Lincoln Fields Secondary Plan
Appendix 1

This is an appendix to report ACS2024-PDB-PS-0088 for the Lincoln Fields Secondary Plan.

The following traffic analysis was commissioned by the City of Ottawa as an initial study to assess the acceptability of the proposed reconfigured Kichi Zībī Mikan and Carling Avenue intersection, as per the City's Multi-Modal Level of Service Guidelines. This traffic analysis serves to inform the policy direction in the secondary plan and future roadway reconstruction and/or transit priority studies and projects.

This traffic analysis assumed the ultimate condition (scenario 1) would be where the Carling bridge structure (SN016090) is currently located. Future designs may shift the location of this intersection. The City will no longer study or pursue the interim condition (scenario 2) as this is results in an unacceptable level of service for vehicular traffic.

Segments of Carling Avenue are planned for rapid transit and transit priority measures. These specific measures were unknown at the time of this analysis and future studies will need to consider how this intersection will prioritize the movement of transit vehicles along Carling Avenue.

MEMORANDUM

To: Jocelyn Cadieux, MCIP, RPP,
Policy and Community Planning, City of Ottawa

From: Matt Fralick, PE, PTOE, Alta Planning + Design Inc.

CC: Ezra Lipton, MCIP, RPP, Alta Planning + Design Canada, Inc.

Date: October 23, 2024

Re: **Lincoln Fields Ultimate Active Transportation Improvements – Traffic Analysis**

Introduction

Alta Planning + Design Canada, Inc. (Alta) was retained by the City of Ottawa (the City) to develop a study for interim and ultimate solutions to improve the safety and priority of movement for active transportation (AT) along Carling Avenue between Lincoln Fields Station and Connaught Avenue. As part of this study, Alta performed a traffic analysis to support decision-making on the implementation of the interim and/or the ultimate design concept.

This memo details the process and summarizes the results of the traffic analysis performed to compare the Existing Conditions in 2024 and the Future No-build Conditions (Scenario 3), Proposed Interim Conditions (Scenario 2) and Proposed Ultimate/Permanent Conditions (Scenario 1) in 2035. Recommendations are provided in the conclusion section based on the findings of the analysis.

Background

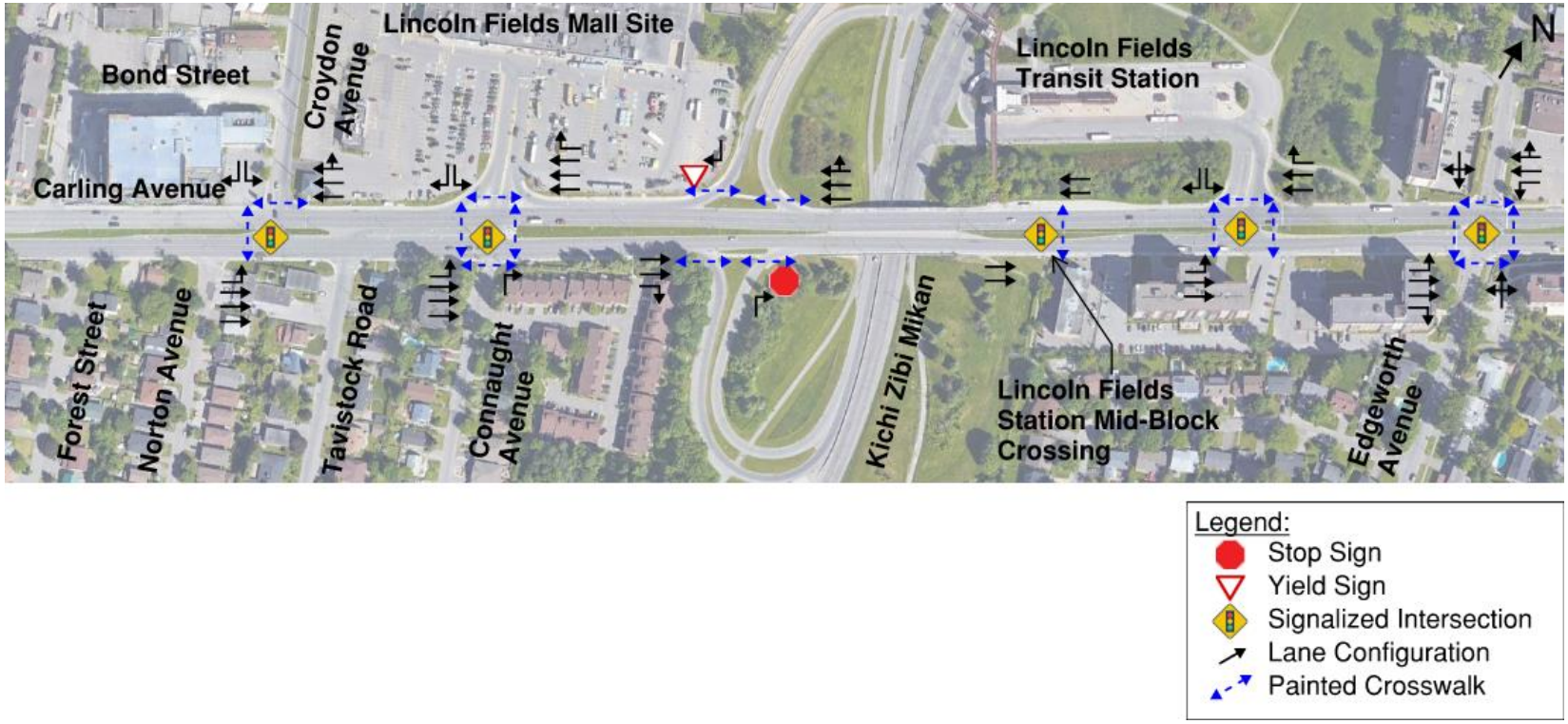
Study Area

The area selected for the traffic analysis lies along Carling Avenue and is bounded by Croydon Avenue and Edgeworth Avenue. This segment of Carling Avenue is a median-separated arterial road with the number of lanes varying from 5 to 6 between intersections. All the intersections include left turn bays in the eastbound and westbound directions in the main corridor. The posted speed limit is 60 km/h. The following intersections are included in the study area:

- Carling Avenue and Croydon Avenue (signalized)
- Carling Avenue and Lincoln Fields Mall Site/Connaught Avenue (signalized)
- Carling Avenue and Kichi Zībī Mikan (formerly Sir John A. Macdonald Parkway) (unsignalized)
- Carling Avenue and Lincoln Fields LRT Station Mid-Block Crossing (signalized, currently under development)
- Carling Avenue and Lincoln Fields LRT Station Access (signalized, currently under development)
- Carling Avenue and Edgeworth Avenue (signalized)

It is important to note that the construction work for the LRT Stage 2 project is currently under development in the study area. For the traffic analysis, the proposed design of the LRT project from the Kichi Zībī Mikan (KZM) overpass to the intersection of Edgeworth Avenue was considered as existing conditions to represent the expected conditions. This work is expected to be completed by the 2035 horizon year. The existing lane configuration in the study area which was used in the traffic analysis is illustrated in Figure 1.

Figure 1: Lane Configuration in Existing Conditions



Turning Movement Volumes

Turning movement counts (TMC's) at the study intersections were provided by the City via the Miovision DataLink platform. A summary of the TMC's collection dates and peak hours is presented in Table 1. The TMC's are presented in **Appendix A**. Since the intersection of Lincoln Fields Station at Carling Avenue was not provided in the Miovision counts, counts provided by the City from 2019 were used for the turn movements. The through movements at this intersection were balanced using the volumes from adjacent intersections. The 2024 balanced volumes used in the existing conditions analysis can be found in **Appendix B**. The red numbers are the counts that were recalculated using the percentage drop.

Table 1: Turning Movement Count Data Summary

Intersection	Count Date	Peak Hour	
		Weekday AM	Weekday PM
Croydon Avenue and Carling Avenue	Tuesday, July 16, 2024	8:00 – 9:00	16:30 – 17:30
Connaught Avenue and Carling Avenue	Tuesday, July 16, 2024	8:00 – 9:00	16:30 – 17:30
Kichi Zībī Mikan and Carling Avenue (North Side)	Tuesday, July 16, 2024	8:00 – 9:00	16:30 – 17:30
Kichi Zībī Mikan and Carling Avenue (South Side)	Tuesday, July 16, 2024	8:00 – 9:00	16:30 – 17:30
Lincoln Fields Station and Carling Avenue*	Wednesday, March 06, 2019	7:45 – 8:45	16:00 – 17:00
Edgeworth Avenue and Carling Avenue	Tuesday, July 16, 2024	8:00 – 9:00	16:15 – 17:15

*Updated counts were not provided. The through movements were balanced to match volumes from 2024 counts

Signal Timing Plans

Signal timing plans for the existing signalized intersections in the study area were provided by the City and are presented in **Appendix C.** The signalized intersections operate using an actuated, coordinated mode of control during the AM and PM peak hours, with Carling Avenue as the main roadway. Cycle lengths in the AM and PM peak hours were set to 130 seconds. The pedestrian crossing time was calculated for the signalized Lincoln Fields Station mid-block crossing (currently under construction) and the signal was modelled to a 65-second cycle length.

Traffic Analysis Measures of Effectiveness

The traffic analysis performed for this study focuses on three main parameters, which are shown in the summary tables in the following sections: volume-to-capacity (V/C) ratio, vehicular delay, and the 95th percentile queues. The Highway Capacity Manual (HCM) reports from Synchro define LOS on roadways with interrupted traffic flow in terms of control delay (in sec/vehicle) at signalized and unsignalized intersections. The City of Ottawa, however, defines the LOS at signalized intersections in terms of vehicular capacity (V/C ratio). The HCM reports provide the output for the V/C ratio, which is in turn transcribed to a LOS based on the City's provided thresholds. The LOS is determined by letter characters that range from 'A' to 'F', with 'A' representing the best traffic operating conditions with minimal delays, according to the HCM definition, or low V/C ratio, according to Ottawa's guidelines. LOS 'F' characterizes poor conditions that cause significant traffic delay, according to HCM, or saturated intersections with V/C ratio > 1 as per Ottawa's guidelines. Levels of service 'A' through 'E' are considered acceptable in the study area. LOS 'F' is representative of failing traffic operations and improvements are usually required in these conditions.

When a change in LOS from 'A' through 'E' to 'F' occurs between future no-build conditions and proposed conditions at study area intersections, it may be considered significant and can indicate impacts resulting from the proposed project conditions. Under these circumstances, if vehicular traffic quality is a priority in a particular study, modifications to traffic control measures, geometric changes, or a combination of both, may be considered. The LOS thresholds for signalized and unsignalized intersections based on the HCM and Ottawa's guidelines are shown in Table 2.

Table 2: Level of Service Thresholds

Level of Service (LOS)	Signalized Intersection		Unsignalized Intersection
	HCM	City of Ottawa	HCM and City of Ottawa
	Delay per Vehicle (sec/veh)	V/C Ratio	Delay per Vehicle (sec/veh)
A	≤10.0	0.0 - 0.60	≤10.0
B	10.1 - 20.0	0.61 - 0.70	10.1 - 15.0
C	20.1 - 35.0	0.71 - 0.80	15.1 - 25.0
D	35.1 - 55.0	0.81 - 0.90	25.1 - 35.0
E	55.1 - 80.0	0.91 - 1.00	35.1 - 50.0
F	> 80.0	> 1.00	> 50.0

Existing Conditions Analysis

Traffic operations analysis for the existing weekday AM and weekday PM peak hours were performed using the Synchro (v12.0) software to determine the V/C ratios and delay/LOS for each of the study area intersections. The analysis employed the HCM 2000 and HCM 6th Edition methodologies, depending on the methodology limitation related to the intersection geometry and signal timing. These methodologies account for intersection configuration, traffic control devices, and traffic (vehicle, bicycle, and pedestrian) volumes. The average 95th percentile queue lengths were obtained from SimTraffic microsimulations.

The results summary of the 2024 Existing Conditions traffic analysis for the AM and PM peak hours are presented in Table 3. Full HCM analysis and SimTraffic results are presented in **Appendix D**.

As shown in Table 3, the study intersections are observed to operate well within capacity during the AM and PM peak hours, with LOS A and LOS B for most eastbound and westbound movements. The side streets operate with LOS D and LOS E, which can be attributed to the signal cycle length and the green time distribution.

Table 3: Traffic Analysis Summary for AM & PM Peak Hours – 2024 Existing Conditions

Intersection *(Traffic Control)*	Traffic Direction	Weekday AM			Weekday PM		
		V/C|LOS[1]	Delay|LOS[2]	Queue[3]	V/C|LOS[1]	Delay|LOS[2]	Queue[3]
Croydon Avenue and Carling Avenue	EB Left	0.13|A	5.5 | A	27.0	0.26|A	8.1 | A	19.5
(Traffic Signal)	EB	0.57|A	8.8 | A	81.6	0.31|A	5.2 | A	88.0
	WB	0.28|A	3.4 | A	29.7	0.55|A	3.2 | A	67.9
	SB Left	0.37|A	47.5 | D	60.4	0.42|A	50.8 | D	80.1
Connaught Avenue and Carling Avenue	EB Left	0.09|A	3.6 | A	11.0	0.46|A	25.3 |C	27.3
(Traffic Signal)	EB	0.58|A	3.6 | A	62.0	0.35|A	4.4 | A	58.4
	WB	0.24|A	5.8 | A	57.5	0.59|A	16.0 | B	106.6
	NB Right	0.11|A	51.1 | D	19.4	0.04|A	45.3 | D	15.0
	SB Left	0.46|A	55.3 | D	29.2	0..55|A	52.2 | D	68.0
Kichi Zībī Mikan and Carling Avenue	EB	-	0.0 | A	18.7	-	0.0 | A	59.1
(Unsignalized)	WB	-	0.0 | A	5.7	-	0.0 | A	146.5
	NB	0.08|A	16.7 | C	-	0.24|A	14.0 | B	13.2
Lincoln Fields Mid-Block Crossing	EB	0.58 |A	7.5 | A	61.1	0.43|A	6.1 | A	121.5
(Traffic Signal)	WB	0.22|A	1.8 | A	26.7	0.52|A	5.7 | A	112.9
Lincoln Fields Station and Carling Avenue	EB Left	0.11|A	2.4 | A	27.0	0..14|A	3.5 | A	34.8
(Traffic Signal)	EB	0.47|A	3.4 | A	60.4	0.36|A	2.1 | A	78.8
	WB	0.19|A	3.8 | A	40.9	0.47|A	1.6 | A	122.7
	WB Right	0.01|A	1.6 | A	7.2	0.02|A	0.01 | A	87.6
	SB Left	0.18|A	61.3 | E	12.8	0.25|A	61.9 | E	13.5
	SB Right*	0.03|A	59.7 | E	14.4	0.03|A	59.3 | E	45.3
Edgeworth Avenue and Carling Avenue	EB Left	0.07|A	3.8 | A	14.1	0.22|A	9.7 | A	22.4
(Traffic Signal)	EB	0.68|B	10.0 | B	101.9	0.47|A	15.0 | B	84.8
	EB Right	0.03|A	10.1 | B	29.1	0.04|A	89.2 | F	35.6
	WB Left	0.33|A	13.1 | B	20.1	0.35|A	8.8 | A	29.9
	WB	0.24|A	10.7 | B	44.0	0.55|A	14.6 | B	261.2
	NB	0.28|A	46.0 | D	27.6	0.25|A	45.8 | D	65.1
	SB	0.23|A	45.4 | D	27.1	0.17|A	44.9 | D	74.1

Notes:

1) Volume to capacity ratio and Ottawa's LOS
2) Delay in second/vehicle and HCM LOS
3) 95th Percentile Queue in metres (longest queue considered when there is more than one lane per direction)

Future Conditions Analysis

Future Turning Movement Volumes

The 2024 TMC's were grown to the horizon year 2035 to perform the Future Conditions analyses. Grown volumes can be found in **Appendix B**. This timeline coincides with the anticipated five-year past-estimated time of completed construction. An annual growth rate of 0.23% was used to grow the future auto volumes. The growth rate was calculated based on the AM peak volume presented in the Ottawa TRANS Regional Models from 2011 and 2031 and is compatible with the City's plan for the study area.

Additionally, auto trips generated in the AM and PM peak hours by planned and anticipated developments in the study area were accounted for in the future traffic volumes. The planned developments considered for the traffic analyses are located at 1420 Richmond Road, 2475 Regina Street, and 1299 Richmond Road. Anticipated trips generated by these developments were obtained from their respective Traffic Impact Assessment (TIA) reports available in the application documents. Additional redevelopments are anticipated by the City at 2525 Carling Avenue (former Mall Site) and 508 Edgeworth Avenue. Trip distributions generated by the anticipated redevelopments were calculated using the 2020 TRANS Trip Generation Methodology. The development-generated auto trip calculation and distribution at the study intersections in the AM and PM peak hours are shown in **Appendix E**. The generated auto trip volumes were added to the volumes grown to 2035 and the total future traffic volumes are also shown in **Appendix B**.

Future No-Build (Scenario 3) Analysis

Traffic operational analysis was performed using Synchro (v12.0) for the Future No-build conditions (Scenario 3) in the 2035 AM and PM peak hours employing HCM 2000 and HCM 7th Edition methodologies. Table 4 shows the analysis summary. Full HCM analysis and SimTraffic results are presented in **Appendix F.**

As shown in Table 4, in 2035, the study intersections are observed to operate with LOS and 95th percentile queue lengths similar to the Existing Conditions during the AM and PM peak hours. LOS A to LOS C are observed in the eastbound and westbound directions and side streets operate with LOS D and LOS E. Green timings and signal offsets were not optimized in this scenario.

Table 4: Traffic Analysis Summary for AM & PM Peak Hours – 2035 Future No-Build Conditions

Intersection *(Traffic Control)*	Traffic Direction	Weekday AM			Weekday PM		
		V/C|LOS[1]	Delay|LOS[2]	Queue[3]	V/C[1]	Delay|LOS[2]	Queue[3]
Croydon Avenue and Carling Avenue *(Traffic Signal)*	EB Left	0.15|A	5.8|A	27.6	0.35|A	9.9|A	34.8
	EB	0.59|A	9.4|A	85.0	0.32|A	5.5|A	87.7
	WB	0.29|A	3.1|A	41.3	0.57|A	3.5|A	40.6
	SB Left	0.44|A	47.8|D	83.1	0.47|A	50.9|D	80.3
Connaught Avenue and Carling Avenue *(Traffic Signal)*	EB Left	0.12|A	3.2|A	14.3	0.61|B	34.0|C	13.5
	EB	0.62|B	4.5|A	64.0	0.38|A	5.0|C	63.0
	WB	0.26|A	6.8|A	56.9	0.62|A	17.1|B	55.1
	NB Right	0.11|A	48.8|D	20.7	0.04|A	44.4|D	20.9
	SB Left	0.60|A	54.4|D	42.5	0.61|B	53.9|D	41.2
Kichi Zībī Mikan and Carling Avenue *(Unsignalized)*	EB	-	0.0 | A	29.6	-	0.0 | A	26.2
	WB	-	0.0 | A	8.5	-	0.0 | A	9.1
	NB	0.01|A	17.5|C	2.0	0.26|A	14.6|B	6.5
Lincoln Fields Mid-Block Crossing *(Traffic Signal)*	EB	0.61|B	8.6|A	67.1	0.46|A	6.5|A	69.8
	WB	0.23|A	1.7|A	41.8	0.55|A	6.4|A	30.6
Lincoln Fields Station and Carling Avenue *(Traffic Signal)*	EB Left	0.11|A	2.4|A	27.3	0.14|A	4.0|A	30.2
	EB	0.49|A	3.4|A	63.0	0.38|A	2.2|A	64.7
	WB	0.20|A	3.9|A	45.1	0.50|A	5.5|A	44.7
	WB Right	0.01|A	1.4|A	8.7	0.02|A	0.0|A	8.3
	SB Left	0.20|A	61.5|E	15.1	0.23|A	61.7|E	17.1
	SB Right	0.03|A	59.7|E	16.1	0.02|A	59.3|E	15.7
Edgeworth Avenue and Carling Avenue *(Traffic Signal)*	EB Left	0.08|A	4.0|A	18.4	0.28|A	10.5|B	20.0
	EB	0.72|C	11.4|B	106.2	0.50|A	14.7|B	110.0
	EB Right	0.03|A	10.8|B	41.8	0.04|A	67.4|E	39.5
	WB Left	0.38|A	15.8|B	22.4	0.35|A	9.2|A	21.7
	WB	0.26|A	11.6|B	40.7	0.58|A	15.4|B	42.9
	NB	0.28|A	44.9|D	26.8	0.26|A	45.9|D	27.9
	SB	0.29|A	45.0|D	29.3	0.11|A	45.3|D	30.5

Notes:

1) Volume to capacity ratio and Ottawa's LOS
2) Delay in second/vehicle and HCM LOS
3) 95th Percentile Queue in metres (longest queue considered when there is more than one lane per direction)

Proposed Conditions

Two scenarios were proposed for the intersection of Carling Avenue and KZM, as follows:

- Interim Condition (Scenario 2): KZM on- and off-ramps are proposed to be realigned to connect to Carling Avenue with angles between 70 deg and 90 deg. This modification converts the existing free-flow right-turn channels into smart channels to improve the safety of pedestrians and cyclists crossing east-west on the north and south sides of Carling Avenue. Additionally, the bidirectional bikeway proposed at the Lincoln Fields LRT Station for the Stage 2 Project is proposed to be extended through the smart channels on the north side to connect the station to the Lincoln Fields Mall Site. The westbound curb lane east to the KZM on-ramp is replaced by the proposed bidirectional bikeway.
- Ultimate Condition (Scenario 1): Carling bridge over KZM is proposed to be replaced by a berm considering that the bridge is required to undergo a costly rehabilitation no later than 2026. The KZM ramps are proposed to be removed and KZM access to Carling Avenue is proposed to be consolidated on the north side. KZM would be realigned and raised to form a full-movement T-intersection at Carling Avenue. This intersection is proposed to be signalized. In this scenario, the bidirectional cycle track at the LRT Station is also proposed to be extended through the north leg of the proposed intersection. The T-intersection configuration is proposed to be as follows:
    - Eastbound: Two through lanes and two left-turn lanes
    - Westbound: Two through lanes and one transit queue jump lane/right-turn lane
    - Southbound: Two right-turn lanes and one left-turn lane; crossings on both east and west legs

No geometric changes were proposed to the other intersections in the study area. The high-level concept for the Interim and Ultimate conditions are presented in **Appendix G**.

Interim Conditions (Scenario 2) Analysis

Traffic operational analysis was performed using Synchro (v12.0) for the Interim Conditions (Scenario 2) in the 2035 AM and PM peak hours employing HCM 2000 and HCM 7th Edition methodologies. Table 5 shows the analysis summary. Full HCM analysis and SimTraffic results are presented in **Appendix H.**

As shown in Table 5, in 2035, the study intersections with no proposed geometric modifications are observed to operate with LOS and 95th percentile queue lengths similar to the Future No-build Conditions during the AM and PM peak hours. LOS A to LOS C are observed in the eastbound and westbound directions and side streets operate with LOS D and LOS E. At the intersection of KZM where the ramps are proposed to be realigned, the eastbound, westbound, and northbound directions also maintain the same LOS and similar 95th percentile queue lengths to the Future No-build Conditions. However, the traffic in the southbound direction is observed to be negatively impacted by the geometric modifications. With the replacement of the free-flow channel for a stop-controlled smart channel, the delays are observed to be approximately 60 and 630 sec/veh in the AM and PM peaks, respectively, which represent LOS F. In both the AM and PM peaks, the southbound off-ramp is above capacity, with a V/C of 1.07 and 2.40, respectively. Failing results are coloured red in the table. Green timings and signal offsets were not optimized in this scenario.

Table 5: Traffic Analysis Summary for AM & PM Peak Hours – 2035 Interim Conditions

Intersection *(Traffic Control)*	Traffic Direction	Weekday AM			Weekday PM		
		V/C|LOS[1]	Delay|LOS[2]	Queue[3]	V/C[1]	Delay|LOS[2]	Queue[3]
Croydon Avenue and Carling Avenue	EB Left	0.15|A	5.8|A	21.0	0.35|A	9.9|A	20.7
(Traffic Signal)	EB	0.59|A	9.4|A	118.9	0.32|A	5.0|A	61.9
	WB	0.29|A	3.0|A	35.9	0.57|A	3.5|A	77.0
	SB Left	0.44|A	47.8|D	84.9	0.47|A	50.9|D	76.9
Connaught Avenue and Carling Avenue	EB Left	0.12|A	3.2|A	14.1	0.61|B	34.0|C	33.1
(Traffic Signal)	EB	0.62|B	4.5|B	86.3	0.38|A	5.0|A	40.5
	WB	0.26|A	6.7|A	53.1	0.62|B	17.1|B	108.4
	NB Right	0.11|A	48.8|D	39.6	0.04|A	44.4|D	11.9
	SB Left	0.60|A	57.8|E	77.4	0.61|B	49.8|D	54.9
Kichi Zībī Mikan and Carling Avenue	EB	-	0.0 | A	48.2	-	0.0 | A	7.5
(stop-controlled)	WB	-	0.0 | A	21.5	-	0.0 | A	19.9
	NB	0.05|A	15.9|C	13.1	0.26|A	14.7|B	17.9
	SB	1.07|F	88.1|F	187.9	2.40|F	630.8|F	236.5
Lincoln Fields Mid-Block Crossing	EB	0.60|A	8.5|A	69.3	0.46|A	6.5|A	64.8
(Traffic Signal)	WB	0.23|A	1.7|A	36.4	0.55|A	6.4|A	86.8
Lincoln Fields Station and Carling Avenue	EB Left	0.11|A	2.4|A	24.9	0.14|A	4.0|A	20.3
(Traffic Signal)	EB	0.49|A	3.4|A	59.9	0.38|A	2.2|A	51.8
	WB	0.20|A	3.9|A	49.7	0.50|A	1.7|A	90.5
	WB Right	0.01|A	1.4|A	8.0	0.02|A	0.0|A	5.7
	SB Left	0.20|A	61.5|E	12.6	0.23|A	61.7|E	19.1
	SB Right	0.03|A	59.7|E	14.9	0.02|A	59.3|E	14.9
Edgeworth Avenue and Carling Avenue	EB Left	0.08|A	4.2|A	16.7	0.28|A	10.2|B	25.1
(Traffic Signal)	EB	0.73|C	12.0|B	100.2	0.50|A	14.9|B	81.5
	EB Right	0.03|A	11.1|A	32.9	0.04|A	67.8|E	29.1
	WB Left	0.42|A	16.8|B	23.0	0.38|A	9.4|A	30.2
	WB	0.26|A	11.6|A	45.9	0.58|A	15.4|B	114.4
	NB	0.28|A	44.9|D	28.1	0.26|A	45.9|D	27.6
	SB	0.29|A	45.0|D	28.6	0.21|A	45.3|D	27.7

Notes:

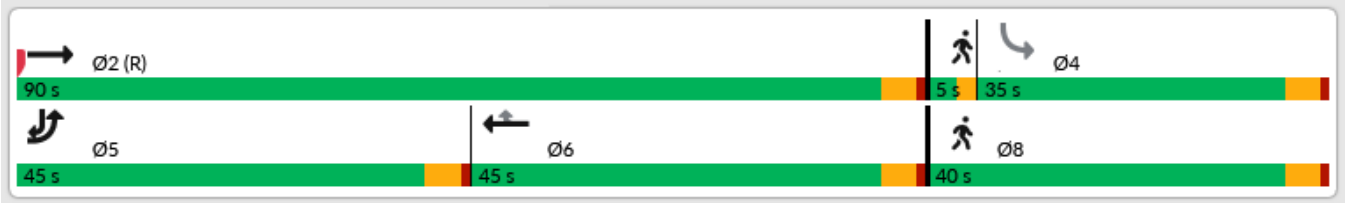
1) Volume to capacity ratio and Ottawa's LOS
2) Delay in second/vehicle and HCM LOS
3) 95th Percentile Queue in metres (longest queue considered when there is more than one lane per direction)

Ultimate Conditions (Scenario 1) Analysis

Traffic operational analysis was performed using Synchro (v12.0) for the Ultimate Conditions (Scenario 1) in the 2035 AM and PM peak hours employing HCM 2000 and HCM 7th Edition methodologies. Table 6 shows the analysis summary. Full HCM analysis and SimTraffic results are presented in **Appendix I.**

With the introduction of a new signalized intersection at Carling Avenue and KZM in the Ultimate Conditions, signal offsets were optimized to minimize queuing and delays. At the proposed intersection, signal timings were set to also minimize queuing and delays in the AM and PM peaks, as shown in Figure 2. In addition, pedestrians and cyclists safety was maximized with the proposed protected right-turn and No-Right-On-Red restriction in the southbound direction. The Leading Pedestrian Interval (LPI) proposed on the east leg crossing provides pedestrians with the opportunity to advance through the intersection before the southbound left-turning vehicles. Signal timings of the other study intersections were not modified in this scenario.

Figure 2: Signal Timings at Carling Avenue and KZM in the AM and PM Peaks in the Ultimate Conditions



As shown in Table 6, in 2035, the study intersections with no proposed geometric modifications are observed to operate with LOS and 95th percentile queue lengths similar to the Future No-build Conditions during the AM and PM peak hours. At these intersections, delays are observed to slightly vary for the eastbound and westbound movements, but LOS A to LOS C are maintained. Side streets operate with LOS D and LOS E. At the proposed intersection of Carling Avenue and KZM, traffic operations are observed to operate within capacity with LOS of 'A' through 'D' in the AM and PM peaks for the overall intersection, but the southbound right turn movements exceed the capacity. This can be further refined once installed with minor adjustments outside of this analysis. Spillovers are not observed along Carling Avenue in any of the study intersections in the proposed Ultimate Conditions in 2035.

Table 6: Traffic Analysis Summary for AM & PM Peak Hours – 2035 Ultimate Conditions

Intersection (Traffic Control)	Traffic Direction	Weekday AM			Weekday PM		
		V/C|LOS[1]	Delay|LOS[2]	Queue[3]	V/C[1]	Delay|LOS[2]	Queue[3]
Croydon Avenue and Carling Avenue	EB Left	0.15|A	5.8|A	80.2	0.35|A	9.9|A	29.0
(Traffic Signal)	EB	0.57|A	9.0|A	210.4	0.32|A	5.5|A	98.1
	WB	0.29|A	6.3|A	56.7	0.57|A	5.2|A	54.5
	SB Left	0.44|A	47.8|D	39.4	0.47|A	50.9|E	78.9
Connaught Avenue and Carling Avenue	EB Left	0.12|A	3.4|A	38.1	0.61|B	32.4|C	35.3
(Traffic Signal)	EB	0.62|B	4.8|A	123.6	0.38|A	5.1|A	52.8
	WB	0.26|A	15.1|B	75.9	0.62|A	2.6|A	42.4
	NB Right	0.11|A	48.8|D	23.5	0.04|A	44.4|D	14.1
	SB Left	0.60|A	57.8|E	25.5	0.61|B	53.9|D	50.3
Kichi Zībī Mikan and Carling Avenue	EB Left	0.93|E	48.4|D	112.6	0.46|A	35.5|D	78.4
(Traffic Signal)	EB	0.67|B	22.9|C	152.0	0.44|A	7.4|A	46.0
	WB	0.35|A	40.5|D	57.8	0.84|D	36.3|D	89.7
	SB Left	0.04|A	34.8|C	10.5	0.23|A	37.7|D	49.3
	SB Right	0.69|B	42.2|D	76.8	1.04|F	84.4|F	138.8
Lincoln Fields Mid-Block Crossing	EB	0.60|A	10.9|B	94.2	0.46|A	4.3|A	52.4
(Traffic Signal)	WB	0.23|A	4.3|A	41.3	0.55|A	9.4|A	92.6
Lincoln Fields Station and Carling Avenue	EB Left	0.11|A	1.2|A	35.3	0.14|A	3.1|A	24.6
(Traffic Signal)	EB	0.49|A	3.2|A	114.2	0.38|A	2.3|A	64.5
	WB	0.20|A	1.6|A	33.3	0.50|A	1.7|A	97.5
	WB Right	0.01|A	0.5|A	4.9	0.02|A	0.0|A	6.7
	SB Left	0.20|A	61.5|E	14.8	0.23|A	61.7|E	13.9
	SB Right	0.03|A	59.7|E	14.9	0.02|A	59.3|E	22.8
Edgeworth Avenue and Carling Avenue	EB Left	0.08|A	9.2|A	17.3	0.28|A	11.6|B	23.2
(Traffic Signal)	EB	0.72|C	24.1|C	127.7	0.50|A	12.4|B	66.4
	EB Right	0.03|A	10.8|B	28.4	0.04|A	20.6|C	23.3
	WB Left	0.38|A	15.8|B	20.7	0.38|A	9.4|A	28.8
	WB	0.26|A	11.6|B	41.5	0.58|A	15.4|B	110.3
	NB	0.28|A	44.9|D	29.5	0.26|A	45.9|D	23.1
	SB	0.29|A	45.0|D	31.7	0.21|A	45.3|D	26.5

Notes:

1) Volume to capacity ratio and Ottawa's LOS
2) Delay in second/vehicle and HCM LOS
3) 95th Percentile Queue in metres (longest queue considered when there is more than one lane per direction)

Multi-Modal Level of Service (MMLOS) Assessment

A MMLOS assessment was performed for the road segment of all three future scenarios and for the intersection of Carling Avenue and KZM in the proposed Ultimate Conditions (Scenario 1). A summary of the results is shown in Table 7 and Table 8. The complete MMLOS assessment forms are presented in **Appendix J**. The methodology presented in the updated City of Ottawa Multi-Modal Level of Service (MMLOS) Guidelines DRAFT (2024) was used in the assessment. It is important to note that the methodology presented in the guidelines considers only signalized intersections for intersection MMLOS assessments. As the KZM ramps to access Carling Avenue are unsignalized, intersection MMLOS was not completed for the Future No-Build (Scenario 3) and proposed Interim (Scenario 2) conditions. In addition, a pedestrian MMLOS was not provided at KZM for the Future No-Build (Scenario 3) since there is not an existing pedestrian crossing at this intersection. A MMLOS analysis was not provided at the intersection of Carling Avenue at Connaught Avenue

The peak hour with the highest traffic volume (PM peak) was selected for the average daily traffic (ADT) calculation required in the MMLOS forms. The future ADT volumes were calculated using the peak hour counts multiplied by 10.

The transit travel speeds required to assess Transit LOS (TLOS) were obtained from Travel Time reports from Synchro.

The updated MMLOS Guidelines DRAFT introduces the Public Realm LOS (PRLOS) for segment assessments based on the UK Healthy Streets Approach. This assessment produces a single score for each side of a street segment based on indicators related to human health and quality of life, in addition to a focus on providing incremental improvements to the public realm.

As per Ottawa's policies, in areas within 600 m from rapid transit stations, the target Pedestrian LOS (PLOS) is 'A', Bicycle LOS (BLOS) is 'B', TLOS is 'E' for mixed traffic, and Auto (ALOS) is 'E'. PRLOS should be used only to compare scenarios and no target is provided in the City guidelines. As shown in Table 7, the segment LOS for all modes meets or exceeds the City's target LOS in Scenario 1. In Scenarios 2 and 3, PLOS and BLOS do not meet the target LOS. The PRLOS scores better in Scenario 1 than in Scenarios 2 and 3. These results are attributed to the increased separation between pedestrian and bicycle facilities from vehicular traffic, especially in Scenario 1. Additionally, in Scenario 1, the proposed signalized intersection reduces the controlled crossing distance from 330 m to 200 m on the west and 100 m on the east.

As shown in Table 8, the intersection BLOS, TLOS and ALOS exceed the City's target LOS for the study area. The PLOS is worse than the target in all intersection legs. The poor PLOS at the proposed intersection in Scenario 1 is mostly affected by the crossing distances, the cycle length of 130 s and the permissive southbound left-turn phasing with more than 100 veh/h.

Table 7: Summary of Segment MMLOS Results for the PM Peak Hour in 2035

Transportation Mode	Segment LOS							
	Ultimate Conditions (West) (Scenario 1)		Ultimate Conditions (East) (Scenario 1)		Interim Conditions (Scenario 2)		Future No-Build (Scenario 3)	
	North	South	North	South	North	South	North	South
Pedestrian	A	A	A	A	B	B	C	B
Bicycle	A	B	A	B	B	C	E	E
Transit	C	D	B	D	C	C	C	C
Public Realm	B	C	B	C	D	D	E	E

Table 8: Summary of Intersection MMLOS Results for the PM Peak Hour in 2035

Transportation Mode	Intersection LOS		
	Ultimate Conditions (Scenario 1)		
	North Leg	East Leg	West Leg
Pedestrian	C	D	D
Bicycle	A	-	A
Transit	-	B	C
Auto	D	A	

Comparative Traffic Analysis

Traffic along Carling Avenue is not expected to be impacted for most of the study intersections in the 2035 AM and PM peaks for both Proposed Interim (Scenario 2) and Ultimate (Scenario 1) Conditions in comparison to the Future No-Build (Scenario 3) Conditions. At the intersection of KZM, in the Interim Conditions, only the southbound movement is negatively impacted with LOS going from 'A' to 'F' due to the replacement of the free-flow channel for a stop-controlled smart channel. In the Ultimate Conditions, all movements perform well, within capacity, with LOS 'A' through 'D', with the exception of the westbound and southbound left movements during the PM peak only.

Overall, traffic is expected to operate better in the Ultimate Conditions than in the Interim Conditions since all movements are balanced.

Conclusion and Recommendations

Both the Interim (Scenario 2) and Ultimate (Scenario 1) Proposed Conditions are expected to improve the safety and connections for AT users with a minor impact to traffic in comparison to the Future No-Build (Scenario 3) Conditions. However, the Ultimate Conditions are recommended over the Interim Conditions due to the following reasons:

- Better MMLOS in the study road segment and above-the-target MMLOS at the proposed intersection for most modes of transportation
- Better traffic LOS for southbound vehicles
- Elimination of conflicts between pedestrians/cyclists crossing east-west and southbound right-turn vehicles
- Introduction of at-grade, direct crossing across Carling Avenue for AT users (especially for Pinecrest Creek MUP users) and motor vehicles
- Elimination of the costs of bridge and ramp maintenance by decommissioning the KZM overpass

Appendix A – Turning Movement Counts

5669827 - Carling Ave @ entrance to Lincoln ... - TMC

Tue Jul 16, 2024
Full Length (7 AM-10 AM, 11:30 AM-1:30 PM, 3 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212106, Location: 45.363663, -75.785531

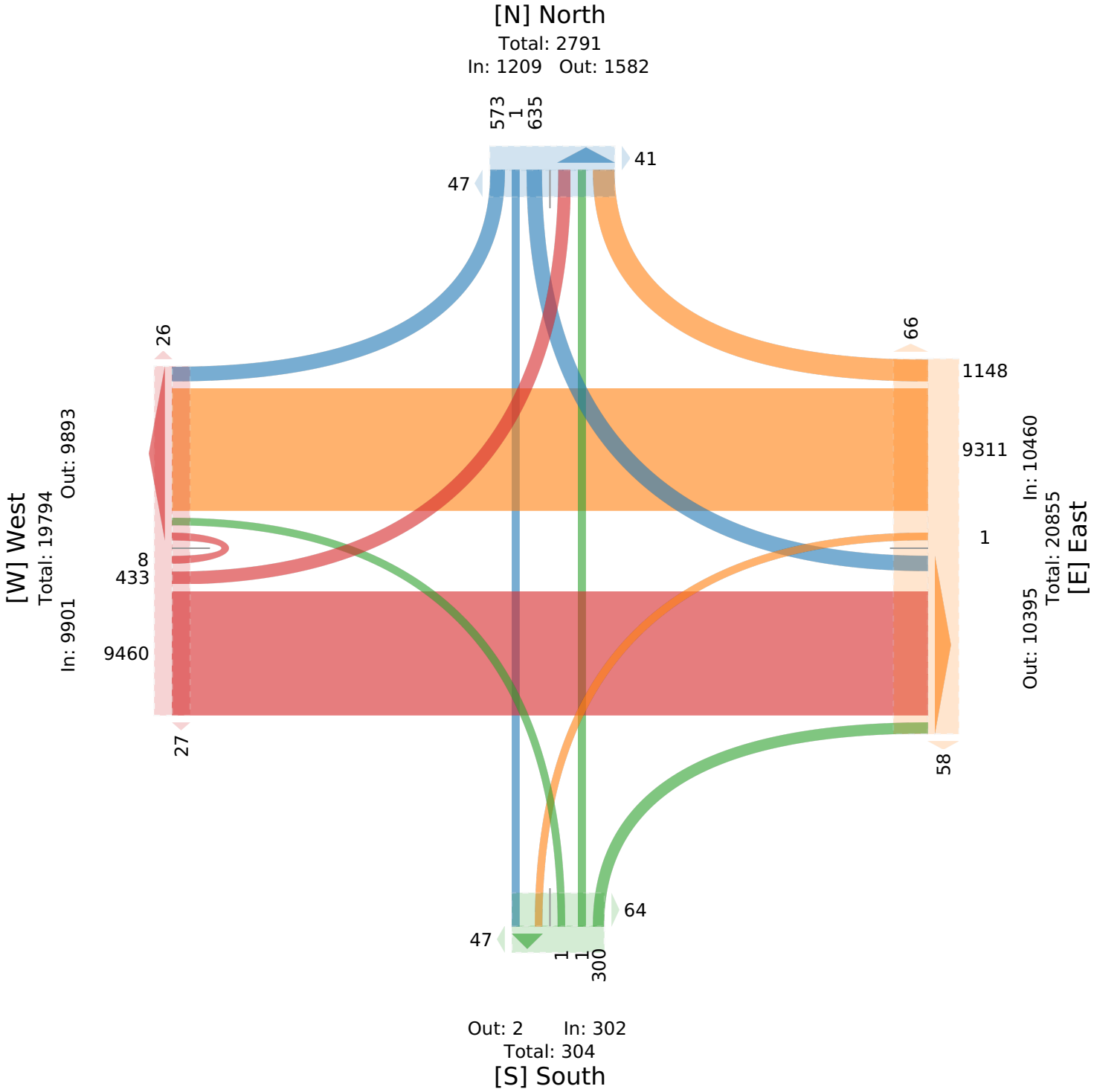
Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg	North						East						South						West						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-07-16 7:00AM	3	0	14	0	**17**	1	7	179	0	0	**186**	0	10	0	0	0	**10**	2	0	275	4	0	**279**	0	**492**
7:15AM	4	0	11	0	**15**	4	6	175	0	0	**181**	0	6	0	0	0	**6**	1	0	368	3	0	**371**	2	**573**
7:30AM	2	0	10	0	**12**	2	12	202	0	0	**214**	0	10	0	0	0	**10**	3	0	455	9	1	**465**	1	**701**
7:45AM	6	0	14	0	**20**	0	16	175	0	0	**191**	2	11	0	0	0	**11**	3	0	453	11	0	**464**	2	**686**
Hourly Total	15	0	49	0	**64**	7	41	731	0	0	**772**	2	37	0	0	0	**37**	9	0	1551	27	1	**1579**	5	**2452**
8:00AM	9	0	12	0	**21**	3	13	222	0	0	**235**	1	12	0	0	0	**12**	3	0	453	4	0	**457**	2	**725**
8:15AM	10	0	17	0	**27**	1	24	202	0	0	**226**	3	21	0	0	0	**21**	5	0	526	16	0	**542**	0	**816**
8:30AM	9	0	17	0	**26**	2	31	203	0	0	**234**	3	15	0	0	0	**15**	9	0	572	13	0	**585**	5	**860**
8:45AM	10	0	18	0	**28**	5	21	216	0	0	**237**	7	9	0	1	0	**10**	3	0	426	5	0	**431**	1	**706**
Hourly Total	38	0	64	0	**102**	11	89	843	0	0	**932**	14	57	0	1	0	**58**	20	0	1977	38	0	**2015**	8	**3107**
9:00AM	6	0	11	0	**17**	1	18	204	0	0	**222**	11	13	0	0	0	**13**	2	0	353	11	0	**364**	0	**616**
9:15AM	8	0	12	0	**20**	1	23	210	0	0	**233**	4	5	0	0	0	**5**	2	0	247	4	0	**251**	0	**509**
9:30AM	12	0	22	0	**34**	1	26	189	0	0	**215**	4	12	0	0	0	**12**	3	0	242	11	1	**254**	1	**515**
9:45AM	10	0	21	0	**31**	2	32	205	0	0	**237**	2	13	0	0	0	**13**	8	0	213	9	0	**222**	1	**503**
Hourly Total	36	0	66	0	**102**	5	99	808	0	0	**907**	21	43	0	0	0	**43**	15	0	1055	35	1	**1091**	2	**2143**
11:30AM	16	0	27	0	**43**	5	36	223	0	0	**259**	6	4	0	0	0	**4**	10	0	162	9	0	**171**	4	**477**
11:45AM	15	0	17	0	**32**	3	42	199	0	0	**241**	7	7	0	0	0	**7**	5	0	184	14	0	**198**	6	**478**
Hourly Total	31	0	44	0	**75**	8	78	422	0	0	**500**	13	11	0	0	0	**11**	15	0	346	23	0	**369**	10	**955**
12:00PM	25	0	21	0	**46**	2	39	236	0	0	**275**	1	7	0	0	0	**7**	0	0	197	21	0	**218**	4	**546**
12:15PM	18	0	19	0	**37**	4	43	223	0	0	**266**	3	10	0	0	0	**10**	3	0	204	16	0	**220**	3	**533**
12:30PM	31	0	45	0	**76**	2	44	219	0	0	**263**	8	10	0	0	0	**10**	3	0	212	18	0	**230**	0	**579**
12:45PM	23	0	20	0	**43**	3	35	244	0	0	**279**	4	10	1	0	0	**11**	4	0	178	22	0	**200**	2	**533**
Hourly Total	97	0	105	0	**202**	11	161	922	0	0	**1083**	16	37	1	0	0	**38**	10	0	791	77	0	**868**	9	**2191**
1:00PM	17	0	15	0	**32**	6	35	264	0	0	**299**	4	5	0	0	0	**5**	2	0	184	11	0	**195**	1	**531**
1:15PM	21	0	22	0	**43**	2	44	242	0	0	**286**	6	8	0	0	0	**8**	2	0	192	18	0	**210**	1	**547**
Hourly Total	38	0	37	0	**75**	8	79	506	0	0	**585**	10	13	0	0	0	**13**	4	0	376	29	0	**405**	2	**1078**
3:00PM	16	0	25	0	**41**	5	43	288	0	0	**331**	2	7	0	0	0	**7**	4	0	250	13	1	**264**	0	**643**
3:15PM	23	0	13	0	**36**	4	44	395	1	0	**440**	2	11	0	0	0	**11**	3	0	306	22	0	**328**	0	**815**
3:30PM	27	0	22	0	**49**	4	52	386	0	0	**438**	1	8	0	0	0	**8**	3	0	325	13	0	**338**	1	**833**
3:45PM	16	0	22	0	**38**	2	47	484	0	0	**531**	4	10	0	0	0	**10**	2	0	284	16	1	**301**	0	**880**
Hourly Total	82	0	82	0	**164**	15	186	1553	1	0	**1740**	9	36	0	0	0	**36**	12	0	1165	64	2	**1231**	1	**3171**
4:00PM	23	0	13	0	**36**	2	49	475	0	0	**524**	4	6	0	0	0	**6**	2	0	257	10	0	**267**	3	**833**
4:15PM	26	0	18	0	**44**	6	61	415	0	0	**476**	6	9	0	0	0	**9**	4	0	276	21	1	**298**	4	**827**
4:30PM	31	0	29	0	**60**	2	59	476	0	0	**535**	3	11	0	0	0	**11**	2	0	298	19	1	**318**	0	**924**
4:45PM	35	0	29	0	**64**	1	45	463	0	0	**508**	4	17	0	0	0	**17**	1	0	276	12	0	**288**	1	**877**
Hourly Total	115	0	89	0	**204**	11	214	1829	0	0	**2043**	17	43	0	0	0	**43**	9	0	1107	62	2	**1171**	8	**3461**
5:00PM	23	0	34	0	**57**	1	64	437	0	0	**501**	8	7	0	0	0	**7**	5	0	320	28	0	**348**	3	**913**
5:15PM	34	0	21	0	**55**	3	49	446	0	0	**495**	7	4	0	0	0	**4**	1	0	313	18	0	**331**	1	**885**
5:30PM	28	1	21	0	**50**	4	44	416	0	0	**460**	3	7	0	0	0	**7**	5	0	259	22	1	**282**	1	**799**
5:45PM	36	0	23	0	**59**	4	44	398	0	0	**442**	4	5	0	0	0	**5**	6	0	200	10	1	**211**	3	**717**
Hourly Total	121	1	99	0	**221**	12	201	1697	0	0	**1898**	22	23	0	0	0	**23**	17	0	1092	78	2	**1172**	8	**3314**
Total	573	1	635	0	**1209**	88	1148	9311	1	0	**10460**	124	300	1	1	0	**302**	111	0	9460	433	8	**9901**	53	**21872**
% Approach	47.4%	0.1%	52.5%	0%	**-**	-	11.0%	89.0%	0%	0%	**-**	-	99.3%	0.3%	0.3%	0%	**-**	-	0%	95.5%	4.4%	0.1%	**-**	-	-
% Total	2.6%	0%	2.9%	0%	**5.5%**	-	5.2%	42.6%	0%	0%	**47.8%**	-	1.4%	0%	0%	0%	**1.4%**	-	0%	43.3%	2.0%	0%	**45.3%**	-	-
Lights and Motorcycles	563	0	616	0	**1179**	-	1127	9103	0	0	**10230**	-	292	1	0	0	**293**	-	0	9220	425	8	**9653**	-	21355
% Lights and Motorcycles	98.3%	0%	97.0%	0%	**97.5%**	-	98.2%	97.8%	0%	0%	**97.8%**	-	97.3%	100%	0%	0%	**97.0%**	-	0%	97.5%	98.2%	100%	**97.5%**	-	97.6%
Heavy	7	0	16	0	**23**	-	20	205	0	0	**225**	-	6	0	0	0	**6**	-	0	236	7	0	**243**	-	497
% Heavy	1.2%	0%	2.5%	0%	**1.9%**	-	1.7%	2.2%	0%	0%	**2.2%**	-	2.0%	0%	0%	0%	**2.0%**	-	0%	2.5%	1.6%	0%	**2.5%**	-	2.3%
Bicycles on Road	3	1	3	0	**7**	-	1	3	1	0	**5**	-	2	0	1	0	**3**	-	0	4	1	0	**5**	-	20
% Bicycles on Road	0.5%	100%	0.5%	0%	**0.6%**	-	0.1%	0%	100%	0%	**0%**	-	0.7%	0%	100%	0%	**1.0%**	-	0%	0%	0.2%	0%	**0.1%**	-	0.1%
Pedestrians	-	-	-	-	-	81	-	-	-	-	-	118	-	-	-	-	-	93	-	-	-	-	-	50	
% Pedestrians	-	-	-	-	-	92.0%	-	-	-	-	-	95.2%	-	-	-	-	-	83.8%	-	-	-	-	-	94.3%	-
Bicycles on Crosswalk	-	-	-	-	-	7	-	-	-	-	-	6	-	-	-	-	-	18	-	-	-	-	-	3	
% Bicycles on Crosswalk	-	-	-	-	-	8.0%	-	-	-	-	-	4.8%	-	-	-	-	-	16.2%	-	-	-	-	-	5.7%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5669827 - Carling Ave @ entrance to Lincoln ... - TMC
Tue Jul 16, 2024
Full Length (7 AM-10 AM, 11:30 AM-1:30 PM, 3 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212106, Location: 45.363663, -75.785531

