



Residential Buildings Development

1356 Clyde Avenue

Step 4 - Strategy Report



**Residential Buildings Development
1356 Clyde Avenue**

TIA Strategy Report

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May 1, 2020

477420 - 01000

Document Control Page

CLIENT:	GOLPRO HOLDINGS INC.
PROJECT NAME:	Transportation Impact Assessment – 1356 Clyde Ave
REPORT TITLE:	1356 Clyde Ave – TIA Strategy Report
PARSONS PROJECT NO.:	477420 - 01000
VERSION:	Draft
DIGITAL MASTER:	\\XCCAN57FS01\Data\ISO\477420\1000\DOCS\Step 4 - Strategy Report\1356 Clyde_Strategy_05.01.20.docx
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HISTORY:	TIA Steps 1 and 2 (Screening and Scoping Form) – Submitted on February 11, 2020 TIA Step 3 (Forecasting Report) – Submitted on March 31, 2020 TIA Step 4 (Strategy Report) – Submitted on May 01, 2020



TIA Plan Reports

On 14 June 2017, the Council of the City of Ottawa adopted new Transportation Impact Assessment (TIA) Guidelines. In adopting the guidelines, Council established a requirement for those preparing and delivering transportation impact assessments and reports to sign a letter of certification.

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

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

CERTIFICATION

1. I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines;
2. I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;
3. I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and
4. I am either a licensed¹ or registered² professional in good standing, whose field of expertise [check ☒ appropriate field(s)] is either transportation engineering☒ or transportation planning ☐.

1,2 License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.

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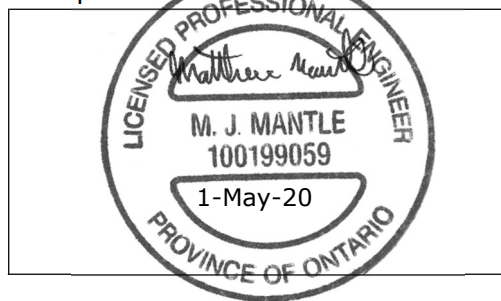


Table of Contents

1.0	SCREENING FORM	1
2.0	SCOPING REPORT.....	1
2.1.	EXISTING AND PLANNED CONDITIONS	1
2.1.1.	PROPOSED DEVELOPMENT.....	1
2.1.2.	EXISTING CONDITIONS	4
2.1.3.	PLANNED CONDITIONS.....	10
2.2.	STUDY AREA AND TIME PERIODS.....	11
2.3.	EXEMPTION REVIEW.....	12
3.0	FORECASTING.....	12
3.1.	DEVELOPMENT GENERATED TRAVEL DEMAND	12
3.1.1.	TRIP GENERATION AND MODE SHARES	12
3.1.2.	TRIP DISTRIBUTION AND ASSIGNMENT	15
3.2.	BACKGROUND NETWORK TRAFFIC	17
3.2.1.	TRANSPORTATION NETWORK PLANS.....	17
3.2.2.	BACKGROUND GROWTH	17
3.2.3.	OTHER DEVELOPMENTS.....	18
3.3.	DEMAND RATIONALIZATION.....	21
4.0	ANALYSIS	24
4.1.	DEVELOPMENT DESIGN.....	24
4.2.	PARKING	24
4.3.	BOUNDARY STREET DESIGN.....	24
4.4.	ACCESS INTERSECTION DESIGN	24
4.5.	TRANSPORTATION DEMAND MANAGEMENT	24
4.6.	NEIGHBOURHOOD TRAFFIC MANAGEMENT	24
4.7.	TRANSIT	25
4.8.	REVIEW OF NETWORK CONCEPT.....	25
4.9.	INTERSECTION DESIGN.....	25
4.9.1.	INTERSECTION CONTROL.....	25
4.9.2.	INTERSECTION DESIGN	25
5.0	FINDINGS, CONCLUSIONS AND RECOMMENDATIONS	28

LIST OF FIGURES

Figure 1: Local Context	2
Figure 2: Concept Plan.....	3
Figure 3: Adjacent Driveways	7
Figure 4: Area Transit Network.....	8
Figure 5: Bus Stop Locations.....	8
Figure 6: Existing Peak Hour Traffic Volumes.....	9
Figure 7: Study Area.....	11
Figure 8: Existing Building Area	12
Figure 9: Phase 1 Site-Generated Traffic Volumes	16
Figure 10: Phase 2 Total Site-Generated Traffic Volumes.....	17
Figure 11: 1375 Clyde Ave Development Traffic	18
Figure 12: 1357 Baseline Rd Development Traffic - Without BRT	19
Figure 13: 1357 Baseline Rd Development Traffic - With BRT	19
Figure 14: Phase 1 Future Background Traffic Volumes (2022)	20
Figure 15: Phase 2 Future Background Traffic Volumes (2026)	21

Figure 16: Total Projected 2022 Traffic Volumes	22
Figure 17: Total Projected 2026 Traffic Volumes	23

LIST OF TABLES

Table 1: Exemptions Review Summary	12
Table 2: Existing Vehicle Trips	13
Table 3: Proposed Development Trip Rates	13
Table 4: Apartment Units Vehicle Trip Generation	13
Table 5: Phase 1 Mode Shares	13
Table 6: Phase 2 Mode Shares	14
Table 7: Phase 1 Retail and Office Space Person Trip Generation.....	14
Table 8: Phase 2 Retail Space Person Trip Generation	14
Table 9: Phase 1 OD Survey Travel Mode Person Trips	14
Table 10: Phase 2 OD Survey Travel Mode Person Trips.....	15
Table 11: Total Travel Mode Person Trips of Proposed Development	15
Table 12: Anticipated 'New' Vehicle Trips	15
Table 13: Background Traffic Growth at Baseline/Clyde.....	18
Table 14: Existing Conditions Intersection Performance	26
Table 15: Future Background 2022 Intersection Performance	26
Table 16: Future Background 2026 Intersection Performance	27
Table 17: Total Projected 2022 Intersection Performance	27
Table 18: Total Projected 2026 Intersection Performance	28

LIST OF APPENDICES

APPENDIX A – SCREENING FORM AND CITY COMMENT RESPONSES
APPENDIX B – TRANSIT ROUTE MAPS
APPENDIX C – CITY OF OTTAWA TRAFFIC DATA
APPENDIX D – CITY OF OTTAWA COLLISION DATA
APPENDIX E – BACKGROUND GROWTH ANALYSIS
APPENDIX F – TDM MEASURES CHECKLIST
APPENDIX G – SYNCHRO ANALYSIS RESULTS

Strategy Report

Parsons has been retained by GOLPRO HOLDINGS INC. to prepare a TIA in support of a Zoning By-Law Amendment Application (ZBLA), for a proposed residential buildings development in Ward 8: College. The following report represents Step 4 – Strategy, of the TIA process.

1.0 SCREENING FORM

The Screening Form was submitted to the City of Ottawa for review and verification of the need to complete a Transportation Impact Assessment (TIA). The Trip Generation, Location and Safety triggers of the Screening Form were all met based on the checklist provided by the TIA Guidelines. As such, a TIA Report was deemed required. The Screening Form is provided in Appendix A.

2.0 SCOPING REPORT

2.1. EXISTING AND PLANNED CONDITIONS

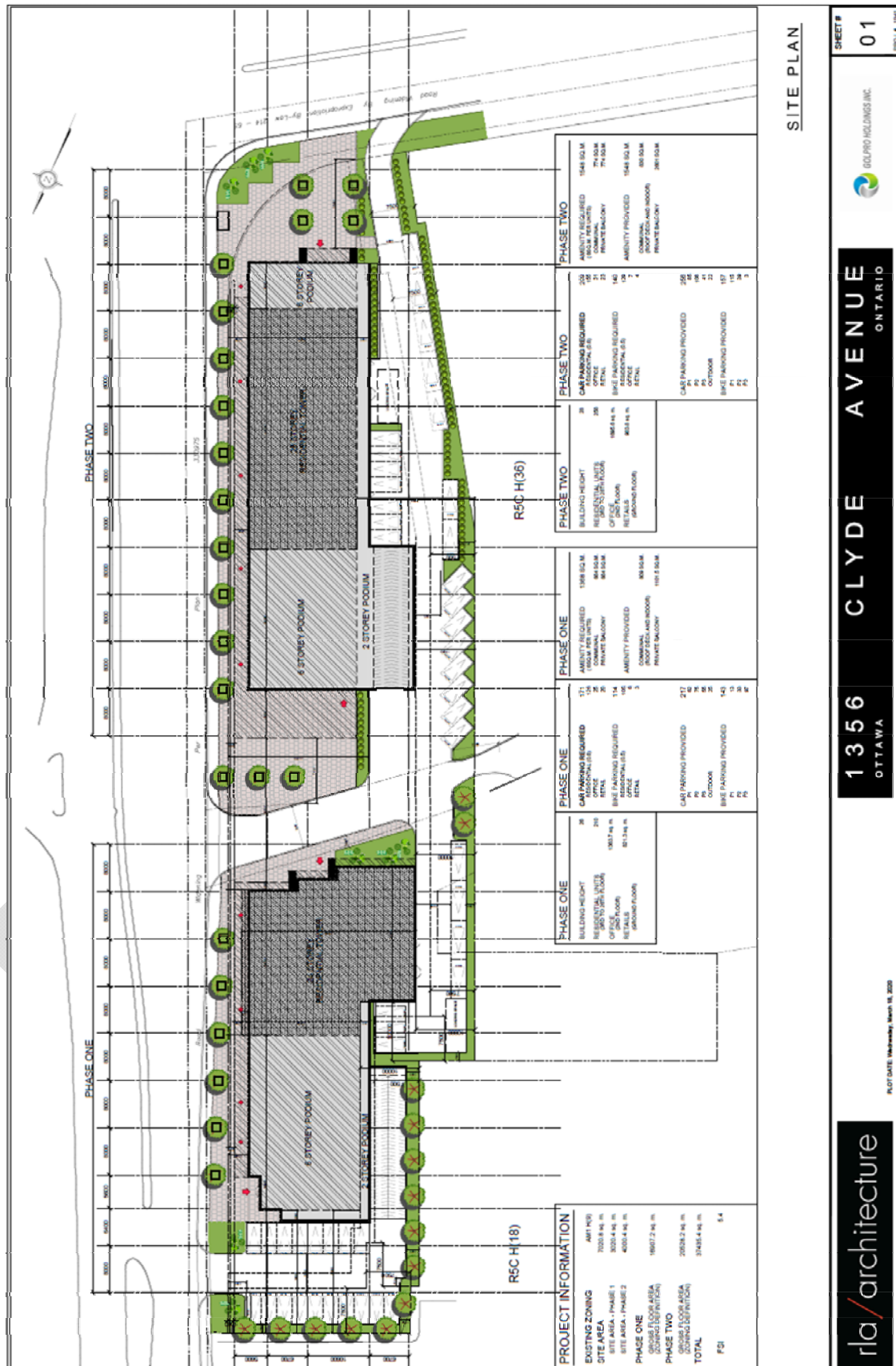
2.1.1. PROPOSED DEVELOPMENT

The proposed development is located at 1356 Clyde Ave and will consist of two high-rise apartment buildings with a total of 468 residential units, 32,927 ft² (3,059 m²) of office space, and 18,568 ft² (1,725 m²) of ground floor retail. The site is currently occupied by a few small commercial stores, two fast food restaurants and three dental offices, all of which are housed within two separate strip malls. The proposed development buildings will be constructed in two phases. Phase 1 will be constructed by 2022, which consists of a 26-storey apartment building housing 210 residential units, 14,682 ft² (1,364 m²) of office space, 8,837 ft² (821 m²) of ground floor retail and 217 parking spaces, which will replace the north existing strip mall building. The buildout year of Phase 2 is assumed to be 2026, where the second proposed residential building, consisting of 258 residential units, 18,256 ft² (1,696 m²) of office space, 9,731 ft² (904 m²) of ground floor retail and 256 parking spaces, will replace the south existing strip mall. Note that the three existing site accesses are proposed to serve the future residential buildings. Figure 1 below provides the local context of the development site, while Figure 2 provides the current concept plan. The site is currently zoned as an Arterial Mainstreet (AM) zone.

Figure 1: Local Context



Figure 2: Concept Plan



2.1.2. EXISTING CONDITIONS

Area Road Network

Baseline Road is an east-west municipal arterial roadway that extends from Robertson/Richmond/Hwy 416 SB on-ramp in the west to Prince of Wales Drive in the east, where it continues as Heron Road. Within the study area, Baseline Road has a four-lane cross-section with auxiliary turn lanes at major intersections and a posted speed limit of 60km/h.

Clyde Avenue is a north-south municipal roadway that extends from Merivale/Lotta in the south to approximately 70m north of Castle Hill Crescent. Within the study area, Clyde Avenue is classified as an arterial roadway and consists of a four-lane cross-section with auxiliary turn lanes at major intersections and a posted speed limit of 60km/h.

Erindale Drive is a north-south municipal roadway that extends from Baseline Road in the south to Maitland Avenue in the north. The majority of Erindale Drive is classified as a local roadway, however a short segment between Navaho Drive and Maitland Avenue classified as a collector. The roadway consists of a two-lane cross-section, with lanes wide enough to allow on-street parking on either side of the road and a posted speed limit of 40km/h. Additionally, there is no truck signs posted at the intersections of Merivale/Erindale and Baseline/Merivale.

Maitland Avenue is a north-south municipal arterial roadway that extends from Carling Avenue in the north and curves eastward to Clyde Avenue in the south. Within the study area, Maitland Avenue consists of a four-lane roadway with a posted speed limit of 50km/h.

Existing Study Area Intersections

Baseline/Clyde

The Baseline/Clyde intersection is a four-legged full-movement signalized intersection. The east and west legs (Baseline) of the intersection consist of two through lanes, one through transit lane, a pocket bike lane, one auxiliary left-turn lane and one channelized auxiliary right-turn lane. The north and south legs (Clyde) consist of one through lane, one shared through/right-turn lane and two auxiliary left-turn lanes. There are no restricted movements at this intersection. However, trucks are not allowed to enter the north leg of the intersection.



Baseline/Erindale

Baseline/Erindale is a three-legged, full-movement "T"-intersection, with stop-control on the minor road. The north leg (Erindale) of the intersection consists of a single shared all movement lane. The west leg (Baseline) of the intersection consists of two through lanes and an auxiliary left-turn lane. The east leg (Baseline) of the intersections consists of one through lane and one shared through/right-turn lane. Trucks are not allowed to enter the north leg of the intersection. Furthermore, U-turns are not permitted from the eastbound left-turn lane and the left-turn is prohibited during morning and afternoon peak hours. A driveway to a private residential property is on the south side of the intersection. However, it is assumed to only be accessed through a right-in/right-out movement.



Erindale/Glenmount/Maitland

The Erindale/Glenmount/Maitland intersection is a four-legged signalized intersection. While there are two sets of lights at this intersection, the signals operate in coordination and under the same controller. As such, they were assumed to be one intersection. The south (Erindale) and north (Glenmount) legs of the intersection consist of a single shared all movement lane. The east and west legs (Maitland) consist of a share through/right-turn lane and a shared through/left-turn lane. Trucks are not permitted to enter the south leg of the intersection.



Clyde/Merivale/Lotta

The Clyde/Merivale/Lotta intersection is a four-legged signalized intersection. The north leg (Clyde) of the intersection consists of a through lane, a shared through/right-turn lane and an auxiliary left-turn lane. The south leg (Merivale) consists of two through lanes, an auxiliary left-turn lane and a channelized auxiliary right-turn lane. The east leg (Merivale) consists of two left-turn lanes, a through lane and a channelized right-turn lane. The west leg (Lotta) consists of a shared through/right-turn lane and an auxiliary left-turn lane.



Clyde/North Access

The Clyde/North Access intersection is a three-legged “T”-intersection and one of the accesses to the subject site, with only inbound traffic permitted at the west leg (North Access). The north leg (Clyde) consists of a through lane and a share through/right-turn lane. The south leg (Clyde) consists of two through lanes and an auxiliary left-turn lane. All outbound movements from the west leg are prohibited.



Clyde/South Access

The Clyde/South Access is an existing right-in/right-out only driveway servicing the site and is located approximately 115m north of Baseline along the west side of Clyde.



Baseline/Site Exit

The Baseline/Site Exit intersection is restricted to right-turn out only from the subject site onto Baseline Road, heading westbound.



Existing Driveways to Adjacent Developments

Major Driveways within 200m of the existing site are shown in Figure 3 and are listed below:

1. Approximately 200m north of the site's North Access along Clyde Avenue is a driveway providing access to a parking lot used by residents of townhomes.
2. Approximately 160m north of the site's North Access along Clyde Avenue is a driveway providing access to a parking lot used by residents of townhomes.
3. Approximately 10m north of the site's North Access along Clyde Avenue is a driveway providing access to a parking lot used by residents of townhomes.
4. A right-in/right-out access to the Laurentian Place Plaza on the right side of Clyde Avenue, approximately 90m north of the Baseline/Clyde intersection.
5. A private roadway allows traffic from the residential buildings area immediately west of the subject site to exit the property and access Clyde Avenue via the subject site's South Access.
6. Private Driveway approximately 200m west of the site along Baseline Road that services a private residential community.

Figure 3: Adjacent Driveways



In addition to the driveways numbered in Figure 3 above, 9 private residential home driveways within 200m of the site access Maitland Avenue along the north side of the roadway.

Pedestrian/Cycling Network

Pedestrian sidewalk facilities are provided throughout the study area, with the exception of the west side of Clyde Avenue, north of Maitland Avenue and the east side of Erindale Drive, between Ainsley Drive and Maitland Avenue. With regards to cycling facilities, there are no dedicated bike lanes along roadways within the study area. However, there are pocket bike lanes provided on the east and west legs of the Baseline/Clyde intersection. Furthermore, Baseline Road, Clyde Avenue and Maitland Avenue are all designated as spine routes in the City of Ottawa Transportation Master Plan (TMP).

Transit Network

The following OC Transpo bus routes currently operate near the proposed development site:

- **Route #50 (Tunney's Pasture <-> Lincoln Fields):** identified by OC Transpo as a "Local Route", this route operates on customized routing and schedules, where Tunney's Pasture bound buses do not operate along Clyde Avenue or Baseline Road during the morning peak and Lincoln Fields bound buses do not operate along Clyde Avenue or Baseline Road during the afternoon peak. During its hours of operation, Route #50 operates at an average rate of every 30 minutes during weekdays. Bus stops nearest to the site are the Clyde/Baseline (northbound and southbound) and Baseline/Clyde (westbound) stops.
- **Route #81 (Tunney's Pasture <-> Clyde):** identified by OC Transpo as a "Local Route", this route operates at an average rate of every 30 minutes during weekdays. The bus stop nearest to the site is the Baseline/Clyde (eastbound) stop.
- **Route #88 (Hurdman <-> Terry Fox):** identified by OC Transpo as a "Frequent Route", this route operates at a high frequency throughout the day, 7 days a week. Bus stops nearest to the site are the Baseline/Clyde (westbound and eastbound) stops.

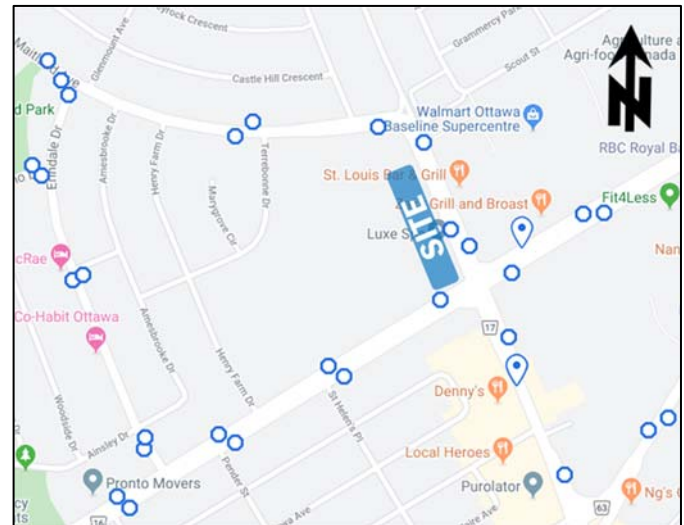
OC Transpo route maps for bus routes #50, #88 and #81 have been provided in Appendix B. Figure 4 below illustrates the area transit network surrounding the subject site, while Figure 5 illustrates the bus stop locations as blue dots relative to the development site. Note that the westbound Baseline/Clyde bus stop is directly south of the site while the eastbound

bus stop is east of the Baseline/Clyde intersection. Southbound and northbound Clyde/Baseline bus stops are directly east of the site.

Figure 4: Area Transit Network



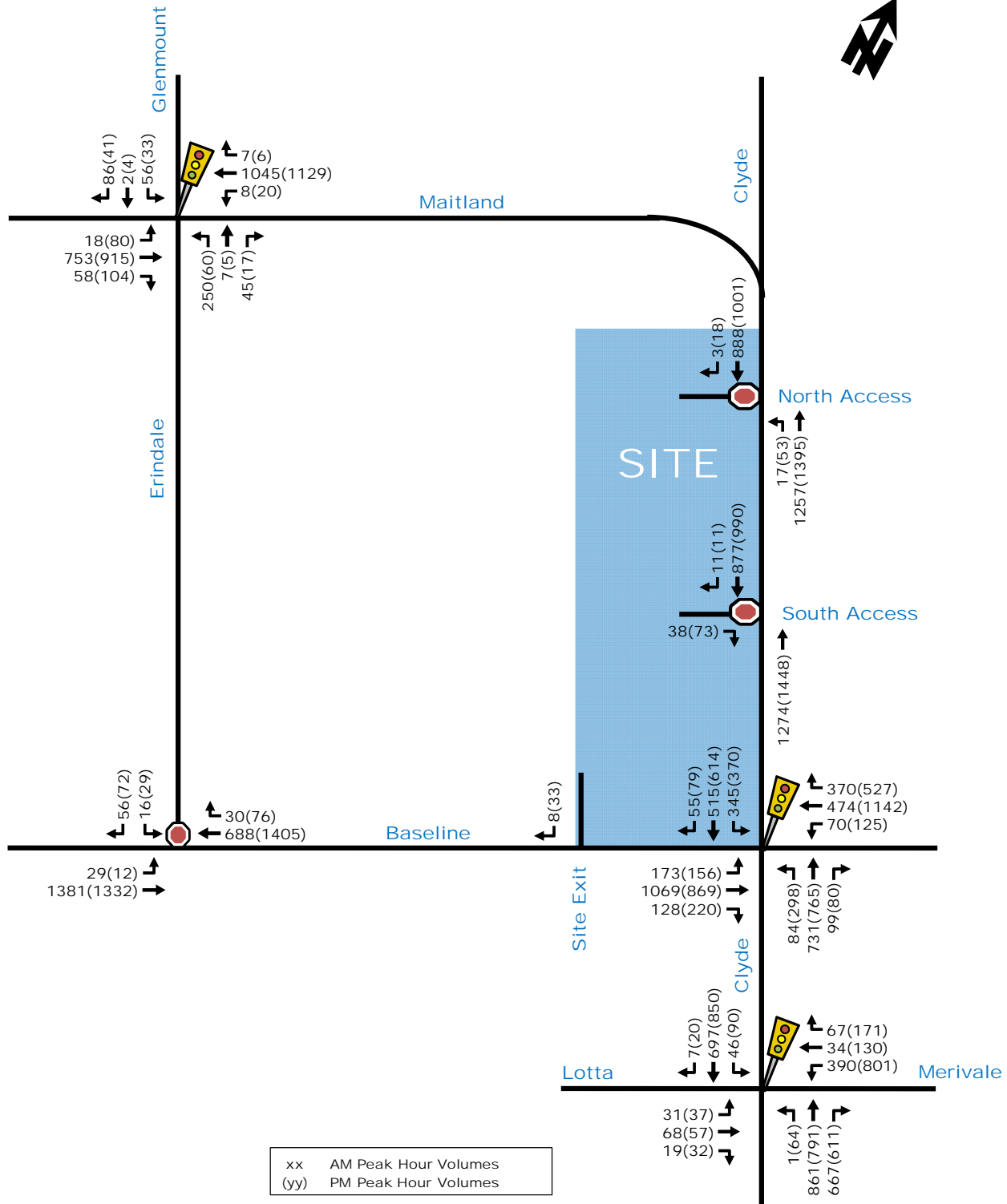
Figure 5: Bus Stop Locations



Peak Hour Travel Demand

Existing peak hour traffic volumes were obtained from the City of Ottawa for the Baseline/Clyde, Baseline/Erindale, Clyde/Merivale/Lotta and Maitland/Erindale intersections, as well as conducted by Parsons at the three existing site accesses. The traffic volumes are illustrated in Figure 6, where southbound traffic volumes have been balanced (to the highest volume) between the site's north and south Clyde accesses and the Baseline/Clyde intersection. The raw traffic count data has been provided in Appendix C.

Figure 6: Existing Peak Hour Traffic Volumes



Existing Road Safety Conditions

Five-year collision history data (2014-2018, inclusive) was requested and obtained from the City of Ottawa for intersections and road segments within the study area that may be used as an access route to the development site. Upon analyzing the collision data, the total number of collisions observed within the study area was determined to be 287 collisions within the past five-years. Approximately 10% (31) of the total collisions resulted from a single vehicle losing control and potentially colliding with a non-motorized object. However, the focus of the analysis will be on the remaining 256 collisions that

occurred between two or more vehicles. Both the detailed collision analysis and the data obtained from the City of Ottawa are provided in Appendix D.

Out of the 256 collisions that occurred, 212 (83%) resulted in property damage only, 44 (17%) resulted in a non-fatal injury and 1 resulted in a fatal injury due to a motorcycle crash along Baseline Rd, between Clyde Ave and Henry Farm Dr. Furthermore, the impacts that caused these collisions are broken down as follows: 131 (51%) rear endings, 25 (10%) turning movements, 57 (22%) sideswipes, 38 (15%) angled, 3 (1%) approaching and 2 (1%) other. The majority of the collisions occurred at the intersections of Baseline Rd/Clyde Ave (120 collisions) and Maitland Ave/Erindale Dr/Glenmount Ave (40 collisions). Based on the City of Ottawa TIA Guidelines, seven or more collisions of the same type exhibited by an approach or movement at any location within the study area may be identified as a collision pattern. However, with the exception of the two intersections, the remaining collisions recorded within the study area show no particular collision pattern.

A standard unit of measure for assessing collisions at a signalized intersection is based on the number of collisions per million entering vehicles (MEV). Within the study area, reported collisions have historically taken place at a rate of:

- 1.16 Collisions/MEV at the intersection of Baseline Rd/Clyde Ave. Out of the 120 collisions that occurred at this intersection in the past five-years, 76 were rear ends, 12 were turning movements, 20 were sideswipes and 12 were angled collisions. The notable collision patterns consist of 24 northbound rear ends, 11 southbound rear ends, 15 eastbound rear ends, 26 westbound rear ends, 9 westbound sideswipes and 8 westbound angled collisions.
- 0.63 Collisions/MEV at the intersection of Maitland Ave/Erindale Dr/Glenmount Ave. Out of the 40 collisions that have taken place at this intersection in the past five-years, 18 were rear ends, 5 were turning movements, 10 were sideswipes, 6 were angled and 1 was approaching. Two collision patterns are noted at this intersection, as 9 rear end and 8 sideswipe collisions occurred in the southbound movement.
- The intersection of Erindale/Baseline has experienced 11 collisions in total consisting of 2 rear ends and 9 angled collisions. A pattern of 7 angled collisions was observed by the southbound movement.
- Along Baseline Rd, between Erindale and Clyde, a total of 21 collisions have occurred, which include 9 rear ends, 7 sideswipes, 3 angled, 1 other and 1 fatal motorcyclist collisions. Nonetheless, there are no particular collision pattern observed by any movement.
- Along Erindale Dr, between Baseline Rd and Maitland Ave, 6 total collisions have been observed at various locations, with no particular collisions pattern noted.
- Along Maitland Ave, between Erindale and Clyde, a total of 42 collisions have been observed at various locations, including 17 rear ends, 3 turning movements, 15 sideswipes, 5 angled, 1 approaching and 1 other collisions. Two collision patterns are noted, as 12 rear ends and 7 sideswipes occurred in the northbound movement of Maitland Ave.
- Along Clyde Ave, between Maitland and Baseline, a total of 17 collisions have been observed, with 6 rear ends, 4 turning movements, 5 sideswipes and 2 angled collisions. As such, there are no particular collision patterns taking place.

2.1.3. PLANNED CONDITIONS

Planned Study Area Transportation Network Changes

Based on the City of Ottawa's TMP, the 2031 Affordable Network for Rapid Transit and Transit Priority illustrates Baseline Road as a future Bus Rapid Transit (BRT) with at-grade crossings, between Navaho Drive and Airport Parkway. Construction of the BRT is assumed to take place between the Phase 1 (2022) and Phase 2 (2027) full buildout of the proposed development. There are no other anticipated changes to the road network surrounding the subject development's site.

Other Area Developments

A summary of other area developments is provided below based on the latest available information from the City's development application search tool.

1375 Clyde Avenue

A TIA was submitted in June 2017 for a development consisting of a five-storey Dymon Storage facility, a 4,500 ft² restaurant and a 12,000 ft² expansion to an existing retail building. The development was anticipated to reach full buildout by 2020 and is expected to generate a total of 47 and 93 vehicle trips/hour during the morning and afternoon peak hour periods, respectively. The vehicle trips generated by this development will be included in the future background and total projected traffic volumes analysis.

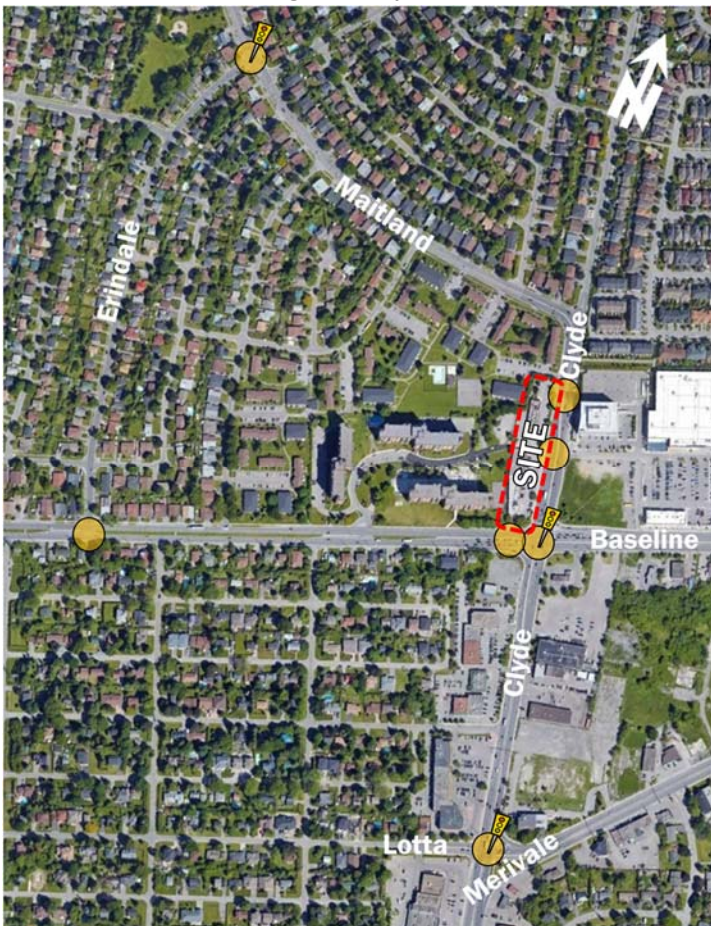
1357 Baseline Road

A mixed-use development consisting of 228 senior adult housing units, 174 high-rise apartment units and a 5,500 ft² shopping centre is proposed at 1357 Baseline Rd. The development will be located in the empty lot at the northeast corner of Baseline/Clyde and is anticipated to be constructed in a single phase by 2022. Prior to the construction of the BRT, the development is anticipated to generate approximately 90 and 111 vehicle/h during the morning and afternoon peak hours respectively. Once the BRT is constructed, the development is anticipated to generate 53 and 66 vehicles/h during the morning and afternoon peak hours respectively.

2.2. STUDY AREA AND TIME PERIODS

Since the proposed development consists of residential buildings, the peak time periods to be assessed are the weekday morning and afternoon peak hour periods. Furthermore, the horizon years to be analyzed are the year of full-buildout of Phase 1 (2022), the year of full-buildout of Phase 2 (2026) and five years after full-buildout (2031), as per the requirements of the TIA Guidelines. The proposed study area is illustrated in Figure 7 below, which identifies the proposed development site and the roadways and intersections that will be assessed in this TIA Report.

Figure 7: Study Area



The highlighted study area intersections include:

- Baseline Road/Clyde Avenue (Signalized)
- Baseline Road/Erindale Drive (Unsignalized)
- Erindale Drive/Glenmount Ave/Maitland Avenue (Signalized)
- Clyde Avenue/Merivale Road/Lotta Avenue (Signalized)
- Clyde Avenue/North Access (Unsignalized)
- Clyde Avenue/South Access (Unsignalized)
- Baseline Road/Site Exit (Unsignalized)

2.3. EXEMPTION REVIEW

Based on the City's TIA guidelines and the subject site, the modules/elements of the TIA process summarized in Table 1 are recommended to be exempt in the subsequent steps of the TIA process:

Table 1: Exemptions Review Summary

Module	Element	Exemption Consideration
4.1 - 4.4 Design Review Component	All elements	Site design requirements are omitted in a Zoning By-Law Amendment Application. These elements will be explored in detail in the future Site Plan Application (SPA).
4.8 Review of Network Concept	All elements	The site is not expected to generate 200 trips more than the established zoning. Refer to Section 4.8.

3.0 FORECASTING

3.1. DEVELOPMENT GENERATED TRAVEL DEMAND

3.1.1. TRIP GENERATION AND MODE SHARES

Existing Site

The number of trips generated in existing conditions are determined using the inbound and outbound traffic volumes of the respective site accesses, during peak hours (see Figure 6). Since the proposed development will be constructed in two phases, with Phase 1 replacing the north strip mall building and Phase 2 replacing the south strip mall building, the existing inbound and outbound traffic counts of the site were split based on the building proportions of the two existing strip malls. As shown in Figure 8, the northmost building is approximately 523 m² and the south building makes up approximately 1408 m², where the total building area is approximately 1931 m².

Figure 8: Existing Building Area



This equates to approximately 30% of the existing counted traffic volumes heading to/from the north building and 70% of the remaining site trips heading to/from the south building. The resulting estimated traffic volumes per building are summarized in Table 2 below.

Table 2: Existing Vehicle Trips

Land Use	Traffic Percentage	AM Peak (Vehicles/h)			PM Peak (Vehicles/h)		
		In	Out	Total	In	Out	Total
North Strip Mall (Future Phase 1)	30%	9	14	23	25	32	57
South Strip Mall (Future Phase 2)	70%	22	32	54	57	74	131
Total	100%	31	46	77	82	106	188

Proposed Development

The proposed development will consist of two high-rise apartment buildings composed of approximately 468 residential units, 32,927 ft² (3,059 m²) of office space and 18,568 ft² (1,725 m²) of retail space. Appropriate trip generation rates for the residential land use were obtained from the 2009 TRANS Trip Generation Residential Trip Rates report, Table 6.3. Retail and office trip rate were obtained from the ITE Trip Generation Manual (10th edition). The trip rates have been summarized in Table 3. Note that the retail trip rates provided reflect the average rate rather than a fitted curve equation rate. This was encouraged by the City in comments received post forecasting report submission, as the fitted curve equation provides overly conservative values.

Table 3: Proposed Development Trip Rates

Land Use	Data Source	Trip Rates	
		AM Peak	PM Peak
High-Rise Apartments	TRANS	$T = 0.24(du);$	$T = 0.27(du);$
Retail Space (first floor)	ITE 820	$T = 0.94(x);$	$T = 3.81(x);$
Office Space	ITE 710	$T = 0.94(x) + 26.49;$	$\ln(T) = 0.95\ln(x) + 0.36;$
Notes:	T = Average Vehicle Trip Ends du = Dwelling unit x = Gross Floor Area (GFA) (1000 ft ²)		

The trip rates shown in Table 3 represent vehicle trips-per-hour for the residential land use and person trips-per-hour for the retail and office space use. With regards to the residential land use, Table 4 provides the vehicle trips-per-hour of the apartment units.

Table 4: Apartment Units Vehicle Trip Generation

Land Use	Dwelling Units	AM Peak (Vehicles/h)			PM Peak (Vehicles/h)		
		In	Out	Total	In	Out	Total
High-Rise Apartments (Phase 1)	210 units	12	38	50	35	22	57
High-Rise Apartments (Phase 2)	258 units	14	48	62	43	27	70
Total		26	86	112	78	49	127

Mode share percentages from the 2009 TRANS Trip Generation Study Report are used to convert the total vehicle trips in Table 4 to the total person trips, and subsequently divide the total person trips into the trips/h for each respective mode share. Table 5 and

Table 6 summarize the person trips generated by the Phase 1 and Phase 2 residential land use of the proposed development.

Table 5: Phase 1 Mode Shares

Travel Mode	Mode Share	AM Peak (Person Trips/h)			Mode Share	PM Peak (Person Trips/h)		
		In	Out	Total		In	Out	Total
Auto Driver	37%	12	38	50	40%	35	22	57
Auto Passenger	8%	3	8	11	9%	9	4	13
Transit	41%	14	42	56	37%	33	20	53
Non-motorized	14%	5	13	18	14%	13	7	20
Total Person Trips	100%	34	101	135	100%	90	53	143

Table 6: Phase 2 Mode Shares

Travel Mode	Mode Share	AM Peak (Person Trips/h)			Mode Share	PM Peak (Person Trips/h)		
		In	Out	Total		In	Out	Total
Auto Driver	37%	14	48	62	40%	43	27	70
Auto Passenger	8%	3	10	13	9%	10	6	16
Transit	41%	16	53	69	37%	41	24	65
Non-motorized	14%	5	19	24	14%	15	9	24
Total Person Trips	100%	38	130	168	100%	109	66	175

With regards to the office and retail space land uses, the person trips/hour are calculated directly using the trip rates shown in Table 3 and multiplied by a factor of 1.28, as per TIA standards, to account for typical North American auto occupancy values of approximately 1.15 and combined transit and non-motorized modal shares of less than 10%. The resulting total person trips/hour for the retail and office land uses of Phases 1 and 2 are summarized in Table 7 and Table 8, respectively.

Table 7: Phase 1 Retail and Office Space Person Trip Generation

Land Use	Area (ft²)	AM Peak (Person Trips/h)			PM Peak (Person Trips/h)		
		In	Out	Total	In	Out	Total
Retail Space (Phase 1)	8,837 ft²	6	5	11	20	23	43
Office Space (Phase 1)	14,682 ft²	44	8	52	3	21	24
Total		50	13	63	23	44	67

Table 8: Phase 2 Retail Space Person Trip Generation

Land Use	Area (ft²)	AM Peak (Person Trips/h)			PM Peak (Person Trips/h)		
		In	Out	Total	In	Out	Total
Retail Space (Phase 2)	9,731 ft²	7	5	12	22	25	47
Office Space (Phase 2)	18,256 ft²	48	8	56	4	25	29
Total		55	13	68	26	50	76

The total person trips of the residential land use can now be combined with the total person trips of the retail and office land use for each of the respective phases. As mode share percentages vary based on the location of the proposed development within the City of Ottawa, new mode share percentages have been obtained from the 2011 NCR Household Origin-Destination Survey for the Merivale District. These mode shares are represented in Table 9 for Phase 1 of the proposed development. For Phase 2, the mode shares in Table 10 were adjusted to provide higher transit and lower auto driver percentages. This is to account for the BRT that was mentioned in Section 2.1.3: Planned Study Area Transportation Network Changes. The person trips in Phase 1 and Phase 2 were then combined as shown in Table 11.

Table 9: Phase 1 OD Survey Travel Mode Person Trips

Travel Mode	Mode Share	AM Peak (Person Trips/h)			PM Peak (Person Trips/h)		
		In	Out	Total	In	Out	Total
Auto Driver	55%	46	65	111	61	55	116
Auto Passenger	15%	13	18	31	17	15	32
Transit	20%	15	23	38	21	20	41
Bike	5%	4	6	9	6	5	11
Walk	5%	3	5	9	5	5	10
Total Person Trips	100%	81	117	198	110	100	210
Total Auto Trips		46	65	111	61	55	116

Table 10: Phase 2 OD Survey Travel Mode Person Trips

Travel Mode	Mode Share	AM Peak (Person Trips/h)			PM Peak (Person Trips/h)		
		In	Out	Total	In	Out	Total
Auto Driver	35%	34	50	84	47	42	89
Auto Passenger	15%	17	22	39	21	18	39
Transit	40%	37	56	93	52	47	99
Bike	5%	4	7	11	7	6	13
Walk	5%	3	6	9	6	5	11
Total Person Trips	100%	95	141	236	133	118	251
Total Auto Trips		34	50	84	47	42	89

Table 11: Total Travel Mode Person Trips of Proposed Development

Travel Mode	AM Peak (Person Trips/h)			PM Peak (Person Trips/h)		
	In	Out	Total	In	Out	Total
Auto Driver	80	115	195	108	97	205
Auto Passenger	30	40	70	38	33	71
Transit	52	79	131	73	67	140
Bike	8	13	20	13	11	24
Walk	6	11	18	11	10	21
Total Person Trips	176	258	434	243	218	461
Total Auto Trips	80	115	195	108	97	205

The auto trips expected to be generated by Phase 1 of the future residential development are 111 and 116 vehicles/h, while Phase 2 is expected to generate 84 and 89 vehicles/h during the morning and afternoon peak hour periods, respectively. As such, the total number of vehicle trips expected to be generated by the proposed development are 195 and 205 vehicles/h during the morning and afternoon peak hour periods.

Estimated Net Difference in Trips Generated

The anticipated net difference between the proposed development's vehicle trips (Table 9 and Table 10) and the existing site's vehicle trips (Table 2) is summarized in Table 12.

Table 12: Anticipated 'New' Vehicle Trips

Development Phase	AM Peak (Vehicles/h)			PM Peak (Vehicles/h)		
	In	Out	Total	In	Out	Total
Phase 1	37	51	88	36	23	59
Phase 2	12	18	30	-10	-32	-42
Total	49	69	118	26	-9	17

As shown in **Table 12** above, Phase 1 shows a net increase of 88 and 59 vehicle/h during the morning and afternoon peak hours. On the other hand, Phase 2 results in a net increase of 30 vehicles/h and a net decrease of 42 vehicles/h during the morning and afternoon peak hours. In total, the two phases generate 118 and 17 vehicles/h during the morning and afternoon peak hours.

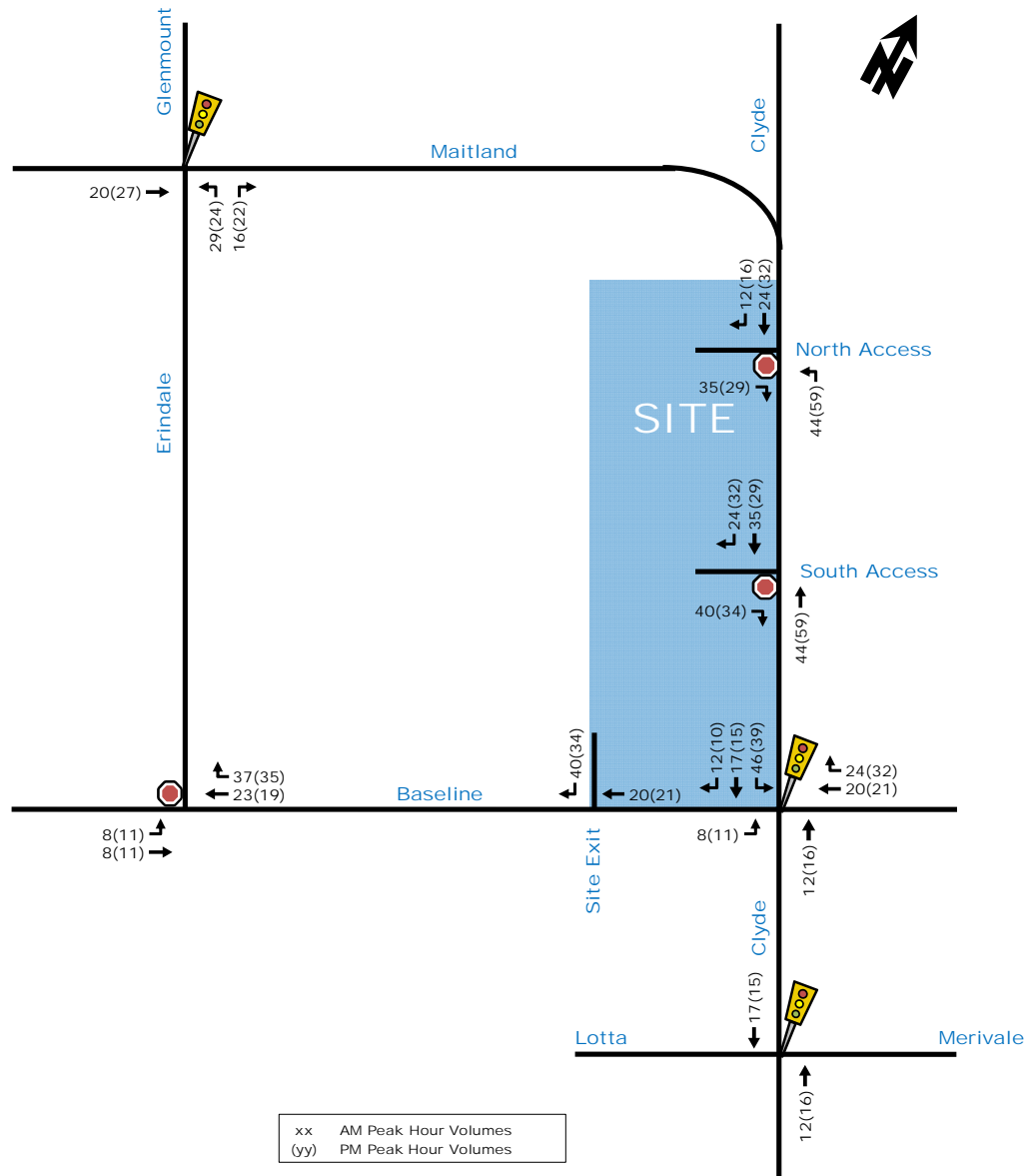
3.1.2. TRIP DISTRIBUTION AND ASSIGNMENT

Based on the 2011 OD Survey (Merivale district) and the location of adjacent arterial roadways and neighbourhoods, the distribution of site-generated traffic volumes was estimated as follows:

- 25% to/from the north;
- 15% to/from the south;
- 40% to/from the east; and,
- 20% to/from the west.

Phase 1 anticipated site-generated traffic volumes are illustrated in Figure 9, while Phase 2 total anticipated site-generated traffic volumes are illustrated in Figure 10. Note that in Phase 1, inbound right-turning traffic were all assumed to access the north building via the north access, while in Phase 2, the right-turning traffic were split between the north and south development accesses. On the other hand, the outbound vehicles were assumed to exit the site via the north access in Phase 1 and via the north, south and "site exit" accesses in Phase 2.

Figure 10: Phase 2 Total Site-Generated Traffic Volumes



3.2. BACKGROUND NETWORK TRAFFIC

3.2.1. TRANSPORTATION NETWORK PLANS

Refer to Section 2.1.3: Planned Study Area Transportation Network Changes. A Planning and Environmental Assessment Study was initiated by the City of Ottawa in 2017 for the Baseline Road Rapid Transit Corridor. The plan is to provide dedicated bus-only lanes, generally within the median of Baseline Road, between Bayshore Station and Heron Station. The timeline of this project is currently uncertain. However, for the sake of this report, it was assumed that modifications along Baseline Rd, within the study area, will take place between the Phase 1 (2022) and Phase 2 (2026) buildout of the proposed development.

3.2.2. BACKGROUND GROWTH

Regression analysis was conducted at the intersection of Baseline/Clyde using three previous traffic counts (2014, 2016, 2019), in order to determine the average annual change in traffic. The analysis was conducted using three different time periods of 8-hour, AM peak hour and PM peak hour traffic volumes and the results are summarized in Table 13 below.

Table 13: Background Traffic Growth at Baseline/Clyde

Time Period	Percent Annual Change				
	North Leg	South Leg	East Leg	West Leg	Overall
8 hrs	-3.80%	-3.37%	-5.77%	-3.21%	-4.11%
AM Peak	-2.16%	0.23%	-4.50%	-0.45%	-1.94%
PM Peak	-4.14%	-2.85%	-8.33%	-6.20%	-5.60%

As shown in Table 13, traffic growth along all legs of the Baseline/Clyde intersection has been mostly declining. As such, it is reasonable to assume that traffic growth within the study area will not be increasing in the future. A background growth of 0% is applied at study area intersections. The detailed traffic growth analysis sheet is provided in Appendix E.

3.2.3. OTHER DEVELOPMENTS

Description of other area developments taking place within the study area was provided in Section 2.1.3 - Other Area Developments. The site-generated traffic volume figures of the other area developments were taken from their respective TIA reports. Figure 11 illustrates the site-generated traffic of 1375 Clyde Ave, while Figure 12 and Figure 13 illustrate the site-generated traffic of 1357 Baseline Rd, before and after the BRT along Baseline Rd is constructed.

Figure 11: 1375 Clyde Ave Development Traffic

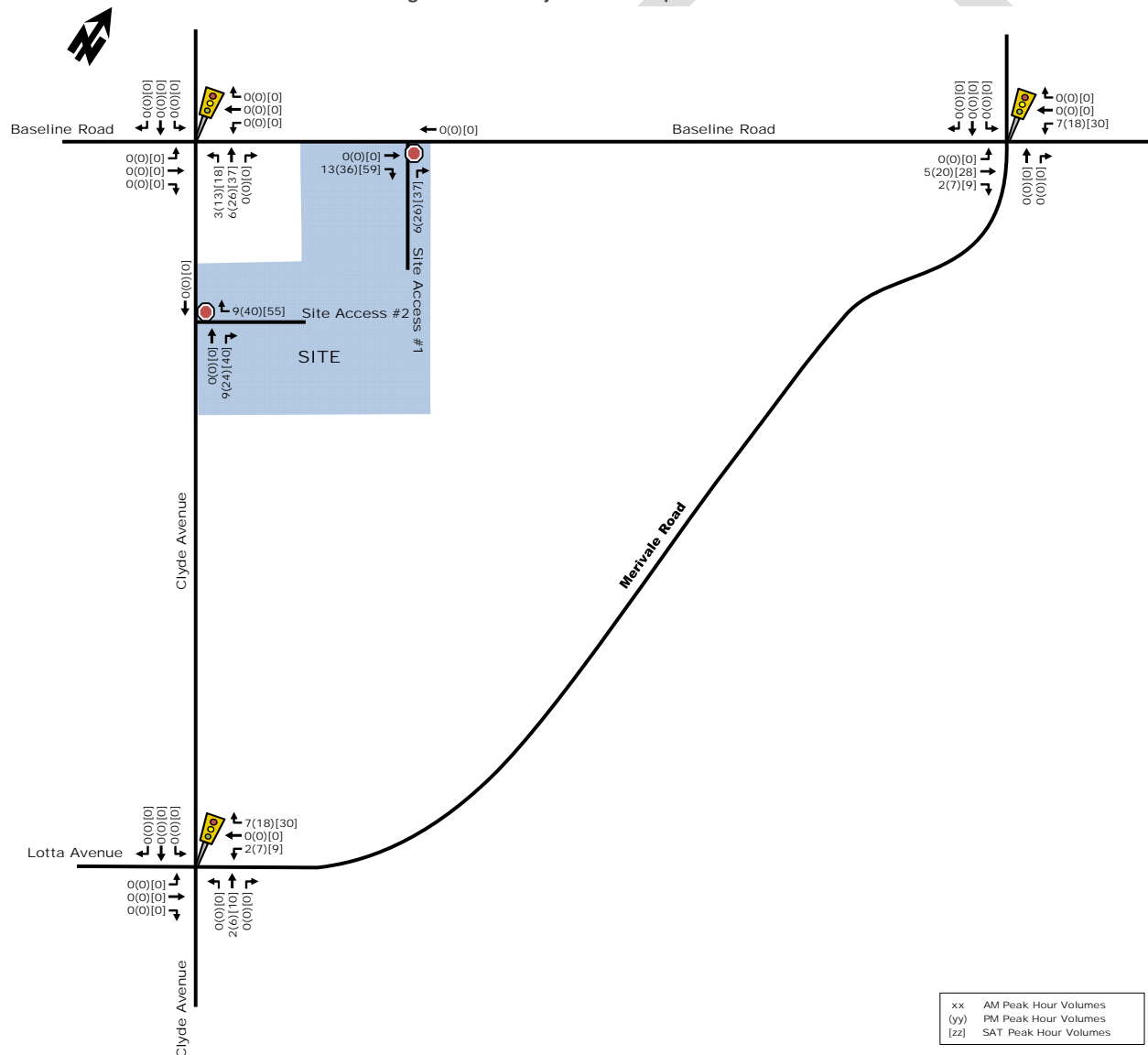


Figure 12: 1357 Baseline Rd Development Traffic - Without BRT

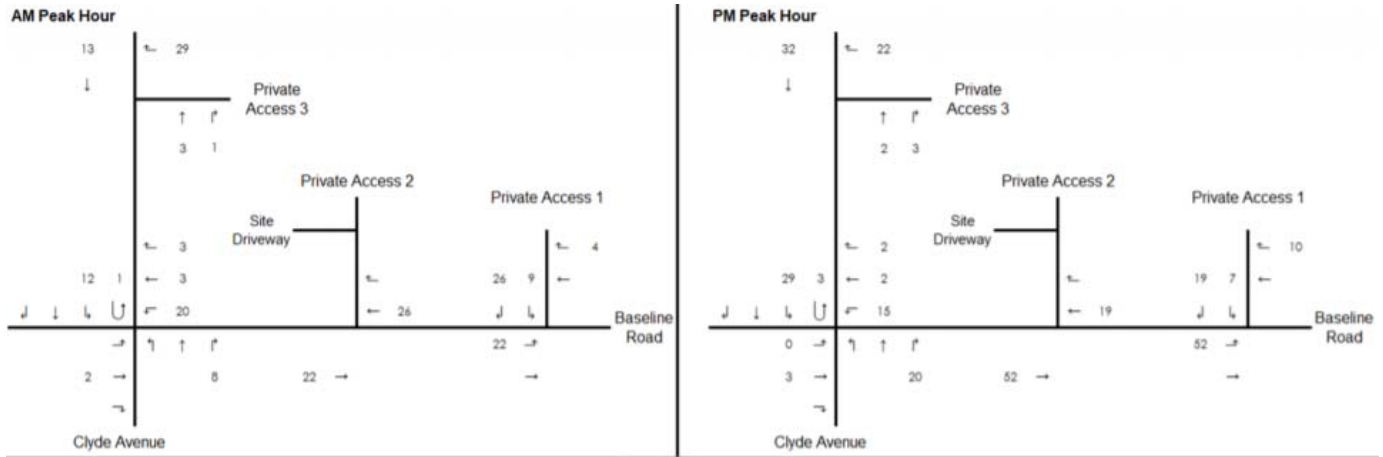
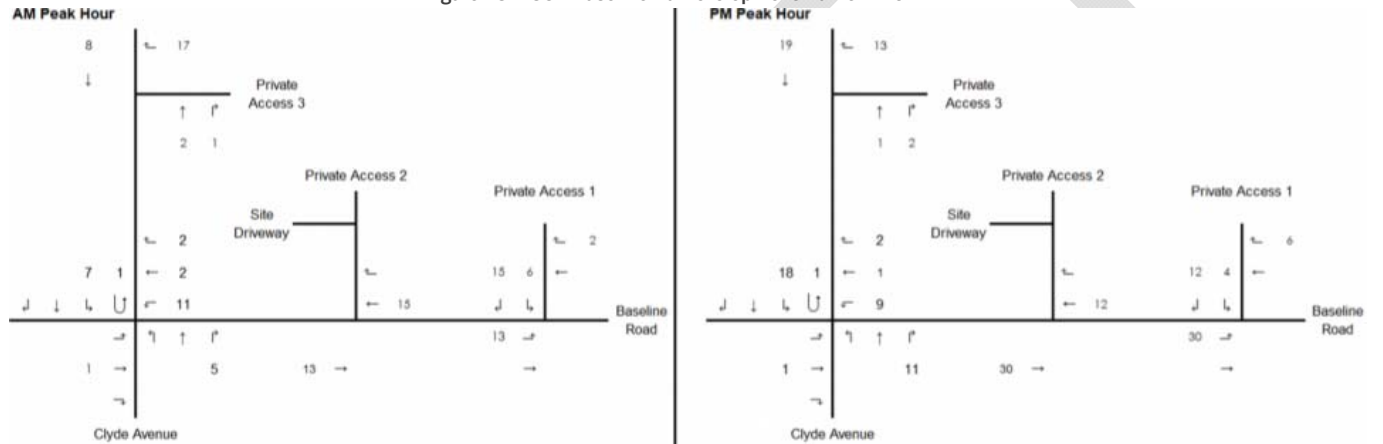


Figure 13: 1357 Baseline Rd Development Traffic - With BRT



The above site-generated traffic volumes of adjacent developments can then be added to the existing traffic volumes (in Figure 6), with respect to each phase, to determine the future background 2022 and future background 2026 traffic volumes. As mentioned in Section 3.2.2, the background traffic growth was assumed to be 0% per year. The background traffic may even begin to decline once the BRT is constructed. However, for conservative purposes, the background growth was kept as 0%. Figure 14 and Figure 15 illustrate the future background traffic volumes for horizon years 2022 and 2026. Horizon year 2031 is anticipated to have the same traffic volumes as 2026, since there is no anticipated change in the background traffic growth.

Figure 14: Phase 1 Future Background Traffic Volumes (2022)

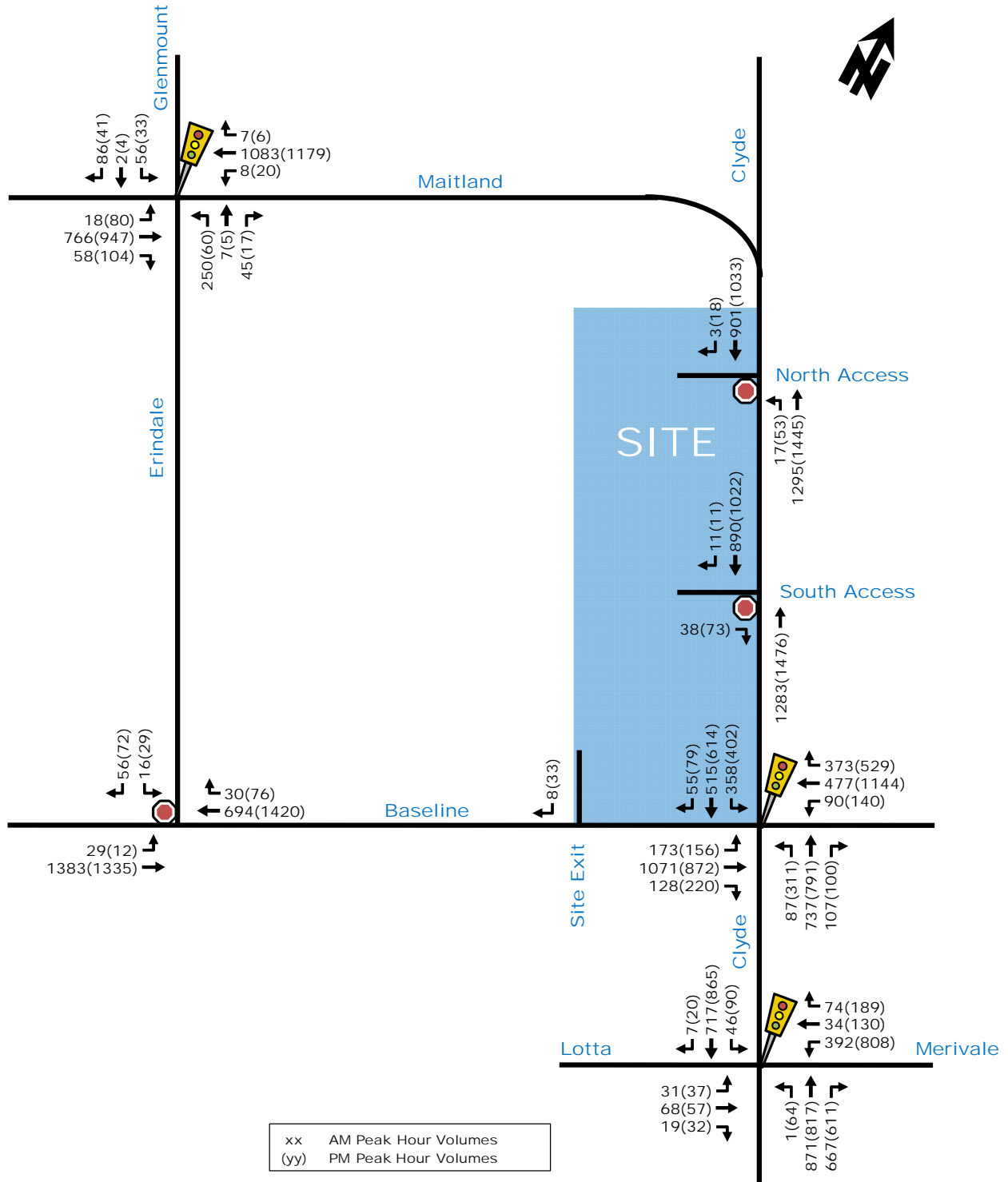
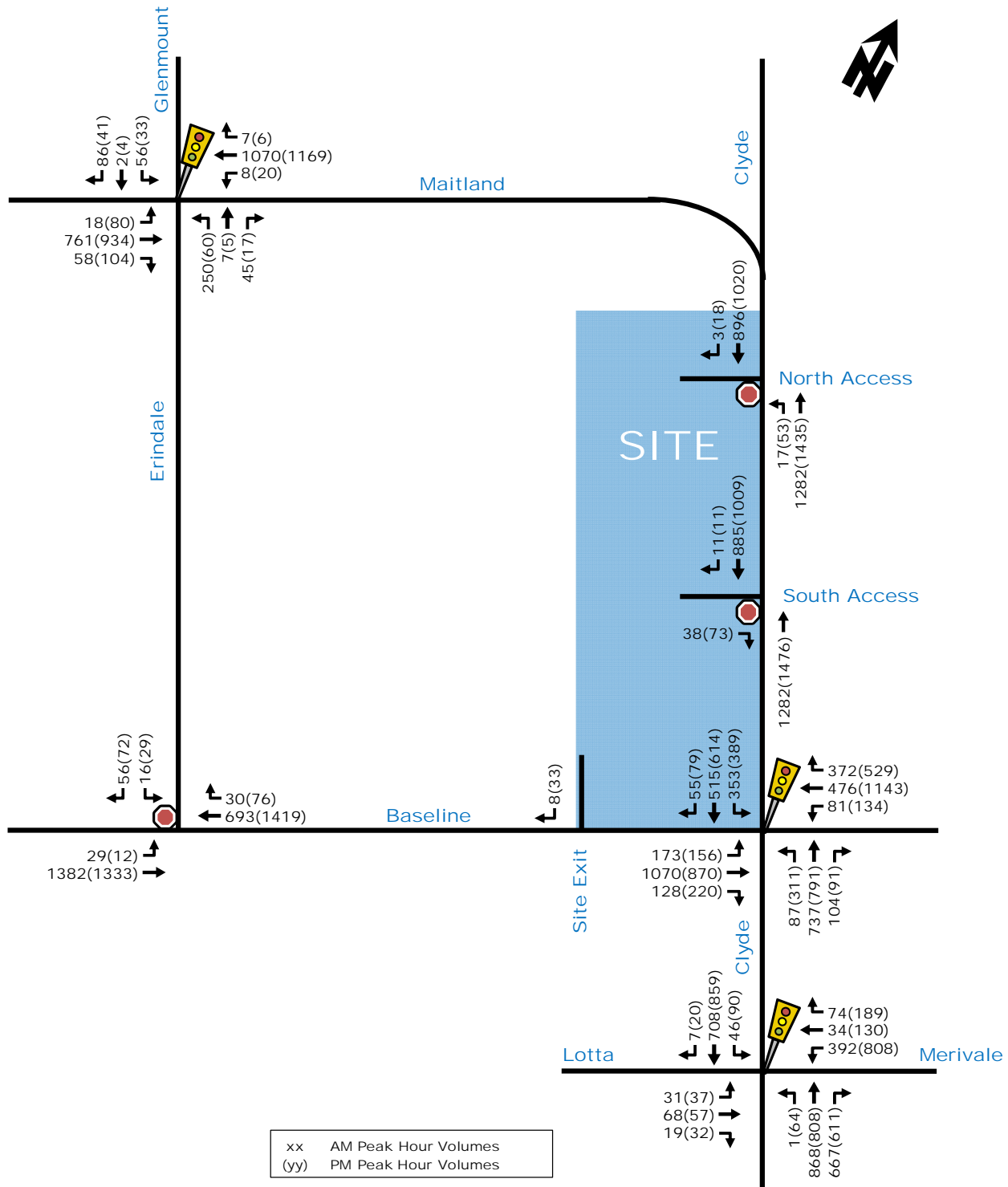


Figure 15: Phase 2 Future Background Traffic Volumes (2026)

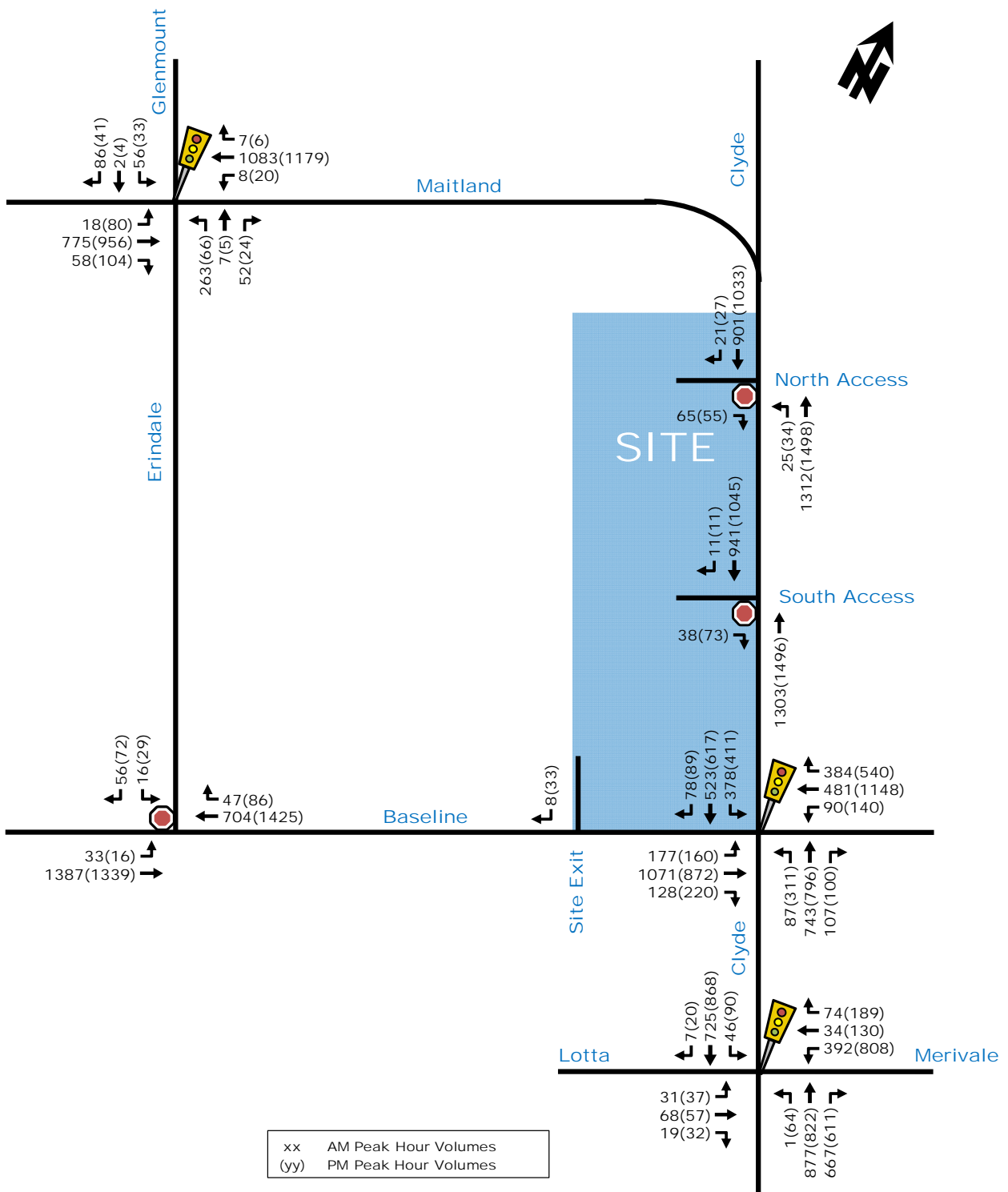


3.3. DEMAND RATIONALIZATION

Analysis of the study area intersections will be conducted in the subsequent Strategy Section and will take into account the planned BRT along Baseline Rd within the appropriate horizon years.

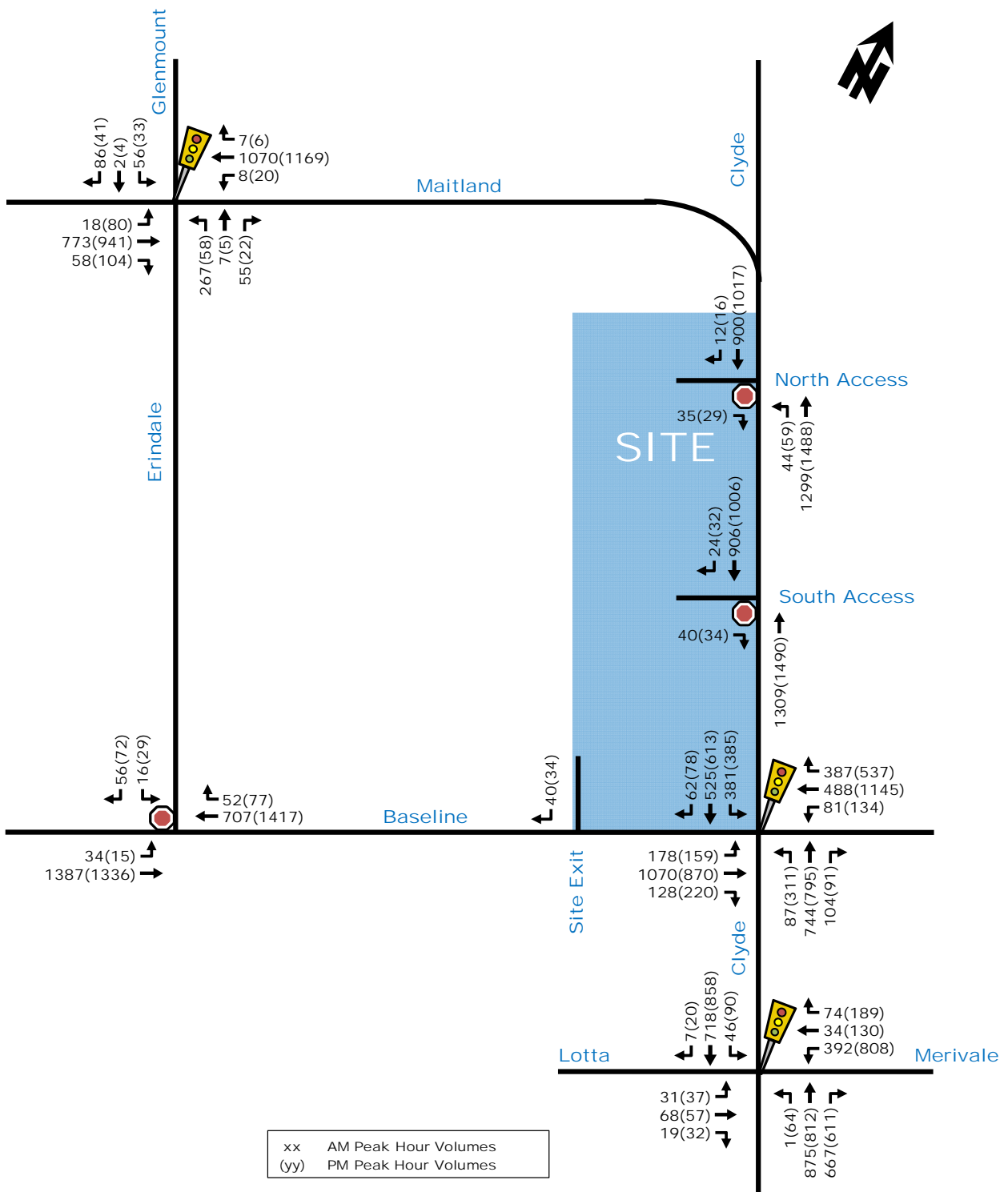
The total projected 2022 traffic volumes are illustrated in Figure 16 below, where the volumes were derived by superimposing the site-generated traffic volumes projected for Phase 1 (Figure 9) onto the future background 2022 traffic volumes (Figure 14).

Figure 16: Total Projected 2022 Traffic Volumes



Similarly, the total projected 2026 traffic volumes are illustrated in Figure 17 below, where the volumes were derived by superimposing the site-generated traffic volumes projected for Phase 2 (Figure 10) onto the future background 2026 traffic volumes (Figure 15).

Figure 17: Total Projected 2026 Traffic Volumes



4.0 ANALYSIS

4.1. DEVELOPMENT DESIGN

As this TIA Report is in support of a Zoning By-Law Amendment application, design related elements are not being discussed. However, they will be included in the future Site Plan Application submission. The City of Ottawa's TDM-supportive Development Design and Infrastructure will also be provided in the future submission.

Car parking spaces are proposed to be located in a three-level underground parking garage and surface parking spaces located along the internal driveways of the site (see Figure 2). Furthermore, all bicycle parking spaces are provided within the underground parking garage.

With regards to transit, it is assumed that transit will continue to operate within the study area as described in Section 2.1.2: Transit Network. As previously mentioned, the Baseline Rd BRT will be constructed sometime between Horizon Years 2022 and 2026, which will likely significantly reduce transit travel times and potentially increase the number of buses along this route.

As shown in the Site Plan (Figure 2), a loading space is illustrated on the west side of the proposed south building. Heavy vehicles are not anticipated to have any issues accessing the loading space as they can enter the site through the south access on Clyde Ave and exit through the site exit on Baseline Rd.

4.2. PARKING

A total of 473 parking spaces are proposed to be provided. For Phase 1, 192 spaces are provided in the underground parking garage and 25 outdoors. For Phase 2, 234 spaces are provided in the underground parking garage and 22 outdoors.

With regards to bicycle parking spaces, a total of 300 spaces are proposed to be provided in the underground parking garage. This includes 143 spaces for Phase 1 and 157 spaces for Phase 2.

4.3. BOUNDARY STREET DESIGN

The Multi-Modal Level of Service (MMLOS) analysis of boundary streets and signalized intersections will be provided in the future Site Plan Application.

4.4. ACCESS INTERSECTION DESIGN

As mentioned previously, the three existing accesses are anticipated to be used by the proposed development. The north access along Clyde Ave is anticipated to permit in/out movements with the exception of the outbound westbound left-turn which will remain prohibited. The south access on Clyde Ave will continue to permit right-in/right-out movements. The site exit on Baseline Rd will continue to permit outbound right-turns only. Access design will be further explored in the future Site Plan Application.

4.5. TRANSPORTATION DEMAND MANAGEMENT

The TDM Measures Checklist has been provided in Appendix F.

4.6. NEIGHBOURHOOD TRAFFIC MANAGEMENT

Site-generated traffic of the proposed development is expected to rely primarily on arterial roads such as Baseline Rd, Maitland Ave and Clyde Ave to access the development site. However, due to the limited inbound left-turn maneuverability of the site-accesses, traffic may utilize Erindale Dr to access the site via an inbound right-turn. Based on the City of Ottawa TMP, the majority of Erindale Dr is classified as a local road, with a small section between Navaho Dr and Erindale Dr classified as a collector road. As such, the future traffic volumes of Erindale Dr need to be compared to the thresholds provided in the TIA Guidelines for local and collector roads.

Within the local section of Erindale Rd, the future traffic volumes are illustrated by the total projected 2022 and 2026 volumes in Figure 16 and Figure 17. Based on the TIA Guidelines, the one-way peak direction threshold of local roads is 120 vehicles during the peak hour. The southbound movement traffic volume at the intersection of Baseline/Erindale is approximately 101 vehicles during the afternoon peak hour, which does not exceed the 120-vehicle threshold.

With regards to the collector section of Erindale Rd, the highest traffic volumes are observed at the northbound movement of the intersection of Erindale/Maitland, with approximately 330 vehicles during the morning peak hour. The TIA Guidelines indicate that the one-way peak direction threshold of collector roads is 300 vehicles during the peak hour. As such, the traffic volume of the northbound movement is anticipated to exceed the threshold by approximately 30 vehicles during the morning peak hour. The majority of the traffic is assumed to have arrived from Navaho Dr, which warranted this section to be classified as a collector road. However, an excess of 30 vehicles, which would equate to approximately 1 more vehicle every 2 minutes during the morning peak hour, does not seem significant enough to change the classification or make adjustments to this section of Erindale Dr.

4.7. TRANSIT

It is assumed that transit will continue to operate within the study area as described in Section 2.1.2: Transit Network. The construction of the Baseline BRT sometime between 2022 and 2026 is expected to significantly reduce transit travel times and potentially increase the number of buses along this route.

4.8. REVIEW OF NETWORK CONCEPT

Based on the City of Ottawa's zoning information, the site is currently zoned as AM1 H(9), which permits a maximum building height of "30 meters but in no case greater than nine storeys". This means that, for this section to be exempted, the total number of proposed dwelling units above nine storeys for both proposed buildings should not exceed 200 person trips. The total number of dwelling units currently proposed are 468 units. Above nine storeys, the number of dwelling units proposed is 291 units.

The average trip rates of a high-rise building (see Table 3) are 0.24 and 0.27 during the morning and afternoon peak hours respectively. Multiplied by 291 units, this equates to approximately 70 and 79 veh/h during the morning and afternoon peak hours. Based on the 2009 TRANS Report mode shares, 37% of mode shares are auto driver during the morning peak hour, while 40% are auto drivers during the afternoon peak hour. Dividing the veh/h by their respective mode shares, the resulting person trips/hour are approximately 189 and 198 during the morning and afternoon peak hours, respectively. Therefore, the proposed development rezoning is not anticipated to exceed the existing zoning by 200 or more person trips.

4.9. INTERSECTION DESIGN

4.9.1. INTERSECTION CONTROL

The three site accesses are anticipated to continue using STOP control for vehicles existing the site, which is anticipated to be sufficient given the limited maneuverability of inbound/outbound vehicles and the low traffic volumes.

4.9.2. INTERSECTION DESIGN

Synchro 10 Trafficware was used to analyze intersection performance of intersections within the study area. Critical movements at each of the intersections were assessed based on either the movement with the highest volume-to-capacity ratio (for signalized intersections), or the movement experiencing the highest average delay (for unsignalized intersections). All Synchro report outputs for existing and future conditions have been provided in Appendix G.

It should be noted that, as per the TIA Guidelines, the Peak Hour Factor (PHF) used for analysis was 0.9 in existing conditions and 1.0 in all future scenario conditions. Furthermore, since there is no anticipated background growth, the 2031 horizon year traffic volumes are expected to be the same as 2026.

Existing Conditions

Table 14 below summarizes the intersection performance of study area intersections, based on existing conditions traffic volumes illustrated in Figure 6.

Table 14: Existing Conditions Intersection Performance

Intersection	Weekday AM Peak (PM Peak)					
	Critical Movement			Intersection 'As a Whole'		
	LOS	max. v/c or avg. delay (s)	Movement	Delay (s)	LOS	v/c
Clyde Ave/Baseline Rd (S)	F(F)	1.19(1.16)	EBL(EBL)	66.9(78.5)	D(F)	0.89(1.10)
Merivale Rd/Lotta Ave & Clyde Ave (S)	C(E)	0.77(0.95)	WBL(WBL)	21.7(44.1)	B(D)	0.67(0.82)
Erindale Dr/Maitland Ave (S)	C(A)	0.79(0.54)	NBL(WBT)	25.8(5.5)	B(A)	0.67(0.53)
Maitland Ave/Glenmount Ave (S)	A(B)	0.59(0.64)	SBL(EBT)	13.9(5.9)	A(B)	0.42(0.62)
Baseline Rd/Erindale Dr (U)	C(F)	24.2(325.1)	SB(SB)	0.9(11.3)	-	-
Clyde Ave/North Access (U)	B(B)	10.3(11.0)	NBL(NBL)	0.1(0.2)	-	-
Clyde Ave/South Access (U)	B(B)	12.5(13.4)	EB(EB)	0.2(0.4)	-	-
Baseline/Site Exit (U)	A(B)	8.8(10.3)	SB(SB)	0.0(0.1)	-	-
Note: Analysis of signalized intersections assumes a PHF of 0.9 and a saturation flow rate of 1800 veh/h/lane. (S) – Signalized intersection (U) – Unsignalized intersection						

As shown in Table 14, the intersection of Clyde/Baseline 'as a whole' operates at capacity during the afternoon peak hour. With regards to critical movements, the intersection of Clyde/Baseline operates at capacity during both peak hours and the intersection of Baseline/Erindale operates at capacity during the afternoon peak hour.

Future Background 2022

Table 15 below summarizes the intersection performance of study area intersections, based on future background 2022 traffic volumes illustrated in Figure 14.

Table 15: Future Background 2022 Intersection Performance

Intersection	Weekday AM Peak (PM Peak)					
	Critical Movement			Intersection 'As a Whole'		
	LOS	max. v/c or avg. delay (s)	Movement	Delay (s)	LOS	v/c
Clyde Ave/Baseline Rd (S)	F(F)	1.04(1.10)	EBT(SBL)	57.7(65.7)	E(F)	0.97(1.02)
Merivale Rd/Lotta Ave & Clyde Ave (S)	C(D)	0.75(0.90)	WBL(WBL)	20.5(40.2)	B(C)	0.63(0.78)
Erindale Dr/Maitland Ave (S)	C(A)	0.77(0.50)	NBL(WBT)	24.1(5.0)	B(A)	0.61(0.49)
Maitland Ave/Glenmount Ave (S)	A(A)	0.54(0.56)	SBL(EBT)	13.1(5.0)	A(A)	0.38(0.55)
Baseline Rd/Erindale Dr (U)	C(F)	19.6(139.7)	SB(SB)	0.8(4.8)	-	-
Clyde Ave/North Access (U)	A(B)	9.9(10.5)	NBL(NBL)	0.1(0.2)	-	-
Clyde Ave/South Access (U)	B(B)	11.9(12.8)	EB(EB)	0.2(0.4)	-	-
Baseline Rd/Site Exit (U)	A(B)	8.8(10.2)	SB(SB)	0.0(0.1)	-	-
Note: Analysis of signalized intersections assumes a PHF of 1.0 and a saturation flow rate of 1800 veh/h/lane. (S) – Signalized intersection (U) – Unsignalized intersection						

As shown in Table 15, study area intersections are anticipated to operate better than existing conditions, due to increasing the PHF to 1.0. However, Clyde/Baseline and Erindale/Baseline intersections are projected to operate at capacity during the morning and afternoon peak hours, similar to existing conditions.

Future Background 2026

Table 16 below summarizes the intersection performance of study area intersections, based on future background 2026 traffic volumes illustrated in Figure 15.

Table 16: Future Background 2026 Intersection Performance

Intersection	Weekday AM Peak (PM Peak)					
	Critical Movement			Intersection 'As a Whole'		
	LOS	max. v/c or avg. delay (s)	Movement	Delay (s)	LOS	v/c
Clyde Ave/Baseline Rd (S)	F(F)	1.01(1.07)	EBL(SBL)	52.1(64.0)	D(F)	0.82(1.02)
Merivale Rd/Lotta Ave & Clyde Ave (S)	C(D)	0.75(0.90)	WBL(WBL)	20.5(40.1)	B(C)	0.63(0.74)
Erindale Dr/Maitland Ave (S)	C(A)	0.77(0.50)	NBL(WBT)	24.2(5.0)	B(A)	0.61(0.49)
Maitland Ave/Glenmount Ave (S)	A(A)	0.54(0.55)	SBL(EBT)	13.1(5.0)	A(A)	0.38(0.54)
Baseline Rd/Erindale Dr (U)	C(F)	19.5(138.8)	SB(SB)	0.8(4.8)	-	-
Clyde Ave/North Access (U)	A(B)	9.9(10.5)	NBL(NBL)	0.1(0.2)	-	-
Clyde Ave/South Access (U)	B(B)	11.9(12.7)	EB(EB)	0.2(0.4)	-	-
Baseline/Site Exit (U)	A(B)	8.8(10.2)	SB(SB)	0.0(0.1)	-	-
Note: Analysis of signalized intersections assumes a PHF of 1.0 and a saturation flow rate of 1800 veh/h/lane. (S) – Signalized intersection (U) – Unsignalized intersection						

As there is no background growth applied and due to the reduced volumes of other area developments (Sections 3.2.2 and 3.2.3), study area intersections are anticipated to operate similar or slightly better than future background 2022 conditions. As with existing conditions, the intersection of Clyde/Baseline 'as a whole' operates at capacity during the afternoon peak hour, with the critical movements operating at capacity during both peak hours. The critical movement at intersection of Baseline/Erindale also continues to operate at capacity during the afternoon peak hour.

Total Projected 2022

Table 17 below summarizes the intersection performance of study area intersections, based on the total projected 2022 traffic volumes illustrated in Figure 16.

Table 17: Total Projected 2022 Intersection Performance

Intersection	Weekday AM Peak (PM Peak)					
	Critical Movement			Intersection 'As a Whole'		
	LOS	max. v/c or avg. delay (s)	Movement	Delay (s)	LOS	v/c
Clyde Ave/Baseline Rd (S)	E(F)	0.97(1.05)	EBL(NBT)	53.1(67.3)	E(F)	0.95(1.04)
Merivale Rd/Lotta Ave & Clyde Ave (S)	C(D)	0.75(0.90)	WBL(WBL)	20.5(40.2)	B(C)	0.63(0.75)
Erindale Dr/Maitland Ave (S)	C(A)	0.78(0.51)	NBL(WBT)	25.4(5.4)	B(A)	0.62(0.50)
Maitland Ave/Glenmount Ave (S)	A(A)	0.54(0.57)	SBL(EBT)	13.0(5.1)	A(A)	0.39(0.56)
Baseline Rd/Erindale Dr (U)	C(F)	20.3(151.5)	SB(SB)	0.8(5.2)	-	-
Clyde Ave/North Access (U)	B(B)	12.5(12.7)	EB(EB)	0.5(0.4)	-	-
Clyde Ave/South Access (U)	B(B)	12.2(13.0)	EB(EB)	0.2(0.4)	-	-
Baseline/Site Exit (U)	A(B)	8.8(10.2)	SB(SB)	0.0(0.1)	-	-
Note: Analysis of signalized intersections assumes a PHF of 1.0 and a saturation flow rate of 1800 veh/h/lane. (S) – Signalized intersection (U) – Unsignalized intersection						

As shown in Table 17, there are slightly higher delays and v/c ratios experienced by the study area intersections, compared to future background 2022 conditions. However, phase splits were optimized for the intersection of Clyde/Baseline during both peak hours, which reduces the critical movement operations during the morning peak hour to below capacity. The afternoon critical movement still operates at capacity, with a lower v/c ratio. Similarly, the intersection 'as a whole' continues to operate at capacity during the afternoon peak hour, with a lower v/c ratio.

With regards to the site accesses, they are anticipated to operate at a LOS 'B' or better during the morning and afternoon peak hour.

Total Projected 2026

Table 18 below summarizes the intersection performance of study area intersections, based on the total projected 2026 traffic volumes illustrated in Figure 17.

Table 18: Total Projected 2026 Intersection Performance

Intersection	Weekday AM Peak (PM Peak)					
	Critical Movement			Intersection 'As a Whole'		
	LOS	max. v/c or avg. delay (s)	Movement	Delay (s)	LOS	v/c
Clyde Ave/Baseline Rd (S)	E(F)	0.97(1.04)	EBL(NBT)	52.4(65.2)	E(F)	0.94(1.02)
Merivale Rd/Lotta Ave & Clyde Ave (S)	C(D)	0.75(0.90)	WBL(WBL)	20.5(40.9)	B(C)	0.63(0.78)
Erindale Dr/Maitland Ave (S)	C(A)	0.79(0.50)	NBL(WBT)	25.8(5.0)	B(A)	0.63(0.49)
Maitland Ave/Glenmount Ave (S)	A(A)	0.54(0.56)	SBL(EBT)	13.1(5.1)	A(A)	0.39(0.55)
Baseline Rd/Erindale Dr (U)	C(F)	20.5(143.0)	SB(SB)	0.8(5.0)	-	-
Clyde Ave/North Access (U)	B(B)	12.0(12.1)	EB(EB)	0.4(0.4)	-	-
Clyde Ave/South Access (U)	B(B)	12.1(12.2)	EB(EB)	0.2(0.2)	-	-
Baseline/Site Exit (U)	A(B)	8.9(10.2)	SB(SB)	0.2(0.1)	-	-
Note: Analysis of signalized intersections assumes a PHF of 1.0 and a saturation flow rate of 1800 veh/h/lane. (S) - Signalized intersection (U) - Unsignalized intersection						

As shown in Table 18, traffic operations are anticipated to be similar to the total projected 2022 conditions, with slightly lower v/c ratios and delays. This is due to the difference in the vehicle modal share targets for Phase 2, which anticipates a lower percentage of auto drivers due to the operations of the Baseline BRT.

The site accesses are anticipated to continue to operate at a LOS 'B' or better during the morning and afternoon peak hours.

5.0 FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Based on the results summarized herein, the following transportation related conclusions are offered:

Proposed Development

- The proposed development will consist of two high-rise mixed-use residential buildings, which will be constructed in two phases.
- The development is proposed to replace the existing developments at 1356 Clyde.
- Phase 1 consists of a 26-storey building containing 210 apartment units, 14,682 ft² (1,364 m²) of office space and 8,837 ft² (821 m²) commercial space, which will be constructed by 2022.
- Phase 2 consists of a 28-storey building containing 258 apartment units, 18,256 ft² (1,696 m²) of office space, 9,731 ft² (904 m²) commercial space, which will be constructed by 2026.
- The three existing accesses are proposed to serve the future development site. Two accesses are located along Clyde Ave and one access is located along Baseline Rd. The north site access on Clyde Ave currently permits inbound traffic only but is anticipated to permit right-turn outbound traffic as well in the future. The south access on Clyde Ave will continue to permit right-in/right-out traffic, while the Baseline Rd access will continue to permit outbound traffic only.
- A total of 473 vehicle parking spaces are proposed, with 47 located outdoors and 426 located in the underground parking garage. 300 bicycle parking spaces are also proposed to be provided within the underground parking lot.
- The development is anticipated to generate 88 and 59 'new' vehicles/hour in Phase 1 during the morning and afternoon peak hours, respectively. In Phase 2, the development is anticipated to generate 118 and 17 'new' vehicles/hour during the morning and afternoon peak hours, respectively.

Existing and Background Conditions

- In existing conditions, Synchro analysis of the study area intersections has indicated the following:
 - Critical movements at the intersection of Clyde/Baseline operate at capacity during both the morning and afternoon peak hours, respectively. The intersection 'as a whole' operates at capacity during the afternoon peak hour.
 - The critical movement at the intersection of Baseline/Erindale operates at capacity during the afternoon peak hour.
 - Other study area intersection operates satisfactorily.
- A background growth rate was not applied within the study area, as traffic growth has been mostly declining at the intersection of Clyde/Baseline.
- The Synchro operational analysis of future background 2022 and 2026 conditions has indicated the following:
 - Traffic operations that are similar to, or better than, existing conditions due to increasing the PHF to 1.0, as per the requirements of the TIA Guidelines.
 - In future background 2026 conditions, the operations are slightly better than future background 2022 conditions as there is no background growth and other area developments anticipate lower future traffic volumes.

Projected Conditions

- A Bus Rapid Transit (BRT) is anticipated to be constructed along the median of Baseline Rd. The construction date was assumed to be sometime between horizon years 2022 and 2026. As such, mode share percentages for auto drivers were reduced for horizon year 2026, while transit mode share was increased.
- To access the development site, traffic may utilize Erindale Dr, which is mostly classified as a local road, with a small section classified as collector road. The total projected volumes along Erindale Dr indicate that the volumes do not exceed the 120 veh/h threshold along the local sections. However, the collector section volumes exceeds the 300 veh/h threshold by approximately 30 vehicles. Due to the short length of the collector segment and the minor difference in traffic, changing the classification of the segment does not seem necessary.
- In total projected 2022 conditions, traffic operations are similar to future background 2022 conditions. However, the intersection of Clyde/Baseline was optimized in phase splits, which reduces the volume-to-capacity ratio of the critical movement to below capacity during the morning peak hour.
- In total projected 2026 conditions, traffic operations are the same as, or slightly better than the operations in total projected 2022 conditions. This is due to the anticipated reduced auto trips once the Baseline BRT is constructed.
- The three site accesses were analyzed with STOP Control at the minor movements and all were projected to operate at a LOS 'B' or better during the morning and afternoon peak hours of all the horizon years.
- MMLoS analysis for signalized intersections and boundary streets within the study area will be provided in the future Site Plan Application.

Based on the foregoing, the proposed development causes a slight impact to the performance of the nearby study area intersections and is recommended to proceed from a transportation perspective.

Prepared By:

Reviewed By:

Basel Ansari, EIT.
Transportation Planner

Matthew Mantle, P.Eng.
Senior Transportation Engineer

APPENDIX A

SCREENING FORM AND CITY COMMENT RESPONSES

DRAFT

City of Ottawa 2017 TIA Guidelines

Date

31-Jan-20

TIA Screening Form

Project

1356 Clyde Avenue ZBLA

Project Number

477420-01000

Results of Screening	Yes/No
Development Satisfies the Trip Generation Trigger	Yes
Development Satisfies the Location Trigger	Yes
Development Satisfies the Safety Trigger	Yes

Module 1.1 - Description of Proposed Development

Municipal Address	1356 Clyde Avenue
Description of location	Northwest corner of Clyde/Baseline intersection
Land Use	Apartments
Development Size	556 Units (two 26 storey buildings)
Number of Accesses and Locations	The three existing accesses are proposed to serve the future residential developments.
Development Phasing	Two phases
Buildout Year	2022 (Phase 1) and 2026 (Phase 2)
Sketch Plan / Site Plan	See attached

Module 1.2 - Trip Generation Trigger

Land Use Type	Townhomes or Apartments	
Development Size	556	Units
Trip Generation Trigger Met?	Yes	

Module 1.3 - Location Triggers

Development Proposes a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit, or Spine Bicycle Networks (See Sheet 3)	Yes
Development is in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone. (See Sheet 3)	Yes
Location Trigger Met?	Yes

Module 1.4 - Safety Triggers

Posted Speed Limit on any boundary road	<80	km/h
Horizontal / Vertical Curvature on a boundary street limits sight lines at a proposed driveway	Yes	
A proposed driveway is within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions) or within auxiliary lanes of an intersection;	Yes	
A proposed driveway makes use of an existing median break that serves an existing site	Yes	
There is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development	Yes	
The development includes a drive-thru facility	No	
Safety Trigger Met?	Yes	

Responses can be found in green following the comments below.

Please review the following comments;

Project No.: 477420 - 01000	Project Address: 1356 Clyde Ave
Applicant/Consultants/Developer: Parsons	Ward/Councillor: 6/Rick Chiarelli

Forecasting Comments:

Transportation Engineering Services:

- Confirm that the number of trips generated does not exceed 200 person trips for the existing zoning. Otherwise, include the Review of Network Concept module in the strategy report.

Confirmed. Refer to Section 4.8 in the Strategy Report.

- Correct section 3.1 - Proposed Development: Office space is listed twice.

Report updated.

- Correct the retail trip generation. Given the small size of the retail land uses, using the average rate of the shopping centre is encouraged as the fitted curve is overly conservative.

The trip generation has been with the average rate of shopping centre.

- Correct Figures 9 and 10. Operational analysis of the accesses must consider all development traffic, not only the new trips.

Figures have been updated. The operational analysis considers all development traffic.

- Reassign the background traffic exiting through the Baseline Road access if that access is to be closed after the development is complete.

Latest site plan shows that Baseline Road access will remain open.

- Complete the demand rationalization module. Mode shares may require adjustment to meet intersection capacity. The combination of development-generated and background traffic volumes at study area intersections at all horizon times are required in order to identify any potential operational concerns.

Total projected traffic volume figures are now provided in the demand rationalization module.

Traffic Signal Operations:

- Figures 6, 14 and 15: verify turning movement volumes for Maitland Avenue and Erindale Drive intersection. There seems to be an error where Erindale Drive has the higher turning volumes.

The volume figures have been updated to show correct volumes at Maitland/Erindale.

- Auxiliary lane analysis will be required to ensure storage lanes are adequate in length.

With regards to the southbound right-turns at the two Clyde Ave site accesses, the TAC Guideline for Right-Turn Designs (Section 9.15.5) states that a right-turn lane would be required if the volumes exceed 60 vehicles per hour. However, as shown in the total projected volumes Figures 16 and 17, the southbound right-turn volumes do not exceed that threshold.

With regards to the northbound left-turns at the north Clyde Ave access, Equation 9.14.1 from the TAC Guidelines was used in coordination with the total projected northbound left-turn traffic volumes in Figures 16 and 17. Based on the calculation, the required storage length is approximately 10m. The existing auxiliary lane provides approximately 30m of storage length.

At study area intersections, the 95th percentile queue length in Synchro indicates that the westbound right-turn traffic volumes at the intersection of Clyde/Baseline exceed the available storage length both in existing and future conditions.

APPENDIX B

TRANSIT ROUTE MAPS

DRAFT



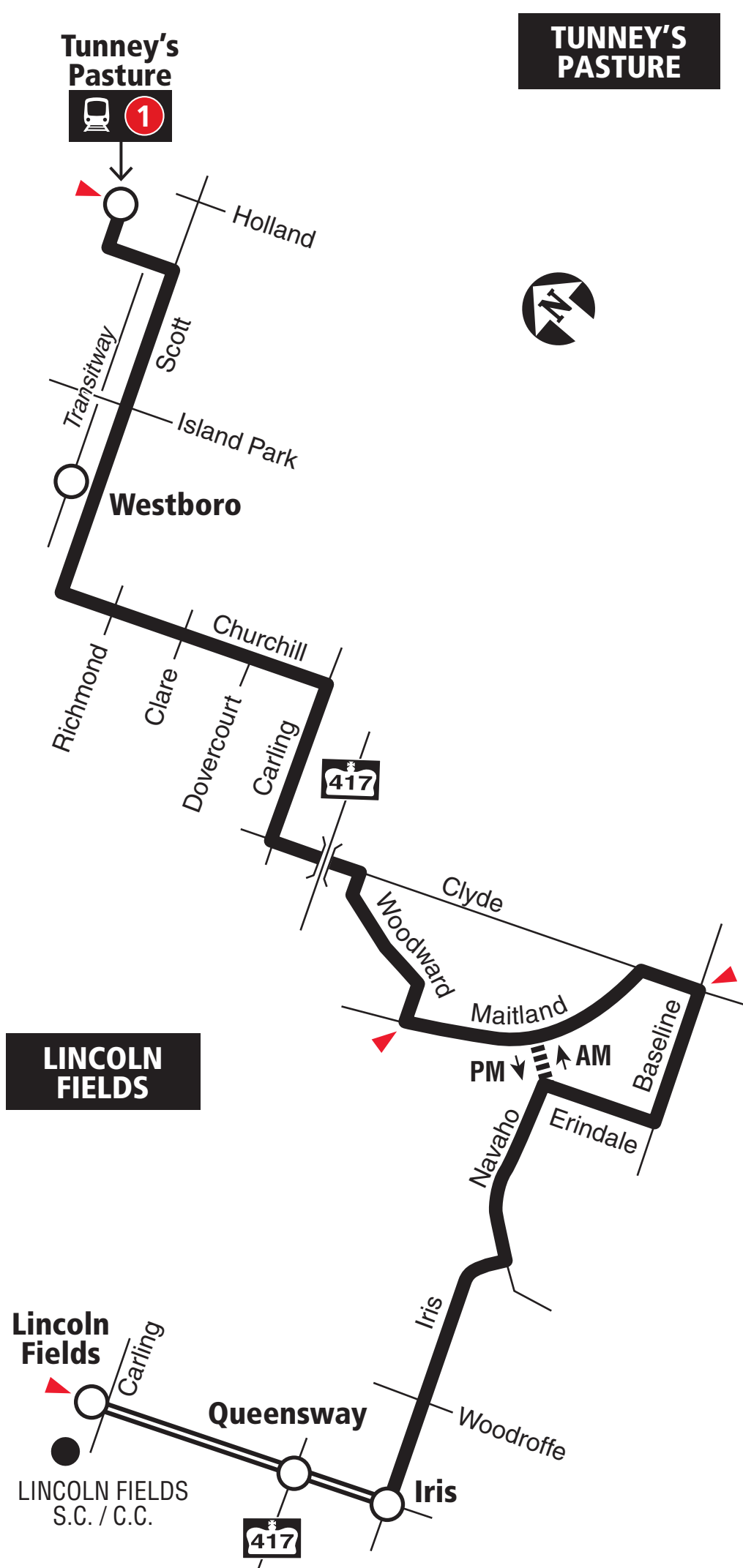
50

LINCOLN FIELDS TUNNEY'S PASTURE

Local

Monday to Saturday / Lundi au samedi

No service Sat. eve. or all day Sunday / Aucun service le soir le sam. ou toute la journée dimanche



2019.06

Schedule / Horaire 613-560-1000

Text / Texto 560560

plus your four digit bus stop number / plus votre numéro d'arrêt à quatre chiffres

Customer Service

Service à la clientèle **613-842-3600**

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**

Effective April 24, 2017

En vigueur 24 avril 2017



INFO 613-741-4390
octranspo.com



81

CLYDE

TUNNEY'S PASTURE

Local

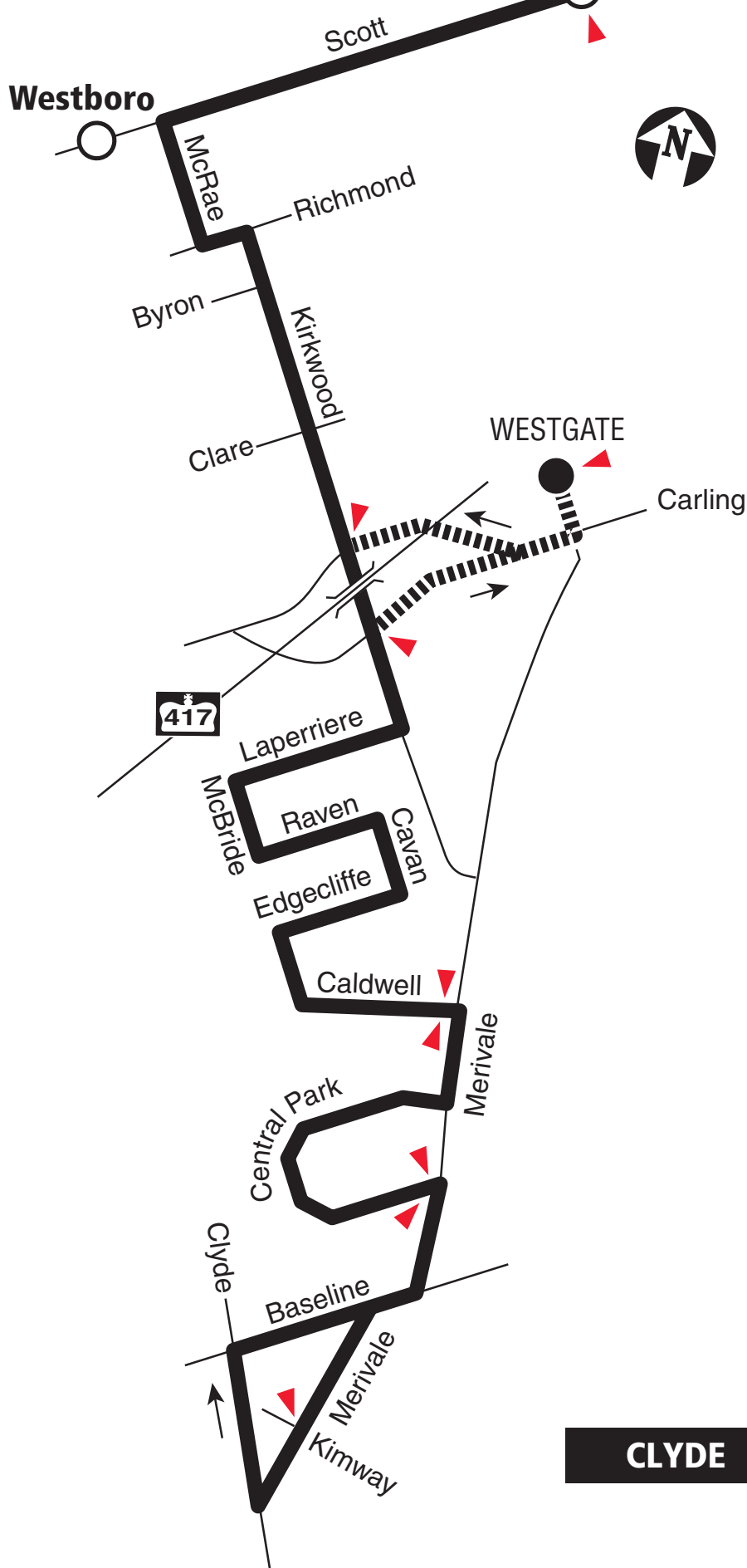
7 days a week / 7 jours par semaine

No service in the evening on weekends

Aucun service le soir les fins de semaine

TUNNEY'S PASTURE

Tunney's Pasture



Station



Some trips / Quelques trajets



Timepoint / Heures de passage

2019.07



Future route after O-Train Line 1 is open
Trajet du circuit après l'ouverture
de la Ligne 1 de l'O-Train

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**



INFO 613-741-4390
octranspo.com



88

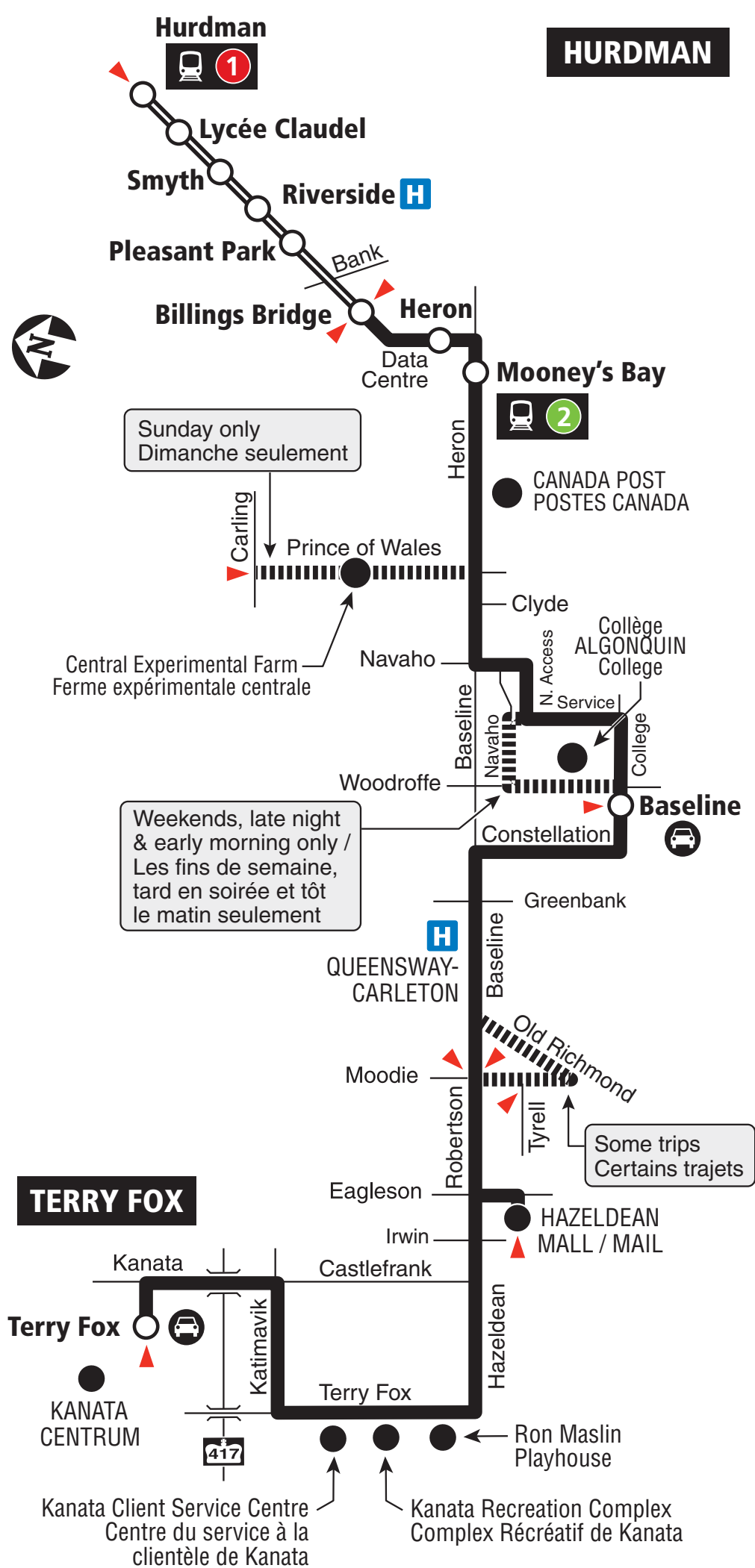
HURDMAN TERRY FOX

Fréquent

7 days a week / 7 jours par semaine

All day service

Service toute la journée



2019.06



Schedule / Horaire.....613-560-1000

Text / Texto560560

plus your four digit bus stop number / plus votre numéro d'arrêt à quatre chiffres

Customer Service

Service à la clientèle **613-741-4390**

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**

Effective Decembre 24, 2017

En vigueur 24 décembre 2017



INFO 613-741-4390
octranspo.com

APPENDIX C

TRAFFIC DATA

DRAFT



Turning Movement Count Bicycle Summary Flow Diagram



Baseline Road & 1356/1366 Clyde Avenue Access

Ottawa, ON

Bicycles

(Including electric bicycles and electric scooters)

Note:

Bicycle volumes are **NOT** included in vehicle totals.