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



5669827 - Carling Ave @ entrance to Lincoln ... - TMC

Tue Jul 16, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212106, Location: 45.363663, -75.785531

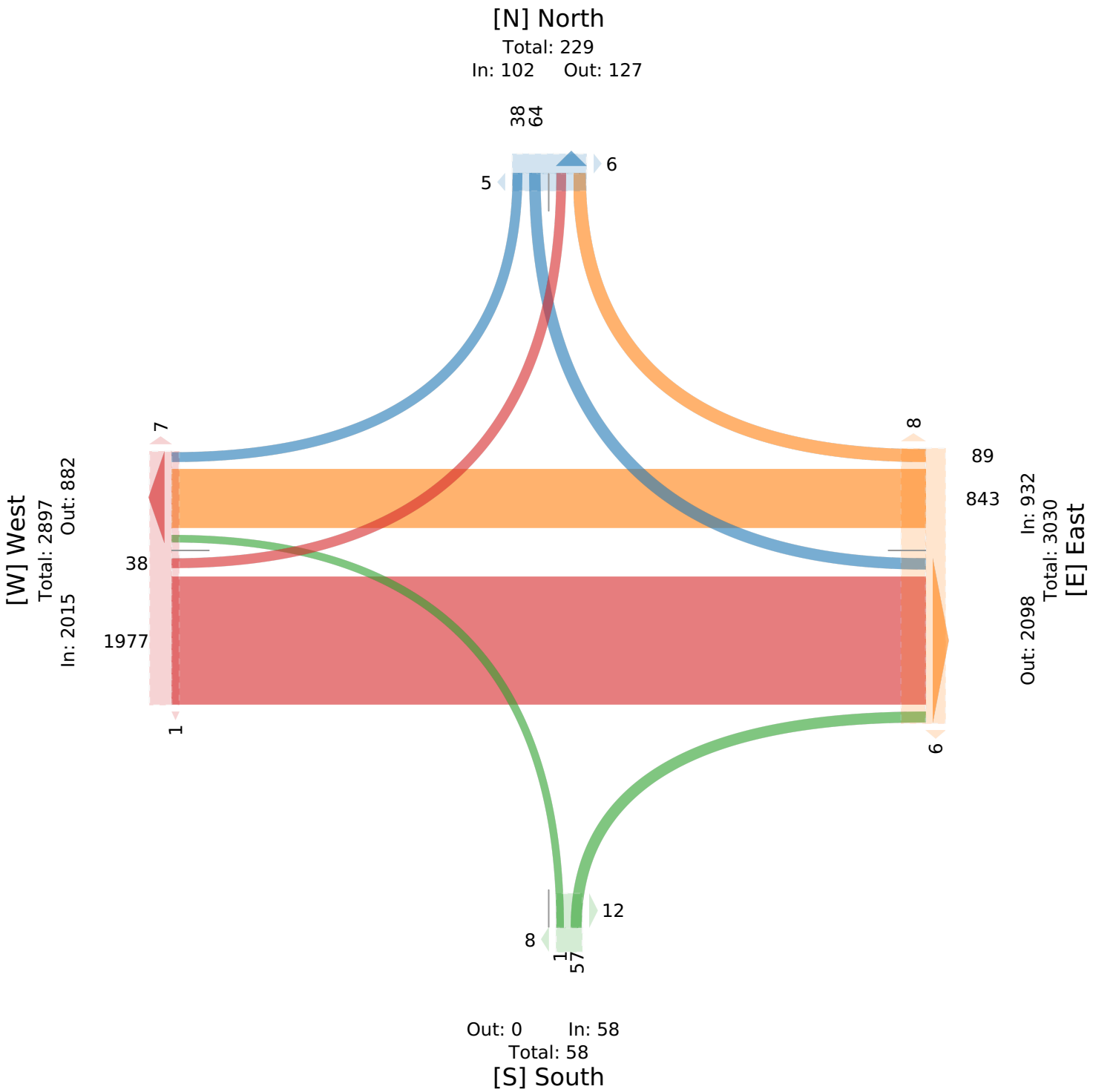
Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg	North						East						South						West						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-07-16 8:00AM	9	0	12	0	**21**	3	13	222	0	0	**235**	1	12	0	0	0	**12**	3	0	453	4	0	**457**	2	**725**
8:15AM	10	0	17	0	**27**	1	24	202	0	0	**226**	3	21	0	0	0	**21**	5	0	526	16	0	**542**	0	**816**
8:30AM	9	0	17	0	**26**	2	31	203	0	0	**234**	3	15	0	0	0	**15**	9	0	572	13	0	**585**	5	**860**
8:45AM	10	0	18	0	**28**	5	21	216	0	0	**237**	7	9	0	1	0	**10**	3	0	426	5	0	**431**	1	**706**
Total	38	0	64	0	**102**	11	89	843	0	0	**932**	14	57	0	1	0	**58**	20	0	1977	38	0	**2015**	8	**3107**
% Approach	37.3%	0%	62.7%	0%	**-**	-	9.5%	90.5%	0%	0%	**-**	-	98.3%	0%	1.7%	0%	**-**	-	0%	98.1%	1.9%	0%	**-**	-	-
% Total	1.2%	0%	2.1%	0%	**3.3%**	-	2.9%	27.1%	0%	0%	**30.0%**	-	1.8%	0%	0%	0%	**1.9%**	-	0%	63.6%	1.2%	0%	**64.9%**	-	-
PHF	0.925	-	0.889	-	**0.902**	-	0.718	0.948	-	-	**0.982**	-	0.679	-	-	-	**0.679**	-	-	0.864	0.594	-	**0.861**	-	0.903
Lights and Motorcycles	35	0	63	0	**98**	-	87	815	0	0	**902**	-	56	0	0	0	**56**	-	0	1932	37	0	**1969**	-	3025
% Lights and Motorcycles	92.1%	0%	98.4%	0%	**96.1%**	-	97.8%	96.7%	0%	0%	**96.8%**	-	98.2%	0%	0%	0%	**96.6%**	-	0%	97.7%	97.4%	0%	**97.7%**	-	97.4%
Heavy	2	0	1	0	**3**	-	2	27	0	0	**29**	-	1	0	0	0	**1**	-	0	44	1	0	**45**	-	78
% Heavy	5.3%	0%	1.6%	0%	**2.9%**	-	2.2%	3.2%	0%	0%	**3.1%**	-	1.8%	0%	0%	0%	**1.7%**	-	0%	2.2%	2.6%	0%	**2.2%**	-	2.5%
Bicycles on Road	1	0	0	0	**1**	-	0	1	0	0	**1**	-	0	0	1	0	**1**	-	0	1	0	0	**1**	-	4
% Bicycles on Road	2.6%	0%	0%	0%	**1.0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	100%	0%	**1.7%**	-	0%	0.1%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	10	-	-	-	-	-	14	-	-	-	-	-	16	-	-	-	-	-	8	
% Pedestrians	-	-	-	-	-	90.9%	-	-	-	-	-	100%	-	-	-	-	-	80.0%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	9.1%	-	-	-	-	-	0%	-	-	-	-	-	20.0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5669827 - Carling Ave @ entrance to Lincoln ... - TMC
Tue Jul 16, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212106, Location: 45.363663, -75.785531

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



5669827 - Carling Ave @ entrance to Lincoln ... - TMC

Tue Jul 16, 2024
Midday Peak (12 PM - 1 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212106, Location: 45.363663, -75.785531

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg	North						East						South						West						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-07-16 12:00PM	25	0	21	0	**46**	2	39	236	0	0	**275**	1	7	0	0	0	**7**	0	0	197	21	0	**218**	4	**546**
12:15PM	18	0	19	0	**37**	4	43	223	0	0	**266**	3	10	0	0	0	**10**	3	0	204	16	0	**220**	3	**533**
12:30PM	31	0	45	0	**76**	2	44	219	0	0	**263**	8	10	0	0	0	**10**	3	0	212	18	0	**230**	0	**579**
12:45PM	23	0	20	0	**43**	3	35	244	0	0	**279**	4	10	1	0	0	**11**	4	0	178	22	0	**200**	2	**533**
Total	97	0	105	0	**202**	11	161	922	0	0	**1083**	16	37	1	0	0	**38**	10	0	791	77	0	**868**	9	**2191**
% Approach	48.0%	0%	52.0%	0%	**-**	-	14.9%	85.1%	0%	0%	**-**	-	97.4%	2.6%	0%	0%	**-**	-	0%	91.1%	8.9%	0%	**-**	-	-
% Total	4.4%	0%	4.8%	0%	**9.2%**	-	7.3%	42.1%	0%	0%	**49.4%**	-	1.7%	0%	0%	0%	**1.7%**	-	0%	36.1%	3.5%	0%	**39.6%**	-	-
PHF	0.782	-	0.583	-	**0.664**	-	0.915	0.945	-	-	**0.970**	-	0.925	0.250	-	-	**0.864**	-	-	0.932	0.864	-	**0.941**	-	0.945
Lights and Motorcycles	96	0	101	0	**197**	-	161	894	0	0	**1055**	-	37	1	0	0	**38**	-	0	755	75	0	**830**	-	2120
% Lights and Motorcycles	99.0%	0%	96.2%	0%	**97.5%**	-	100%	97.0%	0%	0%	**97.4%**	-	100%	100%	0%	0%	**100%**	-	0%	95.4%	97.4%	0%	**95.6%**	-	96.8%
Heavy	1	0	4	0	**5**	-	0	28	0	0	**28**	-	0	0	0	0	**0**	-	0	35	1	0	**36**	-	69
% Heavy	1.0%	0%	3.8%	0%	**2.5%**	-	0%	3.0%	0%	0%	**2.6%**	-	0%	0%	0%	0%	**0%**	-	0%	4.4%	1.3%	0%	**4.1%**	-	3.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	1	0	**2**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	1.3%	0%	**0.2%**	-	0.1%
Pedestrians	-	-	-	-	-	10	-	-	-	-	-	15	-	-	-	-	-	9	-	-	-	-	-	7	
% Pedestrians	-	-	-	-	-	90.9%	-	-	-	-	-	93.8%	-	-	-	-	-	90.0%	-	-	-	-	-	77.8%	-
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	2	
% Bicycles on Crosswalk	-	-	-	-	-	9.1%	-	-	-	-	-	6.3%	-	-	-	-	-	10.0%	-	-	-	-	-	22.2%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5669827 - Carling Ave @ entrance to Lincoln ... - TMC

Tue Jul 16, 2024

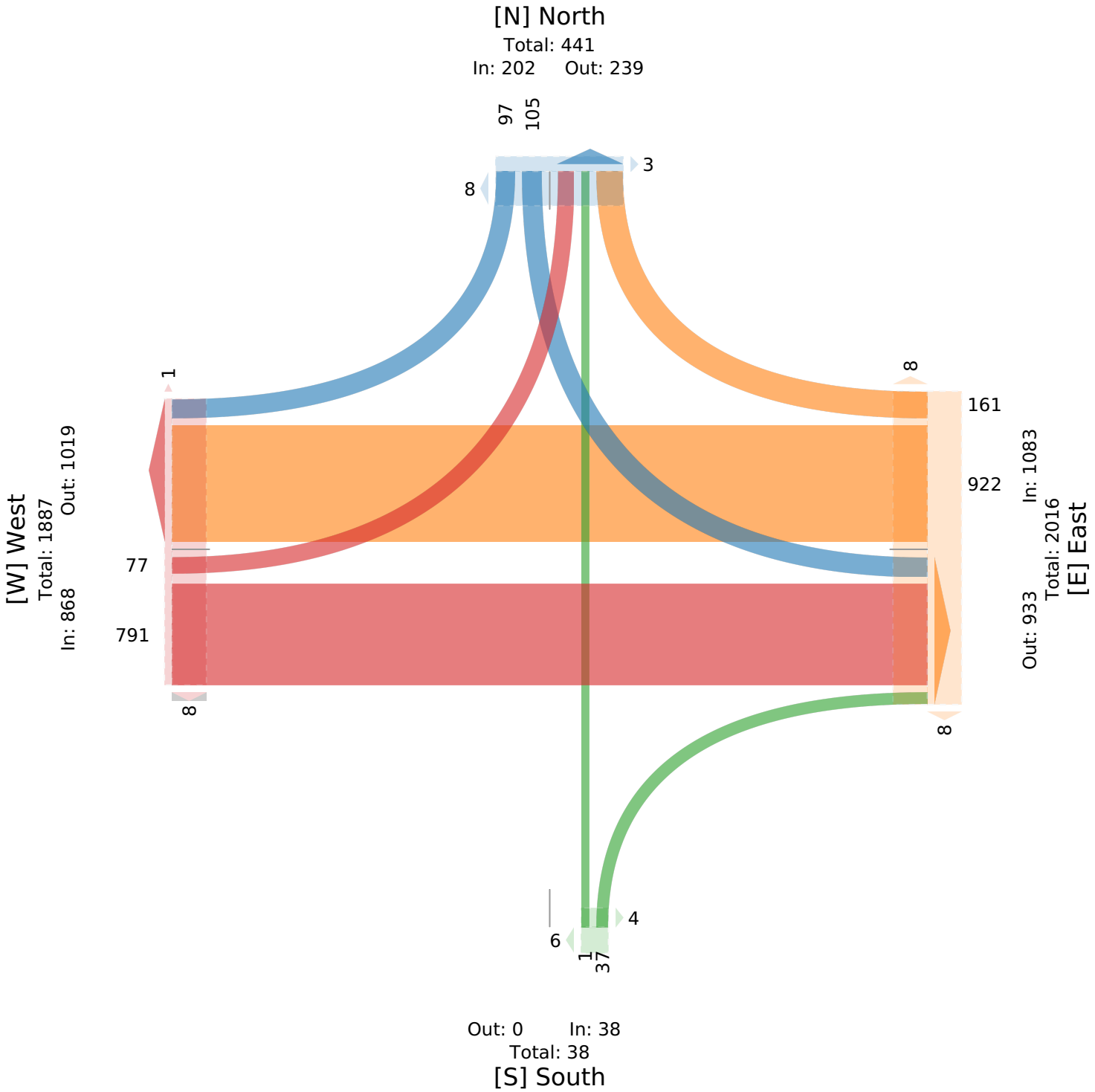
Midday Peak (12 PM - 1 PM)

All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1212106, Location: 45.363663, -75.785531

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



5669827 - Carling Ave @ entrance to Lincoln ... - TMC

Tue Jul 16, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212106, Location: 45.363663, -75.785531

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg / Direction	North Southbound						East Westbound						South Northbound						West Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-07-16 4:30PM	31	0	29	0	**60**	2	59	476	0	0	**535**	3	11	0	0	0	**11**	2	0	298	19	1	**318**	0	**924**
4:45PM	35	0	29	0	**64**	1	45	463	0	0	**508**	4	17	0	0	0	**17**	1	0	276	12	0	**288**	1	**877**
5:00PM	23	0	34	0	**57**	1	64	437	0	0	**501**	8	7	0	0	0	**7**	5	0	320	28	0	**348**	3	**913**
5:15PM	34	0	21	0	**55**	3	49	446	0	0	**495**	7	4	0	0	0	**4**	1	0	313	18	0	**331**	1	**885**
Total	123	0	113	0	**236**	7	217	1822	0	0	**2039**	22	39	0	0	0	**39**	9	0	1207	77	1	**1285**	5	**3599**
% Approach	52.1%	0%	47.9%	0%	**-**	-	10.6%	89.4%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	0%	93.9%	6.0%	0.1%	**-**	-	**-**
% Total	3.4%	0%	3.1%	0%	**6.6%**	-	6.0%	50.6%	0%	0%	**56.7%**	-	1.1%	0%	0%	0%	**1.1%**	-	0%	33.5%	2.1%	0%	**35.7%**	-	**-**
PHF	0.879	-	0.848	-	**0.918**	-	0.848	0.956	-	-	**0.952**	-	0.574	-	-	-	**0.574**	-	-	0.942	0.688	0.250	**0.922**	-	0.973
Lights and Motorcycles	123	0	112	0	**235**	-	217	1801	0	0	**2018**	-	39	0	0	0	**39**	-	0	1171	77	1	**1249**	-	3541
% Lights and Motorcycles	100%	0%	99.1%	0%	**99.6%**	-	100%	98.8%	0%	0%	**99.0%**	-	100%	0%	0%	0%	**100%**	-	0%	97.0%	100%	100%	**97.2%**	-	98.4%
Heavy	0	0	0	0	**0**	-	0	20	0	0	**20**	-	0	0	0	0	**0**	-	0	35	0	0	**35**	-	55
% Heavy	0%	0%	0%	0%	**0%**	-	0%	1.1%	0%	0%	**1.0%**	-	0%	0%	0%	0%	**0%**	-	0%	2.9%	0%	0%	**2.7%**	-	1.5%
Bicycles on Road	0	0	1	0	**1**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	3
% Bicycles on Road	0%	0%	0.9%	0%	**0.4%**	-	0%	0.1%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0.1%
Pedestrians	-	-	-	-	-	7	-	-	-	-	-	22	-	-	-	-	-	7	-	-	-	-	-	5	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	77.8%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	22.2%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5669827 - Carling Ave @ entrance to Lincoln ... - TMC
Tue Jul 16, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212106, Location: 45.363663, -75.785531

Provided by: City of Ottawa
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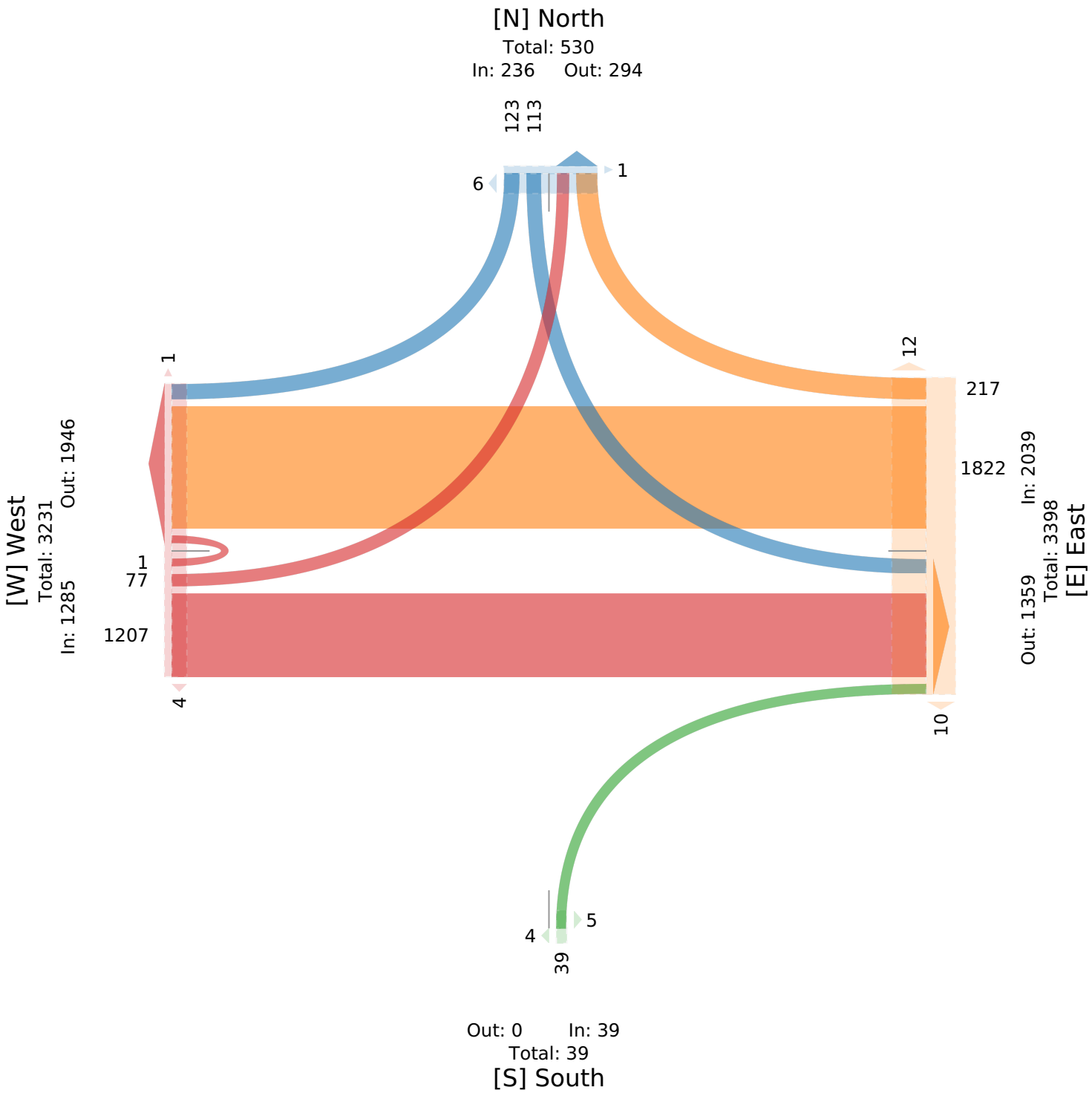

5669827 - Carling Ave @ Kichi Zibi Mikan On/... - TMC

Tue Jul 16, 2024
Full Length (7 AM-10 AM, 11:30 AM-1:30 PM, 3 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212117, Location: 45.364369, -75.783939

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg Direction	North Southbound			East Westbound				South Northbound			West Eastbound				
Time	R	App	Ped*	R	T	App	Ped*	R	App	Ped*	R	T	App	Ped*	Int
2024-07-16 7:00AM	136	**136**	0	2	43	**45**	0	3	**3**	2	153	155	**308**	0	**492**
7:15AM	114	**114**	0	1	70	**71**	0	4	**4**	1	164	208	**372**	0	**561**
7:30AM	138	**138**	0	5	82	**87**	1	5	**5**	0	231	241	**472**	0	**702**
7:45AM	114	**114**	0	0	85	**85**	0	3	**3**	3	209	266	**475**	0	**677**
Hourly Total	502	**502**	0	8	280	**288**	1	15	**15**	6	757	870	**1627**	0	**2432**
8:00AM	142	**142**	0	3	97	**100**	0	7	**7**	4	183	293	**476**	0	**725**
8:15AM	121	**121**	0	3	108	**111**	0	5	**5**	4	219	380	**599**	0	**836**
8:30AM	97	**97**	0	6	121	**127**	0	1	**1**	5	225	368	**593**	0	**818**
8:45AM	123	**123**	0	4	122	**126**	0	1	**1**	4	183	277	**460**	0	**710**
Hourly Total	483	**483**	0	16	448	**464**	0	14	**14**	17	810	1318	**2128**	0	**3089**
9:00AM	105	**105**	2	3	112	**115**	0	5	**5**	1	141	228	**369**	0	**594**
9:15AM	102	**102**	2	6	126	**132**	0	1	**1**	2	88	172	**260**	0	**495**
9:30AM	82	**82**	1	5	151	**156**	0	5	**5**	5	97	185	**282**	0	**525**
9:45AM	90	**90**	2	5	130	**135**	0	5	**5**	4	82	166	**248**	0	**478**
Hourly Total	379	**379**	7	19	519	**538**	0	16	**16**	12	408	751	**1159**	0	**2092**
11:30AM	88	**88**	4	3	181	**184**	1	3	**3**	5	51	151	**202**	0	**477**
11:45AM	67	**67**	2	2	183	**185**	1	2	**2**	4	55	159	**214**	0	**468**
Hourly Total	155	**155**	6	5	364	**369**	2	5	**5**	9	106	310	**416**	0	**945**
12:00PM	78	**78**	2	6	177	**183**	0	3	**3**	2	65	150	**215**	0	**479**
12:15PM	99	**99**	2	5	189	**194**	0	1	**1**	4	77	168	**245**	0	**539**
12:30PM	74	**74**	1	2	192	**194**	0	5	**5**	5	81	192	**273**	0	**546**
12:45PM	87	**87**	2	3	202	**205**	0	3	**3**	1	53	155	**208**	0	**503**
Hourly Total	338	**338**	7	16	760	**776**	0	12	**12**	12	276	665	**941**	0	**2067**
1:00PM	84	**84**	4	2	203	**205**	0	3	**3**	4	51	158	**209**	0	**501**
1:15PM	106	**106**	4	5	179	**184**	0	7	**7**	2	62	168	**230**	0	**527**
Hourly Total	190	**190**	8	7	382	**389**	0	10	**10**	6	113	326	**439**	0	**1028**
3:00PM	138	**138**	0	4	232	**236**	0	5	**5**	4	134	166	**300**	0	**679**
3:15PM	179	**179**	2	3	258	**261**	0	7	**7**	2	163	173	**336**	0	**783**
3:30PM	208	**208**	1	4	252	**256**	0	14	**14**	1	115	230	**345**	0	**823**
3:45PM	270	**270**	3	2	303	**305**	0	17	**17**	4	82	232	**314**	0	**906**
Hourly Total	795	**795**	6	13	1045	**1058**	0	43	**43**	11	494	801	**1295**	0	**3191**
4:00PM	216	**216**	0	4	308	**312**	0	13	**13**	4	77	200	**277**	0	**818**
4:15PM	205	**205**	4	2	284	**286**	0	23	**23**	3	100	206	**306**	0	**820**
4:30PM	218	**218**	3	3	317	**320**	0	29	**29**	2	87	243	**330**	0	**897**
4:45PM	213	**213**	4	4	301	**305**	0	21	**21**	0	107	229	**336**	0	**875**
Hourly Total	852	**852**	11	13	1210	**1223**	0	86	**86**	9	371	878	**1249**	0	**3410**
5:00PM	175	**175**	0	9	303	**312**	1	31	**31**	6	132	224	**356**	0	**874**
5:15PM	210	**210**	2	4	263	**267**	0	18	**18**	2	121	237	**358**	1	**853**
5:30PM	187	**187**	3	1	276	**277**	0	15	**15**	9	74	203	**277**	0	**756**
5:45PM	193	**193**	4	1	227	**228**	0	12	**12**	4	60	161	**221**	1	**654**
Hourly Total	765	**765**	9	15	1069	**1084**	1	76	**76**	21	387	825	**1212**	2	**3137**
Total	4459	**4459**	54	112	6077	**6189**	4	277	**277**	103	3722	6744	**10466**	2	**21391**
% Approach	100%	**-**	-	1.8%	98.2%	**-**	-	100%	**-**	-	35.6%	64.4%	**-**	-	-
% Total	20.8%	**20.8%**	-	0.5%	28.4%	**28.9%**	-	1.3%	**1.3%**	-	17.4%	31.5%	**48.9%**	-	-
Lights and Motorcycles	4445	**4445**	-	111	5868	**5979**	-	273	**273**	-	3693	6479	**10172**	-	20869
% Lights and Motorcycles	99.7%	**99.7%**	-	99.1%	96.6%	**96.6%**	-	98.6%	**98.6%**	-	99.2%	96.1%	**97.2%**	-	97.6%
Heavy	13	**13**	-	1	204	**205**	-	4	**4**	-	28	256	**284**	-	506
% Heavy	0.3%	**0.3%**	-	0.9%	3.4%	**3.3%**	-	1.4%	**1.4%**	-	0.8%	3.8%	**2.7%**	-	2.4%
Bicycles on Road	1	**1**	-	0	5	**5**	-	0	**0**	-	1	9	**10**	-	16
% Bicycles on Road	0%	**0%**	-	0%	0.1%	**0.1%**	-	0%	**0%**	-	0%	0.1%	**0.1%**	-	0.1%
Pedestrians	-	-	50	-	-	-	4	-	-	87	-	-	-	2	
% Pedestrians	-	-	92.6%	-	-	-	100%	-	-	84.5%	-	-	-	100%	-
Bicycles on Crosswalk	-	-	4	-	-	-	0	-	-	16	-	-	-	0	

Leg Direction	North Southbound			East Westbound				South Northbound			West Eastbound				
Time	R	**App**	Ped*	R	T	**App**	Ped*	R	**App**	Ped*	R	T	**App**	Ped*	**Int**
% Bicycles on Crosswalk	-	-	7.4%	-	-	-	0%	-	-	15.5%	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. R: Right, T: Thru

5669827 - Carling Ave @ Kichi Zibi Mikan On/... - TMC
Tue Jul 16, 2024
Full Length (7 AM-10 AM, 11:30 AM-1:30 PM, 3 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212117, Location: 45.364369, -75.783939

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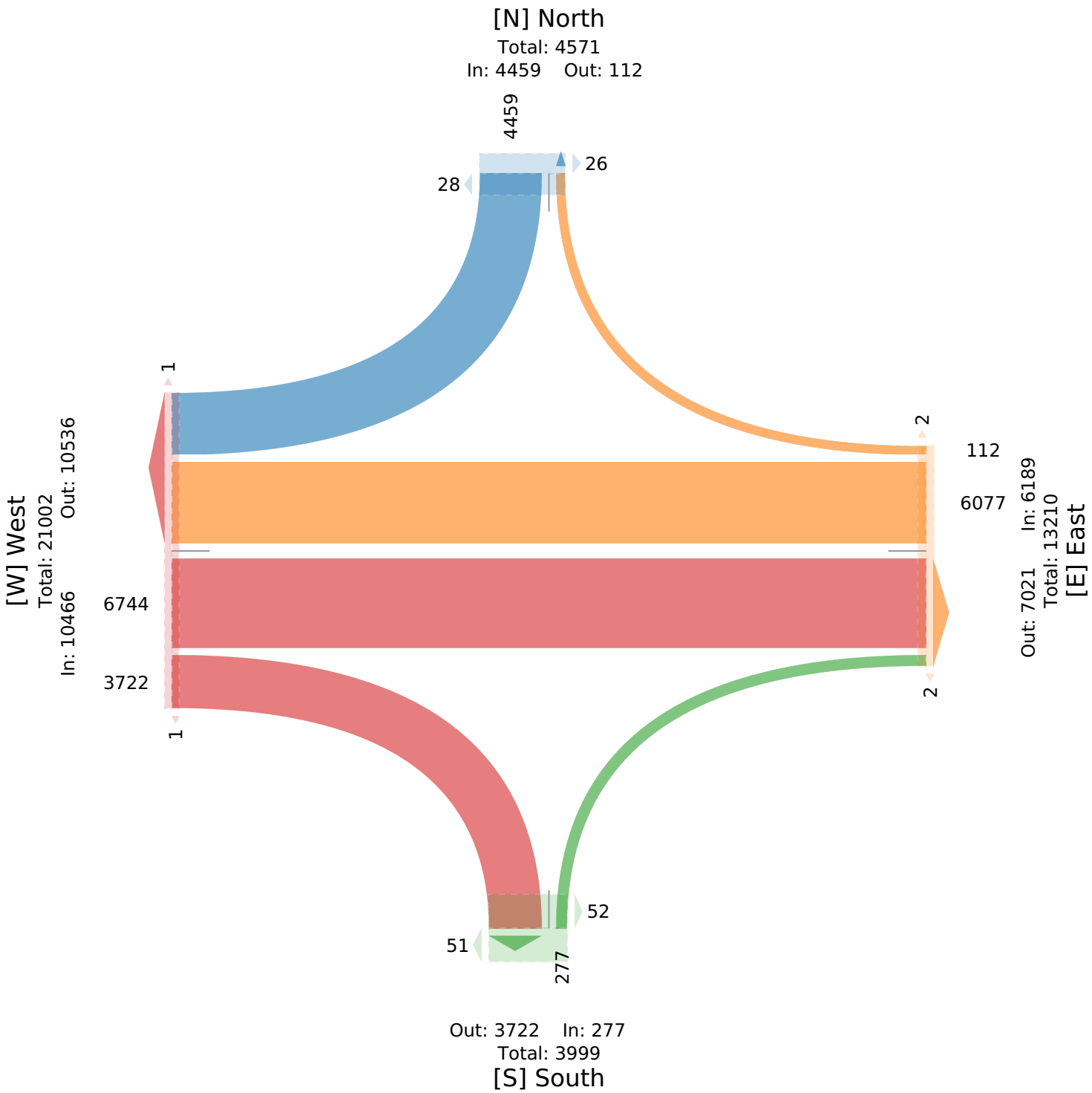


5669827 - Carling Ave @ Kichi Zibi Mikan On/... - TMC

Tue Jul 16, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212117, Location: 45.364369, -75.783939

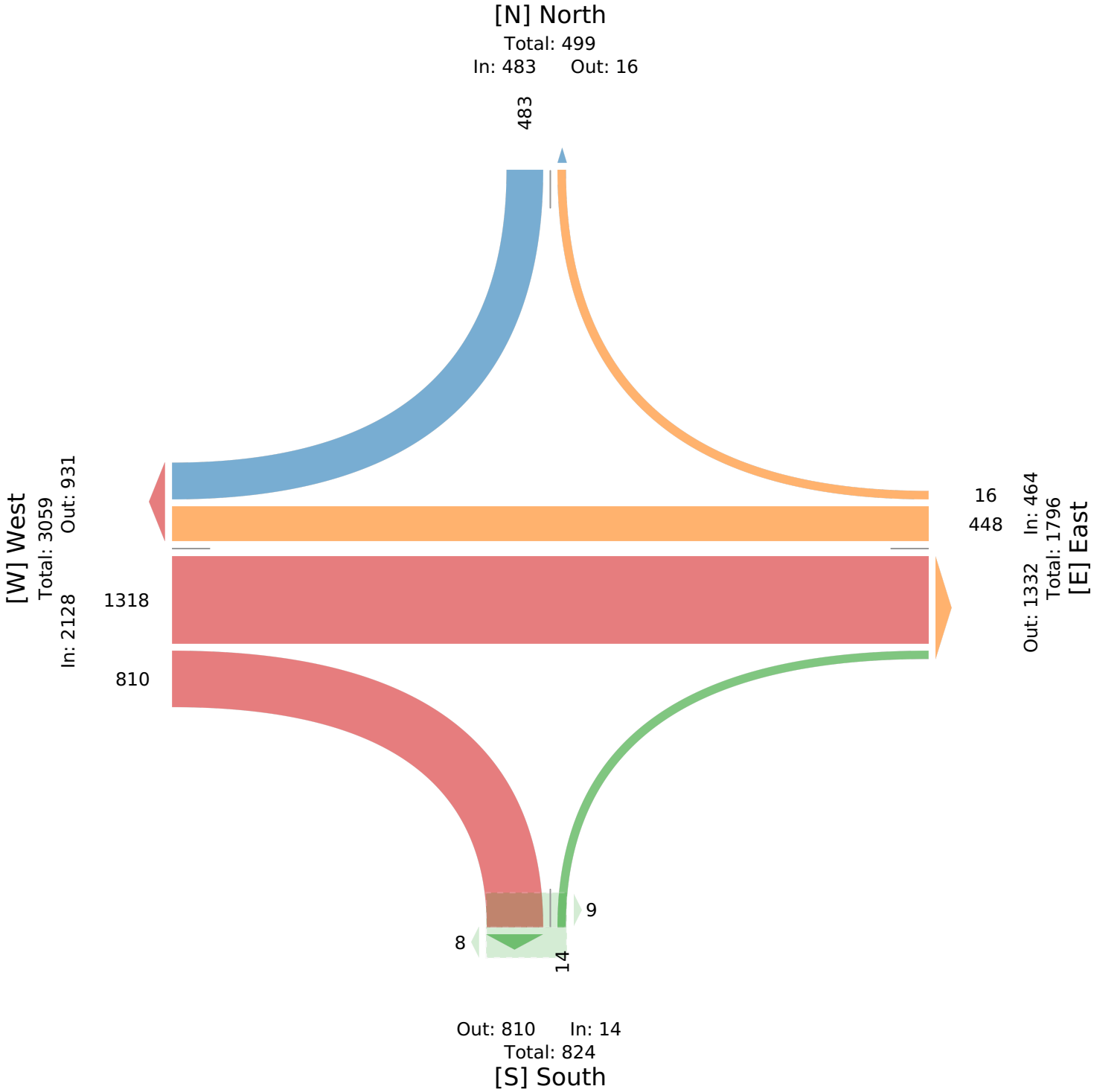
Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg Direction	North Southbound			East Westbound				South Northbound			West Eastbound				
Time	R	**App**	Ped*	R	T	**App**	Ped*	R	**App**	Ped*	R	T	**App**	Ped*	**Int**
2024-07-16 8:00AM	142	**142**	0	3	97	**100**	0	7	**7**	4	183	293	**476**	0	**725**
8:15AM	121	**121**	0	3	108	**111**	0	5	**5**	4	219	380	**599**	0	**836**
8:30AM	97	**97**	0	6	121	**127**	0	1	**1**	5	225	368	**593**	0	**818**
8:45AM	123	**123**	0	4	122	**126**	0	1	**1**	4	183	277	**460**	0	**710**
Total	483	**483**	0	16	448	**464**	0	14	**14**	17	810	1318	**2128**	0	**3089**
% Approach	100%	**-**	-	3.4%	96.6%	**-**	-	100%	**-**	-	38.1%	61.9%	**-**	-	**-**
% Total	15.6%	**15.6%**	-	0.5%	14.5%	**15.0%**	-	0.5%	**0.5%**	-	26.2%	42.7%	**68.9%**	-	**-**
PHF	0.850	**0.850**	-	0.667	0.918	**0.913**	-	0.500	**0.500**	-	0.900	0.867	**0.888**	-	0.924
Lights and Motorcycles	483	**483**	-	15	416	**431**	-	13	**13**	-	802	1280	**2082**	-	3009
% Lights and Motorcycles	100%	**100%**	-	93.8%	92.9%	**92.9%**	-	92.9%	**92.9%**	-	99.0%	97.1%	**97.8%**	-	97.4%
Heavy	0	**0**	-	1	32	**33**	-	1	**1**	-	8	38	**46**	-	80
% Heavy	0%	**0%**	-	6.3%	7.1%	**7.1%**	-	7.1%	**7.1%**	-	1.0%	2.9%	**2.2%**	-	2.6%
Bicycles on Road	0	**0**	-	0	0	**0**	-	0	**0**	-	0	0	**0**	-	0
% Bicycles on Road	0%	**0%**	-	0%	0%	**0%**	-	0%	**0%**	-	0%	0%	**0%**	-	0%
Pedestrians	-	-	0	-	-	-	0	-	-	12	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	70.6%	-	-	-	-	-
Bicycles on Crosswalk	-	-	0	-	-	-	0	-	-	5	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	29.4%	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. R: Right, T: Thru

5669827 - Carling Ave @ Kichi Zibi Mikan On/... - TMC
Tue Jul 16, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 1212117, Location: 45.364369, -75.783939

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



5669827 - Carling Ave @ Kichi Zibi Mikan On/... - TMC

Tue Jul 16, 2024
Midday Peak (12:15 PM - 1:15 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212117, Location: 45.364369, -75.783939