Wednesday, 22 January 2020

0700-0900 & 1600-1800

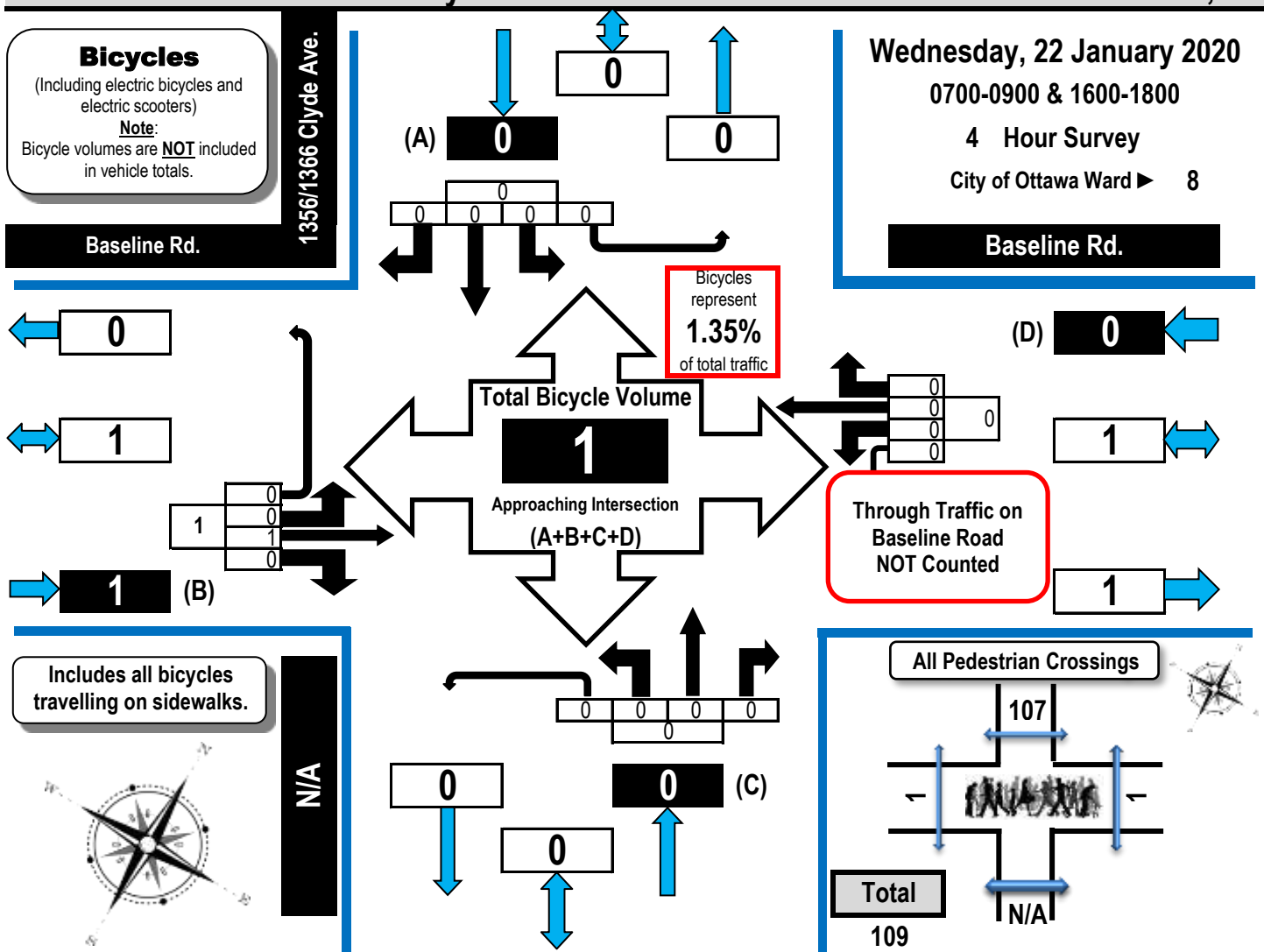
4 Hour Survey

City of Ottawa Ward 8

Baseline Rd.

1356/1366 Clyde Ave.

Baseline Rd.



Time Period	Baseline Rd. Eastbound					Baseline Rd. Westbound					N/A Northbound					1356/1366 Clyde Ave. Southbound					G.Tot.
	LT	ST	RT	UT	S. Tot	LT	ST	RT	UT	S. Tot	LT	ST	RT	UT	S. Tot	LT	ST	RT	UT	S. Tot	
0700-0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800-0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600-1700	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1700-1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Comments:

Through traffic on Baseline Road was not counted. Bicycles were counted on only the north side of Baseline Road or using the exit from 1356/1366 Clyde Avenue. The lone cyclist noted was driving easterly on the sidewalk on the north side of Baseline Road.

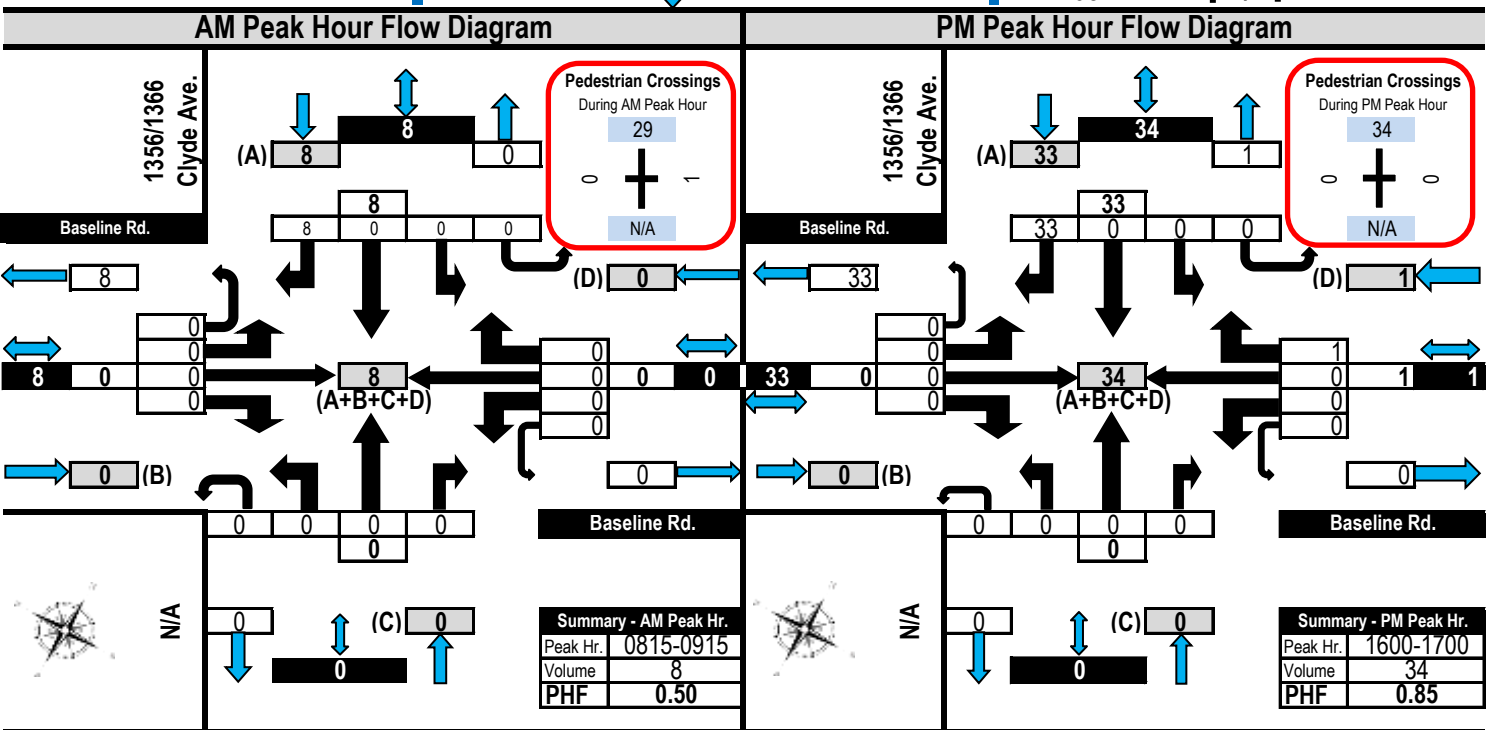
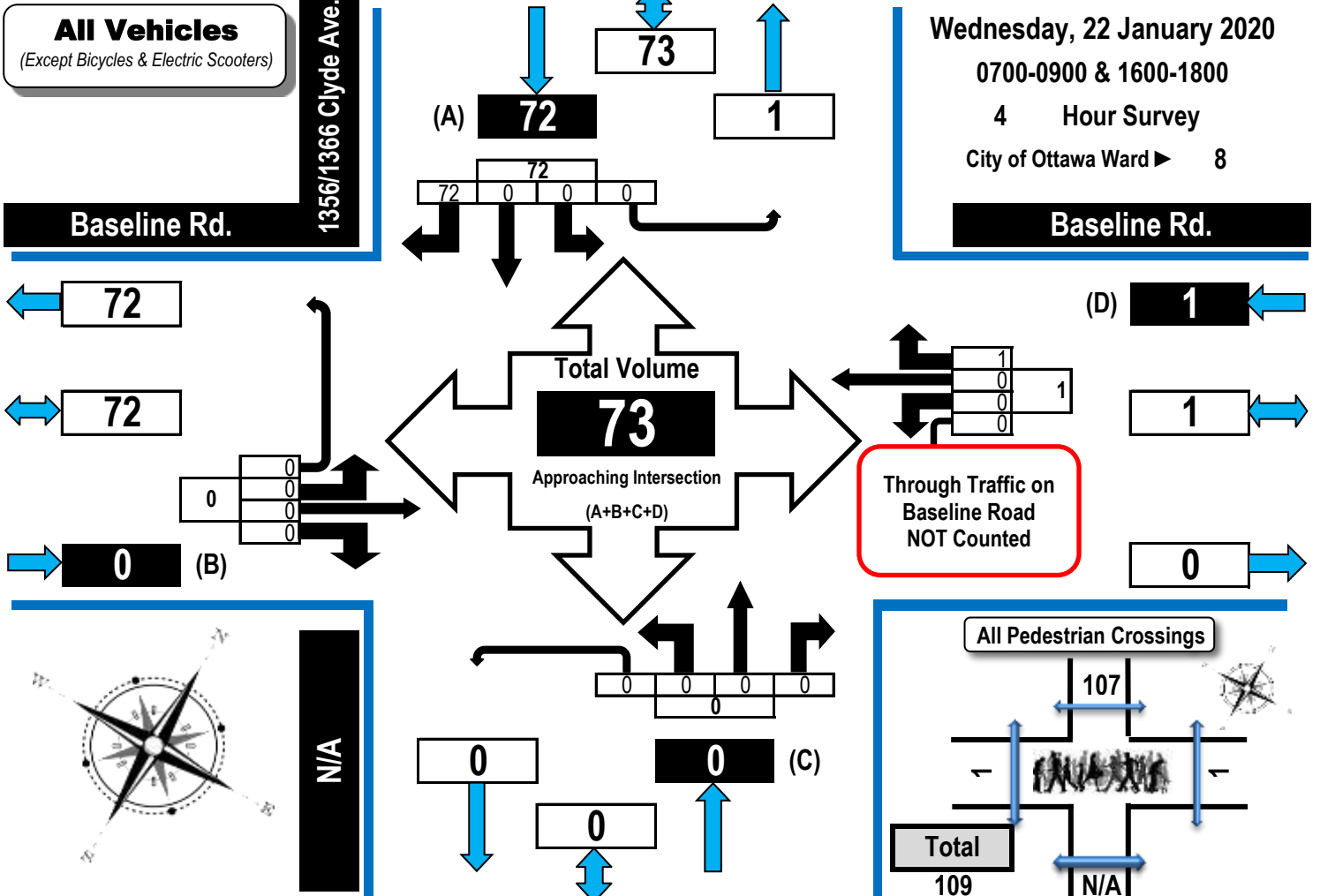


Turning Movement Count Summary, AM and PM Peak Hour Flow Diagrams

Automobiles, Taxis, Light Trucks, Vans, SUV's, Motorcycles, Heavy Trucks, Buses, and School Buses

Baseline Road & 1356/1366 Clyde Avenue Access

Ottawa, ON





Turning Movement Count Pedestrian Crossings Summary and Flow Diagram



Baseline Road & 1356/1366 Clyde Avenue Access

Ottawa, ON

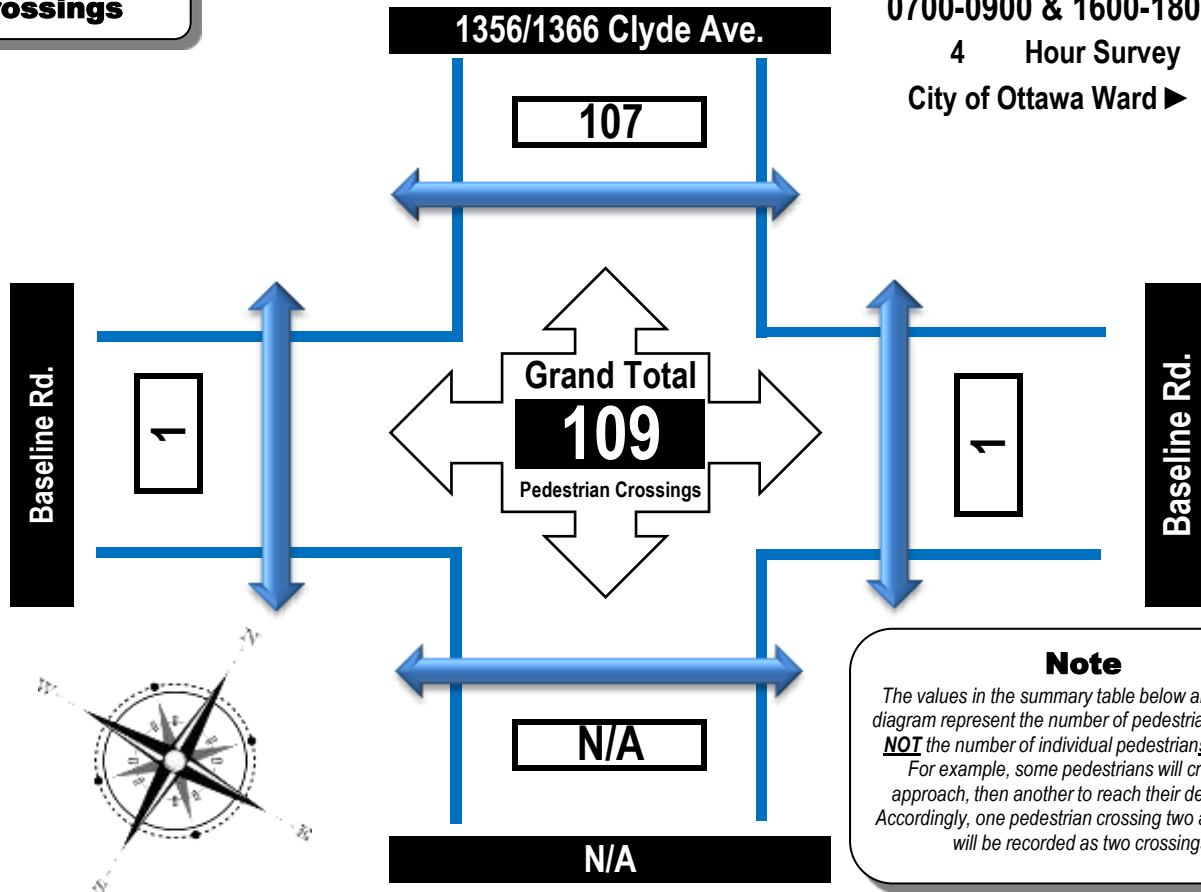
Pedestrian Crossings

Wednesday, 22 January 2020

0700-0900 & 1600-1800

4 Hour Survey

City of Ottawa Ward ► 8



Note

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

Time Period	West Side Crossing Baseline Rd.	East Side Crossing Baseline Rd.	Street Total	South Side Crossing N/A	North Side Crossing 1356/1366 Clyde Ave.	Street Total	Grand Total
0700-0800	1	0	1	0	24	24	25
0800-0900	0	1	1	0	29	29	30
1600-1700	0	0	0	0	34	34	34
1700-1800	0	0	0	0	20	20	20
Totals	1	1	2	0	107	107	109

Comments:

Through traffic on Baseline Road was not counted. Bicycles were counted on only the north side of Baseline Road or using the exit from 1356/1366 Clyde Avenue. The lone cyclist noted was driving easterly on the sidewalk on the north side of Baseline Road.

Survey Date: Wednesday, August 21, 2019

Start Time: 07:00

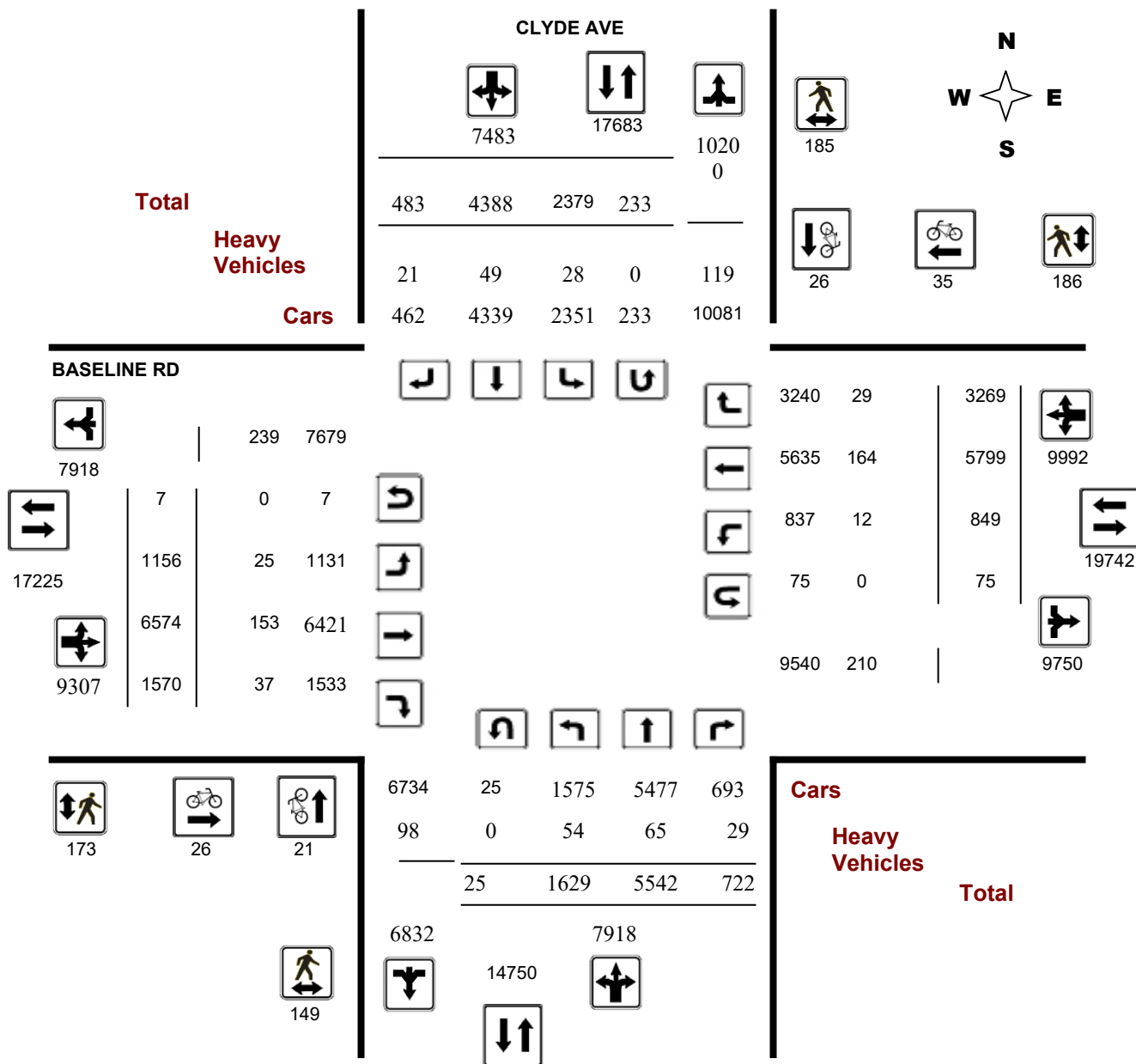
WO No:

38720

Device:

Miovision

Full Study Diagram



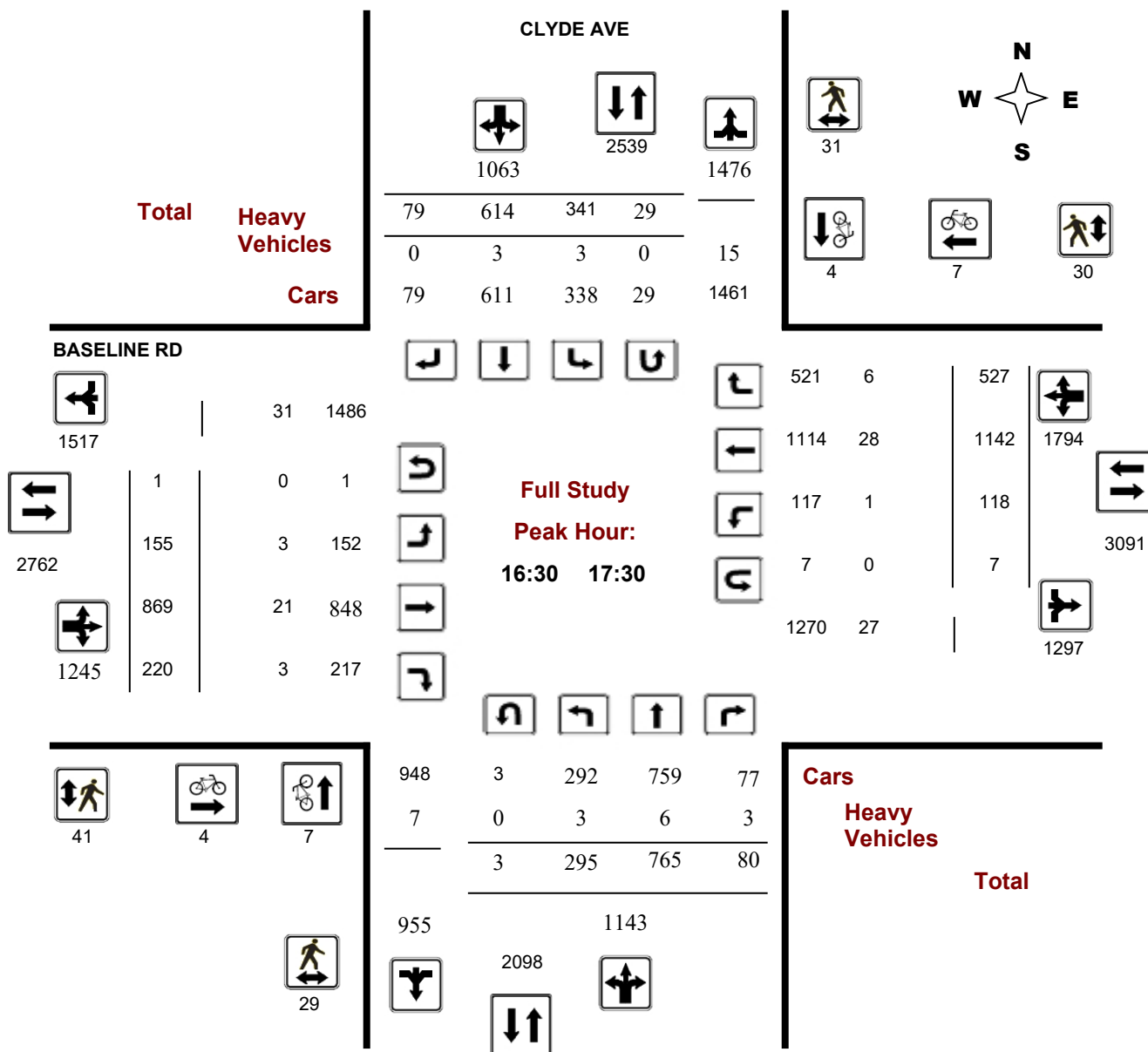
Survey Date: Wednesday, August 21, 2019

WO No: 38720

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram



Turning Movement Count - Peak Hour Diagram

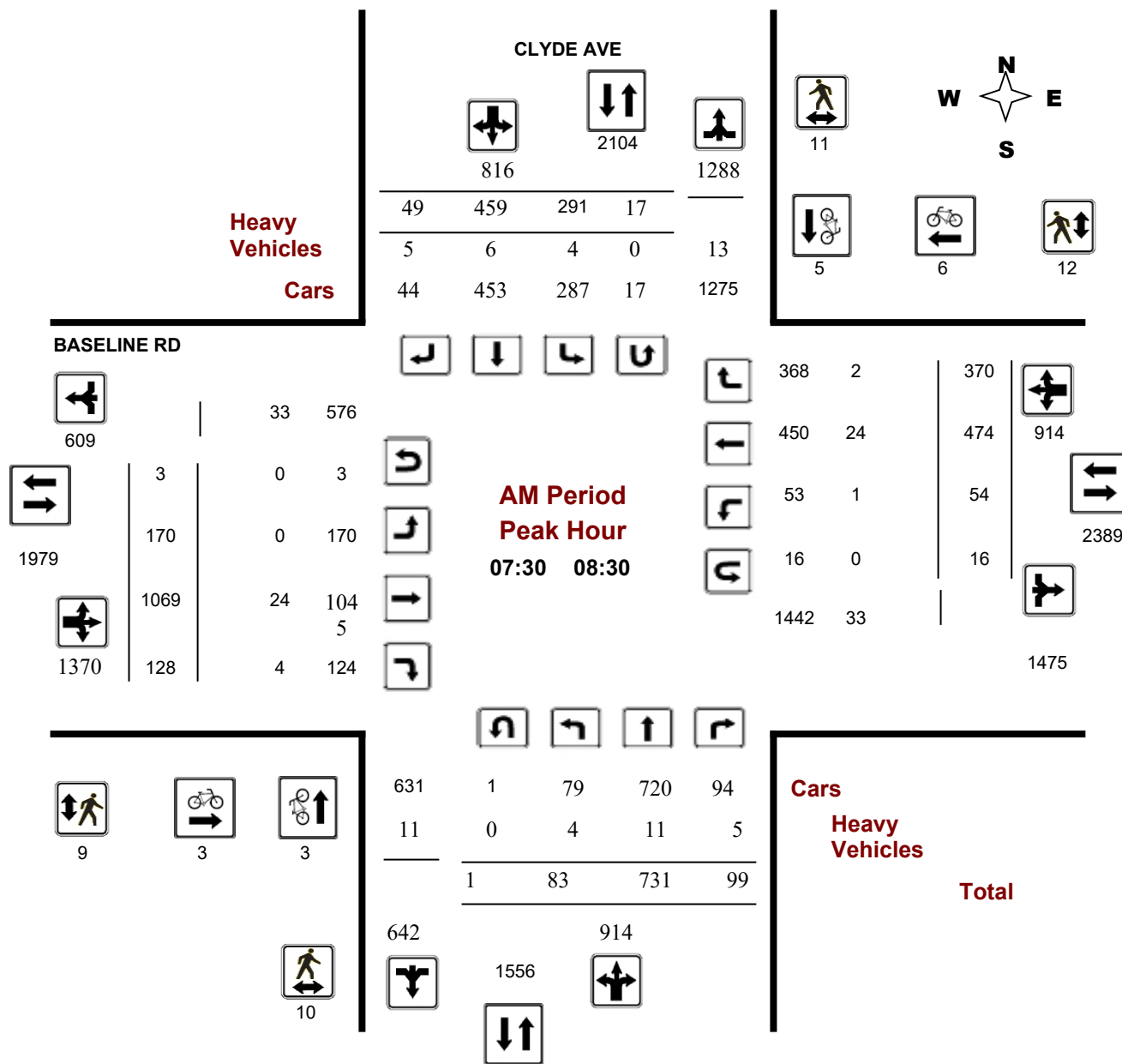
BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, August 21, 2019

Start Time: 07:00

WO No: 38720

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

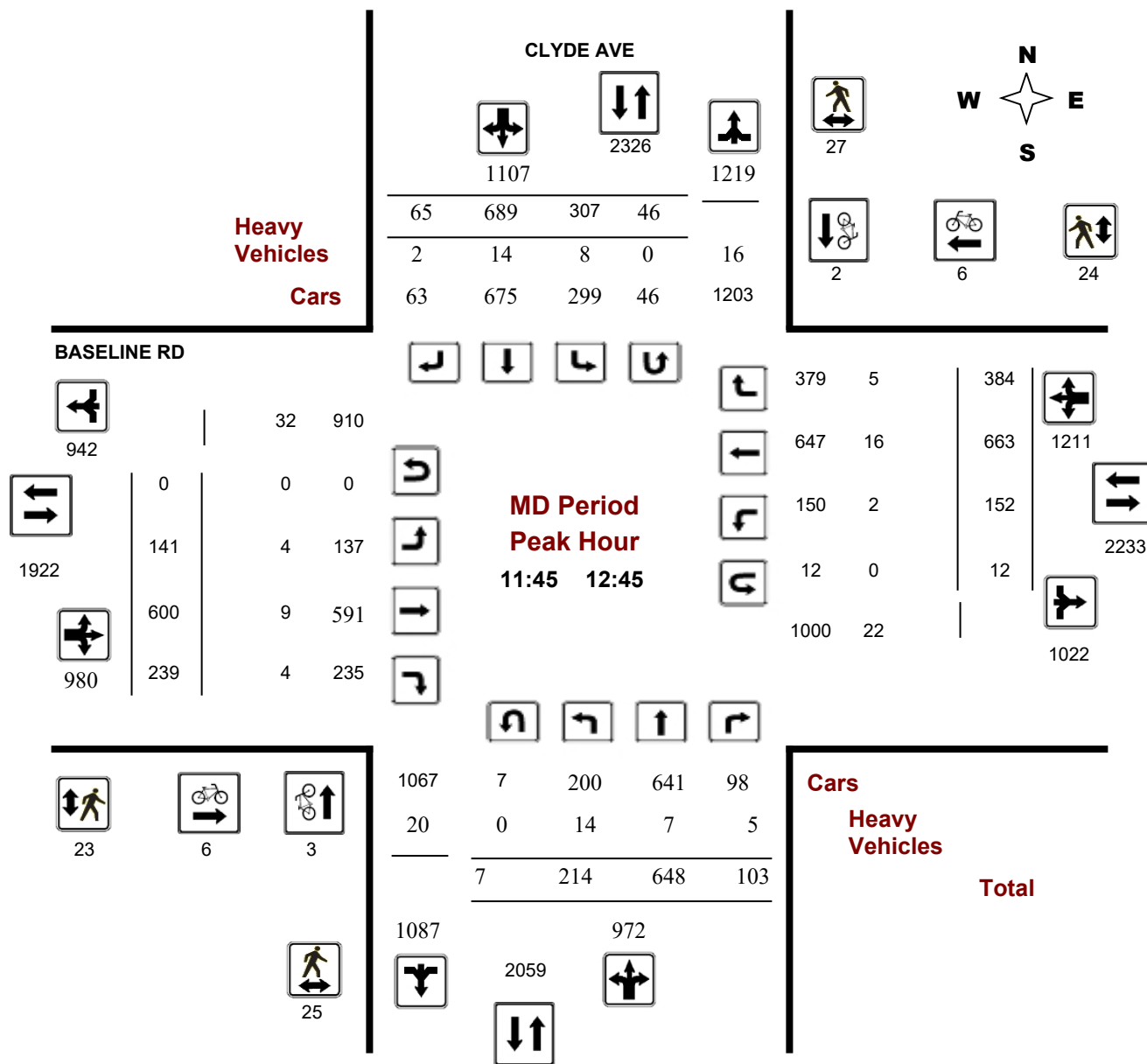
BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, August 21, 2019

Start Time: 07:00

WO No: 38720

Device: Miovision



Turning Movement Count - Peak Hour Diagram

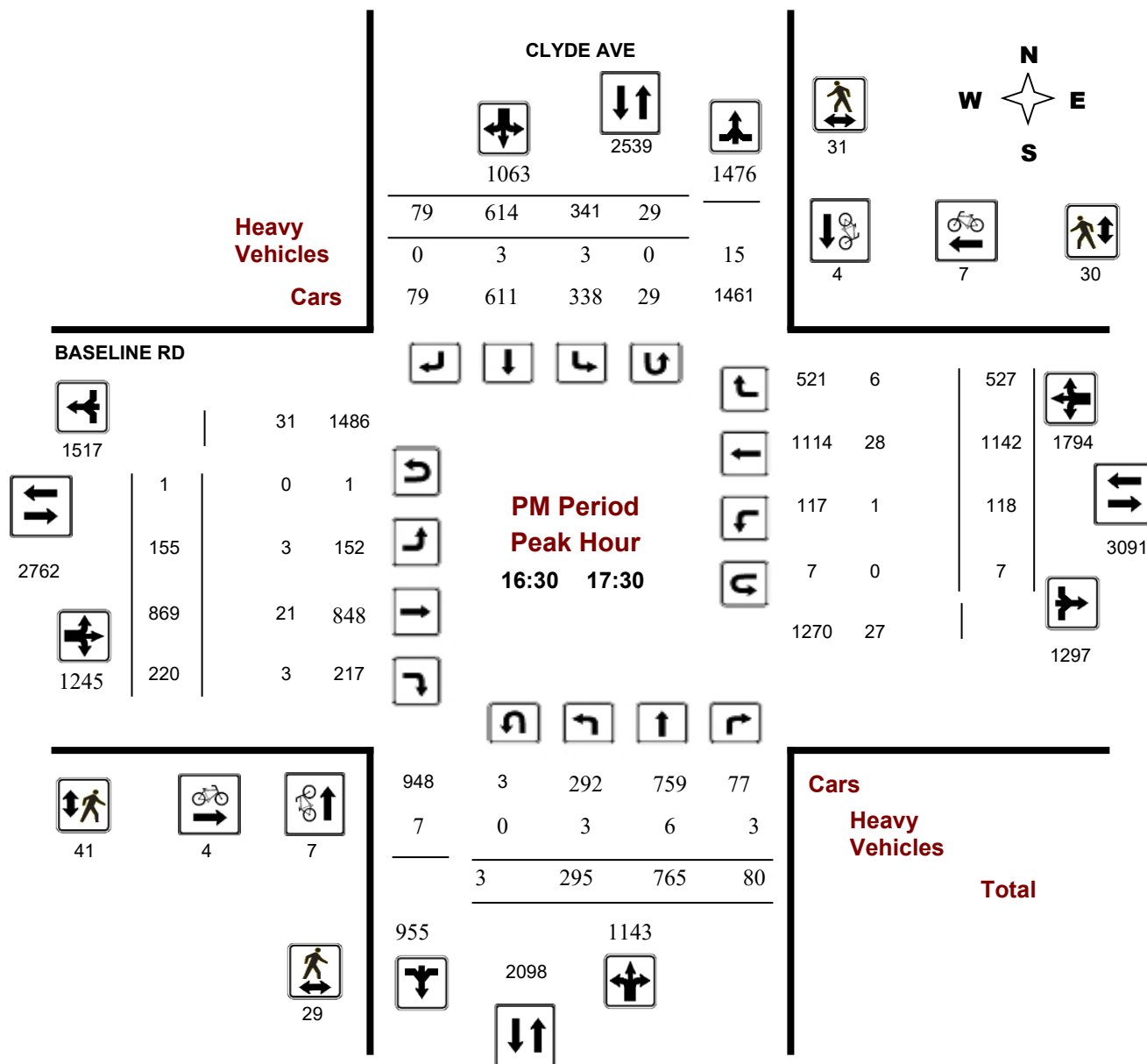
BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, August 21, 2019

Start Time: 07:00

WO No: 38720

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Study Results

BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, August 21, 2019

WO No: 38720

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, August 21, 2019

Total Observed U-Turns

AADT Factor

Northbound: 25 Southbound: 233

1.25

Eastbound: 7 Westbound: 75

CLYDE AVE										BASELINE RD									
Period	Northbound			NB TOT	Southbound			SB TOT	STR TOT	Eastbound			EB TOT	Westbound			WB TOT	STR TOT	Grand Total
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT			
07:00 08:00	63	626	80	769	248	447	19	714	1483	151	989	100	1240	43	420	349	812	2052	3535
08:00 09:00	107	711	105	923	296	499	56	851	1774	179	988	157	1324	69	423	305	797	2121	3895
09:00 10:00	140	634	80	854	260	538	48	846	1700	118	710	220	1048	72	445	317	834	1882	3582
11:30 12:30	204	653	111	968	303	666	66	1035	2003	123	624	223	970	141	644	396	1181	2151	4154
12:30 13:30	266	680	111	1057	340	622	68	1030	2087	141	557	242	940	142	584	319	1045	1985	4072
15:00 16:00	250	747	82	1079	262	500	71	833	1912	149	915	214	1278	131	982	549	1662	2940	4852
16:00 17:00	313	750	79	1142	325	558	77	960	2102	157	949	199	1305	113	1162	521	1796	3101	5203
17:00 18:00	286	741	74	1101	345	558	78	981	2082	138	842	215	1195	138	1139	513	1790	2985	5067
Sub Total	1629	5542	722	7893	2379	4388	483	7250	15143	1156	6574	1570	9300	849	5799	3269	9917	19217	34360
U Turns				25				233	258				7				75	82	340
Total	1629	5542	722	7918	2379	4388	483	7483	15401	1156	6574	1570	9307	849	5799	3269	9992	19299	34700
EQ 12Hr	2264	7703	1004	11006	3307	6099	671	10401	21407	1607	9138	2182	12937	1180	8061	4544	13889	26826	48233
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													1.39						
AVG 12Hr	2038	6933	903	9905	2976	5489	604	9361	19266	1446	8224	1964	11643	1062	7255	4090	12500	24143	43410
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													0.9						
AVG 24Hr	2670	9082	1183	12976	3899	7191	792	12263	25239	1894	10774	2573	15252	1391	9503	5357	16375	31627	56866

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

1.31

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



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, August 21, 2019

WO No: 38720

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

CLYDE AVE

BASELINE RD

Northbound

Southbound

Eastbound

Westbound

Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total	
07:00	07:15	11	93	12	116	57	92	3	156	571	23	195	20	239	8	74	59	142	571	653
07:15	07:30	13	142	24	179	54	122	1	179	779	42	257	26	325	10	100	77	189	779	872
07:30	07:45	25	197	22	244	70	135	5	215	979	37	239	27	303	16	127	103	248	979	1010
07:45	08:00	14	194	22	230	67	98	10	181	904	49	298	27	375	9	119	110	246	904	1032
08:00	08:15	24	149	21	195	86	114	16	217	864	40	247	36	323	17	150	94	266	864	1001
08:15	08:30	20	191	34	245	68	112	18	203	913	44	285	38	369	12	78	63	154	913	971
08:30	08:45	42	170	19	231	67	124	10	206	914	51	229	37	317	14	104	76	197	914	951
08:45	09:00	21	201	31	253	75	149	12	239	1033	44	227	46	318	26	91	72	190	1033	1000
09:00	09:15	37	183	27	248	80	140	10	239	1000	31	193	60	284	15	89	74	181	1000	952
09:15	09:30	30	168	24	224	51	112	14	185	856	27	205	54	286	18	100	58	180	856	875
09:30	09:45	27	148	18	193	58	134	9	205	873	24	169	56	249	16	103	93	216	873	863
09:45	10:00	46	135	11	192	71	152	15	247	936	36	143	50	229	23	153	92	271	936	939
11:30	11:45	55	181	28	264	75	153	19	254	1044	27	172	46	245	21	124	91	238	1044	1001
11:45	12:00	47	155	21	224	85	186	12	294	1091	34	152	57	243	37	187	92	319	1091	1080
12:00	12:15	51	171	34	258	65	155	19	250	1095	35	161	58	254	46	149	109	307	1095	1069
12:15	12:30	51	146	28	227	78	172	16	279	1069	27	139	62	228	37	184	104	330	1069	1064
12:30	12:45	65	176	20	263	79	176	18	284	1130	45	148	62	255	32	143	79	255	1130	1057
12:45	13:00	62	165	30	257	93	156	25	284	1090	29	150	63	242	35	148	91	277	1090	1060
13:00	13:15	59	184	31	275	80	136	8	233	1051	37	133	67	237	44	133	65	244	1051	989
13:15	13:30	80	155	30	265	88	154	17	269	1048	30	126	50	206	31	160	84	275	1048	1015
15:00	15:15	66	191	25	284	61	133	16	216	1083	43	203	45	291	30	221	133	386	1083	1177
15:15	15:30	68	183	25	278	60	136	21	227	1101	32	213	58	303	32	258	143	434	1101	1242
15:30	15:45	54	183	20	259	66	126	14	212	1049	36	287	65	389	36	250	124	411	1049	1271
15:45	16:00	62	190	12	266	75	105	20	207	1043	38	212	46	296	33	253	149	438	1043	1207
16:00	16:15	91	170	19	280	80	122	22	231	1053	40	244	37	321	36	287	130	455	1053	1287
16:15	16:30	71	179	20	270	79	129	18	236	1072	36	245	43	324	31	301	138	473	1072	1303
16:30	16:45	72	200	14	286	74	150	23	251	1153	40	231	66	338	26	277	130	438	1153	1313
16:45	17:00	79	201	26	307	92	157	14	268	1176	41	229	53	323	20	297	123	441	1176	1339
17:00	17:15	73	165	24	263	95	163	16	283	1141	36	186	46	268	40	280	135	455	1141	1269
17:15	17:30	71	199	16	287	80	144	26	261	1167	38	223	55	316	32	288	139	460	1167	1324
17:30	17:45	69	193	19	282	87	129	18	240	1086	33	232	56	321	34	297	112	443	1086	1286
17:45	18:00	73	184	15	273	83	122	18	232	1069	31	201	58	290	32	274	127	433	1069	1228
Total:		1629	5542	722	7918	2379	4388	483	7483	32433	1156	6574	1570	9307	849	5799	3269	9992	32433	34,700

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, August 21, 2019

WO No: 38720

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

		CLYDE AVE			BASELINE RD			Grand Total
Time Period		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	
07:00	07:15	0	2	2	2	1	3	5
07:15	07:30	2	0	2	0	1	1	3
07:30	07:45	0	1	1	1	2	3	4
07:45	08:00	0	0	0	2	1	3	3
08:00	08:15	0	3	3	0	0	0	3
08:15	08:30	3	1	4	0	3	3	7
08:30	08:45	0	0	0	0	0	0	0
08:45	09:00	0	0	0	0	0	0	0
09:00	09:15	0	0	0	1	1	2	2
09:15	09:30	0	1	1	0	0	0	1
09:30	09:45	0	0	0	0	0	0	0
09:45	10:00	0	0	0	0	0	0	0
11:30	11:45	0	0	0	2	2	4	4
11:45	12:00	1	2	3	2	2	4	7
12:00	12:15	1	0	1	1	1	2	3
12:15	12:30	1	0	1	1	1	2	3
12:30	12:45	0	0	0	2	2	4	4
12:45	13:00	1	2	3	2	1	3	6
13:00	13:15	1	3	4	0	3	3	7
13:15	13:30	0	3	3	0	2	2	5
15:00	15:15	0	1	1	1	0	1	2
15:15	15:30	0	0	0	0	0	0	0
15:30	15:45	1	0	1	2	0	2	3
15:45	16:00	0	2	2	1	0	1	3
16:00	16:15	2	0	2	1	1	2	4
16:15	16:30	0	0	0	1	2	3	3
16:30	16:45	4	3	7	1	1	2	9
16:45	17:00	0	0	0	0	1	1	1
17:00	17:15	2	0	2	2	2	4	6
17:15	17:30	1	1	2	1	3	4	6
17:30	17:45	0	0	0	0	0	0	0
17:45	18:00	1	1	2	0	2	2	4
Total		21	26	47	26	35	61	108



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, August 21, 2019

WO No: 38720

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

CLYDE AVE

BASELINE RD

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	1	3	4	3	4	7	11
07:15 07:30	4	6	10	3	6	9	19
07:30 07:45	2	2	4	4	3	7	11
07:45 08:00	3	5	8	2	4	6	14
08:00 08:15	0	1	1	1	1	2	3
08:15 08:30	5	3	8	2	4	6	14
08:30 08:45	1	3	4	3	1	4	8
08:45 09:00	3	4	7	2	4	6	13
09:00 09:15	0	4	4	4	5	9	13
09:15 09:30	3	2	5	2	5	7	12
09:30 09:45	8	3	11	2	11	13	24
09:45 10:00	4	8	12	9	11	20	32
11:30 11:45	2	6	8	2	5	7	15
11:45 12:00	2	8	10	3	7	10	20
12:00 12:15	4	7	11	4	6	10	21
12:15 12:30	10	10	20	8	5	13	33
12:30 12:45	9	2	11	8	6	14	25
12:45 13:00	4	1	5	6	5	11	16
13:00 13:15	1	5	6	6	4	10	16
13:15 13:30	2	9	11	4	2	6	17
15:00 15:15	9	9	18	4	8	12	30
15:15 15:30	5	8	13	5	6	11	24
15:30 15:45	7	18	25	10	9	19	44
15:45 16:00	5	5	10	9	10	19	29
16:00 16:15	5	9	14	10	6	16	30
16:15 16:30	1	4	5	3	2	5	10
16:30 16:45	10	4	14	10	7	17	31
16:45 17:00	4	5	9	9	5	14	23
17:00 17:15	7	12	19	14	8	22	41
17:15 17:30	8	10	18	8	10	18	36
17:30 17:45	7	5	12	5	10	15	27
17:45 18:00	13	4	17	8	6	14	31
Total	149	185	334	173	186	359	693



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, August 21, 2019

WO No: 38720

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

CLYDE AVE

BASELINE RD

Northbound

Southbound

Eastbound

Westbound

Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00 07:15	1	5	0	7	0	1	0	7	14	1	3	0	11	0	6	0	9	20	17
07:15 07:30	1	4	1	13	1	3	1	9	22	0	7	4	18	0	5	0	14	32	27
07:30 07:45	0	3	1	5	0	1	0	5	10	0	5	0	13	0	8	1	15	28	19
07:45 08:00	1	5	2	10	1	2	1	10	20	0	9	0	16	0	5	1	18	34	27
08:00 08:15	3	1	0	8	1	2	2	6	14	0	2	2	19	0	10	0	13	32	23
08:15 08:30	0	2	2	8	2	1	2	7	15	0	8	2	13	1	1	0	14	27	21
08:30 08:45	5	2	0	10	0	2	0	4	14	0	4	0	15	1	6	0	11	26	20
08:45 09:00	1	4	0	11	0	0	1	8	19	2	6	3	17	3	4	1	14	31	25
09:00 09:15	4	2	1	12	0	1	0	3	15	0	6	4	21	0	7	0	14	35	25
09:15 09:30	1	4	1	13	1	2	3	11	24	1	7	5	20	0	3	0	12	32	28
09:30 09:45	3	1	1	9	0	2	0	4	13	0	5	1	12	1	3	1	11	23	18
09:45 10:00	2	4	1	7	0	0	1	7	14	2	2	0	10	0	3	0	6	16	15
11:30 11:45	3	1	0	9	2	3	1	9	18	2	7	1	18	1	4	0	14	32	25
11:45 12:00	1	2	1	7	1	2	1	8	15	0	2	0	9	1	5	2	12	21	18
12:00 12:15	2	3	2	11	2	3	0	9	20	0	2	1	9	0	4	1	11	20	20
12:15 12:30	5	1	1	15	3	6	0	14	29	2	2	2	16	0	5	2	13	29	29
12:30 12:45	6	1	1	13	2	3	1	9	22	2	3	1	15	1	2	0	9	24	23
12:45 13:00	2	0	2	7	1	2	2	7	14	1	3	1	17	0	8	1	15	32	23
13:00 13:15	0	3	0	7	2	2	0	9	16	1	4	1	10	1	4	1	12	22	19
13:15 13:30	2	1	1	5	1	0	2	6	11	1	5	0	17	1	7	1	16	33	22
15:00 15:15	1	3	0	4	0	0	0	4	8	1	5	0	17	0	10	0	15	32	20
15:15 15:30	3	1	3	9	1	1	1	8	17	1	7	1	16	0	3	3	17	33	25
15:30 15:45	1	2	0	8	1	4	0	12	20	0	4	1	8	0	2	5	12	20	20
15:45 16:00	0	0	1	2	0	0	0	3	5	2	8	1	14	0	3	1	13	27	16
16:00 16:15	1	2	0	4	1	0	1	6	10	0	4	1	10	0	3	2	10	20	15
16:15 16:30	0	1	2	5	2	1	0	4	9	0	7	1	13	0	5	0	16	29	19
16:30 16:45	1	1	0	5	1	0	0	4	9	1	5	3	15	0	5	1	12	27	18
16:45 17:00	0	1	1	3	1	1	0	4	7	1	6	0	15	0	8	0	16	31	19
17:00 17:15	0	2	1	4	1	1	0	7	11	0	4	0	8	0	4	3	13	21	16
17:15 17:30	2	2	1	7	0	1	0	6	13	1	6	0	20	1	11	2	21	41	27
17:30 17:45	1	1	0	4	0	1	0	4	8	2	4	1	13	0	5	0	9	22	15
17:45 18:00	1	0	2	4	0	1	1	3	7	1	1	0	9	0	5	0	8	17	12
Total: None	54	65	29	246	28	49	21	217	463	25	153	37	454	12	164	29	415	869	666



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BASELINE RD @ CLYDE AVE

Survey Date: Wednesday, August 21, 2019

WO No: 38720

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

CLYDE AVE

BASELINE RD

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	4	1	1	6
07:15	07:30	0	2	0	2	4
07:30	07:45	0	5	0	2	7
07:45	08:00	0	6	1	8	15
08:00	08:15	1	1	0	5	7
08:15	08:30	0	5	2	1	8
08:30	08:45	0	5	0	3	8
08:45	09:00	0	3	1	1	5
09:00	09:15	1	9	0	3	13
09:15	09:30	2	8	0	4	14
09:30	09:45	0	4	0	4	8
09:45	10:00	0	9	0	3	12
11:30	11:45	0	7	0	2	9
11:45	12:00	1	11	0	3	15
12:00	12:15	2	11	0	3	16
12:15	12:30	2	13	0	5	20
12:30	12:45	2	11	0	1	14
12:45	13:00	0	10	0	3	13
13:00	13:15	1	9	0	2	12
13:15	13:30	0	10	0	0	10
15:00	15:15	2	6	0	2	10
15:15	15:30	2	10	0	1	13
15:30	15:45	2	6	1	1	10
15:45	16:00	2	7	0	3	12
16:00	16:15	0	7	0	2	9
16:15	16:30	0	10	0	3	13
16:30	16:45	0	4	1	5	10
16:45	17:00	1	5	0	1	7
17:00	17:15	1	9	0	0	10
17:15	17:30	1	11	0	1	13
17:30	17:45	1	6	0	0	7
17:45	18:00	1	9	0	0	10
Total		25	233	7	75	340



Turning Movement Count Bicycle Summary Flow Diagram



Clyde Avenue & 1356/1366 North Access

Ottawa, ON

Bicycles

(Including electric bicycles and electric scooters)

Note:

Bicycle volumes are **NOT** included in vehicle totals.

1356/1366 Clyde Ave. (N)

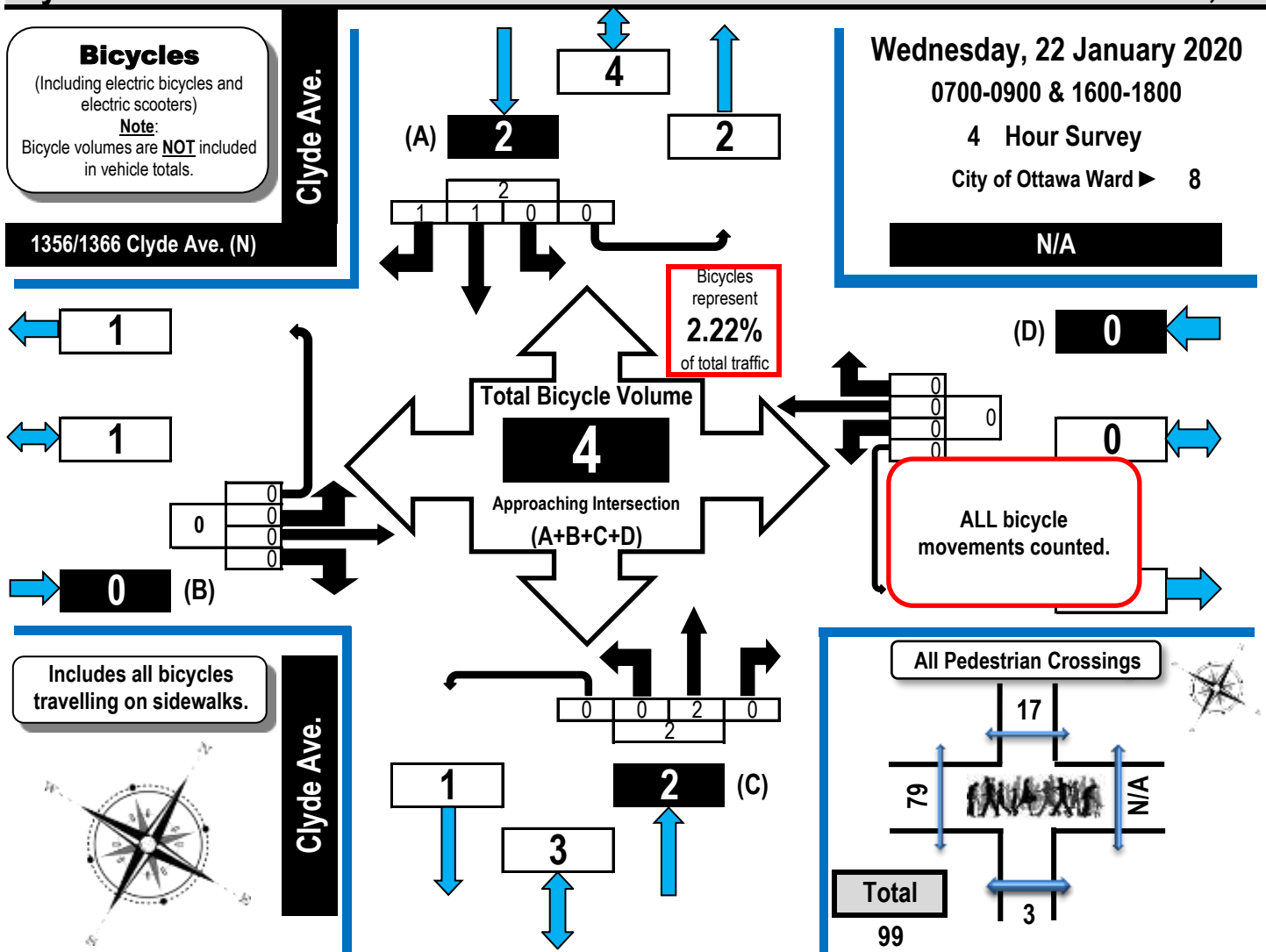
Wednesday, 22 January 2020

0700-0900 & 1600-1800

4 Hour Survey

City of Ottawa Ward 8

N/A



1356/1366 Clyde Ave. (N)

N/A

Clyde Ave.

Clyde Ave.

Eastbound

Westbound

Northbound

Southbound

Time Period	LT	ST	RT	UT	S. Tot	LT	ST	RT	UT	S. Tot	LT	ST	RT	UT	S. Tot	LT	ST	RT	UT	S. Tot	G.Tot.
0700-0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800-0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
1600-1700	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
1700-1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	1	0	2	4

Comments:

Through traffic on Clyde Avenue was not counted. All bicycle movements counted. A few northbound U-turning vehicles were unable to complete their turn in one movement as the driver had to reverse to complete a three point turn. Some pedestrians walk along the narrow median.



Turning Movement Count Summary, AM and PM Peak Hour Flow Diagrams

Automobiles, Taxis, Light
Trucks, Vans, SUV's,
Motorcycles, Heavy Trucks,
Buses, and School Buses

Clyde Avenue & 1356/1366 North Access

Ottawa, ON

All Vehicles

(Except Bicycles & Electric Scooters)

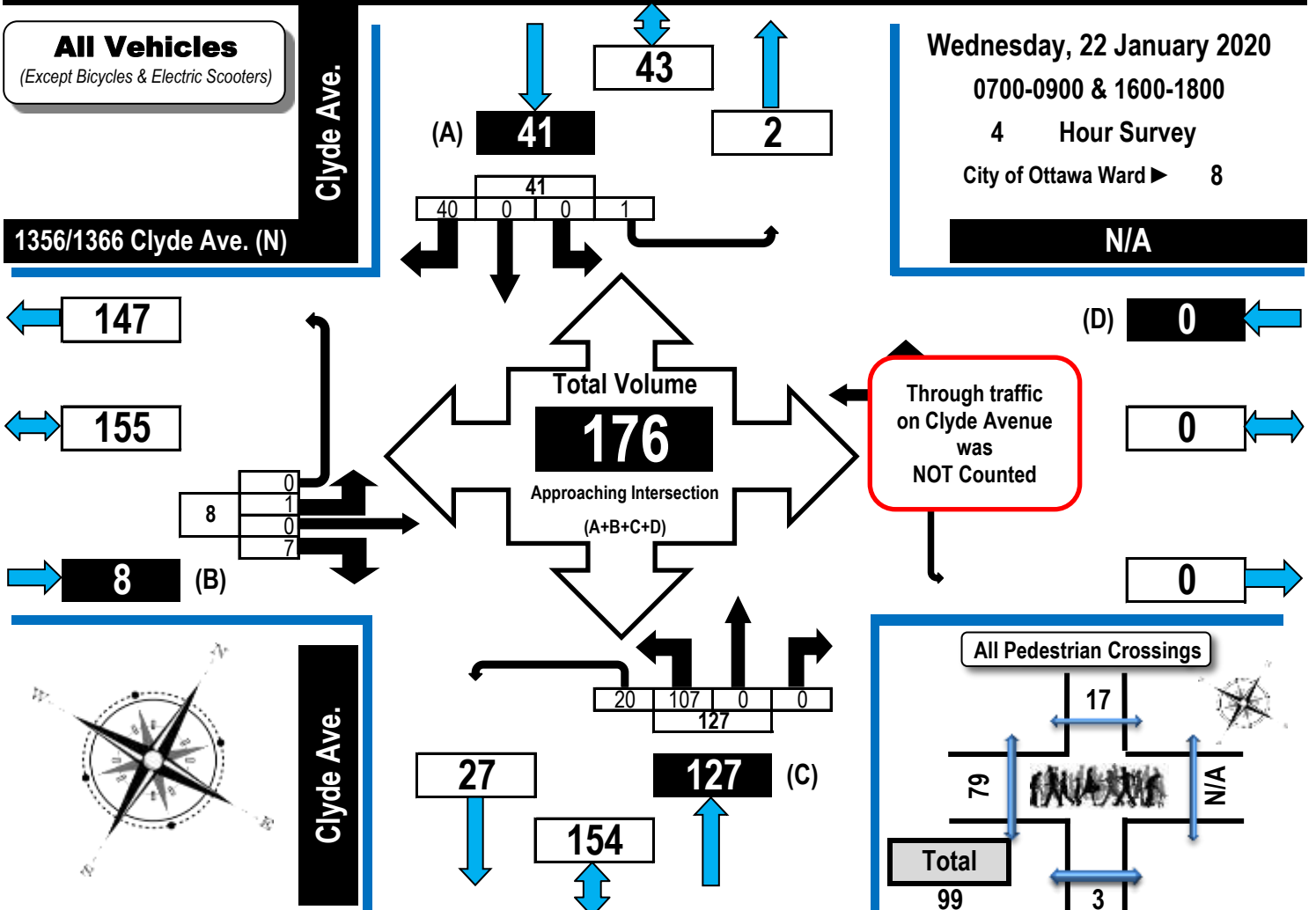
Wednesday, 22 January 2020

0700-0900 & 1600-1800

4 Hour Survey

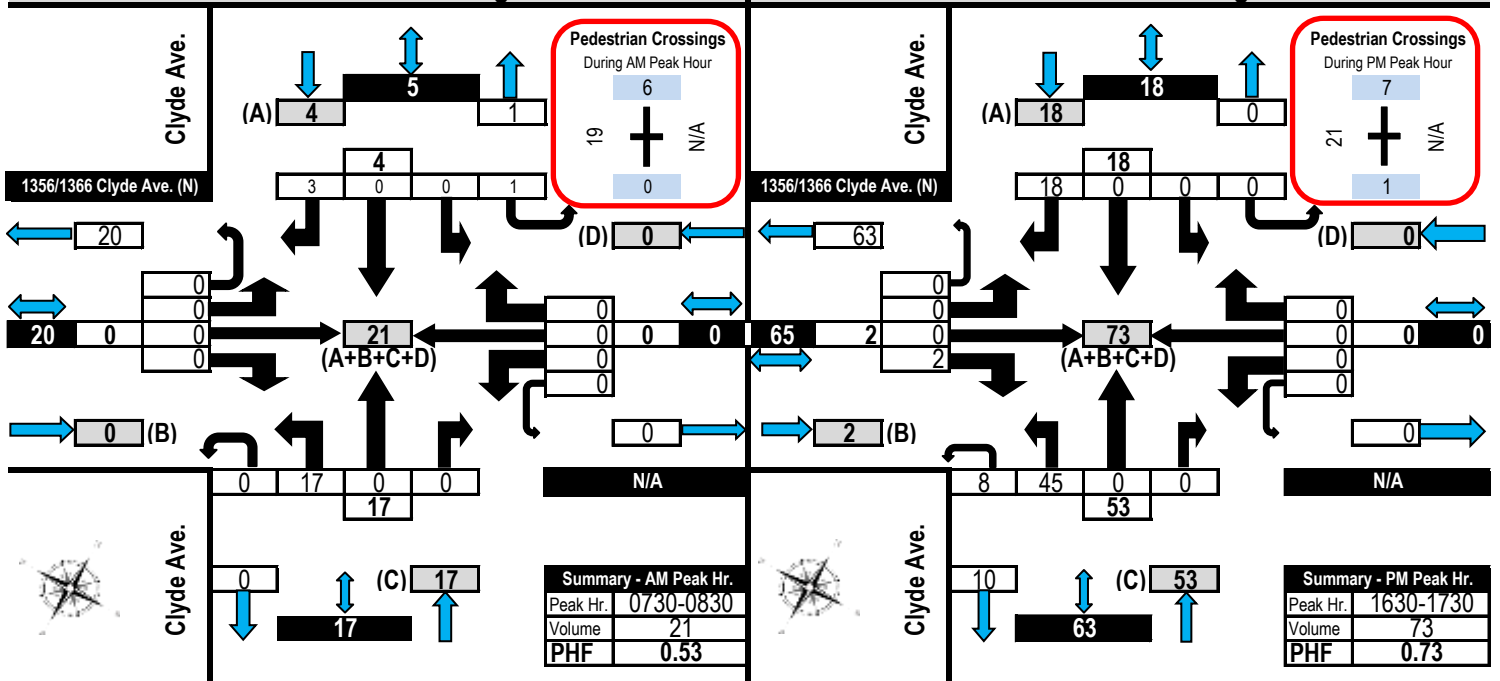
City of Ottawa Ward 8

N/A



AM Peak Hour Flow Diagram

PM Peak Hour Flow Diagram





Turning Movement Count Pedestrian Crossings Summary and Flow Diagram



Clyde Avenue & 1356/1366 North Access

Ottawa, ON

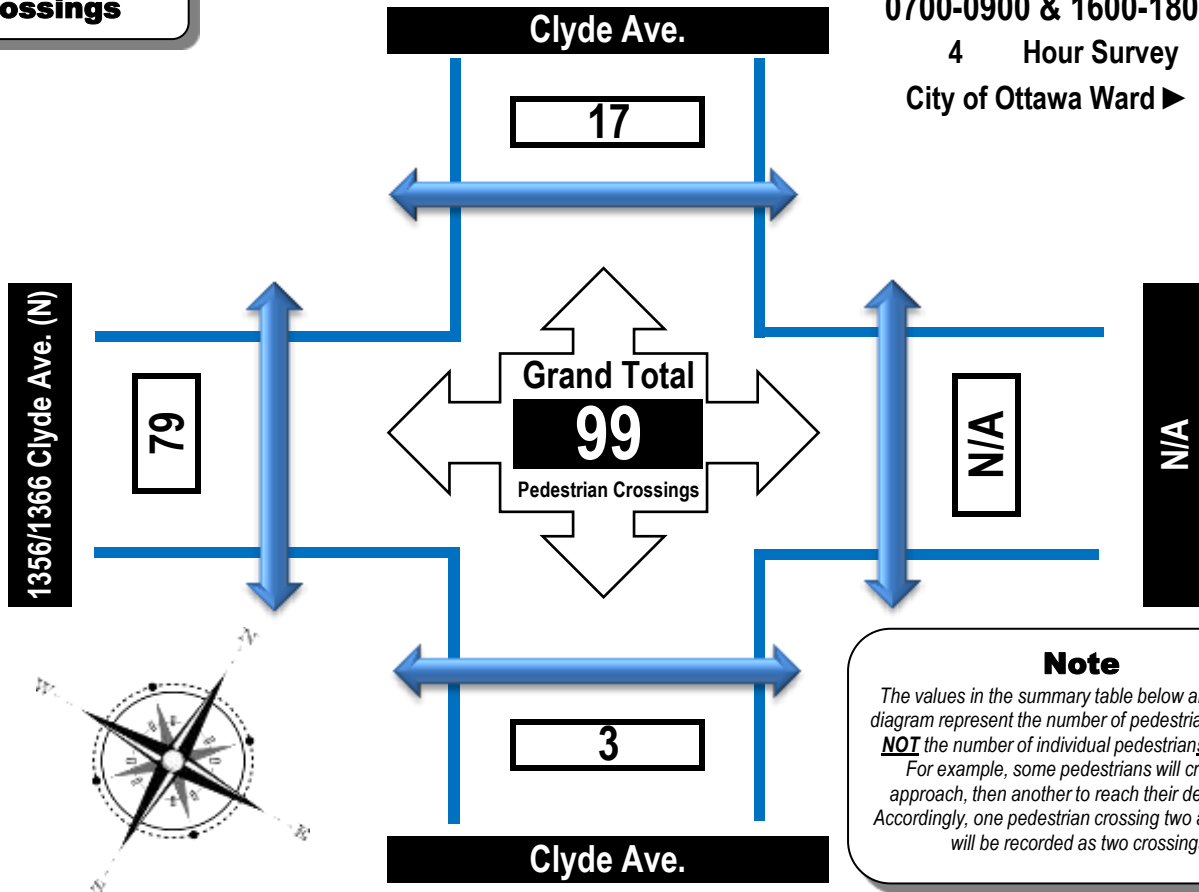
Pedestrian Crossings

Wednesday, 22 January 2020

0700-0900 & 1600-1800

4 Hour Survey

City of Ottawa Ward ► 8



Note

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

Time Period	West Side Crossing 1356/1366 Clyde Ave. (N)	East Side Crossing N/A	Street Total	South Side Crossing Clyde Ave.	North Side Crossing Clyde Ave.	Street Total	Grand Total
0700-0800	13	0	13	1	5	6	19
0800-0900	18	0	18	0	3	3	21
1600-1700	29	0	29	1	3	4	33
1700-1800	19	0	19	1	6	7	26
Totals	79	0	79	3	17	20	99

Comments:

Through traffic on Clyde Avenue was not counted. All bicycle movements counted. A few northbound U-turning vehicles were unable to complete their turn in one movement as the driver had to reverse to complete a three point turn. Some pedestrians walk along the narrow median.



Turning Movement Count

Summary Report

AADT and Expansion Factors

Automobiles, Taxis,
Light Trucks, Vans,
SUV's, Motorcycles,
Heavy Trucks, Buses,
and School Buses

Clyde Avenue & 1356/1366 North Access

Ottawa, ON

Survey Date: Wednesday, 22 January 2020

Start Time: 0700

AADT Factor: 1.0

Weather AM: Cloudy -4° C

Survey Duration: 4 Hrs.

Survey Hours: 0700-0900 & 1600-1800

Weather PM: Overcast +2° C

Surveyor(s): Carmody

1356/1366 Clyde Ave. (N)

N/A

Clyde Ave.

Clyde Ave.

Time Period	Eastbound					Westbound					Street Total	Northbound					Southbound					Street Total	Grand Total
	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot		LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot		
0700-0800	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	16	0	0	2	1	3	19	19
0800-0900	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	14	0	0	1	0	1	15	15
1600-1700	1	0	2	0	3	0	0	0	0	0	3	40	0	0	7	47	0	0	21	0	21	68	71
1700-1800	0	0	5	0	5	0	0	0	0	0	5	37	0	0	13	50	0	0	16	0	16	66	71
Totals	1	0	7	0	8	0	0	0	0	0	8	107	0	0	20	127	0	0	40	1	41	168	176

Equivalent 12 & 24-hour Vehicle Volumes Including the Annual Average Daily Traffic (AADT) Factor
Applicable to the Day and Month of the Turning Movement Count

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

Equivalent 12-hour vehicle volumes. These volumes are calculated by multiplying the 8-hour totals by the 8 → 12 expansion factor of 1.39

Equ. 12 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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Average daily 12-hour vehicle volumes. These volumes are calculated by multiplying the equivalent 12-hour totals by the AADT factor of: 1.0

AADT 12-hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

24-Hour AADT. These volumes are calculated by multiplying the average daily 12-hour vehicle volumes by the 12 → 24 expansion factor of 1.31

AADT 24 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor → 0.53

Highest Hourly Vehicle Volume Between 0700h & 0900h

AM Peak Hr	LT	ST	RT	UT	TOT	LT	ST	RT	UT	TOT	S.TOT	LT	ST	RT	UT	TOT	LT	ST	RT	UT	TOT	S.TOT	G.TOT
0730-0830	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	17	0	0	3	1	4	21	21

PM Peak Hour Factor → 0.73

Highest Hourly Vehicle Volume Between 1600h & 1800h

PM Peak Hr	LT	ST	RT	UT	TOT	LT	ST	RT	UT	TOT	S.TOT	LT	ST	RT	UT	TOT	LT	ST	RT	UT	TOT	S.TOT	G.TOT
1630-1730	0	0	2	0	2	0	0	0	0	0	2	45	0	0	8	53	0	0	18	0	18	71	73

Comments:

Through traffic on Clyde Avenue was not counted. All bicycle movements counted. A few northbound U-turning vehicles were unable to complete their turn in one movement as the driver had to reverse to complete a three point turn. Some pedestrians walk along the narrow median.

Notes:

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



Turning Movement Count Bicycle Summary Flow Diagram



Clyde Avenue & 1356/1366 South Access

Ottawa, ON

Bicycles

(Including electric bicycles and electric scooters)

Note:

Bicycle volumes are **NOT** included in vehicle totals.

1356/1366 Clyde Ave. (S)

Clyde Ave.

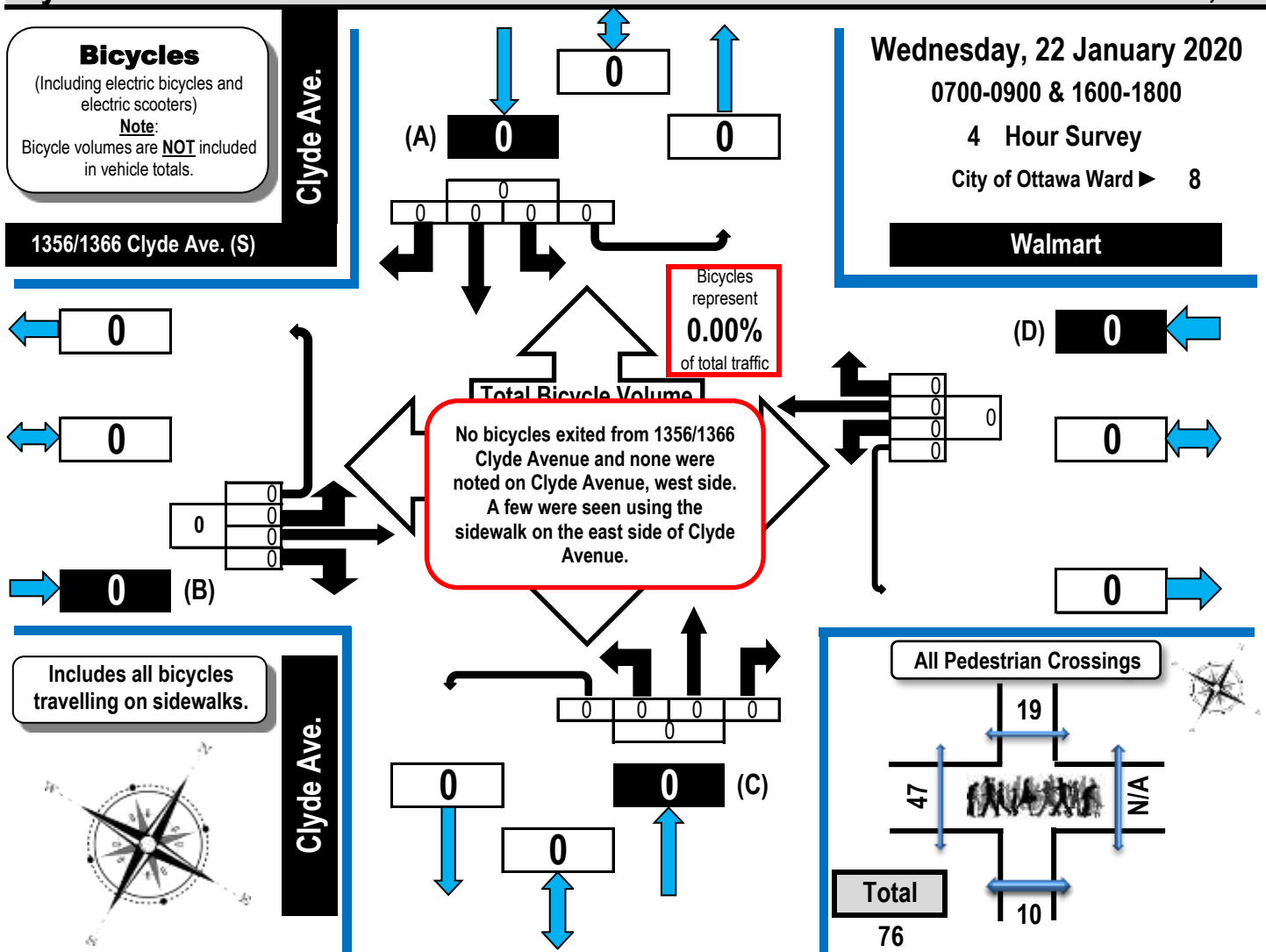
Wednesday, 22 January 2020

0700-0900 & 1600-1800

4 Hour Survey

City of Ottawa Ward 8

Walmart



Time Period	1356/1366 Clyde Ave. (S)					Walmart					Clyde Ave.					Clyde Ave.					G.Tot.
	LT	ST	RT	UT	S. Tot	LT	ST	RT	UT	S. Tot	LT	ST	RT	UT	S. Tot	LT	ST	RT	UT	S. Tot	
0700-0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800-0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600-1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700-1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Comments:

Southbound traffic on Clyde Avenue was counted to provide a point of reference. Northbound traffic on Clyde Avenue, traffic entering/exiting the Walmart access and pedestrian/cycling activity along the east side of Clyde Avenue were not counted. There is an exit from the apartments mid-way between #1356 and #1366 Clyde Avenue. The apartments are located immediately west of this plaza. There were a few bicycles using the sidewalk on the east side of Clyde Avenue - none used the road. A few pedestrians walk along the narrow median.



Turning Movement Count Summary, AM and PM Peak Hour Flow Diagrams

Automobiles, Taxis, Light Trucks, Vans, SUV's, Motorcycles, Heavy Trucks, Buses, and School Buses

Clyde Avenue & 1356/1366 South Access

Ottawa, ON

All Vehicles

(Except Bicycles & Electric Scooters)

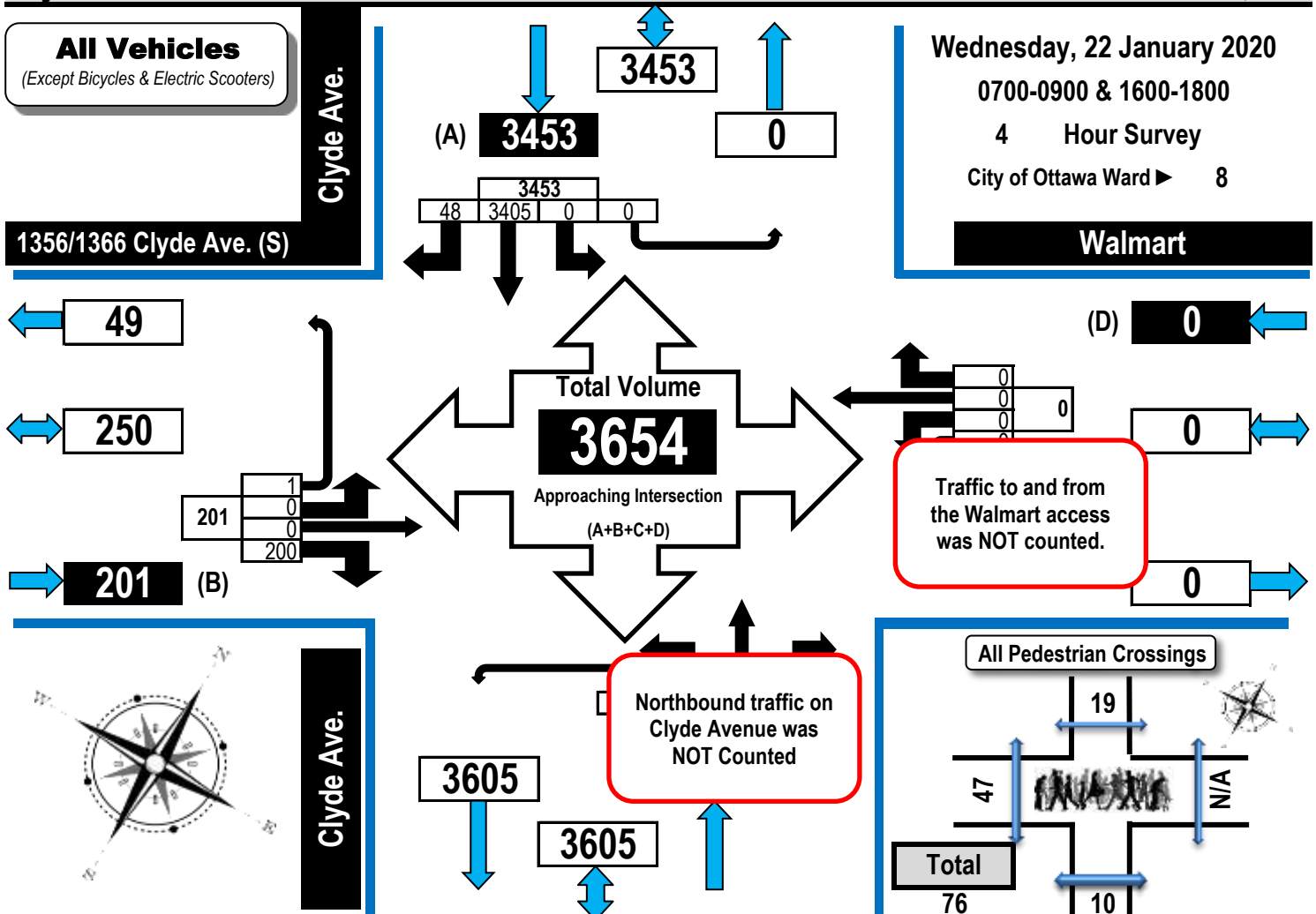
Wednesday, 22 January 2020

0700-0900 & 1600-1800

4 Hour Survey

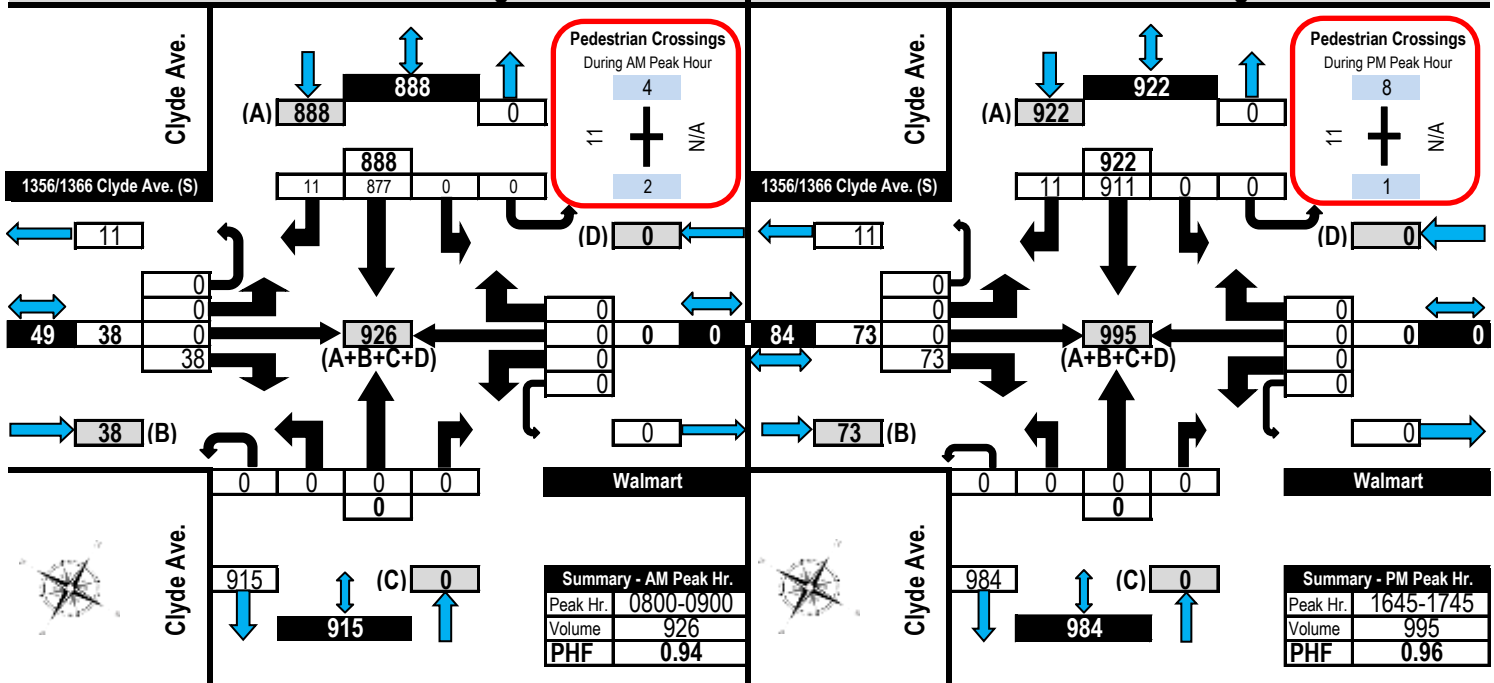
City of Ottawa Ward 8

Walmart



AM Peak Hour Flow Diagram

PM Peak Hour Flow Diagram



Turning Movement Count Pedestrian Crossings Summary and Flow Diagram



Clyde Avenue & 1356/1366 South Access

Ottawa, ON

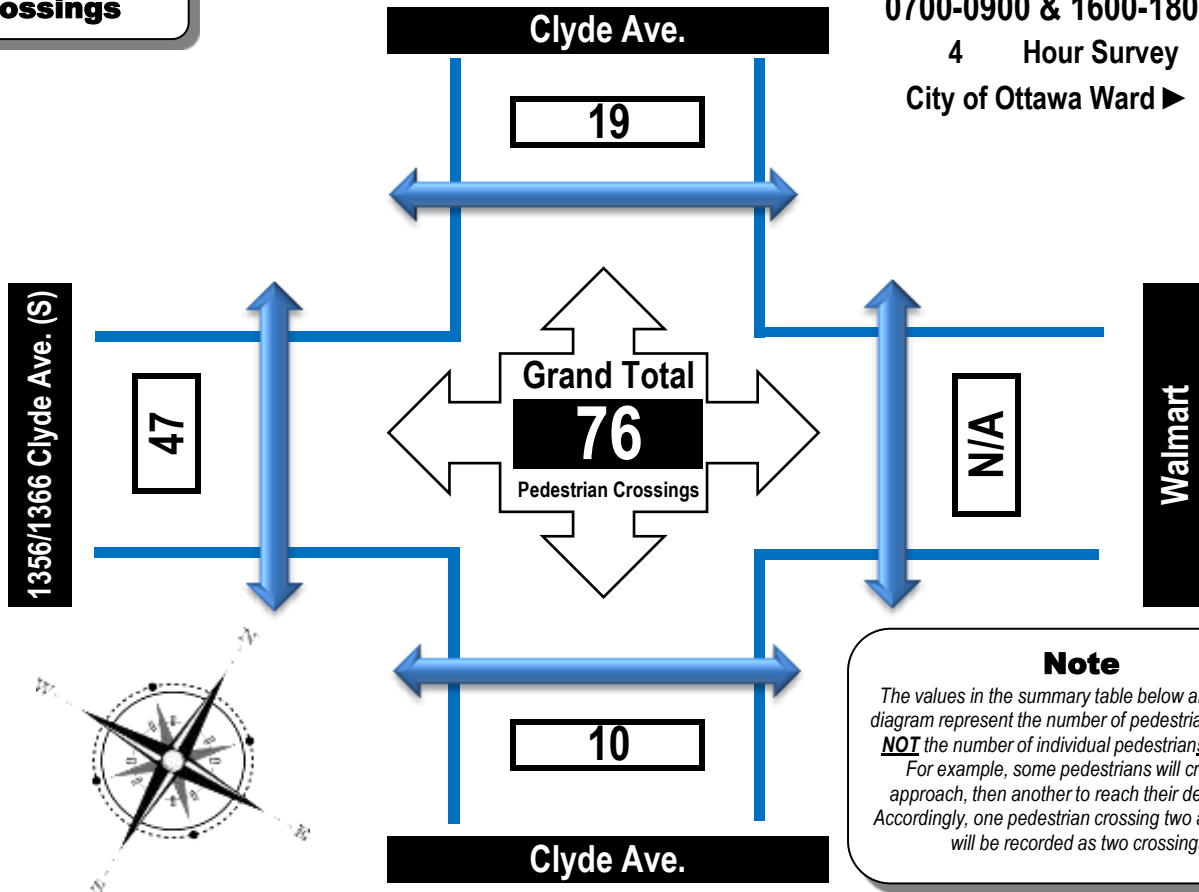
Pedestrian Crossings

Wednesday, 22 January 2020

0700-0900 & 1600-1800

4 Hour Survey

City of Ottawa Ward ► 8



Time Period	West Side Crossing 1356/1366 Clyde Ave. (S)	East Side Crossing Walmart	Street Total	South Side Crossing Clyde Ave.	North Side Crossing Clyde Ave.	Street Total	Grand Total
0700-0800	9	0	9	3	0	3	12
0800-0900	11	0	11	2	4	6	17
1600-1700	18	0	18	4	8	12	30
1700-1800	9	0	9	1	7	8	17
Totals	47	0	47	10	19	29	76

Comments:

Southbound traffic on Clyde Avenue was counted to provide a point of reference. Northbound traffic on Clyde Avenue, traffic entering/exiting the Walmart access and pedestrian/cycling activity along the east side of Clyde Avenue were not counted. There is an exit from the apartments mid-way between #1356 and #1366 Clyde Avenue. The apartments are located immediately west of this plaza. There were a few bicycles using the sidewalk on the east side of Clyde Avenue - none used the road. A few pedestrians walk along the narrow median.



Turning Movement Count

Summary Report

AADT and Expansion Factors

Automobiles, Taxis,
Light Trucks, Vans,
SUV's, Motorcycles,
Heavy Trucks, Buses,
and School Buses

Clyde Avenue & 1356/1366 South Access

Ottawa, ON

Survey Date: Wednesday, 22 January 2020

Start Time: 0700

AADT Factor: 1.0

Weather AM: Cloudy -4° C

Survey Duration: 4 Hrs.

Survey Hours: 0700-0900 & 1600-1800

Weather PM: Overcast +2° C

Surveyor(s): Carmody

1356/1366 Clyde Ave. (S)						Walmart						Clyde Ave.						Clyde Ave.					
Eastbound						Westbound						Northbound						Southbound					
Time Period	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot	Street Total	LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot	Street Total	Grand Total
0700-0800	0	0	27	0	27	0	0	0	0	0	27	0	0	0	0	0	0	773	8	0	781	781	808
0800-0900	0	0	38	0	38	0	0	0	0	0	38	0	0	0	0	0	0	877	11	0	888	888	926
1600-1700	0	0	58	1	59	0	0	0	0	0	59	0	0	0	0	0	0	871	16	0	887	887	946
1700-1800	0	0	77	0	77	0	0	0	0	0	77	0	0	0	0	0	0	884	13	0	897	897	974
Totals	0	0	200	1	201	0	0	0	0	0	201	0	0	0	0	0	0	3405	48	0	3453	3453	3654

Equivalent 12 & 24-hour Vehicle Volumes Including the Annual Average Daily Traffic (AADT) Factor
Applicable to the Day and Month of the Turning Movement Count

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

Equivalent 12-hour vehicle volumes. These volumes are calculated by multiplying the 8-hour totals by the 8 → 12 expansion factor of 1.39

Equ. 12 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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Average daily 12-hour vehicle volumes. These volumes are calculated by multiplying the equivalent 12-hour totals by the AADT factor of: 1.0

AADT 12-hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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24-Hour AADT. These volumes are calculated by multiplying the average daily 12-hour vehicle volumes by the 12 → 24 expansion factor of 1.31

AADT 24 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor → 0.94

Highest Hourly Vehicle Volume Between 0700h & 0900h

AM Peak Hr	LT	ST	RT	UT	TOT	LT	ST	RT	UT	TOT	S.TOT	LT	ST	RT	UT	TOT	LT	ST	RT	UT	TOT	S.TOT	G.TOT
0800-0900	0	0	38	0	38	0	0	0	0	0	38	0	0	0	0	0	0	877	11	0	888	888	926

PM Peak Hour Factor → 0.96

Highest Hourly Vehicle Volume Between 1600h & 1800h

PM Peak Hr	LT	ST	RT	UT	TOT	LT	ST	RT	UT	TOT	S.TOT	LT	ST	RT	UT	TOT	LT	ST	RT	UT	TOT	S.TOT	G.TOT
1645-1745	0	0	73	0	73	0	0	0	0	0	73	0	0	0	0	0	0	911	11	0	922	922	995

Comments:

Southbound traffic on Clyde Avenue was counted to provide a point of reference. Northbound traffic on Clyde Avenue, traffic entering/exiting the Walmart access and pedestrian/cycling activity along the east side of Clyde Avenue were not counted. There is an exit from the apartments mid-way between #1356 and #1366 Clyde Avenue. The apartments are located immediately west of this plaza. There were a few bicycles using the sidewalk on the east side of Clyde Avenue - none used the road. A few pedestrians walk along the narrow median.

Notes:

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

Turning Movement Count - 15 Minute Summary Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

Total Observed U-Turns

Northbound: 40 Southbound: 6
Eastbound: 0 Westbound: 0

		CLYDE AVE									MERIVALE RD/LOTTA AVE											
		Northbound				Southbound				Eastbound					Westbound							
		N				S				E					W							
		TOT				TOT				TOT					TOT							
		STR				STR				STR					STR							
		TOT				TOT				TOT					TOT							
		TOT				TOT				TOT					TOT							
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Note: U-Turns are included in Totals.

Comment:



Transportation Services - Traffic Services

Turning Movement Count - Cyclist Volume Report

Work Order
35504

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Count Date: Wednesday, April 13, 2016

Start Time: 07:00

Time Period	CLYDE AVE			MERIVALE RD/LOTTA AVE			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	
07:00 08:00	1	0	1	0	0	0	1
08:00 09:00	1	0	1	1	1	2	3
09:00 10:00	0	0	0	0	1	1	1
11:30 12:30	0	1	1	1	0	1	2
12:30 13:30	2	0	2	0	0	0	2
15:00 16:00	0	1	1	0	0	0	1
16:00 17:00	1	0	1	0	1	1	2
17:00 18:00	0	1	1	0	5	5	6
Total	5	3	8	2	8	10	18

Comment:

Note: These volumes consists of bicycles only (no mopeds or motorcycles) and ARE NOT included in the Turning Movement Count Summary.

Transportation Services - Traffic Services

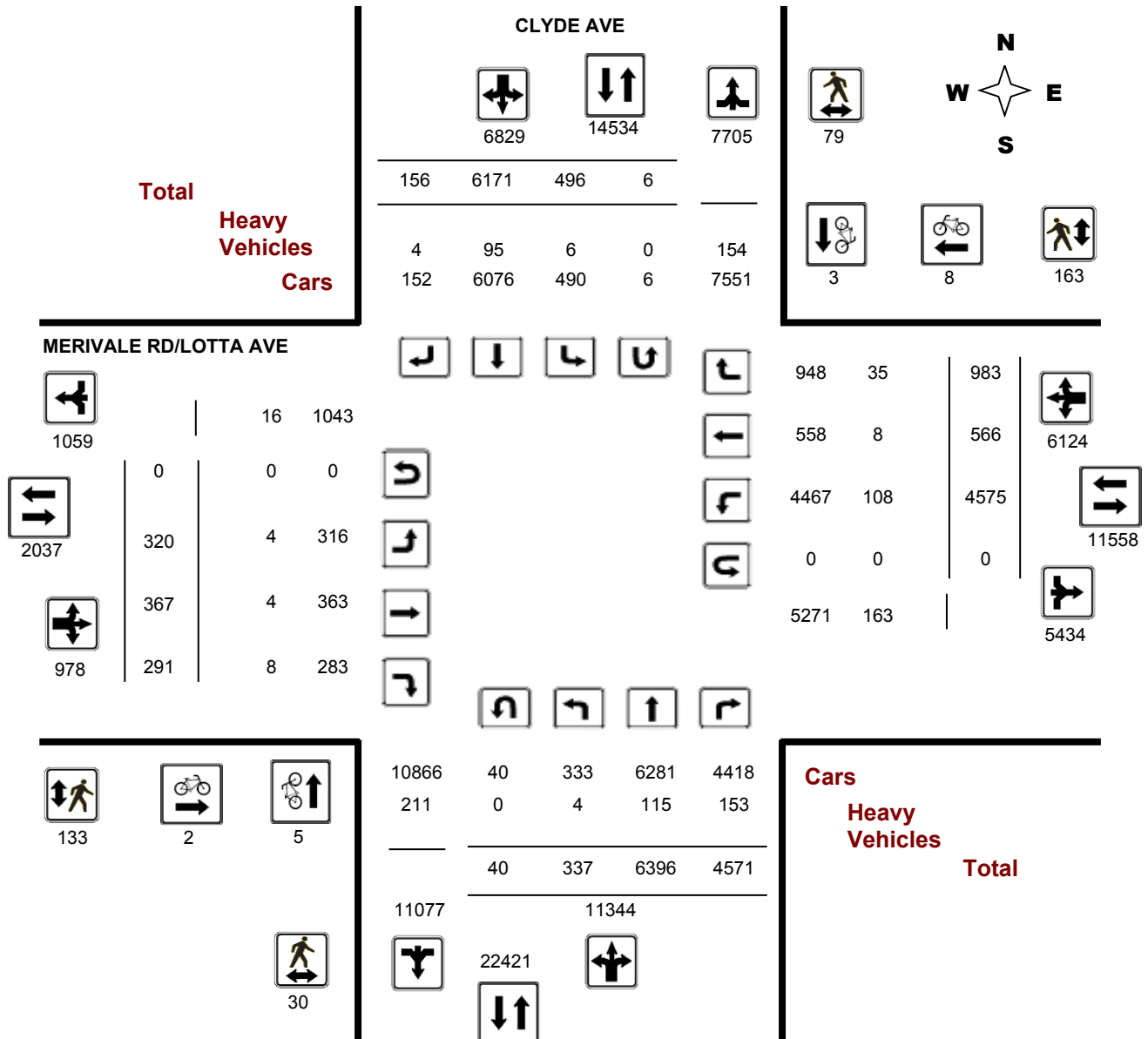
Turning Movement Count - Full Study Diagram

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

WO#: 35504

Device: Miovision



Comments



Transportation Services - Traffic Services

W.O.
35504

Turning Movement Count - Heavy Vehicle Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

CLYDE AVE										MERIVALE RD/LOTTA AVE										
Time Period	Northbound			Southbound			S TOT	STR TOT	Eastbound			Westbound			W TOT	STR TOT	Grand Total			
	LT	ST	RT	N TOT	LT	ST			RT	LT	ST	RT	E TOT	LT				ST	RT	
07:00	08:00	0	26	27	53	0	14	1	15	68	0	0	0	0	12	2	2	16	16	84
08:00	09:00	0	18	24	42	4	11	0	15	57	1	0	1	2	11	2	4	17	19	76
09:00	10:00	0	17	24	41	0	17	1	18	59	0	0	3	3	13	0	6	19	22	81
11:30	12:30	1	18	27	46	1	17	2	20	66	1	0	2	3	14	1	5	20	23	89
12:30	13:30	1	13	21	35	0	9	0	9	44	1	1	2	4	17	1	5	23	27	71
15:00	16:00	1	9	12	22	0	11	0	11	33	1	1	0	2	11	1	4	16	18	51
16:00	17:00	0	11	9	20	1	13	0	14	34	0	2	0	2	16	1	5	22	24	58
17:00	18:00	1	3	9	13	0	3	0	3	16	0	0	0	0	14	0	4	18	18	34
Sub Total		4	115	153	272	6	95	4	105	377	4	4	8	16	108	8	35	151	167	544
U-Turns (Heavy Vehicles)					0				0	0				0				0	0	0
Total		4	115	153	0	6	95	4	105	377	4	4	8	16	108	8	35	151	167	544

Heavy Vehicles include Buses, Single-Unit Trucks and Articulated Trucks. Further, they ARE included in the Turning Movement Count Summary.



Transportation Services - Traffic Services

Work Order

35504

Turning Movement Count - Pedestrian Volume Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Count Date: Wednesday, April 13, 2016

Start Time: 07:00

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	1	0	1	1	1	2	3
07:15 07:30	0	2	2	0	1	1	3
07:30 07:45	0	0	0	2	1	3	3
07:45 08:00	2	1	3	3	0	3	6
07:00 08:00	3	3	6	6	3	9	15
08:00 08:15	0	1	1	2	4	6	7
08:15 08:30	0	2	2	3	3	6	8
08:30 08:45	0	2	2	3	0	3	5
08:45 09:00	2	1	3	6	1	7	10
08:00 09:00	2	6	8	14	8	22	30
09:00 09:15	0	3	3	3	4	7	10
09:15 09:30	0	1	1	4	2	6	7
09:30 09:45	2	1	3	1	4	5	8
09:45 10:00	0	2	2	5	2	7	9
09:00 10:00	2	7	9	13	12	25	34
11:30 11:45	3	1	4	4	7	11	15
11:45 12:00	0	1	1	3	3	6	7
12:00 12:15	3	2	5	9	5	14	19
12:15 12:30	1	0	1	2	10	12	13
11:30 12:30	7	4	11	18	25	43	54
12:30 12:45	0	3	3	7	7	14	17
12:45 13:00	0	7	7	9	8	17	24
13:00 13:15	0	7	7	11	3	14	21
13:15 13:30	3	4	7	5	6	11	18
12:30 13:30	3	21	24	32	24	56	80
15:00 15:15	0	1	1	6	3	9	10
15:15 15:30	2	5	7	1	9	10	17
15:30 15:45	0	5	5	5	8	13	18
15:45 16:00	2	2	4	4	9	13	17
15:00 16:00	4	13	17	16	29	45	62
16:00 16:15	1	3	4	5	6	11	15
16:15 16:30	1	2	3	6	10	16	19
16:30 16:45	2	3	5	6	7	13	18
16:45 17:00	2	3	5	3	3	6	11
16:00 17:00	6	11	17	20	26	46	63
17:00 17:15	0	5	5	4	19	23	28
17:15 17:30	1	5	6	1	9	10	16
17:30 17:45	1	2	3	4	6	10	13
17:45 18:00	1	2	3	5	2	7	10
17:00 18:00	3	14	17	14	36	50	67
Total	30	79	109	133	163	296	405

Comment:

Turning Movement Count - Full Study Summary Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

Total Observed U-Turns

Northbound: 40 Southbound: 6
Eastbound: 0 Westbound: 0

AADT Factor

.90

Full Study

CLYDE AVE										MERIVALE RD/LOTTA AVE										
Period	Northbound				Southbound				STR TOT	Eastbound				Westbound				STR TOT	Grand Total	
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT		LT	ST	RT	EB TOT	LT	ST	RT	WB TOT			
07:00 08:00	16	674	566	1256	20	538	7	565	1821	14	27	14	55	312	20	56	388	443	2264	
08:00 09:00	0	861	667	1528	44	697	7	748	2276	31	68	19	118	390	34	67	491	609	2885	
09:00 10:00	49	656	443	1148	50	710	23	783	1931	34	35	29	98	451	31	91	573	671	2602	
11:30 12:30	70	824	519	1413	87	917	37	1041	2454	65	52	56	173	578	70	122	770	943	3397	
12:30 13:30	64	890	597	1551	78	912	29	1019	2570	55	47	57	159	571	67	159	797	956	3526	
15:00 16:00	55	855	540	1450	60	771	20	851	2301	47	40	42	129	708	87	162	957	1086	3387	
16:00 17:00	25	845	628	1498	69	776	13	858	2356	37	41	42	120	764	127	155	1046	1166	3522	
17:00 18:00	58	791	611	1460	88	850	20	958	2418	37	57	32	126	801	130	171	1102	1228	3646	
Sub Total	337	6396	4571	11304	496	6171	156	6823	18127	320	367	291	978	4575	566	983	6124	7102	25229	
U Turns	40								6	46	0				0				0	46
Total	337	6396	4571	11344	496	6171	156	6829	18173	320	367	291	978	4575	566	983	6124	7102	25275	
EQ 12Hr	468	8890	6354	15768	689	8578	217	9492	25260	445	510	404	1359	6359	787	1366	8512	9871	35131	
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													1.39							
AVG 12Hr	422	8001	5718	14191	620	7720	195	8543	22734	400	459	364	1223	5723	708	1230	7661	8884	31618	
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													.90							
AVG 24Hr	552	10482	7491	18591	813	10113	256	11191	29782	524	601	477	1603	7498	928	1611	10036	11639	41421	
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													1.31							

Comments:

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



Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

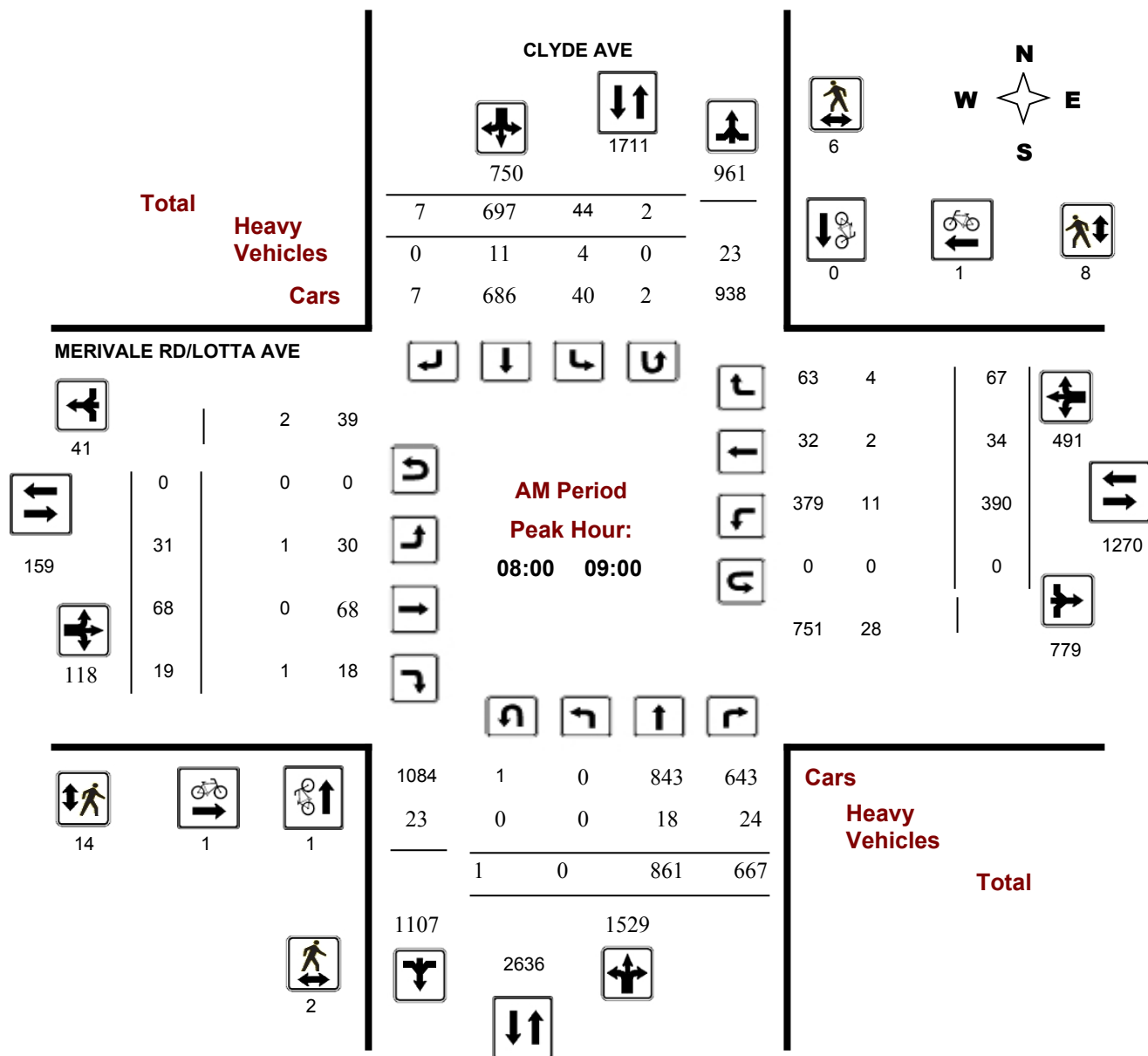
MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

Start Time: 07:00

WO No: 35504

Device: Miovision

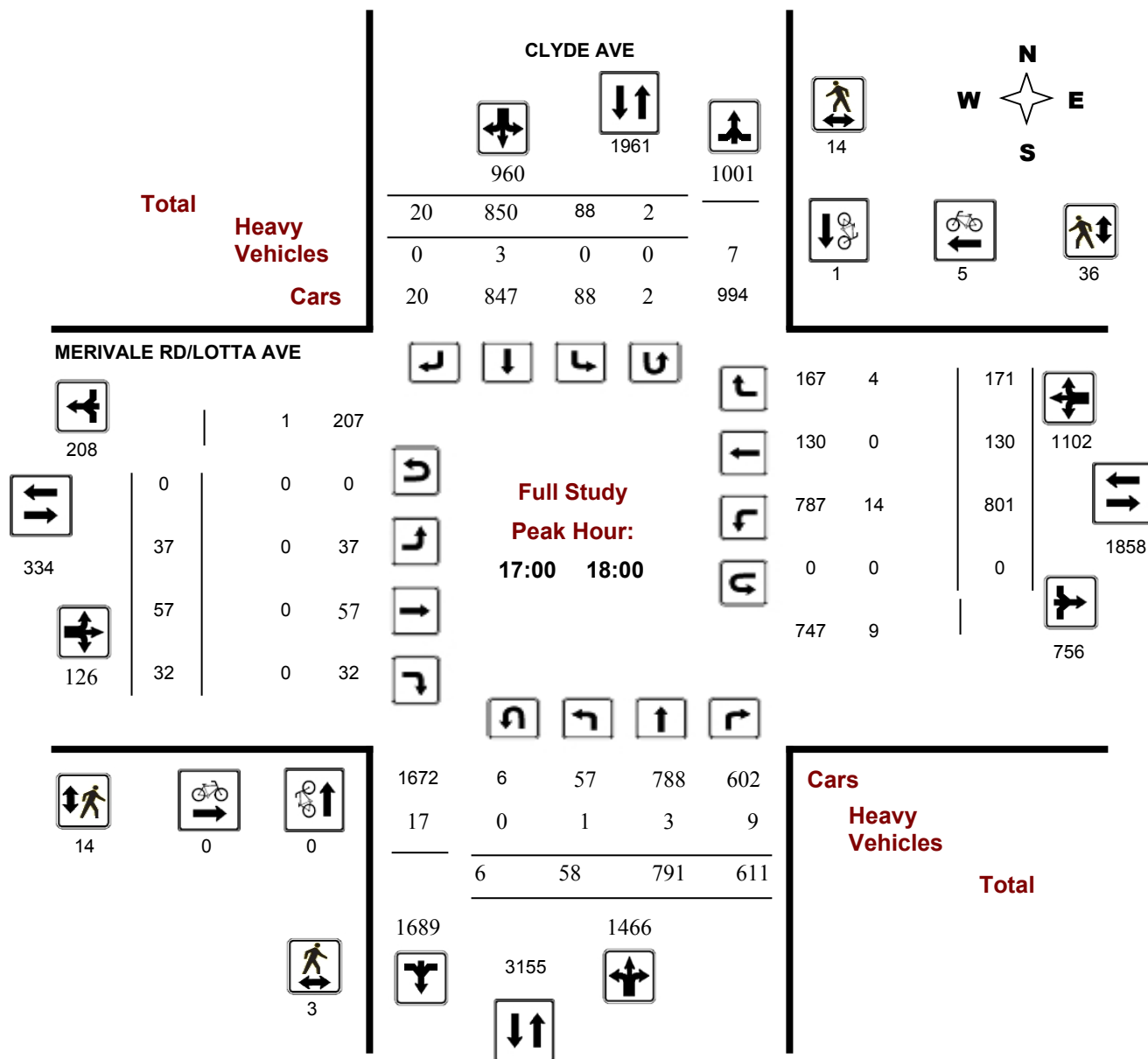


Survey Date: Wednesday, April 13, 2016

Start Time: 07:00

WO No: 35504

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

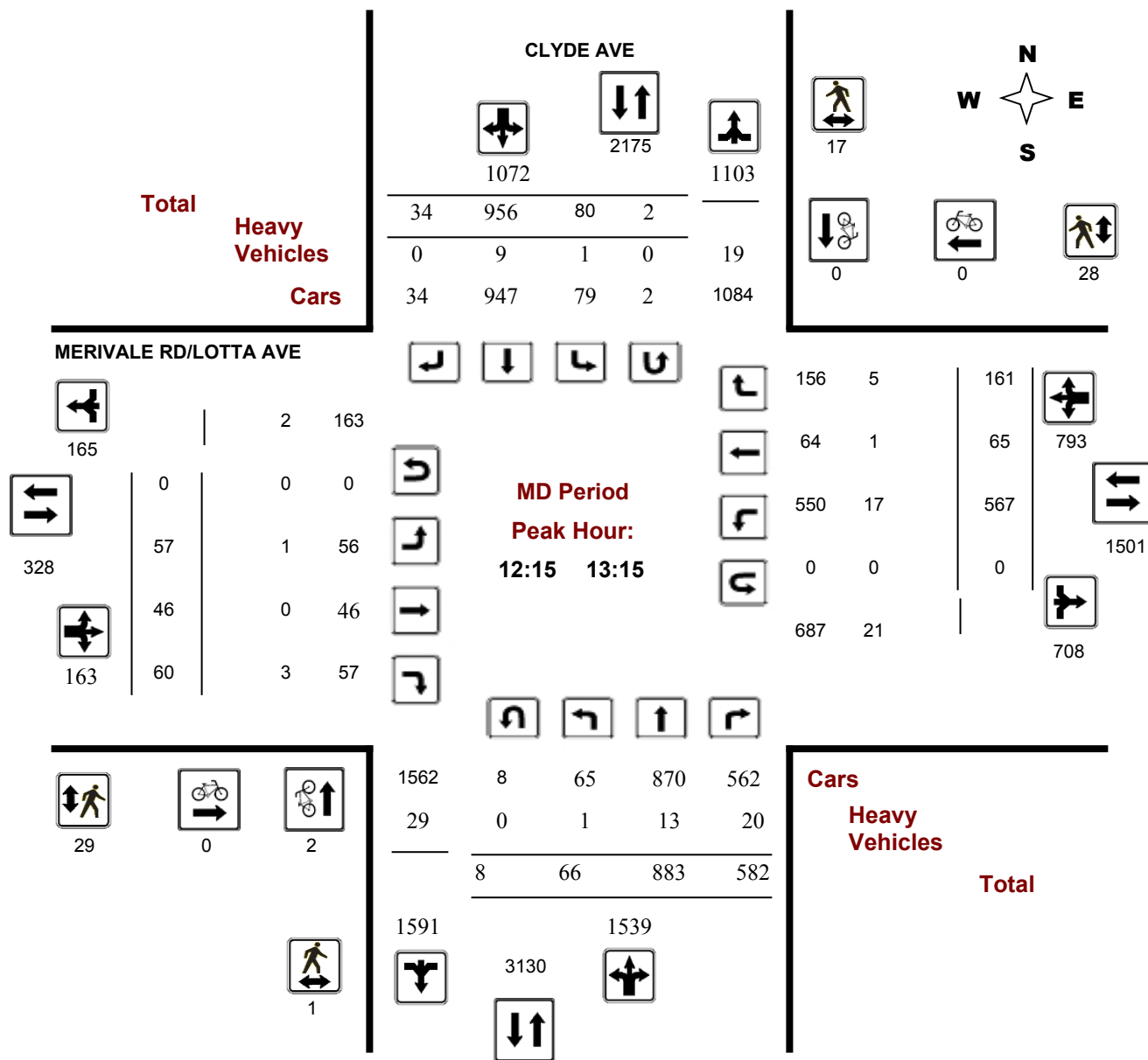
MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