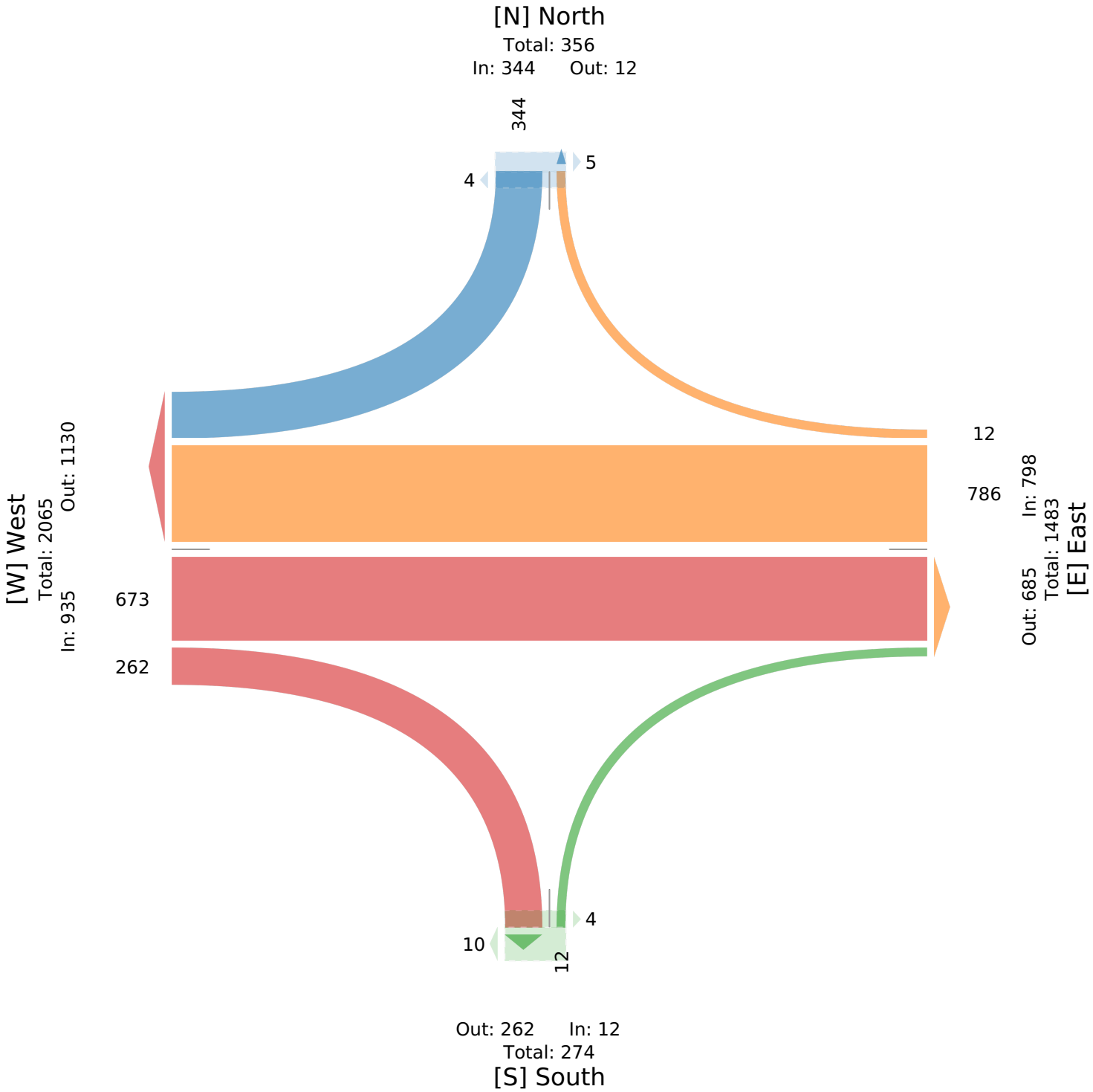
Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg Direction	North Southbound			East Westbound				South Northbound			West Eastbound				
Time	R	**App**	Ped*	R	T	**App**	Ped*	R	**App**	Ped*	R	T	**App**	Ped*	**Int**
2024-07-16 12:15PM	99	**99**	2	5	189	**194**	0	1	**1**	4	77	168	**245**	0	**539**
12:30PM	74	**74**	1	2	192	**194**	0	5	**5**	5	81	192	**273**	0	**546**
12:45PM	87	**87**	2	3	202	**205**	0	3	**3**	1	53	155	**208**	0	**503**
1:00PM	84	**84**	4	2	203	**205**	0	3	**3**	4	51	158	**209**	0	**501**
Total	344	**344**	9	12	786	**798**	0	12	**12**	14	262	673	**935**	0	**2089**
% Approach	100%	**-**	-	1.5%	98.5%	**-**	-	100%	**-**	-	28.0%	72.0%	**-**	-	-
% Total	16.5%	**16.5%**	-	0.6%	37.6%	**38.2%**	-	0.6%	**0.6%**	-	12.5%	32.2%	**44.8%**	-	-
PHF	0.869	**0.869**	-	0.600	0.966	**0.971**	-	0.600	**0.600**	-	0.809	0.874	**0.854**	-	0.955
Lights and Motorcycles	343	**343**	-	12	764	**776**	-	12	**12**	-	261	641	**902**	-	2033
% Lights and Motorcycles	99.7%	**99.7%**	-	100%	97.2%	**97.2%**	-	100%	**100%**	-	99.6%	95.2%	**96.5%**	-	97.3%
Heavy	1	**1**	-	0	20	**20**	-	0	**0**	-	1	30	**31**	-	52
% Heavy	0.3%	**0.3%**	-	0%	2.5%	**2.5%**	-	0%	**0%**	-	0.4%	4.5%	**3.3%**	-	2.5%
Bicycles on Road	0	**0**	-	0	2	**2**	-	0	**0**	-	0	2	**2**	-	4
% Bicycles on Road	0%	**0%**	-	0%	0.3%	**0.3%**	-	0%	**0%**	-	0%	0.3%	**0.2%**	-	0.2%
Pedestrians	-	-	8	-	-	-	0	-	-	13	-	-	-	0	
% Pedestrians	-	-	88.9%	-	-	-	-	-	-	92.9%	-	-	-	-	-
Bicycles on Crosswalk	-	-	1	-	-	-	0	-	-	1	-	-	-	0	
% Bicycles on Crosswalk	-	-	11.1%	-	-	-	-	-	-	7.1%	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. R: Right, T: Thru

5669827 - Carling Ave @ Kichi Zibi Mikan On/... - TMC
Tue Jul 16, 2024
Midday Peak (12:15 PM - 1:15 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212117, Location: 45.364369, -75.783939

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



5669827 - Carling Ave @ Kichi Zibi Mikan On/... - TMC

Tue Jul 16, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212117, Location: 45.364369, -75.783939

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

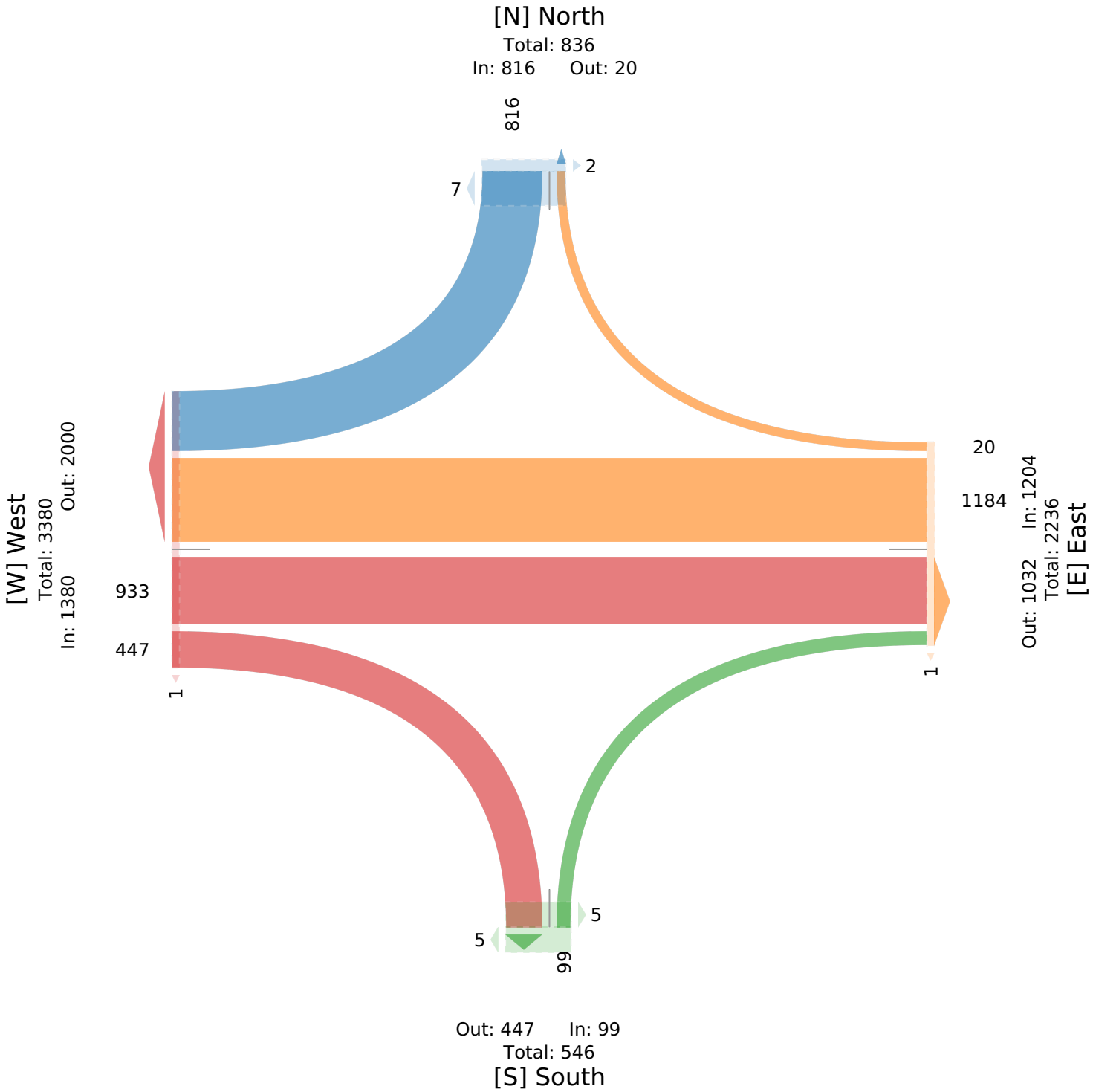
Leg Direction	North Southbound			East Westbound				South Northbound			West Eastbound				
Time	R	**App**	Ped*	R	T	**App**	Ped*	R	**App**	Ped*	R	T	**App**	Ped*	**Int**
2024-07-16 4:30PM	218	**218**	3	3	317	**320**	0	29	**29**	2	87	243	**330**	0	**897**
4:45PM	213	**213**	4	4	301	**305**	0	21	**21**	0	107	229	**336**	0	**875**
5:00PM	175	**175**	0	9	303	**312**	1	31	**31**	6	132	224	**356**	0	**874**
5:15PM	210	**210**	2	4	263	**267**	0	18	**18**	2	121	237	**358**	1	**853**
Total	816	**816**	9	20	1184	**1204**	1	99	**99**	10	447	933	**1380**	1	**3499**
% Approach	100%	**-**	-	1.7%	98.3%	**-**	-	100%	**-**	-	32.4%	67.6%	**-**	-	-
% Total	23.3%	**23.3%**	-	0.6%	33.8%	**34.4%**	-	2.8%	**2.8%**	-	12.8%	26.7%	**39.4%**	-	-
PHF	0.936	**0.936**	-	0.556	0.933	**0.940**	-	0.798	**0.798**	-	0.847	0.958	**0.965**	-	0.974
Lights and Motorcycles	815	**815**	-	20	1166	**1186**	-	98	**98**	-	443	900	**1343**	-	3442
% Lights and Motorcycles	99.9%	**99.9%**	-	100%	98.5%	**98.5%**	-	99.0%	**99.0%**	-	99.1%	96.5%	**97.3%**	-	98.4%
Heavy	1	**1**	-	0	17	**17**	-	1	**1**	-	4	31	**35**	-	54
% Heavy	0.1%	**0.1%**	-	0%	1.4%	**1.4%**	-	1.0%	**1.0%**	-	0.9%	3.3%	**2.5%**	-	1.5%
Bicycles on Road	0	**0**	-	0	1	**1**	-	0	**0**	-	0	2	**2**	-	3
% Bicycles on Road	0%	**0%**	-	0%	0.1%	**0.1%**	-	0%	**0%**	-	0%	0.2%	**0.1%**	-	0.1%
Pedestrians	-	-	9	-	-	-	1	-	-	7	-	-	-	1	
% Pedestrians	-	-	100%	-	-	-	100%	-	-	70.0%	-	-	-	100%	-
Bicycles on Crosswalk	-	-	0	-	-	-	0	-	-	3	-	-	-	0	
% Bicycles on Crosswalk	-	-	0%	-	-	-	0%	-	-	30.0%	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. R: Right, T: Thru

5669827 - Carling Ave @ Kichi Zibi Mikan On/... - TMC

Tue Jul 16, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212117, Location: 45.364369, -75.783939

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



5669827 - Carling Ave and Croydon Ave - Jul ... - TMC

Tue Jul 16, 2024
Full Length (7 AM-10 AM, 11:30 AM-1:30 PM, 3 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212099, Location: 45.36305, -75.78698

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg Direction	North Southbound					East Westbound					West Eastbound					
Time	R	L	U	App	Ped*	R	T	U	App	Ped*	T	L	U	App	Ped*	Int
2024-07-16 7:00AM	4	23	0	**27**	2	9	157	0	**166**	0	253	9	2	**264**	0	**457**
7:15AM	0	34	0	**34**	6	12	137	0	**149**	0	319	4	1	**324**	6	**507**
7:30AM	2	26	0	**28**	3	15	179	0	**194**	0	436	9	0	**445**	3	**667**
7:45AM	7	29	0	**36**	3	7	161	0	**168**	0	429	13	1	**443**	3	**647**
Hourly Total	13	112	0	**125**	14	43	634	0	**677**	0	1437	35	4	**1476**	12	**2278**
8:00AM	2	46	0	**48**	4	13	207	0	**220**	0	428	10	2	**440**	4	**708**
8:15AM	2	43	0	**45**	7	17	185	0	**202**	0	511	5	2	**518**	0	**765**
8:30AM	3	42	0	**45**	0	16	184	0	**200**	0	529	10	1	**540**	2	**785**
8:45AM	5	49	0	**54**	4	13	205	0	**218**	0	397	11	4	**412**	4	**684**
Hourly Total	12	180	0	**192**	15	59	781	0	**840**	0	1865	36	9	**1910**	10	**2942**
9:00AM	1	48	0	**49**	7	19	187	0	**206**	0	313	13	1	**327**	4	**582**
9:15AM	5	30	0	**35**	7	25	200	0	**225**	0	221	9	1	**231**	4	**491**
9:30AM	3	42	0	**45**	4	19	171	0	**190**	0	204	8	3	**215**	1	**450**
9:45AM	9	40	0	**49**	7	25	165	0	**190**	0	181	21	2	**204**	10	**443**
Hourly Total	18	160	0	**178**	25	88	723	0	**811**	0	919	51	7	**977**	19	**1966**
11:30AM	8	35	0	**43**	5	25	203	0	**228**	0	150	17	1	**168**	2	**439**
11:45AM	8	36	0	**44**	5	22	182	0	**204**	0	160	13	0	**173**	3	**421**
Hourly Total	16	71	0	**87**	10	47	385	0	**432**	0	310	30	1	**341**	5	**860**
12:00PM	8	36	0	**44**	6	24	214	0	**238**	0	180	12	0	**192**	2	**474**
12:15PM	15	39	0	**54**	5	27	195	0	**222**	0	187	14	4	**205**	2	**481**
12:30PM	27	59	0	**86**	2	27	216	0	**243**	0	182	5	1	**188**	5	**517**
12:45PM	10	44	0	**54**	8	26	231	0	**257**	0	161	9	0	**170**	0	**481**
Hourly Total	60	178	0	**238**	21	104	856	0	**960**	0	710	40	5	**755**	9	**1953**
1:00PM	13	32	0	**45**	2	35	225	0	**260**	0	166	12	1	**179**	2	**484**
1:15PM	6	44	0	**50**	3	19	215	0	**234**	0	169	10	4	**183**	2	**467**
Hourly Total	19	76	0	**95**	5	54	440	0	**494**	0	335	22	5	**362**	4	**951**
3:00PM	8	33	0	**41**	2	26	281	0	**307**	0	223	8	0	**231**	4	**579**
3:15PM	2	35	0	**37**	1	24	363	0	**387**	0	296	7	1	**304**	3	**728**
3:30PM	13	32	0	**45**	7	21	388	0	**409**	0	300	4	1	**305**	3	**759**
3:45PM	4	36	0	**40**	6	24	467	0	**491**	0	269	8	3	**280**	5	**811**
Hourly Total	27	136	0	**163**	16	95	1499	0	**1594**	0	1088	27	5	**1120**	15	**2877**
4:00PM	7	40	0	**47**	5	33	410	0	**443**	0	243	10	1	**254**	1	**744**
4:15PM	3	39	0	**42**	5	27	373	0	**400**	0	259	8	1	**268**	2	**710**
4:30PM	9	46	0	**55**	3	35	430	0	**465**	0	278	5	0	**283**	2	**803**
4:45PM	4	44	0	**48**	8	34	427	1	**462**	0	261	11	2	**274**	1	**784**
Hourly Total	23	169	0	**192**	21	129	1640	1	**1770**	0	1041	34	4	**1079**	6	**3041**
5:00PM	7	48	0	**55**	9	27	391	0	**418**	0	296	10	1	**307**	12	**780**
5:15PM	11	39	0	**50**	8	27	431	0	**458**	0	275	14	1	**290**	7	**798**
5:30PM	5	44	0	**49**	7	32	389	1	**422**	0	239	7	1	**247**	5	**718**
5:45PM	5	36	0	**41**	7	27	383	1	**411**	0	178	11	1	**190**	6	**642**
Hourly Total	28	167	0	**195**	31	113	1594	2	**1709**	0	988	42	4	**1034**	30	**2938**
Total	216	1249	0	**1465**	158	732	8552	3	**9287**	0	8693	317	44	**9054**	110	**19806**
% Approach	14.7%	85.3%	0%	**-**	-	7.9%	92.1%	0%	**-**	-	96.0%	3.5%	0.5%	**-**	-	-
% Total	1.1%	6.3%	0%	**7.4%**	-	3.7%	43.2%	0%	**46.9%**	-	43.9%	1.6%	0.2%	**45.7%**	-	-
Lights and Motorcycles	210	1164	0	**1374**	-	661	8407	3	**9071**	-	8498	307	43	**8848**	-	19293
% Lights and Motorcycles	97.2%	93.2%	0%	**93.8%**	-	90.3%	98.3%	100%	**97.7%**	-	97.8%	96.8%	97.7%	**97.7%**	-	97.4%
Heavy	6	82	0	**88**	-	68	140	0	**208**	-	190	10	1	**201**	-	497
% Heavy	2.8%	6.6%	0%	**6.0%**	-	9.3%	1.6%	0%	**2.2%**	-	2.2%	3.2%	2.3%	**2.2%**	-	2.5%
Bicycles on Road	0	3	0	**3**	-	3	5	0	**8**	-	5	0	0	**5**	-	16
% Bicycles on Road	0%	0.2%	0%	**0.2%**	-	0.4%	0.1%	0%	**0.1%**	-	0.1%	0%	0%	**0.1%**	-	0.1%
Pedestrians	-	-	-	-	153	-	-	-	-	0	-	-	-	-	105	
% Pedestrians	-	-	-	-	96.8%	-	-	-	-	-	-	-	-	-	95.5%	-
Bicycles on Crosswalk	-	-	-	-	5	-	-	-	-	0	-	-	-	-	5	

Leg Direction	North Southbound					East Westbound					West Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
% Bicycles on Crosswalk	-	-	-	-	3.2%	-	-	-	-	-	-	-	-	-	4.5%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5669827 - Carling Ave and Croydon Ave - Jul ... - TMC

Tue Jul 16, 2024
Full Length (7 AM-10 AM, 11:30 AM-1:30 PM, 3 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212099, Location: 45.36305, -75.78698

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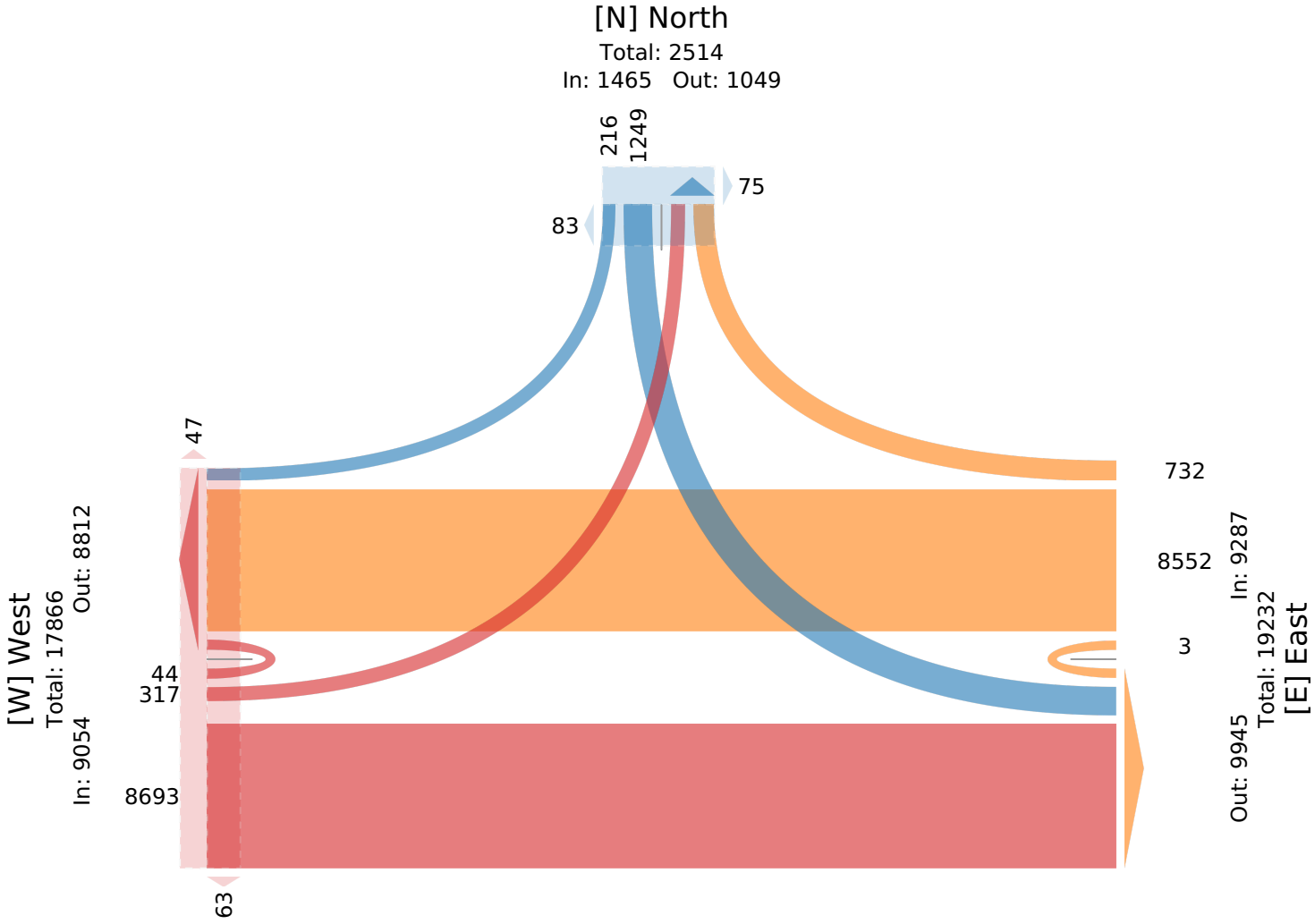


5669827 - Carling Ave and Croydon Ave - Jul ... - TMC

Tue Jul 16, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212099, Location: 45.36305, -75.78698

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

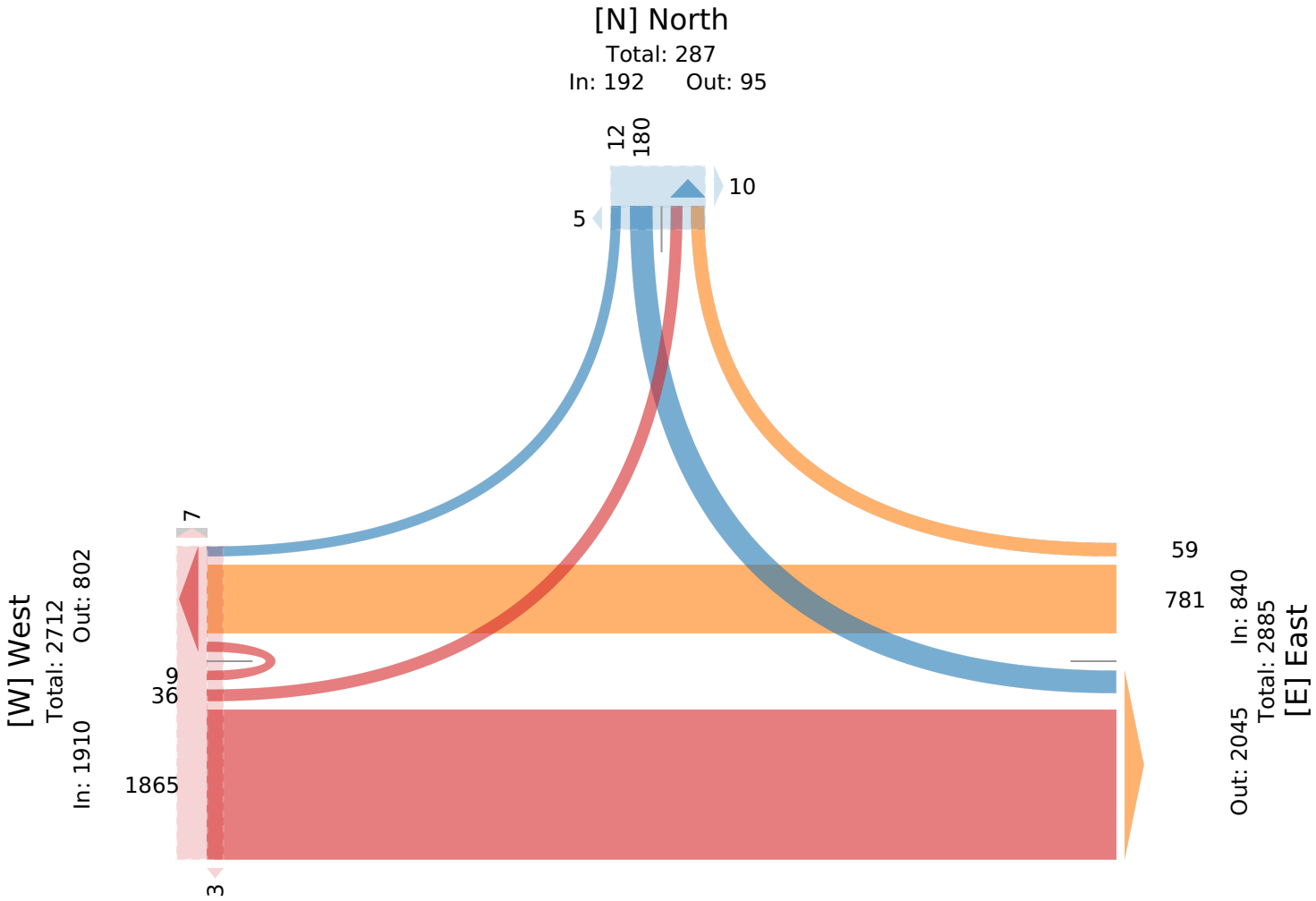
Leg Direction	North Southbound					East Westbound					West Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
2024-07-16 8:00AM	2	46	0	**48**	4	13	207	0	**220**	0	428	10	2	**440**	4	**708**
8:15AM	2	43	0	**45**	7	17	185	0	**202**	0	511	5	2	**518**	0	**765**
8:30AM	3	42	0	**45**	0	16	184	0	**200**	0	529	10	1	**540**	2	**785**
8:45AM	5	49	0	**54**	4	13	205	0	**218**	0	397	11	4	**412**	4	**684**
Total	12	180	0	**192**	15	59	781	0	**840**	0	1865	36	9	**1910**	10	**2942**
% Approach	6.3%	93.8%	0%	**-**	-	7.0%	93.0%	0%	**-**	-	97.6%	1.9%	0.5%	**-**	-	**-**
% Total	0.4%	6.1%	0%	**6.5%**	-	2.0%	26.5%	0%	**28.6%**	-	63.4%	1.2%	0.3%	**64.9%**	-	**-**
PHF	0.600	0.913	-	**0.884**	-	0.868	0.941	-	**0.952**	-	0.881	0.818	0.563	**0.884**	-	0.937
Lights and Motorcycles	12	167	0	**179**	-	51	760	0	**811**	-	1832	33	9	**1874**	-	2864
% Lights and Motorcycles	100%	92.8%	0%	**93.2%**	-	86.4%	97.3%	0%	**96.5%**	-	98.2%	91.7%	100%	**98.1%**	-	97.3%
Heavy	0	12	0	**12**	-	8	19	0	**27**	-	32	3	0	**35**	-	74
% Heavy	0%	6.7%	0%	**6.3%**	-	13.6%	2.4%	0%	**3.2%**	-	1.7%	8.3%	0%	**1.8%**	-	2.5%
Bicycles on Road	0	1	0	**1**	-	0	2	0	**2**	-	1	0	0	**1**	-	4
% Bicycles on Road	0%	0.6%	0%	**0.5%**	-	0%	0.3%	0%	**0.2%**	-	0.1%	0%	0%	**0.1%**	-	0.1%
Pedestrians	-	-	-	-	14	-	-	-	-	0	-	-	-	-	10	
% Pedestrians	-	-	-	-	93.3%	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	6.7%	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5669827 - Carling Ave and Croydon Ave - Jul ... - TMC

Tue Jul 16, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212099, Location: 45.36305, -75.78698

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



5669827 - Carling Ave and Croydon Ave - Jul ... - TMC

Tue Jul 16, 2024
Midday Peak (12:15 PM - 1:15 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212099, Location: 45.36305, -75.78698

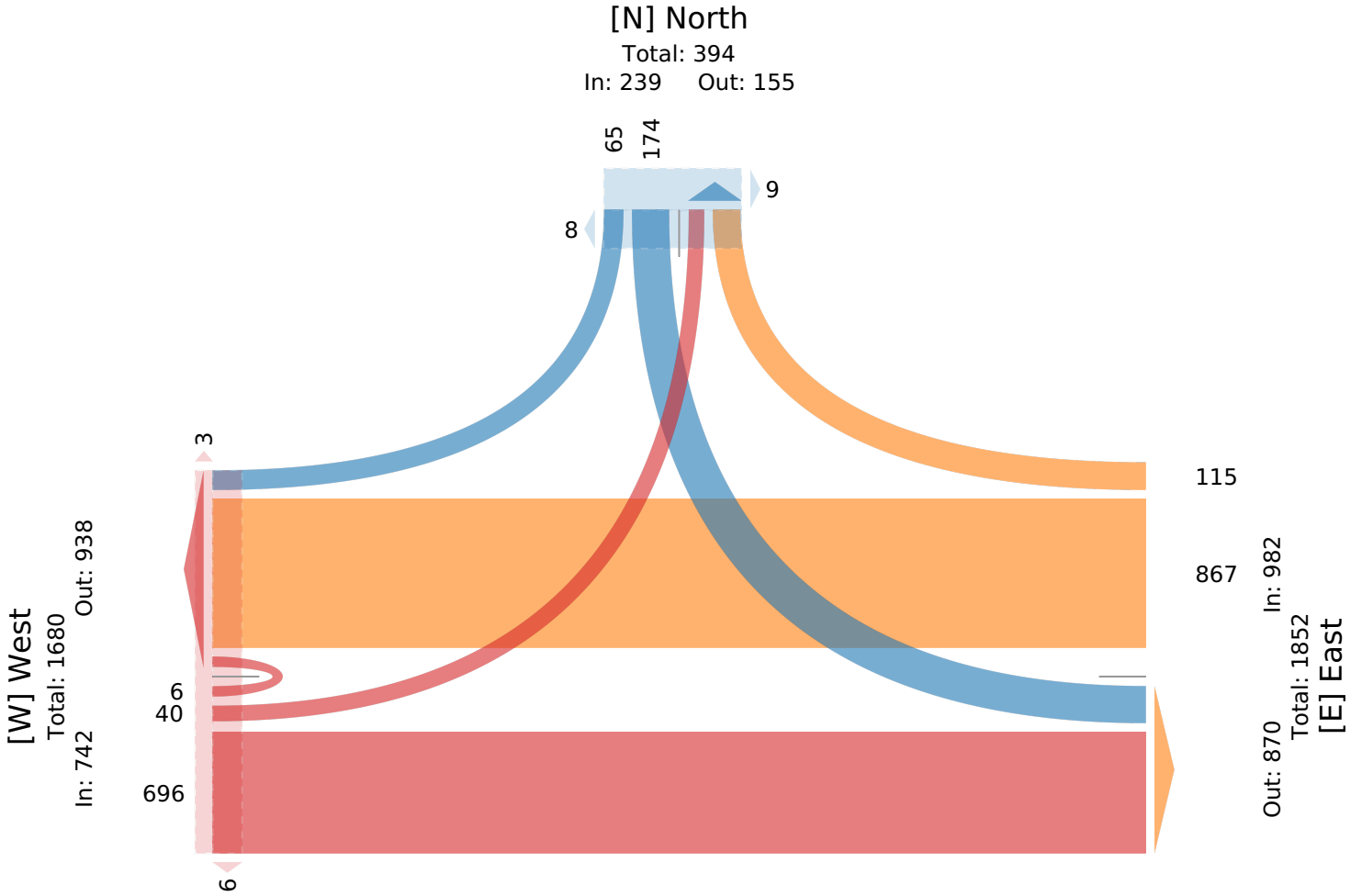
Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg Direction	North Southbound					East Westbound					West Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
2024-07-16 12:15PM	15	39	0	**54**	5	27	195	0	**222**	0	187	14	4	**205**	2	**481**
12:30PM	27	59	0	**86**	2	27	216	0	**243**	0	182	5	1	**188**	5	**517**
12:45PM	10	44	0	**54**	8	26	231	0	**257**	0	161	9	0	**170**	0	**481**
1:00PM	13	32	0	**45**	2	35	225	0	**260**	0	166	12	1	**179**	2	**484**
Total	65	174	0	**239**	17	115	867	0	**982**	0	696	40	6	**742**	9	**1963**
% Approach	27.2%	72.8%	0%	**-**	-	11.7%	88.3%	0%	**-**	-	93.8%	5.4%	0.8%	**-**	-	**-**
% Total	3.3%	8.9%	0%	**12.2%**	-	5.9%	44.2%	0%	**50.0%**	-	35.5%	2.0%	0.3%	**37.8%**	-	**-**
PHF	0.602	0.737	-	**0.695**	-	0.831	0.937	-	**0.945**	-	0.931	0.714	0.375	**0.906**	-	0.948
Lights and Motorcycles	64	164	0	**228**	-	103	854	0	**957**	-	669	38	6	**713**	-	1898
% Lights and Motorcycles	98.5%	94.3%	0%	**95.4%**	-	89.6%	98.5%	0%	**97.5%**	-	96.1%	95.0%	100%	**96.1%**	-	96.7%
Heavy	1	10	0	**11**	-	10	12	0	**22**	-	24	2	0	**26**	-	59
% Heavy	1.5%	5.7%	0%	**4.6%**	-	8.7%	1.4%	0%	**2.2%**	-	3.4%	5.0%	0%	**3.5%**	-	3.0%
Bicycles on Road	0	0	0	**0**	-	2	1	0	**3**	-	3	0	0	**3**	-	6
% Bicycles on Road	0%	0%	0%	**0%**	-	1.7%	0.1%	0%	**0.3%**	-	0.4%	0%	0%	**0.4%**	-	0.3%
Pedestrians	-	-	-	-	17	-	-	-	-	0	-	-	-	-	9	
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5669827 - Carling Ave and Croydon Ave - Jul ... - TMC
Tue Jul 16, 2024
Midday Peak (12:15 PM - 1:15 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212099, Location: 45.36305, -75.78698

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



5669827 - Carling Ave and Croydon Ave - Jul ... - TMC

Tue Jul 16, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212099, Location: 45.36305, -75.78698

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

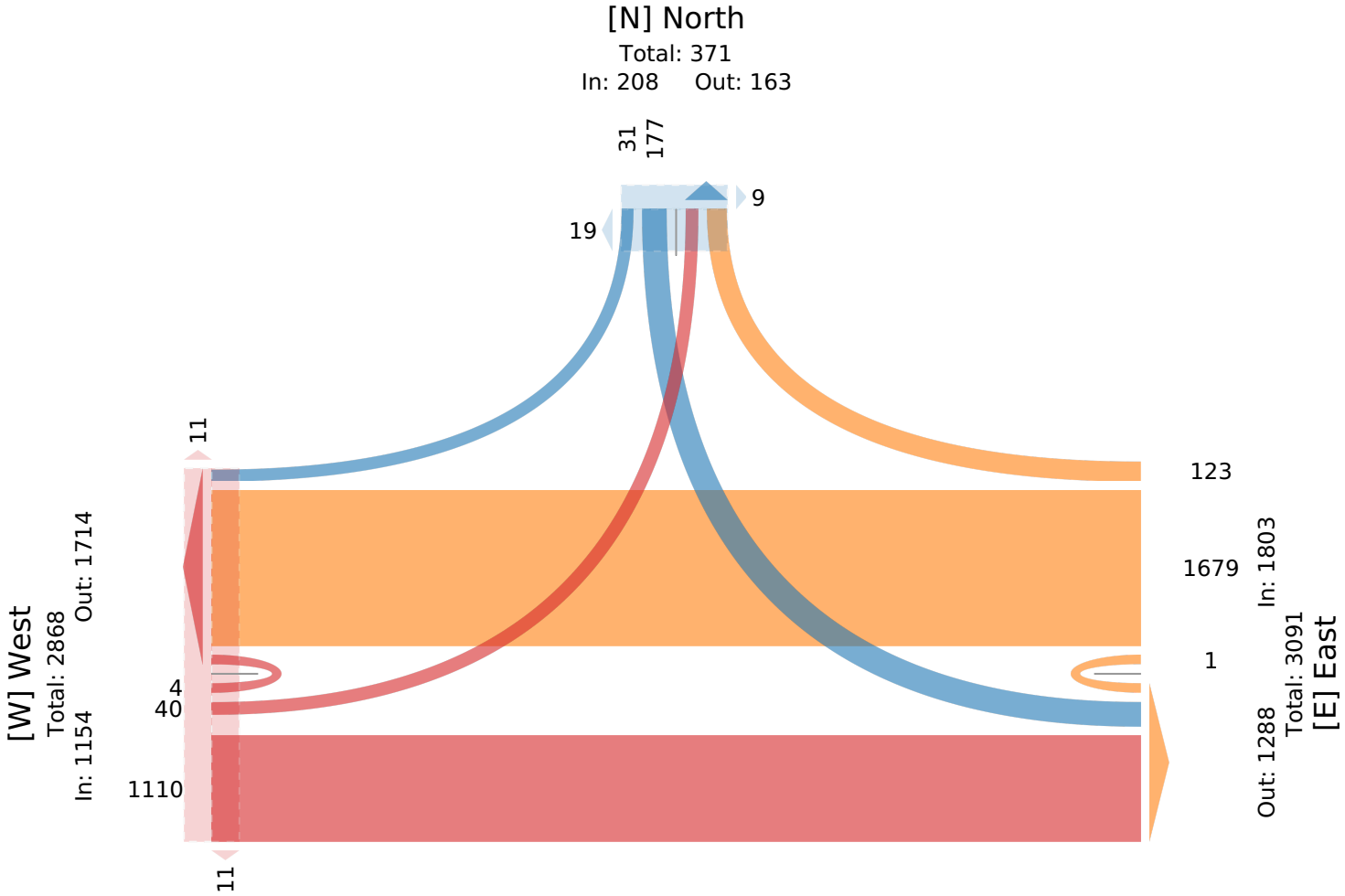
Leg Direction	North Southbound					East Westbound					West Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
2024-07-16 4:30PM	9	46	0	**55**	3	35	430	0	**465**	0	278	5	0	**283**	2	**803**
4:45PM	4	44	0	**48**	8	34	427	1	**462**	0	261	11	2	**274**	1	**784**
5:00PM	7	48	0	**55**	9	27	391	0	**418**	0	296	10	1	**307**	12	**780**
5:15PM	11	39	0	**50**	8	27	431	0	**458**	0	275	14	1	**290**	7	**798**
Total	31	177	0	**208**	28	123	1679	1	**1803**	0	1110	40	4	**1154**	22	**3165**
% Approach	14.9%	85.1%	0%	**-**	-	6.8%	93.1%	0.1%	**-**	-	96.2%	3.5%	0.3%	**-**	-	-
% Total	1.0%	5.6%	0%	**6.6%**	-	3.9%	53.0%	0%	**57.0%**	-	35.1%	1.3%	0.1%	**36.5%**	-	-
PHF	0.705	0.922	-	**0.945**	-	0.879	0.973	0.250	**0.969**	-	0.938	0.714	0.500	**0.940**	-	0.985
Lights and Motorcycles	31	169	0	**200**	-	118	1664	1	**1783**	-	1085	40	4	**1129**	-	3112
% Lights and Motorcycles	100%	95.5%	0%	**96.2%**	-	95.9%	99.1%	100%	**98.9%**	-	97.7%	100%	100%	**97.8%**	-	98.3%
Heavy	0	8	0	**8**	-	5	14	0	**19**	-	25	0	0	**25**	-	52
% Heavy	0%	4.5%	0%	**3.8%**	-	4.1%	0.8%	0%	**1.1%**	-	2.3%	0%	0%	**2.2%**	-	1.6%
Bicycles on Road	0	0	0	**0**	-	0	1	0	**1**	-	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0.1%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	28	-	-	-	-	0	-	-	-	-	21	
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	95.5%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	4.5%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5669827 - Carling Ave and Croydon Ave - Jul ... - TMC

Tue Jul 16, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212099, Location: 45.36305, -75.78698

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



5669827 - Carling Ave and Edgeworth Ave - Ju... - TMC

Tue Jul 16, 2024
Full Length (7 AM-10 AM, 11:30 AM-1:30 PM, 3 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212127, Location: 45.366398, -75.77928

Provided by: City of Ottawa
100 Constellation Dr, Nepean, ON, K2G 5J9, CA

Leg	North						East						South						West						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-07-16 7:00AM	1	0	2	0	**3**	4	2	38	1	12	**53**	3	4	0	5	0	**9**	4	2	145	5	2	**154**	1	**219**
7:15AM	1	0	5	0	**6**	1	0	58	0	8	**66**	2	7	0	3	0	**10**	2	7	190	12	3	**212**	1	**294**
7:30AM	5	0	1	0	**6**	2	2	70	4	7	**83**	1	6	0	7	0	**13**	2	7	230	9	0	**246**	0	**348**
7:45AM	1	0	9	0	**10**	7	3	73	3	13	**92**	5	2	0	3	0	**5**	3	7	253	10	2	**272**	0	**379**
Hourly Total	8	0	17	0	**25**	14	7	239	8	40	**294**	11	19	0	18	0	**37**	11	23	818	36	7	**884**	2	**1240**
8:00AM	6	1	7	0	**14**	0	1	77	3	7	**88**	8	3	3	12	0	**18**	5	12	284	5	4	**305**	1	**425**
8:15AM	1	0	16	0	**17**	2	6	105	4	8	**123**	0	6	0	7	0	**13**	4	8	335	7	0	**350**	2	**503**
8:30AM	2	0	8	0	**10**	0	2	110	10	13	**135**	3	4	0	8	0	**12**	4	13	362	8	0	**383**	0	**540**
8:45AM	4	0	8	0	**12**	4	3	125	7	13	**148**	1	5	2	10	0	**17**	1	6	250	10	0	**266**	1	**443**
Hourly Total	13	1	39	0	**53**	6	12	417	24	41	**494**	12	18	5	37	0	**60**	14	39	1231	30	4	**1304**	4	**1911**
9:00AM	2	0	5	0	**7**	3	2	112	3	17	**134**	0	4	1	7	0	**12**	1	10	196	17	1	**224**	2	**377**
9:15AM	6	2	7	0	**15**	6	6	110	9	6	**131**	5	3	1	11	0	**15**	2	6	161	8	0	**175**	3	**336**
9:30AM	8	1	12	0	**21**	1	2	124	7	11	**144**	1	3	1	10	0	**14**	6	6	162	9	3	**180**	4	**359**
9:45AM	7	0	7	0	**14**	4	2	118	10	17	**147**	0	4	0	6	0	**10**	8	9	147	17	2	**175**	1	**346**
Hourly Total	23	3	31	0	**57**	14	12	464	29	51	**556**	6	14	3	34	0	**51**	17	31	666	51	6	**754**	10	**1418**
11:30AM	8	0	7	0	**15**	7	2	165	11	16	**194**	3	9	1	5	0	**15**	9	5	139	7	1	**152**	4	**376**
11:45AM	2	0	6	0	**8**	1	1	162	11	14	**188**	3	7	0	13	0	**20**	2	7	139	9	1	**156**	1	**372**
Hourly Total	10	0	13	0	**23**	8	3	327	22	30	**382**	6	16	1	18	0	**35**	11	12	278	16	2	**308**	5	**748**
12:00PM	3	1	10	0	**14**	4	6	169	6	16	**197**	2	4	2	2	0	**8**	5	7	134	13	3	**157**	2	**376**
12:15PM	4	4	2	0	**10**	2	9	167	13	12	**201**	0	8	2	11	0	**21**	1	5	153	9	0	**167**	1	**399**
12:30PM	6	0	10	0	**16**	4	4	179	13	13	**209**	3	9	2	8	0	**19**	2	12	162	21	3	**198**	1	**442**
12:45PM	9	0	8	0	**17**	1	5	183	10	12	**210**	6	5	1	8	0	**14**	3	7	130	14	3	**154**	1	**395**
Hourly Total	22	5	30	0	**57**	11	24	698	42	53	**817**	11	26	7	29	0	**62**	11	31	579	57	9	**676**	5	**1612**
1:00PM	4	0	4	0	**8**	4	4	190	3	15	**212**	2	5	1	5	0	**11**	2	6	143	10	1	**160**	2	**391**
1:15PM	5	1	9	0	**15**	4	2	172	7	21	**202**	4	4	0	7	0	**11**	3	7	151	12	2	**172**	1	**400**
Hourly Total	9	1	13	0	**23**	8	6	362	10	36	**414**	6	9	1	12	0	**22**	5	13	294	22	3	**332**	3	**791**
3:00PM	11	0	8	0	**19**	1	2	207	8	22	**239**	6	8	1	12	0	**21**	6	8	138	8	0	**154**	3	**433**
3:15PM	7	1	7	0	**15**	4	1	250	9	12	**272**	7	7	0	1	0	**8**	2	5	157	10	3	**175**	2	**470**
3:30PM	2	0	4	0	**6**	3	3	233	12	24	**272**	3	4	0	11	0	**15**	3	8	198	8	1	**215**	2	**508**
3:45PM	5	2	7	0	**14**	5	2	288	19	29	**338**	4	10	0	9	0	**19**	4	15	222	13	1	**251**	3	**622**
Hourly Total	25	3	26	0	**54**	13	8	978	48	87	**1121**	20	29	1	33	0	**63**	15	36	715	39	5	**795**	10	**2033**
4:00PM	4	0	3	0	**7**	4	3	269	14	13	**299**	3	4	1	8	0	**13**	5	8	198	13	0	**219**	3	**538**
4:15PM	2	1	5	0	**8**	4	4	273	10	17	**304**	1	2	2	8	0	**12**	4	15	187	12	0	**214**	4	**538**
4:30PM	5	3	8	0	**16**	6	4	303	10	19	**336**	3	3	1	9	0	**13**	4	13	260	13	1	**287**	2	**652**
4:45PM	7	1	8	0	**16**	12	3	283	20	20	**326**	2	3	2	8	0	**13**	1	15	217	9	1	**242**	8	**597**
Hourly Total	18	5	24	0	**47**	26	14	1128	54	69	**1265**	9	12	6	33	0	**51**	14	51	862	47	2	**962**	17	**2325**
5:00PM	5	1	6	0	**12**	2	3	291	14	18	**326**	2	2	2	12	0	**16**	3	14	229	17	3	**263**	5	**617**
5:15PM	5	3	5	0	**13**	9	4	233	19	11	**267**	1	2	1	18	0	**21**	3	6	214	4	2	**226**	3	**527**
5:30PM	11	1	5	0	**17**	4	1	255	5	12	**273**	3	1	3	13	0	**17**	11	10	212	11	1	**234**	3	**541**
5:45PM	4	1	3	0	**8**	3	2	220	15	23	**260**	5	5	1	8	0	**14**	5	8	153	12	2	**175**	2	**457**
Hourly Total	25	6	19	0	**50**	18	10	999	53	64	**1126**	11	10	7	51	0	**68**	22	38	808	44	8	**898**	13	**2142**
Total	153	24	212	0	**389**	118	96	5612	290	471	**6469**	92	153	31	265	0	**449**	120	274	6251	342	46	**6913**	69	**14220**
% Approach	39.3%	6.2%	54.5%	0%	**-**	-	1.5%	86.8%	4.5%	7.3%	**-**	-	34.1%	6.9%	59.0%	0%	**-**	-	4.0%	90.4%	4.9%	0.7%	**-**	-	-
% Total	1.1%	0.2%	1.5%	0%	**2.7%**	-	0.7%	39.5%	2.0%	3.3%	**45.5%**	-	1.1%	0.2%	1.9%	0%	**3.2%**	-	1.9%	44.0%	2.4%	0.3%	**48.6%**	-	-
Lights and Motorcycles	148	23	206	0	**377**	-	90	5414	281	469	**6254**	-	146	25	263	0	**434**	-	265	6080	336	45	**6726**	-	13791
% Lights and Motorcycles	96.7%	95.8%	97.2%	0%	**96.9%**	-	93.8%	96.5%	96.9%	99.6%	**96.7%**	-	95.4%	80.6%	99.2%	0%	**96.7%**	-	96.7%	97.3%	98.2%	97.8%	**97.3%**	-	97.0%
Heavy	3	0	6	0	**9**	-	6	190	8	2	**206**	-	7	2	2	0	**11**	-	6	167	6	1	**180**	-	406
% Heavy	2.0%	0%	2.8%	0%	**2.3%**	-	6.3%	3.4%	2.8%	0.4%	**3.2%**	-	4.6%	6.5%	0.8%	0%	**2.4%**	-	2.2%	2.7%	1.8%	2.2%	**2.6%**	-	2.9%
Bicycles on Road	2	1	0	0	**3**	-	0	8	1	0	**9**	-	0	4	0	0	**4**	-	3	4	0	0	**7**	-	23
% Bicycles on Road	1.3%	4.2%	0%	0%	**0.8%**	-	0%	0.1%	0.3%	0%	**0.1%**	-	0%	12.9%	0%	0%	**0.9%**	-	1.1%	0.1%	0%	0%	**0.1%**	-	0.2%
Pedestrians	-	-	-	-	-	113	-	-	-	-	-	79	-	-	-	-	-	100	-	-	-	-	-	67	
% Pedestrians	-	-	-	-	-	95.8%	-	-	-	-	-	85.9%	-	-	-	-	-	83.3%	-	-	-	-	-	97.1%	-
Bicycles on Crosswalk	-	-	-	-	-	5	-	-	-	-	-	13	-	-	-	-	-	20	-	-	-	-	-	2	
% Bicycles on Crosswalk	-	-	-	-	-	4.2%	-	-	-	-	-	14.1%	-	-	-	-	-	16.7%	-	-	-	-	-	2.9%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5669827 - Carling Ave and Edgeworth Ave - Ju... - TMC

Tue Jul 16, 2024
Full Length (7 AM-10 AM, 11:30 AM-1:30 PM, 3 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212127, Location: 45.366398, -75.77928

Provided by: City of Ottawa
100 Constellation Dr,
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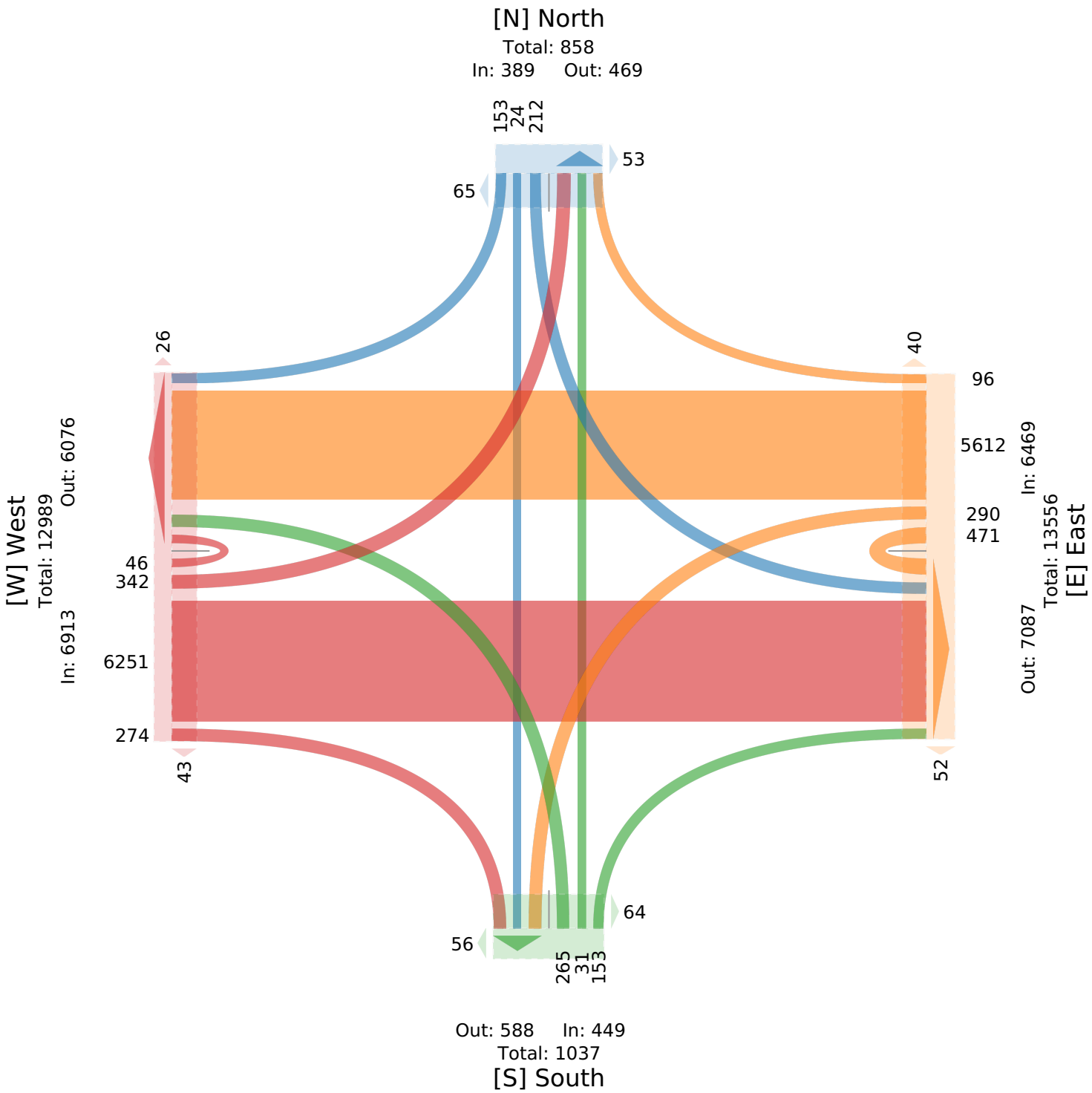


5669827 - Carling Ave and Edgeworth Ave - Ju... - TMC

Tue Jul 16, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212127, Location: 45.366398, -75.77928

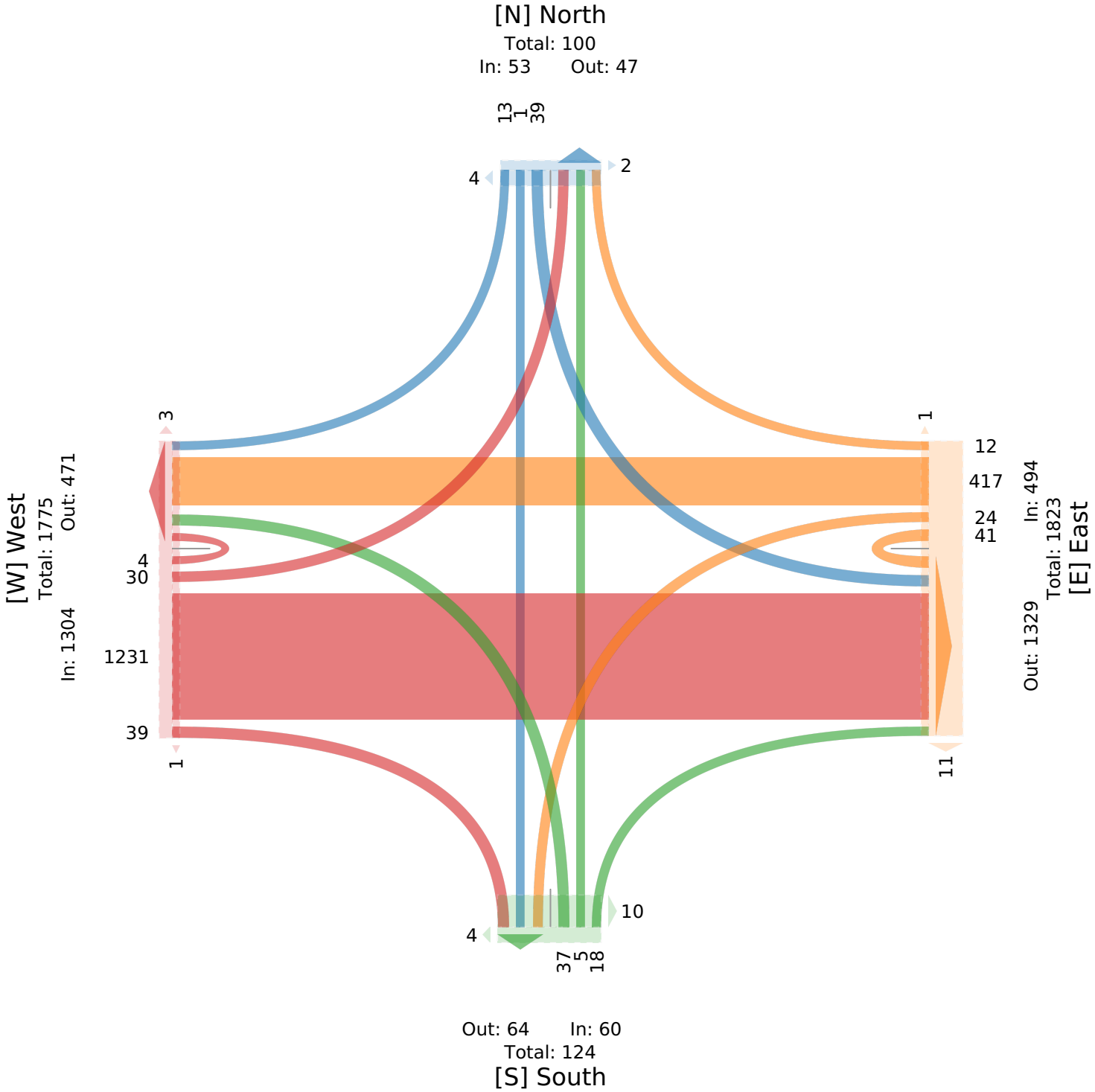
Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg	North						East						South						West						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-07-16 8:00AM	6	1	7	0	**14**	0	1	77	3	7	**88**	8	3	3	12	0	**18**	5	12	284	5	4	**305**	1	**425**
8:15AM	1	0	16	0	**17**	2	6	105	4	8	**123**	0	6	0	7	0	**13**	4	8	335	7	0	**350**	2	**503**
8:30AM	2	0	8	0	**10**	0	2	110	10	13	**135**	3	4	0	8	0	**12**	4	13	362	8	0	**383**	0	**540**
8:45AM	4	0	8	0	**12**	4	3	125	7	13	**148**	1	5	2	10	0	**17**	1	6	250	10	0	**266**	1	**443**
Total	13	1	39	0	**53**	6	12	417	24	41	**494**	12	18	5	37	0	**60**	14	39	1231	30	4	**1304**	4	**1911**
% Approach	24.5%	1.9%	73.6%	0%	**-**	-	2.4%	84.4%	4.9%	8.3%	**-**	-	30.0%	8.3%	61.7%	0%	**-**	-	3.0%	94.4%	2.3%	0.3%	**-**	-	-
% Total	0.7%	0.1%	2.0%	0%	**2.8%**	-	0.6%	21.8%	1.3%	2.1%	**25.9%**	-	0.9%	0.3%	1.9%	0%	**3.1%**	-	2.0%	64.4%	1.6%	0.2%	**68.2%**	-	-
PHF	0.542	0.250	0.609	-	**0.779**	-	0.500	0.830	0.600	0.788	**0.831**	-	0.750	0.250	0.771	-	**0.838**	-	0.771	0.850	0.750	0.250	**0.852**	-	0.883
Lights and Motorcycles	13	1	38	0	**52**	-	10	385	22	41	**458**	-	17	1	37	0	**55**	-	37	1196	30	4	**1267**	-	1832
% Lights and Motorcycles	100%	100%	97.4%	0%	**98.1%**	-	83.3%	92.3%	91.7%	100%	**92.7%**	-	94.4%	20.0%	100%	0%	**91.7%**	-	94.9%	97.2%	100%	100%	**97.2%**	-	95.9%
Heavy	0	0	1	0	**1**	-	2	30	2	0	**34**	-	1	1	0	0	**2**	-	0	35	0	0	**35**	-	72
% Heavy	0%	0%	2.6%	0%	**1.9%**	-	16.7%	7.2%	8.3%	0%	**6.9%**	-	5.6%	20.0%	0%	0%	**3.3%**	-	0%	2.8%	0%	0%	**2.7%**	-	3.8%
Bicycles on Road	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	3	0	0	**3**	-	2	0	0	0	**2**	-	7
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0.5%	0%	0%	**0.4%**	-	0%	60.0%	0%	0%	**5.0%**	-	5.1%	0%	0%	0%	**0.2%**	-	0.4%
Pedestrians	-	-	-	-	-	6	-	-	-	-	-	7	-	-	-	-	-	11	-	-	-	-	-	4	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	58.3%	-	-	-	-	-	78.6%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	5	-	-	-	-	-	3	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	41.7%	-	-	-	-	-	21.4%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5669827 - Carling Ave and Edgeworth Ave - Ju... - TMC
Tue Jul 16, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212127, Location: 45.366398, -75.77928

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



5669827 - Carling Ave and Edgeworth Ave - Ju... - TMC

Tue Jul 16, 2024
Midday Peak (12:15 PM - 1:15 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212127, Location: 45.366398, -75.77928

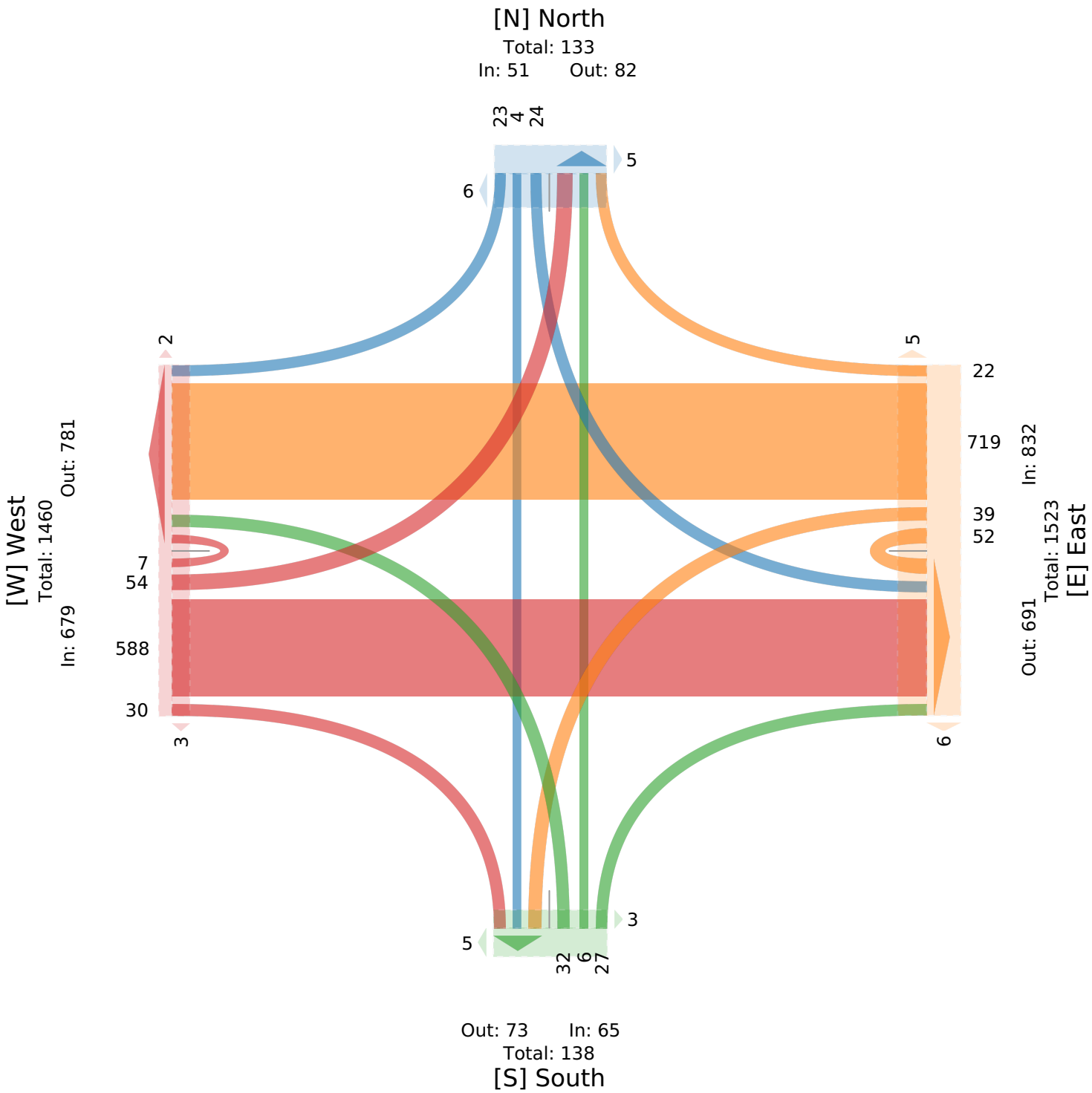
Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg	North						East						South						West						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-07-16 12:15PM	4	4	2	0	**10**	2	9	167	13	12	**201**	0	8	2	11	0	**21**	1	5	153	9	0	**167**	1	**399**
12:30PM	6	0	10	0	**16**	4	4	179	13	13	**209**	3	9	2	8	0	**19**	2	12	162	21	3	**198**	1	**442**
12:45PM	9	0	8	0	**17**	1	5	183	10	12	**210**	6	5	1	8	0	**14**	3	7	130	14	3	**154**	1	**395**
1:00PM	4	0	4	0	**8**	4	4	190	3	15	**212**	2	5	1	5	0	**11**	2	6	143	10	1	**160**	2	**391**
Total	23	4	24	0	**51**	11	22	719	39	52	**832**	11	27	6	32	0	**65**	8	30	588	54	7	**679**	5	**1627**
% Approach	45.1%	7.8%	47.1%	0%	**-**	-	2.6%	86.4%	4.7%	6.3%	**-**	-	41.5%	9.2%	49.2%	0%	**-**	-	4.4%	86.6%	8.0%	1.0%	**-**	-	-
% Total	1.4%	0.2%	1.5%	0%	**3.1%**	-	1.4%	44.2%	2.4%	3.2%	**51.1%**	-	1.7%	0.4%	2.0%	0%	**4.0%**	-	1.8%	36.1%	3.3%	0.4%	**41.7%**	-	-
PHF	0.688	0.250	0.600	-	**0.781**	-	0.611	0.946	0.750	0.867	**0.981**	-	0.750	0.625	0.727	-	**0.762**	-	0.625	0.906	0.643	0.583	**0.856**	-	0.921
Lights and Motorcycles	22	4	21	0	**47**	-	21	696	39	51	**807**	-	27	5	32	0	**64**	-	28	565	54	7	**654**	-	1572
% Lights and Motorcycles	95.7%	100%	87.5%	0%	**92.2%**	-	95.5%	96.8%	100%	98.1%	**97.0%**	-	100%	83.3%	100%	0%	**98.5%**	-	93.3%	96.1%	100%	100%	**96.3%**	-	96.6%
Heavy	0	0	3	0	**3**	-	1	23	0	1	**25**	-	0	0	0	0	**0**	-	2	22	0	0	**24**	-	52
% Heavy	0%	0%	12.5%	0%	**5.9%**	-	4.5%	3.2%	0%	1.9%	**3.0%**	-	0%	0%	0%	0%	**0%**	-	6.7%	3.7%	0%	0%	**3.5%**	-	3.2%
Bicycles on Road	1	0	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	1	0	0	**1**	-	3
% Bicycles on Road	4.3%	0%	0%	0%	**2.0%**	-	0%	0%	0%	0%	**0%**	-	0%	16.7%	0%	0%	**1.5%**	-	0%	0.2%	0%	0%	**0.1%**	-	0.2%
Pedestrians	-	-	-	-	-	11	-	-	-	-	-	10	-	-	-	-	-	8	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	90.9%	-	-	-	-	-	100%	-	-	-	-	-	60.0%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	9.1%	-	-	-	-	-	0%	-	-	-	-	-	40.0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5669827 - Carling Ave and Edgeworth Ave - Ju... - TMC
Tue Jul 16, 2024
Midday Peak (12:15 PM - 1:15 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212127, Location: 45.366398, -75.77928

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



5669827 - Carling Ave and Edgeworth Ave - Ju... - TMC

Tue Jul 16, 2024
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212127, Location: 45.366398, -75.77928

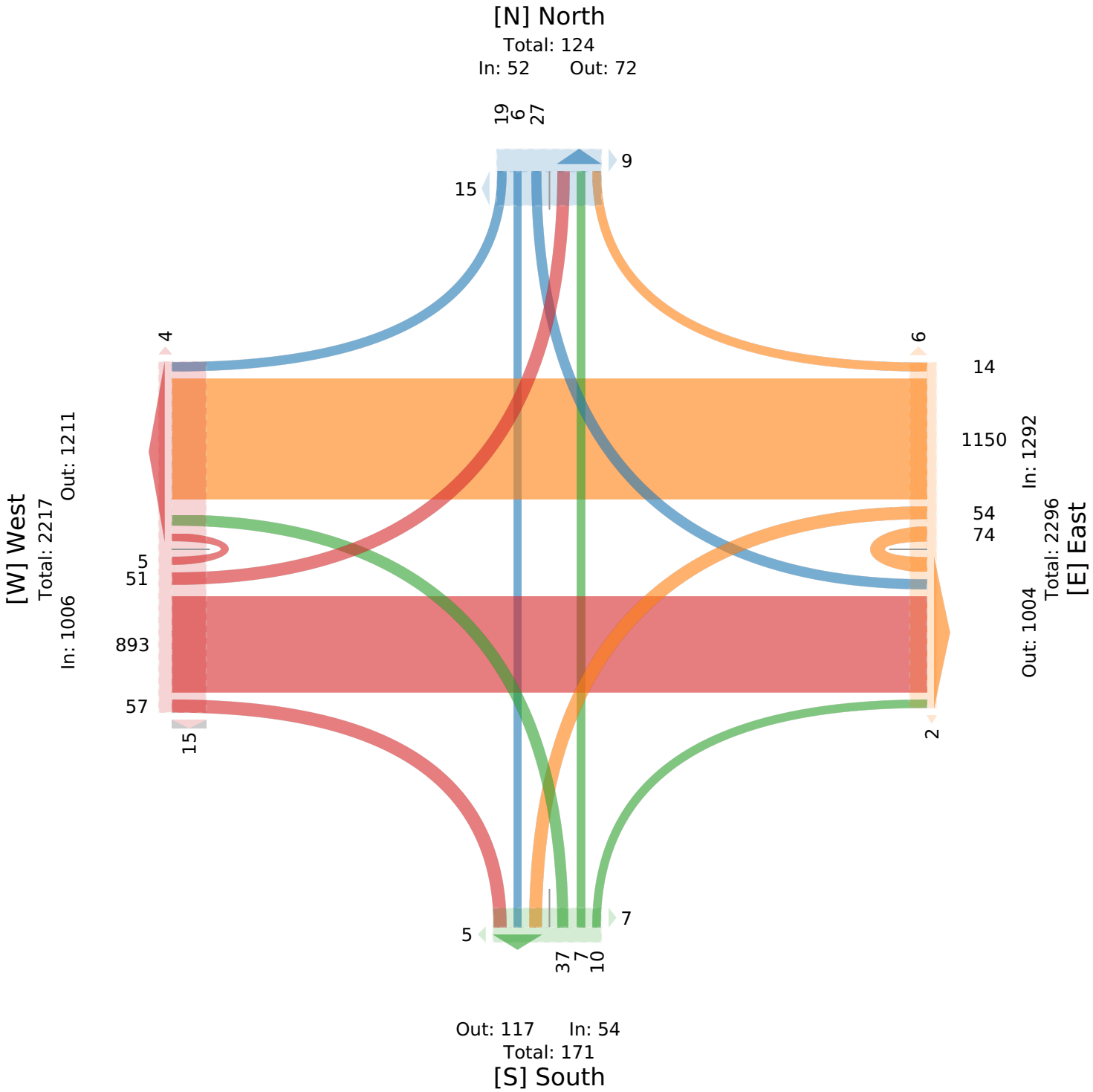
Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg	North						East						South						West						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-07-16 4:15PM	2	1	5	0	**8**	4	4	273	10	17	**304**	1	2	2	8	0	**12**	4	15	187	12	0	**214**	4	**538**
4:30PM	5	3	8	0	**16**	6	4	303	10	19	**336**	3	3	1	9	0	**13**	4	13	260	13	1	**287**	2	**652**
4:45PM	7	1	8	0	**16**	12	3	283	20	20	**326**	2	3	2	8	0	**13**	1	15	217	9	1	**242**	8	**597**
5:00PM	5	1	6	0	**12**	2	3	291	14	18	**326**	2	2	2	12	0	**16**	3	14	229	17	3	**263**	5	**617**
Total	19	6	27	0	**52**	24	14	1150	54	74	**1292**	8	10	7	37	0	**54**	12	57	893	51	5	**1006**	19	**2404**
% Approach	36.5%	11.5%	51.9%	0%	**-**	-	1.1%	89.0%	4.2%	5.7%	**-**	-	18.5%	13.0%	68.5%	0%	**-**	-	5.7%	88.8%	5.1%	0.5%	**-**	-	-
% Total	0.8%	0.2%	1.1%	0%	**2.2%**	-	0.6%	47.8%	2.2%	3.1%	**53.7%**	-	0.4%	0.3%	1.5%	0%	**2.2%**	-	2.4%	37.1%	2.1%	0.2%	**41.8%**	-	-
PHF	0.750	0.625	0.844	-	**0.833**	-	0.875	0.948	0.675	0.925	**0.961**	-	0.833	0.875	0.771	-	**0.844**	-	0.950	0.858	0.750	0.417	**0.875**	-	0.922
Lights and Motorcycles	18	5	27	0	**50**	-	14	1129	54	74	**1271**	-	9	7	37	0	**53**	-	56	871	51	5	**983**	-	2357
% Lights and Motorcycles	94.7%	83.3%	100%	0%	**96.2%**	-	100%	98.2%	100%	100%	**98.4%**	-	90.0%	100%	100%	0%	**98.1%**	-	98.2%	97.5%	100%	100%	**97.7%**	-	98.0%
Heavy	0	0	0	0	**0**	-	0	20	0	0	**20**	-	1	0	0	0	**1**	-	1	21	0	0	**22**	-	43
% Heavy	0%	0%	0%	0%	**0%**	-	0%	1.7%	0%	0%	**1.5%**	-	10.0%	0%	0%	0%	**1.9%**	-	1.8%	2.4%	0%	0%	**2.2%**	-	1.8%
Bicycles on Road	1	1	0	0	**2**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	4
% Bicycles on Road	5.3%	16.7%	0%	0%	**3.8%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0.2%
Pedestrians	-	-	-	-	-	22	-	-	-	-	-	8	-	-	-	-	-	8	-	-	-	-	-	19	
% Pedestrians	-	-	-	-	-	91.7%	-	-	-	-	-	100%	-	-	-	-	-	66.7%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	8.3%	-	-	-	-	-	0%	-	-	-	-	-	33.3%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5669827 - Carling Ave and Edgeworth Ave - Ju... - TMC
Tue Jul 16, 2024
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1212127, Location: 45.366398, -75.77928

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



Appendix B – Balanced and Grown Traffic Volumes

Projet: **Lincoln Fields Interim AT Improvements**
Date: **August 28, 2024**
Numer of Years Grown: **9 years**
Growth Rate: **0.23%**
Time Period: **AM Peak**

Carling Ave @ Croydon Ave

TMC Year	Time Period	EBL	EBU	EBT	EBR	WBL	WBU	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2016		93	2	2035			1	842	88				156		25
2024	8:00-9:00 am	36	9	1865			0	781	59				180		12
2035	8:00-9:00 am	37	10	1914			0	802	61				185		13
Trip Gen Volumes		4	0	6			0	2	13				31		11
TOTAL VOL. IN 2035		**41**	**10**	**1920**			**0**	**804**	**74**				**216**		**24**

Carling Ave @ Mall Site/Connaught Ave

TMC Year	Time Period	EBL	EBU	EBT	EBR	WBL	WBU	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2016				2197				842							
2024	8:00-9:00 am	38	0	1977			0	843	89			57	64		38
2035	8:00-9:00 am	39	0	2029			0	865	92			59	66	0	39
Trip Gen Volumes		5	0	32				15	16			0	31		15
TOTAL VOL. IN 2035		**44**	**0**	**2061**			**0**	**880**	**108**			**59**	**97**		**54**

Carling Ave @ Kichi Zibi Mikan

TMC Year	Time Period	EBU	EBT	EBR/EBL*	WBL	WBU	WBT	WBR	NBL	NBT	NBR/SBL*		SBT	SBR
2018	8:15-9:15 am		1798	1240			491	22			23			667
2024	8:15-9:15 am	0	1318	810		0	448	16			14			483
2035	8:15-9:15 am	0	1353	832		0	460	17			15			496
Trip Gen Volumes		0	26	37		0	14	0			0			17
TOTAL VOL. IN 2035		**0**	**1379**	**869**		**0**	**474**	**17**			**15**			**513**

*Note: With the replacement of the on- and off-ramps for a full-movement intersection at Kichi Zibi Mikan, former EBR movements become EBL and NBR become SBL.

Carling Ave @ Lincoln Fields Transitway

TMC Year	Time Period	EBL	EBU	EBT	EBR	WBL	WBU	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2019	7:45-8:45 am	58	13	1622	0	0	0	430	22				32		42
2024	7:45-8:45 am	55		1294	0	0	0	454	15	0	0	0	10	0	28
2035	7:45-8:45 am	57	0	1328	0	0	0	466	16	0	0	0	11	0	29
Trip Gen Volumes		0	0	26	0	0	0	14	0	0	0	0	0	0	0
TOTAL VOL. IN 2035		**57**	**0**	**1354**	**0**	**0**	**0**	**480**	**16**	**0**	**0**	**0**	**11**	**0**	**29**

Carling Ave @ Edgeworth Ave

TMC Year	Time Period	EBL	EBU	EBT	EBR	WBL	WBU	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2017	7:30-8:30 am	38	2	1659	130	36	26	346	7	46	12	27	25	10	8
2024	7:30-8:30 am	30	4	1231	39	24	41	417	12	37	5	18	39	1	13
2035	7:30-8:30 am	31	5	1264	41	25	43	428	13	38	6	19	41	2	14
Trip Gen Volumes		1	0	25	0	0	0	12	1	0	1	0	6	3	2
TOTAL VOL. IN 2035		**32**	**5**	**1289**	**41**	**25**	**43**	**440**	**14**	**38**	**7**	**19**	**47**	**5**	**16**

Projet: **Lincoln Fields Interim AT Improvements**
Date: **August 28, 2024**
Numer of Years Grown: **9 years**
Growth Rate: **0.23%**
Time Period: **PM Peak**

Carling Ave @ Croydon Ave

TMC Year	Time Period	EBL	EBU	EBT	EBR	WBL	WBU	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2016				1100				1936							
2024	16:30-17:30	40	4	1110			1	1679	123				177		31
2035	16:30-17:30	42	5	1139			2	1723	127				182		32
Trip Gen Volumes		9	0	23			0	3	25				18		5
TOTAL VOL. IN 2035		**51**	**5**	**1162**			**2**	**1726**	**152**				**200**		**37**

Carling Ave @ Mall Site/Connaught Ave

TMC Year	Time Period	EBL	EBU	EBT	EBR	WBL	WBU	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2016	16:15-17:15			1209				1992							
2024	16:30-17:30	77	1	1207			0	1822	217			39	113		123
2035	16:30-17:30	80	2	1239			0	1870	223			41	116		127
Trip Gen Volumes		16	0	25			0	28	30			0	17		17
TOTAL VOL. IN 2035		**96**	**2**	**1264**			**0**	**1898**	**253**			**41**	**133**		**144**

Carling Ave @ Kichi Zibi Mikan

TMC Year	Time Period	EBU	EBT	EBR/EBL*	WBL	WBU	WBT	WBR	NBL	NBT	NBR/SBL*	SBT	SBR
2018	15:45-16:45		1198	720			1294	28			255		976
2024	16:30-17:30	0	933	447		0	1184	17			99		816
2035	16:30-17:30	0	958	459		0	1215	18			102		838
Trip Gen Volumes		0	25	17			35	0			1		23
TOTAL VOL. IN 2035		**0**	**983**	**476**		**0**	**1250**	**18**			**103**		**861**

*Note: With the replacement of the on- and off-ramps for a full-movement intersection at Kichi Zibi Mikan, former EBR movements become EBL and NBR become SBL.

Carling Ave @ Lincoln Fields Transitway

TMC Year	Time Period	EBL	EBU	EBT	EBR	WBL	WBU	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2019	16:00-17:00	32	4	896	7	0	0	1248	26				18		40
2024	16:30-17:30	21	3	992		0	0	1191	17	0	0	0	12	0	26
2035	16:30-17:30	22	4	1018	0	0	0	1223	18	0	0	0	13	0	27
Trip Gen Volumes		0	0	25	0	0	0	35	0	0	0	0	0	0	0
TOTAL VOL. IN 2035		**22**	**4**	**1043**	**0**	**0**	**0**	**1258**	**18**	**0**	**0**	**0**	**13**	**0**	**27**

Carling Ave @ Edgeworth Ave

TMC Year	Time Period	EBL	EBU	EBT	EBR	WBL	WBU	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2017	16:30-17:30	38	2	802	60	52	97	1277	4	53	9	23	32	3	24
2024	16:30-17:30	51	5	893	57	54	74	1150	14	37	7	10	27	6	19
2035	16:30-17:30	53	6	917	59	56	76	1180	15	38	8	11	28	7	20
Trip Gen Volumes		8	0	18	0	0	0	32	1	0	2	0	4	0	3
TOTAL VOL. IN 2035		**61**	**6**	**935**	**59**	**56**	**76**	**1212**	**16**	**38**	**10**	**11**	**32**	**7**	**23**

Appendix C – Signal Timing Plans

Traffic Signal Timing

City of Ottawa, Public Works Department

Traffic Signal Operations Unit

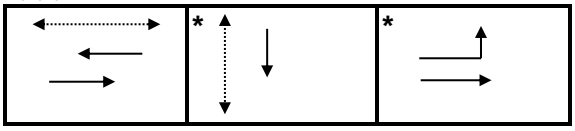
Intersection:	***Main:*** Carling	***Side:***	Croydon
Controller:	**MS 3200**	**TSD:**	**5632**
Author:	Matthew Anderson	**Date:**	16-Feb-2023

Existing Timing Plans†

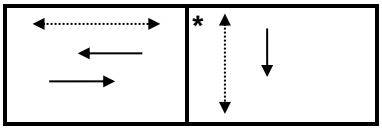
	Plan					**Ped Minimum Time**		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	***Walk***	***DW***	***A+R***
Cycle	130	100	130	80	100			
Offset	45	80	18	X	83			
EB Thru	92	62	92	42	62	-	-	3.7+2.2
WB Thru	78	50	78	42	50	7	16	3.7+2.2
SB Thru	38	38	38	38	38	21	10	3.3+3.0
EB Left	14	12	14	-	12	-	-	3.7+2.2

Phasing Sequence‡

Plan: 1,2,3,5



Plan: 4



Schedule

Weekday

Time	Plan
0:15	4
6:30	1
9:30	2
15:00	3
18:30	2
21:30	4

Weekend

Time	Plan
0:15	4
7:00	2
9:10	5
18:30	2
22:00	4

Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $61.16 ($54.12 + HST)

Traffic Signal Timing

City of Ottawa, Public Works Department

Traffic Signal Operations Unit

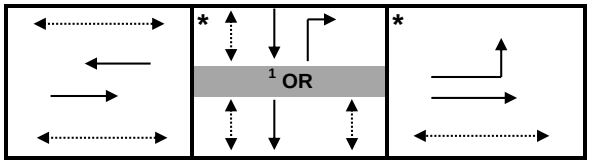
Intersection:	***Main:*** Carling	***Side:***	Connaught
Controller:	**ATC3**	**TSD:**	**5192**
Author:	Matthew Anderson	**Date:**	16-Feb-2023

Existing Timing Plans†

	Plan					**Ped Minimum Time**		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	***Walk***	***DW***	***A+R***
Cycle	130	100	130	90	100			
Offset	36	82	19	X	75			
EB Thru	89	59	89	38	59	7	8	3.7+1.9
WB Thru	78	48	75	38	48	7	8	3.7+1.9
NB Right (fp)	41	41	41	41	41	26	8	3.0+3.9
SB Thru	41	41	41	41	41	26	8	3.0+3.9
EB Left	11	11	14	11	11	-	-	3.7+2.3

Phasing Sequence‡

Plan: All



Notes: 1) If the east pedestrian crossing is actuated, the NBRT will remiain red
2) The NB Thru and Left movements are prohibited

Schedule

Weekday

Time	Plan
0:15	4
6:30	1
9:30	2
15:00	3
18:30	2
21:30	4

Weekend

Time	Plan
0:15	4
7:00	2
9:10	5
18:30	2
22:00	4

Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $61.16 ($54.12 + HST)

Traffic Signal Timing

City of Ottawa, Public Works Department

Traffic Signal Operations Unit

Intersection:	***Main:*** Carling	***Side:***	Lincoln Fields Station
Controller:	**ATC 3**	**TSD:**	**5724**
Author:	Matthew Anderson	**Date:**	17-Feb-2023

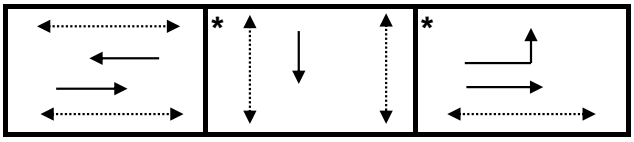
Existing Timing Plans†

	Plan					**Ped Minimum Time**		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	***Walk***	***DW***	***A+R***
Cycle	130	100	130	105	100			
Offset	59	15	0	X	24			
EB Thru	87	57	87	45	57	-	-	3.7+2.8
WB Thru	75	45	74	45	45	7	30	3.7+2.8
SB Thru	43	43	43	43	43	7	27	3.3+3.5
EB Left (fp)	12	12	13	17	12	-	-	3.7+2.7

The eastbound left turn is currently prohibited for the construction of the New Lincoln Fields Station.

Phasing Sequence‡

Plan: All



Notes: 1) If the NS pedestrian phase is not actuated, the NS movement will force off after 15 seconds.