Start Time: 07:00

WO No: 35504

Device: Miovision

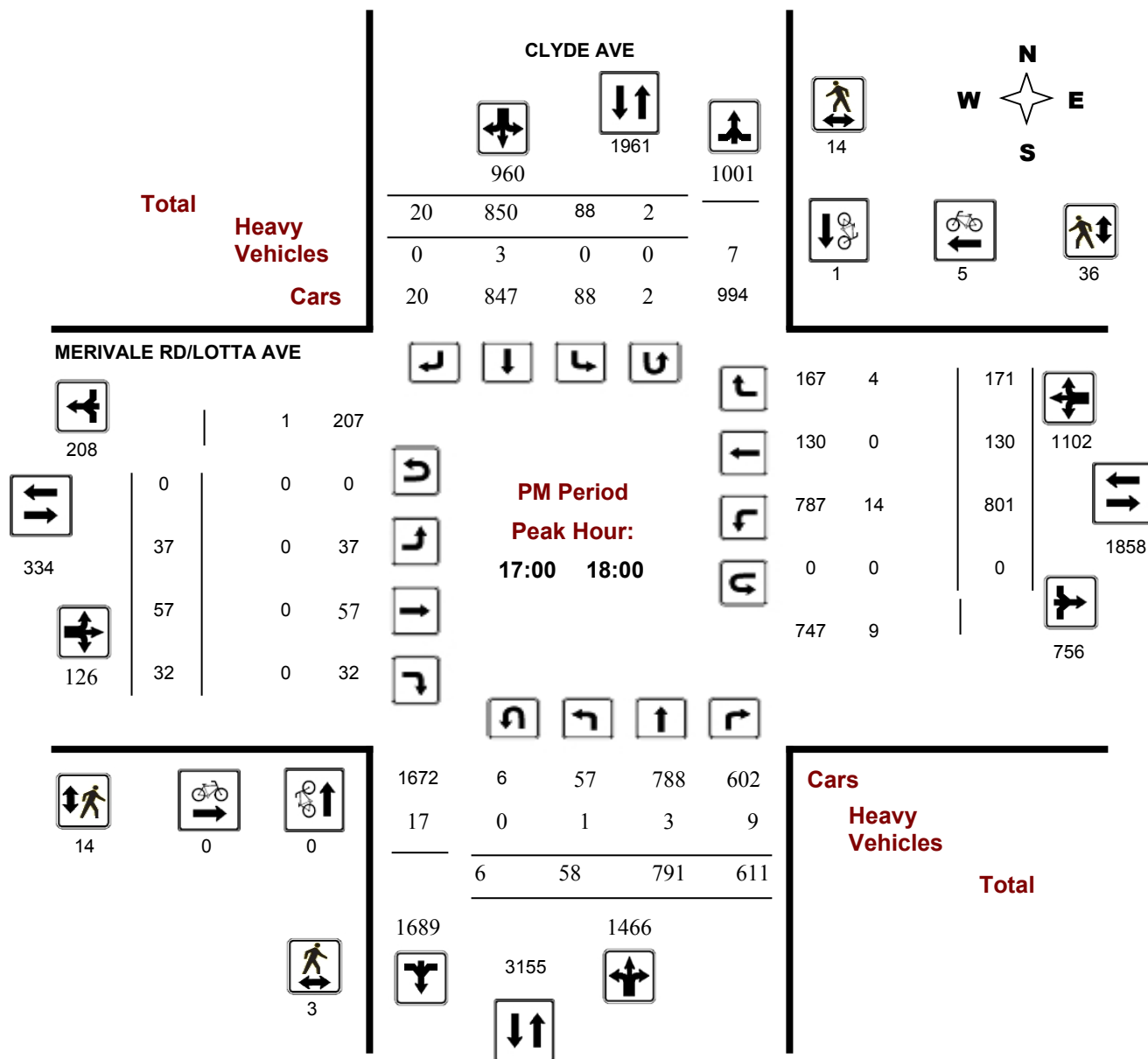


Survey Date: Wednesday, April 13, 2016

Start Time: 07:00

WO No: 35504

Device: Miovision



Comments

Turning Movement Count - 15 Min U-Turn Total Report

MERIVALE RD/LOTTA AVE @ CLYDE AVE

Survey Date: Wednesday, April 13, 2016

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	1	0	0	0	1
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	1	0	0	1
08:45	09:00	1	1	0	0	2
09:00	09:15	1	0	0	0	1
09:15	09:30	1	0	0	0	1
09:30	09:45	2	0	0	0	2
09:45	10:00	1	0	0	0	1
11:30	11:45	2	0	0	0	2
11:45	12:00	2	0	0	0	2
12:00	12:15	1	0	0	0	1
12:15	12:30	2	2	0	0	4
12:30	12:45	0	0	0	0	0
12:45	13:00	6	0	0	0	6
13:00	13:15	0	0	0	0	0
13:15	13:30	4	0	0	0	4
15:00	15:15	1	0	0	0	1
15:15	15:30	0	0	0	0	0
15:30	15:45	1	0	0	0	1
15:45	16:00	1	0	0	0	1
16:00	16:15	2	0	0	0	2
16:15	16:30	2	0	0	0	2
16:30	16:45	2	0	0	0	2
16:45	17:00	1	0	0	0	1
17:00	17:15	0	0	0	0	0
17:15	17:30	1	1	0	0	2
17:30	17:45	2	1	0	0	3
17:45	18:00	3	0	0	0	3
Total		40	6	0	0	46

Survey Date: Tuesday, July 24, 2018

Start Time: 07:00

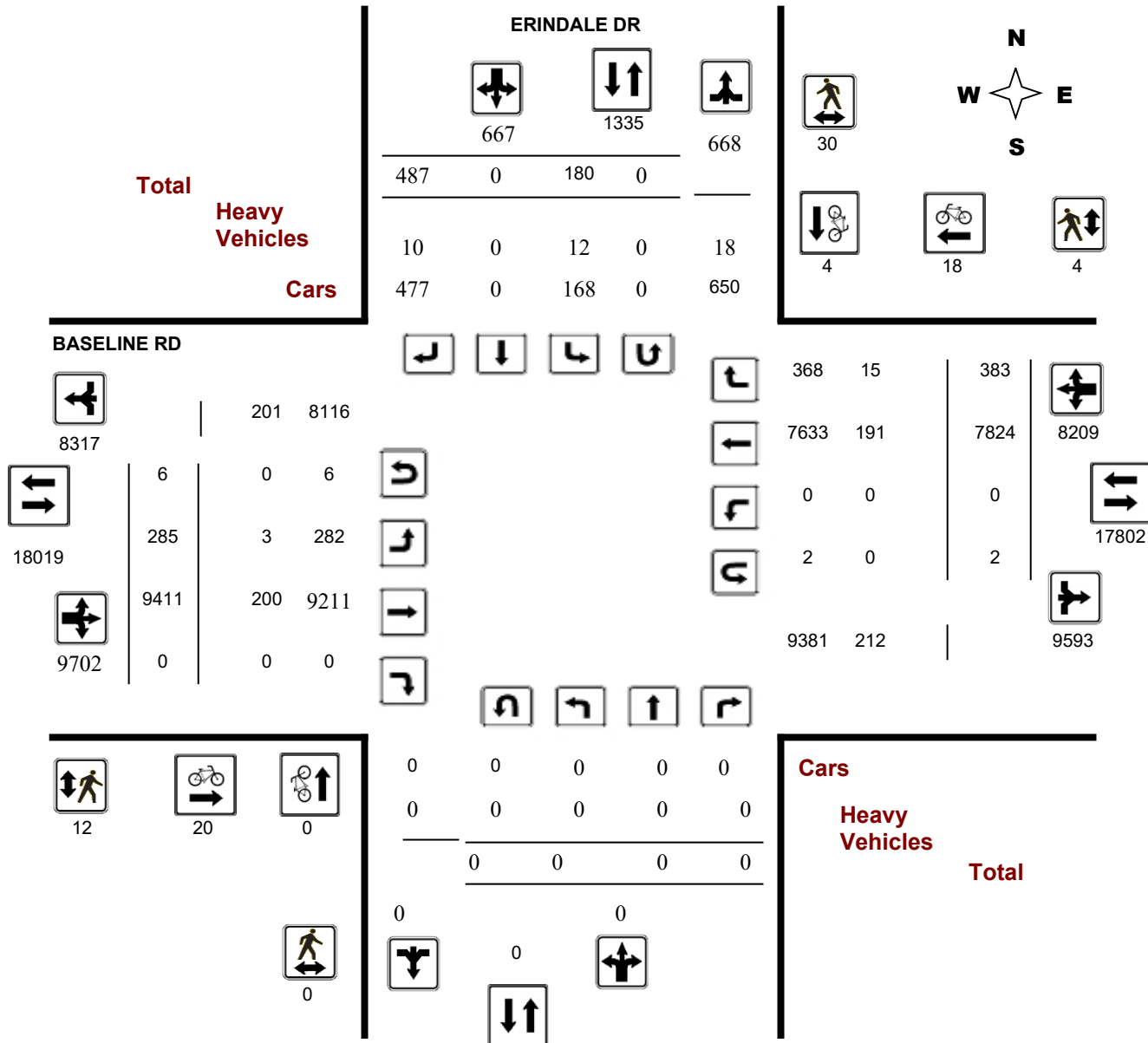
WO No:

37994

Device:

Miovision

Full Study Diagram



Turning Movement Count - Study Results

ERINDALE DR @ BASELINE RD

Survey Date: Tuesday, July 24, 2018

Start Time: 07:00

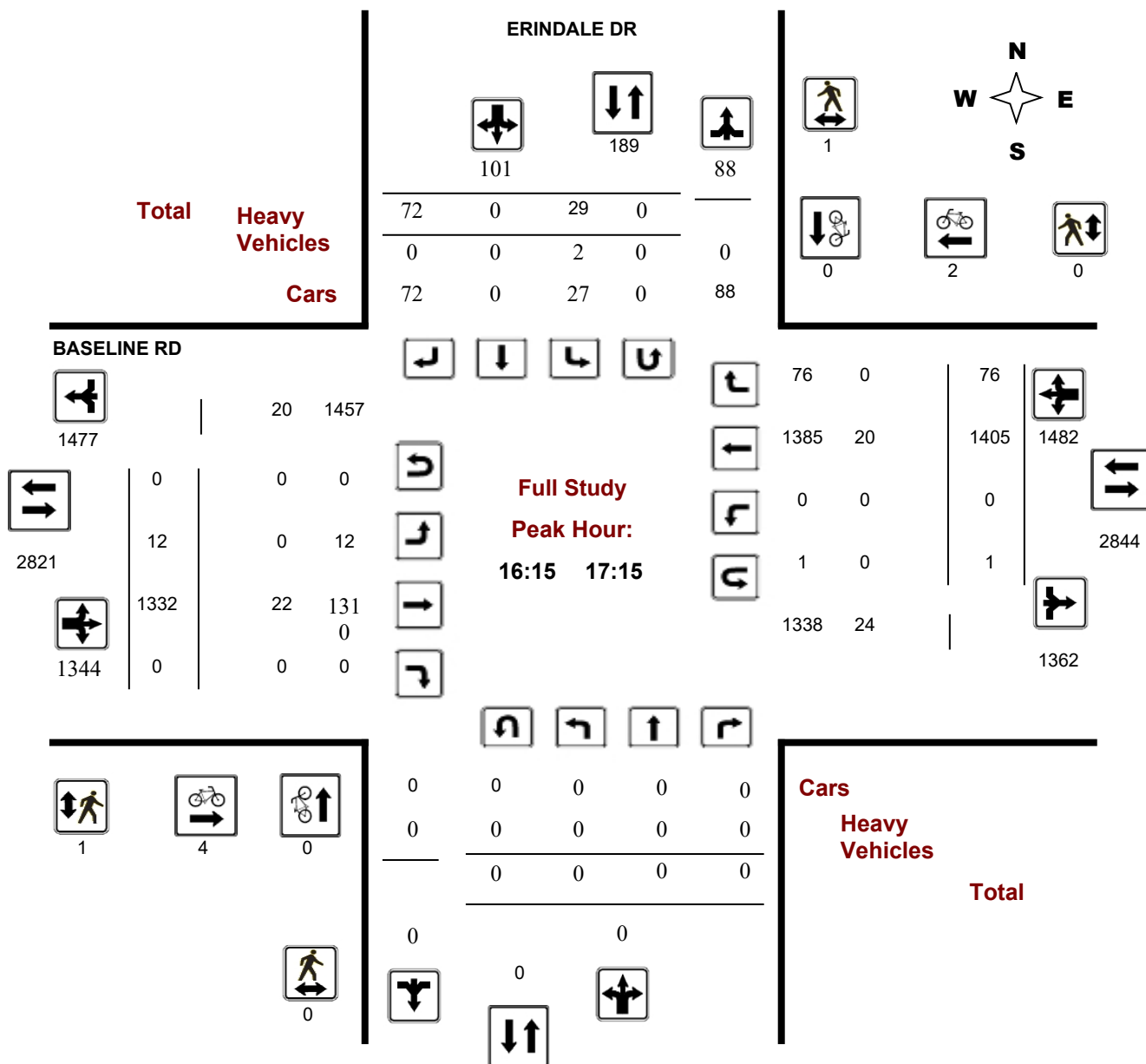
WO No:

37994

Device:

Miovision

Full Study Peak Hour Diagram



Turning Movement Count - Peak Hour Diagram

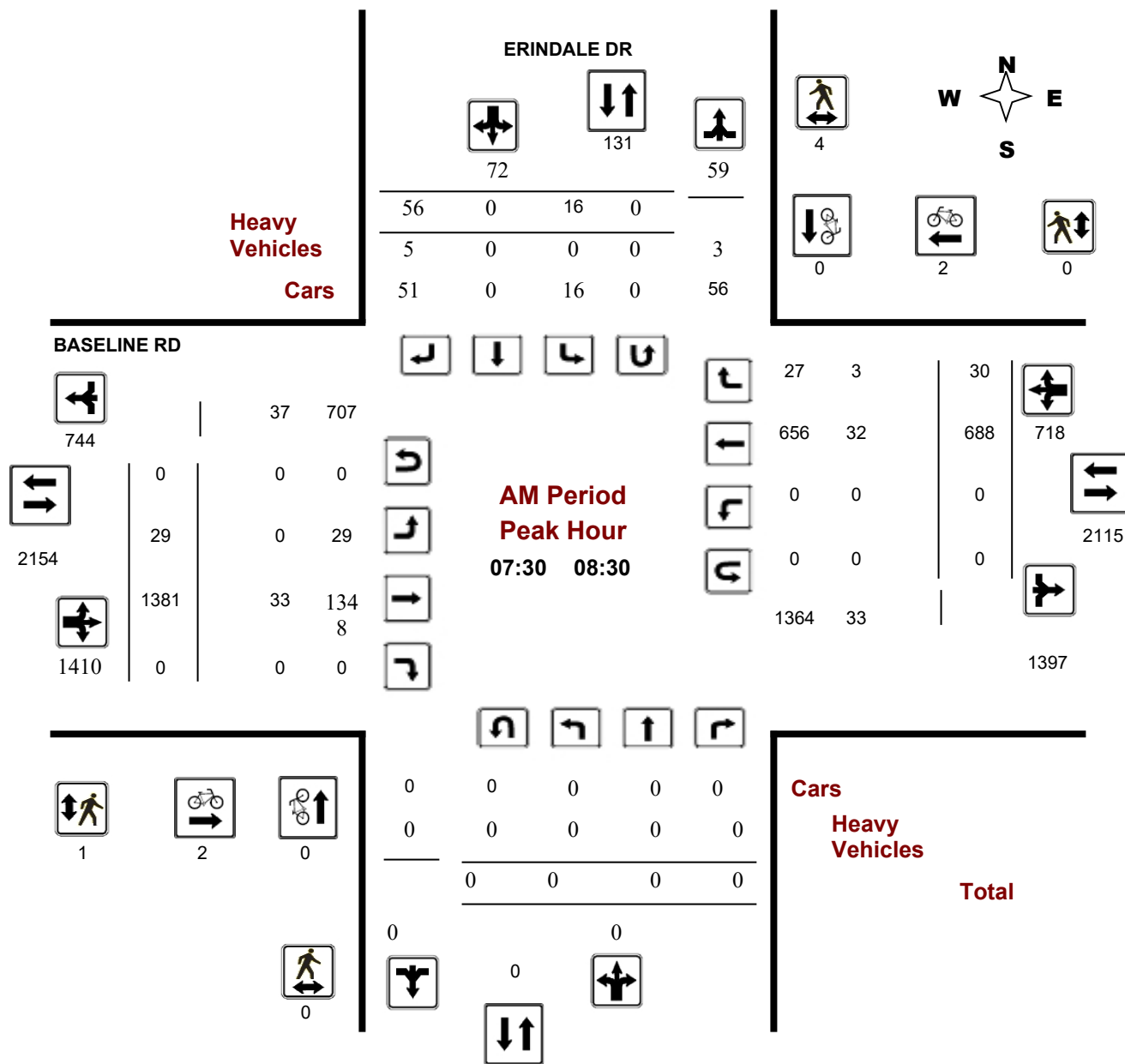
ERINDALE DR @ BASELINE RD

Survey Date: Tuesday, July 24, 2018

Start Time: 07:00

WO No: 37994

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

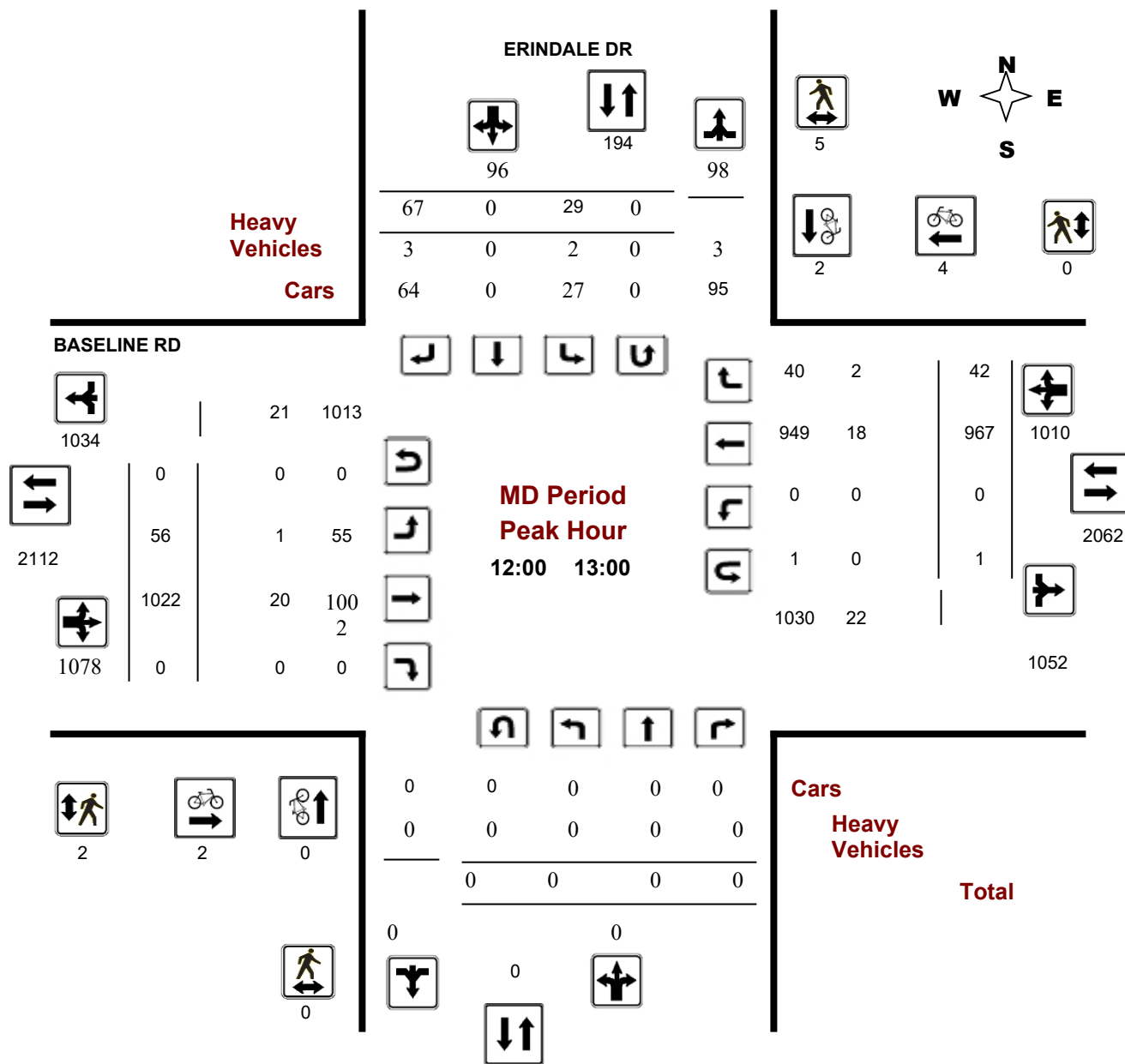
ERINDALE DR @ BASELINE RD

Survey Date: Tuesday, July 24, 2018

Start Time: 07:00

WO No: 37994

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

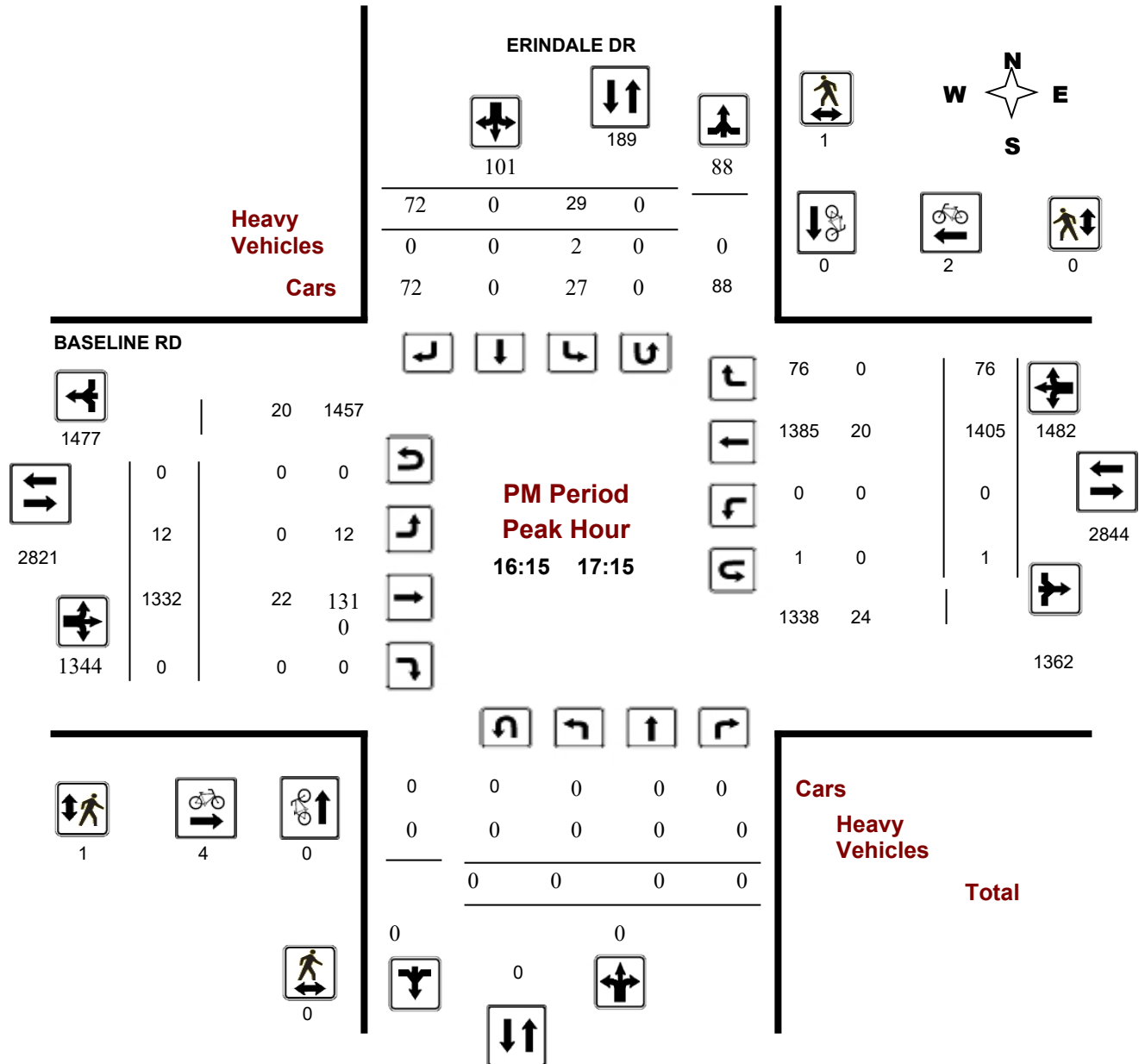
ERINDALE DR @ BASELINE RD

Survey Date: Tuesday, July 24, 2018

Start Time: 07:00

WO No: 37994

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Study Results

ERINDALE DR @ BASELINE RD

Survey Date: Tuesday, July 24, 2018

WO No: 37994

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, July 24, 2018

Total Observed U-Turns

Northbound: 0 Southbound: 0
Eastbound: 6 Westbound: 2

AADT Factor

1.25

ERINDALE DR										BASELINE RD									
Period	Northbound				Southbound				STR TOT	Eastbound				Westbound				STR TOT	Grand Total
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT		LT	ST	RT	EB TOT	LT	ST	RT	WB TOT		
07:00 08:00	0	0	0	0	23	0	46	69	69	15	1278	0	1293	0	562	29	591	1884	1953
08:00 09:00	0	0	0	0	13	0	54	67	67	41	1306	0	1347	0	713	37	750	2097	2164
09:00 10:00	0	0	0	0	20	0	58	78	78	58	1177	0	1235	0	726	27	753	1988	2066
11:30 12:30	0	0	0	0	24	0	61	85	85	61	1006	0	1067	0	906	53	959	2026	2111
12:30 13:30	0	0	0	0	29	0	64	93	93	49	970	0	1019	0	909	44	953	1972	2065
15:00 16:00	0	0	0	0	21	0	67	88	88	31	1153	0	1184	0	1298	54	1352	2536	2624
16:00 17:00	0	0	0	0	21	0	79	100	100	9	1352	0	1361	0	1385	69	1454	2815	2915
17:00 18:00	0	0	0	0	29	0	58	87	87	21	1169	0	1190	0	1325	70	1395	2585	2672
Sub Total	0	0	0	0	180	0	487	667	667	285	9411	0	9696	0	7824	383	8207	17903	18570
U Turns				0				0	0				6				2	8	8
Total	0	0	0	0	180	0	487	667	667	285	9411	0	9702	0	7824	383	8209	17911	18578
EQ 12Hr	0	0	0	0	250	0	677	927	927	396	13081	0	13486	0	10875	532	11411	24896	25823
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													1.39						
AVG 12Hr	0	0	0	0	225	0	609	834	834	357	11773	0	12137	0	9788	479	10269	22406	23241
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													0.9						
AVG 24Hr	0	0	0	0	295	0	798	1093	1093	467	15423	0	15900	0	12822	628	13453	29353	30446

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

1.31

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



Transportation Services - Traffic Services

Turning Movement Count - Study Results

ERINDALE DR @ BASELINE RD

Survey Date: Tuesday, July 24, 2018

WO No: 37994

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

ERINDALE DR

BASELINE RD

Northbound

Southbound

Eastbound

Westbound

Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total	
07:00	07:15	0	0	0	0	5	0	8	13	20	2	274	0	276	0	105	5	110	20	399
07:15	07:30	0	0	0	0	8	0	9	17	30	3	300	0	303	0	128	10	138	30	458
07:30	07:45	0	0	0	0	5	0	11	16	28	4	347	0	351	0	184	8	192	28	559
07:45	08:00	0	0	0	0	5	0	18	23	35	6	357	0	363	0	145	6	151	35	537
08:00	08:15	0	0	0	0	4	0	16	20	38	9	362	0	371	0	199	9	208	38	599
08:15	08:30	0	0	0	0	2	0	11	13	30	10	315	0	325	0	160	7	167	30	505
08:30	08:45	0	0	0	0	2	0	13	15	39	13	321	0	334	0	181	11	192	39	541
08:45	09:00	0	0	0	0	5	0	14	19	38	9	308	0	317	0	173	10	183	38	519
09:00	09:15	0	0	0	0	5	0	18	23	47	19	295	0	314	0	211	5	216	47	553
09:15	09:30	0	0	0	0	5	0	13	18	42	20	313	0	334	0	174	4	178	42	530
09:30	09:45	0	0	0	0	5	0	14	19	37	10	295	0	305	0	180	8	188	37	512
09:45	10:00	0	0	0	0	5	0	13	18	37	9	274	0	284	0	161	10	171	37	473
11:30	11:45	0	0	0	0	4	0	16	20	61	24	253	0	277	0	208	17	225	61	522
11:45	12:00	0	0	0	0	10	0	12	22	45	11	238	0	249	0	226	12	238	45	509
12:00	12:15	0	0	0	0	7	0	16	23	44	11	252	0	263	0	236	10	246	44	532
12:15	12:30	0	0	0	0	3	0	17	20	49	15	263	0	278	0	236	14	250	49	548
12:30	12:45	0	0	0	0	9	0	14	23	48	15	266	0	281	0	245	10	255	48	559
12:45	13:00	0	0	0	0	10	0	20	30	53	15	241	0	256	0	250	8	259	53	545
13:00	13:15	0	0	0	0	6	0	13	19	45	14	230	0	246	0	202	12	214	45	479
13:15	13:30	0	0	0	0	4	0	17	21	40	5	233	0	238	0	212	14	226	40	485
15:00	15:15	0	0	0	0	6	0	12	18	35	10	256	0	266	0	289	7	296	35	580
15:15	15:30	0	0	0	0	5	0	18	23	53	13	264	0	278	0	328	17	345	53	646
15:30	15:45	0	0	0	0	7	0	15	22	43	4	306	0	310	0	343	17	360	43	692
15:45	16:00	0	0	0	0	3	0	22	25	42	4	327	0	331	0	338	13	351	42	707
16:00	16:15	0	0	0	0	2	0	22	24	36	1	346	0	348	0	340	11	351	36	723
16:15	16:30	0	0	0	0	4	0	15	19	37	2	340	0	342	0	355	16	371	37	732
16:30	16:45	0	0	0	0	8	0	17	25	58	3	353	0	356	0	341	30	372	58	753
16:45	17:00	0	0	0	0	7	0	25	32	47	3	313	0	316	0	349	12	361	47	709
17:00	17:15	0	0	0	0	10	0	15	25	47	4	326	0	330	0	360	18	378	47	733
17:45	18:00	0	0	0	0	10	0	9	19	46	8	265	0	273	0	314	19	333	46	625
17:15	17:30	0	0	0	0	3	0	14	17	42	5	309	0	314	0	342	20	362	42	693
17:30	17:45	0	0	0	0	6	0	20	26	43	4	269	0	273	0	309	13	322	43	621
Total:		0	0	0	0	180	0	487	667	1335	285	9411	0	9702	0	7824	383	8209	1335	18,578

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

ERINDALE DR @ BASELINE RD

Survey Date: Tuesday, July 24, 2018

WO No: 37994

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

		ERINDALE DR			BASELINE RD			Grand Total
Time Period		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	
07:00	07:15	0	0	0	0	0	0	0
07:15	07:30	0	0	0	0	1	1	1
07:30	07:45	0	0	0	1	0	1	1
07:45	08:00	0	0	0	1	1	2	2
08:00	08:15	0	0	0	0	0	0	0
08:15	08:30	0	0	0	0	1	1	1
08:30	08:45	0	0	0	0	0	0	0
08:45	09:00	0	0	0	1	0	1	1
09:00	09:15	0	0	0	1	0	1	1
09:15	09:30	0	0	0	1	0	1	1
09:30	09:45	0	0	0	0	0	0	0
09:45	10:00	0	0	0	0	1	1	1
11:30	11:45	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0
12:00	12:15	0	2	2	2	2	4	6
12:15	12:30	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	1	1	1
12:45	13:00	0	0	0	0	1	1	1
13:00	13:15	0	0	0	5	1	6	6
13:15	13:30	0	0	0	0	0	0	0
15:00	15:15	0	0	0	0	0	0	0
15:15	15:30	0	0	0	1	2	3	3
15:30	15:45	0	0	0	0	1	1	1
15:45	16:00	0	2	2	1	1	2	4
16:00	16:15	0	0	0	0	0	0	0
16:15	16:30	0	0	0	1	0	1	1
16:30	16:45	0	0	0	2	0	2	2
16:45	17:00	0	0	0	1	0	1	1
17:00	17:15	0	0	0	0	2	2	2
17:45	18:00	0	0	0	0	2	2	2
17:15	17:30	0	0	0	1	1	2	2
17:30	17:45	0	0	0	1	0	1	1
Total		0	4	4	20	18	38	42



Transportation Services - Traffic Services

Turning Movement Count - Study Results

ERINDALE DR @ BASELINE RD

Survey Date: Tuesday, July 24, 2018

WO No: 37994

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

ERINDALE DR

BASELINE RD

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	0	0	0	1	0	1	1
07:15 07:30	0	0	0	0	0	0	0
07:30 07:45	0	1	1	0	0	0	1
07:45 08:00	0	1	1	0	0	0	1
08:00 08:15	0	0	0	1	0	1	1
08:15 08:30	0	2	2	0	0	0	2
08:30 08:45	0	1	1	0	0	0	1
08:45 09:00	0	0	0	0	0	0	0
09:00 09:15	0	0	0	0	0	0	0
09:15 09:30	0	1	1	0	0	0	1
09:30 09:45	0	2	2	0	0	0	2
09:45 10:00	0	1	1	1	0	1	2
11:30 11:45	0	1	1	0	0	0	1
11:45 12:00	0	0	0	0	0	0	0
12:00 12:15	0	3	3	0	0	0	3
12:15 12:30	0	0	0	0	0	0	0
12:30 12:45	0	0	0	2	0	2	2
12:45 13:00	0	2	2	0	0	0	2
13:00 13:15	0	1	1	1	2	3	4
13:15 13:30	0	1	1	0	0	0	1
15:00 15:15	0	1	1	0	2	2	3
15:15 15:30	0	2	2	1	0	1	3
15:30 15:45	0	0	0	0	0	0	0
15:45 16:00	0	3	3	1	0	1	4
16:00 16:15	0	3	3	1	0	1	4
16:15 16:30	0	1	1	0	0	0	1
16:30 16:45	0	0	0	1	0	1	1
16:45 17:00	0	0	0	0	0	0	0
17:00 17:15	0	0	0	0	0	0	0
17:15 17:30	0	2	2	0	0	0	2
17:30 17:45	0	0	0	1	0	1	1
17:45 18:00	0	1	1	1	0	1	2
Total	0	30	30	12	4	16	46



Transportation Services - Traffic Services

Turning Movement Count - Study Results

ERINDALE DR @ BASELINE RD

Survey Date: Tuesday, July 24, 2018

WO No: 37994

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

ERINDALE DR

BASELINE RD

Northbound

Southbound

Eastbound

Westbound

Time Period		Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total
		LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT			
07:00	07:15	0	0	0	0	0	0	0	2	2	0	9	0	13	0	4	2	15	28	15
07:15	07:30	0	0	0	0	0	0	0	1	1	0	5	0	14	0	9	1	15	29	15
07:30	07:45	0	0	0	0	0	0	1	1	1	0	5	0	16	0	10	0	15	31	16
07:45	08:00	0	0	0	0	0	0	3	5	5	0	6	0	15	0	6	2	14	29	17
08:00	08:15	0	0	0	0	0	0	0	0	0	0	12	0	19	0	7	0	19	38	19
08:15	08:30	0	0	0	0	0	0	1	2	2	0	10	0	20	0	9	1	20	40	21
08:30	08:45	0	0	0	0	0	0	0	0	0	0	8	0	12	0	4	0	12	24	12
08:45	09:00	0	0	0	0	0	0	0	1	1	0	5	0	13	0	8	1	14	27	14
09:00	09:15	0	0	0	0	1	0	1	2	2	0	12	0	19	0	6	0	19	38	20
09:15	09:30	0	0	0	0	1	0	0	2	2	1	6	0	14	0	7	0	14	28	15
09:30	09:45	0	0	0	0	1	0	0	3	3	0	10	0	13	0	3	2	16	29	16
09:45	10:00	0	0	0	0	0	0	0	1	1	0	4	0	10	0	6	1	11	21	11
11:30	11:45	0	0	0	0	1	0	0	1	1	0	4	0	13	0	9	0	14	27	14
11:45	12:00	0	0	0	0	0	0	0	1	1	0	7	0	18	0	11	1	19	37	19
12:00	12:15	0	0	0	0	1	0	1	2	2	0	4	0	8	0	3	0	8	16	9
12:15	12:30	0	0	0	0	0	0	0	2	2	1	5	0	12	0	6	1	12	24	13
12:30	12:45	0	0	0	0	1	0	1	2	2	0	8	0	15	0	6	0	15	30	16
12:45	13:00	0	0	0	0	0	0	1	2	2	0	3	0	7	0	3	1	7	14	8
13:00	13:15	0	0	0	0	1	0	1	2	2	0	5	0	13	0	7	0	13	26	14
13:15	13:30	0	0	0	0	0	0	0	1	1	0	4	0	8	0	4	1	9	17	9
15:00	15:15	0	0	0	0	0	0	0	0	0	0	2	0	10	0	8	0	10	20	10
15:15	15:30	0	0	0	0	1	0	0	2	2	1	7	0	13	0	5	0	13	26	14
15:30	15:45	0	0	0	0	1	0	0	1	1	0	5	0	10	0	5	0	11	21	11
15:45	16:00	0	0	0	0	0	0	0	0	0	0	14	0	22	0	8	0	22	44	22
16:00	16:15	0	0	0	0	0	0	0	0	0	0	4	0	7	0	3	0	7	14	7
16:15	16:30	0	0	0	0	1	0	0	1	1	0	5	0	10	0	5	0	11	21	11
16:30	16:45	0	0	0	0	0	0	0	0	0	0	4	0	11	0	7	0	11	22	11
16:45	17:00	0	0	0	0	0	0	0	0	0	0	5	0	9	0	4	0	9	18	9
17:00	17:15	0	0	0	0	1	0	0	1	1	0	8	0	12	0	4	0	13	25	13
17:45	18:00	0	0	0	0	0	0	0	1	1	0	1	0	4	0	3	1	5	9	5
17:15	17:30	0	0	0	0	1	0	0	1	1	0	8	0	12	0	4	0	13	25	13
17:30	17:45	0	0	0	0	0	0	0	0	0	0	5	0	12	0	7	0	12	24	12
Total:	None	0	0	0	0	12	0	10	40	40	3	200	0	404	0	191	15	418	822	431



Transportation Services - Traffic Services

Turning Movement Count - Study Results

ERINDALE DR @ BASELINE RD

Survey Date: Tuesday, July 24, 2018

WO No: 37994

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

ERINDALE DR

BASELINE RD

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	1	0	1
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	1	0	1
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	1	1
13:00	13:15	0	0	2	0	2
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	1	0	1
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	1	0	1
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	1	1
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:45	18:00	0	0	0	0	0
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	0	0	0
Total		0	0	6	2	8

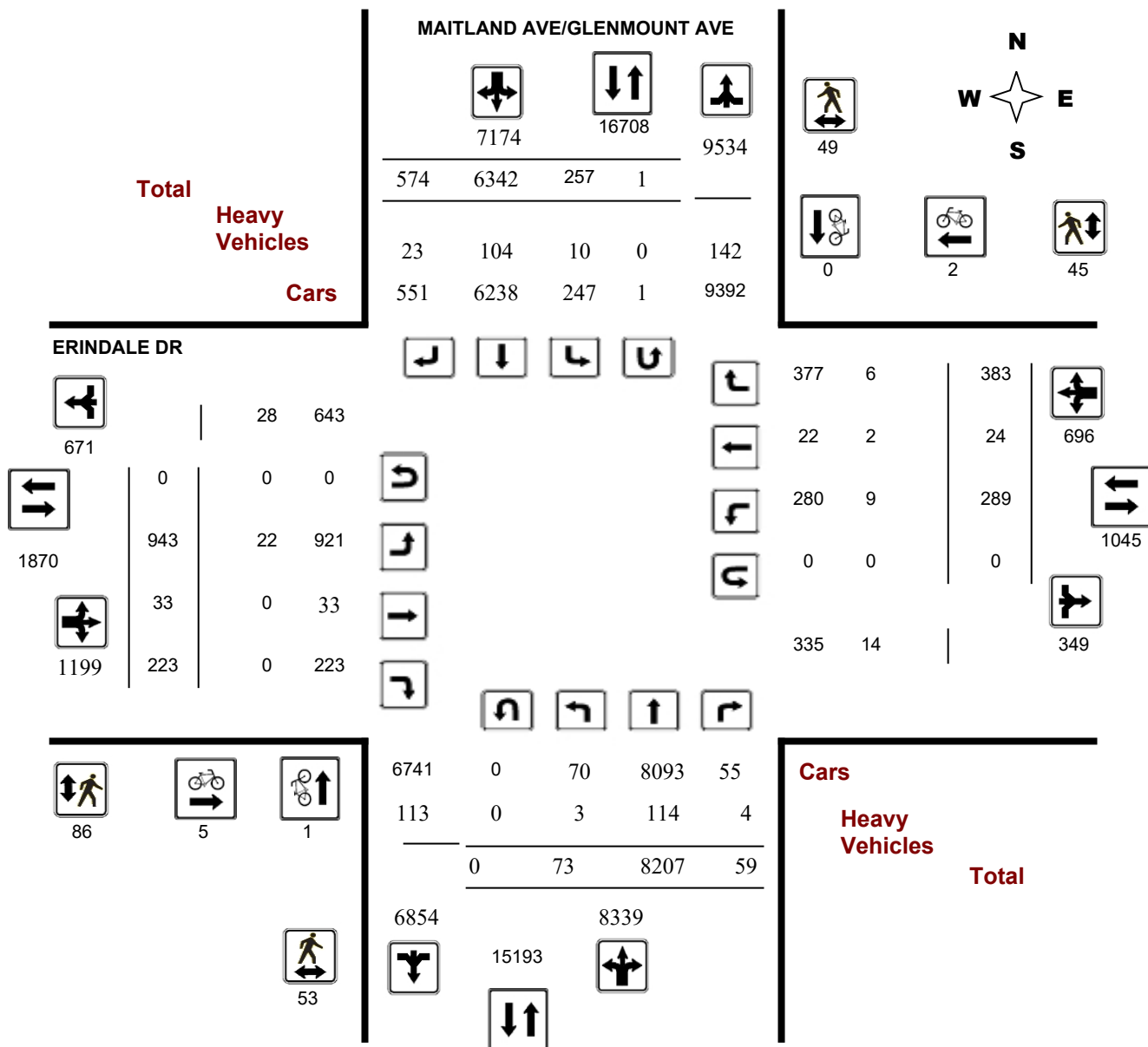
Survey Date: Tuesday, January 21, 2020

Start Time: 07:00

WO No: 39347

Device: Miovision

Full Study Diagram



Turning Movement Count - Study Results

MAITLAND AVE/GLENMOUNT AVE @ ERINDALE DR

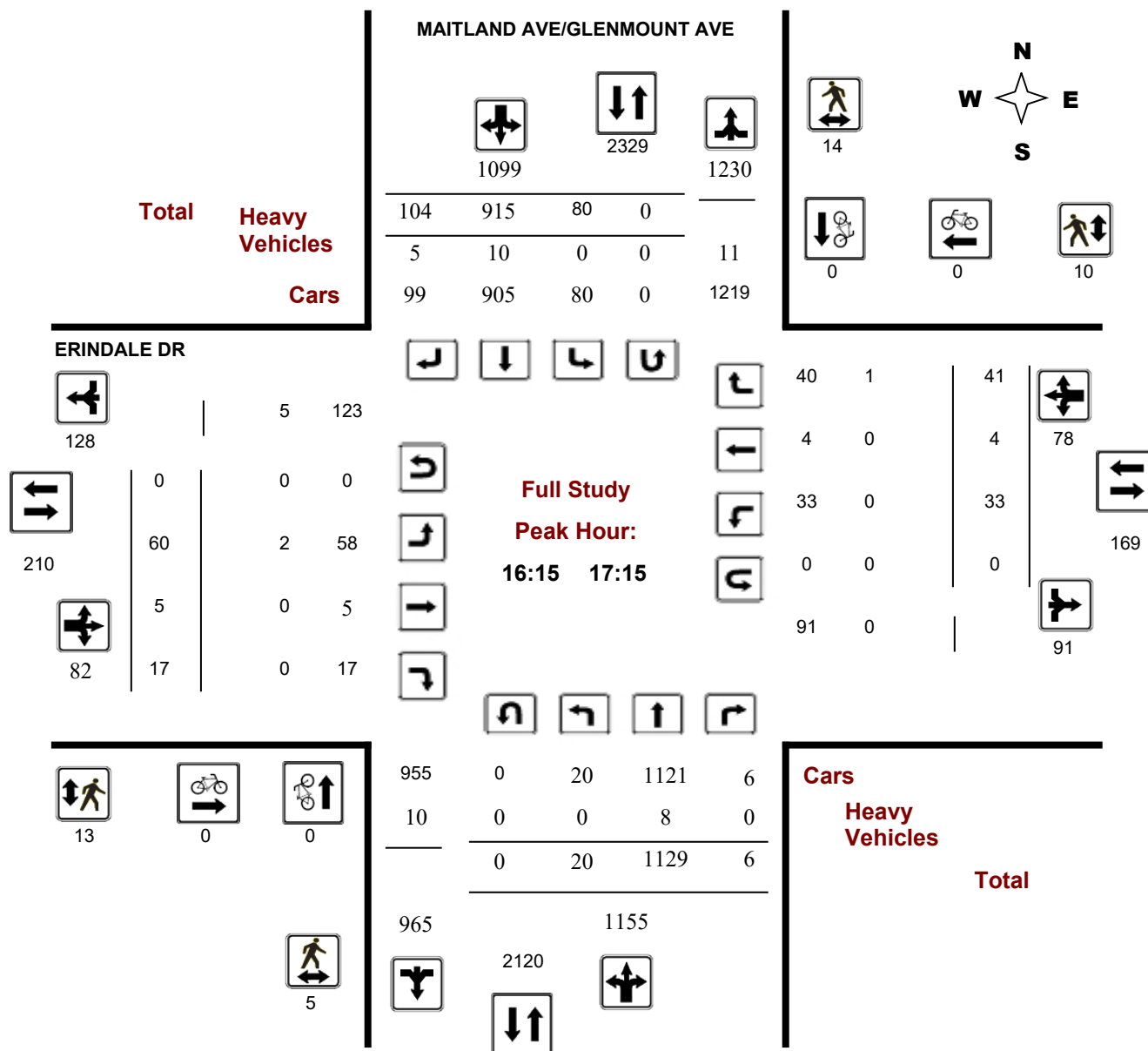
Survey Date: Tuesday, January 21, 2020

WO No: 39347

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram



5461338 - TUE JAN 21, 2020 - 8HRS - SHAWN MCGUIRE



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

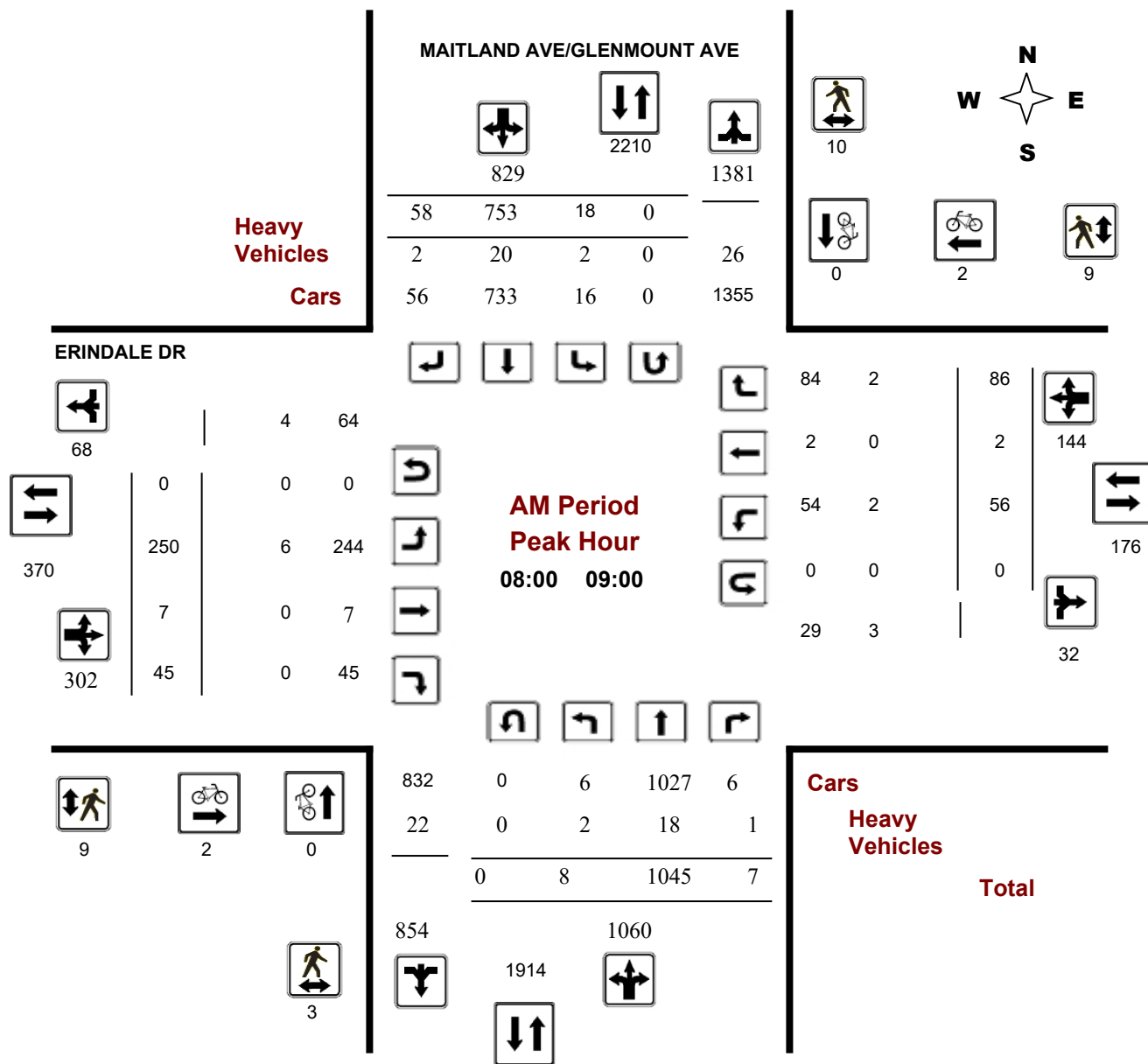
MAITLAND AVE/GLENMOUNT AVE @ ERINDALE DR

Survey Date: Tuesday, January 21, 2020

Start Time: 07:00

WO No: 39347

Device: Miovision



Comments 5461338 - TUE JAN 21, 2020 - 8HRS - SHAWN MCGUIRE

Turning Movement Count - Peak Hour Diagram

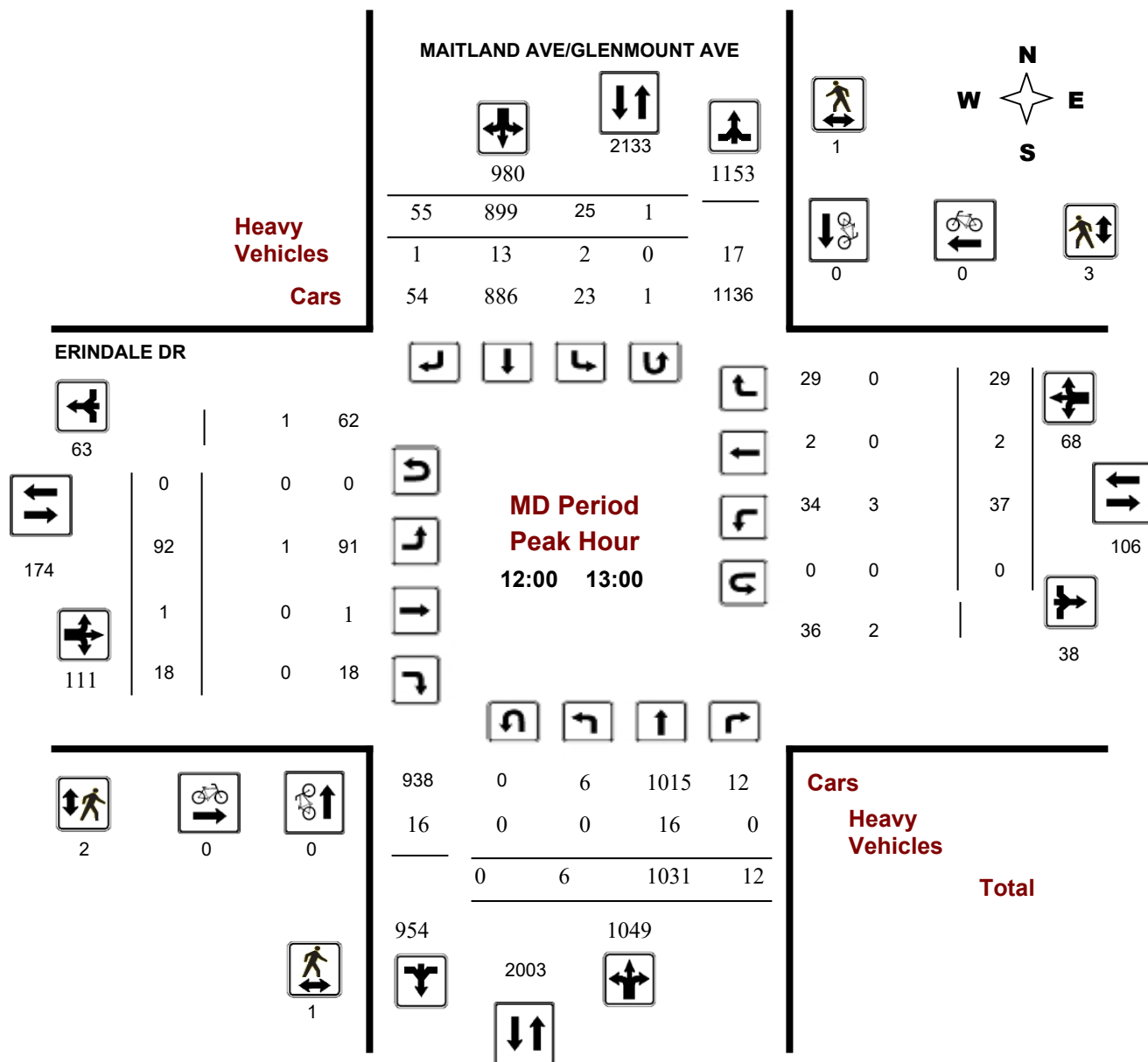
MAITLAND AVE/GLENMOUNT AVE @ ERINDALE DR

Survey Date: Tuesday, January 21, 2020

Start Time: 07:00

WO No: 39347

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

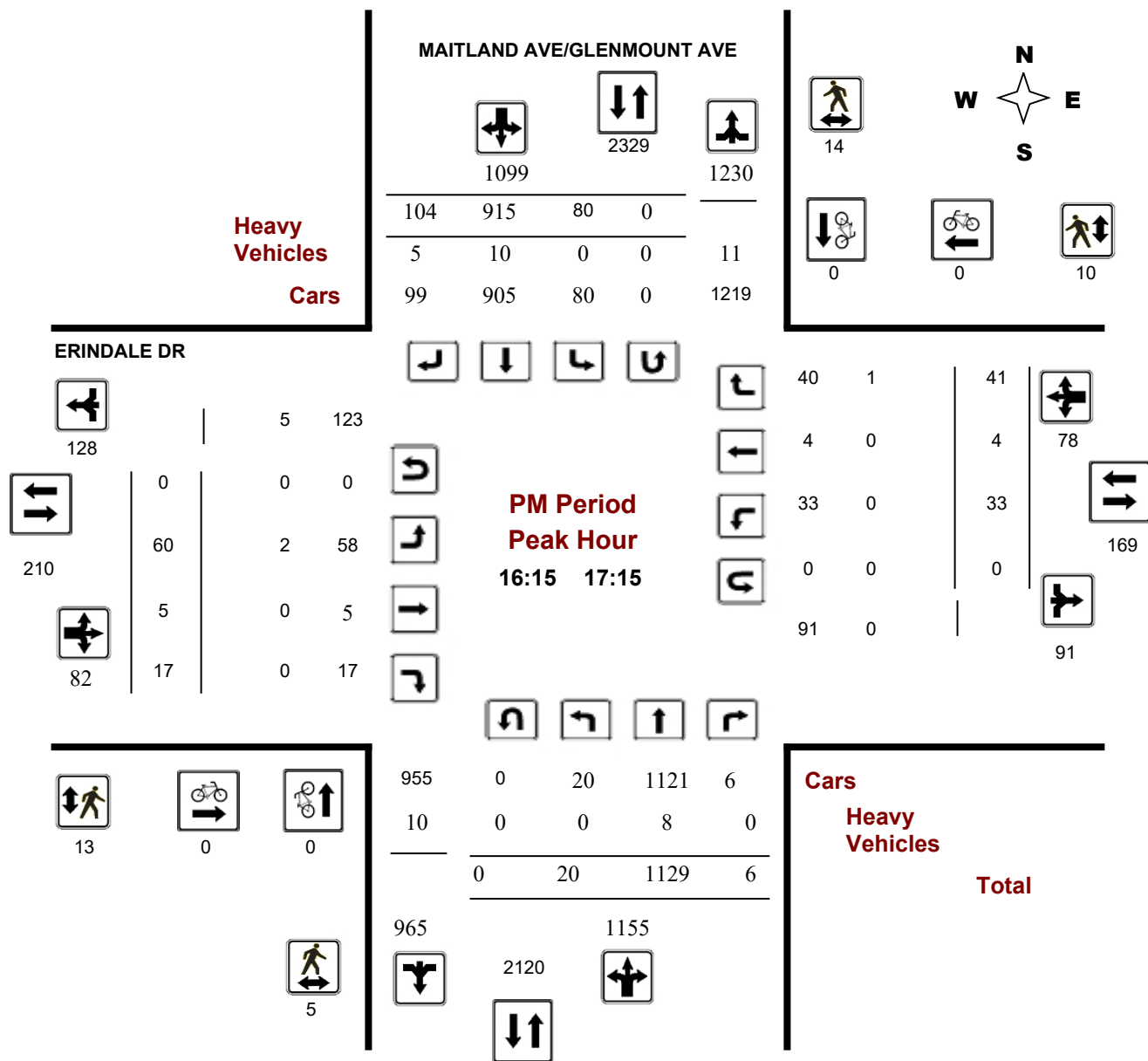
MAITLAND AVE/GLENMOUNT AVE @ ERINDALE DR

Survey Date: Tuesday, January 21, 2020

Start Time: 07:00

WO No: 39347

Device: Miovision



Comments 5461338 - TUE JAN 21, 2020 - 8HRS - SHAWN MCGUIRE



Transportation Services - Traffic Services

Turning Movement Count - Study Results

MAITLAND AVE/GLENMOUNT AVE @ ERINDALE DR

Survey Date: Tuesday, January 21, 2020

WO No: 39347

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, January 21, 2020

Total Observed U-Turns

AADT Factor

Northbound: 0 Southbound: 1

1.53

Eastbound: 0 Westbound: 0

MAITLAND AVE/GLENMOUNT AVE

ERINDALE DR

		Northbound				Southbound						Eastbound						Westbound					
Period		LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	Grand Total			
07:00	08:00	4	918	3	925	14	631	37	682	1607	161	0	39	200	39	3	73	115	315	1922			
08:00	09:00	8	1045	7	1060	18	753	58	829	1889	250	7	45	302	56	2	86	144	446	2335			
09:00	10:00	3	947	8	958	14	778	52	844	1802	148	2	50	200	38	3	53	94	294	2096			
11:30	12:30	10	959	11	980	28	933	70	1031	2011	85	2	15	102	26	2	29	57	159	2170			
12:30	13:30	5	1048	8	1061	26	870	48	944	2005	85	2	18	105	30	2	28	60	165	2170			
15:00	16:00	8	1197	10	1215	38	629	120	787	2002	75	5	23	103	28	3	15	46	149	2151			
16:00	17:00	20	1062	5	1087	67	852	82	1001	2088	69	6	19	94	36	6	67	109	203	2291			
17:00	18:00	15	1031	7	1053	52	896	107	1055	2108	70	9	14	93	36	3	32	71	164	2272			
Sub Total		73	8207	59	8339	257	6342	574	7173	15512	943	33	223	1199	289	24	383	696	1895	17407			
U Turns		0								1	1	0				0				0	1		
Total		73	8207	59	8339	257	6342	574	7174	15513	943	33	223	1199	289	24	383	696	1895	17408			
EQ 12Hr		101	11408	82	11591	357	8815	798	9972	21563	1311	46	310	1667	402	33	532	967	2634	24197			
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														1.39									
AVG 12Hr		112	12549	90	12750	393	9697	878	10969	23719	1442	50	341	1833	442	37	586	1064	2897	26617			
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														1.1									
AVG 24Hr		146	16439	118	16703	515	12703	1150	14369	31072	1889	66	447	2402	579	48	767	1394	3796	34868			

Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor. **1.31**

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



Transportation Services - Traffic Services

Turning Movement Count - Study Results

MAITLAND AVE/GLENMOUNT AVE @ ERINDALE DR

Survey Date: Tuesday, January 21, 2020

WO No: 39347

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

MAITLAND AVE/GLENMOUNT AVE

ERINDALE DR

Northbound

Southbound

Eastbound

Westbound

Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total	
07:00	07:15	0	194	2	196	6	143	7	156	747	34	0	8	42	5	1	11	17	747	411
07:15	07:30	1	226	0	227	3	157	3	163	844	35	0	8	43	9	0	19	28	844	461
07:30	07:45	0	259	1	260	2	160	10	172	946	51	0	10	61	14	1	20	35	946	528
07:45	08:00	3	239	0	242	3	171	17	191	931	41	0	13	54	11	1	23	35	931	522
08:00	08:15	3	296	0	299	1	159	20	180	1055	67	1	11	79	17	2	26	45	1055	603
08:15	08:30	2	263	2	267	6	205	20	231	1077	60	2	12	74	18	0	21	39	1077	611
08:30	08:45	2	235	4	241	3	210	11	224	1026	68	3	13	84	15	0	20	35	1026	584
08:45	09:00	1	251	1	253	8	179	7	194	966	55	1	9	65	6	0	19	25	966	537
09:00	09:15	0	311	0	311	3	197	15	215	1108	41	0	13	54	8	0	12	20	1108	600
09:15	09:30	0	220	2	222	7	185	17	209	918	45	1	15	61	9	0	13	22	918	514
09:30	09:45	0	208	3	211	1	212	9	222	933	34	1	16	51	15	1	15	31	933	515
09:45	10:00	3	208	3	214	3	184	11	198	857	28	0	6	34	6	2	13	21	857	467
11:30	11:45	1	231	2	234	8	210	13	231	941	19	1	4	24	8	1	4	13	941	502
11:45	12:00	3	219	2	224	7	263	24	294	1039	23	1	3	27	6	0	7	13	1039	558
12:00	12:15	3	240	2	245	5	240	14	259	1023	17	0	5	22	4	1	13	18	1023	544
12:15	12:30	3	269	5	277	8	220	19	247	1055	26	0	3	29	8	0	5	13	1055	566
12:30	12:45	0	244	2	246	10	223	11	245	1007	22	0	5	27	13	1	8	22	1007	540
12:45	13:00	0	278	3	281	2	216	11	229	1051	27	1	5	33	12	0	3	15	1051	558
13:00	13:15	2	238	0	240	8	207	14	229	947	18	1	3	22	3	1	9	13	947	504
13:15	13:30	3	288	3	294	6	224	12	242	1081	18	0	5	23	2	0	8	10	1081	569
15:00	15:15	0	304	2	306	10	184	18	212	1044	17	4	9	30	7	1	5	13	1044	561
15:15	15:30	4	323	4	331	14	161	14	189	1049	29	1	9	39	5	0	2	7	1049	566
15:30	15:45	4	323	0	327	7	165	23	195	1048	22	0	3	25	8	1	5	14	1048	561
15:45	16:00	0	247	4	251	7	119	65	191	828	7	0	2	9	8	1	3	12	828	463
16:00	16:15	2	206	1	209	6	181	12	199	864	22	1	5	28	9	2	33	44	864	480
16:15	16:30	5	355	1	361	24	233	24	281	1277	20	2	2	24	11	3	14	28	1277	694
16:30	16:45	3	277	0	280	15	220	22	257	1069	14	2	5	21	6	0	10	16	1069	574
16:45	17:00	10	224	3	237	22	218	24	264	983	13	1	7	21	10	1	10	21	983	543
17:00	17:15	2	273	2	277	19	244	34	297	1120	13	0	3	16	6	0	7	13	1120	603
17:15	17:30	1	275	3	279	8	227	24	259	1086	17	8	8	33	9	0	12	21	1086	592
17:30	17:45	6	273	1	280	12	222	30	264	1076	20	1	2	23	8	2	7	17	1076	584
17:45	18:00	6	210	1	217	13	203	19	235	905	20	0	1	21	13	1	6	20	905	493
Total:		73	8207	59	8339	257	6342	574	7174	31901	943	33	223	1199	289	24	383	696	31901	17,408

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

MAITLAND AVE/GLENMOUNT AVE @ ERINDALE DR

Survey Date: Tuesday, January 21, 2020

WO No: 39347

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

MAITLAND AVE/GLENMOUNT AVE

ERINDALE DR

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



Transportation Services - Traffic Services

Turning Movement Count - Study Results

MAITLAND AVE/GLENMOUNT AVE @ ERINDALE DR

Survey Date: Tuesday, January 21, 2020

WO No: 39347

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

MAITLAND AVE/GLENMOUNT AVE

ERINDALE DR

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	0	0	0	0	1	1	1
07:15 07:30	0	0	0	1	2	3	3
07:30 07:45	3	4	7	5	3	8	15
07:45 08:00	1	0	1	5	2	7	8
08:00 08:15	1	6	7	3	4	7	14
08:15 08:30	1	2	3	4	0	4	7
08:30 08:45	1	2	3	1	3	4	7
08:45 09:00	0	0	0	1	2	3	3
09:00 09:15	2	0	2	0	0	0	2
09:15 09:30	1	0	1	3	0	3	4
09:30 09:45	0	0	0	1	0	1	1
09:45 10:00	0	2	2	2	3	5	7
11:30 11:45	0	1	1	1	1	2	3
11:45 12:00	3	0	3	3	0	3	6
12:00 12:15	1	0	1	1	0	1	2
12:15 12:30	0	0	0	0	3	3	3
12:30 12:45	0	1	1	1	0	1	2
12:45 13:00	0	0	0	0	0	0	0
13:00 13:15	0	1	1	0	0	0	1
13:15 13:30	0	1	1	1	0	1	2
15:00 15:15	8	2	10	6	0	6	16
15:15 15:30	9	5	14	9	4	13	27
15:30 15:45	7	1	8	9	1	10	18
15:45 16:00	3	0	3	7	2	9	12
16:00 16:15	2	2	4	0	1	1	5
16:15 16:30	2	2	4	4	1	5	9
16:30 16:45	0	2	2	0	2	2	4
16:45 17:00	0	9	9	3	6	9	18
17:00 17:15	3	1	4	6	1	7	11
17:15 17:30	4	3	7	6	2	8	15
17:30 17:45	0	1	1	2	0	2	3
17:45 18:00	1	1	2	1	1	2	4
Total	53	49	102	86	45	131	233

5461338 - TUE JAN 21, 2020 - 8HRS - SHAWN MCGUIRE



Transportation Services - Traffic Services

Turning Movement Count - Study Results

MAITLAND AVE/GLENMOUNT AVE @ ERINDALE DR

Survey Date: Tuesday, January 21, 2020

WO No: 39347

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

MAITLAND AVE/GLENMOUNT AVE

ERINDALE DR

Northbound

Southbound

Eastbound

Westbound

Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00 07:15	0	2	1	4	0	1	0	4	8	1	0	0	1	0	0	0	1	2	5
07:15 07:30	0	5	0	7	1	2	0	9	16	1	0	0	1	0	0	0	1	2	9
07:30 07:45	0	1	0	5	0	3	0	5	10	1	0	0	1	1	0	0	1	2	6
07:45 08:00	0	3	0	5	0	2	2	8	13	1	0	0	4	0	1	0	1	5	9
08:00 08:15	1	3	0	12	0	7	1	14	26	3	0	0	5	1	0	0	1	6	16
08:15 08:30	1	5	0	11	1	4	1	13	24	1	0	0	3	1	0	1	3	6	15
08:30 08:45	0	4	1	8	0	3	0	8	16	1	0	0	1	0	0	0	1	2	9
08:45 09:00	0	6	0	12	1	6	0	15	27	1	0	0	1	0	0	1	2	3	15
09:00 09:15	0	8	0	12	0	4	2	14	26	0	0	0	2	0	0	0	0	2	14
09:15 09:30	0	4	0	5	0	1	0	6	11	1	0	0	1	0	0	0	0	1	6
09:30 09:45	0	6	0	12	0	6	1	13	25	0	0	0	1	0	0	0	0	1	13
09:45 10:00	0	5	0	9	0	3	1	10	19	0	0	0	1	1	0	1	2	3	11
11:30 11:45	0	4	0	7	1	3	0	8	15	0	0	0	1	0	1	0	2	3	9
11:45 12:00	0	4	0	13	0	8	0	13	26	1	0	0	1	1	0	0	1	2	14
12:00 12:15	0	3	0	9	0	6	0	9	18	0	0	0	0	0	0	0	0	0	9
12:15 12:30	0	1	0	3	2	2	0	5	8	0	0	0	0	0	0	0	2	2	5
12:30 12:45	0	6	0	13	0	5	0	11	24	0	0	0	0	2	0	0	2	2	13
12:45 13:00	0	6	0	7	0	0	1	8	15	1	0	0	2	1	0	0	1	3	9
13:00 13:15	0	5	0	11	0	6	1	12	23	0	0	0	1	0	0	0	0	1	12
13:15 13:30	0	0	1	8	0	7	0	9	17	1	0	0	1	0	0	1	2	3	10
15:00 15:15	0	5	0	8	0	3	2	10	18	0	0	0	2	0	0	0	0	2	10
15:15 15:30	1	3	0	6	1	2	0	8	14	2	0	0	3	0	0	0	1	4	9
15:30 15:45	0	4	0	9	0	4	1	9	18	0	0	0	1	1	0	0	1	2	10
15:45 16:00	0	0	1	4	0	3	1	6	10	2	0	0	3	0	0	0	1	4	7
16:00 16:15	0	5	0	6	3	1	1	11	17	0	0	0	1	0	0	1	4	5	11
16:15 16:30	0	2	0	3	0	1	1	5	8	0	0	0	1	0	0	1	1	2	5
16:30 16:45	0	1	0	3	0	2	1	5	8	1	0	0	2	0	0	0	0	2	5
16:45 17:00	0	2	0	5	0	3	2	8	13	1	0	0	3	0	0	0	0	3	8
17:00 17:15	0	3	0	7	0	4	1	8	15	0	0	0	1	0	0	0	0	1	8
17:15 17:30	0	2	0	2	0	0	1	4	6	1	0	0	2	0	0	0	0	2	4
17:30 17:45	0	3	0	3	0	0	1	5	8	1	0	0	2	0	0	0	0	2	5
17:45 18:00	0	3	0	5	0	2	1	6	11	0	0	0	1	0	0	0	0	1	6
Total: None	3	114	4	234	10	104	23	279	513	22	0	0	50	9	2	6	31	81	297



Transportation Services - Traffic Services

Turning Movement Count - Study Results

MAITLAND AVE/GLENMOUNT AVE @ ERINDALE DR

Survey Date: Tuesday, January 21, 2020

WO No: 39347

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

MAITLAND AVE/GLENMOUNT AVE

ERINDALE DR

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

APPENDIX D

CITY OF OTTAWA COLLISION DATA

DRAFT

Total Area

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	108	21	53	27	2	0	0	1	212
Non-fatal injury	23	4	4	11	1	0	0	1	44
Non reportable	0	0	0	0	0	0	0	0	0
Total	131	25	57	38	3	0	0	2	256
	#1 or 51%	#4 or 10%	#2 or 22%	#3 or 15%	#5 or 1%	#7 or 0%	#7 or 0%	#6 or 1%	

83%
17%
0%
100%

BASELINE RD/CLYDE AVE

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	120	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	64	11	19	8	0	0	0	0	102
Non-fatal injury	12	1	1	4	0	0	0	0	18
Non reportable	0	0	0	0	0	0	0	0	0
Total	76	12	20	12	0	0	0	0	120
	63%	10%	17%	10%	0%	0%	0%	0%	

85%
15%
0%
100%

BASELINE RD/PENDER ST

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	3	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	1	0	1	0	0	0	0	0	2
Non-fatal injury	1	0	0	0	0	0	0	0	1
Non reportable	0	0	0	0	0	0	0	0	0
Total	2	0	1	0	0	0	0	0	3
	67%	0%	33%	0%	0%	0%	0%	0%	

67%
33%
0%
100%

BASELINE RD/ST HELEN'S PL

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	3	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	1	0	1	0	0	0	0	0	2
Non-fatal injury	1	0	0	0	0	0	0	0	1
Non reportable	0	0	0	0	0	0	0	0	0
Total	2	0	1	0	0	0	0	0	3
	67%	0%	33%	0%	0%	0%	0%	0%	

67%
33%
0%
100%

BASELINE RD, PENDER ST to HENRY FARM DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	0	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	0	0	0	0	0	0	0	0	0
Non-fatal injury	0	0	0	0	0	0	0	0	0
Non reportable	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0

0%

BASELINE RD, ST HELEN'S PL to CLYDE AVE

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	14	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	4	0	4	2	0	0	0	0	10
Non-fatal injury	1	0	1	1	0	0	0	1	4
Non reportable	0	0	0	0	0	0	0	0	0
Total	5	0	5	3	0	0	0	1	14
	36%	0%	36%	21%	0%	0%	0%	7%	

71%
29%
0%
100%

CLYDE AVE/MAITLAND AVE

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	7	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	3	1	2	0	0	0	0	0	6	86%
Non-fatal injury	0	1	0	0	0	0	0	0	1	14%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	3	2	2	0	0	0	0	0	7	100%
	43%	29%	29%	0%	0%	0%	0%	0%		

CLYDE AVE, MAITLAND AVE to BASELINE RD

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	10	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	3	2	3	1	0	0	0	0	9	90%
Non-fatal injury	0	0	0	1	0	0	0	0	1	10%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	3	2	3	2	0	0	0	0	10	100%
	30%	20%	30%	20%	0%	0%	0%	0%		

ERINDALE DR/BASELINE RD

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	11	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	2	0	0	6	0	0	0	0	8	73%
Non-fatal injury	0	0	0	3	0	0	0	0	3	27%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	2	0	0	9	0	0	0	0	11	100%
	18%	0%	0%	82%	0%	0%	0%	0%		

AMESBROOKE DR/MAITLAND AVE

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	4	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	2	0	2	0	0	0	0	0	4	100%
Non-fatal injury	0	0	0	0	0	0	0	0	0	0%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	2	0	2	0	0	0	0	0	4	100%
	50%	0%	50%	0%	0%	0%	0%	0%		

CAMEO DR/MAITLAND AVE

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	7	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	1	1	1	4	0	0	0	0	7	100%
Non-fatal injury	0	0	0	0	0	0	0	0	0	0%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	1	1	1	4	0	0	0	0	7	100%
	14%	14%	14%	57%	0%	0%	0%	0%		

ERINDALE DR/FORLAN DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	1	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	0	0	0	0	0	0	0	0	0	0%
Non-fatal injury	1	0	0	0	0	0	0	0	1	100%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	1	0	0	0	0	0	0	0	1	100%
	100%	0%	0%	0%	0%	0%	0%	0%		

ERINDALE DR/NAVAHO DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	2	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	0	0	0	1	0	0	0	0	1	50%
Non-fatal injury	1	0	0	0	0	0	0	0	1	50%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	1	0	0	1	0	0	0	0	2	100%
	50%	0%	0%	50%	0%	0%	0%	0%		

ERINDALE DR, AINSLEY DR to BASELINE RD

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	1	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	1	0	0	0	0	0	0	0	1	100%
Non-fatal injury	0	0	0	0	0	0	0	0	0	0%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	1	0	0	0	0	0	0	0	1	100%
	100%	0%	0%	0%	0%	0%	0%	0%		

ERINDALE DR, FORLAN DR to AINSLEY DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	0	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	0	0	0	0	0	0	0	0	0	
Non-fatal injury	0	0	0	0	0	0	0	0	0	
Non reportable	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0%

ERINDALE DR, NAVAHO DR to FORLAN DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	1	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	0	1	0	0	0	0	0	0	1	100%
Non-fatal injury	0	0	0	0	0	0	0	0	0	0%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	0	1	0	0	0	0	0	0	1	100%
	0%	100%	0%	0%	0%	0%	0%	0%		

ERINDALE DR, NAVAHO DR to MAITLAND AVE

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	1	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	0	0	0	0	1	0	0	0	1	100%
Non-fatal injury	0	0	0	0	0	0	0	0	0	0%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	0	0	0	0	1	0	0	0	1	100%
	0%	0%	0%	0%	100%	0%	0%	0%		

HENRY FARM DR/MAITLAND AVE

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	3	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total	
P.D. only	1	0	0	1	0	0	0	0	2	67%
Non-fatal injury	1	0	0	0	0	0	0	0	1	33%
Non reportable	0	0	0	0	0	0	0	0	0	0%
Total	2	0	0	1	0	0	0	0	3	100%
	67%	0%	0%	33%	0%	0%	0%	0%		

MAITLAND AVE/TERREBONNE DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	5	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	2	1	1	0	0	0	0	0	4
Non-fatal injury	1	0	0	0	0	0	0	0	1
Non reportable	0	0	0	0	0	0	0	0	0
Total	3	1	1	0	0	0	0	0	5
	60%	20%	20%	0%	0%	0%	0%	0%	

80%
20%
0%
100%

MAITLAND AVE, AMESBROOKE DR to HENRY FARM DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	5	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	3	0	2	0	0	0	0	0	5
Non-fatal injury	0	0	0	0	0	0	0	0	0
Non reportable	0	0	0	0	0	0	0	0	0
Total	3	0	2	0	0	0	0	0	5
	60%	0%	40%	0%	0%	0%	0%	0%	

100%
0%
0%
100%

MAITLAND AVE, CAMEO DR to CLYDE AVE

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	3	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	1	0	2	0	0	0	0	0	3
Non-fatal injury	0	0	0	0	0	0	0	0	0
Non reportable	0	0	0	0	0	0	0	0	0
Total	1	0	2	0	0	0	0	0	3
	33%	0%	67%	0%	0%	0%	0%	0%	

100%
0%
0%
100%

MAITLAND AVE, GLENMOUNT AVE to AMESBROOKE DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	4	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	1	0	3	0	0	0	0	0	4
Non-fatal injury	0	0	0	0	0	0	0	0	0
Non reportable	0	0	0	0	0	0	0	0	0
Total	1	0	3	0	0	0	0	0	4
	25%	0%	75%	0%	0%	0%	0%	0%	

100%
0%
0%
100%

MAITLAND AVE, HENRY FARM DR to TERREBONNE DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	4	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	0	0	2	0	0	0	0	1	3
Non-fatal injury	0	0	1	0	0	0	0	0	1
Non reportable	0	0	0	0	0	0	0	0	0
Total	0	0	3	0	0	0	0	1	4
	0%	0%	75%	0%	0%	0%	0%	25%	

75%
25%
0%
100%

MAITLAND AVE, TERREBONNE DR to CAMEO DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	7	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	3	1	1	0	0	0	0	0	5
Non-fatal injury	1	0	0	0	1	0	0	0	2
Non reportable	0	0	0	0	0	0	0	0	0
Total	4	1	1	0	1	0	0	0	7
	57%	14%	14%	0%	14%	0%	0%	0%	

71%
29%
0%
100%

MAITLAND AVE/ERINDALE DR/GLENMOUNT AVE

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
#VALUE!	40	n/a	#VALUE!	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	15	3	9	4	1	0	0	0	32
Non-fatal injury	3	2	1	2	0	0	0	0	8
Non reportable	0	0	0	0	0	0	0	0	0
Total	18	5	10	6	1	0	0	0	40
	45%	13%	25%	15%	3%	0%	0%	0%	

80%
20%
0%
100%



City Operations - Transportation Services

Collision Details Report - Public Version

From: January 1, 2014 **To:** December 31, 2018

Location: BASELINE RD @ CLYDE AVE

Traffic Control: Traffic signal

Total Collisions: 123

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2014-Jan-26, Sun,13:56	Clear	Rear end	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	
					East	Turning left	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Pick-up truck	Other motor vehicle	
2014-Feb-22, Sat,12:45	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2014-Feb-14, Fri,18:27	Clear	Rear end	P.D. only	Wet	East	Going ahead	Pick-up truck	Other motor vehicle	
					East	Stopped	Pick-up truck	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2014-Mar-05, Wed,21:06	Clear	Turning movement	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	
					North	Turning left	Automobile, station wagon	Other motor vehicle	
					North	Turning left	Automobile, station wagon	Other motor vehicle	

2014-Apr-03, Thu,21:25	Clear	SMV other	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Pole (utility, power)
2014-Mar-07, Fri,17:24	Clear	Rear end	P.D. only	Ice	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					East	Stopped	Pick-up truck	Other motor vehicle
2014-Mar-24, Mon,09:33	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Passenger van	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2014-May-07, Wed,17:16	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Jun-05, Thu,19:46	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Pick-up truck	Other motor vehicle
2014-Jul-27, Sun,16:39	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2014-Jul-02, Wed,10:25	Clear	Rear end	P.D. only	Dry	South	Going ahead	Delivery van	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle

2014-Jul-22, Tue,17:40	Clear	Rear end	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2014-Jul-03, Thu,08:20	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2014-Aug-24, Sun,09:50	Clear	Rear end	Non-fatal injury	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2014-Aug-19, Tue,18:14	Clear	Turning movement	P.D. only	Dry	South	Turning left	Pick-up truck	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2014-Oct-09, Thu,16:20	Rain	Rear end	P.D. only	Wet	West	Turning right	Delivery van	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2014-Dec-14, Sun,20:12	Fog, mist, smoke, dust	Rear end	P.D. only	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2015-Jan-20, Tue,11:00	Clear	Rear end	Non-fatal injury	Ice	North	Slowing or stopping	Pick-up truck	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

2014-Jul-03, Thu,06:05	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Turning left	Pick-up truck	Other motor vehicle
2014-Oct-29, Wed,16:30	Clear	Rear end	P.D. only	Dry	North	Turning right	Passenger van	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
2014-Nov-28, Fri,16:58	Clear	Angle	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					South	Making "U" turn	Automobile, station wagon	Other motor vehicle
2014-Dec-19, Fri,14:40	Clear	Turning movement	P.D. only	Dry	East	Turning left	Municipal transit bus	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2014-Sep-25, Thu,16:46	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jan-25, Sun,20:25	Clear	Rear end	P.D. only	Ice	South	Slowing or stopping	Pick-up truck	Other motor vehicle
					South	Slowing or stopping	Pick-up truck	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2014-Dec-26, Fri,16:27	Clear	Turning movement	P.D. only	Dry	West	Going ahead	Motorcycle	Skidding/sliding
					East	Turning left	Automobile, station wagon	Other motor vehicle

2015-Mar-20, Fri,09:15	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2015-Mar-31, Tue,16:21	Clear	Rear end	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle
					West	Stopped	Passenger van	Other motor vehicle
					West	Stopped	Pick-up truck	Other motor vehicle
2015-Feb-06, Fri,09:35	Clear	Angle	P.D. only	Loose snow	West	Slowing or stopping	Passenger van	Other motor vehicle
					North	Going ahead	Passenger van	Other motor vehicle
2015-Jan-28, Wed,13:45	Clear	Sideswipe	P.D. only	Dry	West	Overtaking	Unknown	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2015-Mar-11, Wed,00:00	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2015-Jan-02, Fri,10:30	Clear	Sideswipe	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2015-Feb-08, Sun,13:06	Clear	Rear end	P.D. only	Ice	South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle

2014-Dec-25, Thu,15:09	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Mar-14, Sat,19:17	Freezing Rain	Sideswipe	P.D. only	Wet	West	Changing lanes	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle
2015-Apr-15, Wed,09:58	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2015-Mar-03, Tue,18:27	Snow	Angle	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2015-May-08, Fri,19:52	Clear	Rear end	Non-fatal injury	Dry	West	Unknown	Unknown	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2015-Aug-31, Mon,12:09	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Passenger van	Other motor vehicle
2015-Jul-03, Fri,16:04	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Pick-up truck	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle

2015-Jun-20, Sat,17:55	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2015-Mar-17, Tue,17:11	Clear	Sideswipe	P.D. only	Dry	South	Turning left	Pick-up truck	Other motor vehicle
					South	Turning left	Pick-up truck	Other motor vehicle
2015-Jun-08, Mon,17:47	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2015-Jun-20, Sat,15:50	Clear	Turning movement	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2016-May-07, Sat,14:45	Clear	Turning movement	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2016-Jan-16, Sat,22:50	Snow	Turning movement	P.D. only	Loose snow	North	Going ahead	Passenger van	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2016-Mar-26, Sat,20:29	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Passenger van	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
					North	Turning left	Passenger van	Other motor vehicle

					East	Turning left	Automobile, station wagon	Other motor vehicle
2016-Oct-26, Wed,20:00	Clear	Rear end	P.D. only	Dry	North	Turning right	Police vehicle	Other motor vehicle
					North	Turning right	Police vehicle	Other motor vehicle
2015-Oct-29, Thu,12:54	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Truck - open	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2015-Dec-11, Fri,18:00	Rain	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2015-Dec-05, Sat,23:12	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
2016-Jan-09, Sat,09:45	Rain	Rear end	P.D. only	Wet	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Pick-up truck	Other motor vehicle
2016-Apr-25, Mon,17:13	Clear	Rear end	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2016-Mar-26, Sat,21:04	Clear	Rear end	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle

					West	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Aug-24, Wed,15:30	Clear	Sideswipe	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Mar-29, Tue,12:53	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2016-Jun-30, Thu,15:45	Clear	Rear end	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle
					East	Stopped	Pick-up truck	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2016-Apr-13, Wed,17:19	Clear	Sideswipe	P.D. only	Dry	West	Overtaking	Pick-up truck	Other motor vehicle
					West	Stopped	Tow truck	Other motor vehicle
2016-May-25, Wed,19:33	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Sep-03, Sat,11:50	Clear	Rear end	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

					North	Stopped	Pick-up truck	Other motor vehicle
2016-Apr-10, Sun,10:40	Clear	Rear end	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle
					West	Turning left	Pick-up truck	Other motor vehicle
2016-Jul-28, Thu,14:05	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Pick-up truck	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Nov-09, Wed,17:55	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2016-Oct-11, Tue,13:00	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2016-Oct-19, Wed,16:55	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
2016-Jun-30, Thu,17:02	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2016-Sep-30, Fri,08:20	Clear	Rear end	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle

					West	Stopped	Pick-up truck	Other motor vehicle
2016-Oct-14, Fri,17:30	Clear	Rear end	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Passenger van	Other motor vehicle
2017-Aug-24, Thu,14:02	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2017-Aug-14, Mon,20:00	Clear	Angle	P.D. only	Dry	West	Merging	Automobile, station wagon	Other motor vehicle
					South	Making "U" turn	Automobile, station wagon	Other motor vehicle
2017-Feb-13, Mon,20:44	Clear	Rear end	Non-fatal injury	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Municipal transit bus	Other motor vehicle
2017-Feb-10, Fri,08:51	Clear	Rear end	P.D. only	Ice	North	Slowing or stopping	Automobile, station wagon	Skidding/sliding
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-Feb-11, Sat,14:30	Clear	Rear end	P.D. only	Packed snow	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2017-Feb-16, Thu,16:49	Clear	Rear end	Non-fatal injury	Packed snow	West	Slowing or stopping	Passenger van	Skidding/sliding

					West	Stopped	Automobile, station wagon	Other motor vehicle
2017-Feb-16, Thu,08:30	Snow	Rear end	P.D. only	Ice	West	Slowing or stopping	Pick-up truck	Skidding/sliding
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Feb-16, Thu,08:45	Clear	Rear end	P.D. only	Slush	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2017-Feb-24, Fri,12:07	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2017-Feb-16, Thu,07:00	Snow	Sideswipe	P.D. only	Packed snow	West	Changing lanes	Passenger van	Skidding/sliding
					West	Slowing or stopping	Pick-up truck	Other motor vehicle
2016-Dec-20, Tue,19:35	Clear	Angle	P.D. only	Slush	South	Making "U" turn	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2016-Nov-30, Wed,16:22	Rain	Sideswipe	P.D. only	Wet	West	Changing lanes	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle

2016-Nov-28, Mon,17:17	Clear	SMV other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Concrete guide rail
2016-Dec-10, Sat,11:35	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Passenger van	Other motor vehicle
					North	Stopped	Passenger van	Other motor vehicle
2016-Dec-11, Sun,16:05	Snow	Rear end	Non-fatal injury	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2017-May-22, Mon,14:46	Rain	Rear end	P.D. only	Wet	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
2017-May-30, Tue,23:52	Clear	SMV other	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Curb
2017-May-05, Fri,09:22	Rain	Angle	P.D. only	Wet	East	Slowing or stopping	Pick-up truck	Skidding/sliding
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-May-30, Tue,12:01	Clear	Turning movement	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning left	Pick-up truck	Other motor vehicle
2017-Jul-11, Tue,15:20	Rain	Sideswipe	P.D. only	Wet	West	Changing lanes	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle

2017-Sep-24, Sun,14:04	Clear	Rear end	P.D. only	Dry	East	Merging	Unknown	Other motor vehicle
					East	Going ahead	Municipal transit bus	Other motor vehicle
2017-Jul-20, Thu,12:40	Clear	Rear end	P.D. only	Dry	North	Going ahead	Passenger van	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-Nov-08, Wed,23:06	Clear	Turning movement	P.D. only	Dry	South	Going ahead	Unknown	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2017-Sep-18, Mon,08:55	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2017-Nov-17, Fri,13:00	Clear	Angle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Unknown	Other motor vehicle
2017-Dec-23, Sat,22:24	Snow	Turning movement	Non-fatal injury	Packed snow	East	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2017-Dec-27, Wed,13:20	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle

2017-Sep-21, Thu,13:45	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Unknown	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Dec-06, Wed,16:29	Clear	Rear end	P.D. only	Dry	East	Changing lanes	Passenger van	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2017-Dec-11, Mon,17:19	Clear	Rear end	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2017-Dec-11, Mon,15:06	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-Dec-10, Sun,01:28	Snow	Sideswipe	P.D. only	Slush	West	Going ahead	Automobile, station wagon	Skidding/sliding
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2018-Feb-01, Thu,11:08	Clear	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2017-Sep-14, Thu,14:22	Clear	Angle	Non-fatal injury	Dry	West	Turning right	Passenger van	Cyclist
					South	Going ahead	Bicycle	Other motor vehicle

2018-Mar-25, Sun,12:25	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2018-Apr-03, Tue,22:01	Freezing Rain	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2018-Mar-21, Wed,16:21	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					East	Slowing or stopping	School bus	Other motor vehicle
2018-Jan-18, Thu,19:44	Clear	Sideswipe	Non-fatal injury	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2018-Mar-01, Thu,13:45	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Police vehicle	Other motor vehicle
2018-Apr-16, Mon,09:47	Freezing Rain	Sideswipe	P.D. only	Wet	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2018-May-13, Sun,11:17	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle

2018-May-15, Tue,12:25	Clear	Rear end	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2018-Jul-11, Wed,21:31	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2018-Jun-11, Mon,09:30	Clear	Rear end	P.D. only	Dry	North	Going ahead	Motorcycle	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2018-Jun-25, Mon,16:11	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2018-Sep-28, Fri,13:54	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Nov-17, Sat,14:35	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2018-Nov-05, Mon,14:36	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle

2018-Nov-22, Thu,19:11	Snow	Rear end	P.D. only	Slush	West	Turning left	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2018-Dec-12, Wed,15:28	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Jul-21, Sat,17:59	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2018-Aug-03, Fri,15:43	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Oct-29, Mon,11:03	Clear	Sideswipe	P.D. only	Wet	East	Changing lanes	Passenger van	Other motor vehicle
					East	Overtaking	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Nov-01, Thu,08:05	Rain	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2018-Aug-31, Fri,12:20	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle

					South	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Nov-09, Fri,12:47	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle

Location: BASELINE RD @ PENDER ST

Traffic Control: Stop sign

Total Collisions: 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Sep-08, Tue,14:36	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Dec-05, Mon,14:10	Snow	Rear end	P.D. only	Packed snow	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Nov-30, Fri,14:49	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	School bus	Other motor vehicle	
					East	Going ahead	Truck - closed	Other motor vehicle	

Location: BASELINE RD @ ST. HELEN'S PL

Traffic Control: Stop sign

Total Collisions: 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Jul-16, Wed,12:43	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	

2014-Sep-22, Mon,16:30	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Pick-up truck	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle

2018-Oct-26, Fri,09:21	Clear	Rear end	Non-fatal injury	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle

Location: BASELINE RD btwn PENDER ST & HENRY FARM DR

Traffic Control: No control

Total Collisions: 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Feb-10, Mon,18:20	Clear	SMV other	Non-fatal injury	Ice	West	Going ahead	Pick-up truck	Pedestrian	1

Location: BASELINE RD btwn ST. HELEN'S PL & CLYDE AVE

Traffic Control: No control

Total Collisions: 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Sep-05, Fri,15:07	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Passenger van	Other motor vehicle	
					East	Going ahead	Pick-up truck	Other motor vehicle	

2014-Feb-21, Fri,16:18	Rain	Rear end	Non-fatal injury	Wet	East	Slowing or stopping	Pick-up truck	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle

2015-Feb-11, Wed,19:04	Snow	Angle	P.D. only	Slush	South	Turning left	Automobile, station wagon	Other motor vehicle
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					West	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Jan-04, Sun,13:21	Rain	SMV unattended vehicle	Non-fatal injury	Ice	East	Going ahead	Automobile, station wagon	Unattended vehicle
2015-Jul-22, Wed,06:56	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Bicycle	Other motor vehicle
					North	Turning right	Pick-up truck	Cyclist
2015-Mar-29, Sun,17:00	Clear	Angle	P.D. only	Dry	South	Turning left	Passenger van	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Sep-21, Mon,06:05	Clear	SMV other	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Curb
2015-Sep-14, Mon,08:30	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Passenger van	Other motor vehicle
					West	Slowing or stopping	Pick-up truck	Other motor vehicle
2016-Sep-06, Tue,14:10	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
					East	Slowing or stopping	Passenger van	Other motor vehicle
2015-Sep-29, Tue,18:06	Rain	Rear end	P.D. only	Wet	West	Slowing or stopping	Delivery van	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle

2016-Apr-08, Fri,16:34	Clear	Sideswipe	P.D. only	Dry	East	Pulling away from shoulder or curb	Municipal transit bus	Other motor vehicle
					East	Going ahead	Pick-up truck	Other motor vehicle
2016-Oct-30, Sun,19:06	Clear	Turning movement	Fatal injury	Dry	West	Going ahead	Motorcycle	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2016-Apr-18, Mon,21:01	Rain	SMV other	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Ran off road
2016-Sep-02, Fri,20:19	Clear	Other	Non-fatal injury	Dry	West	Going ahead	Bicycle	Other motor vehicle
					East	Turning right	Passenger van	Cyclist
2016-Jun-01, Wed,15:16	Clear	Sideswipe	Non-fatal injury	Dry	West	Changing lanes	Pick-up truck	Other motor vehicle
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2016-Dec-21, Wed,09:59	Clear	Sideswipe	P.D. only	Wet	West	Changing lanes	Pick-up truck	Other motor vehicle
					West	Going ahead	Truck - closed	Other motor vehicle
2018-Sep-26, Wed,15:23	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Oct-27, Sat,14:30	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle

East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
East	Stopped	Automobile, station wagon	Other motor vehicle

Location: CLYDE AVE @ MAITLAND AVE

Traffic Control: Yield sign

Total Collisions: 10

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Feb-14, Fri,09:55	Snow	Rear end	P.D. only	Loose snow	North	Going ahead	Pick-up truck	Other motor vehicle	
					North	Slowing or stopping	Passenger van	Other motor vehicle	
2014-Jul-22, Tue,16:45	Clear	Turning movement	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	
					South	Turning right	Automobile, station wagon	Other motor vehicle	
2015-Feb-28, Sat,04:55	Clear	SMV other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Steel guide rail	
2015-Sep-03, Thu,17:17	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Bicycle	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Cyclist	
2016-Dec-08, Thu,19:18	Snow	SMV other	P.D. only	Ice	North	Turning left	Automobile, station wagon	Steel guide rail	
2017-Oct-14, Sat,14:35	Clear	Sideswipe	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

2017-Oct-27, Fri,17:15	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2017-Jul-15, Sat,18:50	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Oct-08, Mon,11:44	Rain	SMV other	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Curb
2018-Aug-27, Mon,11:41	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Passenger van	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle

Location: CLYDE AVE btwn MAITLAND AVE & BASELINE RD

Traffic Control: No control

Total Collisions: 12

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2014-Sep-17, Wed,08:50	Clear	Angle	Non-fatal injury	Dry	East	Turning right	Unknown	Cyclist	
					South	Going ahead	Bicycle	Other motor vehicle	
2014-Dec-08, Mon,12:44	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Unknown	Other motor vehicle	
					North	Going ahead	Passenger van	Other motor vehicle	

2016-Aug-12, Fri,16:32	Rain	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Feb-17, Wed,18:08	Snow	Turning movement	P.D. only	Slush	North	Making "U" turn	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Pick-up truck	Other motor vehicle	
2015-Aug-14, Fri,09:45	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Pick-up truck	Other motor vehicle	
2015-Nov-13, Fri,12:29	Rain	Angle	P.D. only	Wet	East	Turning right	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Pick-up truck	Other motor vehicle	
2016-Sep-10, Sat,15:00	Clear	SMV other	P.D. only	Wet	North	Turning right	Automobile, station wagon	Skidding/sliding	
2017-Nov-14, Tue,21:25	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Sep-24, Sun,01:30	Clear	SMV other	Fatal injury	Dry	South	Going ahead	Automobile, station wagon	Pedestrian	1
2018-Feb-07, Wed,11:18	Snow	Turning movement	P.D. only	Loose snow	South	Turning left	Automobile, station wagon	Other motor vehicle	

					North	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Feb-11, Sun,17:34	Snow	Rear end	P.D. only	Slush	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2018-Oct-04, Thu,19:15	Clear	Sideswipe	P.D. only	Wet	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle

Location: ERINDALE DR @ BASELINE RD

Traffic Control: Stop sign

Total Collisions: 15

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Jan-31, Fri,16:56	Clear	Angle	P.D. only	Loose snow	South	Turning left	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2014-Jan-23, Thu,11:50	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2014-Feb-06, Thu,18:05	Clear	Angle	P.D. only	Wet	South	Turning left	Pick-up truck	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2014-Feb-07, Fri,16:04	Clear	SMV other	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Skidding/sliding	

2014-Apr-24, Thu,07:32	Clear	Angle	P.D. only	Dry	South	Turning left	Pick-up truck	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2014-Apr-26, Sat,09:21	Rain	Angle	P.D. only	Wet	South	Turning right	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle
2014-Dec-02, Tue,15:55	Clear	Angle	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					South	Stopped	Municipal transit bus	Other motor vehicle
2015-Jun-06, Sat,14:50	Clear	Angle	Non-fatal injury	Dry	South	Turning left	Pick-up truck	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle
2016-Oct-28, Fri,17:42	Clear	Angle	Non-fatal injury	Dry	South	Turning left	Pick-up truck	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Jan-01, Sun,21:40	Clear	SMV other	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Skidding/sliding
2017-Jan-12, Thu,08:55	Rain	Angle	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle
2016-Dec-14, Wed,23:29	Snow	SMV other	P.D. only	Loose snow	East	Making "U" turn	Automobile, station wagon	Skidding/sliding

2017-Sep-16, Sat,14:53	Clear	Angle	Non-fatal injury	Dry	East	Going ahead	Bicycle	Other motor vehicle	
					South	Turning right	Automobile, station wagon	Cyclist	
2018-Sep-20, Thu,09:17	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Aug-23, Thu,07:31	Clear	SMV other	Non-fatal injury	Dry	East	Turning left	Automobile, station wagon	Pedestrian	1



City Operations - Transportation Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2018

Location: AMESBROOKE DR @ MAITLAND AVE

Traffic Control: Stop sign

Total Collisions: 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Nov-06, Thu,10:41	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Truck and trailer	Other motor vehicle	
					South	Going ahead	Passenger van	Other motor vehicle	
2016-Sep-27, Tue,09:07	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Oct-25, Wed,19:30	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Dec-09, Fri,08:45	Clear	Rear end	P.D. only	Ice	West	Slowing or stopping	Pick-up truck	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	

Location: CAMEO DR @ MAITLAND AVE

Traffic Control: Stop sign

Total Collisions: 8

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
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2014-Feb-14, Fri,09:42	Snow	SMV other	P.D. only	Loose snow	North	Going ahead	Automobile, station wagon	Steel guide rail
2014-Dec-22, Mon,15:02	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle
2015-Sep-09, Wed,16:29	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Passenger van	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Mar-20, Fri,08:10	Clear	Angle	P.D. only	Dry	West	Turning left	Pick-up truck	Other motor vehicle
					South	Turning left	Passenger van	Other motor vehicle
2015-Nov-24, Tue,18:35	Clear	Angle	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Feb-15, Wed,19:57	Snow	Angle	P.D. only	Loose snow	West	Turning right	Automobile, station wagon	Other motor vehicle
					South	Stopped	Passenger van	Other motor vehicle
2018-Nov-30, Fri,08:16	Clear	Angle	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Sep-30, Sun,19:05	Rain	Rear end	P.D. only	Wet	South	Going ahead	Pick-up truck	Other motor vehicle

South Turning left Automobile,
station wagon Other motor
vehicle

Location: CLYDE AVE @ MAITLAND AVE

Traffic Control: Yield sign

Total Collisions: 10

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2014-Feb-14, Fri,09:55	Snow	Rear end	P.D. only	Loose snow	North	Going ahead	Pick-up truck	Other motor vehicle	
					North	Slowing or stopping	Passenger van	Other motor vehicle	
2014-Jul-22, Tue,16:45	Clear	Turning movement	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	
					South	Turning right	Automobile, station wagon	Other motor vehicle	
2015-Feb-28, Sat,04:55	Clear	SMV other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Steel guide rail	
2015-Sep-03, Thu,17:17	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Bicycle	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Cyclist	
2016-Dec-08, Thu,19:18	Snow	SMV other	P.D. only	Ice	North	Turning left	Automobile, station wagon	Steel guide rail	
2017-Oct-14, Sat,14:35	Clear	Sideswipe	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Oct-27, Fri,17:15	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	

					East	Stopped	Automobile, station wagon	Other motor vehicle
2017-Jul-15, Sat,18:50	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Oct-08, Mon,11:44	Rain	SMV other	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Curb
2018-Aug-27, Mon,11:41	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Passenger van	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle

Location: ERINDALE DR @ BASELINE RD

Traffic Control: Stop sign

Total Collisions: 15

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Jan-31, Fri,16:56	Clear	Angle	P.D. only	Loose snow	South	Turning left	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2014-Jan-23, Thu,11:50	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2014-Feb-06, Thu,18:05	Clear	Angle	P.D. only	Wet	South	Turning left	Pick-up truck	Other motor vehicle	

					East	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Feb-07, Fri,16:04	Clear	SMV other	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Skidding/sliding
2014-Apr-24, Thu,07:32	Clear	Angle	P.D. only	Dry	South	Turning left	Pick-up truck	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2014-Apr-26, Sat,09:21	Rain	Angle	P.D. only	Wet	South	Turning right	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle
2014-Dec-02, Tue,15:55	Clear	Angle	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					South	Stopped	Municipal transit bus	Other motor vehicle
2015-Jun-06, Sat,14:50	Clear	Angle	Non-fatal injury	Dry	South	Turning left	Pick-up truck	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle
2016-Oct-28, Fri,17:42	Clear	Angle	Non-fatal injury	Dry	South	Turning left	Pick-up truck	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Jan-01, Sun,21:40	Clear	SMV other	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Skidding/sliding

2017-Jan-12, Thu,08:55	Rain	Angle	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Pick-up truck	Other motor vehicle	
2016-Dec-14, Wed,23:29	Snow	SMV other	P.D. only	Loose snow	East	Making "U" turn	Automobile, station wagon	Skidding/sliding	
2017-Sep-16, Sat,14:53	Clear	Angle	Non-fatal injury	Dry	East	Going ahead	Bicycle	Other motor vehicle	
					South	Turning right	Automobile, station wagon	Cyclist	
2018-Sep-20, Thu,09:17	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Aug-23, Thu,07:31	Clear	SMV other	Non-fatal injury	Dry	East	Turning left	Automobile, station wagon	Pedestrian	1

Location: ERINDALE DR @ FORLAN DR

Traffic Control: Stop sign

Total Collisions: 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Apr-24, Sun,09:32	Clear	Rear end	Non-fatal injury	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	

Location: ERINDALE DR @ NAVAHO DR

Traffic Control: Stop sign

Total Collisions: 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jun-14, Tue,09:00	Clear	Angle	P.D. only	Dry	East	Going ahead	Passenger van	Other motor vehicle	

					North	Going ahead	Passenger van	Other motor vehicle
2016-Oct-15, Sat,15:21	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle

Location: ERINDALE DR btwn AINSLEY DR & BASELINE RD

Traffic Control: No control

Total Collisions: 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jul-13, Wed,16:42	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					North	Slowing or stopping	Pick-up truck	Other motor vehicle	
					North	Slowing or stopping	Passenger van	Other motor vehicle	

Location: ERINDALE DR btwn FORLAN DR & AINSLEY DR

Traffic Control: No control

Total Collisions: 5

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Feb-01, Sat,18:15	Snow	SMV unattended vehicle	P.D. only	Loose snow	Unknown	Unknown	Unknown	Unattended vehicle	
2014-Feb-19, Wed,02:00	Clear	SMV unattended vehicle	P.D. only	Packed snow	South	Pulling onto shoulder or toward curb	Automobile, station wagon	Unattended vehicle	
2017-Feb-16, Thu,00:00	Snow	SMV unattended vehicle	P.D. only	Loose snow	Unknown	Unknown	Unknown	Unattended vehicle	
2018-Nov-30, Fri,00:00	Unknown	SMV unattended vehicle	P.D. only	Other	Unknown	Unknown	Unknown	Unattended vehicle	

2018-Sep-06, Thu,07:15	Clear	SMV unattended vehicle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Unattended vehicle
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Location: ERINDALE DR btwn NAVAHO DR & FORLAN DR

Traffic Control: No control

Total Collisions: 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Mar-14, Sat,10:55	Clear	SMV unattended vehicle	Non-fatal injury	Wet	North	Going ahead	Pick-up truck	Unattended vehicle	
2017-Oct-12, Thu,13:54	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: ERINDALE DR btwn NAVAHO DR & MAITLAND AVE

Traffic Control: No control

Total Collisions: 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-May-11, Wed,21:02	Clear	Approaching	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: HENRY FARM DR @ MAITLAND AVE

Traffic Control: Stop sign

Total Collisions: 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Sep-08, Fri,13:11	Clear	Rear end	Non-fatal injury	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Passenger van	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	

2017-Dec-24, Sun,16:33	Clear	SMV other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Curb
2018-Mar-14, Wed,21:12	Clear	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2018-Mar-11, Sun,17:32	Clear	Angle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle

Location: MAITLAND AVE @ TERREBONNE DR

Traffic Control: Stop sign

Total Collisions: 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Jan-13, Tue,16:15	Clear	Rear end	P.D. only	Packed snow	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Jan-29, Fri,11:59	Clear	Sideswipe	P.D. only	Wet	North	Changing lanes	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Pick-up truck	Other motor vehicle	
2015-Dec-21, Mon,17:10	Rain	Turning movement	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Aug-18, Fri,15:54	Clear	Rear end	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Turning left	Automobile, station wagon	Other motor vehicle	

2017-Feb-23, Thu,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	Unknown	Unknown	Unknown	Unattended vehicle
2018-Dec-19, Wed,09:15	Clear	Rear end	P.D. only	Ice	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

Location: MAITLAND AVE btwn AMESBROOKE DR & HENRY FARM DR

Traffic Control: No control

Total Collisions: 5

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2014-May-15, Thu,18:32	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Jan-14, Wed,15:00	Clear	Rear end	P.D. only	Ice	North	Changing lanes	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Pick-up truck	Other motor vehicle	
2016-Aug-22, Mon,19:50	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jan-10, Wed,14:10	Clear	Sideswipe	P.D. only	Loose snow	East	Stopped	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

2018-Nov-23, Fri,16:43	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

Location: MAITLAND AVE btwn CAMEO DR & CLYDE AVE

Traffic Control: No control

Total Collisions: 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2015-Apr-13, Mon,12:30	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Nov-12, Thu,17:56	Clear	Sideswipe	P.D. only	Dry	North	Going ahead	Truck - open	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Sep-27, Tue,05:30	Rain	SMV other	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Skidding/sliding	
2016-Jun-03, Fri,19:56	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Tow truck	Other motor vehicle	
2018-Nov-24, Sat,07:50	Clear	SMV other	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Steel guide rail	
2018-Dec-14, Fri,10:30	Freezing Rain	SMV other	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Curb	

Location: MAITLAND AVE btwn GLENMOUNT AVE & AMESBROOKE DR

Traffic Control: No control

Total Collisions: 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-May-21, Sat,18:45	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Pick-up truck	Other motor vehicle	
					South	Going ahead	Pick-up truck	Other motor vehicle	
2016-Apr-16, Sat,10:21	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Pick-up truck	Other motor vehicle	
2016-Nov-09, Wed,11:31	Clear	Sideswipe	P.D. only	Dry	South	Unknown	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Nov-14, Mon,14:09	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	

Location: MAITLAND AVE btwn HENRY FARM DR & TERREBONNE DR

Traffic Control: No control

Total Collisions: 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2015-Mar-05, Thu,07:57	Clear	Other	P.D. only	Dry	South	Reversing	Pick-up truck	Other motor vehicle	
					North	Reversing	Automobile, station wagon	Other motor vehicle	
2016-May-10, Tue,14:45	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	

					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Aug-20, Sun,21:24	Clear	Sideswipe	Non-fatal injury	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Motorcycle	Other motor vehicle
2018-Sep-20, Thu,11:00	Clear	Sideswipe	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle

Location: MAITLAND AVE btwn TERREBONNE DR & CAMEO DR

Traffic Control: No control

Total Collisions: 8

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Jan-07, Tue,14:56	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2014-Oct-16, Thu,18:30	Rain	Rear end	P.D. only	Wet	North	Slowing or stopping	Pick-up truck	Other motor vehicle	
					North	Stopped	Pick-up truck	Other motor vehicle	
2015-Jun-22, Mon,09:23	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Passenger van	Other motor vehicle	
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2015-Nov-18, Wed,17:30	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Pick-up truck	Other motor vehicle	

2016-Jun-15, Wed,15:16	Clear	SMV other	Non-fatal injury	Dry	South	Reversing	Pick-up truck	Pedestrian	1
2016-Jul-22, Fri,17:44	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Jul-22, Fri,18:59	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
					North	Slowing or stopping	Pick-up truck	Other motor vehicle	
2016-Nov-13, Sun,09:29	Clear	Approaching	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: MAITLAND AVE/GLENMOUNT AVE @ ERINDALE DR

Traffic Control: Traffic signal

Total Collisions: 41

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Feb-09, Sun,16:04	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2014-Feb-07, Fri,16:40	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	

					South	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Apr-01, Tue,16:30	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Pick-up truck	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Jun-04, Wed,16:06	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2014-Sep-14, Sun,16:19	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jan-16, Fri,15:38	Clear	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2014-Dec-07, Sun,08:00	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Passenger van	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2015-Feb-23, Mon,08:15	Clear	Rear end	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

2015-Mar-22, Sun,13:46	Clear	Rear end	P.D. only	Dry	South	Going ahead	Passenger van	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Sep-02, Wed,10:15	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Pick-up truck	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2015-Apr-04, Sat,00:02	Rain	Angle	Non-fatal injury	Wet	West	Turning right	Pick-up truck	Cyclist
					South	Going ahead	Bicycle	Other motor vehicle
2015-Aug-06, Thu,11:02	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2016-Aug-03, Wed,08:01	Clear	Rear end	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2016-Aug-17, Wed,18:11	Clear	Angle	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Dec-16, Wed,09:08	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle

2016-Jun-29, Wed,17:08	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Jul-04, Mon,16:05	Clear	Rear end	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2016-Jul-03, Sun,13:00	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Nov-04, Fri,10:00	Clear	Rear end	P.D. only	Dry	South	Going ahead	Passenger van	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
					South	Changing lanes	Passenger van	Other
2017-Oct-05, Thu,17:05	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Dec-09, Fri,07:48	Clear	Rear end	P.D. only	Ice	South	Stopped	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Mar-06, Mon,09:25	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle

2017-May-23, Tue,17:33	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Pick-up truck	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle
2017-Jun-20, Tue,12:25	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Nov-30, Thu,09:31	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-Dec-04, Mon,09:25	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2017-Dec-04, Mon,17:23	Clear	Rear end	Non-fatal injury	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
2017-Sep-29, Fri,20:34	Rain	Turning movement	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Jan-05, Fri,13:00	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle

2017-Nov-08, Wed,13:11	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Dec-28, Thu,19:43	Clear	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Passenger van	Other motor vehicle	
2018-Feb-15, Thu,11:41	Rain	SMV other	Non-fatal injury	Wet	East	Turning left	Automobile, station wagon	Pedestrian	1
2018-Apr-18, Wed,17:23	Clear	Sideswipe	Non-fatal injury	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Apr-29, Sun,20:17	Clear	Angle	Non-fatal injury	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Jul-04, Wed,12:52	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Passenger van	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jun-05, Tue,17:48	Clear	Angle	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

2018-Sep-14, Fri,20:51	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2018-Sep-26, Wed,20:00	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2018-Dec-17, Mon,14:04	Clear	Approaching	P.D. only	Wet	South	Turning right	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Aug-27, Mon,13:27	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2018-Jul-20, Fri,17:45	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Delivery van	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle

APPENDIX E

BACKGROUND GROWTH ANALYSIS

DRAFT

Baseline/Clyde
8 hrs

Year	Date	North Leg		South Leg		East Leg		West Leg		Total
		SB	NB	NB	SB	WB	EB	EB	WB	
2014	Thursday, July 31	12024	9569	7276	10307	15695	11014	8128	12233	86246
2016	Wednesday, October 26	8363	9911	7994	7512	10444	10086	9431	8723	72464
2019	Wednesday, August 21	7483	10200	7918	6832	9992	9750	9307	7918	69400

North Leg	Year	Counts				% Change			
		NB	SB	NB+SB	INT	NB	SB	NB+SB	INT
	2014	9569	12024	21593	86246				
	2016	9911	8363	18274	72464	3.6%	-30.4%	-15.4%	-16.0%
	2019	10200	7483	17683	69400	2.9%	-10.5%	-3.2%	-4.2%

Regression Estimate 2014 9604 11296 20900
Regression Estimate 2019 10224 6998 17221
Average Annual Change 1.26% -9.13% -3.80%

West Leg	Year	Counts				% Change			
		EB	WB	EB+WB	INT	EB	WB	EB+WB	INT
	2014	8128	12233	20361	86246				
	2016	9431	8723	18154	72464	16.0%	-28.7%	-10.8%	-16.0%
	2019	9307	7918	17225	69400	-1.3%	-9.2%	-5.1%	-4.2%

Regression Estimate 2014 8456 11529 19985
Regression Estimate 2019 9526 7449 16974
Average Annual Change 2.41% -8.37% -3.21%

East Leg	Year	Counts				% Change			
		EB	WB	EB+WB	INT	EB	WB	EB+WB	INT
	2014	11014	15695	26709	86246				
	2016	10086	10444	20530	72464	-8.4%	-33.5%	-23.1%	-16.0%
	2019	9750	9992	19742	69400	-3.3%	-4.3%	-3.8%	-4.2%

Regression Estimate 2014 10847 14523 25370
Regression Estimate 2019 9639 9210 18849
Average Annual Change -2.33% -8.71% -5.77%

South Leg	Year	Counts				% Change			
		NB	SB	NB+SB	INT	NB	SB	NB+SB	INT
	2014	7276	10307	17583	86246				
	2016	7994	7512	15506	72464	9.9%	-27.1%	-11.8%	-16.0%
	2019	7918	6832	14750	69400	-1.0%	-9.1%	-4.9%	-4.2%

Regression Estimate 2014 7458 9752 17210
Regression Estimate 2019 8039 6462 14502
Average Annual Change 1.51% -7.90% -3.37%

Baseline/Clyde
AM Peak

Year	Date	North Leg		South Leg		East Leg		West Leg		Total
		SB	NB	NB	SB	WB	EB	EB	WB	
2014	Thursday, July 31	1196	1130	624	881	1729	1279	862	1121	8822
2016	Wednesday, October 26	1112	1334	946	828	1091	1650	1484	821	9266
2019	Wednesday, August 21	816	1288	914	642	914	1475	1370	609	8028

North Leg

Year	Counts				% Change			
	NB	SB	NB+SB	INT	NB	SB	NB+SB	INT
2014	1130	1196	2326	8822				
2016	1334	1112	2446	9266	18.1%	-7.0%	5.2%	5.0%
2019	1288	816	2104	8028	-3.4%	-26.6%	-14.0%	-13.4%

Regression Estimate 2014 1186 1223 2408
Regression Estimate 2019 1325 834 2159
Average Annual Change 2.25% -7.37% -2.16%

West Leg

Year	Counts				% Change			
	EB	WB	EB+WB	INT	EB	WB	EB+WB	INT
2014	862	1121	1983	8822				
2016	1484	821	2305	9266	72.2%	-26.8%	16.2%	5.0%
2019	1370	609	1979	8028	-7.7%	-25.8%	-14.1%	-13.4%

Regression Estimate 2014 1027 1083 2111
Regression Estimate 2019 1480 584 2064
Average Annual Change 7.58% -11.63% -0.45%

East Leg

Year	Counts				% Change			
	EB	WB	EB+WB	INT	EB	WB	EB+WB	INT
2014	1279	1729	3008	8822				
2016	1650	1091	2741	9266	29.0%	-36.9%	-8.9%	5.0%
2019	1475	914	2389	8028	-10.6%	-16.2%	-12.8%	-13.4%

Regression Estimate 2014 1395 1606 3000
Regression Estimate 2019 1552 832 2384
Average Annual Change 2.16% -12.33% -4.50%

South Leg

Year	Counts				% Change			
	NB	SB	NB+SB	INT	NB	SB	NB+SB	INT
2014	624	881	1505	8822				
2016	946	828	1774	9266	51.6%	-6.0%	17.9%	5.0%
2019	914	642	1556	8028	-3.4%	-22.5%	-12.3%	-13.4%

Regression Estimate 2014 705 898 1603
Regression Estimate 2019 968 653 1621
Average Annual Change 6.54% -6.16% 0.23%

Baseline/Clyde
PM Peak

Year	Date	North Leg		South Leg		East Leg		West Leg		Total
		SB	NB	NB	SB	WB	EB	EB	WB	
2014	Thursday, July 31	1584	1575	1106	1330	3250	1512	1152	2675	14184
2016	Wednesday, October 26	1138	1459	1165	1013	1822	1224	1135	1564	10520
2019	Wednesday, August 21	1063	1476	1143	955	1794	1297	1245	1517	10490

North Leg	Year	Counts				% Change			
		NB	SB	NB+SB	INT	NB	SB	NB+SB	INT
	2014	1575	1584	3159	14184				
	2016	1459	1138	2597	10520	-7.4%	-28.2%	-17.8%	-25.8%
	2019	1476	1063	2539	10490	1.2%	-6.6%	-2.2%	-0.3%

Regression Estimate 2014 1545 1490 3035
Regression Estimate 2019 1456 1000 2456
Average Annual Change -1.18% -7.66% -4.14%

West Leg	Year	Counts				% Change			
		EB	WB	EB+WB	INT	EB	WB	EB+WB	INT
	2014	1152	2675	3827	14184				
	2016	1135	1564	2699	10520	-1.5%	-41.5%	-29.5%	-25.8%
	2019	1245	1517	2762	10490	9.7%	-3.0%	2.3%	-0.3%

Regression Estimate 2014 1131 2419 3550
Regression Estimate 2019 1231 1347 2577
Average Annual Change 1.71% -11.06% -6.20%

East Leg	Year	Counts				% Change			
		EB	WB	EB+WB	INT	EB	WB	EB+WB	INT
	2014	1512	3250	4762	14184				
	2016	1224	1822	3046	10520	-19.0%	-43.9%	-36.0%	-25.8%
	2019	1297	1794	3091	10490	6.0%	-1.5%	1.5%	-0.3%

Regression Estimate 2014 1432 2916 4348
Regression Estimate 2019 1244 1571 2815
Average Annual Change -2.78% -11.63% -8.33%

South Leg	Year	Counts				% Change			
		NB	SB	NB+SB	INT	NB	SB	NB+SB	INT
	2014	1106	1330	2436	14184				
	2016	1165	1013	2178	10520	5.3%	-23.8%	-10.6%	-25.8%
	2019	1143	955	2098	10490	-1.9%	-5.7%	-3.7%	-0.3%

Regression Estimate 2014 1123 1264 2388
Regression Estimate 2019 1155 911 2066
Average Annual Change 0.55% -6.34% -2.85%

APPENDIX F

TDM MEASURES CHECKLIST

DRAFT

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

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

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

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

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

APPENDIX G

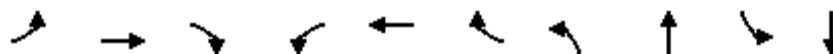
SYNCHRO ANALYSIS RESULTS

DRAFT

Existing Conditions

Lanes, Volumes, Timings
1: Clyde Ave & Baseline Rd

Existing AM
04/29/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	173	1069	128	70	474	370	84	731	345	515
Future Volume (vph)	173	1069	128	70	474	370	84	731	345	515
Lane Group Flow (vph)	192	1188	142	78	527	411	93	922	383	633
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9	11.6	39.9
Total Split (s)	18.0	41.0	41.0	18.0	41.0	41.0	21.0	40.0	21.0	40.0
Total Split (%)	15.0%	34.2%	34.2%	15.0%	34.2%	34.2%	17.5%	33.3%	17.5%	33.3%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6	3.3	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9	6.6	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	11.5	38.8	38.8	9.9	34.6	34.6	8.8	33.1	14.4	38.7
Actuated g/C Ratio	0.10	0.32	0.32	0.08	0.29	0.29	0.07	0.28	0.12	0.32
v/c Ratio	1.19	1.08	0.24	0.56	0.54	0.64	0.39	1.00	0.97	0.58
Control Delay	175.9	92.2	5.1	68.0	38.4	15.6	57.3	71.6	91.7	36.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	175.9	92.2	5.1	68.0	38.4	15.6	57.3	71.6	91.7	36.4
LOS	F	F	A	E	D	B	E	E	F	D
Approach Delay		94.6			31.5			70.3		57.2
Approach LOS		F			C			E		E
Queue Length 50th (m)	~54.3	~177.7	0.0	17.8	55.0	22.3	10.9	113.0	47.0	64.3
Queue Length 95th (m)	#99.9	#221.8	12.1	33.6	72.4	57.3	19.0	#157.4	#77.2	85.8
Internal Link Dist (m)		24.7			271.0			387.0		105.7
Turn Bay Length (m)	100.0		15.0	75.0		40.0	60.0		105.0	
Base Capacity (vph)	162	1096	595	162	977	645	394	926	394	1084
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	1.08	0.24	0.48	0.54	0.64	0.24	1.00	0.97	0.58

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 19 (16%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.19

Intersection Signal Delay: 66.9

Intersection LOS: E

Intersection Capacity Utilization 92.4%

ICU Level of Service F

Analysis Period (min) 15

Lanes, Volumes, Timings 1: Clyde Ave & Baseline Rd

Existing AM
04/29/2020

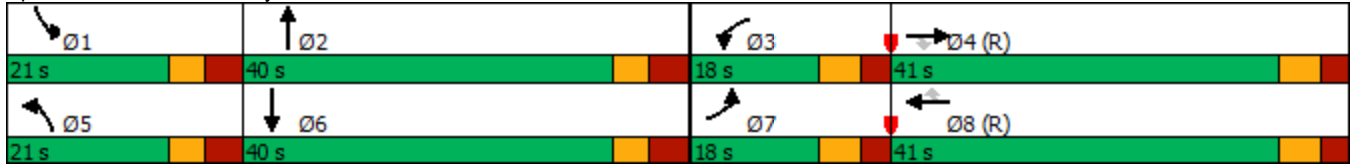
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Clyde Ave & Baseline Rd



Lanes, Volumes, Timings
2: Baseline Rd & Erindale Dr

Existing AM
04/29/2020



Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	29	1381	688	16
Future Volume (vph)	29	1381	688	16
Lane Group Flow (vph)	32	1534	797	80
Sign Control		Free	Free	Stop

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 51.5% ICU Level of Service A

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

2: Baseline Rd & Erindale Dr







Existing AM
04/29/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	1381	688	30	16	56
Future Volume (Veh/h)	29	1381	688	30	16	56
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	32	1534	764	33	18	62
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	797				1612	398
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	797				1612	398
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				80	90
cM capacity (veh/h)	821				91	601
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	32	767	767	509	288	80
Volume Left	32	0	0	0	0	18
Volume Right	0	0	0	0	33	62
cSH	821	1700	1700	1700	1700	267
Volume to Capacity	0.04	0.45	0.45	0.30	0.17	0.30
Queue Length 95th (m)	0.9	0.0	0.0	0.0	0.0	9.3
Control Delay (s)	9.6	0.0	0.0	0.0	0.0	24.2
Lane LOS	A					C
Approach Delay (s)	0.2			0.0		24.2
Approach LOS						C
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			51.5%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Clyde Ave & Access 1

Existing AM
04/29/2020











			
Lane Group	NBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	17	1257	888
Future Volume (vph)	17	1257	888
Lane Group Flow (vph)	19	1397	990
Sign Control		Free	Free
Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 40.0%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis

Existing AM

04/29/2020

4: Clyde Ave & Access 1

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	17	1257	888	3
Future Volume (Veh/h)	0	0	17	1257	888	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	19	1397	987	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				209		
pX, platoon unblocked	0.75					
vC, conflicting volume	1725	495	990			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1307	495	990			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	97			
cM capacity (veh/h)	111	520	694			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	0	19	698	698	658	332
Volume Left	0	19	0	0	0	0
Volume Right	0	0	0	0	0	3
cSH	1700	694	1700	1700	1700	1700
Volume to Capacity	0.00	0.03	0.41	0.41	0.39	0.20
Queue Length 95th (m)	0.0	0.6	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	10.3	0.0	0.0	0.0	0.0
Lane LOS	A	B				
Approach Delay (s)	0.0	0.1			0.0	
Approach LOS	A					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			40.0%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: Clyde Ave & Access 2

Existing AM
04/29/2020



Lane Group	EBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	0	1274	877
Future Volume (vph)	0	1274	877
Lane Group Flow (vph)	42	1416	986
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized










Intersection Capacity Utilization 47.2% ICU Level of Service A

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

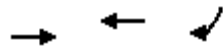
5: Clyde Ave & Access 2

Existing AM
04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	38	0	1274	877	11
Future Volume (Veh/h)	0	38	0	1274	877	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	42	0	1416	974	12
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked	0.74					
vC, conflicting volume	1688	493	986			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1232	493	986			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	92	100			
cM capacity (veh/h)	126	522	696			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	42	708	708	649	337	
Volume Left	0	0	0	0	0	
Volume Right	42	0	0	0	12	
cSH	522	1700	1700	1700	1700	
Volume to Capacity	0.08	0.42	0.42	0.38	0.20	
Queue Length 95th (m)	2.0	0.0	0.0	0.0	0.0	
Control Delay (s)	12.5	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	12.5	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			47.2%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
6: Baseline Rd & Access 3

Existing AM
04/29/2020



Lane Group	EBT	WBT	SBR
Lane Configurations	↑↑	↑↑	↗
Traffic Volume (vph)	1370	613	8
Future Volume (vph)	1370	613	8
Lane Group Flow (vph)	1522	681	9
Sign Control	Free	Free	
Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 43.3%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis

Existing AM

6: Baseline Rd & Access 3

04/29/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (veh/h)	0	1370	613	0	0	8
Future Volume (Veh/h)	0	1370	613	0	0	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	1522	681	0	0	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)			49			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	681				1442	340
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	338				1212	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1061				152	945
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	761	761	340	340	9	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	9	
cSH	1700	1700	1700	1700	945	
Volume to Capacity	0.45	0.45	0.20	0.20	0.01	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.2	
Control Delay (s)	0.0	0.0	0.0	0.0	8.8	
Lane LOS					A	
Approach Delay (s)	0.0		0.0		8.8	
Approach LOS					A	
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			43.3%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
7: Merivale Rd & Lotta Ave & Clyde Ave

Existing AM
04/29/2020



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	31	68	390	34	1	861	667	46	697
Future Volume (vph)	31	68	390	34	1	861	667	46	697
Lane Group Flow (vph)	34	97	433	112	1	957	741	51	782
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	7	4	3	8		2			6
Permitted Phases					2		2	6	
Detector Phase	7	4	3	8	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.8	33.8	11.2	33.2	30.0	30.0	30.0	30.0	30.0
Total Split (s)	33.0	34.0	33.0	34.0	63.0	63.0	63.0	63.0	63.0
Total Split (%)	25.4%	26.2%	25.4%	26.2%	48.5%	48.5%	48.5%	48.5%	48.5%
Yellow Time (s)	3.0	3.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.8	3.8	2.5	2.5	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.2	6.2	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	8.1	12.6	22.1	31.8	76.3	76.3	76.3	76.3	76.3
Actuated g/C Ratio	0.06	0.10	0.17	0.24	0.59	0.59	0.59	0.59	0.59
v/c Ratio	0.32	0.55	0.77	0.25	0.00	0.48	0.62	0.21	0.39
Control Delay	65.6	61.7	61.2	18.7	14.0	17.4	3.7	17.7	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.6	61.7	61.2	18.7	14.0	17.4	3.7	17.7	16.0
LOS	E	E	E	B	B	B	A	B	B
Approach Delay		62.7		52.5		11.4			16.1
Approach LOS		E		D		B			B
Queue Length 50th (m)	8.5	21.7	55.2	9.1	0.1	70.0	0.0	5.8	53.2
Queue Length 95th (m)	19.0	38.4	70.2	24.0	1.1	103.0	18.2	16.2	79.7
Internal Link Dist (m)		203.2		249.5		171.9			387.0
Turn Bay Length (m)	30.0		85.0		75.0			75.0	
Base Capacity (vph)	341	369	677	448	318	1990	1196	245	1986
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.26	0.64	0.25	0.00	0.48	0.62	0.21	0.39

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 9 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 21.7

Intersection LOS: C

Intersection Capacity Utilization 75.9%

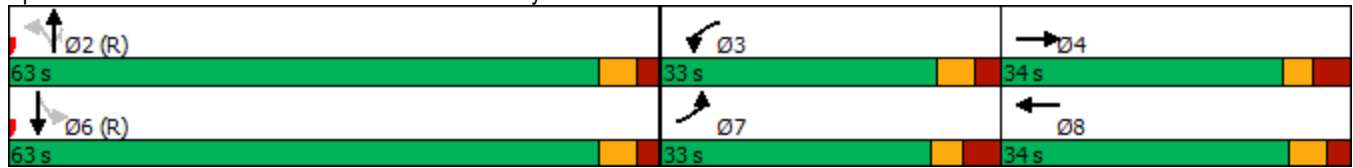
ICU Level of Service D

Analysis Period (min) 15

Lanes, Volumes, Timings
 7: Merivale Rd & Lotta Ave & Clyde Ave

Existing AM
 04/29/2020

Splits and Phases: 7: Merivale Rd & Lotta Ave & Clyde Ave



Lanes, Volumes, Timings
8: Erindale Dr & Maitland Ave

Existing AM
04/29/2020



Lane Group	EBT	WBL	WBT	NBL	Ø9
Lane Configurations	↑↑		↑↑	↑↑	
Traffic Volume (vph)	708	8	1045	250	
Future Volume (vph)	708	8	1045	250	
Lane Group Flow (vph)	851	0	1170	328	
Turn Type	NA	Perm	NA	Perm	
Protected Phases	4		8		9
Permitted Phases		8		2	
Detector Phase	4	8	8	2	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	29.1	24.5	24.5	30.4	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	1.8	8.4	8.4	2.1	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.1		11.7	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	61.3		54.7	23.2	
Actuated g/C Ratio	0.65		0.58	0.24	
v/c Ratio	0.39		0.63	0.79	
Control Delay	9.3		13.7	45.9	
Queue Delay	0.0		0.3	65.3	
Total Delay	9.3		13.9	111.2	
LOS	A		B	F	
Approach Delay	9.3		13.9	111.2	
Approach LOS	A		B	F	
Queue Length 50th (m)	34.6		74.1	54.8	
Queue Length 95th (m)	57.1		113.3	76.6	
Internal Link Dist (m)	140.4		13.1	185.7	
Turn Bay Length (m)					
Base Capacity (vph)	2167		1843	478	
Starvation Cap Reductn	0		188	0	
Spillback Cap Reductn	39		0	304	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.40		0.71	1.89	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 49 (52%), Referenced to phase 4:EBT and 8:WBTL, Start of Green					
Natural Cycle: 80					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.79					
Intersection Signal Delay: 25.8				Intersection LOS: C	
Intersection Capacity Utilization 68.2%				ICU Level of Service C	
Analysis Period (min) 15					

Lanes, Volumes, Timings
 8: Erindale Dr & Maitland Ave

Existing AM
 04/29/2020

Splits and Phases: 8: Erindale Dr & Maitland Ave



Lanes, Volumes, Timings
9: Maitland Ave & Glenmount Ave

Existing AM
04/29/2020



Lane Group	EBL	EBT	WBT	SBL	Ø9
Lane Configurations		↕↕	↕↕	↕↕	
Traffic Volume (vph)	18	753	959	56	
Future Volume (vph)	18	753	959	56	
Lane Group Flow (vph)	0	857	1074	158	
Turn Type	Perm	NA	NA	Perm	
Protected Phases		4	8		9
Permitted Phases	4			6	
Detector Phase	4	4	8	6	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	22.5	22.5	29.1	31.0	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	8.4	8.4	1.8	2.1	0.0
Lost Time Adjust (s)		0.0	0.0	0.0	
Total Lost Time (s)		11.7	5.1	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)		66.1	72.7	11.8	
Actuated g/C Ratio		0.70	0.77	0.12	
v/c Ratio		0.40	0.41	0.59	
Control Delay		3.6	4.6	28.8	
Queue Delay		0.4	0.2	100.7	
Total Delay		4.0	4.8	129.5	
LOS		A	A	F	
Approach Delay		4.0	4.8	129.5	
Approach LOS		A	A	F	
Queue Length 50th (m)		11.9	25.8	13.6	
Queue Length 95th (m)		15.2	46.6	31.2	
Internal Link Dist (m)		13.1	488.7	48.4	
Turn Bay Length (m)					
Base Capacity (vph)		2133	2590	491	
Starvation Cap Reductn		687	0	0	
Spillback Cap Reductn		0	582	444	
Storage Cap Reductn		0	0	0	
Reduced v/c Ratio		0.59	0.53	3.36	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 49 (52%), Referenced to phase 4:EBTL and 8:WBT, Start of Green					
Natural Cycle: 75					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.59					
Intersection Signal Delay: 13.9			Intersection LOS: B		
Intersection Capacity Utilization 58.7%			ICU Level of Service B		
Analysis Period (min) 15					

Lanes, Volumes, Timings
 9: Maitland Ave & Glenmount Ave

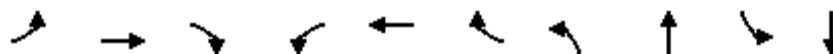
Existing AM
 04/29/2020

Splits and Phases: 9: Maitland Ave & Glenmount Ave



Lanes, Volumes, Timings
1: Clyde Ave & Baseline Rd

Existing PM
04/29/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	156	869	220	125	1142	527	298	765	370	614
Future Volume (vph)	156	869	220	125	1142	527	298	765	370	614
Lane Group Flow (vph)	173	966	244	139	1269	586	331	939	411	770
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9	11.6	39.9
Total Split (s)	18.0	51.0	51.0	18.0	51.0	51.0	21.0	40.0	21.0	40.0
Total Split (%)	13.8%	39.2%	39.2%	13.8%	39.2%	39.2%	16.2%	30.8%	16.2%	30.8%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6	3.3	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9	6.6	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	11.5	44.6	44.6	11.5	44.6	44.6	14.4	33.1	14.4	33.1
Actuated g/C Ratio	0.09	0.34	0.34	0.09	0.34	0.34	0.11	0.25	0.11	0.25
v/c Ratio	1.16	0.83	0.40	0.93	1.09	0.87	0.91	1.10	1.13	0.90
Control Delay	174.4	46.6	15.1	116.4	95.3	38.9	104.1	86.0	138.2	60.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	174.4	46.6	15.1	116.4	95.3	38.9	104.1	86.0	138.2	60.8
LOS	F	D	B	F	F	D	F	F	F	E
Approach Delay		57.1			80.2			90.7		87.7
Approach LOS		E			F			F		F
Queue Length 50th (m)	~52.2	119.2	18.2	36.0	~192.5	91.8	44.6	~143.2	~62.7	99.7
Queue Length 95th (m)	#97.4	146.0	40.5	#75.6	#234.5	#160.6	#72.4	#176.4	#94.6	#133.8
Internal Link Dist (m)		24.7			271.0			387.0		105.7
Turn Bay Length (m)	100.0		15.0	75.0		40.0	60.0		105.0	
Base Capacity (vph)	149	1163	614	149	1163	672	364	857	364	856
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.16	0.83	0.40	0.93	1.09	0.87	0.91	1.10	1.13	0.90

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 53 (41%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.16

Intersection Signal Delay: 78.5

Intersection LOS: E

Intersection Capacity Utilization 100.6%

ICU Level of Service G

Analysis Period (min) 15

Lanes, Volumes, Timings

1: Clyde Ave & Baseline Rd

Existing PM
04/29/2020

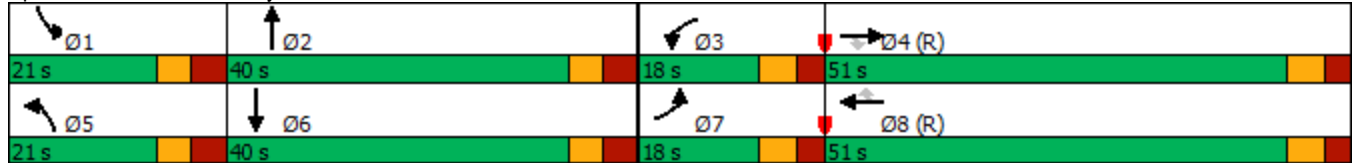
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Clyde Ave & Baseline Rd



Lanes, Volumes, Timings
2: Baseline Rd & Erindale Dr

Existing PM
04/29/2020



Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	12	1332	1405	29
Future Volume (vph)	12	1332	1405	29
Lane Group Flow (vph)	13	1480	1645	112
Sign Control		Free	Free	Stop

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 56.6% ICU Level of Service B

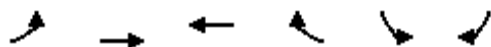
Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

Existing PM

2: Baseline Rd & Erindale Dr







04/29/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	12	1332	1405	76	29	72
Future Volume (Veh/h)	12	1332	1405	76	29	72
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	13	1480	1561	84	32	80
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1645				2369	822
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1645				2369	822
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				0	75
cM capacity (veh/h)	389				28	317
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	13	740	740	1041	604	112
Volume Left	13	0	0	0	0	32
Volume Right	0	0	0	0	84	80
cSH	389	1700	1700	1700	1700	81
Volume to Capacity	0.03	0.44	0.44	0.61	0.36	1.39
Queue Length 95th (m)	0.8	0.0	0.0	0.0	0.0	66.3
Control Delay (s)	14.6	0.0	0.0	0.0	0.0	325.1
Lane LOS	B					F
Approach Delay (s)	0.1			0.0		325.1
Approach LOS						F
Intersection Summary						
Average Delay			11.3			
Intersection Capacity Utilization			56.6%		ICU Level of Service	B
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Clyde Ave & Access 1

Existing PM
04/29/2020











			
Lane Group	NBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	53	1395	922
Future Volume (vph)	53	1395	922
Lane Group Flow (vph)	59	1550	1044
Sign Control		Free	Free
Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 44.0%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis

Existing PM

04/29/2020

4: Clyde Ave & Access 1

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	53	1395	922	18
Future Volume (Veh/h)	0	0	53	1395	922	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	59	1550	1024	20
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				209		
pX, platoon unblocked	0.76					
vC, conflicting volume	1927	522	1044			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1592	522	1044			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	91			
cM capacity (veh/h)	68	499	662			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	0	59	775	775	683	361
Volume Left	0	59	0	0	0	0
Volume Right	0	0	0	0	0	20
cSH	1700	662	1700	1700	1700	1700
Volume to Capacity	0.00	0.09	0.46	0.46	0.40	0.21
Queue Length 95th (m)	0.0	2.2	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	11.0	0.0	0.0	0.0	0.0
Lane LOS	A	B				
Approach Delay (s)	0.0	0.4			0.0	
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			44.0%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: Clyde Ave & Access 2

Existing PM
04/29/2020



Lane Group	EBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	0	1448	911
Future Volume (vph)	0	1448	911
Lane Group Flow (vph)	81	1609	1024
Sign Control	Stop	Free	Free

Intersection Summary










Control Type: Unsignalized

Intersection Capacity Utilization 53.7% ICU Level of Service A

Analysis Period (min) 15

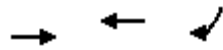
HCM Unsignalized Intersection Capacity Analysis 5: Clyde Ave & Access 2

Existing PM
04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	73	0	1448	911	11
Future Volume (Veh/h)	0	73	0	1448	911	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	81	0	1609	1012	12
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked	0.75					
vC, conflicting volume	1822	512	1024			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1439	512	1024			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	84	100			
cM capacity (veh/h)	93	507	674			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	81	804	804	675	349	
Volume Left	0	0	0	0	0	
Volume Right	81	0	0	0	12	
cSH	507	1700	1700	1700	1700	
Volume to Capacity	0.16	0.47	0.47	0.40	0.21	
Queue Length 95th (m)	4.3	0.0	0.0	0.0	0.0	
Control Delay (s)	13.4	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	13.4	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay		0.4				
Intersection Capacity Utilization		53.7%		ICU Level of Service		A
Analysis Period (min)		15				

Lanes, Volumes, Timings
6: Baseline Rd & Access 3

Existing PM
04/29/2020



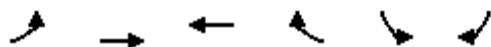
Lane Group	EBT	WBT	SBR
Lane Configurations	↑↑	↑↑	↗
Traffic Volume (vph)	1245	1519	33
Future Volume (vph)	1245	1519	33
Lane Group Flow (vph)	1383	1688	37
Sign Control	Free	Free	
Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 54.3%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis

Existing PM

6: Baseline Rd & Access 3

04/29/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (veh/h)	0	1245	1519	0	0	33
Future Volume (Veh/h)	0	1245	1519	0	0	33
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	1383	1688	0	0	37
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)			49			
pX, platoon unblocked	0.66				0.66	0.66
vC, conflicting volume	1688				2380	844
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1013				2060	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	95
cM capacity (veh/h)	449				31	716
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	692	692	844	844	37	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	37	
cSH	1700	1700	1700	1700	716	
Volume to Capacity	0.41	0.41	0.50	0.50	0.05	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	1.2	
Control Delay (s)	0.0	0.0	0.0	0.0	10.3	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		10.3	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			54.3%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
7: Merivale Rd & Lotta Ave & Clyde Ave

Existing PM
04/29/2020



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	37	57	801	130	64	791	611	90	850
Future Volume (vph)	37	57	801	130	64	791	611	90	850
Lane Group Flow (vph)	41	99	890	334	71	879	679	100	966
Turn Type	Prot	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases					2		2	6	
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	11.8	33.8	11.2	33.2	11.0	30.0	30.0	11.0	30.0
Total Split (s)	44.0	34.0	44.0	34.0	12.0	40.0	40.0	12.0	40.0
Total Split (%)	33.8%	26.2%	33.8%	26.2%	9.2%	30.8%	30.8%	9.2%	30.8%
Yellow Time (s)	3.0	3.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.8	3.8	2.5	2.5	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.2	6.2	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	8.6	12.4	37.1	43.3	53.6	45.0	45.0	58.4	49.4
Actuated g/C Ratio	0.07	0.10	0.29	0.33	0.41	0.35	0.35	0.45	0.38
v/c Ratio	0.37	0.56	0.95	0.58	0.36	0.75	0.74	0.44	0.75
Control Delay	66.5	56.2	64.9	36.0	25.8	43.3	10.9	30.1	52.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.5	56.2	64.9	36.0	25.8	43.3	10.9	30.1	52.6
LOS	E	E	E	D	C	D	B	C	D
Approach Delay		59.2		57.0		29.0			50.5
Approach LOS		E		E		C			D
Queue Length 50th (m)	10.3	19.7	114.5	62.9	9.7	103.8	13.0	21.2	135.6
Queue Length 95th (m)	21.5	36.7	#152.2	92.8	20.1	#151.5	67.2	m27.8m#164.6	
Internal Link Dist (m)		203.2		249.5		171.9			387.0
Turn Bay Length (m)	30.0		85.0		75.0			75.0	
Base Capacity (vph)	485	368	956	575	196	1173	920	227	1284
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.27	0.93	0.58	0.36	0.75	0.74	0.44	0.75

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 98 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 44.1

Intersection LOS: D

Intersection Capacity Utilization 77.8%

ICU Level of Service D

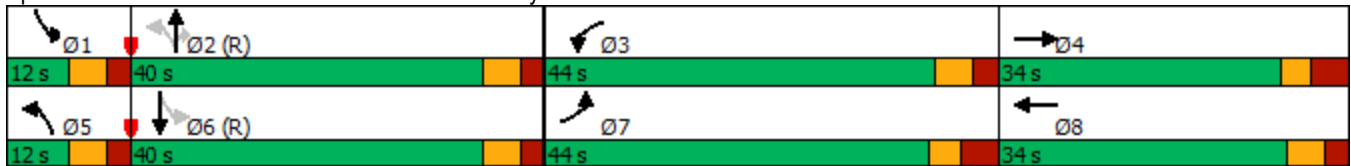
Analysis Period (min) 15

Lanes, Volumes, Timings 7: Merivale Rd & Lotta Ave & Clyde Ave

Existing PM
04/29/2020

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

Splits and Phases: 7: Merivale Rd & Lotta Ave & Clyde Ave



Lanes, Volumes, Timings
8: Erindale Dr & Maitland Ave

Existing PM
04/29/2020



Lane Group	EBT	WBL	WBT	NBL	Ø9
Lane Configurations	↑↑		↑↑	↑↑	
Traffic Volume (vph)	898	20	1129	60	
Future Volume (vph)	898	20	1129	60	
Lane Group Flow (vph)	1114	0	1276	86	
Turn Type	NA	Perm	NA	Perm	
Protected Phases	4		8		9
Permitted Phases		8		2	
Detector Phase	4	8	8	2	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	29.1	24.5	24.5	30.4	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	1.8	8.4	8.4	2.1	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.1		11.7	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	77.7		72.4	10.9	
Actuated g/C Ratio	0.82		0.76	0.11	
v/c Ratio	0.41		0.54	0.42	
Control Delay	3.7		4.6	38.6	
Queue Delay	0.0		0.0	3.0	
Total Delay	3.8		4.6	41.5	
LOS	A		A	D	
Approach Delay	3.8		4.6	41.5	
Approach LOS	A		A	D	
Queue Length 50th (m)	26.1		16.0	12.4	
Queue Length 95th (m)	42.3		19.7	25.7	
Internal Link Dist (m)	140.4		13.1	185.7	
Turn Bay Length (m)					
Base Capacity (vph)	2731		2358	460	
Starvation Cap Reductn	0		8	0	
Spillback Cap Reductn	126		0	291	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.43		0.54	0.51	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 33 (35%), Referenced to phase 4:EBT and 8:WBTL, Start of Green					
Natural Cycle: 90					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.54					
Intersection Signal Delay: 5.5			Intersection LOS: A		
Intersection Capacity Utilization 70.5%			ICU Level of Service C		
Analysis Period (min) 15					

Lanes, Volumes, Timings
 8: Erindale Dr & Maitland Ave

Existing PM
 04/29/2020

Splits and Phases: 8: Erindale Dr & Maitland Ave



Lanes, Volumes, Timings
9: Maitland Ave & Glenmount Ave

Existing PM
04/29/2020



Lane Group	EBL	EBT	WBT	SBL	Ø9
Lane Configurations		↕↕	↕↕	↕	
Traffic Volume (vph)	80	915	1088	33	
Future Volume (vph)	80	915	1088	33	
Lane Group Flow (vph)	0	1106	1216	83	
Turn Type	Perm	NA	NA	Perm	
Protected Phases		4	8		9
Permitted Phases	4			6	
Detector Phase	4	4	8	6	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	22.5	22.5	29.1	31.0	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	8.4	8.4	1.8	2.1	0.0
Lost Time Adjust (s)		0.0	0.0	0.0	
Total Lost Time (s)		11.7	5.1	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)		72.9	78.2	10.4	
Actuated g/C Ratio		0.77	0.82	0.11	
v/c Ratio		0.64	0.44	0.38	
Control Delay		6.6	3.7	25.8	
Queue Delay		0.0	0.0	2.0	
Total Delay		6.6	3.8	27.8	
LOS		A	A	C	
Approach Delay		6.6	3.8	27.8	
Approach LOS		A	A	C	
Queue Length 50th (m)		53.0	30.5	6.3	
Queue Length 95th (m)		81.5	44.1	19.6	
Internal Link Dist (m)		13.1	488.7	48.4	
Turn Bay Length (m)					
Base Capacity (vph)		1715	2789	468	
Starvation Cap Reductn		8	0	0	
Spillback Cap Reductn		0	155	279	
Storage Cap Reductn		0	0	0	
Reduced v/c Ratio		0.65	0.46	0.44	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 33 (35%), Referenced to phase 4:EBTL and 8:WBT, Start of Green					
Natural Cycle: 100					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.64					
Intersection Signal Delay: 5.9				Intersection LOS: A	
Intersection Capacity Utilization 87.9%				ICU Level of Service E	
Analysis Period (min) 15					

Lanes, Volumes, Timings
 9: Maitland Ave & Glenmount Ave

Existing PM
 04/29/2020

Splits and Phases: 9: Maitland Ave & Glenmount Ave























Future Background 2022

Lanes, Volumes, Timings
1: Clyde Ave & Baseline Rd

Future Background 2022 AM

04/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	173	1071	128	90	477	373	87	737	358	515
Future Volume (vph)	173	1071	128	90	477	373	87	737	358	515
Lane Group Flow (vph)	173	1071	128	90	477	373	87	844	358	570
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9	11.6	39.9
Total Split (s)	18.0	41.0	41.0	18.0	41.0	41.0	21.0	40.0	21.0	40.0
Total Split (%)	15.0%	34.2%	34.2%	15.0%	34.2%	34.2%	17.5%	33.3%	17.5%	33.3%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6	3.3	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9	6.6	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	12.1	36.4	36.4	10.3	34.6	34.6	8.6	32.5	14.4	38.3
Actuated g/C Ratio	0.10	0.30	0.30	0.09	0.29	0.29	0.07	0.27	0.12	0.32
v/c Ratio	1.02	1.04	0.23	0.62	0.49	0.57	0.37	0.93	0.91	0.53
Control Delay	126.8	80.5	3.8	71.6	37.4	11.5	57.2	58.9	79.8	35.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	126.8	80.5	3.8	71.6	37.4	11.5	57.2	58.9	79.8	35.2
LOS	F	F	A	E	D	B	E	E	E	D
Approach Delay		79.1			30.4			58.8		52.4
Approach LOS		E			C			E		D
Queue Length 50th (m)	~45.0	~150.1	0.0	20.6	48.9	12.5	10.2	100.0	43.5	56.4
Queue Length 95th (m)	#89.1	#190.8	9.0	37.7	65.2	41.5	18.1	#136.1	#70.1	76.0
Internal Link Dist (m)		24.7			271.0			387.0		105.7
Turn Bay Length (m)	100.0		15.0	75.0		40.0	60.0		105.0	
Base Capacity (vph)	170	1029	568	162	977	652	394	926	394	1074
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductcn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	1.04	0.23	0.56	0.49	0.57	0.22	0.91	0.91	0.53
Intersection Summary										
Cycle Length: 120										
Actuated Cycle Length: 120										
Offset: 19 (16%), Referenced to phase 4:EBT and 8:WBT, Start of Green										
Natural Cycle: 110										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 1.04										
Intersection Signal Delay: 57.7					Intersection LOS: E					
Intersection Capacity Utilization 94.4%					ICU Level of Service F					
Analysis Period (min) 15										

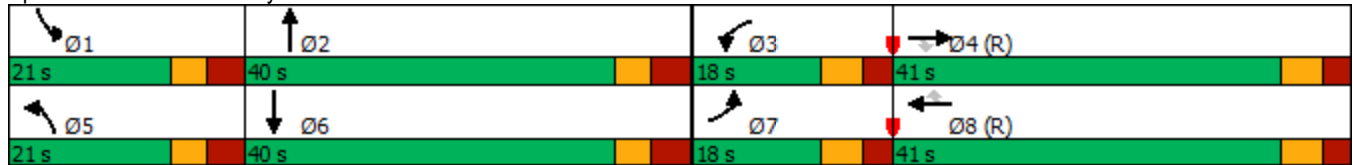
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Clyde Ave & Baseline Rd



Lanes, Volumes, Timings
2: Baseline Rd & Erindale Dr

Future Background 2022 AM

04/29/2020



Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	29	1383	694	16
Future Volume (vph)	29	1383	694	16
Lane Group Flow (vph)	29	1383	724	72
Sign Control		Free	Free	Stop

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 51.6% ICU Level of Service A

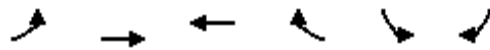
Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

Future Background 2022 AM

2: Baseline Rd & Erindale Dr

04/29/2020









Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	1383	694	30	16	56
Future Volume (Veh/h)	29	1383	694	30	16	56
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	29	1383	694	30	16	56
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	724				1458	362
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	724				1458	362
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				86	91
cM capacity (veh/h)	874				116	635
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	29	692	692	463	261	72
Volume Left	29	0	0	0	0	16
Volume Right	0	0	0	0	30	56
cSH	874	1700	1700	1700	1700	319
Volume to Capacity	0.03	0.41	0.41	0.27	0.15	0.23
Queue Length 95th (m)	0.8	0.0	0.0	0.0	0.0	6.5
Control Delay (s)	9.3	0.0	0.0	0.0	0.0	19.6
Lane LOS	A					C
Approach Delay (s)	0.2			0.0		19.6
Approach LOS						C
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			51.6%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Clyde Ave & Access 1

Future Background 2022 AM

04/29/2020











			
Lane Group	NBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	17	1295	901
Future Volume (vph)	17	1295	901
Lane Group Flow (vph)	17	1295	904
Sign Control		Free	Free
Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 41.1%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis

Future Background 2022 AM

04/29/2020

4: Clyde Ave & Access 1

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	17	1295	901	3
Future Volume (Veh/h)	0	0	17	1295	901	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	17	1295	901	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				209		
pX, platoon unblocked	0.78					
vC, conflicting volume	1584	452	904			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1177	452	904			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	98			
cM capacity (veh/h)	140	555	748			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	0	17	648	648	601	303
Volume Left	0	17	0	0	0	0
Volume Right	0	0	0	0	0	3
cSH	1700	748	1700	1700	1700	1700
Volume to Capacity	0.00	0.02	0.38	0.38	0.35	0.18
Queue Length 95th (m)	0.0	0.5	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	9.9	0.0	0.0	0.0	0.0
Lane LOS	A	A				
Approach Delay (s)	0.0	0.1			0.0	
Approach LOS	A					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			41.1%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: Clyde Ave & Access 2

Future Background 2022 AM

04/29/2020



Lane Group	EBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	0	1283	890
Future Volume (vph)	0	1283	890
Lane Group Flow (vph)	38	1283	901
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized










Intersection Capacity Utilization 47.4% ICU Level of Service A

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis 5: Clyde Ave & Access 2

Future Background 2022 AM

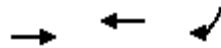
04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	38	0	1283	890	11
Future Volume (Veh/h)	0	38	0	1283	890	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	38	0	1283	890	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				130		
pX, platoon unblocked	0.77					
vC, conflicting volume	1537	450	901			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1093	450	901			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	93	100			
cM capacity (veh/h)	160	556	750			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	38	642	642	593	308	
Volume Left	0	0	0	0	0	
Volume Right	38	0	0	0	11	
cSH	556	1700	1700	1700	1700	
Volume to Capacity	0.07	0.38	0.38	0.35	0.18	
Queue Length 95th (m)	1.7	0.0	0.0	0.0	0.0	
Control Delay (s)	11.9	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	11.9	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			47.4%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
6: Baseline Rd & Access 3

Future Background 2022 AM

04/29/2020



Lane Group	EBT	WBT	SBR
Lane Configurations	↑↑	↑↑	↑
Traffic Volume (vph)	1370	619	8
Future Volume (vph)	1370	619	8
Lane Group Flow (vph)	1370	619	8
Sign Control	Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 43.3% ICU Level of Service A

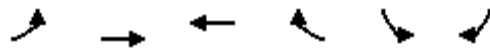
Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

Future Background 2022 AM

6: Baseline Rd & Access 3

04/29/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (veh/h)	0	1370	619	0	0	8
Future Volume (Veh/h)	0	1370	619	0	0	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1370	619	0	0	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)			49			
pX, platoon unblocked	0.89				0.89	0.89
vC, conflicting volume	619				1304	310
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	312				1085	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1103				187	961
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	685	685	310	310	8	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	8	
cSH	1700	1700	1700	1700	961	
Volume to Capacity	0.40	0.40	0.18	0.18	0.01	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.2	
Control Delay (s)	0.0	0.0	0.0	0.0	8.8	
Lane LOS					A	
Approach Delay (s)	0.0		0.0		8.8	
Approach LOS					A	
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			43.3%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
7: Merivale Rd & Lotta Ave & Clyde Ave

Future Background 2022 AM

04/29/2020



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	31	68	392	34	1	871	667	46	717
Future Volume (vph)	31	68	392	34	1	871	667	46	717
Lane Group Flow (vph)	31	87	392	108	1	871	667	46	724
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	7	4	3	8		2			6
Permitted Phases					2		2	6	
Detector Phase	7	4	3	8	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.8	33.8	11.2	33.2	30.0	30.0	30.0	30.0	30.0
Total Split (s)	33.0	34.0	33.0	34.0	63.0	63.0	63.0	63.0	63.0
Total Split (%)	25.4%	26.2%	25.4%	26.2%	48.5%	48.5%	48.5%	48.5%	48.5%
Yellow Time (s)	3.0	3.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.8	3.8	2.5	2.5	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.2	6.2	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	7.9	12.0	20.7	30.0	78.3	78.3	78.3	78.3	78.3
Actuated g/C Ratio	0.06	0.09	0.16	0.23	0.60	0.60	0.60	0.60	0.60
v/c Ratio	0.30	0.52	0.75	0.25	0.00	0.43	0.57	0.16	0.36
Control Delay	65.2	60.3	61.3	17.3	13.0	15.5	3.2	15.2	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	60.3	61.3	17.3	13.0	15.5	3.2	15.2	14.5
LOS	E	E	E	B	B	B	A	B	B
Approach Delay		61.6		51.8		10.1			14.5
Approach LOS		E		D		B			B
Queue Length 50th (m)	7.8	19.2	50.0	7.3	0.1	58.4	0.0	4.8	45.9
Queue Length 95th (m)	17.7	35.1	64.0	21.9	1.1	87.8	17.1	13.7	70.1
Internal Link Dist (m)		203.2		249.5		171.9			387.0
Turn Bay Length (m)	30.0		85.0		75.0			75.0	
Base Capacity (vph)	341	368	677	436	357	2041	1179	291	2039
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.24	0.58	0.25	0.00	0.43	0.57	0.16	0.36

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 9 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 20.5

Intersection LOS: C

Intersection Capacity Utilization 75.9%

ICU Level of Service D

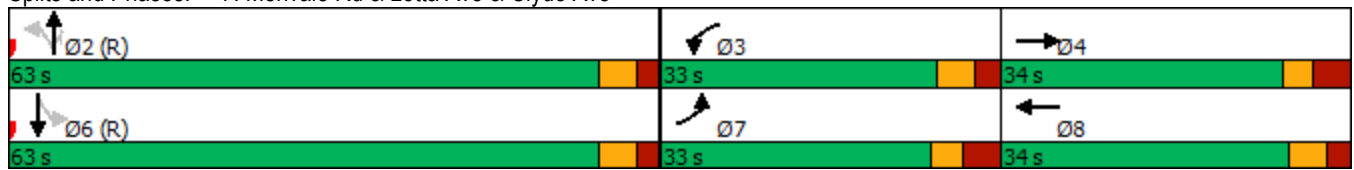
Analysis Period (min) 15

Lanes, Volumes, Timings
 7: Merivale Rd & Lotta Ave & Clyde Ave

Future Background 2022 AM

04/29/2020

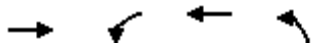
Splits and Phases: 7: Merivale Rd & Lotta Ave & Clyde Ave



Lanes, Volumes, Timings
8: Erindale Dr & Maitland Ave

Future Background 2022 AM

04/29/2020



Lane Group	EBT	WBL	WBT	NBL	Ø9
Lane Configurations	↑↑		↑↑	↑↑	
Traffic Volume (vph)	721	8	1083	250	
Future Volume (vph)	721	8	1083	250	
Lane Group Flow (vph)	779	0	1091	295	
Turn Type	NA	Perm	NA	Perm	
Protected Phases	4		8		9
Permitted Phases		8		2	
Detector Phase	4	8	8	2	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	29.1	24.5	24.5	30.4	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	1.8	8.4	8.4	2.1	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.1		11.7	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	63.2		56.6	21.3	
Actuated g/C Ratio	0.67		0.60	0.22	
v/c Ratio	0.35		0.57	0.77	
Control Delay	8.0		11.5	46.8	
Queue Delay	0.0		0.3	65.3	
Total Delay	8.0		11.8	112.2	
LOS	A		B	F	
Approach Delay	8.0		11.8	112.2	
Approach LOS	A		B	F	
Queue Length 50th (m)	28.5		62.5	49.4	
Queue Length 95th (m)	48.1		97.2	70.5	
Internal Link Dist (m)	140.4		13.1	185.7	
Turn Bay Length (m)					
Base Capacity (vph)	2235		1913	467	
Starvation Cap Reductn	0		310	0	
Spillback Cap Reductn	22		0	289	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.35		0.68	1.66	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 49 (52%), Referenced to phase 4:EBT and 8:WBTL, Start of Green					
Natural Cycle: 75					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.77					
Intersection Signal Delay: 24.1			Intersection LOS: C		
Intersection Capacity Utilization 69.3%			ICU Level of Service C		
Analysis Period (min) 15					

Splits and Phases: 8: Erindale Dr & Maitland Ave



Lanes, Volumes, Timings
9: Maitland Ave & Glenmount Ave

Future Background 2022 AM

04/29/2020



Lane Group	EBL	EBT	WBT	SBL	Ø9
Lane Configurations		↔↔	↔↔	↔	
Traffic Volume (vph)	18	766	997	56	
Future Volume (vph)	18	766	997	56	
Lane Group Flow (vph)	0	784	1004	142	
Turn Type	Perm	NA	NA	Perm	
Protected Phases		4	8		9
Permitted Phases	4			6	
Detector Phase	4	4	8	6	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	22.5	22.5	29.1	31.0	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	8.4	8.4	1.8	2.1	0.0
Lost Time Adjust (s)		0.0	0.0	0.0	
Total Lost Time (s)		11.7	5.1	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)		66.6	73.2	11.3	
Actuated g/C Ratio		0.70	0.77	0.12	
v/c Ratio		0.36	0.38	0.54	
Control Delay		3.4	4.2	26.4	
Queue Delay		0.4	0.1	99.3	
Total Delay		3.8	4.3	125.7	
LOS		A	A	F	
Approach Delay		3.8	4.3	125.7	
Approach LOS		A	A	F	
Queue Length 50th (m)		11.0	23.0	10.8	
Queue Length 95th (m)		13.9	39.9	27.6	
Internal Link Dist (m)		13.1	488.7	48.4	
Turn Bay Length (m)					
Base Capacity (vph)		2166	2609	491	
Starvation Cap Reductn		829	0	0	
Spillback Cap Reductn		0	515	442	
Storage Cap Reductn		0	0	0	
Reduced v/c Ratio		0.59	0.48	2.90	