Schedule

Weekday

Time	Plan
0:15	4
6:30	1
9:30	2
15:00	3
18:30	2
21:30	4

Weekend

Time	Plan
0:15	4
7:00	2
9:10	5
18:30	2
22:00	4

Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $61.16 ($54.12 + HST)

Traffic Signal Timing

City of Ottawa, Public Works Department

Traffic Signal Operations Unit

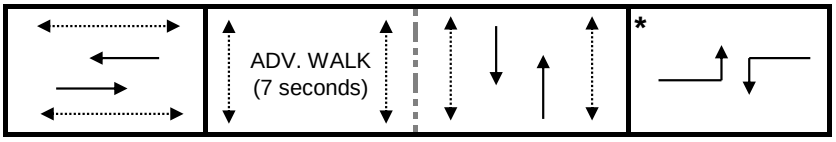
Intersection:	***Main:*** Carling	***Side:***	Edgeworth
Controller:	**ATC 3**	**TSD:**	**5368**
Author:	Matthew Anderson	**Date:**	17-Feb-2023

Existing Timing Plans†

	Plan					**Ped Minimum Time**		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	***Walk***	***DW***	***A+R***
Cycle	130	100	130	100	100			
Offset	49	20	1	X	30			
EB Thru	68	38	66	38	38	9	14	3.7+1.9
WB Thru	68	38	66	38	38	9	14	3.7+1.9
NB Thru	51	51	51	51	51	28	16	3.3+3.3
SB Thru	51	51	51	51	51	28	16	3.3+3.3
EB Left	11	11	13	11	11	-	-	3.7+2.4
WB Left	11	11	13	11	11	-	-	3.7+2.4

Phasing Sequence‡

Plan: All



Schedule

Weekday

Time	Plan
0:15	4
6:30	1
9:30	2
15:00	3
18:30	2
20:00	4

Weekend

Time	Plan
0:15	4
9:10	5
18:30	2
20:00	4

Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

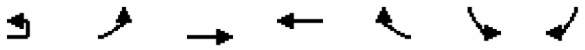
Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

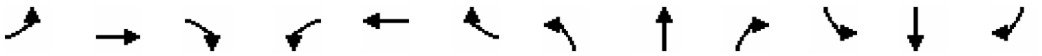
Cost is $61.16 ($54.12 + HST)

Appendix D – Existing Conditions Analysis



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	9	36	1865	781	59	180	12
Future Volume (vph)	9	36	1865	781	59	180	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.9	5.9	5.9		6.3	
Lane Util. Factor		1.00	0.91	0.91		0.97	
Frpb, ped/bikes		1.00	1.00	1.00		1.00	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	
Frt		1.00	1.00	0.99		0.99	
Flt Protected		0.95	1.00	1.00		0.96	
Satd. Flow (prot)		1692	5085	4969		3297	
Flt Permitted		0.27	1.00	1.00		0.96	
Satd. Flow (perm)		488	5085	4969		3297	
Peak-hour factor, PHF	0.88	0.88	0.88	0.95	0.95	0.88	0.88
Adj. Flow (vph)	10	41	2119	822	62	205	14
RTOR Reduction (vph)	0	0	0	5	0	4	0
Lane Group Flow (vph)	0	51	2119	879	0	215	0
Confl. Peds. (#/hr)		15			15		10
Confl. Bikes (#/hr)					1		1
Heavy Vehicles (%)	0%	8%	2%	2%	14%	6%	0%
Turn Type	custom	pm+pt	NA	NA		Prot	
Protected Phases		5	2	6		7	
Permitted Phases	5	2					
Actuated Green, G (s)		94.8	94.8	83.3		23.0	
Effective Green, g (s)		94.8	94.8	83.3		23.0	
Actuated g/C Ratio		0.73	0.73	0.64		0.18	
Clearance Time (s)		5.9	5.9	5.9		6.3	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		407	3708	3183		583	
v/s Ratio Prot		0.01	c0.42	0.18		c0.07	
v/s Ratio Perm		0.09					
v/c Ratio		0.13	0.57	0.28		0.37	
Uniform Delay, d1		5.4	8.2	10.2		47.1	
Progression Factor		1.00	1.00	0.32		1.00	
Incremental Delay, d2		0.1	0.6	0.2		0.4	
Delay (s)		5.5	8.8	3.4		47.5	
Level of Service		A	A	A		D	
Approach Delay (s/veh)			8.7	3.4		47.5	
Approach LOS			A	A		D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

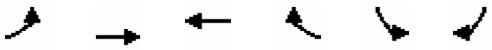


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	1977	0	0	843	89	0	0	57	64	0	38
Future Volume (vph)	38	1977	0	0	843	89	0	0	57	64	0	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00		1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.93		0.96		1.00		0.98
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		0.98		1.00
Frt	1.00	1.00			1.00	0.85		0.87		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95		1.00
Satd. Flow (prot)	1800	5085			5036	1463		1553		1717		1532
Flt Permitted	0.29	1.00			1.00	1.00		1.00		0.70		1.00
Satd. Flow (perm)	547	5085			5036	1463		1553		1269		1532
Peak-hour factor, PHF	0.86	0.86	0.86	0.98	0.98	0.98	0.68	0.68	0.68	0.90	0.90	0.90
Adj. Flow (vph)	44	2299	0	0	860	91	0	0	84	71	0	42
RTOR Reduction (vph)	0	0	0	0	0	27	0	63	0	0	0	37
Lane Group Flow (vph)	44	2299	0	0	860	64	0	21	0	71	0	5
Confl. Peds. (#/hr)	11		14	14		11	8		20	20		8
Confl. Bikes (#/hr)			1			1			1			1
Heavy Vehicles (%)	0%	2%	0%	0%	3%	3%	0%	0%	2%	3%	0%	3%
Turn Type	pm+pt	NA			NA	Perm		NA		Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2					6				4		4
Actuated Green, G (s)	101.7	101.7			91.0	91.0		15.8		15.8		15.8
Effective Green, g (s)	101.7	101.7			91.0	91.0		15.8		15.8		15.8
Actuated g/C Ratio	0.78	0.78			0.70	0.70		0.12		0.12		0.12
Clearance Time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0		3.0
Lane Grp Cap (vph)	473	3978			3525	1024		188		154		186
v/s Ratio Prot	0.00	c0.45			0.17			0.01				
v/s Ratio Perm	0.07					0.04				c0.06		0.00
v/c Ratio	0.09	0.58			0.24	0.06		0.11		0.46		0.03
Uniform Delay, d1	3.5	5.6			7.1	6.1		50.8		53.1		50.3
Progression Factor	0.74	0.54			0.80	0.38		1.00		1.00		1.00
Incremental Delay, d2	0.1	0.5			0.2	0.1		0.3		2.2		0.1
Delay (s)	2.6	3.6			5.8	2.4		51.1		55.3		50.4
Level of Service	A	A			A	A		D		E		D
Approach Delay (s/veh)		3.6			5.5			51.1			53.5	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑							
Traffic Volume (vph)	0	1349	0	0	487	0	0	0	0	0	0	0
Future Volume (vph)	0	1349	0	0	487	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0							
Lane Util. Factor		0.95			0.95							
Frt		1.00			1.00							
Flt Protected		1.00			1.00							
Satd. Flow (prot)		3505			3312							
Flt Permitted		1.00			1.00							
Satd. Flow (perm)		3505			3312							
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1466	0	0	529	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1466	0	0	529	0	0	0	0	0	0	0
Heavy Vehicles (%)	0%	3%	0%	0%	9%	0%	2%	2%	2%	2%	2%	2%
Turn Type		NA			NA							
Protected Phases		2			6							
Permitted Phases												
Actuated Green, G (s)		47.0			47.0							
Effective Green, g (s)		47.0			47.0							
Actuated g/C Ratio		0.72			0.72							
Clearance Time (s)		5.0			5.0							
Vehicle Extension (s)		3.0			3.0							
Lane Grp Cap (vph)		2534			2394							
v/s Ratio Prot		c0.42			0.16							
v/s Ratio Perm												
v/c Ratio		0.58			0.22							
Uniform Delay, d1		4.3			3.0							
Progression Factor		1.57			0.52							
Incremental Delay, d2		0.8			0.2							
Delay (s)		7.5			1.8							
Level of Service		A			A							
Approach Delay (s/veh)		7.5			1.8			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	55	1294	454	17	10	33
Future Volume (vph)	55	1294	454	17	10	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	6.5	6.5	6.5	6.8	6.8
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1357	3539	3343	1313	1410	1233
Flt Permitted	0.44	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	633	3539	3343	1313	1410	1233
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	1407	493	18	11	36
RTOR Reduction (vph)	0	0	0	4	0	34
Lane Group Flow (vph)	60	1407	493	14	11	2
Heavy Vehicles (%)	33%	2%	8%	23%	28%	31%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	111.0	111.0	99.9	99.9	5.7	5.7
Effective Green, g (s)	111.0	111.0	99.9	99.9	5.7	5.7
Actuated g/C Ratio	0.85	0.85	0.77	0.77	0.04	0.04
Clearance Time (s)	6.4	6.5	6.5	6.5	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	566	3021	2568	1008	61	54
v/s Ratio Prot	0.00	c0.40	0.15		c0.01	
v/s Ratio Perm	0.09			0.01		0.00
v/c Ratio	0.11	0.47	0.19	0.01	0.18	0.03
Uniform Delay, d1	1.6	2.3	4.1	3.5	59.9	59.5
Progression Factor	1.46	1.30	0.88	0.44	1.00	1.00
Incremental Delay, d2	0.1	0.4	0.2	0.0	1.4	0.2
Delay (s)	2.4	3.4	3.8	1.6	61.3	59.7
Level of Service	A	A	A	A	E	E
Approach Delay (s/veh)		3.4	3.7		60.1	
Approach LOS		A	A		E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	4.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	4	30	1231	39	41	24	417	12	37	5	18	39
Future Volume (vph)	4	30	1231	39	41	24	417	12	37	5	18	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95			1.00		
Frpb, ped/bikes		1.00	1.00	0.97		1.00	1.00			0.99		
Flpb, ped/bikes		0.99	1.00	1.00		1.00	1.00			1.00		
Frt		1.00	1.00	0.85		1.00	1.00			0.96		
Flt Protected		0.95	1.00	1.00		0.95	1.00			0.97		
Satd. Flow (prot)		1746	3505	1517		1759	3355			1697		
Flt Permitted		0.46	1.00	1.00		0.11	1.00			0.79		
Satd. Flow (perm)		845	3505	1517		197	3355			1386		
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.83	0.83	0.83	0.83	0.84	0.84	0.84	0.78
Adj. Flow (vph)	5	35	1448	46	49	29	502	14	44	6	21	50
RTOR Reduction (vph)	0	0	0	18	0	0	1	0	0	0	0	0
Lane Group Flow (vph)	0	40	1448	28	0	78	515	0	0	71	0	0
Confl. Peds. (#/hr)		12		4		4		12	6		14	14
Confl. Bikes (#/hr)				2				2			3	
Heavy Vehicles (%)	0%	3%	3%	3%	0%	7%	7%	7%	3%	3%	3%	2%
Turn Type	custom	pm+pt	NA	Perm	custom	pm+pt	NA		Perm	NA		Perm
Protected Phases		5	2			1	6			8		
Permitted Phases	5	2		2	1	6			8			4
Actuated Green, G (s)		84.9	79.4	79.4		90.1	82.0			24.2		
Effective Green, g (s)		84.9	79.4	79.4		90.1	82.0			24.2		
Actuated g/C Ratio		0.65	0.61	0.61		0.69	0.63			0.19		
Clearance Time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0			3.0		
Lane Grp Cap (vph)		589	2140	926		233	2116			258		
v/s Ratio Prot		0.00	c0.41			c0.02	0.15					
v/s Ratio Perm		0.04		0.02		c0.21				c0.05		
v/c Ratio		0.07	0.68	0.03		0.33	0.24			0.28		
Uniform Delay, d1		8.0	16.8	10.0		12.2	10.5			45.4		
Progression Factor		0.47	0.50	1.00		1.00	1.00			1.00		
Incremental Delay, d2		0.0	1.6	0.1		0.9	0.3			0.6		
Delay (s)		3.8	10.0	10.1		13.1	10.7			46.0		
Level of Service		A	B	B		B	B			D		
Approach Delay (s/veh)			9.9				11.1			46.0		
Approach LOS			A				B			D		

Intersection Summary			
HCM 2000 Control Delay (s/veh)	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.3
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1	13
Future Volume (vph)	1	13
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.6	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	0.99	
Frt	0.97	
Flt Protected	0.96	
Satd. Flow (prot)	1712	
Flt Permitted	0.77	
Satd. Flow (perm)	1363	
Peak-hour factor, PHF	0.78	0.78
Adj. Flow (vph)	1	17
RTOR Reduction (vph)	11	0
Lane Group Flow (vph)	57	0
Confl. Peds. (#/hr)		6
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	24.2	
Effective Green, g (s)	24.2	
Actuated g/C Ratio	0.19	
Clearance Time (s)	6.6	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	253	
v/s Ratio Prot		
v/s Ratio Perm	0.04	
v/c Ratio	0.23	
Uniform Delay, d1	45.0	
Progression Factor	1.00	
Incremental Delay, d2	0.5	
Delay (s)	45.4	
Level of Service	D	
Approach Delay (s/veh)	45.4	
Approach LOS	D	

Intersection Summary

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1318	810	0	448	16	0	0	14	0	0	483
Future Vol, veh/h	0	1318	810	0	448	16	0	0	14	0	0	483
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	17	0	0	17
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Yield	Yield	Yield
RT Channelized	-	-	Free	-	-	Free	-	-	Stop	-	-	Yield
Storage Length	-	-	0	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	91	91	91	50	50	50	85	85	85
Heavy Vehicles, %	0	2	0	0	7	0	7	7	7	0	0	0
Mvmt Flow	0	1481	910	0	492	18	0	0	28	0	0	568

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	-	0	-	-	-	0	-	-	757
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.04
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.37
Pot Cap-1 Maneuver	0	-	0	0	-	0	0	0	339
Stage 1	0	-	0	0	-	0	0	0	-
Stage 2	0	-	0	0	-	0	0	0	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	0	334
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	16.76
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	334	-	-
HCM Lane V/C Ratio	0.084	-	-
HCM Control Delay (s/veh)	16.8	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	3502	3517	3437	3471	3414	3467
Vehs Exited	3487	3506	3449	3516	3413	3474
Starting Vehs	81	102	102	120	84	93
Ending Vehs	96	113	90	75	85	91
Travel Distance (km)	2992	3016	2987	3040	2940	2995
Travel Time (hr)	95.4	93.4	92.9	92.8	89.1	92.7
Total Delay (hr)	38.3	35.9	36.3	35.4	33.3	35.9
Total Stops	3098	2877	3042	2889	2761	2934
Fuel Used (l)	281.1	280.2	278.2	280.6	270.9	278.2

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3502	3517	3437	3471	3414	3467
Vehs Exited	3487	3506	3449	3516	3413	3474
Starting Vehs	81	102	102	120	84	93
Ending Vehs	96	113	90	75	85	91
Travel Distance (km)	2992	3016	2987	3040	2940	2995
Travel Time (hr)	95.4	93.4	92.9	92.8	89.1	92.7
Total Delay (hr)	38.3	35.9	36.3	35.4	33.3	35.9
Total Stops	3098	2877	3042	2889	2761	2934
Fuel Used (l)	281.1	280.2	278.2	280.6	270.9	278.2

Intersection: 1: Carling Ave & Croydon Ave

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	T	TR	L	LR
Maximum Queue (m)	44.5	92.9	85.0	92.8	32.2	39.7	40.9	10.0	74.3
Average Queue (m)	8.4	47.9	37.1	42.7	4.7	6.1	10.3	0.5	37.7
95th Queue (m)	27.0	81.6	73.2	77.5	19.0	23.1	29.7	5.5	60.4
Link Distance (m)		162.0	162.0	162.0	101.8	101.8	101.8		75.9
Upstream Blk Time (%)									0
Queuing Penalty (veh)									0
Storage Bay Dist (m)	68.0							25.0	
Storage Blk Time (%)		2							28
Queuing Penalty (veh)		1							25

Intersection: 2: Connaught Ave/Mall Site & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	L	T	T	T	T	T	T	R	TR	L
Maximum Queue (m)	14.5	58.7	73.1	78.9	45.6	54.7	70.3	29.3	27.1	34.3
Average Queue (m)	4.1	27.7	28.1	32.6	16.0	22.7	29.1	1.0	9.0	14.2
95th Queue (m)	11.0	51.6	56.4	62.0	37.2	47.5	57.5	19.5	19.7	29.2
Link Distance (m)	101.8	101.8	101.8	101.8	124.8	124.8	124.8	124.8	74.2	146.2
Upstream Blk Time (%)				0				0		
Queuing Penalty (veh)				0				0		
Storage Bay Dist (m)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 3: Kichi Zibi Mikan Ramps & Carling Ave

Movement	EB	EB	EB	WB	WB	WB
Directions Served	T	T	R	T	T	TR
Maximum Queue (m)	26.8	27.6	65.6	10.5	8.0	12.9
Average Queue (m)	3.5	5.0	4.3	0.5	0.6	0.5
95th Queue (m)	16.0	18.7	28.4	4.8	4.4	5.7
Link Distance (m)	124.8	124.8	124.8	168.5	168.5	168.5
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: Lincoln Fields Mid-Block Crossing & Carling Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (m)	77.3	72.6	37.7	39.2
Average Queue (m)	20.8	21.4	6.3	7.6
95th Queue (m)	60.9	61.1	23.2	26.7
Link Distance (m)	168.5	168.5	95.0	95.0
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Carling Ave & Lincoln Fields Station

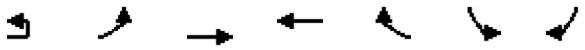
Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	R	L	R
Maximum Queue (m)	43.1	91.3	89.2	45.6	55.1	12.0	22.0	19.0
Average Queue (m)	9.3	16.0	18.1	12.1	13.0	1.1	3.4	5.3
95th Queue (m)	27.0	55.9	60.4	36.3	40.9	7.2	12.8	14.4
Link Distance (m)		95.0	95.0	113.4	113.4	113.4	58.8	58.8
Upstream Blk Time (%)		0	0					
Queuing Penalty (veh)		1	1					
Storage Bay Dist (m)	40.0							
Storage Blk Time (%)	0	2						
Queuing Penalty (veh)	0	1						

Intersection: 6: Edgeworth Ave & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	UL	T	T	R	UL	T	TR	LTR	LTR
Maximum Queue (m)	21.1	113.4	110.1	55.2	26.8	57.2	44.9	35.6	38.3
Average Queue (m)	3.9	53.4	54.7	5.9	8.9	20.3	14.7	12.4	13.0
95th Queue (m)	14.1	101.9	100.3	29.1	20.1	44.0	35.6	27.6	27.1
Link Distance (m)		113.4	113.4			305.7	305.7	87.3	97.2
Upstream Blk Time (%)		0	1						
Queuing Penalty (veh)		3	4						
Storage Bay Dist (m)	20.0			60.0	20.0				
Storage Blk Time (%)	0	22	9	0	1	9			
Queuing Penalty (veh)	2	8	3	0	2	6			

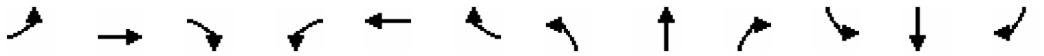
Network Summary

Network wide Queuing Penalty: 56



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	4	40	1110	1679	123	177	31
Future Volume (vph)	4	40	1110	1679	123	177	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.9	5.9	5.9		6.3	
Lane Util. Factor		1.00	0.91	0.91		0.97	
Frpb, ped/bikes		1.00	1.00	1.00		0.99	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	
Frt		1.00	1.00	0.99		0.98	
Flt Protected		0.95	1.00	1.00		0.96	
Satd. Flow (prot)		1773	5085	5076		3300	
Flt Permitted		0.08	1.00	1.00		0.96	
Satd. Flow (perm)		148	5085	5076		3300	
Peak-hour factor, PHF	0.94	0.94	0.94	0.97	0.97	0.94	0.94
Adj. Flow (vph)	4	43	1181	1731	127	188	33
RTOR Reduction (vph)	0	0	0	5	0	13	0
Lane Group Flow (vph)	0	47	1181	1853	0	208	0
Confl. Peds. (#/hr)							28
Confl. Bikes (#/hr)					1		
Heavy Vehicles (%)	0%	2%	2%	1%	1%	4%	4%
Turn Type	custom	pm+pt	NA	NA		Prot	
Protected Phases		5	2	6		7	
Permitted Phases	5	2					
Actuated Green, G (s)		98.4	98.4	87.1		19.4	
Effective Green, g (s)		98.4	98.4	87.1		19.4	
Actuated g/C Ratio		0.76	0.76	0.67		0.15	
Clearance Time (s)		5.9	5.9	5.9		6.3	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		179	3848	3400		492	
v/s Ratio Prot		0.01	c0.23	c0.37		c0.06	
v/s Ratio Perm		0.19					
v/c Ratio		0.26	0.31	0.55		0.42	
Uniform Delay, d1		7.3	5.0	11.2		50.2	
Progression Factor		1.00	1.00	0.24		1.00	
Incremental Delay, d2		0.8	0.2	0.5		0.6	
Delay (s)		8.1	5.2	3.2		50.8	
Level of Service		A	A	A		D	
Approach Delay (s/veh)			5.3	3.2		50.8	
Approach LOS			A	A		D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

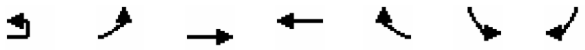


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	1207	0	0	1822	217	0	0	39	113	0	123
Future Volume (vph)	77	1207	0	0	1822	217	0	0	39	113	0	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00		1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.89		0.98		1.00		0.98
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		0.99		1.00
Frt	1.00	1.00			1.00	0.85		0.87		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95		1.00
Satd. Flow (prot)	1805	5036			5136	1417		1607		1788		1581
Flt Permitted	0.07	1.00			1.00	1.00		1.00		0.71		1.00
Satd. Flow (perm)	128	5036			5136	1417		1607		1341		1581
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.57	0.57	0.57	0.92	0.92	0.92
Adj. Flow (vph)	84	1312	0	0	1918	228	0	0	68	123	0	134
RTOR Reduction (vph)	0	0	0	0	0	77	0	57	0	0	0	99
Lane Group Flow (vph)	84	1312	0	0	1918	151	0	11	0	123	0	35
Confl. Peds. (#/hr)	22		5	5		22	7		9	9		7
Confl. Bikes (#/hr)			1			1						1
Heavy Vehicles (%)	0%	3%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA			NA	Perm		NA		Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2					6				4		4
Actuated Green, G (s)	95.6	95.6			82.6	82.6		21.9		21.9		21.9
Effective Green, g (s)	95.6	95.6			82.6	82.6		21.9		21.9		21.9
Actuated g/C Ratio	0.74	0.74			0.64	0.64		0.17		0.17		0.17
Clearance Time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0		3.0
Lane Grp Cap (vph)	184	3703			3263	900		270		225		266
v/s Ratio Prot	0.02	c0.26			c0.37			0.01				
v/s Ratio Perm	0.31					0.11				c0.09		0.02
v/c Ratio	0.46	0.35			0.59	0.17		0.04		0.55		0.13
Uniform Delay, d1	11.1	6.2			13.8	9.7		45.3		49.5		46.0
Progression Factor	2.12	0.67			1.10	1.94		1.00		1.00		1.00
Incremental Delay, d2	1.7	0.3			0.8	0.4		0.1		2.7		0.2
Delay (s)	25.3	4.4			16.0	19.2		45.3		52.2		46.2
Level of Service	C	A			B	B		D		D		D
Approach Delay (s/veh)		5.6			16.3			45.3			49.1	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑							
Traffic Volume (vph)	0	1021	0	0	1226	0	0	0	0	0	0	0
Future Volume (vph)	0	1021	0	0	1226	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0							
Lane Util. Factor		0.95			0.95							
Frt		1.00			1.00							
Flt Protected		1.00			1.00							
Satd. Flow (prot)		3539			3539							
Flt Permitted		1.00			1.00							
Satd. Flow (perm)		3539			3539							
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1110	0	0	1333	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1110	0	0	1333	0	0	0	0	0	0	0
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	2%	2%	2%	2%	2%	2%
Turn Type		NA			NA							
Protected Phases		2			6							
Permitted Phases												
Actuated Green, G (s)		47.0			47.0							
Effective Green, g (s)		47.0			47.0							
Actuated g/C Ratio		0.72			0.72							
Clearance Time (s)		5.0			5.0							
Vehicle Extension (s)		3.0			3.0							
Lane Grp Cap (vph)		2558			2558							
v/s Ratio Prot		0.31			c0.38							
v/s Ratio Perm												
v/c Ratio		0.43			0.52							
Uniform Delay, d1		3.6			4.0							
Progression Factor		1.53			1.25							
Incremental Delay, d2		0.5			0.7							
Delay (s)		6.1			5.7							
Level of Service		A			A							
Approach Delay (s/veh)		6.1			5.7			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	5.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	4	25	992	1191	20	14	31
Future Volume (vph)	4	25	992	1191	20	14	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.5	6.5	6.5	6.8	6.8
Lane Util. Factor		1.00	0.95	0.95	1.00	1.00	1.00
Frt		1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected		0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1213	3539	3574	1313	1299	1262
Flt Permitted		0.18	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		227	3539	3574	1313	1299	1262
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	27	1078	1295	22	15	34
RTOR Reduction (vph)	0	0	0	0	5	0	32
Lane Group Flow (vph)	0	31	1078	1295	17	15	2
Heavy Vehicles (%)	0%	56%	2%	1%	23%	39%	28%
Turn Type	custom	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases		5	2	6		4	
Permitted Phases	5	2			6		4
Actuated Green, G (s)		110.6	110.6	100.4	100.4	6.1	6.1
Effective Green, g (s)		110.6	110.6	100.4	100.4	6.1	6.1
Actuated g/C Ratio		0.85	0.85	0.77	0.77	0.05	0.05
Clearance Time (s)		6.4	6.5	6.5	6.5	6.8	6.8
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		221	3010	2760	1014	60	59
v/s Ratio Prot		0.00	c0.30	c0.36		c0.01	
v/s Ratio Perm		0.11			0.01		0.00
v/c Ratio		0.14	0.36	0.47	0.02	0.25	0.03
Uniform Delay, d1		2.9	2.1	5.3	3.4	59.7	59.1
Progression Factor		1.13	0.85	0.21	0.01	1.00	1.00
Incremental Delay, d2		0.3	0.3	0.5	0.0	2.2	0.2
Delay (s)		3.5	2.1	1.6	0.1	61.9	59.3
Level of Service		A	A	A	A	E	E
Approach Delay (s/veh)			2.1	1.6		60.1	
Approach LOS			A	A		E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	3.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	5	51	893	57	74	54	1150	14	37	7	10	27
Future Volume (vph)	5	51	893	57	74	54	1150	14	37	7	10	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95			1.00		
Frpb, ped/bikes		1.00	1.00	0.93		1.00	1.00			1.00		
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00			0.98		
Frt		1.00	1.00	0.85		1.00	1.00			0.97		
Flt Protected		0.95	1.00	1.00		0.95	1.00			0.97		
Satd. Flow (prot)		1804	3539	1497		1803	3532			1750		
Flt Permitted		0.18	1.00	1.00		0.22	1.00			0.77		
Satd. Flow (perm)		339	3539	1497		413	3532			1385		
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.96	0.96	0.96	0.96	0.84	0.84	0.84	0.83
Adj. Flow (vph)	6	58	1015	65	77	56	1198	15	44	8	12	33
RTOR Reduction (vph)	0	0	0	26	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	64	1015	39	0	133	1213	0	0	64	0	0
Confl. Peds. (#/hr)		8		19		19		8	24		12	12
Confl. Bikes (#/hr)				1				1				
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	2%	0%	0%	2%	0%	0%
Turn Type	custom	pm+pt	NA	Perm	custom	pm+pt	NA		Perm	NA		Perm
Protected Phases		5	2			1	6			8		
Permitted Phases	5	2		2	1	6			8			4
Actuated Green, G (s)		84.9	78.9	78.9		90.5	81.7			24.0		
Effective Green, g (s)		84.9	78.9	78.9		90.5	81.7			24.0		
Actuated g/C Ratio		0.65	0.61	0.61		0.70	0.63			0.18		
Clearance Time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0			3.0		
Lane Grp Cap (vph)		289	2147	908		381	2219			255		
v/s Ratio Prot		0.01	0.29			c0.02	c0.34					
v/s Ratio Perm		0.13		0.03		0.22				c0.05		
v/c Ratio		0.22	0.47	0.04		0.35	0.55			0.25		
Uniform Delay, d1		9.6	14.1	10.3		8.3	13.7			45.3		
Progression Factor		0.97	1.01	8.64		1.00	1.00			1.00		
Incremental Delay, d2		0.4	0.7	0.1		0.6	1.0			0.5		
Delay (s)		9.7	15.0	89.2		8.8	14.6			45.8		
Level of Service		A	B	F		A	B			D		
Approach Delay (s/veh)			18.9				14.1			45.8		
Approach LOS			B				B			D		

Intersection Summary			
HCM 2000 Control Delay (s/veh)	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.3
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	6	19
Future Volume (vph)	6	19
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.6	
Lane Util. Factor	1.00	
Frpb, ped/bikes	0.99	
Flpb, ped/bikes	0.99	
Frt	0.95	
Flt Protected	0.97	
Satd. Flow (prot)	1725	
Flt Permitted	0.82	
Satd. Flow (perm)	1457	
Peak-hour factor, PHF	0.83	0.83
Adj. Flow (vph)	7	23
RTOR Reduction (vph)	18	0
Lane Group Flow (vph)	45	0
Confl. Peds. (#/hr)		24
Confl. Bikes (#/hr)		2
Heavy Vehicles (%)	0%	0%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	24.0	
Effective Green, g (s)	24.0	
Actuated g/C Ratio	0.18	
Clearance Time (s)	6.6	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	268	
v/s Ratio Prot		
v/s Ratio Perm	0.03	
v/c Ratio	0.17	
Uniform Delay, d1	44.6	
Progression Factor	1.00	
Incremental Delay, d2	0.3	
Delay (s)	44.9	
Level of Service	D	
Approach Delay (s/veh)	44.9	
Approach LOS	D	

Intersection Summary

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	933	447	0	1184	20	0	0	99	0	0	816
Future Vol, veh/h	0	933	447	0	1184	20	0	0	99	0	0	816
Conflicting Peds, #/hr	1	0	1	1	0	1	9	0	10	10	0	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Yield	Yield	Yield
RT Channelized	-	-	Free	-	-	Free	-	-	Stop	-	-	Yield
Storage Length	-	-	0	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	94	94	94	80	80	80	94	94	94
Heavy Vehicles, %	0	3	0	0	1	0	1	1	1	0	0	0
Mvmt Flow	0	962	461	0	1260	21	0	0	124	0	0	868

Major/Minor	Major1			Major2			Minor1					
Conflicting Flow All	-	0	-	-	-	0	-	-	491			
Stage 1	-	-	-	-	-	-	-	-	-			
Stage 2	-	-	-	-	-	-	-	-	-			
Critical Hdwy	-	-	-	-	-	-	-	-	6.92			
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-			
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.31			
Pot Cap-1 Maneuver	0	-	0	0	-	0	0	0	526			
Stage 1	0	-	0	0	-	0	0	0	-			
Stage 2	0	-	0	0	-	0	0	0	-			
Platoon blocked, %		-			-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	0	522			
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-			
Stage 1	-	-	-	-	-	-	-	0	-			
Stage 2	-	-	-	-	-	-	-	0	-			

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	14.04
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	522	-	-
HCM Lane V/C Ratio	0.237	-	-
HCM Control Delay (s/veh)	14	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.9	-	-

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:15	4:15	4:15	4:15	4:15	4:15
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	4015	2745	4142	3983	4035	3783
Vehs Exited	4037	2361	4143	3990	4066	3719
Starting Vehs	124	131	111	97	142	118
Ending Vehs	102	515	110	90	111	183
Travel Distance (km)	3534	1898	3632	3441	3544	3210
Travel Time (hr)	115.5	872.5	118.8	113.5	119.1	267.9
Total Delay (hr)	48.4	833.9	49.7	47.6	51.7	206.2
Total Stops	4146	2704	4295	4140	4567	3968
Fuel Used (l)	338.2	878.1	347.5	332.7	344.6	448.2

Interval #0 Information Seeding

Start Time	4:15
End Time	4:30
Total Time (min)	15

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	4015	2745	4142	3983	4035	3783
Vehs Exited	4037	2361	4143	3990	4066	3719
Starting Vehs	124	131	111	97	142	118
Ending Vehs	102	515	110	90	111	183
Travel Distance (km)	3534	1898	3632	3441	3544	3210
Travel Time (hr)	115.5	872.5	118.8	113.5	119.1	267.9
Total Delay (hr)	48.4	833.9	49.7	47.6	51.7	206.2
Total Stops	4146	2704	4295	4140	4567	3968
Fuel Used (l)	338.2	878.1	347.5	332.7	344.6	448.2

Intersection: 2: Carling Ave & Croydon Ave

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	T	TR	L	LR
Maximum Queue (m)	24.6	86.2	75.5	68.0	62.8	74.8	93.9	25.4	79.7
Average Queue (m)	8.7	40.7	27.7	27.9	14.5	20.6	28.9	2.9	48.2
95th Queue (m)	19.5	88.0	79.0	76.7	41.8	52.8	67.9	14.5	80.1
Link Distance (m)		158.1	158.1	158.1	101.8	101.8	101.8		75.9
Upstream Blk Time (%)		3	3	3	0	0	0		5
Queuing Penalty (veh)		0	0	0	0	0	2		0
Storage Bay Dist (m)	68.0							25.0	
Storage Blk Time (%)		4						0	38
Queuing Penalty (veh)		2						0	33

Intersection: 3: Connaught Ave/Lincoln Fields Mall Access & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	L	T	T	T	T	T	T	R	TR	L
Maximum Queue (m)	32.5	65.2	57.7	54.9	86.6	96.6	116.6	123.8	21.6	71.3
Average Queue (m)	12.6	23.4	21.6	19.5	33.7	48.5	55.6	20.5	5.4	30.7
95th Queue (m)	27.3	58.4	57.9	55.8	75.9	93.1	106.6	96.7	15.0	68.0
Link Distance (m)	101.8	101.8	101.8	101.8	124.6	124.6	124.6	124.6	74.2	146.2
Upstream Blk Time (%)		4	4	5			0	1		1
Queuing Penalty (veh)		14	14	15			1	7		0
Storage Bay Dist (m)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 4: SJAM Pkwy/S.J.A.M. Pkwy & Carling Ave

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	T	T	R	T	T	TR	R	R
Maximum Queue (m)	37.6	40.6	32.8	28.2	31.0	51.4	21.8	23.4
Average Queue (m)	10.7	9.6	7.0	2.5	11.4	35.3	3.2	0.8
95th Queue (m)	59.1	58.5	53.3	19.4	44.6	146.5	13.2	16.5
Link Distance (m)	124.6	124.6	124.6	169.8	169.8	169.8	189.4	306.3
Upstream Blk Time (%)	5	5	4			20		
Queuing Penalty (veh)	24	24	19			82		
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 5: Lincoln Fields Mid-Block Crossing & Carling Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (m)	100.9	104.9	97.6	98.1
Average Queue (m)	39.3	28.6	41.7	43.5
95th Queue (m)	121.5	88.2	110.9	112.9
Link Distance (m)	169.8	169.8	95.0	95.0
Upstream Blk Time (%)	7	0	19	20
Queuing Penalty (veh)	37	0	115	121
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Carling Ave & Lincoln Fields Station

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	R	L	R
Maximum Queue (m)	35.6	64.3	72.8	104.8	106.9	31.8	16.1	31.4
Average Queue (m)	13.1	25.5	18.5	43.5	45.2	19.6	3.8	14.4
95th Queue (m)	34.8	78.8	59.1	118.1	122.7	87.6	13.5	45.3
Link Distance (m)		95.0	95.0	113.4	113.4	113.4	58.8	58.8
Upstream Blk Time (%)		13	0	18	18	17		13
Queuing Penalty (veh)		64	2	72	73	70		0
Storage Bay Dist (m)	40.0							
Storage Blk Time (%)	15	10						
Queuing Penalty (veh)	76	3						

Intersection: 7: Edgeworth Ave & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	UL	T	T	R	UL	T	TR	LTR	LTR
Maximum Queue (m)	27.4	90.0	87.0	56.5	24.9	148.2	147.2	43.8	42.0
Average Queue (m)	8.6	44.0	45.9	8.9	12.7	104.3	102.2	21.9	23.7
95th Queue (m)	22.4	83.1	84.8	35.6	29.9	261.2	260.4	65.1	74.1
Link Distance (m)		113.4	113.4			305.7	305.7	87.3	97.2
Upstream Blk Time (%)		0	0			17	17	11	13
Queuing Penalty (veh)		0	1			0	0	0	0
Storage Bay Dist (m)	20.0			60.0	20.0				
Storage Blk Time (%)	1	21	5	0	5	37			
Queuing Penalty (veh)	3	12	3	0	27	47			

Network Summary

Network wide Queuing Penalty: 964

Appendix E – Trip Generation Volumes and Distributions

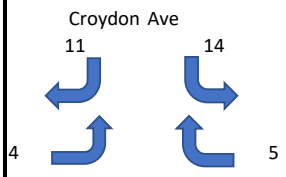
Project: **Lincoln Fields Interim AT Improvements**
Description: **Development-Generated Auto Trip Demand**
Date: **August 28, 2024**
Produced by: **Thaise Mota**
Checked by: **Matt Fralick**
Location: **1420 Richmond Road/365 Forest Street/2583 & 2589 Bond Street**
Reference: **Traffic Impact Assessment - Analysis from May 20, 2021 by EXP**

Total New Auto Trips			
AM Peak Hour		PM Peak Hour	
In	Out	In	Out
11	34	26	16

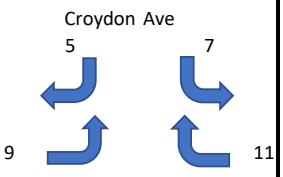
Trip Distribution To/From Carling Ave Via Croydon Ave (%)		
Direction	**In**	**Out**
East	39%	39%
West	31%	31%

Trip Distribution To/From Carling Ave in AM and PM Peak hours				
Direction	**AM Peak Hour**		**PM Peak Hour**	
	In	**Out**	**In**	**Out**
East	5	14	11	7
West	4	11	9	5

AM



PM

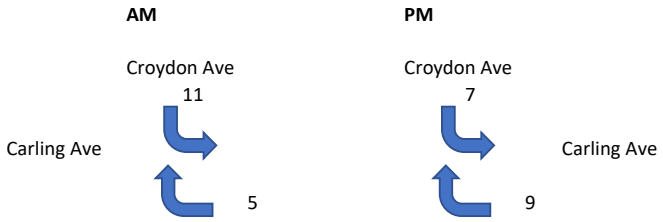


Project: **Lincoln Fields Interim AT Improvements**
Description: **Development-Generated Auto Trip Demand**
Date: **August 28, 2024**
Produced by: **Thaise Mota**
Checked by: **Matt Fralick**
Location: **2475 Regina Street**
Reference: **Transportation Impact Assessment from May 2022 by CGH**

Total New Auto Trips			
AM Peak Hour		PM Peak Hour	
In	Out	In	Out
18	41	35	26

Trip Distribution To/From Carling Ave Via Croydon Ave (%)		
Direction	**In**	**Out**
East	25%	25%

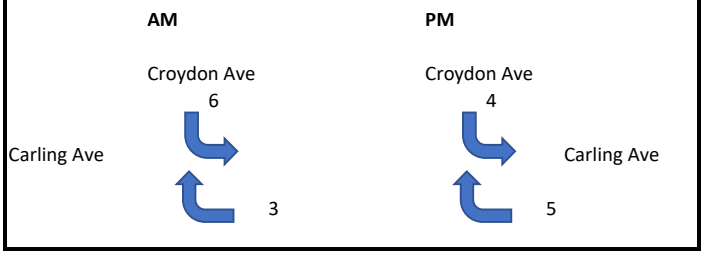
Trip Distribution To/From Carling Ave in AM and PM Peak hours				
Direction	**AM Peak Hour**		**PM Peak Hour**	
	In	**Out**	**In**	**Out**
East	5	11	9	7



Project: **Lincoln Fields Interim AT Improvements**
Description: **Development-Generated Auto Trip Demand**
Date: **August 28, 2024**
Produced by: **Thaise Mota**
Checked by: **Matt Fralick**
Location: **1299 Richmond Road**
Reference: **Transportation Impact Assessment Strategy Report from June 2023 by Parsons**

Total New Auto Trips			
AM Peak Hour		PM Peak Hour	
In	Out	In	Out
19	42	35	26

Trip Distribution To/From Carling Ave in AM and PM Peak hours				
Direction	AM Peak Hour		PM Peak Hour	
	In	Out	In	Out
East	3	6	5	4



Project: **Lincoln Fields Interim AT Improvements**
Description: **Development-Generated Auto Trip Demand**
Date: **August 28, 2024**
Produced by: **Thaise Mota**
Checked by: **Matt Fralick**
Location: **2525 Carling Avenue**

Development Assumptions	
Building Type	High-rise
# of Towers	4
Units/tower	300
Total Units	1200

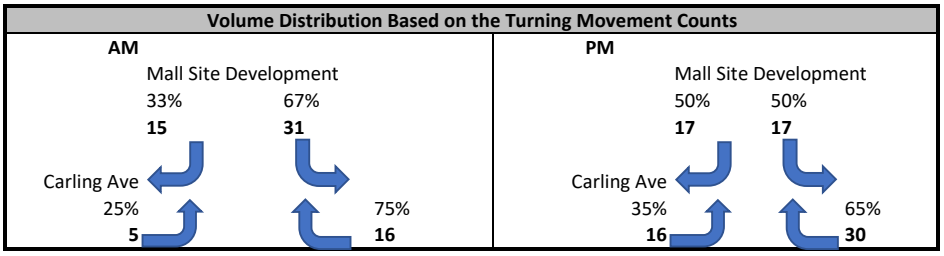
Trip Direction Distribution	
North	50%
South	50%

Trip Generation and Distribution	AM		PM	
	Entering	**Exiting**	**Entering**	**Exiting**
Trips/tower	507		507	
Total Trips	507		507	
Distribution	31%	69%	58%	42%
	157	350	294	213
Auto Share	26%		31%	
Auto trips	**42**	**93**	**91**	**66**

AM

Time	Number of Units	Type of Unit	District		AM peak			PM peak			AM peak	PM peak
Peak Hour	1200	High-Rise	Ottawa West		In	Out	Total	In	Out	Total	Mode Share	Mode Share
				Auto Driver	42	93	134	91	66	157	26%	31%
				Auto Passenger	16	35	51	30	22	52	10%	10%
				Transit	67	149	216	77	55	132	43%	26%
				Cycling	5	12	17	21	15	36	3%	7%
				Pedestrian	28	61	89	75	54	129	18%	26%
				Total	157	350	507	294	213	507	100%	100%

Volume Distribution Based on the Turning Movement Counts



Project: **Lincoln Fields Interim AT Improvements**
Description: **Development-Generated Auto Trip Demand**
Date: **August 28, 2024**
Produced by: **Thaise Mota**
Checked by: **Matt Fralick**
Location: **508 Edgeworth Avenue**

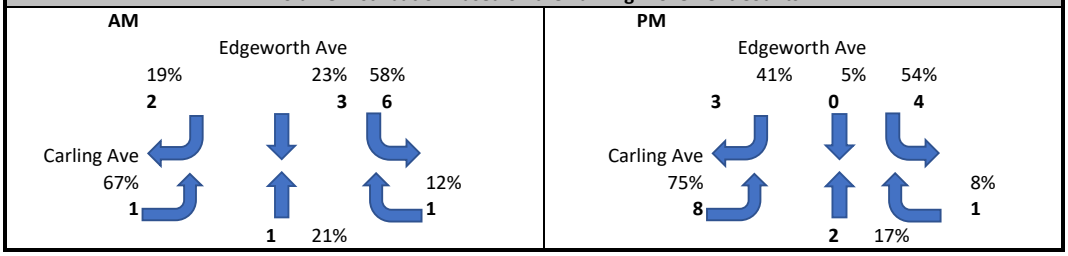
Development Assumptions	
Building Type	High-rise
# of Towers	1
Units/tower	175
Total Units	175

Trip Direction Distribution	
North	20%
South	80%

Trip Generation and Distribution				
	AM		PM	
	Entering	Exiting	Entering	Exiting
Trips/tower	74		74	
Total Trips	74		74	
Distribution	31%	69%	58%	42%
	23	51	43	31
Auto Share	26%		31%	
Auto trips	**6**	**14**	**13**	**10**

Time	Number of Units	Type of Unit	District		AM peak			PM peak			AM peak	PM peak
Peak Hour	175	High-Rise	Ottawa West		In	Out	Total	In	Out	Total	Mode Share	Mode Share
				Auto Driver	6	14	20	13	10	23	26%	31%
				Auto Passenger	2	5	7	4	3	8	10%	10%
				Transit	10	22	32	11	8	19	43%	26%
				Cycling	1	2	2	3	2	5	3%	7%
				Pedestrian	4	9	13	11	8	19	18%	26%
				Total	23	51	74	43	31	74	100%	100%

Volume Distribution Based on the Turning Movement Counts



Project: **Lincoln Fields Interim AT Improvements**
Description: **Development-Generated Auto Trip Demand**
Date: **August 28, 2024**
Produced by: **Thaise Mota**
Checked by: **Matt Fralick**

Total Trip Generated Volumes From/To Carling Ave

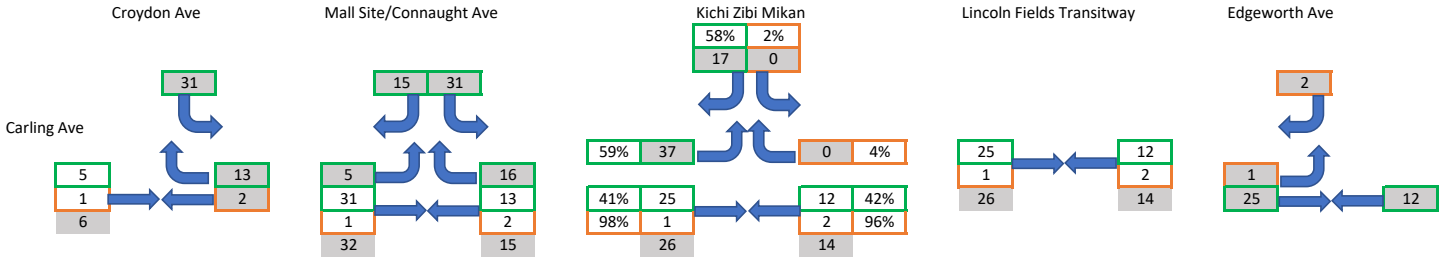
Trips through Croydon Ave		
	AM	PM
Entering	13	25
Exiting	31	18

Trips through the Mall Site		
	AM	PM
Entering	16	30
Exiting	31	17

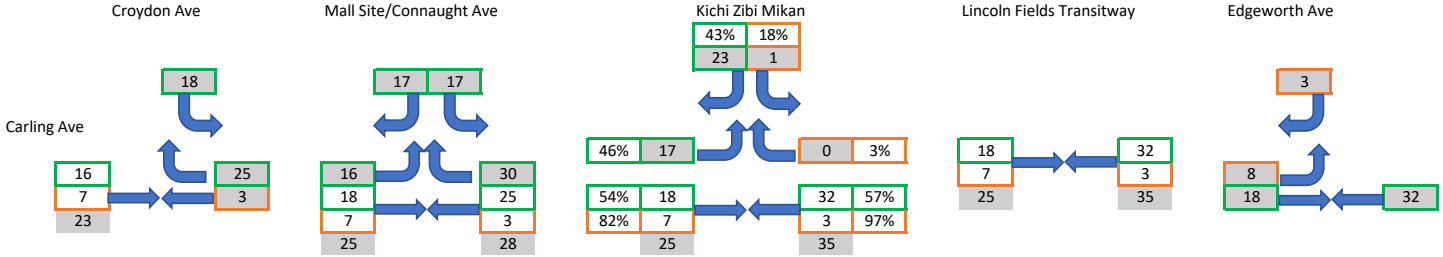
Trips through Edgeworth Ave		
	AM	PM
Entering	1	8
Exiting	2	3

Distributed Volumes of Planned Developments
- The percentage of volumes going in and out of Kichi Zibi Mikan was calculated based on the TMCs provided by the city
- Volumes added to the grown volumes

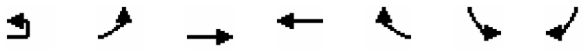
AM



PM

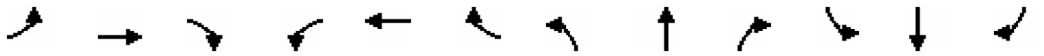


Appendix F – Future No-Build Conditions Analysis



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	10	41	1920	804	74	216	24
Future Volume (vph)	10	41	1920	804	74	216	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.9	5.9	5.9		6.3	
Lane Util. Factor		1.00	0.91	0.91		0.97	
Frpb, ped/bikes		1.00	1.00	0.99		1.00	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	
Frt		1.00	1.00	0.99		0.99	
Flt Protected		0.95	1.00	1.00		0.96	
Satd. Flow (prot)		1692	5085	4945		3288	
Flt Permitted		0.26	1.00	1.00		0.96	
Satd. Flow (perm)		463	5085	4945		3288	
Peak-hour factor, PHF	0.88	0.88	0.88	0.95	0.95	0.88	0.88
Adj. Flow (vph)	11	47	2182	846	78	245	27
RTOR Reduction (vph)	0	0	0	7	0	7	0
Lane Group Flow (vph)	0	58	2182	917	0	265	0
Confl. Peds. (#/hr)		15			15		10
Confl. Bikes (#/hr)					1		1
Heavy Vehicles (%)	0%	8%	2%	2%	14%	6%	0%
Turn Type	custom	pm+pt	NA	NA		Prot	
Protected Phases		5	2	6		7	
Permitted Phases	5	2					
Actuated Green, G (s)		94.1	94.1	82.4		23.7	
Effective Green, g (s)		94.1	94.1	82.4		23.7	
Actuated g/C Ratio		0.72	0.72	0.63		0.18	
Clearance Time (s)		5.9	5.9	5.9		6.3	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		389	3680	3134		599	
v/s Ratio Prot		0.01	c0.43	0.19		c0.08	
v/s Ratio Perm		0.10					
v/c Ratio		0.15	0.59	0.29		0.44	
Uniform Delay, d1		5.7	8.7	10.7		47.3	
Progression Factor		1.00	1.00	0.26		1.00	
Incremental Delay, d2		0.2	0.7	0.2		0.5	
Delay (s)		5.8	9.4	3.1		47.8	
Level of Service		A	A	A		D	
Approach Delay (s/veh)			9.3	3.1		47.8	
Approach LOS			A	A		D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

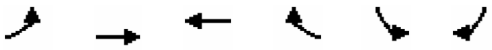


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	2061	0	0	880	108	0	0	59	97	0	54
Future Volume (vph)	44	2061	0	0	880	108	0	0	59	97	0	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00		1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.93		0.96		1.00		0.98
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		0.98		1.00
Frt	1.00	1.00			1.00	0.85		0.87		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95		1.00
Satd. Flow (prot)	1801	5085			5036	1463		1553		1717		1533
Flt Permitted	0.27	1.00			1.00	1.00		1.00		0.70		1.00
Satd. Flow (perm)	518	5085			5036	1463		1553		1266		1533
Peak-hour factor, PHF	0.86	0.86	0.86	0.98	0.98	0.98	0.68	0.68	0.68	0.90	0.90	0.90
Adj. Flow (vph)	51	2397	0	0	898	110	0	0	87	108	0	60
RTOR Reduction (vph)	0	0	0	0	0	35	0	62	0	0	0	51
Lane Group Flow (vph)	51	2397	0	0	898	75	0	25	0	108	0	9
Confl. Peds. (#/hr)	11		14	14		11	8		20	20		8
Confl. Bikes (#/hr)			1			1			1			1
Heavy Vehicles (%)	0%	2%	0%	0%	3%	3%	0%	0%	2%	3%	0%	3%
Turn Type	pm+pt	NA			NA	Perm		NA		Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2					6				4		4
Actuated Green, G (s)	99.0	99.0			88.2	88.2		18.5		18.5		18.5
Effective Green, g (s)	99.0	99.0			88.2	88.2		18.5		18.5		18.5
Actuated g/C Ratio	0.76	0.76			0.68	0.68		0.14		0.14		0.14
Clearance Time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0		3.0
Lane Grp Cap (vph)	441	3872			3416	992		221		180		218
v/s Ratio Prot	0.00	c0.47			0.18			0.02				
v/s Ratio Perm	0.08					0.05				c0.09		0.01
v/c Ratio	0.12	0.62			0.26	0.08		0.11		0.60		0.04
Uniform Delay, d1	4.2	7.0			8.2	7.1		48.6		52.3		48.1
Progression Factor	0.74	0.55			0.81	0.35		1.00		1.00		1.00
Incremental Delay, d2	0.1	0.6			0.2	0.1		0.2		5.5		0.1
Delay (s)	3.2	4.5			6.8	2.6		48.8		57.8		48.2
Level of Service	A	A			A	A		D		E		D
Approach Delay (s/veh)		4.5			6.3			48.8			54.4	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑							
Traffic Volume (vph)	0	1411	0	0	509	0	0	0	0	0	0	0
Future Volume (vph)	0	1411	0	0	509	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0							
Lane Util. Factor		0.95			0.95							
Frt		1.00			1.00							
Flt Protected		1.00			1.00							
Satd. Flow (prot)		3505			3312							
Flt Permitted		1.00			1.00							
Satd. Flow (perm)		3505			3312							
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1534	0	0	553	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1534	0	0	553	0	0	0	0	0	0	0
Heavy Vehicles (%)	0%	3%	0%	0%	9%	0%	2%	2%	2%	2%	2%	2%
Turn Type		NA			NA							
Protected Phases		2			6							
Permitted Phases												
Actuated Green, G (s)		47.0			47.0							
Effective Green, g (s)		47.0			47.0							
Actuated g/C Ratio		0.72			0.72							
Clearance Time (s)		5.0			5.0							
Vehicle Extension (s)		3.0			3.0							
Lane Grp Cap (vph)		2534			2394							
v/s Ratio Prot		c0.44			0.17							
v/s Ratio Perm												
v/c Ratio		0.61			0.23							
Uniform Delay, d1		4.4			3.0							
Progression Factor		1.75			0.50							
Incremental Delay, d2		0.9			0.2							
Delay (s)		8.6			1.7							
Level of Service		A			A							
Approach Delay (s/veh)		8.6			1.7			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	57	1354	480	16	11	29
Future Volume (vph)	57	1354	480	16	11	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	6.5	6.5	6.5	6.8	6.8
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1357	3539	3343	1313	1410	1233
Flt Permitted	0.43	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	616	3539	3343	1313	1410	1233
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	62	1472	522	17	12	32
RTOR Reduction (vph)	0	0	0	4	0	31
Lane Group Flow (vph)	62	1472	522	13	12	1
Heavy Vehicles (%)	33%	2%	8%	23%	28%	31%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	111.0	111.0	99.9	99.9	5.7	5.7
Effective Green, g (s)	111.0	111.0	99.9	99.9	5.7	5.7
Actuated g/C Ratio	0.85	0.85	0.77	0.77	0.04	0.04
Clearance Time (s)	6.4	6.5	6.5	6.5	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	552	3021	2568	1008	61	54
v/s Ratio Prot	0.00	c0.42	0.16		c0.01	
v/s Ratio Perm	0.09			0.01		0.00
v/c Ratio	0.11	0.49	0.20	0.01	0.20	0.03
Uniform Delay, d1	1.6	2.4	4.1	3.5	59.9	59.5
Progression Factor	1.43	1.24	0.90	0.40	1.00	1.00
Incremental Delay, d2	0.1	0.5	0.2	0.0	1.6	0.2
Delay (s)	2.4	3.4	3.9	1.4	61.5	59.7
Level of Service	A	A	A	A	E	E
Approach Delay (s/veh)		3.4	3.8		60.2	
Approach LOS		A	A		E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	5	32	1289	41	43	25	440	14	38	7	19	47
Future Volume (vph)	5	32	1289	41	43	25	440	14	38	7	19	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95			1.00		
Frpb, ped/bikes		1.00	1.00	0.97		1.00	1.00			0.99		
Flpb, ped/bikes		0.99	1.00	1.00		1.00	1.00			1.00		
Frt		1.00	1.00	0.85		1.00	1.00			0.96		
Flt Protected		0.95	1.00	1.00		0.95	1.00			0.97		
Satd. Flow (prot)		1748	3505	1517		1760	3352			1698		
Flt Permitted		0.44	1.00	1.00		0.09	1.00			0.80		
Satd. Flow (perm)		813	3505	1517		164	3352			1399		
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.83	0.83	0.83	0.83	0.84	0.84	0.84	0.78
Adj. Flow (vph)	6	38	1516	48	52	30	530	17	45	8	23	60
RTOR Reduction (vph)	0	0	0	19	0	0	1	0	0	0	0	0
Lane Group Flow (vph)	0	44	1516	29	0	82	546	0	0	76	0	0
Confl. Peds. (#/hr)		12		4		4		12	6		14	14
Confl. Bikes (#/hr)				2				2			3	
Heavy Vehicles (%)	0%	3%	3%	3%	0%	7%	7%	7%	3%	3%	3%	2%
Turn Type	custom	pm+pt	NA	Perm	custom	pm+pt	NA		Perm	NA		Perm
Protected Phases		5	2			1	6			8		
Permitted Phases	5	2		2	1	6			8			4
Actuated Green, G (s)		83.3	77.7	77.7		88.9	80.5			25.6		
Effective Green, g (s)		83.3	77.7	77.7		88.9	80.5			25.6		
Actuated g/C Ratio		0.64	0.60	0.60		0.68	0.62			0.20		
Clearance Time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0			3.0		
Lane Grp Cap (vph)		561	2094	906		215	2075			275		
v/s Ratio Prot		0.00	c0.43			c0.02	0.16					
v/s Ratio Perm		0.05		0.02		c0.24				0.05		
v/c Ratio		0.08	0.72	0.03		0.38	0.26			0.28		
Uniform Delay, d1		8.6	18.5	10.7		14.7	11.3			44.3		
Progression Factor		0.46	0.51	1.00		1.00	1.00			1.00		
Incremental Delay, d2		0.1	2.0	0.1		1.1	0.3			0.5		
Delay (s)		4.0	11.4	10.8		15.8	11.6			44.9		
Level of Service		A	B	B		B	B			D		
Approach Delay (s/veh)			11.2				12.1			44.9		
Approach LOS			B				B			D		

Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.3
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	5	16
Future Volume (vph)	5	16
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.6	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	0.99	
Frt	0.97	
Flt Protected	0.97	
Satd. Flow (prot)	1719	
Flt Permitted	0.77	
Satd. Flow (perm)	1365	
Peak-hour factor, PHF	0.78	0.78
Adj. Flow (vph)	6	21
RTOR Reduction (vph)	10	0
Lane Group Flow (vph)	77	0
Confl. Peds. (#/hr)		6
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	25.6	
Effective Green, g (s)	25.6	
Actuated g/C Ratio	0.20	
Clearance Time (s)	6.6	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	268	
v/s Ratio Prot		
v/s Ratio Perm	c0.06	
v/c Ratio	0.29	
Uniform Delay, d1	44.4	
Progression Factor	1.00	
Incremental Delay, d2	0.6	
Delay (s)	45.0	
Level of Service	D	
Approach Delay (s/veh)	45.0	
Approach LOS	D	

Intersection Summary

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1379	869	0	474	17	0	0	15	0	0	513
Future Vol, veh/h	0	1379	869	0	474	17	0	0	15	0	0	513
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	17	0	0	17
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Yield	Yield	Yield
RT Channelized	-	-	Free	-	-	Free	-	-	Stop	-	-	Yield
Storage Length	-	-	0	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	91	91	91	50	50	50	85	85	85
Heavy Vehicles, %	0	2	0	0	7	0	7	7	7	0	0	0
Mvmt Flow	0	1549	976	0	521	19	0	0	30	0	0	604

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	-	0	-	-	-	0	-	-	792
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.04
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.37
Pot Cap-1 Maneuver	0	-	0	0	-	0	0	0	322
Stage 1	0	-	0	0	-	0	0	0	-
Stage 2	0	-	0	0	-	0	0	0	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	0	317
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	17.54
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	317	-	-
HCM Lane V/C Ratio	0.095	-	-
HCM Control Delay (s/veh)	17.5	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	3722	3734	3683	3784	3649	3713
Vehs Exited	3764	3721	3683	3811	3644	3724
Starting Vehs	142	96	107	117	114	114
Ending Vehs	100	109	107	90	119	104
Travel Distance (km)	3170	3178	3135	3229	3101	3163
Travel Time (hr)	105.4	101.9	101.3	105.4	102.2	103.2
Total Delay (hr)	44.9	41.2	41.4	43.7	42.9	42.8
Total Stops	3633	3473	3375	3432	3435	3468
Fuel Used (l)	303.3	302.1	297.8	305.1	295.5	300.8

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3722	3734	3683	3784	3649	3713
Vehs Exited	3764	3721	3683	3811	3644	3724
Starting Vehs	142	96	107	117	114	114
Ending Vehs	100	109	107	90	119	104
Travel Distance (km)	3170	3178	3135	3229	3101	3163
Travel Time (hr)	105.4	101.9	101.3	105.4	102.2	103.2
Total Delay (hr)	44.9	41.2	41.4	43.7	42.9	42.8
Total Stops	3633	3473	3375	3432	3435	3468
Fuel Used (l)	303.3	302.1	297.8	305.1	295.5	300.8

Intersection: 1: Carling Ave & Croydon Ave

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	T	TR	L	LR
Maximum Queue (m)	40.7	99.9	99.7	94.9	42.8	55.8	65.0	27.5	83.9
Average Queue (m)	9.6	53.0	44.5	50.5	6.8	10.4	15.3	2.1	51.7
95th Queue (m)	27.6	85.0	82.0	84.7	25.8	35.3	41.3	12.4	83.1
Link Distance (m)		158.7	158.7	158.7	101.8	101.8	101.8		75.9
Upstream Blk Time (%)									3
Queuing Penalty (veh)									0
Storage Bay Dist (m)	68.0							25.0	
Storage Blk Time (%)		2							37
Queuing Penalty (veh)		1							40

Intersection: 2: Connaught Ave/Mall Site & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	L	T	T	T	T	T	T	R	TR	L
Maximum Queue (m)	19.2	60.5	75.4	78.5	48.0	63.8	68.8	8.2	25.0	54.5
Average Queue (m)	6.1	29.6	30.9	34.4	16.9	24.0	29.7	0.3	9.5	22.0
95th Queue (m)	14.3	51.7	61.6	64.0	37.7	49.2	56.9	5.8	20.7	42.5
Link Distance (m)	101.8	101.8	101.8	101.8	124.7	124.7	124.7	124.7	74.2	146.2
Upstream Blk Time (%)			0	0						
Queuing Penalty (veh)			0	0						
Storage Bay Dist (m)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 3: Kichi Zibi Mikan Ramps & Carling Ave

Movement	EB	EB	EB	WB	WB	WB	NB
Directions Served	T	T	R	T	T	TR	R
Maximum Queue (m)	48.3	54.2	109.1	9.9	16.4	17.5	4.0
Average Queue (m)	5.7	6.6	7.7	0.6	0.9	1.2	0.1
95th Queue (m)	26.1	29.6	46.9	5.0	7.2	8.5	2.0
Link Distance (m)	124.7	124.7	124.7	170.3	170.3	170.3	188.8
Upstream Blk Time (%)		0	0				
Queuing Penalty (veh)		0	0				
Storage Bay Dist (m)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 4: Lincoln Fields Mid-Block Crossing & Carling Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (m)	80.7	81.4	55.8	64.3
Average Queue (m)	24.5	26.1	9.9	12.7
95th Queue (m)	64.7	67.1	34.0	41.8
Link Distance (m)	170.3	170.3	94.8	94.8
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Carling Ave & Lincoln Fields Station

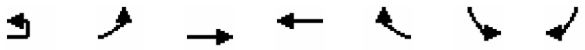
Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	R	L	R
Maximum Queue (m)	47.0	90.5	95.0	55.3	63.5	18.4	23.4	20.6
Average Queue (m)	9.1	16.2	18.8	14.1	14.2	1.5	4.2	5.8
95th Queue (m)	27.3	57.6	63.0	43.9	45.1	8.7	15.1	16.1
Link Distance (m)		94.8	94.8	113.7	113.7	113.7	120.5	120.5
Upstream Blk Time (%)		0	0					
Queuing Penalty (veh)		0	1					
Storage Bay Dist (m)	40.0							
Storage Blk Time (%)	0	2						
Queuing Penalty (veh)	0	1						

Intersection: 6: Edgeworth Ave & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	UL	T	T	R	UL	T	TR	LTR	LTR
Maximum Queue (m)	27.3	111.2	113.9	67.4	25.6	48.8	42.4	35.8	37.1
Average Queue (m)	5.1	58.3	60.6	9.7	9.9	20.1	15.6	12.1	14.4
95th Queue (m)	18.4	104.0	106.2	41.8	22.4	40.7	35.1	26.8	29.3
Link Distance (m)		113.7	113.7			305.7	305.7	87.3	97.2
Upstream Blk Time (%)		1	1						
Queuing Penalty (veh)		4	5						
Storage Bay Dist (m)	20.0			60.0	20.0				
Storage Blk Time (%)	0	26	11	0	2	8			
Queuing Penalty (veh)	2	10	4	0	4	6			

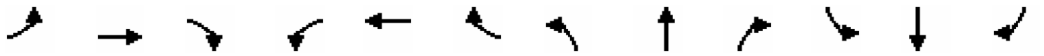
Network Summary

Network wide Queuing Penalty: 78



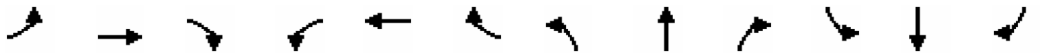
Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	5	51	1162	1726	152	200	37
Future Volume (vph)	5	51	1162	1726	152	200	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.9	5.9	5.9		6.3	
Lane Util. Factor		1.00	0.91	0.91		0.97	
Frpb, ped/bikes		1.00	1.00	1.00		0.99	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	
Frt		1.00	1.00	0.99		0.98	
Flt Protected		0.95	1.00	1.00		0.96	
Satd. Flow (prot)		1773	5085	5065		3298	
Flt Permitted		0.07	1.00	1.00		0.96	
Satd. Flow (perm)		131	5085	5065		3298	
Peak-hour factor, PHF	0.94	0.94	0.94	0.97	0.97	0.94	0.94
Adj. Flow (vph)	5	54	1236	1779	157	213	39
RTOR Reduction (vph)	0	0	0	6	0	14	0
Lane Group Flow (vph)	0	59	1236	1930	0	238	0
Confl. Peds. (#/hr)							28
Confl. Bikes (#/hr)					1		
Heavy Vehicles (%)	0%	2%	2%	1%	1%	4%	4%
Turn Type	custom	pm+pt	NA	NA		Prot	
Protected Phases		5	2	6		7	
Permitted Phases	5	2					
Actuated Green, G (s)		97.8	97.8	86.2		20.0	
Effective Green, g (s)		97.8	97.8	86.2		20.0	
Actuated g/C Ratio		0.75	0.75	0.66		0.15	
Clearance Time (s)		5.9	5.9	5.9		6.3	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		170	3825	3358		507	
v/s Ratio Prot		0.02	c0.24	c0.38		c0.07	
v/s Ratio Perm		0.25					
v/c Ratio		0.35	0.32	0.57		0.47	
Uniform Delay, d1		8.7	5.3	11.9		50.2	
Progression Factor		1.00	1.00	0.24		1.00	
Incremental Delay, d2		1.2	0.2	0.6		0.7	
Delay (s)		9.9	5.5	3.5		50.9	
Level of Service		A	A	A		D	
Approach Delay (s/veh)			5.7	3.5		50.9	
Approach LOS			A	A		D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



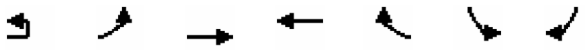
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	1264	0	0	1898	253	0	0	41	133	0	144
Future Volume (vph)	98	1264	0	0	1898	253	0	0	41	133	0	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00		1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.89		0.98		1.00		0.98
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		0.99		1.00
Frt	1.00	1.00			1.00	0.85		0.87		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95		1.00
Satd. Flow (prot)	1805	5036			5136	1417		1607		1788		1581
Flt Permitted	0.06	1.00			1.00	1.00		1.00		0.71		1.00
Satd. Flow (perm)	110	5036			5136	1417		1607		1337		1581
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.57	0.57	0.57	0.92	0.92	0.92
Adj. Flow (vph)	107	1374	0	0	1998	266	0	0	72	145	0	157
RTOR Reduction (vph)	0	0	0	0	0	89	0	59	0	0	0	97
Lane Group Flow (vph)	107	1374	0	0	1998	177	0	13	0	145	0	60
Confl. Peds. (#/hr)	22		5	5		22	7		9	9		7
Confl. Bikes (#/hr)			1			1						1
Heavy Vehicles (%)	0%	3%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA			NA	Perm		NA		Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2					6				4		4
Actuated Green, G (s)	94.4	94.4			81.0	81.0		23.1		23.1		23.1
Effective Green, g (s)	94.4	94.4			81.0	81.0		23.1		23.1		23.1
Actuated g/C Ratio	0.73	0.73			0.62	0.62		0.18		0.18		0.18
Clearance Time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0		3.0
Lane Grp Cap (vph)	176	3656			3200	882		285		237		280
v/s Ratio Prot	c0.03	0.27			0.39			0.01				
v/s Ratio Perm	c0.41					0.12				c0.11		0.04
v/c Ratio	0.61	0.38			0.62	0.20		0.04		0.61		0.21
Uniform Delay, d1	16.1	6.7			15.1	10.6		44.3		49.3		45.7
Progression Factor	1.76	0.70			1.07	1.76		1.00		1.00		1.00
Incremental Delay, d2	5.6	0.3			0.9	0.5		0.1		4.6		0.4
Delay (s)	34.0	5.0			17.1	19.1		44.4		53.9		46.1
Level of Service	C	A			B	B		D		D		D
Approach Delay (s/veh)		7.1			17.4			44.4			49.8	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1086	0	0	1289	0	0	0	0	0	0	0
Future Volume (vph)	0	1086	0	0	1289	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0							
Lane Util. Factor		0.95			0.95							
Frt		1.00			1.00							
Flt Protected		1.00			1.00							
Satd. Flow (prot)		3539			3539							
Flt Permitted		1.00			1.00							
Satd. Flow (perm)		3539			3539							
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1180	0	0	1401	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1180	0	0	1401	0	0	0	0	0	0	0
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	2%	2%	2%	2%	2%	2%
Turn Type		NA			NA							
Protected Phases		2			6							
Permitted Phases												
Actuated Green, G (s)		47.0			47.0							
Effective Green, g (s)		47.0			47.0							
Actuated g/C Ratio		0.72			0.72							
Clearance Time (s)		5.0			5.0							
Vehicle Extension (s)		3.0			3.0							
Lane Grp Cap (vph)		2558			2558							
v/s Ratio Prot		0.33			c0.40							
v/s Ratio Perm												
v/c Ratio		0.46			0.55							
Uniform Delay, d1		3.7			4.1							
Progression Factor		1.57			1.38							
Incremental Delay, d2		0.6			0.8							
Delay (s)		6.5			6.4							
Level of Service		A			A							
Approach Delay (s/veh)		6.5			6.4			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	4	22	1043	1258	18	13	27
Future Volume (vph)	4	22	1043	1258	18	13	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.5	6.5	6.5	6.8	6.8
Lane Util. Factor		1.00	0.95	0.95	1.00	1.00	1.00
Frt		1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected		0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1220	3539	3574	1313	1299	1262
Flt Permitted		0.16	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		208	3539	3574	1313	1299	1262
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	24	1134	1367	20	14	29
RTOR Reduction (vph)	0	0	0	0	5	0	28
Lane Group Flow (vph)	0	28	1134	1367	15	14	1
Heavy Vehicles (%)	0%	56%	2%	1%	23%	39%	28%
Turn Type	custom	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases		5	2	6		4	
Permitted Phases	5	2			6		4
Actuated Green, G (s)		110.6	110.6	100.4	100.4	6.1	6.1
Effective Green, g (s)		110.6	110.6	100.4	100.4	6.1	6.1
Actuated g/C Ratio		0.85	0.85	0.77	0.77	0.05	0.05
Clearance Time (s)		6.4	6.5	6.5	6.5	6.8	6.8
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		206	3010	2760	1014	60	59
v/s Ratio Prot		0.00	c0.32	c0.38		c0.01	
v/s Ratio Perm		0.11			0.01		0.00
v/c Ratio		0.14	0.38	0.50	0.02	0.23	0.02
Uniform Delay, d1		3.1	2.1	5.5	3.4	59.7	59.1
Progression Factor		1.18	0.87	0.20	0.01	1.00	1.00
Incremental Delay, d2		0.3	0.3	0.6	0.0	2.0	0.2
Delay (s)		4.0	2.2	1.7	0.0	61.7	59.3
Level of Service		A	A	A	A	E	E
Approach Delay (s/veh)			2.2	1.6		60.1	
Approach LOS			A	A		E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	2.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	6	61	935	59	76	46	1212	16	38	10	11	32
Future Volume (vph)	6	61	935	59	76	46	1212	16	38	10	11	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95			1.00		
Frpb, ped/bikes		1.00	1.00	0.93		1.00	1.00			1.00		
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00			0.99		
Frt		1.00	1.00	0.85		1.00	1.00			0.97		
Flt Protected		0.95	1.00	1.00		0.95	1.00			0.97		
Satd. Flow (prot)		1805	3539	1497		1803	3531			1755		
Flt Permitted		0.16	1.00	1.00		0.20	1.00			0.79		
Satd. Flow (perm)		301	3539	1497		386	3531			1439		
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.96	0.96	0.96	0.96	0.84	0.84	0.84	0.83
Adj. Flow (vph)	7	69	1062	67	79	48	1262	17	45	12	13	39
RTOR Reduction (vph)	0	0	0	26	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	76	1063	41	0	127	1280	0	0	70	0	0
Confl. Peds. (#/hr)		8		19		19		8	24		12	12
Confl. Bikes (#/hr)				1				1				
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	2%	0%	0%	2%	0%	0%
Turn Type	custom	pm+pt	NA	Perm	custom	pm+pt	NA		Perm	NA		Perm
Protected Phases		5	2			1	6			8		
Permitted Phases	5	2		2	1	6			8			4
Actuated Green, G (s)		85.2	78.9	78.9		90.0	81.3			24.1		
Effective Green, g (s)		85.2	78.9	78.9		90.0	81.3			24.1		
Actuated g/C Ratio		0.66	0.61	0.61		0.69	0.63			0.19		
Clearance Time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0			3.0		
Lane Grp Cap (vph)		270	2147	908		362	2208			266		
v/s Ratio Prot		0.01	0.30			c0.02	c0.36					
v/s Ratio Perm		0.17		0.03		0.22				c0.05		
v/c Ratio		0.28	0.50	0.04		0.35	0.58			0.26		
Uniform Delay, d1		10.2	14.4	10.3		8.6	14.3			45.3		
Progression Factor		0.94	0.97	6.52		1.00	1.00			1.00		
Incremental Delay, d2		0.5	0.8	0.1		0.6	1.1			0.5		
Delay (s)		10.1	14.7	67.4		9.2	15.4			45.9		
Level of Service		B	B	E		A	B			D		
Approach Delay (s/veh)			17.3				14.9			45.9		
Approach LOS			B				B			D		

Intersection Summary			
HCM 2000 Control Delay (s/veh)	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.3
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	7	23
Future Volume (vph)	7	23
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.6	
Lane Util. Factor	1.00	
Frpb, ped/bikes	0.99	
Flpb, ped/bikes	0.99	
Frt	0.95	
Flt Protected	0.97	
Satd. Flow (prot)	1723	
Flt Permitted	0.81	
Satd. Flow (perm)	1438	
Peak-hour factor, PHF	0.83	0.83
Adj. Flow (vph)	8	28
RTOR Reduction (vph)	19	0
Lane Group Flow (vph)	56	0
Confl. Peds. (#/hr)		24
Confl. Bikes (#/hr)		2
Heavy Vehicles (%)	0%	0%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	24.1	
Effective Green, g (s)	24.1	
Actuated g/C Ratio	0.19	
Clearance Time (s)	6.6	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	266	
v/s Ratio Prot		
v/s Ratio Perm	0.04	
v/c Ratio	0.21	
Uniform Delay, d1	44.9	
Progression Factor	1.00	
Incremental Delay, d2	0.4	
Delay (s)	45.3	
Level of Service	D	
Approach Delay (s/veh)	45.3	
Approach LOS	D	

Intersection Summary

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	983	476	0	1250	18	0	0	103	0	0	861
Future Vol, veh/h	0	983	476	0	1250	18	0	0	103	0	0	861
Conflicting Peds, #/hr	1	0	1	1	0	1	9	0	10	10	0	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Yield	Yield	Yield
RT Channelized	-	-	Free	-	-	Free	-	-	Stop	-	-	Yield
Storage Length	-	-	0	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	94	94	94	80	80	80	94	94	94
Heavy Vehicles, %	0	3	0	0	1	0	1	1	1	0	0	0
Mvmt Flow	0	1013	491	0	1330	19	0	0	129	0	0	916

Major/Minor	Major1			Major2			Minor1					
Conflicting Flow All	-	0	-	-	-	0	-	-	517			
Stage 1	-	-	-	-	-	-	-	-	-			
Stage 2	-	-	-	-	-	-	-	-	-			
Critical Hdwy	-	-	-	-	-	-	-	-	6.92			
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-			
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.31			
Pot Cap-1 Maneuver	0	-	0	0	-	0	0	0	506			
Stage 1	0	-	0	0	-	0	0	0	-			
Stage 2	0	-	0	0	-	0	0	0	-			
Platoon blocked, %		-			-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	0	502			
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-			
Stage 1	-	-	-	-	-	-	-	0	-			
Stage 2	-	-	-	-	-	-	-	0	-			

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	14.63
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	502	-	-
HCM Lane V/C Ratio	0.257	-	-
HCM Control Delay (s/veh)	14.6	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	1	-	-

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:15	4:15	4:15	4:15	4:15	4:15
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	3796	3725	3750	3754	3781	3761
Vehs Exited	3803	3717	3760	3745	3772	3758
Starting Vehs	108	88	116	100	72	92
Ending Vehs	101	96	106	109	81	97
Travel Distance (km)	3247	3169	3212	3196	3213	3207
Travel Time (hr)	107.7	100.0	105.8	104.3	103.3	104.2
Total Delay (hr)	46.0	39.4	44.6	43.5	41.8	43.0
Total Stops	3556	3192	3494	3515	3323	3416
Fuel Used (l)	310.5	298.8	308.5	304.4	303.9	305.2

Interval #0 Information Seeding

Start Time	4:15
End Time	4:30
Total Time (min)	15

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3796	3725	3750	3754	3781	3761
Vehs Exited	3803	3717	3760	3745	3772	3758
Starting Vehs	108	88	116	100	72	92
Ending Vehs	101	96	106	109	81	97
Travel Distance (km)	3247	3169	3212	3196	3213	3207
Travel Time (hr)	107.7	100.0	105.8	104.3	103.3	104.2
Total Delay (hr)	46.0	39.4	44.6	43.5	41.8	43.0
Total Stops	3556	3192	3494	3515	3323	3416
Fuel Used (l)	310.5	298.8	308.5	304.4	303.9	305.2

Intersection: 1: Carling Ave & Croydon Ave

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	T	TR	L	LR
Maximum Queue (m)	53.9	97.8	86.1	89.2	33.0	44.0	56.5	22.9	83.4
Average Queue (m)	11.1	55.1	46.3	46.8	6.5	9.5	15.5	1.3	50.6
95th Queue (m)	34.8	87.7	81.8	78.6	22.3	30.5	40.6	9.4	80.3
Link Distance (m)		158.7	158.7	158.7	101.8	101.8	101.8		75.9
Upstream Blk Time (%)									3
Queuing Penalty (veh)									0
Storage Bay Dist (m)	68.0							25.0	
Storage Blk Time (%)	0	3							39
Queuing Penalty (veh)	0	1							42

Intersection: 2: Connaught Ave/Mall Site & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	L	T	T	T	T	T	T	R	TR	L
Maximum Queue (m)	18.2	70.8	71.4	69.3	44.1	55.6	63.3	19.4	28.3	52.8
Average Queue (m)	5.4	29.6	31.4	35.8	16.2	22.9	30.0	1.1	9.2	22.0
95th Queue (m)	13.5	54.8	60.4	63.0	36.6	45.5	55.1	12.7	20.9	41.2
Link Distance (m)	101.8	101.8	101.8	101.8	124.7	124.7	124.7	124.7	74.2	146.2
Upstream Blk Time (%)		0								
Queuing Penalty (veh)		0								
Storage Bay Dist (m)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 3: Kichi Zibi Mikan Ramps & Carling Ave

Movement	EB	EB	EB	WB	WB	WB
Directions Served	T	T	R	T	T	TR
Maximum Queue (m)	48.4	49.2	49.6	10.0	15.2	13.7
Average Queue (m)	5.4	6.1	2.5	0.9	1.2	0.8
95th Queue (m)	26.2	25.4	21.9	5.3	9.1	6.5
Link Distance (m)	124.7	124.7	124.7	170.3	170.3	170.3
Upstream Blk Time (%)			0			
Queuing Penalty (veh)			0			
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: Lincoln Fields Mid-Block Crossing & Carling Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (m)	84.7	84.1	42.7	48.7
Average Queue (m)	23.9	25.0	7.8	8.8
95th Queue (m)	68.5	69.8	27.5	30.6
Link Distance (m)	170.3	170.3	94.8	94.8
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Carling Ave & Lincoln Fields Station

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	R	L	R
Maximum Queue (m)	47.0	81.1	80.6	57.6	56.9	18.3	28.7	22.1
Average Queue (m)	9.5	18.3	20.0	13.8	13.7	1.4	4.7	5.3
95th Queue (m)	30.2	60.3	64.7	42.5	44.7	8.3	17.1	15.7
Link Distance (m)		94.8	94.8	113.7	113.7	113.7	120.5	120.5
Upstream Blk Time (%)		0	0					
Queuing Penalty (veh)		2	2					
Storage Bay Dist (m)	40.0							
Storage Blk Time (%)	0	2						
Queuing Penalty (veh)	1	1						

Intersection: 6: Edgeworth Ave & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	UL	T	T	R	UL	T	TR	LTR	LTR
Maximum Queue (m)	27.4	113.8	119.2	67.5	26.6	56.0	47.9	32.8	34.7
Average Queue (m)	6.2	59.9	62.2	9.1	10.6	19.2	17.5	13.3	15.0
95th Queue (m)	20.0	107.9	110.0	39.5	21.7	42.9	38.3	27.9	30.5
Link Distance (m)		113.7	113.7			305.7	305.7	87.3	97.2
Upstream Blk Time (%)		0	1						
Queuing Penalty (veh)		3	4						
Storage Bay Dist (m)	20.0			60.0	20.0				
Storage Blk Time (%)		24	12	0	2	8			
Queuing Penalty (veh)		9	5	0	5	5			

Network Summary

Network wide Queuing Penalty: 82

Appendix G – Proposed Interim and Ultimate Concepts

LINCOLN FIELDS
CONNECTIVITY
SECONDARY PLAN
INTERIM CONDITIONS HIGH-LEVEL CONCEPT

Director | Project Manager

alta
Alta Planning + Design Canada, Inc.
45 Spencer Street, Unit 101 | Ottawa, ON, K1Y 2P5
613-319-0321 | alta.plan

Ottawa

Contract No.	Drawing No.
CPXXXXXX	001

Sheet No. 1 of 1

Asset No.

Asset Group

Des:	Chk'd:
TM	NP
Dwn:	Chk'd:
TM	NP
Utility Circ. No.	Index No.

Construction Inspector:

Scale: 1:500
0m 5 10

NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

REVISIONS

No.	Description	By	Date (dd/mm/yy)
1	Base Plan	TM	(07/09/22)

NOT FOR CONSTRUCTION

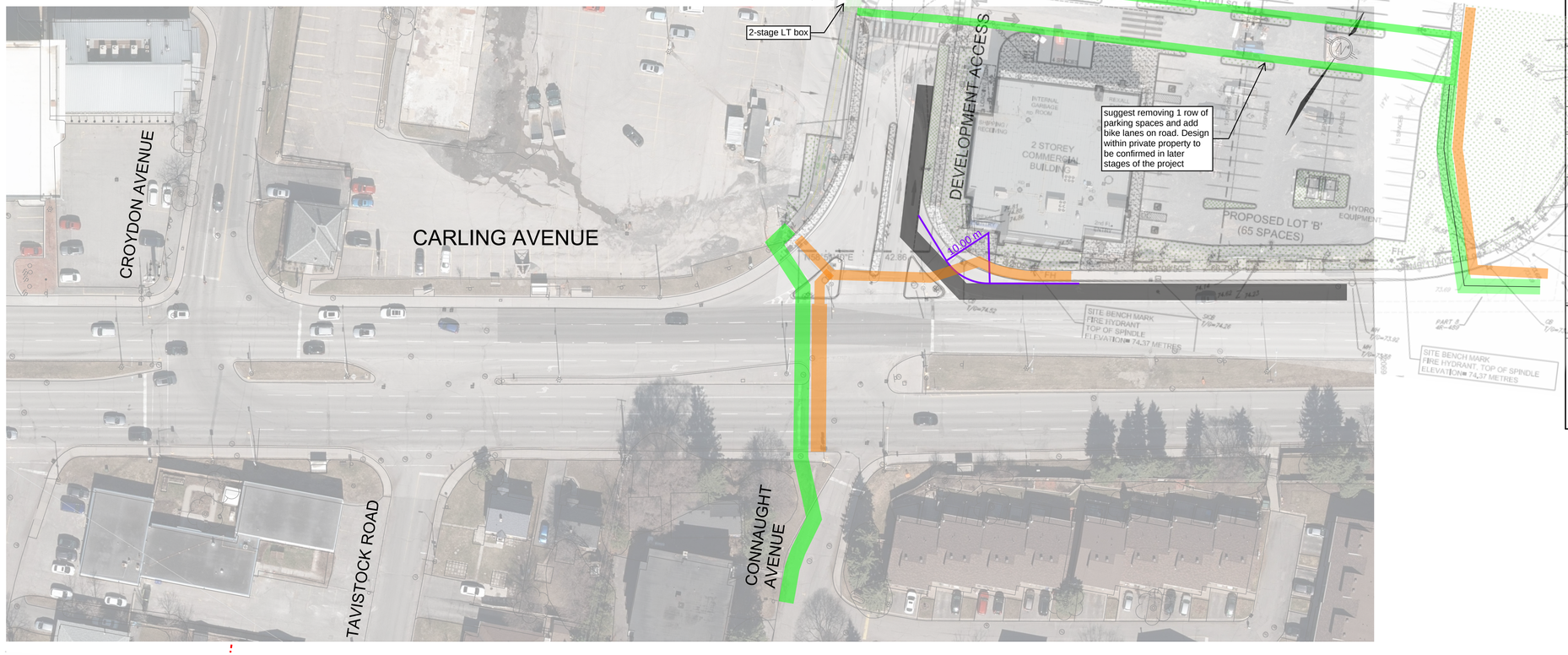
LEGEND:

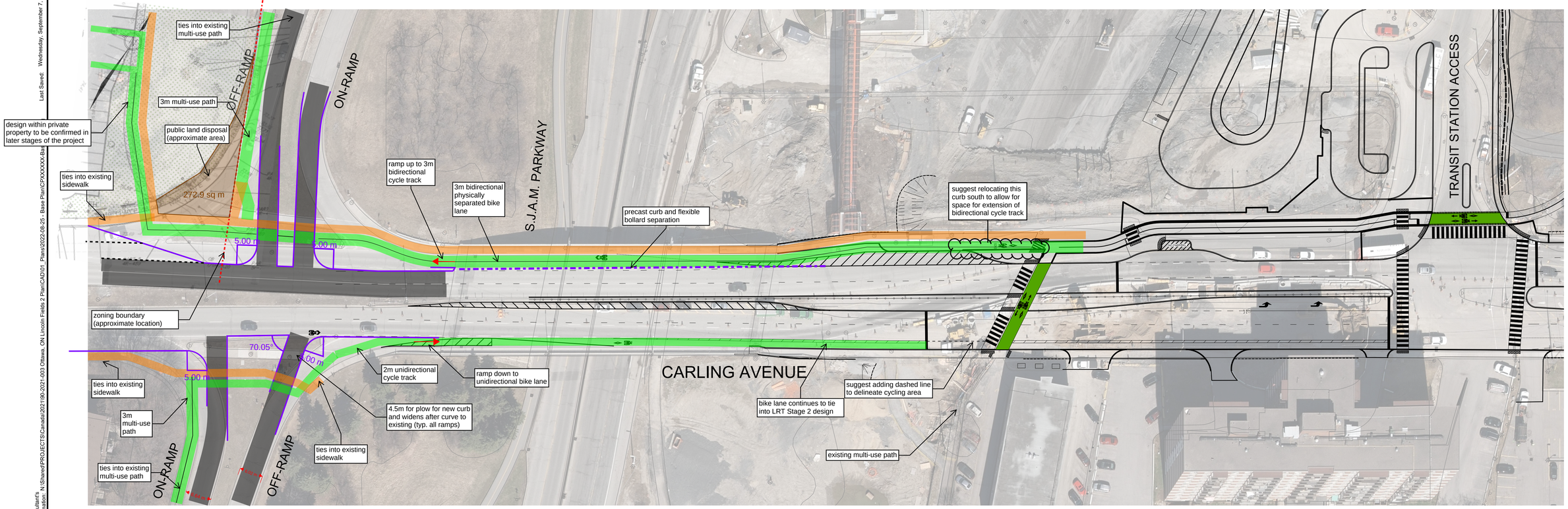
EXISTING
- MAINTENANCE HOLE
- CATCH BASIN
- FIRE HYDRANT
- UTILITY/TRAFFIC POLE
- LIGHT STANDARD
- BOLLARD

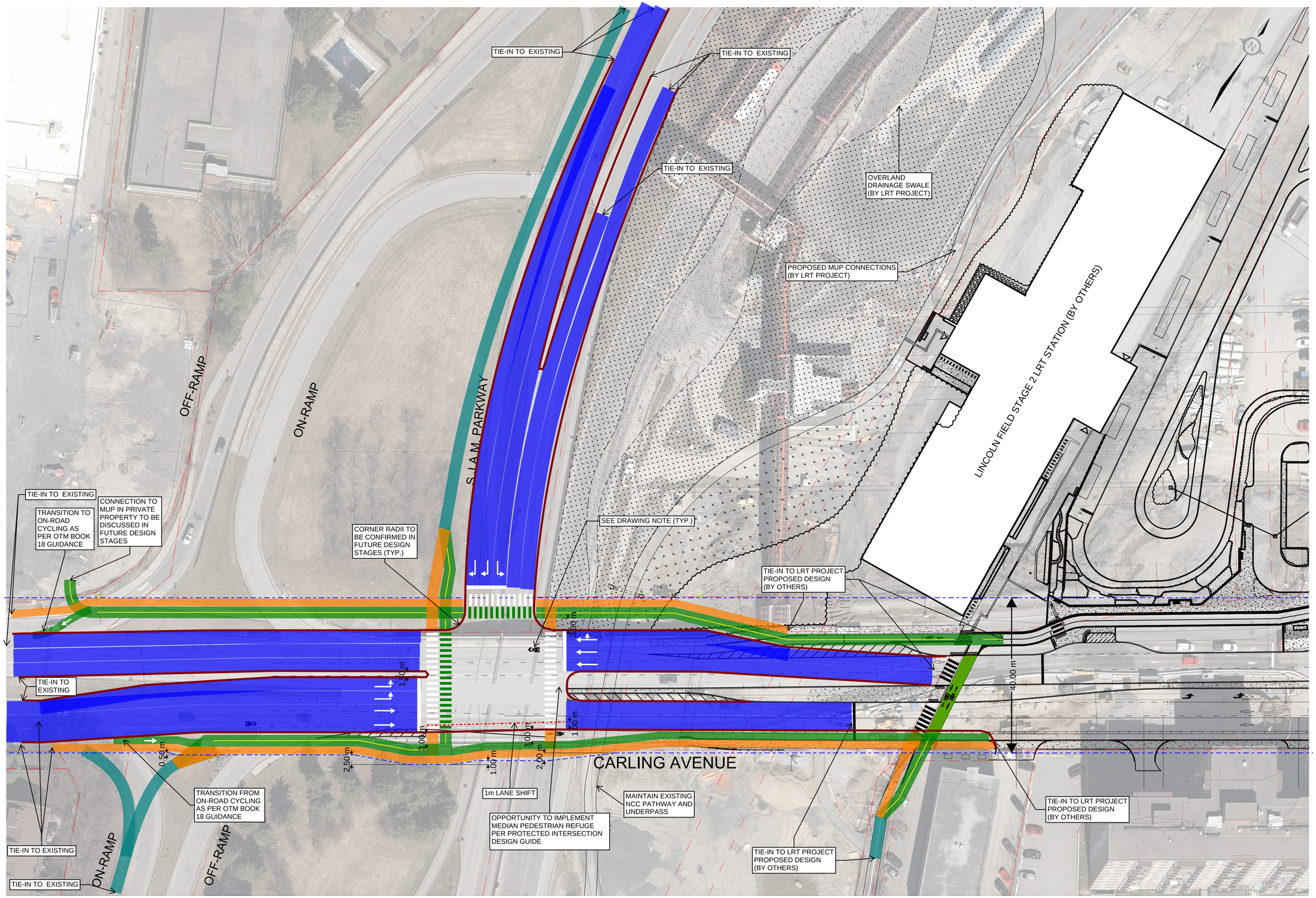
PROPOSED
- CYCLING FACILITIES
- PEDESTRIAN FACILITIES
- TRAFFIC LANE
- CONCRETE CURB

NOTE:

DARKER LINES SHOW THE DESIGN OF THE STAGE 2 LRT LINCOLN FIELDS STATION WHICH IS CURRENTLY UNDER CONSTRUCTION.







LEGEND:

EXISTING	PROPOSED
ROW LINE	ROW LINE
MAINTENANCE HOLE	3.5 m TRAVEL LANE
CATCH BASIN	3 m MULTI-USE PATH
FIRE HYDRANT	3 m TWO-WAY CYCLE TRACK
UTILITY/TRAFFIC POLE	2 m ONE-WAY CYCLE TRACK
LIGHT STANDARD	2 m SIDEWALK
BOLLARD	CONCRETE CURB

NOTE:

DARKER LINES SHOW THE DESIGN OF THE STAGE 2 LRT LINCOLN FIELDS STATION WHICH IS CURRENTLY UNDER CONSTRUCTION.

NOT FOR CONSTRUCTION

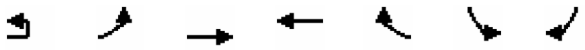
NO.	DESCRIPTION	BY	YYYY/MM/DD
1	BASE PLAN	TM	2022/07/09
2	UPDATED BASE PLAN	TM	2023/11/29
3	HIGH-LEVEL CONCEPT (DRAFT)	TM	2023/12/08
4	HIGH-LEVEL CONCEPT (FINAL)	TM	2024/02/27
-	-	-	-

Ottawa
Planning, Real Estate & Economic Development
Transportation Engineering Services

LINCOLN FIELDS CONNECTIVITY SECONDARY PLAN

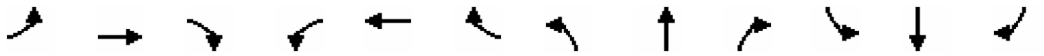
Designed By: T.Mota
Drawn By: T.Mota
Scale: 1:500
Date: 2024/02/27
Drawing No.: 01

Appendix H – Proposed Interim Conditions Analysis



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	10	41	1920	804	74	216	24
Future Volume (vph)	10	41	1920	804	74	216	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.9	5.9	5.9		6.3	
Lane Util. Factor		1.00	0.91	0.91		0.97	
Frpb, ped/bikes		1.00	1.00	0.99		1.00	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	
Frt		1.00	1.00	0.99		0.99	
Flt Protected		0.95	1.00	1.00		0.96	
Satd. Flow (prot)		1692	5085	4945		3288	
Flt Permitted		0.26	1.00	1.00		0.96	
Satd. Flow (perm)		463	5085	4945		3288	
Peak-hour factor, PHF	0.88	0.88	0.88	0.95	0.95	0.88	0.88
Adj. Flow (vph)	11	47	2182	846	78	245	27
RTOR Reduction (vph)	0	0	0	7	0	7	0
Lane Group Flow (vph)	0	58	2182	917	0	265	0
Confl. Peds. (#/hr)		15			15		10
Confl. Bikes (#/hr)					1		1
Heavy Vehicles (%)	0%	8%	2%	2%	14%	6%	0%
Turn Type	custom	pm+pt	NA	NA		Prot	
Protected Phases		5	2	6		7	
Permitted Phases	5	2					
Actuated Green, G (s)		94.1	94.1	82.4		23.7	
Effective Green, g (s)		94.1	94.1	82.4		23.7	
Actuated g/C Ratio		0.72	0.72	0.63		0.18	
Clearance Time (s)		5.9	5.9	5.9		6.3	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		389	3680	3134		599	
v/s Ratio Prot		0.01	c0.43	0.19		c0.08	
v/s Ratio Perm		0.10					
v/c Ratio		0.15	0.59	0.29		0.44	
Uniform Delay, d1		5.7	8.7	10.7		47.3	
Progression Factor		1.00	1.00	0.26		1.00	
Incremental Delay, d2		0.2	0.7	0.2		0.5	
Delay (s)		5.8	9.4	3.0		47.8	
Level of Service		A	A	A		D	
Approach Delay (s/veh)			9.3	3.0		47.8	
Approach LOS			A	A		D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

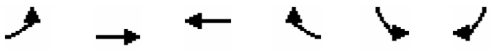


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	2061	0	0	880	108	0	0	59	97	0	54
Future Volume (vph)	44	2061	0	0	880	108	0	0	59	97	0	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00		1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.93		0.96		1.00		0.98
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		0.98		1.00
Frt	1.00	1.00			1.00	0.85		0.87		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95		1.00
Satd. Flow (prot)	1801	5085			5036	1463		1553		1717		1533
Flt Permitted	0.27	1.00			1.00	1.00		1.00		0.70		1.00
Satd. Flow (perm)	518	5085			5036	1463		1553		1266		1533
Peak-hour factor, PHF	0.86	0.86	0.86	0.98	0.98	0.98	0.68	0.68	0.68	0.90	0.90	0.90
Adj. Flow (vph)	51	2397	0	0	898	110	0	0	87	108	0	60
RTOR Reduction (vph)	0	0	0	0	0	35	0	62	0	0	0	51
Lane Group Flow (vph)	51	2397	0	0	898	75	0	25	0	108	0	9
Confl. Peds. (#/hr)	11		14	14		11	8		20	20		8
Confl. Bikes (#/hr)			1			1			1			1
Heavy Vehicles (%)	0%	2%	0%	0%	3%	3%	0%	0%	2%	3%	0%	3%
Turn Type	pm+pt	NA			NA	Perm		NA		Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2					6				4		4
Actuated Green, G (s)	99.0	99.0			88.2	88.2		18.5		18.5		18.5
Effective Green, g (s)	99.0	99.0			88.2	88.2		18.5		18.5		18.5
Actuated g/C Ratio	0.76	0.76			0.68	0.68		0.14		0.14		0.14
Clearance Time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0		3.0
Lane Grp Cap (vph)	441	3872			3416	992		221		180		218
v/s Ratio Prot	0.00	c0.47			0.18			0.02				
v/s Ratio Perm	0.08					0.05				c0.09		0.01
v/c Ratio	0.12	0.62			0.26	0.08		0.11		0.60		0.04
Uniform Delay, d1	4.2	7.0			8.2	7.1		48.6		52.3		48.1
Progression Factor	0.74	0.55			0.80	0.34		1.00		1.00		1.00
Incremental Delay, d2	0.1	0.6			0.2	0.1		0.2		5.5		0.1
Delay (s)	3.2	4.5			6.7	2.5		48.8		57.8		48.2
Level of Service	A	A			A	A		D		E		D
Approach Delay (s/veh)		4.5			6.3			48.8			54.4	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑							
Traffic Volume (vph)	0	1394	0	0	509	0	0	0	0	0	0	0
Future Volume (vph)	0	1394	0	0	509	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0							
Lane Util. Factor		0.95			0.95							
Frt		1.00			1.00							
Flt Protected		1.00			1.00							
Satd. Flow (prot)		3505			3312							
Flt Permitted		1.00			1.00							
Satd. Flow (perm)		3505			3312							
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1515	0	0	553	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1515	0	0	553	0	0	0	0	0	0	0
Heavy Vehicles (%)	0%	3%	0%	0%	9%	0%	2%	2%	2%	2%	2%	2%
Turn Type		NA			NA							
Protected Phases		2			6							
Permitted Phases												
Actuated Green, G (s)		47.0			47.0							
Effective Green, g (s)		47.0			47.0							
Actuated g/C Ratio		0.72			0.72							
Clearance Time (s)		5.0			5.0							
Vehicle Extension (s)		3.0			3.0							
Lane Grp Cap (vph)		2534			2394							
v/s Ratio Prot		c0.43			0.17							
v/s Ratio Perm												
v/c Ratio		0.60			0.23							
Uniform Delay, d1		4.4			3.0							
Progression Factor		1.75			0.50							
Incremental Delay, d2		0.9			0.2							
Delay (s)		8.5			1.7							
Level of Service		A			A							
Approach Delay (s/veh)		8.5			1.7			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	57	1354	480	16	11	29
Future Volume (vph)	57	1354	480	16	11	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	6.5	6.5	6.5	6.8	6.8
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1357	3539	3343	1313	1410	1233
Flt Permitted	0.43	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	616	3539	3343	1313	1410	1233
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	62	1472	522	17	12	32
RTOR Reduction (vph)	0	0	0	4	0	31
Lane Group Flow (vph)	62	1472	522	13	12	1
Heavy Vehicles (%)	33%	2%	8%	23%	28%	31%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	111.0	111.0	99.9	99.9	5.7	5.7
Effective Green, g (s)	111.0	111.0	99.9	99.9	5.7	5.7
Actuated g/C Ratio	0.85	0.85	0.77	0.77	0.04	0.04
Clearance Time (s)	6.4	6.5	6.5	6.5	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	552	3021	2568	1008	61	54
v/s Ratio Prot	0.00	c0.42	0.16		c0.01	
v/s Ratio Perm	0.09			0.01		0.00
v/c Ratio	0.11	0.49	0.20	0.01	0.20	0.03
Uniform Delay, d1	1.6	2.4	4.1	3.5	59.9	59.5
Progression Factor	1.41	1.22	0.90	0.40	1.00	1.00
Incremental Delay, d2	0.1	0.5	0.2	0.0	1.6	0.2
Delay (s)	2.4	3.4	3.9	1.4	61.5	59.7
Level of Service	A	A	A	A	E	E
Approach Delay (s/veh)		3.3	3.8		60.2	
Approach LOS		A	A		E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	5	32	1289	41	53	25	440	14	38	7	19	47
Future Volume (vph)	5	32	1289	41	53	25	440	14	38	7	19	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95			1.00		
Frpb, ped/bikes		1.00	1.00	0.97		1.00	1.00			0.99		
Flpb, ped/bikes		0.99	1.00	1.00		1.00	1.00			1.00		
Frt		1.00	1.00	0.85		1.00	1.00			0.96		
Flt Protected		0.95	1.00	1.00		0.95	1.00			0.97		
Satd. Flow (prot)		1748	3505	1517		1766	3352			1698		
Flt Permitted		0.45	1.00	1.00		0.09	1.00			0.80		
Satd. Flow (perm)		821	3505	1517		158	3352			1399		
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.83	0.83	0.83	0.83	0.84	0.84	0.84	0.78
Adj. Flow (vph)	6	38	1516	48	64	30	530	17	45	8	23	60
RTOR Reduction (vph)	0	0	0	20	0	0	1	0	0	0	0	0
Lane Group Flow (vph)	0	44	1516	28	0	94	546	0	0	76	0	0
Confl. Peds. (#/hr)		12		4		4		12	6		14	14
Confl. Bikes (#/hr)				2				2			3	
Heavy Vehicles (%)	0%	3%	3%	3%	0%	7%	7%	7%	3%	3%	3%	2%
Turn Type	custom	pm+pt	NA	Perm	custom	pm+pt	NA		Perm	NA		Perm
Protected Phases		5	2			1	6			8		
Permitted Phases	5	2		2	1	6			8			4
Actuated Green, G (s)		82.5	76.9	76.9		89.7	80.5			25.6		
Effective Green, g (s)		82.5	76.9	76.9		89.7	80.5			25.6		
Actuated g/C Ratio		0.63	0.59	0.59		0.69	0.62			0.20		
Clearance Time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0			3.0		
Lane Grp Cap (vph)		560	2073	897		222	2075			275		
v/s Ratio Prot		0.00	c0.43			c0.03	0.16					
v/s Ratio Perm		0.05		0.02		c0.26				0.05		
v/c Ratio		0.08	0.73	0.03		0.42	0.26			0.28		
Uniform Delay, d1		8.9	19.1	11.1		15.5	11.3			44.3		
Progression Factor		0.47	0.51	1.00		1.00	1.00			1.00		
Incremental Delay, d2		0.1	2.1	0.1		1.3	0.3			0.5		
Delay (s)		4.2	12.0	11.1		16.8	11.6			44.9		
Level of Service		A	B	B		B	B			D		
Approach Delay (s/veh)			11.7				12.3			44.9		
Approach LOS			B				B			D		

Intersection Summary			
HCM 2000 Control Delay (s/veh)	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.3
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	5	16
Future Volume (vph)	5	16
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.6	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	0.99	
Frt	0.97	
Flt Protected	0.97	
Satd. Flow (prot)	1719	
Flt Permitted	0.77	
Satd. Flow (perm)	1365	
Peak-hour factor, PHF	0.78	0.78
Adj. Flow (vph)	6	21
RTOR Reduction (vph)	10	0
Lane Group Flow (vph)	77	0
Confl. Peds. (#/hr)		6
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	25.6	
Effective Green, g (s)	25.6	
Actuated g/C Ratio	0.20	
Clearance Time (s)	6.6	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	268	
v/s Ratio Prot		
v/s Ratio Perm	c0.06	
v/c Ratio	0.29	
Uniform Delay, d1	44.4	
Progression Factor	1.00	
Incremental Delay, d2	0.6	
Delay (s)	45.0	
Level of Service	D	
Approach Delay (s/veh)	45.0	
Approach LOS	D	

Intersection Summary

Intersection	
Int Delay, s/veh	13.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1379	869	0	474	17	0	0	15	0	0	513
Future Vol, veh/h	0	1379	869	0	474	17	0	0	15	0	0	513
Conflicting Peds, #/hr	0	0	5	0	0	74	0	0	5	0	0	74
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	3	0	0	9	0	2	2	2	0	0	0
Mvmt Flow	0	1499	945	0	515	18	0	0	16	0	0	558

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	759	-	-	415
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	349	0	0	592
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	346	-	-	~ 520
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0	15.92	88.05
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	346	-	-	-	-	520
HCM Lane V/C Ratio	0.047	-	-	-	-	1.072
HCM Control Delay (s/veh)	15.9	-	-	-	-	88
HCM Lane LOS	C	-	-	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	-	17

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	3697	3732	2839	3724	3745	3546
Vehs Exited	3677	3700	2714	3719	3724	3508
Starting Vehs	100	80	106	106	104	98
Ending Vehs	120	112	231	111	125	134
Travel Distance (km)	3164	3184	2343	3191	3206	3017
Travel Time (hr)	106.4	106.8	305.8	107.7	107.9	146.9
Total Delay (hr)	45.5	45.4	261.2	46.5	46.4	89.0
Total Stops	4071	4268	3384	4215	4292	4048
Fuel Used (l)	304.5	307.8	424.7	307.9	308.8	330.7

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3697	3732	2839	3724	3745	3546
Vehs Exited	3677	3700	2714	3719	3724	3508
Starting Vehs	100	80	106	106	104	98
Ending Vehs	120	112	231	111	125	134
Travel Distance (km)	3164	3184	2343	3191	3206	3017
Travel Time (hr)	106.4	106.8	305.8	107.7	107.9	146.9
Total Delay (hr)	45.5	45.4	261.2	46.5	46.4	89.0
Total Stops	4071	4268	3384	4215	4292	4048
Fuel Used (l)	304.5	307.8	424.7	307.9	308.8	330.7

Intersection: 1: Carling Ave & Croydon Ave

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	T	TR	L	LR
Maximum Queue (m)	30.3	111.4	107.6	102.2	35.7	48.6	51.7	22.9	81.8
Average Queue (m)	8.2	59.8	54.0	56.9	6.0	8.3	12.5	1.9	53.5
95th Queue (m)	21.0	118.9	118.2	118.4	22.9	30.7	35.9	10.8	84.9
Link Distance (m)		171.5	171.5	171.5	101.8	101.8	101.8		75.9
Upstream Blk Time (%)		6	7	7					10
Queuing Penalty (veh)		0	0	0					0
Storage Bay Dist (m)	68.0							25.0	
Storage Blk Time (%)	0	9						0	45
Queuing Penalty (veh)	0	4						0	49

Intersection: 2: Connaught Ave/Mall Site & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	T	T	T	T	T	TR	L
Maximum Queue (m)	17.3	82.8	89.0	90.6	48.5	55.1	67.6	37.7	68.1
Average Queue (m)	5.8	29.6	36.8	44.4	18.3	24.7	28.4	13.4	30.6
95th Queue (m)	14.1	59.6	74.4	86.3	38.3	47.5	53.1	39.6	77.4
Link Distance (m)	101.8	101.8	101.8	101.8	120.7	120.7	120.7	74.2	146.2
Upstream Blk Time (%)		0	0	8				4	3
Queuing Penalty (veh)		0	2	42				0	0
Storage Bay Dist (m)									
Storage Blk Time (%)							0		
Queuing Penalty (veh)							0		

Intersection: 3: Kichi Zibi Mikan Ramps & Carling Ave

Movement	EB	EB	EB	WB	WB	NB	SB
Directions Served	T	T	R	T	TR	R	R
Maximum Queue (m)	60.9	72.1	119.1	27.4	35.4	13.3	159.4
Average Queue (m)	12.7	16.1	55.5	4.8	5.6	3.1	75.1
95th Queue (m)	38.2	48.2	119.1	16.6	21.5	13.1	187.9
Link Distance (m)	120.7	120.7	120.7	169.4	169.4	174.8	288.2
Upstream Blk Time (%)			8				7
Queuing Penalty (veh)			62				0
Storage Bay Dist (m)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 4: Lincoln Fields Mid-Block Crossing & Carling Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (m)	86.1	89.0	54.3	51.6
Average Queue (m)	23.5	24.8	9.0	10.8
95th Queue (m)	66.0	69.3	31.2	36.4
Link Distance (m)	169.4	169.4	94.8	94.8
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Carling Ave & Lincoln Fields Station

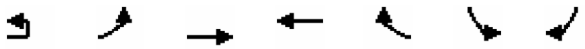
Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	R	L	R
Maximum Queue (m)	41.7	81.6	82.2	63.6	67.9	14.8	17.1	20.1
Average Queue (m)	8.7	15.0	17.5	15.1	15.4	1.5	3.4	5.4
95th Queue (m)	24.9	52.6	59.9	48.8	49.7	8.0	12.6	14.9
Link Distance (m)		94.8	94.8	113.7	113.7	113.7	120.5	120.5
Upstream Blk Time (%)		0	0					
Queuing Penalty (veh)		1	1					
Storage Bay Dist (m)	40.0							
Storage Blk Time (%)	0	2						
Queuing Penalty (veh)	0	1						

Intersection: 6: Edgeworth Ave & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	UL	T	T	R	UL	T	TR	LTR	LTR
Maximum Queue (m)	27.3	106.8	108.4	54.7	27.2	62.7	53.9	38.8	31.7
Average Queue (m)	4.6	50.4	51.6	7.0	10.3	19.7	17.2	12.3	14.6
95th Queue (m)	16.7	99.5	100.2	32.9	23.0	45.9	39.6	28.1	28.6
Link Distance (m)		113.7	113.7			305.7	305.7	87.3	97.2
Upstream Blk Time (%)		0	0						
Queuing Penalty (veh)		3	2						
Storage Bay Dist (m)	20.0			60.0	20.0				
Storage Blk Time (%)		21	9	0	2	8			
Queuing Penalty (veh)		8	4	0	4	6			

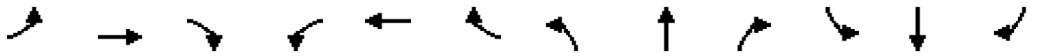
Network Summary

Network wide Queuing Penalty: 187



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	5	51	1162	1726	152	200	37
Future Volume (vph)	5	51	1162	1726	152	200	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.9	5.9	5.9		6.3	
Lane Util. Factor		1.00	0.91	0.91		0.97	
Frpb, ped/bikes		1.00	1.00	1.00		0.99	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	
Frt		1.00	1.00	0.99		0.98	
Flt Protected		0.95	1.00	1.00		0.96	
Satd. Flow (prot)		1773	5085	5065		3298	
Flt Permitted		0.07	1.00	1.00		0.96	
Satd. Flow (perm)		131	5085	5065		3298	
Peak-hour factor, PHF	0.94	0.94	0.94	0.97	0.97	0.94	0.94
Adj. Flow (vph)	5	54	1236	1779	157	213	39
RTOR Reduction (vph)	0	0	0	6	0	14	0
Lane Group Flow (vph)	0	59	1236	1930	0	238	0
Confl. Peds. (#/hr)							28
Confl. Bikes (#/hr)					1		
Heavy Vehicles (%)	0%	2%	2%	1%	1%	4%	4%
Turn Type	custom	pm+pt	NA	NA		Prot	
Protected Phases		5	2	6		7	
Permitted Phases	5	2					
Actuated Green, G (s)		97.8	97.8	86.2		20.0	
Effective Green, g (s)		97.8	97.8	86.2		20.0	
Actuated g/C Ratio		0.75	0.75	0.66		0.15	
Clearance Time (s)		5.9	5.9	5.9		6.3	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		170	3825	3358		507	
v/s Ratio Prot		0.02	c0.24	c0.38		c0.07	
v/s Ratio Perm		0.25					
v/c Ratio		0.35	0.32	0.57		0.47	
Uniform Delay, d1		8.7	5.3	11.9		50.2	
Progression Factor		1.00	1.00	0.24		1.00	
Incremental Delay, d2		1.2	0.2	0.6		0.7	
Delay (s)		9.9	5.5	3.5		50.9	
Level of Service		A	A	A		D	
Approach Delay (s/veh)			5.7	3.5		50.9	
Approach LOS			A	A		D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

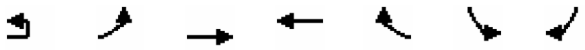


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	1264	0	0	1898	253	0	0	41	133	0	144
Future Volume (vph)	98	1264	0	0	1898	253	0	0	41	133	0	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00		1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.89		0.98		1.00		0.98
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		0.99		1.00
Frt	1.00	1.00			1.00	0.85		0.87		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95		1.00
Satd. Flow (prot)	1805	5036			5136	1417		1607		1788		1581
Flt Permitted	0.06	1.00			1.00	1.00		1.00		0.71		1.00
Satd. Flow (perm)	110	5036			5136	1417		1607		1337		1581
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.57	0.57	0.57	0.92	0.92	0.92
Adj. Flow (vph)	107	1374	0	0	1998	266	0	0	72	145	0	157
RTOR Reduction (vph)	0	0	0	0	0	89	0	59	0	0	0	97
Lane Group Flow (vph)	107	1374	0	0	1998	177	0	13	0	145	0	60
Confl. Peds. (#/hr)	22		5	5		22	7		9	9		7
Confl. Bikes (#/hr)			1			1						1
Heavy Vehicles (%)	0%	3%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA			NA	Perm		NA		Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2					6				4		4
Actuated Green, G (s)	94.4	94.4			81.0	81.0		23.1		23.1		23.1
Effective Green, g (s)	94.4	94.4			81.0	81.0		23.1		23.1		23.1
Actuated g/C Ratio	0.73	0.73			0.62	0.62		0.18		0.18		0.18
Clearance Time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0		3.0
Lane Grp Cap (vph)	176	3656			3200	882		285		237		280
v/s Ratio Prot	c0.03	0.27			0.39			0.01				
v/s Ratio Perm	c0.41					0.12				c0.11		0.04
v/c Ratio	0.61	0.38			0.62	0.20		0.04		0.61		0.21
Uniform Delay, d1	16.1	6.7			15.1	10.6		44.3		49.3		45.7
Progression Factor	1.76	0.70			1.07	1.76		1.00		1.00		1.00
Incremental Delay, d2	5.6	0.3			0.9	0.5		0.1		4.6		0.4
Delay (s)	34.0	5.0			17.1	19.1		44.4		53.9		46.1
Level of Service	C	A			B	B		D		D		D
Approach Delay (s/veh)		7.1			17.4			44.4			49.8	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

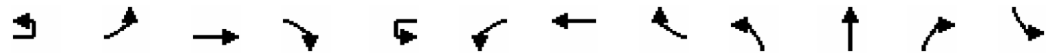
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑							
Traffic Volume (vph)	0	1086	0	0	1289	0	0	0	0	0	0	0
Future Volume (vph)	0	1086	0	0	1289	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0							
Lane Util. Factor		0.95			0.95							
Frt		1.00			1.00							
Flt Protected		1.00			1.00							
Satd. Flow (prot)		3539			3539							
Flt Permitted		1.00			1.00							
Satd. Flow (perm)		3539			3539							
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1180	0	0	1401	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1180	0	0	1401	0	0	0	0	0	0	0
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	2%	2%	2%	2%	2%	2%
Turn Type		NA			NA							
Protected Phases		2			6							
Permitted Phases												
Actuated Green, G (s)		47.0			47.0							
Effective Green, g (s)		47.0			47.0							
Actuated g/C Ratio		0.72			0.72							
Clearance Time (s)		5.0			5.0							
Vehicle Extension (s)		3.0			3.0							
Lane Grp Cap (vph)		2558			2558							
v/s Ratio Prot		0.33			c0.40							
v/s Ratio Perm												
v/c Ratio		0.46			0.55							
Uniform Delay, d1		3.7			4.1							
Progression Factor		1.57			1.38							
Incremental Delay, d2		0.6			0.8							
Delay (s)		6.5			6.4							
Level of Service		A			A							
Approach Delay (s/veh)		6.5			6.4			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	4	22	1043	1258	18	13	27
Future Volume (vph)	4	22	1043	1258	18	13	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.5	6.5	6.5	6.8	6.8
Lane Util. Factor		1.00	0.95	0.95	1.00	1.00	1.00
Frt		1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected		0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1220	3539	3574	1313	1299	1262
Flt Permitted		0.16	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		208	3539	3574	1313	1299	1262
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	24	1134	1367	20	14	29
RTOR Reduction (vph)	0	0	0	0	5	0	28
Lane Group Flow (vph)	0	28	1134	1367	15	14	1
Heavy Vehicles (%)	0%	56%	2%	1%	23%	39%	28%
Turn Type	custom	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases		5	2	6		4	
Permitted Phases	5	2			6		4
Actuated Green, G (s)		110.6	110.6	100.4	100.4	6.1	6.1
Effective Green, g (s)		110.6	110.6	100.4	100.4	6.1	6.1
Actuated g/C Ratio		0.85	0.85	0.77	0.77	0.05	0.05
Clearance Time (s)		6.4	6.5	6.5	6.5	6.8	6.8
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		206	3010	2760	1014	60	59
v/s Ratio Prot		0.00	c0.32	c0.38		c0.01	
v/s Ratio Perm		0.11			0.01		0.00
v/c Ratio		0.14	0.38	0.50	0.02	0.23	0.02
Uniform Delay, d1		3.1	2.1	5.5	3.4	59.7	59.1
Progression Factor		1.18	0.87	0.20	0.01	1.00	1.00
Incremental Delay, d2		0.3	0.3	0.6	0.0	2.0	0.2
Delay (s)		4.0	2.2	1.7	0.0	61.7	59.3
Level of Service		A	A	A	A	E	E
Approach Delay (s/veh)			2.2	1.6		60.1	
Approach LOS			A	A		E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	2.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	6	61	935	59	76	56	1212	16	38	10	11	32
Future Volume (vph)	6	61	935	59	76	56	1212	16	38	10	11	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95			1.00		
Frpb, ped/bikes		1.00	1.00	0.93		1.00	1.00			1.00		
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00			0.99		
Frt		1.00	1.00	0.85		1.00	1.00			0.97		
Flt Protected		0.95	1.00	1.00		0.95	1.00			0.97		
Satd. Flow (prot)		1805	3539	1497		1803	3531			1755		
Flt Permitted		0.16	1.00	1.00		0.20	1.00			0.79		
Satd. Flow (perm)		302	3539	1497		383	3531			1439		
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.96	0.96	0.96	0.96	0.84	0.84	0.84	0.83
Adj. Flow (vph)	7	69	1062	67	79	58	1262	17	45	12	13	39
RTOR Reduction (vph)	0	0	0	26	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	76	1063	41	0	137	1280	0	0	70	0	0
Confl. Peds. (#/hr)		8		19		19		8	24		12	12
Confl. Bikes (#/hr)				1				1				
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	2%	0%	0%	2%	0%	0%
Turn Type	custom	pm+pt	NA	Perm	custom	pm+pt	NA		Perm	NA		Perm
Protected Phases		5	2			1	6			8		
Permitted Phases	5	2		2	1	6			8			4
Actuated Green, G (s)		84.9	78.6	78.6		90.3	81.3			24.1		
Effective Green, g (s)		84.9	78.6	78.6		90.3	81.3			24.1		
Actuated g/C Ratio		0.65	0.60	0.60		0.69	0.63			0.19		
Clearance Time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0			3.0		
Lane Grp Cap (vph)		270	2139	905		364	2208			266		
v/s Ratio Prot		0.01	0.30			c0.03	c0.36					
v/s Ratio Perm		0.17		0.03		0.23				c0.05		
v/c Ratio		0.28	0.50	0.04		0.38	0.58			0.26		
Uniform Delay, d1		10.2	14.5	10.4		8.7	14.3			45.3		
Progression Factor		0.94	0.97	6.49		1.00	1.00			1.00		
Incremental Delay, d2		0.5	0.8	0.1		0.7	1.1			0.5		
Delay (s)		10.2	14.9	67.8		9.4	15.4			45.9		
Level of Service		B	B	E		A	B			D		
Approach Delay (s/veh)			17.5				14.8			45.9		
Approach LOS			B				B			D		

Intersection Summary			
HCM 2000 Control Delay (s/veh)	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.3
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	7	23
Future Volume (vph)	7	23
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.6	
Lane Util. Factor	1.00	
Frpb, ped/bikes	0.99	
Flpb, ped/bikes	0.99	
Frt	0.95	
Flt Protected	0.97	
Satd. Flow (prot)	1723	
Flt Permitted	0.81	
Satd. Flow (perm)	1438	
Peak-hour factor, PHF	0.83	0.83
Adj. Flow (vph)	8	28
RTOR Reduction (vph)	19	0
Lane Group Flow (vph)	56	0
Confl. Peds. (#/hr)		24
Confl. Bikes (#/hr)		2
Heavy Vehicles (%)	0%	0%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	24.1	
Effective Green, g (s)	24.1	
Actuated g/C Ratio	0.19	
Clearance Time (s)	6.6	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	266	
v/s Ratio Prot		
v/s Ratio Perm	0.04	
v/c Ratio	0.21	
Uniform Delay, d1	44.9	
Progression Factor	1.00	
Incremental Delay, d2	0.4	
Delay (s)	45.3	
Level of Service	D	
Approach Delay (s/veh)	45.3	
Approach LOS	D	

Intersection Summary

Intersection	
Int Delay, s/veh	148.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	983	476	0	1250	18	0	0	103	0	0	861
Future Vol, veh/h	0	983	476	0	1250	18	0	0	103	0	0	861
Conflicting Peds, #/hr	1	0	1	1	0	1	9	0	10	10	0	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	94	94	94	80	80	80	94	94	94
Heavy Vehicles, %	0	3	0	0	1	0	1	1	1	0	0	0
Mvmt Flow	0	1013	491	0	1330	19	0	0	129	0	0	916

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	518	-	-	684
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.92	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.31	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	505	0	0	~ 396
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	501	-	-	~ 392
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0	14.66	$ 630.81
HCM LOS			B	F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	501	-	-	-	-	392
HCM Lane V/C Ratio	0.257	-	-	-	-	2.336
HCM Control Delay (s/veh)	14.7	-	-	-	-	-$ 630.8
HCM Lane LOS	B	-	-	-	-	F
HCM 95th %tile Q(veh)	1	-	-	-	-	70.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	3:45	3:45	3:45	3:45	3:45	3:45
End Time	5:00	5:00	5:00	5:00	5:00	5:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	4390	4328	4390	4317	4287	4342
Vehs Exited	4427	4316	4400	4316	4316	4355
Starting Vehs	164	128	125	129	120	134
Ending Vehs	127	140	115	130	91	119
Travel Distance (km)	3818	3739	3813	3719	3764	3771
Travel Time (hr)	136.0	125.7	132.9	132.0	136.0	132.5
Total Delay (hr)	62.5	53.8	59.7	60.6	64.0	60.1
Total Stops	5127	5026	5480	4957	5257	5168
Fuel Used (l)	373.3	361.0	374.9	365.6	371.6	369.3

Interval #0 Information Seeding

Start Time	3:45
End Time	4:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	4390	4328	4390	4317	4287	4342
Vehs Exited	4427	4316	4400	4316	4316	4355
Starting Vehs	164	128	125	129	120	134
Ending Vehs	127	140	115	130	91	119
Travel Distance (km)	3818	3739	3813	3719	3764	3771
Travel Time (hr)	136.0	125.7	132.9	132.0	136.0	132.5
Total Delay (hr)	62.5	53.8	59.7	60.6	64.0	60.1
Total Stops	5127	5026	5480	4957	5257	5168
Fuel Used (l)	373.3	361.0	374.9	365.6	371.6	369.3

Intersection: 1: Carling Ave & Croydon Ave

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	T	TR	L	LR
Maximum Queue (m)	24.4	69.2	52.9	44.8	84.2	85.6	114.1	28.8	80.3
Average Queue (m)	10.6	36.2	20.3	20.6	19.4	26.6	34.7	5.2	47.2
95th Queue (m)	20.7	61.9	44.0	39.7	52.5	60.3	77.0	19.2	76.9
Link Distance (m)		168.9	168.9	168.9	101.8	101.8	101.8		75.9
Upstream Blk Time (%)					0	0	0		2
Queuing Penalty (veh)					0	0	2		0
Storage Bay Dist (m)	68.0							25.0	
Storage Blk Time (%)		0						0	36
Queuing Penalty (veh)		0						0	36

Intersection: 2: Connaught Ave/Mall Site & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	T	T	T	T	R	TR	L	R
Maximum Queue (m)	38.6	53.4	46.9	49.6	112.5	127.5	123.1	87.5	13.7	62.2	8.1
Average Queue (m)	17.8	18.3	19.0	16.8	47.7	59.3	63.7	13.2	5.4	31.6	0.3
95th Queue (m)	33.1	40.5	39.3	39.5	90.5	105.8	108.4	62.7	11.9	54.9	5.7
Link Distance (m)	101.8	101.8	101.8	101.8	120.5	120.5	120.5		74.2	146.2	146.2
Upstream Blk Time (%)					0	1	1				
Queuing Penalty (veh)					2	4	6				
Storage Bay Dist (m)								80.0			
Storage Blk Time (%)							3	0			
Queuing Penalty (veh)							8	0			

Intersection: 3: Kichi Zibi Mikan Ramps & Carling Ave

Movement	EB	EB	EB	WB	WB	NB	SB
Directions Served	T	T	R	T	TR	R	R
Maximum Queue (m)	16.5	15.8	26.2	33.2	39.2	23.7	220.1
Average Queue (m)	1.1	1.2	1.8	3.1	3.9	9.1	108.4
95th Queue (m)	7.5	7.3	12.1	16.9	19.9	17.9	236.5
Link Distance (m)	120.5	120.5	120.5	167.9	167.9	177.0	291.0
Upstream Blk Time (%)							2
Queuing Penalty (veh)							0
Storage Bay Dist (m)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 4: Lincoln Fields Mid-Block Crossing & Carling Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (m)	85.6	81.2	98.8	101.4
Average Queue (m)	21.2	20.8	24.1	25.9
95th Queue (m)	64.8	63.4	83.5	86.8
Link Distance (m)	167.9	167.9	95.0	95.0
Upstream Blk Time (%)			1	1
Queuing Penalty (veh)			5	8
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Carling Ave & Lincoln Fields Station

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	R	L	R
Maximum Queue (m)	27.2	74.6	76.9	111.6	115.3	9.4	25.3	19.1
Average Queue (m)	6.7	16.5	18.4	30.1	31.4	0.8	6.7	5.5
95th Queue (m)	20.3	49.0	51.8	88.3	90.5	5.7	19.1	14.9
Link Distance (m)		95.0	95.0	113.4	113.4	113.4	58.8	58.8
Upstream Blk Time (%)		0	0	0	0			
Queuing Penalty (veh)		0	1	1	2			
Storage Bay Dist (m)	40.0							
Storage Blk Time (%)		2						
Queuing Penalty (veh)		0						

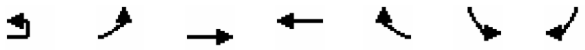
Intersection: 6: Edgeworth Ave & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	UL	T	T	R	UL	T	TR	LTR	LTR
Maximum Queue (m)	27.4	95.9	96.2	46.4	27.4	121.0	119.9	33.8	33.0
Average Queue (m)	10.7	43.4	46.3	7.5	16.1	63.6	60.9	12.4	12.4
95th Queue (m)	25.1	78.5	81.5	29.1	30.2	114.4	109.3	27.6	27.7
Link Distance (m)		113.4	113.4			305.7	305.7	87.3	97.2
Upstream Blk Time (%)		0	0						
Queuing Penalty (veh)		0	0						
Storage Bay Dist (m)	20.0			60.0	20.0				
Storage Blk Time (%)	1	23	4	0	6	23			
Queuing Penalty (veh)	6	15	2	0	38	31			

Network Summary

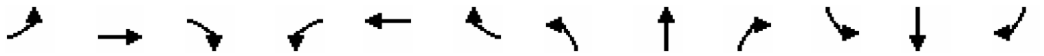
Network wide Queuing Penalty: 166

Appendix I – Proposed Ultimate Conditions Analysis



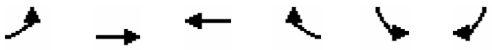
Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	10	41	1920	804	74	216	24
Future Volume (vph)	10	41	1920	804	74	216	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.9	5.9	5.9		6.3	
Lane Util. Factor		1.00	0.91	0.91		0.97	
Frpb, ped/bikes		1.00	1.00	0.99		1.00	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	
Frt		1.00	1.00	0.99		0.99	
Flt Protected		0.95	1.00	1.00		0.96	
Satd. Flow (prot)		1692	5085	4945		3288	
Flt Permitted		0.26	1.00	1.00		0.96	
Satd. Flow (perm)		463	5085	4945		3288	
Peak-hour factor, PHF	0.88	0.88	0.92	0.95	0.95	0.88	0.88
Adj. Flow (vph)	11	47	2087	846	78	245	27
RTOR Reduction (vph)	0	0	0	7	0	7	0
Lane Group Flow (vph)	0	58	2087	917	0	265	0
Confl. Peds. (#/hr)		15			15		10
Confl. Bikes (#/hr)					1		1
Heavy Vehicles (%)	0%	8%	2%	2%	14%	6%	0%
Turn Type	custom	pm+pt	NA	NA		Prot	
Protected Phases		5	2	6		7	
Permitted Phases	5	2					
Actuated Green, G (s)		94.1	94.1	82.4		23.7	
Effective Green, g (s)		94.1	94.1	82.4		23.7	
Actuated g/C Ratio		0.72	0.72	0.63		0.18	
Clearance Time (s)		5.9	5.9	5.9		6.3	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		389	3680	3134		599	
v/s Ratio Prot		0.01	c0.41	0.19		c0.08	
v/s Ratio Perm		0.10					
v/c Ratio		0.15	0.57	0.29		0.44	
Uniform Delay, d1		5.7	8.4	10.7		47.3	
Progression Factor		1.00	1.00	0.57		1.00	
Incremental Delay, d2		0.2	0.6	0.2		0.5	
Delay (s)		5.8	9.0	6.3		47.8	
Level of Service		A	A	A		D	
Approach Delay (s/veh)			9.0	6.3		47.8	
Approach LOS			A	A		D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	2061	0	0	880	108	0	0	59	97	0	54
Future Volume (vph)	44	2061	0	0	880	108	0	0	59	97	0	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00		1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.93		0.96		1.00		0.98
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		0.98		1.00
Frt	1.00	1.00			1.00	0.85		0.87		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95		1.00
Satd. Flow (prot)	1801	5085			5036	1463		1553		1717		1533
Flt Permitted	0.27	1.00			1.00	1.00		1.00		0.70		1.00
Satd. Flow (perm)	518	5085			5036	1463		1553		1266		1533
Peak-hour factor, PHF	0.86	0.86	0.86	0.98	0.98	0.98	0.68	0.68	0.68	0.90	0.90	0.90
Adj. Flow (vph)	51	2397	0	0	898	110	0	0	87	108	0	60
RTOR Reduction (vph)	0	0	0	0	0	35	0	62	0	0	0	51
Lane Group Flow (vph)	51	2397	0	0	898	75	0	25	0	108	0	9
Confl. Peds. (#/hr)	11		14	14		11	8		20	20		8
Confl. Bikes (#/hr)			1			1			1			1
Heavy Vehicles (%)	0%	2%	0%	0%	3%	3%	0%	0%	2%	3%	0%	3%
Turn Type	pm+pt	NA			NA	Perm		NA		Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2					6				4		4
Actuated Green, G (s)	99.0	99.0			88.2	88.2		18.5		18.5		18.5
Effective Green, g (s)	99.0	99.0			88.2	88.2		18.5		18.5		18.5
Actuated g/C Ratio	0.76	0.76			0.68	0.68		0.14		0.14		0.14
Clearance Time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0		3.0
Lane Grp Cap (vph)	441	3872			3416	992		221		180		218
v/s Ratio Prot	0.00	c0.47			0.18			0.02				
v/s Ratio Perm	0.08					0.05				c0.09		0.01
v/c Ratio	0.12	0.62			0.26	0.08		0.11		0.60		0.04
Uniform Delay, d1	4.2	7.0			8.2	7.1		48.6		52.3		48.1
Progression Factor	0.79	0.60			1.83	3.68		1.00		1.00		1.00
Incremental Delay, d2	0.1	0.7			0.2	0.1		0.2		5.5		0.1
Delay (s)	3.4	4.8			15.1	26.2		48.8		57.8		48.2
Level of Service	A	A			B	C		D		E		D
Approach Delay (s/veh)		4.8			16.3			48.8			54.4	
Approach LOS		A			B			D			D	

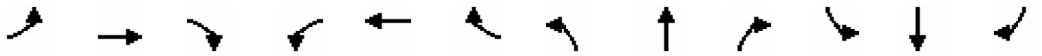
Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	869	1379	474	17	15	513
Future Volume (vph)	869	1379	474	17	15	513
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	0.97	0.95	0.91		1.00	0.88
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3433	3539	4822		1805	2842
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3433	3539	4822		1805	2842
Peak-hour factor, PHF	0.89	0.89	0.91	0.91	0.85	0.85
Adj. Flow (vph)	976	1549	521	19	18	604
RTOR Reduction (vph)	0	0	3	0	0	0
Lane Group Flow (vph)	976	1549	537	0	18	604
Confl. Peds. (#/hr)						17
Heavy Vehicles (%)	2%	2%	7%	7%	0%	0%
Turn Type	Prot	NA	NA		Perm	Over
Protected Phases	5	2	6			5
Permitted Phases					4	
Actuated Green, G (s)	39.8	85.5	41.2		35.5	39.8
Effective Green, g (s)	39.8	85.5	41.2		35.5	39.8
Actuated g/C Ratio	0.31	0.66	0.32		0.27	0.31
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	1051	2327	1528		492	870
v/s Ratio Prot	c0.28	c0.44	0.11			0.21
v/s Ratio Perm					c0.01	
v/c Ratio	0.93	0.67	0.35		0.04	0.69
Uniform Delay, d1	43.7	13.5	34.1		34.7	39.7
Progression Factor	0.84	1.60	1.17		1.00	1.00
Incremental Delay, d2	11.6	1.2	0.6		0.1	2.4
Delay (s)	48.4	22.9	40.5		34.8	42.2
Level of Service	D	C	D		C	D
Approach Delay (s/veh)		32.7	40.5		41.9	
Approach LOS		C	D		D	

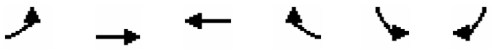
Intersection Summary			
HCM 2000 Control Delay (s/veh)	35.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1394	0	0	509	0	0	0	0	0	0	0
Future Volume (vph)	0	1394	0	0	509	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0							
Lane Util. Factor		0.95			0.95							
Frt		1.00			1.00							
Flt Protected		1.00			1.00							
Satd. Flow (prot)		3505			3312							
Flt Permitted		1.00			1.00							
Satd. Flow (perm)		3505			3312							
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1515	0	0	553	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1515	0	0	553	0	0	0	0	0	0	0
Heavy Vehicles (%)	0%	3%	0%	0%	9%	0%	2%	2%	2%	2%	2%	2%
Turn Type		NA			NA							
Protected Phases		2			6							
Permitted Phases												
Actuated Green, G (s)		47.0			47.0							
Effective Green, g (s)		47.0			47.0							
Actuated g/C Ratio		0.72			0.72							
Clearance Time (s)		5.0			5.0							
Vehicle Extension (s)		3.0			3.0							
Lane Grp Cap (vph)		2534			2394							
v/s Ratio Prot		c0.43			0.17							
v/s Ratio Perm												
v/c Ratio		0.60			0.23							
Uniform Delay, d1		4.4			3.0							
Progression Factor		2.31			1.36							
Incremental Delay, d2		0.8			0.2							
Delay (s)		10.9			4.3							
Level of Service		B			A							
Approach Delay (s/veh)		10.9			4.3			0.0			0.0	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	57	1354	480	16	11	29
Future Volume (vph)	57	1354	480	16	11	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	6.5	6.5	6.5	6.8	6.8
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1357	3539	3343	1313	1410	1233
Flt Permitted	0.43	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	616	3539	3343	1313	1410	1233
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	62	1472	522	17	12	32
RTOR Reduction (vph)	0	0	0	4	0	31
Lane Group Flow (vph)	62	1472	522	13	12	1
Heavy Vehicles (%)	33%	2%	8%	23%	28%	31%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	111.0	111.0	99.9	99.9	5.7	5.7
Effective Green, g (s)	111.0	111.0	99.9	99.9	5.7	5.7
Actuated g/C Ratio	0.85	0.85	0.77	0.77	0.04	0.04
Clearance Time (s)	6.4	6.5	6.5	6.5	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	552	3021	2568	1008	61	54
v/s Ratio Prot	0.00	c0.42	0.16		c0.01	
v/s Ratio Perm	0.09			0.01		0.00
v/c Ratio	0.11	0.49	0.20	0.01	0.20	0.03
Uniform Delay, d1	1.6	2.4	4.1	3.5	59.9	59.5
Progression Factor	0.71	1.13	0.35	0.13	1.00	1.00
Incremental Delay, d2	0.1	0.5	0.2	0.0	1.6	0.2
Delay (s)	1.2	3.2	1.6	0.5	61.5	59.7
Level of Service	A	A	A	A	E	E
Approach Delay (s/veh)		3.1	1.6		60.2	
Approach LOS		A	A		E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	3.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	5	32	1289	41	43	25	440	14	38	7	19	47
Future Volume (vph)	5	32	1289	41	43	25	440	14	38	7	19	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95			1.00		
Frpb, ped/bikes		1.00	1.00	0.97		1.00	1.00			0.99		
Flpb, ped/bikes		0.99	1.00	1.00		1.00	1.00			1.00		
Frt		1.00	1.00	0.85		1.00	1.00			0.96		
Flt Protected		0.95	1.00	1.00		0.95	1.00			0.97		
Satd. Flow (prot)		1748	3505	1517		1760	3352			1698		
Flt Permitted		0.44	1.00	1.00		0.09	1.00			0.80		
Satd. Flow (perm)		813	3505	1517		164	3352			1399		
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.83	0.83	0.83	0.83	0.84	0.84	0.84	0.78
Adj. Flow (vph)	6	38	1516	48	52	30	530	17	45	8	23	60
RTOR Reduction (vph)	0	0	0	19	0	0	1	0	0	0	0	0
Lane Group Flow (vph)	0	44	1516	29	0	82	546	0	0	76	0	0
Confl. Peds. (#/hr)		12		4		4		12	6		14	14
Confl. Bikes (#/hr)				2				2			3	
Heavy Vehicles (%)	0%	3%	3%	3%	0%	7%	7%	7%	3%	3%	3%	2%
Turn Type	custom	pm+pt	NA	Perm	custom	pm+pt	NA		Perm	NA		Perm
Protected Phases		5	2			1	6			8		
Permitted Phases	5	2		2	1	6			8			4
Actuated Green, G (s)		83.3	77.7	77.7		88.9	80.5			25.6		
Effective Green, g (s)		83.3	77.7	77.7		88.9	80.5			25.6		
Actuated g/C Ratio		0.64	0.60	0.60		0.68	0.62			0.20		
Clearance Time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0			3.0		
Lane Grp Cap (vph)		561	2094	906		215	2075			275		
v/s Ratio Prot		0.00	c0.43			c0.02	0.16					
v/s Ratio Perm		0.05		0.02		c0.24				0.05		
v/c Ratio		0.08	0.72	0.03		0.38	0.26			0.28		
Uniform Delay, d1		8.6	18.5	10.7		14.7	11.3			44.3		
Progression Factor		1.06	1.19	1.00		1.00	1.00			1.00		
Incremental Delay, d2		0.1	2.0	0.1		1.1	0.3			0.5		
Delay (s)		9.2	24.1	10.8		15.8	11.6			44.9		
Level of Service		A	C	B		B	B			D		
Approach Delay (s/veh)			23.3				12.1			44.9		
Approach LOS			C				B			D		

Intersection Summary			
HCM 2000 Control Delay (s/veh)	21.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.3
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	5	16
Future Volume (vph)	5	16
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.6	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	0.99	
Frt	0.97	
Flt Protected	0.97	
Satd. Flow (prot)	1719	
Flt Permitted	0.77	
Satd. Flow (perm)	1365	
Peak-hour factor, PHF	0.78	0.78
Adj. Flow (vph)	6	21
RTOR Reduction (vph)	10	0
Lane Group Flow (vph)	77	0
Confl. Peds. (#/hr)		6
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	25.6	
Effective Green, g (s)	25.6	
Actuated g/C Ratio	0.20	
Clearance Time (s)	6.6	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	268	
v/s Ratio Prot		
v/s Ratio Perm	c0.06	
v/c Ratio	0.29	
Uniform Delay, d1	44.4	
Progression Factor	1.00	
Incremental Delay, d2	0.6	
Delay (s)	45.0	
Level of Service	D	
Approach Delay (s/veh)	45.0	
Approach LOS	D	

Intersection Summary

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	3723	3671	3707	3771	3751	3723
Vehs Exited	3740	3685	3714	3754	3713	3721
Starting Vehs	153	141	165	165	160	153
Ending Vehs	136	127	158	182	198	159
Travel Distance (km)	3219	3243	3231	3285	3218	3239
Travel Time (hr)	150.5	148.6	172.5	175.3	161.2	161.6
Total Delay (hr)	90.7	88.8	112.5	114.4	101.4	101.6
Total Stops	7312	7124	8296	8336	7870	7788
Fuel Used (l)	367.2	364.9	386.9	395.1	379.1	378.6

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3723	3671	3707	3771	3751	3723
Vehs Exited	3740	3685	3714	3754	3713	3721
Starting Vehs	153	141	165	165	160	153
Ending Vehs	136	127	158	182	198	159
Travel Distance (km)	3219	3243	3231	3285	3218	3239
Travel Time (hr)	150.5	148.6	172.5	175.3	161.2	161.6
Total Delay (hr)	90.7	88.8	112.5	114.4	101.4	101.6
Total Stops	7312	7124	8296	8336	7870	7788
Fuel Used (l)	367.2	364.9	386.9	395.1	379.1	378.6

Intersection: 1: Carling Ave & Croydon Ave

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	T	TR	L	LR
Maximum Queue (m)	75.4	182.8	164.5	108.1	63.3	70.7	78.7	32.3	82.8
Average Queue (m)	27.6	143.4	112.0	45.2	14.8	17.3	21.2	22.9	48.3
95th Queue (m)	80.2	210.4	179.9	101.0	46.2	51.6	56.7	39.4	90.4
Link Distance (m)		171.5	171.5	171.5	102.3	102.3	102.3		75.8
Upstream Blk Time (%)		12	0				0		15
Queuing Penalty (veh)		0	0				1		0
Storage Bay Dist (m)	68.0							25.0	
Storage Blk Time (%)	0	37						27	17
Queuing Penalty (veh)	0	19						36	19

Intersection: 2: Connaught Ave/Mall Site & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	T	T	T	T	R	TR	L	T
Maximum Queue (m)	42.4	107.5	105.0	102.1	80.3	75.8	96.2	68.8	33.5	22.2	44.1
Average Queue (m)	11.5	90.9	60.2	49.9	32.0	39.8	40.8	2.9	10.8	17.0	11.2
95th Queue (m)	38.1	123.6	99.6	90.9	65.1	67.3	75.9	28.4	23.5	25.5	37.4
Link Distance (m)		102.3	102.3	102.3	209.8	209.8	209.8		73.1		144.3
Upstream Blk Time (%)		8	0	0							
Queuing Penalty (veh)		54	1	1							
Storage Bay Dist (m)	35.0							80.0		15.0	
Storage Blk Time (%)	0	33					0	0		38	1
Queuing Penalty (veh)	0	15					0	0		0	1

Intersection: 3: Carling Ave & Kichi Zibi Mikan

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	L	L	T	T	T	T	TR	L	R	R
Maximum Queue (m)	102.6	107.2	176.4	142.9	70.1	61.2	64.8	14.9	86.0	76.0
Average Queue (m)	80.5	86.6	89.3	81.9	36.9	34.6	35.1	3.2	53.1	42.8
95th Queue (m)	112.2	112.6	152.0	118.9	57.8	56.1	57.4	10.5	76.8	68.7
Link Distance (m)			209.8	209.8	76.7	76.7	76.7	139.3	139.3	139.3
Upstream Blk Time (%)			0		0		0			
Queuing Penalty (veh)			1		0		0			
Storage Bay Dist (m)	100.0	100.0								
Storage Blk Time (%)	1	3	1							
Queuing Penalty (veh)	7	19	5							

Intersection: 4: Lincoln Fields Mid-Block Crossing & Carling Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (m)	80.2	80.2	55.8	58.1
Average Queue (m)	38.0	37.4	11.7	13.8
95th Queue (m)	94.2	93.1	37.1	41.3
Link Distance (m)	76.7	76.7	94.8	94.8
Upstream Blk Time (%)	4	3		
Queuing Penalty (veh)	25	23		
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Carling Ave & Lincoln Fields Station

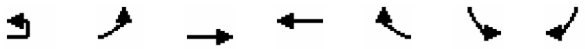
Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	R	L	R
Maximum Queue (m)	47.3	100.8	99.9	54.3	48.0	9.6	22.7	20.2
Average Queue (m)	12.1	47.9	49.8	9.5	9.1	0.7	4.1	5.3
95th Queue (m)	35.3	112.2	114.2	33.3	31.7	4.9	14.8	14.9
Link Distance (m)		94.8	94.8	113.7	113.7	113.7	120.5	120.5
Upstream Blk Time (%)		3	4					
Queuing Penalty (veh)		22	25					
Storage Bay Dist (m)	40.0							
Storage Blk Time (%)	0	9						
Queuing Penalty (veh)	0	5						

Intersection: 6: Edgeworth Ave & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	UL	T	T	R	UL	T	TR	LTR	LTR
Maximum Queue (m)	27.3	117.8	117.8	67.0	27.2	54.0	47.0	34.9	42.1
Average Queue (m)	4.9	58.1	62.3	5.1	9.3	19.4	17.0	13.9	14.0
95th Queue (m)	17.3	126.1	127.7	28.4	20.7	41.5	38.0	29.5	31.7
Link Distance (m)		113.7	113.7			305.7	305.7	87.3	97.2
Upstream Blk Time (%)		2	3						
Queuing Penalty (veh)		14	19						
Storage Bay Dist (m)	20.0			60.0	20.0				
Storage Blk Time (%)	0	19	8	0	2	8			
Queuing Penalty (veh)	0	7	3	0	4	5			

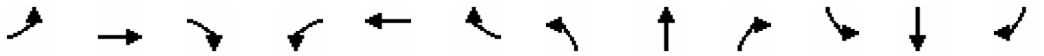
Network Summary

Network wide Queuing Penalty: 332



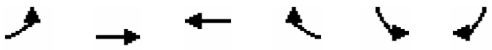
Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	5	51	1162	1726	152	200	37
Future Volume (vph)	5	51	1162	1726	152	200	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.9	5.9	5.9		6.3	
Lane Util. Factor		1.00	0.91	0.91		0.97	
Frpb, ped/bikes		1.00	1.00	1.00		0.99	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	
Frt		1.00	1.00	0.99		0.98	
Flt Protected		0.95	1.00	1.00		0.96	
Satd. Flow (prot)		1773	5085	5065		3298	
Flt Permitted		0.07	1.00	1.00		0.96	
Satd. Flow (perm)		131	5085	5065		3298	
Peak-hour factor, PHF	0.94	0.94	0.94	0.97	0.97	0.94	0.94
Adj. Flow (vph)	5	54	1236	1779	157	213	39
RTOR Reduction (vph)	0	0	0	6	0	14	0
Lane Group Flow (vph)	0	59	1236	1930	0	238	0
Confl. Peds. (#/hr)							28
Confl. Bikes (#/hr)					1		
Heavy Vehicles (%)	0%	2%	2%	1%	1%	4%	4%
Turn Type	custom	pm+pt	NA	NA		Prot	
Protected Phases		5	2	6		7	
Permitted Phases	5	2					
Actuated Green, G (s)		97.8	97.8	86.2		20.0	
Effective Green, g (s)		97.8	97.8	86.2		20.0	
Actuated g/C Ratio		0.75	0.75	0.66		0.15	
Clearance Time (s)		5.9	5.9	5.9		6.3	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		170	3825	3358		507	
v/s Ratio Prot		0.02	c0.24	c0.38		c0.07	
v/s Ratio Perm		0.25					
v/c Ratio		0.35	0.32	0.57		0.47	
Uniform Delay, d1		8.7	5.3	11.9		50.2	
Progression Factor		1.00	1.00	0.39		1.00	
Incremental Delay, d2		1.2	0.2	0.6		0.7	
Delay (s)		9.9	5.5	5.2		50.9	
Level of Service		A	A	A		D	
Approach Delay (s/veh)			5.7	5.2		50.9	
Approach LOS			A	A		D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	1264	0	0	1898	253	0	0	41	133	0	144
Future Volume (vph)	98	1264	0	0	1898	253	0	0	41	133	0	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00		1.00		1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.89		0.98		1.00		0.98
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00		0.99		1.00
Frt	1.00	1.00			1.00	0.85		0.87		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95		1.00
Satd. Flow (prot)	1805	5036			5136	1417		1607		1788		1581
Flt Permitted	0.06	1.00			1.00	1.00		1.00		0.71		1.00
Satd. Flow (perm)	110	5036			5136	1417		1607		1337		1581
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.57	0.57	0.57	0.92	0.92	0.92
Adj. Flow (vph)	107	1374	0	0	1998	266	0	0	72	145	0	157
RTOR Reduction (vph)	0	0	0	0	0	89	0	59	0	0	0	97
Lane Group Flow (vph)	107	1374	0	0	1998	177	0	13	0	145	0	60
Confl. Peds. (#/hr)	22		5	5		22	7		9	9		7
Confl. Bikes (#/hr)			1			1						1
Heavy Vehicles (%)	0%	3%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA			NA	Perm		NA		Perm		Perm
Protected Phases	5	2			6			8			4	
Permitted Phases	2					6				4		4
Actuated Green, G (s)	94.4	94.4			81.0	81.0		23.1		23.1		23.1
Effective Green, g (s)	94.4	94.4			81.0	81.0		23.1		23.1		23.1
Actuated g/C Ratio	0.73	0.73			0.62	0.62		0.18		0.18		0.18
Clearance Time (s)	6.0	5.6			5.6	5.6		6.9		6.9		6.9
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0		3.0
Lane Grp Cap (vph)	176	3656			3200	882		285		237		280
v/s Ratio Prot	c0.03	0.27			0.39			0.01				
v/s Ratio Perm	c0.41					0.12				c0.11		0.04
v/c Ratio	0.61	0.38			0.62	0.20		0.04		0.61		0.21
Uniform Delay, d1	16.1	6.7			15.1	10.6		44.3		49.3		45.7
Progression Factor	1.66	0.72			0.17	0.13		1.00		1.00		1.00
Incremental Delay, d2	5.6	0.3			0.1	0.0		0.1		4.6		0.4
Delay (s)	32.4	5.1			2.6	1.4		44.4		53.9		46.1
Level of Service	C	A			A	A		D		D		D
Approach Delay (s/veh)		7.1			2.5			44.4			49.8	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

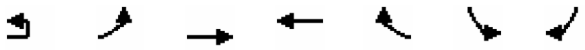


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	476	983	1250	18	103	861
Future Volume (vph)	476	983	1250	18	103	861
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	0.97	0.95	0.91		1.00	0.88
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		0.99	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	5124		1781	2842
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	5124		1781	2842
Peak-hour factor, PHF	0.97	0.97	0.94	0.94	0.94	0.94
Adj. Flow (vph)	491	1013	1330	19	110	916
RTOR Reduction (vph)	0	0	1	0	0	0
Lane Group Flow (vph)	491	1013	1348	0	110	916
Confl. Peds. (#/hr)	1			1	10	9
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	3%	3%	1%	1%	0%	0%
Turn Type	Prot	NA	NA		Perm	Over
Protected Phases	5	2	6			5
Permitted Phases					4	
Actuated Green, G (s)	40.5	85.5	40.5		35.5	40.5
Effective Green, g (s)	40.5	85.5	40.5		35.5	40.5
Actuated g/C Ratio	0.31	0.66	0.31		0.27	0.31
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	1059	2305	1596		486	885
v/s Ratio Prot	0.14	0.29	c0.26			c0.32
v/s Ratio Perm					c0.06	
v/c Ratio	0.46	0.44	0.84		0.23	1.04
Uniform Delay, d1	36.0	10.7	41.8		36.6	44.8
Progression Factor	0.98	0.64	0.75		1.00	1.00
Incremental Delay, d2	0.3	0.6	5.0		1.1	39.7
Delay (s)	35.5	7.4	36.3		37.7	84.4
Level of Service	D	A	D		D	F
Approach Delay (s/veh)		16.6	36.3		79.4	
Approach LOS		B	D		E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	40.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑							
Traffic Volume (vph)	0	1086	0	0	1289	0	0	0	0	0	0	0
Future Volume (vph)	0	1086	0	0	1289	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0							
Lane Util. Factor		0.95			0.95							
Frt		1.00			1.00							
Flt Protected		1.00			1.00							
Satd. Flow (prot)		3539			3539							
Flt Permitted		1.00			1.00							
Satd. Flow (perm)		3539			3539							
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1180	0	0	1401	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1180	0	0	1401	0	0	0	0	0	0	0
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	2%	2%	2%	2%	2%	2%
Turn Type		NA			NA							
Protected Phases		2			6							
Permitted Phases												
Actuated Green, G (s)		47.0			47.0							
Effective Green, g (s)		47.0			47.0							
Actuated g/C Ratio		0.72			0.72							
Clearance Time (s)		5.0			5.0							
Vehicle Extension (s)		3.0			3.0							
Lane Grp Cap (vph)		2558			2558							
v/s Ratio Prot		0.33			c0.40							
v/s Ratio Perm												
v/c Ratio		0.46			0.55							
Uniform Delay, d1		3.7			4.1							
Progression Factor		1.01			2.09							
Incremental Delay, d2		0.6			0.8							
Delay (s)		4.3			9.4							
Level of Service		A			A							
Approach Delay (s/veh)		4.3			9.4			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	4	22	1043	1258	18	13	27
Future Volume (vph)	4	22	1043	1258	18	13	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.5	6.5	6.5	6.8	6.8
Lane Util. Factor		1.00	0.95	0.95	1.00	1.00	1.00
Frt		1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected		0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1220	3539	3574	1313	1299	1262
Flt Permitted		0.16	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		208	3539	3574	1313	1299	1262
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	24	1134	1367	20	14	29
RTOR Reduction (vph)	0	0	0	0	5	0	28
Lane Group Flow (vph)	0	28	1134	1367	15	14	1
Heavy Vehicles (%)	0%	56%	2%	1%	23%	39%	28%
Turn Type	custom	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases		5	2	6		4	
Permitted Phases	5	2			6		4
Actuated Green, G (s)		110.6	110.6	100.4	100.4	6.1	6.1
Effective Green, g (s)		110.6	110.6	100.4	100.4	6.1	6.1
Actuated g/C Ratio		0.85	0.85	0.77	0.77	0.05	0.05
Clearance Time (s)		6.4	6.5	6.5	6.5	6.8	6.8
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		206	3010	2760	1014	60	59
v/s Ratio Prot		0.00	c0.32	c0.38		c0.01	
v/s Ratio Perm		0.11			0.01		0.00
v/c Ratio		0.14	0.38	0.50	0.02	0.23	0.02
Uniform Delay, d1		3.1	2.1	5.5	3.4	59.7	59.1
Progression Factor		0.88	0.90	0.20	0.01	1.00	1.00
Incremental Delay, d2		0.3	0.3	0.6	0.0	2.0	0.2
Delay (s)		3.1	2.3	1.7	0.0	61.7	59.3
Level of Service		A	A	A	A	E	E
Approach Delay (s/veh)			2.3	1.6		60.1	
Approach LOS			A	A		E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	2.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	6	61	935	59	76	56	1212	16	38	10	11	32
Future Volume (vph)	6	61	935	59	76	56	1212	16	38	10	11	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95			1.00		
Frpb, ped/bikes		1.00	1.00	0.93		1.00	1.00			1.00		
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00			0.99		
Frt		1.00	1.00	0.85		1.00	1.00			0.97		
Flt Protected		0.95	1.00	1.00		0.95	1.00			0.97		
Satd. Flow (prot)		1805	3539	1497		1803	3531			1755		
Flt Permitted		0.16	1.00	1.00		0.20	1.00			0.79		
Satd. Flow (perm)		302	3539	1497		383	3531			1439		
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.96	0.96	0.96	0.96	0.84	0.84	0.84	0.83
Adj. Flow (vph)	7	69	1062	67	79	58	1262	17	45	12	13	39
RTOR Reduction (vph)	0	0	0	26	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	76	1063	41	0	137	1280	0	0	70	0	0
Confl. Peds. (#/hr)		8		19		19		8	24		12	12
Confl. Bikes (#/hr)				1				1				
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	2%	0%	0%	2%	0%	0%
Turn Type	custom	pm+pt	NA	Perm	custom	pm+pt	NA		Perm	NA		Perm
Protected Phases		5	2			1	6			8		
Permitted Phases	5	2		2	1	6			8			4
Actuated Green, G (s)		84.9	78.6	78.6		90.3	81.3			24.1		
Effective Green, g (s)		84.9	78.6	78.6		90.3	81.3			24.1		
Actuated g/C Ratio		0.65	0.60	0.60		0.69	0.63			0.19		
Clearance Time (s)		6.1	5.6	5.6		6.1	5.6			6.6		
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0			3.0		
Lane Grp Cap (vph)		270	2139	905		364	2208			266		
v/s Ratio Prot		0.01	0.30			c0.03	c0.36					
v/s Ratio Perm		0.17		0.03		0.23				c0.05		
v/c Ratio		0.28	0.50	0.04		0.38	0.58			0.26		
Uniform Delay, d1		10.2	14.5	10.4		8.7	14.3			45.3		
Progression Factor		1.08	0.80	1.96		1.00	1.00			1.00		
Incremental Delay, d2		0.5	0.8	0.1		0.7	1.1			0.5		
Delay (s)		11.6	12.4	20.6		9.4	15.4			45.9		
Level of Service		B	B	C		A	B			D		
Approach Delay (s/veh)			12.8				14.8			45.9		
Approach LOS			B				B			D		

Intersection Summary			
HCM 2000 Control Delay (s/veh)	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.3
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	7	23
Future Volume (vph)	7	23
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.6	
Lane Util. Factor	1.00	
Frpb, ped/bikes	0.99	
Flpb, ped/bikes	0.99	
Frt	0.95	
Flt Protected	0.97	
Satd. Flow (prot)	1723	
Flt Permitted	0.81	
Satd. Flow (perm)	1438	
Peak-hour factor, PHF	0.83	0.83
Adj. Flow (vph)	8	28
RTOR Reduction (vph)	19	0
Lane Group Flow (vph)	56	0
Confl. Peds. (#/hr)		24
Confl. Bikes (#/hr)		2
Heavy Vehicles (%)	0%	0%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	24.1	
Effective Green, g (s)	24.1	
Actuated g/C Ratio	0.19	
Clearance Time (s)	6.6	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	266	
v/s Ratio Prot		
v/s Ratio Perm	0.04	
v/c Ratio	0.21	
Uniform Delay, d1	44.9	
Progression Factor	1.00	
Incremental Delay, d2	0.4	
Delay (s)	45.3	
Level of Service	D	
Approach Delay (s/veh)	45.3	
Approach LOS	D	

Intersection Summary

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	3:45	3:45	3:45	3:45	3:45	3:45
End Time	5:00	5:00	5:00	5:00	5:00	5:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	4343	4374	4273	4317	4332	4326
Vehs Exited	4374	4398	4269	4353	4358	4349
Starting Vehs	175	152	139	189	160	162
Ending Vehs	144	128	143	153	134	137
Travel Distance (km)	3730	3799	3681	3725	3739	3735
Travel Time (hr)	146.7	154.5	148.5	150.9	155.9	151.3
Total Delay (hr)	77.2	83.7	79.8	81.5	86.2	81.7
Total Stops	5579	5813	5819	5522	6093	5765
Fuel Used (l)	394.2	407.7	392.9	397.7	404.2	399.3

Interval #0 Information Seeding

Start Time	3:45
End Time	4:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	4343	4374	4273	4317	4332	4326
Vehs Exited	4374	4398	4269	4353	4358	4349
Starting Vehs	175	152	139	189	160	162
Ending Vehs	144	128	143	153	134	137
Travel Distance (km)	3730	3799	3681	3725	3739	3735
Travel Time (hr)	146.7	154.5	148.5	150.9	155.9	151.3
Total Delay (hr)	77.2	83.7	79.8	81.5	86.2	81.7
Total Stops	5579	5813	5819	5522	6093	5765
Fuel Used (l)	394.2	407.7	392.9	397.7	404.2	399.3

Intersection: 1: Carling Ave & Croydon Ave

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	T	TR	L	LR
Maximum Queue (m)	45.7	104.6	88.9	30.2	38.5	44.1	73.4	32.2	82.1
Average Queue (m)	12.4	54.6	28.0	6.3	18.7	24.3	30.8	4.8	47.3
95th Queue (m)	29.0	89.1	64.2	19.5	34.1	40.5	54.5	19.3	78.9
Link Distance (m)		168.9	168.9	168.9	101.7	101.7	101.7		75.8
Upstream Blk Time (%)							0		2
Queuing Penalty (veh)							2		0
Storage Bay Dist (m)	68.0							25.0	
Storage Blk Time (%)		2							36
Queuing Penalty (veh)		1							36

Intersection: 2: Connaught Ave/Mall Site & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	L	T	T	T	T	T	T	R	TR	L
Maximum Queue (m)	45.2	71.3	49.0	35.5	41.2	45.2	48.4	8.0	18.6	56.3
Average Queue (m)	18.7	27.7	16.8	13.1	14.6	19.1	20.3	0.3	6.4	29.5
95th Queue (m)	35.3	52.8	35.7	29.7	32.7	38.7	42.4	5.7	14.1	50.3
Link Distance (m)	101.7	101.7	101.7	101.7	209.8	209.8	209.8		72.6	144.3
Upstream Blk Time (%)		0								
Queuing Penalty (veh)		0								
Storage Bay Dist (m)								80.0		
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 3: Carling Ave & Kichi Zibi Mikan

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	L	L	T	T	T	T	TR	L	R	R
Maximum Queue (m)	87.3	88.5	57.6	51.4	83.0	85.3	88.9	77.1	141.4	130.9
Average Queue (m)	45.7	52.1	25.2	26.1	58.8	56.9	57.5	21.8	99.7	87.1
95th Queue (m)	72.5	78.4	45.9	46.0	89.7	87.9	88.1	49.3	138.8	121.1
Link Distance (m)			209.8	209.8	77.0	77.0	77.0	140.3	140.3	140.3
Upstream Blk Time (%)					5	4	5	0	1	0
Queuing Penalty (veh)					20	15	21	0	0	0
Storage Bay Dist (m)	100.0	100.0								
Storage Blk Time (%)	0	0								
Queuing Penalty (veh)	0	0								

Intersection: 4: Lincoln Fields Mid-Block Crossing & Carling Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (m)	69.7	68.7	101.2	98.9
Average Queue (m)	17.1	18.3	33.4	37.0
95th Queue (m)	50.6	52.4	85.7	92.6
Link Distance (m)	77.0	77.0	95.0	95.0
Upstream Blk Time (%)	0	0	1	1
Queuing Penalty (veh)	0	1	4	5
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Carling Ave & Lincoln Fields Station

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	UL	T	T	T	T	R	L	R
Maximum Queue (m)	36.9	77.5	79.1	110.3	109.5	12.8	21.8	36.1
Average Queue (m)	9.1	21.0	22.6	31.1	33.6	1.1	3.8	6.5
95th Queue (m)	24.6	61.6	64.5	94.8	97.5	6.7	13.9	22.8
Link Distance (m)		95.0	95.0	113.4	113.4	113.4	58.8	58.8
Upstream Blk Time (%)		0	0	0	0			0
Queuing Penalty (veh)		0	0	1	1			0
Storage Bay Dist (m)	40.0							
Storage Blk Time (%)	0	3						
Queuing Penalty (veh)	0	1						

Intersection: 6: Edgeworth Ave & Carling Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	UL	T	T	R	UL	T	TR	LTR	LTR
Maximum Queue (m)	27.4	74.5	78.7	45.6	27.4	115.2	113.9	30.0	34.7
Average Queue (m)	10.2	32.5	35.9	5.1	15.4	62.4	59.2	9.9	12.6
95th Queue (m)	23.2	63.7	66.4	23.3	28.8	110.3	104.0	23.1	26.5
Link Distance (m)		113.4	113.4			305.7	305.7	87.3	97.2
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)	20.0			60.0	20.0				
Storage Blk Time (%)	1	20	2	0	4	23			
Queuing Penalty (veh)	4	13	1	0	24	30			

Network Summary

Network wide Queuing Penalty: 181

Appendix J – MMLOS Assessment Forms

Multi-Modal Level of Service - Segments Form

Project: Lincoln Fields AT Ultimate Improvements
Consultant: Alta Planning+Design Canada
Date: Aug 28, 2024
Scenario: Ultimate Conditions (Scenario 1)

	Segment Name	**Carling Ave (West of KZM intersection)**				**Carling Ave (East of KZM intersection)**			
	OP Transect / Policy Area	**Within 600m of a rapid transit station**				**Within 600m of a rapid transit station**			
	Segment Component	**Majority (>50%)**		**Critical**		**Majority (>50%)**		**Critical**	
	Side of Street	**W or N**	**E or S**	**W or N**	**E or S**	**W or N**	**E or S**	**W or N**	**E or S**
Pedestrian	**PLOS Inputs**								
	Posted Speed (km/h)	60 km/h		60 km/h		60 km/h		60 km/h	
	Two-Way ADT	23,770		23,770		14,730		14,730	
	Pedestrian Facility	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk
	Does the facility meet the TMP Sidewalk or MUP Policy? If not, for MUPs, is it outside of an anticipated high-volume area and does it have a low-to-moderate volume of pedestrians relative to cyclists (≤ 20%)?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Facility Width (m)	2.00m	2.00m	2.00m	2.00m	2.00m	2.00m	2.00m	2.00m
	Offset from Motor Vehicle Travel Lanes (m)	≥ 3.0m	≥ 3.0m	≥ 3.0m	≥ 3.0m	≥ 3.0m	1.5-2.99m	≥ 3.0m	1.5-2.99m
	Presence of Adjacent Parking?	No	No	No	No	No	-	No	-
	General Purpose Curb Lane ADT	-	-	-	-	-	> 3000	-	> 3000
	Max. Distance between Controlled Crossings (m)	≤ 200m	≤ 200m	≤ 200m	≤ 200m	≤ 200m	≤ 200m	≤ 200m	≤ 200m
	PLOS	**A**	**A**	**A**	**A**	**A**	**B**	**A**	**B**
	Target PLOS	**A**				**A**			
Bicycle	**BLOS Inputs**								
	Cycling Route Classification	**Elsewhere**				**Elsewhere**			
	Cycling Facility	Cycle Track	Cycle Track	Cycle Track	Cycle Track	Cycle Track	Cycle Track	Cycle Track	Cycle Track
	Is the minimum level of separation provided according to OTM Book 18 Pre-Selection Nomograph - Rural Context (Figure 5.6)? (for paved shoulders)	-	-	-	-	-	-	-	-
	Facility Operation	Bidirectional	Bidirectional	Bidirectional	Bidirectional	Bidirectional	Unidirectional	Bidirectional	Unidirectional
	Pedestrian/Cyclist Volume	-	-	-	-	-	-	-	-
	Facility Width	3.0-3.49m	3.0-3.49m	3.0-3.49m	3.0-3.49m	3.0-3.49m	1.8m-2.09m	3.0-3.49m	1.8m-2.09m
	Boulevard/Buffer Width (excluding curb)	≥ 1.5m or any boulevard width with continuous traffic barrier	0.6-1.49m and no adjacent parking	≥ 1.5m or any boulevard width with continuous traffic barrier	0.6-1.49m and no adjacent parking	≥ 1.5m or any boulevard width with continuous traffic barrier	0.3-0.59m	0.6-1.49m and no adjacent parking	0.3-0.59m
	Unsignalized Roadway Crossing Type (where cyclists are required to yield)	None	None	None	None	None	None	None	None
	Number of Travel Lanes at Crossing	-	-	-	-	-	-	-	-
	Crossing includes Median Refuge (≥ 2.7m)	-	-	-	-	-	-	-	-
	Cross-street Posted Speed (km/h)	-	-	-	-	-	-	-	-
	Cycling Path Blockages (e.g. bus stops and/or loading zones)	-	-	-	-	-	-	-	-
	BLOS	**A**	**B**	**A**	**B**	**A**	**#N/A**	**B**	**#N/A**
	Target BLOS	**B**				**B**			
Transit	**TLOS Inputs**								
	Transit Facility	**Mixed Traffic**				**Mixed Traffic**			
	Facility Type	Mixed Traffic	Mixed Traffic			Continuous Curbside Bus Lane	Mixed Traffic		
	Transit Travel Speed (Mixed Traffic Only)	40 km/h	36 km/h			12 km/h	33 km/h		
	TLOS	**D**	**D**			**B**	**E**		
	Target TLOS	**E**				**E**			
Public Realm	**PRLOS Inputs**								
	Context	Mainstreet or active frontage street within a Hub, Special District, or Village	Mainstreet or active frontage street within a Hub, Special District, or Village			Mainstreet or active frontage street within a Hub, Special District, or Village	Mainstreet or active frontage street within a Hub, Special District, or Village		
	Inner Boulevard Width	≥ 4.0m	0.6-1.19m			2.0-3.99m	0.6-1.19m		
	Middle Boulevard Width	Half-height curb serving as the boulevard	Half-height curb serving as the boulevard			Half-height curb serving as the boulevard	Half-height curb serving as the boulevard		
	Outer Boulevard (Frontage) Width	-	-			-	-		
	Transit Route on Segment?	No	No			No	No		
	Bus Stop Elements	-	-			-	-		
	Number of Midblock Traffic Lanes (both travel directions)	≥ 6				5			
	Design Speed (km/h)	60 km/h				60 km/h			
	PRLOS	**B**	**C**			**B**	**C**		
		C				**C**			

Multi-Modal Level of Service - Intersections Form

Project: Lincoln Fields AT Ultimate Improvements
Consultant: Alta Planning+Design Canada
Date: Aug 28, 2024
Scenario: Ultimate Conditions (Scenario 1)

	Intersection Name	**Carling Ave and KZM**				
	OP Transect / Policy Area	**Within 600m of a rapid transit station**				
Pedestrian	**PLOS Inputs**					
	Pedestrians Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**	
	Number of Travel Lanes Crossed	5	No Crosswalk	7	7	
	Median Refuge (>2.7m)	No	-	No	No	
	Crosswalk Treatment	Zebra Stripe Hi-Vis Markings	-	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	
	Signal Cycle Length (sec)	> 120				
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	**WBR**	**EBR**	**NBR**	**SBR**	
	Right-Turn Geometry	Right-Turn With No Channel	No Right-Turn / Prohib.	No Right-Turn / Prohib.	Right-Turn With No Channel	
	Right-Turn Signal Phasing	Permissive (with LPI/LBI)	-	-	Fully Protected	
	Right-Turn Volume	≤ 150 veh/h	-	-	-	
	Right-Turn Effective Corner Radius	≤ 8m	-	-	-	
	Cross-street Posted Speed (km/h)	50 km/h		50 km/h		
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	**EBL**	**WBL**	**SBL**	**NBL**	
	Left-Turn Signal Phasing	Fully Protected	No Left-Turn / Prohib.	Perm or Prot+Perm (with centreline hardening and/or LPI)	No Left-Turn / Prohib.	
	Left-Turn Volume	-	-	> 100 veh/h	-	
	Left-Turn Opposing Lanes	-	-	-	-	
	Score	**2.70**	**-**	**1.55**	**1.70**	
	PLOS	**C**	**-**	**D**	**D**	
		D				
	Target PLOS	**A**				
Bicycle	**BLOS Inputs**					
	Cycling Route Classification	**Elsewhere**				
	Cyclists Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**	
	Type of Cycling Facility Across Leg	Crossride			Crossride	
	Two-Way ADT on Adjacent Roadway	14,730		12,080		
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	No			No	
	Crossride Operation	Bidirectional			Bidirectional	
	Target Crossride Setback Met?	Yes	-	-	-	
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	No			-	
	Cyclist Left-Turn Operation	**WBL**	**EBL**	**NBL**	**SBL**	
	Cyclist Left-Turn Treatment Type	Protected Corner			Protected Corner	
	Vehicle Lanes Crossed by Cyclists	-			-	
	Score	**145**	**-**	**-**	**150**	
	BLOS	**A**	**-**	**-**	**A**	
		A				
	Target BLOS	**B**				
Transit	**TLOS Inputs**					
	Transit Facility	**Mixed Traffic**				
	Vehicles Travelling	**Southbound**	**Northbound**	**Westbound**	**Eastbound**	
	Average Transit Delay	36-55 sec		11-20 sec	21-35 sec	
	Example Transit Priority Treatment	-		-	-	
	TLOS	**D**	**-**	**B**	**C**	
		C				
	Target TLOS	**E**				
Auto	**AutoLOS Inputs**					
	Overall Intersection Volume to Capacity Ratio	0 to 0.60				
	AutoLOS	**A**				
	Target AutoLOS	**E**				

Multi-Modal Level of Service - Segments Form

Project: Lincoln Fields AT Ultimate Improvements
Consultant: Alta Planning+Design Canada
Date: Aug 28, 2024
Scenario: Interim Conditions (Scenario 2)

	Segment Name	**Carling Ave (KZM Ramps to Ped. Crossing)**				
	OP Transect / Policy Area	**Within 600m of a rapid transit station**				
	Segment Component	**Majority (>50%)**		**Critical**		
	Side of Street	**W or N**	**E or S**	**W or N**	**E or S**	
Pedestrian	**PLOS Inputs**					
	Posted Speed (km/h)	60 km/h		60 km/h		
	Two-Way ADT	14,730		14,730		
	Pedestrian Facility	Sidewalk	Sidewalk	Sidewalk	Sidewalk	
	Does the facility meet the TMP Sidewalk or MUP Policy? If not, for MUPs, is it outside of an anticipated high-volume area and does it have a low-to-moderate volume of pedestrians relative to cyclists (≤ 20%)?	Yes	Yes	Yes	Yes	
	Facility Width (m)	2.00m	2.00m	2.00m	2.00m	
	Offset from Motor Vehicle Travel Lanes (m)	≥ 3.0m	1.5-2.99m	≥ 3.0m	1.5-2.99m	
	Presence of Adjacent Parking?	No	-	No	-	
	General Purpose Curb Lane ADT	-	> 3000	-	> 3000	
	Max. Distance between Controlled Crossings (m)	291-400m	291-400m	291-400m	291-400m	
	PLOS	**B**	**C**	**B**	**C**	
	Target PLOS	**A**				
Bicycle	**BLOS Inputs**					
	Cycling Route Classification	**Elsewhere**				
	Cycling Facility	Painted and Physically Separated Bike Lanes	Painted and Physically Separated Bike Lanes	Painted and Physically Separated Bike Lanes	Shared Operating Space	
	Is the minimum level of separation provided according to OTM Book 18 Pre-Selection Nomograph - Rural Context (Figure 5.6)? (for paved shoulders)	-	-	-	-	
	Facility Operation	Bidirectional	Unidirectional	Bidirectional	-	
	Pedestrian/Cyclist Volume	-	-	-	-	
	Facility Width	3.0-3.49m	2.0-2.5m	3.0-3.49m	-	
	Boulevard/Buffer Width (excluding curb)	0.3-0.99m with vertical measure or ≥ 0.6-0.99m with adjacent parking	< 1.0m and no vertical measure or < 0.6m with adjacent parking	0.3-0.99m with vertical measure or ≥ 0.6-0.99m with adjacent parking	-	
	Unsignalized Roadway Crossing Type (where cyclists are required to yield)	None	None	None	None	
	Number of Travel Lanes at Crossing	-	-	-	-	
	Crossing includes Median Refuge (≥ 2.7m)	-	-	-	-	
	Cross-street Posted Speed (km/h)	-	-	-	-	
	Cycling Path Blockages (e.g. bus stops and/or loading zones)	Rare	Rare	Rare	Rare	
	BLOS	**#N/A**	**C**	**#N/A**	**E**	
	Target BLOS	**B**				
Transit	**TLOS Inputs**					
	Transit Facility	**Mixed Traffic**				
	Facility Type	Mixed Traffic	Mixed Traffic			
	Transit Travel Speed (Mixed Traffic Only)	43 km/h	43 km/h			
	TLOS	**D**	**D**			
	Target TLOS	**E**				
Public Realm	**PRLOS Inputs**					
	Context	Mainstreet or active frontage street within a Hub, Special District, or Village	Mainstreet or active frontage street within a Hub, Special District, or Village			
	Inner Boulevard Width	≤ 0.6m	≤ 0.6m			
	Middle Boulevard Width	≤ 0.5m	≤ 0.5m			
	Outer Boulevard (Frontage) Width	-	-			
	Transit Route on Segment?	No	No			
	Bus Stop Elements	-	-			
	Number of Midblock Traffic Lanes (both travel directions)	4				
	Design Speed (km/h)	60 km/h				
	PRLOS	**D**	**D**			
		D				

Multi-Modal Level of Service - Segments Form

Project: Lincoln Fields AT Ultimate Improvements
Consultant: Alta Planning+Design Canada
Date: Aug 28, 2024
Scenario: Future No-Build (Scenario 3)

		Segment Name	Carling Ave (KZM Ramps to Ped. Crossing)			
		OP Transect / Policy Area	Within 600m of a rapid transit station			
		Segment Component	Majority (>50%)		Critical	
		Side of Street	W or N	E or S	W or N	E or S
Pedestrian	PLOS Inputs					
	Posted Speed (km/h)		60 km/h		60 km/h	
	Two-Way ADT		14,730		14,730	
	Pedestrian Facility		Sidewalk	Sidewalk	Sidewalk	Sidewalk
	Does the facility meet the TMP Sidewalk or MUP Policy? If not, for MUPs, is it outside of an anticipated high-volume area and does it have a low-to-moderate volume of pedestrians relative to cyclists (≤ 20%)?		Yes	Yes	Yes	Yes
	Facility Width (m)		2.00m	2.00m	2.00m	2.00m
	Offset from Motor Vehicle Travel Lanes (m)		< 0.5m	1.5-2.99m	< 0.5m	1.5-2.99m
	Presence of Adjacent Parking?		-	-	-	-
	General Purpose Curb Lane ADT		≤ 3000	> 3000	≤ 3000	> 3000
	Max. Distance between Controlled Crossings (m)		291-400m	291-400m	291-400m	291-400m
	PLOS		C	C	C	C
	Target PLOS		A			
Bicycle	BLOS Inputs					
	Cycling Route Classification		Elsewhere			
	Cycling Facility		Shared Operating Space	Shared Operating Space	Shared Operating Space	Shared Operating Space
	Is the minimum level of separation provided according to OTM Book 18 Pre-Selection Nomograph - Rural Context (Figure 5.6)? (for paved shoulders)		-	-	-	-
	Facility Operation		-	-	-	-
	Pedestrian/Cyclist Volume		-	-	-	-
	Facility Width		-	-	-	-
	Boulevard/Buffer Width (excluding curb)		-	-	-	-
	Unsignalized Roadway Crossing Type (where cyclists are required to yield)		None	None	None	None
	Number of Travel Lanes at Crossing		-	-	-	-
	Crossing includes Median Refuge (≥ 2.7m)		-	-	-	-
	Cross-street Posted Speed (km/h)		-	-	-	-
	Cycling Path Blockages (e.g. bus stops and/or loading zones)		Rare	Rare	Rare	Rare
	BLOS		E	E	E	E
	Target BLOS		B			
Transit	TLOS Inputs					
	Transit Facility		Mixed Traffic			
	Facility Type		Mixed Traffic	Mixed Traffic		
	Transit Travel Speed (Mixed Traffic Only)		43 km/h	43 km/h		
	TLOS		D	D		
	Target TLOS		E			
Public Realm	PRLOS Inputs					
	Context		Mainstreet or active frontage street within a Hub, Special District, or Village	Mainstreet or active frontage street within a Hub, Special District, or Village		
	Inner Boulevard Width		≤ 0.6m	≤ 0.6m		
	Middle Boulevard Width		≤ 0.5m	≤ 0.5m		
	Outer Boulevard (Frontage) Width		-	-		
	Transit Route on Segment?		No	No		
	Bus Stop Elements		-	-		
	Number of Midblock Traffic Lanes (both travel directions)		5			
	Design Speed (km/h)		60 km/h			
	PRLOS		E	E		
			E			