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 95
Offset: 49 (52%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.54
Intersection Signal Delay: 13.1
Intersection Capacity Utilization 59.1%
Analysis Period (min) 15
Intersection LOS: B
ICU Level of Service B





















Splits and Phases: 9: Maitland Ave & Glenmount Ave



Lanes, Volumes, Timings
1: Clyde Ave & Baseline Rd

Future Background 2022 PM

04/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	156	872	220	140	1144	529	311	791	402	614
Future Volume (vph)	156	872	220	140	1144	529	311	791	402	614
Lane Group Flow (vph)	156	872	220	140	1144	529	311	891	402	693
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9	11.6	39.9
Total Split (s)	18.0	51.0	51.0	18.0	51.0	51.0	21.0	40.0	21.0	40.0
Total Split (%)	13.8%	39.2%	39.2%	13.8%	39.2%	39.2%	16.2%	30.8%	16.2%	30.8%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6	3.3	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9	6.6	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	11.5	44.6	44.6	11.5	44.6	44.6	14.3	33.1	14.4	33.2
Actuated g/C Ratio	0.09	0.34	0.34	0.09	0.34	0.34	0.11	0.25	0.11	0.26
v/c Ratio	1.05	0.75	0.36	0.94	0.98	0.79	0.86	1.04	1.10	0.81
Control Delay	143.0	42.6	13.1	117.9	65.2	30.5	96.0	70.8	130.7	53.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	143.0	42.6	13.1	117.9	65.2	30.5	96.0	70.8	130.7	53.1
LOS	F	D	B	F	E	C	F	E	F	D
Approach Delay		50.0			59.1			77.3		81.6
Approach LOS		D			E			E		F
Queue Length 50th (m)	~43.1	103.5	13.6	36.3	152.3	71.9	40.1	~129.6	~60.3	87.0
Queue Length 95th (m)	#86.8	127.8	33.7	#76.1	#199.3	119.8	#66.6	#163.6	#92.1	109.9
Internal Link Dist (m)		24.7			271.0			387.0		105.7
Turn Bay Length (m)	100.0		15.0	75.0		40.0	60.0		105.0	
Base Capacity (vph)	149	1163	614	149	1163	672	364	856	364	859
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductcn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.75	0.36	0.94	0.98	0.79	0.85	1.04	1.10	0.81
Intersection Summary										
Cycle Length: 130										
Actuated Cycle Length: 130										
Offset: 53 (41%), Referenced to phase 4:EBT and 8:WBT, Start of Green										
Natural Cycle: 130										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 1.10										
Intersection Signal Delay: 65.7					Intersection LOS: E					
Intersection Capacity Utilization 103.1%					ICU Level of Service G					
Analysis Period (min) 15										

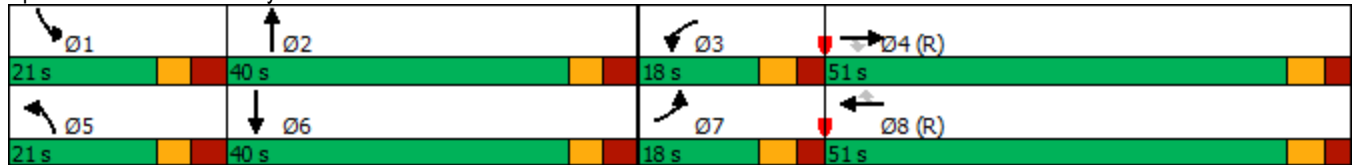
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Clyde Ave & Baseline Rd



Lanes, Volumes, Timings
2: Baseline Rd & Erindale Dr

Future Background 2022 PM

04/29/2020



Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	12	1335	1420	29
Future Volume (vph)	12	1335	1420	29
Lane Group Flow (vph)	12	1335	1496	101
Sign Control		Free	Free	Stop

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 57.0% ICU Level of Service B

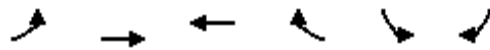
Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

Future Background 2022 PM

2: Baseline Rd & Erindale Dr

04/29/2020









Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	12	1335	1420	76	29	72
Future Volume (Veh/h)	12	1335	1420	76	29	72
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	12	1335	1420	76	29	72
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1496				2150	748
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1496				2150	748
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				28	80
cM capacity (veh/h)	444				40	355
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	12	668	668	947	549	101
Volume Left	12	0	0	0	0	29
Volume Right	0	0	0	0	76	72
cSH	444	1700	1700	1700	1700	109
Volume to Capacity	0.03	0.39	0.39	0.56	0.32	0.93
Queue Length 95th (m)	0.6	0.0	0.0	0.0	0.0	43.1
Control Delay (s)	13.3	0.0	0.0	0.0	0.0	139.7
Lane LOS	B					F
Approach Delay (s)	0.1			0.0		139.7
Approach LOS						F
Intersection Summary						
Average Delay			4.8			
Intersection Capacity Utilization			57.0%		ICU Level of Service	B
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Clyde Ave & Access 1

Future Background 2022 PM

04/29/2020











			
Lane Group	NBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	53	1445	954
Future Volume (vph)	53	1445	954
Lane Group Flow (vph)	53	1445	972
Sign Control		Free	Free
Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 45.5%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis

Future Background 2022 PM

4: Clyde Ave & Access 1

04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	53	1445	954	18
Future Volume (Veh/h)	0	0	53	1445	954	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	53	1445	954	18
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				209		
pX, platoon unblocked	0.77					
vC, conflicting volume	1792	486	972			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1428	486	972			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	92			
cM capacity (veh/h)	89	527	705			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	0	53	722	722	636	336
Volume Left	0	53	0	0	0	0
Volume Right	0	0	0	0	0	18
cSH	1700	705	1700	1700	1700	1700
Volume to Capacity	0.00	0.08	0.42	0.42	0.37	0.20
Queue Length 95th (m)	0.0	1.8	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	10.5	0.0	0.0	0.0	0.0
Lane LOS	A	B				
Approach Delay (s)	0.0	0.4			0.0	
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			45.5%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: Clyde Ave & Access 2

Future Background 2022 PM

04/29/2020



Lane Group	EBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	0	1476	943
Future Volume (vph)	0	1476	943
Lane Group Flow (vph)	73	1476	954
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized










Intersection Capacity Utilization 54.5% ICU Level of Service A

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis 5: Clyde Ave & Access 2

Future Background 2022 PM

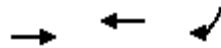
04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	73	0	1476	943	11
Future Volume (Veh/h)	0	73	0	1476	943	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	73	0	1476	943	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				130		
pX, platoon unblocked	0.76					
vC, conflicting volume	1686	477	954			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1268	477	954			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	86	100			
cM capacity (veh/h)	122	534	716			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	73	738	738	629	325	
Volume Left	0	0	0	0	0	
Volume Right	73	0	0	0	11	
cSH	534	1700	1700	1700	1700	
Volume to Capacity	0.14	0.43	0.43	0.37	0.19	
Queue Length 95th (m)	3.6	0.0	0.0	0.0	0.0	
Control Delay (s)	12.8	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	12.8	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			54.5%	ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings
6: Baseline Rd & Access 3

Future Background 2022 PM

04/29/2020



Lane Group	EBT	WBT	SBR
Lane Configurations	↑↑	↑↑	↑
Traffic Volume (vph)	1245	1534	33
Future Volume (vph)	1245	1534	33
Lane Group Flow (vph)	1245	1534	33
Sign Control	Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 54.8% ICU Level of Service A

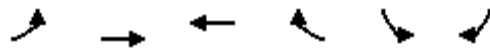
Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

Future Background 2022 PM

6: Baseline Rd & Access 3

04/29/2020
























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (veh/h)	0	1245	1534	0	0	33
Future Volume (Veh/h)	0	1245	1534	0	0	33
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1245	1534	0	0	33
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)			49			
pX, platoon unblocked	0.66				0.66	0.66
vC, conflicting volume	1534				2156	767
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	795				1731	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	95
cM capacity (veh/h)	547				53	721
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	622	622	767	767	33	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	33	
cSH	1700	1700	1700	1700	721	
Volume to Capacity	0.37	0.37	0.45	0.45	0.05	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	1.1	
Control Delay (s)	0.0	0.0	0.0	0.0	10.2	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		10.2	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			54.8%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
7: Merivale Rd & Lotta Ave & Clyde Ave

Future Background 2022 PM

04/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations			 			 			 
Traffic Volume (vph)	37	57	808	130	64	817	611	90	865
Future Volume (vph)	37	57	808	130	64	817	611	90	865
Lane Group Flow (vph)	37	89	808	319	64	817	611	90	885
Turn Type	Prot	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases					2		2	6	
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	11.8	33.8	11.2	33.2	11.0	30.0	30.0	11.0	30.0
Total Split (s)	44.0	34.0	44.0	34.0	12.0	40.0	40.0	12.0	40.0
Total Split (%)	33.8%	26.2%	33.8%	26.2%	9.2%	30.8%	30.8%	9.2%	30.8%
Yellow Time (s)	3.0	3.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.8	3.8	2.5	2.5	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.2	6.2	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	8.3	11.8	35.6	44.3	56.1	47.9	47.9	60.1	51.7
Actuated g/C Ratio	0.06	0.09	0.27	0.34	0.43	0.37	0.37	0.46	0.40
v/c Ratio	0.34	0.52	0.90	0.54	0.29	0.65	0.66	0.36	0.66
Control Delay	66.0	54.1	59.0	33.5	22.9	38.6	7.4	28.3	49.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.0	54.1	59.0	33.5	22.9	38.6	7.4	28.3	49.5
LOS	E	D	E	C	C	D	A	C	D
Approach Delay		57.6		51.8		25.2			47.6
Approach LOS		E		D		C			D
Queue Length 50th (m)	9.3	17.2	100.5	58.1	8.6	92.3	4.1	18.6	123.1
Queue Length 95th (m)	20.2	33.4	125.2	87.3	18.1	126.5	40.8	m27.1	m145.5
Internal Link Dist (m)		203.2		249.5		171.9			387.0
Turn Bay Length (m)	30.0		85.0		75.0			75.0	
Base Capacity (vph)	485	368	956	587	225	1248	928	249	1346
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.24	0.85	0.54	0.28	0.65	0.66	0.36	0.66

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 98 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 40.2

Intersection LOS: D

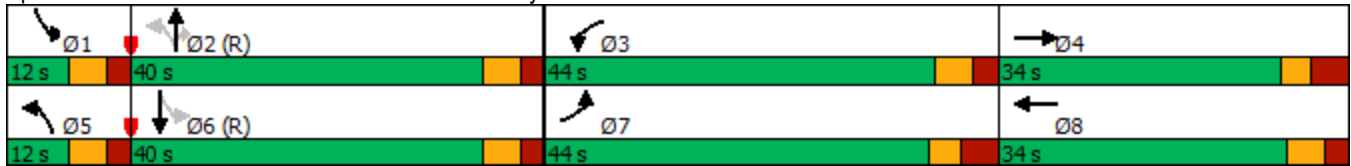
Intersection Capacity Utilization 78.2%

ICU Level of Service D

Analysis Period (min) 15

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

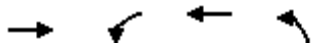
Splits and Phases: 7: Merivale Rd & Lotta Ave & Clyde Ave



Lanes, Volumes, Timings
8: Erindale Dr & Maitland Ave

Future Background 2022 PM

04/29/2020



Lane Group	EBT	WBL	WBT	NBL	Ø9
Lane Configurations	↑↑		↑↑	↑↑	
Traffic Volume (vph)	930	20	1179	60	
Future Volume (vph)	930	20	1179	60	
Lane Group Flow (vph)	1034	0	1199	77	
Turn Type	NA	Perm	NA	Perm	
Protected Phases	4		8		9
Permitted Phases		8		2	
Detector Phase	4	8	8	2	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	29.1	24.5	24.5	30.4	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	1.8	8.4	8.4	2.1	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.1		11.7	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	77.9		72.7	10.7	
Actuated g/C Ratio	0.82		0.77	0.11	
v/c Ratio	0.38		0.50	0.39	
Control Delay	3.4		4.1	37.8	
Queue Delay	0.0		0.0	2.1	
Total Delay	3.5		4.2	39.9	
LOS	A		A	D	
Approach Delay	3.5		4.2	39.9	
Approach LOS	A		A	D	
Queue Length 50th (m)	23.5		14.9	10.8	
Queue Length 95th (m)	36.3		18.5	23.5	
Internal Link Dist (m)	140.4		13.1	185.7	
Turn Bay Length (m)					
Base Capacity (vph)	2743		2385	460	
Starvation Cap Reductn	0		121	0	
Spillback Cap Reductn	105		0	284	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.39		0.53	0.44	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 33 (35%), Referenced to phase 4:EBT and 8:WBTL, Start of Green					
Natural Cycle: 80					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.50					
Intersection Signal Delay: 5.0			Intersection LOS: A		
Intersection Capacity Utilization 72.0%			ICU Level of Service C		
Analysis Period (min) 15					

Splits and Phases: 8: Erindale Dr & Maitland Ave



Lanes, Volumes, Timings
9: Maitland Ave & Glenmount Ave

Future Background 2022 PM

04/29/2020



Lane Group	EBL	EBT	WBT	SBL	Ø9
Lane Configurations		↕↕	↕↕	↕	
Traffic Volume (vph)	80	947	1138	33	
Future Volume (vph)	80	947	1138	33	
Lane Group Flow (vph)	0	1027	1144	74	
Turn Type	Perm	NA	NA	Perm	
Protected Phases		4	8		9
Permitted Phases	4			6	
Detector Phase	4	4	8	6	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	22.5	22.5	29.1	31.0	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	8.4	8.4	1.8	2.1	0.0
Lost Time Adjust (s)		0.0	0.0	0.0	
Total Lost Time (s)		11.7	5.1	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)		73.0	78.3	10.3	
Actuated g/C Ratio		0.77	0.82	0.11	
v/c Ratio		0.56	0.41	0.35	
Control Delay		5.1	3.5	25.8	
Queue Delay		0.0	0.0	1.6	
Total Delay		5.1	3.5	27.4	
LOS		A	A	C	
Approach Delay		5.1	3.5	27.4	
Approach LOS		A	A	C	
Queue Length 50th (m)		13.8	27.8	5.6	
Queue Length 95th (m)		16.8	39.1	18.2	
Internal Link Dist (m)		13.1	488.7	48.4	
Turn Bay Length (m)					
Base Capacity (vph)		1830	2792	464	
Starvation Cap Reductn		8	0	0	
Spillback Cap Reductn		0	139	274	
Storage Cap Reductn		0	0	0	
Reduced v/c Ratio		0.56	0.43	0.39	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 33 (35%), Referenced to phase 4:EBTL and 8:WBT, Start of Green					
Natural Cycle: 90					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.56					
Intersection Signal Delay: 5.0				Intersection LOS: A	
Intersection Capacity Utilization 90.3%				ICU Level of Service E	
Analysis Period (min) 15					

Splits and Phases: 9: Maitland Ave & Glenmount Ave























Future Background 2026

Lanes, Volumes, Timings
1: Clyde Ave & Baseline Rd

Future Background 2026 AM

04/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	173	1070	128	81	476	372	87	737	353	515
Future Volume (vph)	173	1070	128	81	476	372	87	737	353	515
Lane Group Flow (vph)	173	1070	128	81	476	372	87	841	353	570
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9	11.6	39.9
Total Split (s)	18.0	41.0	41.0	18.0	41.0	41.0	21.0	40.0	21.0	40.0
Total Split (%)	15.0%	34.2%	34.2%	15.0%	34.2%	34.2%	17.5%	33.3%	17.5%	33.3%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6	3.3	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9	6.6	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	12.1	39.4	39.4	10.0	34.6	34.6	8.6	32.5	14.4	38.3
Actuated g/C Ratio	0.10	0.33	0.33	0.08	0.29	0.29	0.07	0.27	0.12	0.32
v/c Ratio	1.01	0.96	0.21	0.58	0.49	0.57	0.37	0.93	0.90	0.53
Control Delay	125.9	60.2	3.7	69.0	37.4	11.4	57.2	58.7	77.9	35.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	125.9	60.2	3.7	69.0	37.4	11.4	57.2	58.7	77.9	35.3
LOS	F	E	A	E	D	B	E	E	E	D
Approach Delay		63.2			29.7			58.5		51.6
Approach LOS		E			C			E		D
Queue Length 50th (m)	~45.0	~148.1	0.0	18.5	48.8	12.3	10.2	99.5	42.8	56.4
Queue Length 95th (m)	#89.1	#190.8	9.0	34.6	65.1	41.3	18.1	#135.3	#68.8	76.0
Internal Link Dist (m)		24.7			271.0			387.0		105.7
Turn Bay Length (m)	100.0		15.0	75.0		40.0	60.0		105.0	
Base Capacity (vph)	171	1113	602	162	977	652	394	926	394	1072
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.96	0.21	0.50	0.49	0.57	0.22	0.91	0.90	0.53

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 19 (16%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 52.1

Intersection LOS: D

Intersection Capacity Utilization 93.6%

ICU Level of Service F

Analysis Period (min) 15

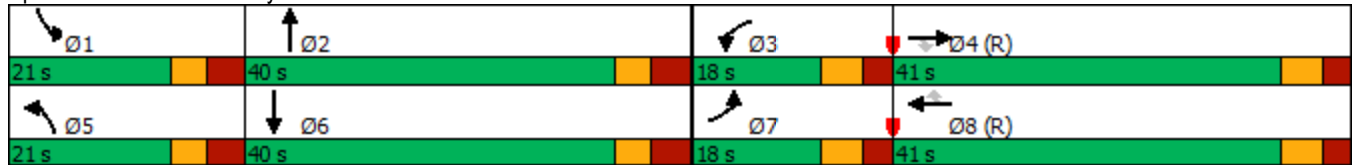
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Clyde Ave & Baseline Rd



Lanes, Volumes, Timings
2: Baseline Rd & Erindale Dr

Future Background 2026 AM

04/29/2020



Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	29	1382	693	16
Future Volume (vph)	29	1382	693	16
Lane Group Flow (vph)	29	1382	723	72
Sign Control		Free	Free	Stop

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 51.6% ICU Level of Service A

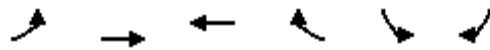
Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

Future Background 2026 AM

2: Baseline Rd & Erindale Dr

04/29/2020









Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	1382	693	30	16	56
Future Volume (Veh/h)	29	1382	693	30	16	56
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	29	1382	693	30	16	56
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	723				1457	362
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	723				1457	362
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				86	91
cM capacity (veh/h)	875				116	635
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	29	691	691	462	261	72
Volume Left	29	0	0	0	0	16
Volume Right	0	0	0	0	30	56
cSH	875	1700	1700	1700	1700	319
Volume to Capacity	0.03	0.41	0.41	0.27	0.15	0.23
Queue Length 95th (m)	0.8	0.0	0.0	0.0	0.0	6.5
Control Delay (s)	9.3	0.0	0.0	0.0	0.0	19.5
Lane LOS	A					C
Approach Delay (s)	0.2			0.0		19.5
Approach LOS						C
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			51.6%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Clyde Ave & Access 1

Future Background 2026 AM

04/29/2020











			
Lane Group	NBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	17	1282	896
Future Volume (vph)	17	1282	896
Lane Group Flow (vph)	17	1282	899
Sign Control		Free	Free
Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 40.7%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis

Future Background 2026 AM

4: Clyde Ave & Access 1

04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	17	1282	896	3
Future Volume (Veh/h)	0	0	17	1282	896	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	17	1282	896	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				209		
pX, platoon unblocked	0.78					
vC, conflicting volume	1572	450	899			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1164	450	899			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	98			
cM capacity (veh/h)	143	557	751			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	0	17	641	641	597	302
Volume Left	0	17	0	0	0	0
Volume Right	0	0	0	0	0	3
cSH	1700	751	1700	1700	1700	1700
Volume to Capacity	0.00	0.02	0.38	0.38	0.35	0.18
Queue Length 95th (m)	0.0	0.5	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	9.9	0.0	0.0	0.0	0.0
Lane LOS	A	A				
Approach Delay (s)	0.0	0.1			0.0	
Approach LOS	A					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			40.7%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: Clyde Ave & Access 2

Future Background 2026 AM

04/29/2020



Lane Group	EBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	0	1282	885
Future Volume (vph)	0	1282	885
Lane Group Flow (vph)	38	1282	896
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized










Intersection Capacity Utilization 47.4% ICU Level of Service A

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis 5: Clyde Ave & Access 2

Future Background 2026 AM

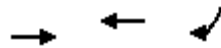
04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	38	0	1282	885	11
Future Volume (Veh/h)	0	38	0	1282	885	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	38	0	1282	885	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				130		
pX, platoon unblocked	0.77					
vC, conflicting volume	1532	448	896			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1088	448	896			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	93	100			
cM capacity (veh/h)	161	558	753			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	38	641	641	590	306	
Volume Left	0	0	0	0	0	
Volume Right	38	0	0	0	11	
cSH	558	1700	1700	1700	1700	
Volume to Capacity	0.07	0.38	0.38	0.35	0.18	
Queue Length 95th (m)	1.7	0.0	0.0	0.0	0.0	
Control Delay (s)	11.9	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	11.9	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			47.4%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
6: Baseline Rd & Access 3

Future Background 2026 AM

04/29/2020



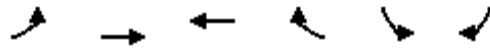
Lane Group	EBT	WBT	SBR
Lane Configurations	↑↑	↑↑	↗
Traffic Volume (vph)	1370	619	8
Future Volume (vph)	1370	619	8
Lane Group Flow (vph)	1370	619	8
Sign Control	Free	Free	
Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 43.3%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis

Future Background 2026 AM

6: Baseline Rd & Access 3

04/29/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (veh/h)	0	1370	619	0	0	8
Future Volume (Veh/h)	0	1370	619	0	0	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1370	619	0	0	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)			49			
pX, platoon unblocked	0.89				0.89	0.89
vC, conflicting volume	619				1304	310
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	313				1086	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1102				187	961
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	685	685	310	310	8	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	8	
cSH	1700	1700	1700	1700	961	
Volume to Capacity	0.40	0.40	0.18	0.18	0.01	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.2	
Control Delay (s)	0.0	0.0	0.0	0.0	8.8	
Lane LOS					A	
Approach Delay (s)	0.0		0.0		8.8	
Approach LOS					A	
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			43.3%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
7: Merivale Rd & Lotta Ave & Clyde Ave

Future Background 2026 AM

04/29/2020



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	31	68	392	34	1	868	667	46	708
Future Volume (vph)	31	68	392	34	1	868	667	46	708
Lane Group Flow (vph)	31	87	392	108	1	868	667	46	715
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	7	4	3	8		2			6
Permitted Phases					2		2	6	
Detector Phase	7	4	3	8	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.8	33.8	11.2	33.2	30.0	30.0	30.0	30.0	30.0
Total Split (s)	33.0	34.0	33.0	34.0	63.0	63.0	63.0	63.0	63.0
Total Split (%)	25.4%	26.2%	25.4%	26.2%	48.5%	48.5%	48.5%	48.5%	48.5%
Yellow Time (s)	3.0	3.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.8	3.8	2.5	2.5	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.2	6.2	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	7.9	12.0	20.7	30.0	78.3	78.3	78.3	78.3	78.3
Actuated g/C Ratio	0.06	0.09	0.16	0.23	0.60	0.60	0.60	0.60	0.60
v/c Ratio	0.30	0.52	0.75	0.25	0.00	0.43	0.57	0.16	0.35
Control Delay	65.2	60.3	61.3	17.3	13.0	15.4	3.2	15.2	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	60.3	61.3	17.3	13.0	15.4	3.2	15.2	14.4
LOS	E	E	E	B	B	B	A	B	B
Approach Delay		61.6		51.8		10.1			14.5
Approach LOS		E		D		B			B
Queue Length 50th (m)	7.8	19.2	50.0	7.3	0.1	58.3	0.0	4.8	45.2
Queue Length 95th (m)	17.7	35.1	64.0	21.9	1.1	87.5	17.1	13.7	69.0
Internal Link Dist (m)		203.2		249.5		171.9			387.0
Turn Bay Length (m)	30.0		85.0		75.0			75.0	
Base Capacity (vph)	341	368	677	436	363	2041	1179	292	2039
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.24	0.58	0.25	0.00	0.43	0.57	0.16	0.35

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 9 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 20.5

Intersection LOS: C

Intersection Capacity Utilization 75.9%

ICU Level of Service D

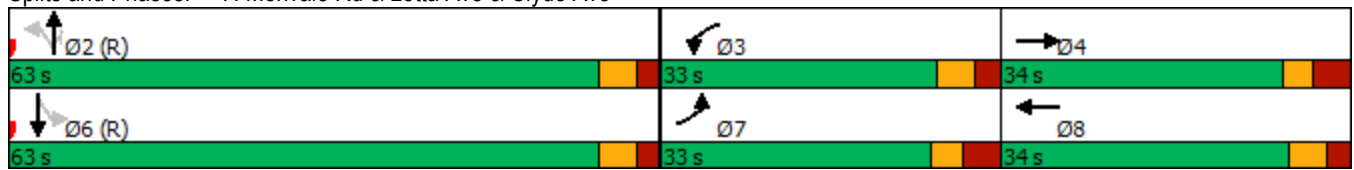
Analysis Period (min) 15

Lanes, Volumes, Timings
 7: Merivale Rd & Lotta Ave & Clyde Ave

Future Background 2026 AM

04/29/2020

Splits and Phases: 7: Merivale Rd & Lotta Ave & Clyde Ave



Lanes, Volumes, Timings
8: Erindale Dr & Maitland Ave

Future Background 2026 AM

04/29/2020



Lane Group	EBT	WBL	WBT	NBL	Ø9
Lane Configurations	↑↑		↑↑	↑↑	
Traffic Volume (vph)	716	8	1070	250	
Future Volume (vph)	716	8	1070	250	
Lane Group Flow (vph)	774	0	1078	295	
Turn Type	NA	Perm	NA	Perm	
Protected Phases	4		8		9
Permitted Phases		8		2	
Detector Phase	4	8	8	2	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	29.1	24.5	24.5	30.4	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	1.8	8.4	8.4	2.1	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.1		11.7	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	63.2		56.6	21.3	
Actuated g/C Ratio	0.67		0.60	0.22	
v/c Ratio	0.35		0.56	0.77	
Control Delay	8.0		11.4	46.8	
Queue Delay	0.0		0.4	65.1	
Total Delay	8.0		11.8	111.9	
LOS	A		B	F	
Approach Delay	8.0		11.8	111.9	
Approach LOS	A		B	F	
Queue Length 50th (m)	28.2		61.2	49.4	
Queue Length 95th (m)	47.6		95.5	70.5	
Internal Link Dist (m)	140.4		13.1	185.7	
Turn Bay Length (m)					
Base Capacity (vph)	2236		1913	467	
Starvation Cap Reductn	0		329	0	
Spillback Cap Reductn	22		0	286	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.35		0.68	1.63	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 49 (52%), Referenced to phase 4:EBT and 8:WBTL, Start of Green					
Natural Cycle: 75					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.77					
Intersection Signal Delay: 24.2			Intersection LOS: C		
Intersection Capacity Utilization 68.9%			ICU Level of Service C		
Analysis Period (min) 15					

Splits and Phases: 8: Erindale Dr & Maitland Ave



Lanes, Volumes, Timings
9: Maitland Ave & Glenmount Ave

Future Background 2026 AM

04/29/2020



Lane Group	EBL	EBT	WBT	SBL	Ø9
Lane Configurations		↕↕	↕↕	↕↕	
Traffic Volume (vph)	18	761	984	56	
Future Volume (vph)	18	761	984	56	
Lane Group Flow (vph)	0	779	991	142	
Turn Type	Perm	NA	NA	Perm	
Protected Phases		4	8		9
Permitted Phases	4			6	
Detector Phase	4	4	8	6	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	22.5	22.5	29.1	31.0	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	8.4	8.4	1.8	2.1	0.0
Lost Time Adjust (s)		0.0	0.0	0.0	
Total Lost Time (s)		11.7	5.1	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)		66.6	73.2	11.3	
Actuated g/C Ratio		0.70	0.77	0.12	
v/c Ratio		0.36	0.38	0.54	
Control Delay		3.4	4.2	26.4	
Queue Delay		0.4	0.1	98.6	
Total Delay		3.9	4.3	125.0	
LOS		A	A	F	
Approach Delay		3.9	4.3	125.0	
Approach LOS		A	A	F	
Queue Length 50th (m)		11.0	22.6	10.8	
Queue Length 95th (m)		13.9	39.2	27.6	
Internal Link Dist (m)		13.1	488.7	48.4	
Turn Bay Length (m)					
Base Capacity (vph)		2166	2609	491	
Starvation Cap Reductn		839	0	0	
Spillback Cap Reductn		0	512	441	
Storage Cap Reductn		0	0	0	
Reduced v/c Ratio		0.59	0.47	2.84	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 49 (52%), Referenced to phase 4:EBTL and 8:WBT, Start of Green					
Natural Cycle: 70					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.54					
Intersection Signal Delay: 13.1			Intersection LOS: B		
Intersection Capacity Utilization 58.9%			ICU Level of Service B		
Analysis Period (min) 15					



























Splits and Phases: 9: Maitland Ave & Glenmount Ave



Lanes, Volumes, Timings
1: Clyde Ave & Baseline Rd

Future Background 2026 PM

04/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations		 			 		 	 	 	 
Traffic Volume (vph)	156	870	220	134	1143	529	311	791	389	614
Future Volume (vph)	156	870	220	134	1143	529	311	791	389	614
Lane Group Flow (vph)	156	870	220	134	1143	529	311	882	389	693
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9	11.6	39.9
Total Split (s)	18.0	51.0	51.0	18.0	51.0	51.0	21.0	40.0	21.0	40.0
Total Split (%)	13.8%	39.2%	39.2%	13.8%	39.2%	39.2%	16.2%	30.8%	16.2%	30.8%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6	3.3	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9	6.6	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	11.5	44.6	44.6	11.5	44.6	44.6	14.3	33.1	14.4	33.2
Actuated g/C Ratio	0.09	0.34	0.34	0.09	0.34	0.34	0.11	0.25	0.11	0.26
v/c Ratio	1.05	0.75	0.36	0.90	0.98	0.79	0.86	1.03	1.07	0.81
Control Delay	143.0	42.6	13.1	109.5	65.0	30.5	95.9	67.9	120.6	53.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	143.0	42.6	13.1	109.5	65.0	30.5	95.9	67.9	120.6	53.1
LOS	F	D	B	F	E	C	F	E	F	D
Approach Delay		49.9			58.2			75.2		77.4
Approach LOS		D			E			E		E
Queue Length 50th (m)	~43.1	103.2	13.6	34.6	152.2	71.9	40.0	~127.0	~56.7	87.0
Queue Length 95th (m)	#86.8	127.4	33.7	#72.4	#199.0	119.8	#66.7	#160.7	#88.2	109.9
Internal Link Dist (m)		24.7			271.0			387.0		105.7
Turn Bay Length (m)	100.0		15.0	75.0		40.0	60.0		105.0	
Base Capacity (vph)	149	1163	614	149	1163	672	364	856	364	859
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.75	0.36	0.90	0.98	0.79	0.85	1.03	1.07	0.81

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 53 (41%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.07

Intersection Signal Delay: 64.0

Intersection LOS: E

Intersection Capacity Utilization 102.3%

ICU Level of Service G

Analysis Period (min) 15

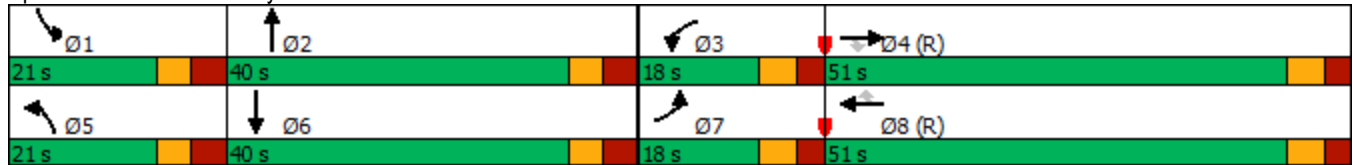
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Clyde Ave & Baseline Rd



Lanes, Volumes, Timings
2: Baseline Rd & Erindale Dr

Future Background 2026 PM

04/29/2020



Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	12	1333	1419	29
Future Volume (vph)	12	1333	1419	29
Lane Group Flow (vph)	12	1333	1495	101
Sign Control		Free	Free	Stop

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 57.0% ICU Level of Service B

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

2: Baseline Rd & Erindale Dr

Future Background 2026 PM

04/29/2020









Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	12	1333	1419	76	29	72
Future Volume (Veh/h)	12	1333	1419	76	29	72
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	12	1333	1419	76	29	72
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1495				2148	748
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1495				2148	748
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				28	80
cM capacity (veh/h)	445				40	355
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	12	666	666	946	549	101
Volume Left	12	0	0	0	0	29
Volume Right	0	0	0	0	76	72
cSH	445	1700	1700	1700	1700	109
Volume to Capacity	0.03	0.39	0.39	0.56	0.32	0.92
Queue Length 95th (m)	0.6	0.0	0.0	0.0	0.0	43.0
Control Delay (s)	13.3	0.0	0.0	0.0	0.0	138.8
Lane LOS	B					F
Approach Delay (s)	0.1			0.0		138.8
Approach LOS						F
Intersection Summary						
Average Delay			4.8			
Intersection Capacity Utilization			57.0%		ICU Level of Service	B
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Clyde Ave & Access 1

Future Background 2026 PM

04/29/2020











			
Lane Group	NBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	53	1435	941
Future Volume (vph)	53	1435	941
Lane Group Flow (vph)	53	1435	959
Sign Control		Free	Free
Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 45.2%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis

Future Background 2026 PM

4: Clyde Ave & Access 1

04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	53	1435	941	18
Future Volume (Veh/h)	0	0	53	1435	941	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	53	1435	941	18
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				209		
pX, platoon unblocked	0.77					
vC, conflicting volume	1774	480	959			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1405	480	959			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	93			
cM capacity (veh/h)	93	532	713			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	0	53	718	718	627	332
Volume Left	0	53	0	0	0	0
Volume Right	0	0	0	0	0	18
cSH	1700	713	1700	1700	1700	1700
Volume to Capacity	0.00	0.07	0.42	0.42	0.37	0.20
Queue Length 95th (m)	0.0	1.8	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	10.5	0.0	0.0	0.0	0.0
Lane LOS	A	B				
Approach Delay (s)	0.0	0.4			0.0	
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			45.2%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: Clyde Ave & Access 2

Future Background 2026 PM

04/29/2020



Lane Group	EBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	0	1476	930
Future Volume (vph)	0	1476	930
Lane Group Flow (vph)	73	1476	941
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 54.5% ICU Level of Service A










Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

5: Clyde Ave & Access 2

Future Background 2026 PM

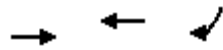
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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	73	0	1476	930	11
Future Volume (Veh/h)	0	73	0	1476	930	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	73	0	1476	930	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				130		
pX, platoon unblocked	0.76					
vC, conflicting volume	1674	470	941			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1251	470	941			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	86	100			
cM capacity (veh/h)	125	540	724			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	73	738	738	620	321	
Volume Left	0	0	0	0	0	
Volume Right	73	0	0	0	11	
cSH	540	1700	1700	1700	1700	
Volume to Capacity	0.14	0.43	0.43	0.36	0.19	
Queue Length 95th (m)	3.5	0.0	0.0	0.0	0.0	
Control Delay (s)	12.7	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	12.7	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			54.5%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
6: Baseline Rd & Access 3

Future Background 2026 PM

04/29/2020



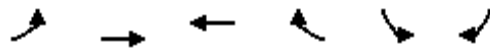
Lane Group	EBT	WBT	SBR
Lane Configurations	↑↑	↑↑	↗
Traffic Volume (vph)	1245	1534	33
Future Volume (vph)	1245	1534	33
Lane Group Flow (vph)	1245	1534	33
Sign Control	Free	Free	
Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 54.8%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis

Future Background 2026 PM

6: Baseline Rd & Access 3

04/29/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (veh/h)	0	1245	1534	0	0	33
Future Volume (Veh/h)	0	1245	1534	0	0	33
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1245	1534	0	0	33
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)			49			
pX, platoon unblocked	0.67				0.67	0.67
vC, conflicting volume	1534				2156	767
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	796				1732	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	95
cM capacity (veh/h)	546				53	721
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	622	622	767	767	33	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	33	
cSH	1700	1700	1700	1700	721	
Volume to Capacity	0.37	0.37	0.45	0.45	0.05	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	1.1	
Control Delay (s)	0.0	0.0	0.0	0.0	10.2	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		10.2	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			54.8%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
7: Merivale Rd & Lotta Ave & Clyde Ave

Future Background 2026 PM

04/29/2020



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	37	57	808	130	64	808	611	90	859
Future Volume (vph)	37	57	808	130	64	808	611	90	859
Lane Group Flow (vph)	37	89	808	319	64	808	611	90	879
Turn Type	Prot	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases					2		2	6	
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	11.8	33.8	11.2	33.2	11.0	30.0	30.0	11.0	30.0
Total Split (s)	44.0	34.0	44.0	34.0	12.0	40.0	40.0	12.0	40.0
Total Split (%)	33.8%	26.2%	33.8%	26.2%	9.2%	30.8%	30.8%	9.2%	30.8%
Yellow Time (s)	3.0	3.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.8	3.8	2.5	2.5	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.2	6.2	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	8.3	11.8	35.6	44.3	56.1	47.9	47.9	60.1	51.7
Actuated g/C Ratio	0.06	0.09	0.27	0.34	0.43	0.37	0.37	0.46	0.40
v/c Ratio	0.34	0.52	0.90	0.54	0.28	0.65	0.65	0.36	0.65
Control Delay	66.0	54.1	59.0	33.5	22.8	38.4	7.1	28.4	49.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.0	54.1	59.0	33.5	22.8	38.4	7.1	28.4	49.6
LOS	E	D	E	C	C	D	A	C	D
Approach Delay		57.6		51.8		24.8			47.6
Approach LOS		E		D		C			D
Queue Length 50th (m)	9.3	17.2	100.5	58.1	8.6	91.0	3.0	18.8	122.2
Queue Length 95th (m)	20.2	33.4	125.2	87.3	18.1	124.7	38.2	m27.3	m145.5
Internal Link Dist (m)		203.2		249.5		171.9			387.0
Turn Bay Length (m)	30.0		85.0		75.0			75.0	
Base Capacity (vph)	485	368	956	587	226	1248	933	251	1346
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.24	0.85	0.54	0.28	0.65	0.65	0.36	0.65

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 98 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 40.1

Intersection LOS: D

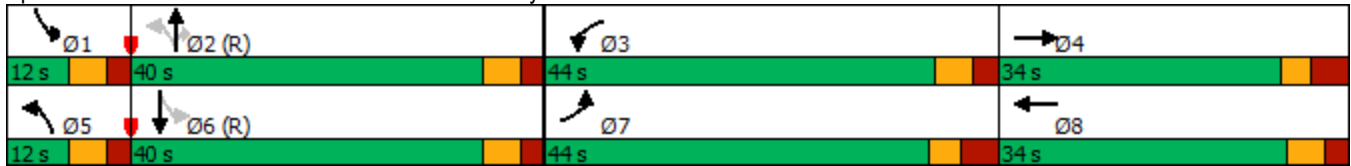
Intersection Capacity Utilization 78.0%

ICU Level of Service D

Analysis Period (min) 15

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

Splits and Phases: 7: Merivale Rd & Lotta Ave & Clyde Ave



Lanes, Volumes, Timings
8: Erindale Dr & Maitland Ave

Future Background 2026 PM

04/29/2020



Lane Group	EBT	WBL	WBT	NBL	Ø9
Lane Configurations	↑↑		↑↑	↑↑	
Traffic Volume (vph)	917	20	1169	60	
Future Volume (vph)	917	20	1169	60	
Lane Group Flow (vph)	1021	0	1189	77	
Turn Type	NA	Perm	NA	Perm	
Protected Phases	4		8		9
Permitted Phases		8		2	
Detector Phase	4	8	8	2	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	29.1	24.5	24.5	30.4	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	1.8	8.4	8.4	2.1	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.1		11.7	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	77.9		72.7	10.7	
Actuated g/C Ratio	0.82		0.77	0.11	
v/c Ratio	0.37		0.50	0.39	
Control Delay	3.4		4.1	37.8	
Queue Delay	0.0		0.0	2.1	
Total Delay	3.4		4.1	39.9	
LOS	A		A	D	
Approach Delay	3.4		4.1	39.9	
Approach LOS	A		A	D	
Queue Length 50th (m)	23.0		14.8	10.8	
Queue Length 95th (m)	35.7		18.3	23.5	
Internal Link Dist (m)	140.4		13.1	185.7	
Turn Bay Length (m)					
Base Capacity (vph)	2743		2385	460	
Starvation Cap Reductn	0		139	0	
Spillback Cap Reductn	101		0	284	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.39		0.53	0.44	

Intersection Summary

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 33 (35%), Referenced to phase 4:EBT and 8:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 5.0

Intersection LOS: A

Intersection Capacity Utilization 71.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 8: Erindale Dr & Maitland Ave



Lanes, Volumes, Timings
9: Maitland Ave & Glenmount Ave

Future Background 2026 PM

04/29/2020



Lane Group	EBL	EBT	WBT	SBL	Ø9
Lane Configurations		↕↕	↕↕	↕↕	
Traffic Volume (vph)	80	934	1128	33	
Future Volume (vph)	80	934	1128	33	
Lane Group Flow (vph)	0	1014	1134	74	
Turn Type	Perm	NA	NA	Perm	
Protected Phases		4	8		9
Permitted Phases	4			6	
Detector Phase	4	4	8	6	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	22.5	22.5	29.1	31.0	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	8.4	8.4	1.8	2.1	0.0
Lost Time Adjust (s)		0.0	0.0	0.0	
Total Lost Time (s)		11.7	5.1	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)		73.0	78.3	10.3	
Actuated g/C Ratio		0.77	0.82	0.11	
v/c Ratio		0.55	0.41	0.35	
Control Delay		5.0	3.5	25.8	
Queue Delay		0.0	0.0	1.6	
Total Delay		5.0	3.5	27.4	
LOS		A	A	C	
Approach Delay		5.0	3.5	27.4	
Approach LOS		A	A	C	
Queue Length 50th (m)		13.7	27.5	5.6	
Queue Length 95th (m)		16.6	38.7	18.2	
Internal Link Dist (m)		13.1	488.7	48.4	
Turn Bay Length (m)					
Base Capacity (vph)		1832	2792	464	
Starvation Cap Reductn		8	0	0	
Spillback Cap Reductn		0	139	274	
Storage Cap Reductn		0	0	0	
Reduced v/c Ratio		0.56	0.43	0.39	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 33 (35%), Referenced to phase 4:EBTL and 8:WBT, Start of Green					
Natural Cycle: 90					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.55					
Intersection Signal Delay: 5.0				Intersection LOS: A	
Intersection Capacity Utilization 89.7%				ICU Level of Service E	
Analysis Period (min) 15					

Splits and Phases: 9: Maitland Ave & Glenmount Ave























Total Projected 2022

Lanes, Volumes, Timings
1: Clyde Ave & Baseline Rd

Total Projected 2022 AM

04/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	177	1071	128	90	481	384	87	743	378	523
Future Volume (vph)	177	1071	128	90	481	384	87	743	378	523
Lane Group Flow (vph)	177	1071	128	90	481	384	87	850	378	601
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9	11.6	39.9
Total Split (s)	23.1	45.5	45.5	13.6	36.0	36.0	13.8	39.9	21.0	47.1
Total Split (%)	19.3%	37.9%	37.9%	11.3%	30.0%	30.0%	11.5%	33.3%	17.5%	39.3%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6	3.3	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9	6.6	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	15.5	39.2	39.2	7.5	31.2	31.2	7.0	32.5	14.4	39.9
Actuated g/C Ratio	0.13	0.33	0.33	0.06	0.26	0.26	0.06	0.27	0.12	0.33
v/c Ratio	0.81	0.97	0.20	0.85	0.55	0.64	0.46	0.93	0.96	0.54
Control Delay	78.0	60.6	0.7	109.6	41.5	17.3	62.5	60.0	89.0	33.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.0	60.6	0.7	109.6	41.5	17.3	62.5	60.0	89.0	33.8
LOS	E	E	A	F	D	B	E	E	F	C
Approach Delay		57.2			38.2			60.2		55.1
Approach LOS		E			D			E		E
Queue Length 50th (m)	40.6	130.3	0.0	21.5	52.5	21.6	10.3	101.1	46.2	58.5
Queue Length 95th (m)	#73.4	#174.5	0.0	#52.8	69.8	56.5	18.7	#138.3	#75.9	76.3
Internal Link Dist (m)		24.7			271.0			387.0		105.7
Turn Bay Length (m)	100.0		15.0	75.0		40.0	60.0		105.0	
Base Capacity (vph)	234	1106	640	106	882	597	197	924	394	1124
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.97	0.20	0.85	0.55	0.64	0.44	0.92	0.96	0.53

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 19 (16%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 53.1

Intersection LOS: D

Intersection Capacity Utilization 95.2%

ICU Level of Service F

Analysis Period (min) 15

Lanes, Volumes, Timings
1: Clyde Ave & Baseline Rd

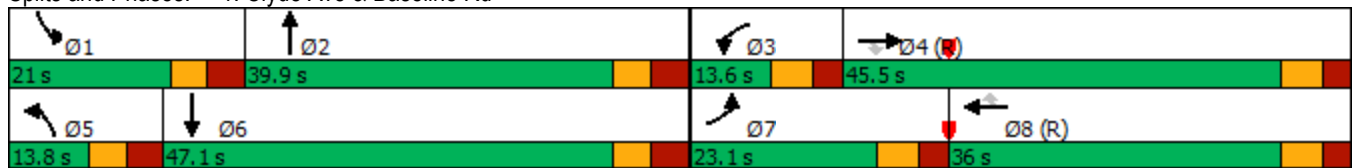
Total Projected 2022 AM

04/29/2020

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Clyde Ave & Baseline Rd



Lanes, Volumes, Timings
2: Baseline Rd & Erindale Dr

Total Projected 2022 AM

04/29/2020



Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	33	1387	704	16
Future Volume (vph)	33	1387	704	16
Lane Group Flow (vph)	33	1387	751	72
Sign Control		Free	Free	Stop

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 51.7% ICU Level of Service A

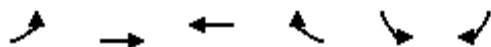
Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

2: Baseline Rd & Erindale Dr

Total Projected 2022 AM

04/29/2020













Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	33	1387	704	47	16	56
Future Volume (Veh/h)	33	1387	704	47	16	56
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	33	1387	704	47	16	56
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	751				1487	376
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	751				1487	376
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				86	91
cM capacity (veh/h)	854				111	622
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	33	694	694	469	282	72
Volume Left	33	0	0	0	0	16
Volume Right	0	0	0	0	47	56
cSH	854	1700	1700	1700	1700	307
Volume to Capacity	0.04	0.41	0.41	0.28	0.17	0.23
Queue Length 95th (m)	0.9	0.0	0.0	0.0	0.0	6.8
Control Delay (s)	9.4	0.0	0.0	0.0	0.0	20.3
Lane LOS	A					C
Approach Delay (s)	0.2			0.0		20.3
Approach LOS						C
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			51.7%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Clyde Ave & Access 1

Total Projected 2022 AM

04/29/2020











				
Lane Group	EBR	NBL	NBT	SBT
Lane Configurations			 	 
Traffic Volume (vph)	65	25	1312	901
Future Volume (vph)	65	25	1312	901
Lane Group Flow (vph)	65	25	1312	922
Sign Control			Free	Free
Intersection Summary				
Control Type: Unsignalized				
Intersection Capacity Utilization 41.6%			ICU Level of Service A	
Analysis Period (min) 15				

HCM Unsignalized Intersection Capacity Analysis

Total Projected 2022 AM

4: Clyde Ave & Access 1

04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	65	25	1312	901	21
Future Volume (Veh/h)	0	65	25	1312	901	21
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	65	25	1312	901	21
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				209		
pX, platoon unblocked	0.78					
vC, conflicting volume	1618	461	922			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1216	461	922			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	88	97			
cM capacity (veh/h)	130	547	736			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	65	25	656	656	601	321
Volume Left	0	25	0	0	0	0
Volume Right	65	0	0	0	0	21
cSH	547	736	1700	1700	1700	1700
Volume to Capacity	0.12	0.03	0.39	0.39	0.35	0.19
Queue Length 95th (m)	3.1	0.8	0.0	0.0	0.0	0.0
Control Delay (s)	12.5	10.1	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	12.5	0.2			0.0	
Approach LOS	B					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			41.6%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: Clyde Ave & Access 2

Total Projected 2022 AM

04/29/2020



Lane Group	EBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	0	1303	941
Future Volume (vph)	0	1303	941
Lane Group Flow (vph)	38	1303	952
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 48.0% ICU Level of Service A










Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

5: Clyde Ave & Access 2

Total Projected 2022 AM

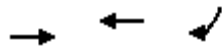
04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	38	0	1303	941	11
Future Volume (Veh/h)	0	38	0	1303	941	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	38	0	1303	941	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				130		
pX, platoon unblocked	0.76					
vC, conflicting volume	1598	476	952			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1167	476	952			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	93	100			
cM capacity (veh/h)	143	535	717			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	38	652	652	627	325	
Volume Left	0	0	0	0	0	
Volume Right	38	0	0	0	11	
cSH	535	1700	1700	1700	1700	
Volume to Capacity	0.07	0.38	0.38	0.37	0.19	
Queue Length 95th (m)	1.7	0.0	0.0	0.0	0.0	
Control Delay (s)	12.2	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	12.2	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			48.0%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
6: Baseline Rd & Access 3

Total Projected 2022 AM

04/29/2020



Lane Group	EBT	WBT	SBR
Lane Configurations	↑↑	↑↑	↑
Traffic Volume (vph)	1370	646	8
Future Volume (vph)	1370	646	8
Lane Group Flow (vph)	1370	646	8
Sign Control	Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 43.3% ICU Level of Service A

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

Total Projected 2022 AM

6: Baseline Rd & Access 3

04/29/2020
























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (veh/h)	0	1370	646	0	0	8
Future Volume (Veh/h)	0	1370	646	0	0	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1370	646	0	0	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)			49			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	646				1331	323
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	325				1103	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1084				181	954
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	685	685	323	323	8	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	8	
cSH	1700	1700	1700	1700	954	
Volume to Capacity	0.40	0.40	0.19	0.19	0.01	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.2	
Control Delay (s)	0.0	0.0	0.0	0.0	8.8	
Lane LOS					A	
Approach Delay (s)	0.0		0.0		8.8	
Approach LOS					A	
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			43.3%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
7: Merivale Rd & Lotta Ave & Clyde Ave

Total Projected 2022 AM

04/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations			 			 			 
Traffic Volume (vph)	31	68	392	34	1	877	667	46	725
Future Volume (vph)	31	68	392	34	1	877	667	46	725
Lane Group Flow (vph)	31	87	392	108	1	877	667	46	732
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	7	4	3	8		2			6
Permitted Phases					2		2	6	
Detector Phase	7	4	3	8	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.8	33.8	11.2	33.2	30.0	30.0	30.0	30.0	30.0
Total Split (s)	33.0	34.0	33.0	34.0	63.0	63.0	63.0	63.0	63.0
Total Split (%)	25.4%	26.2%	25.4%	26.2%	48.5%	48.5%	48.5%	48.5%	48.5%
Yellow Time (s)	3.0	3.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.8	3.8	2.5	2.5	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.2	6.2	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	7.9	12.0	20.7	30.0	78.3	78.3	78.3	78.3	78.3
Actuated g/C Ratio	0.06	0.09	0.16	0.23	0.60	0.60	0.60	0.60	0.60
v/c Ratio	0.30	0.52	0.75	0.25	0.00	0.43	0.57	0.16	0.36
Control Delay	65.2	60.3	61.3	17.3	13.0	15.5	3.2	15.2	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	60.3	61.3	17.3	13.0	15.5	3.2	15.2	14.5
LOS	E	E	E	B	B	B	A	B	B
Approach Delay		61.6		51.8		10.2			14.6
Approach LOS		E		D		B			B
Queue Length 50th (m)	7.8	19.2	50.0	7.3	0.1	59.0	0.0	4.8	46.5
Queue Length 95th (m)	17.7	35.1	64.0	21.9	1.1	88.7	17.1	13.7	70.9
Internal Link Dist (m)		203.2		249.5		171.9			387.0
Turn Bay Length (m)	30.0		85.0		75.0			75.0	
Base Capacity (vph)	341	368	677	436	354	2041	1179	289	2039
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.24	0.58	0.25	0.00	0.43	0.57	0.16	0.36

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 9 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 20.5

Intersection LOS: C

Intersection Capacity Utilization 75.9%

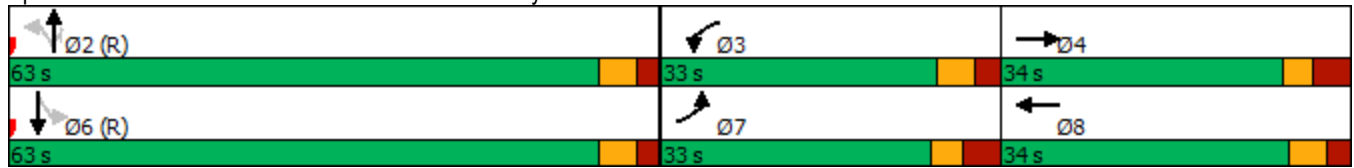
ICU Level of Service D

Analysis Period (min) 15

Lanes, Volumes, Timings
 7: Merivale Rd & Lotta Ave & Clyde Ave

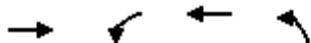
Total Projected 2022 AM
 04/29/2020

Splits and Phases: 7: Merivale Rd & Lotta Ave & Clyde Ave



Lanes, Volumes, Timings
8: Erindale Dr & Maitland Ave

Total Projected 2022 AM
04/29/2020



Lane Group	EBT	WBL	WBT	NBL	Ø9
Lane Configurations	↑↑		↑↑	↑↑	
Traffic Volume (vph)	730	8	1083	263	
Future Volume (vph)	730	8	1083	263	
Lane Group Flow (vph)	788	0	1091	315	
Turn Type	NA	Perm	NA	Perm	
Protected Phases	4		8		9
Permitted Phases		8		2	
Detector Phase	4	8	8	2	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	29.1	24.5	24.5	30.4	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	1.8	8.4	8.4	2.1	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.1		11.7	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	62.1		55.5	22.4	
Actuated g/C Ratio	0.65		0.58	0.24	
v/c Ratio	0.36		0.58	0.78	
Control Delay	8.6		12.4	46.2	
Queue Delay	0.0		0.4	64.8	
Total Delay	8.6		12.7	111.0	
LOS	A		B	F	
Approach Delay	8.6		12.7	111.0	
Approach LOS	A		B	F	
Queue Length 50th (m)	30.2		64.4	52.6	
Queue Length 95th (m)	50.8		100.5	74.0	
Internal Link Dist (m)	140.4		13.1	185.7	
Turn Bay Length (m)					
Base Capacity (vph)	2196		1876	473	
Starvation Cap Reductn	0		303	0	
Spillback Cap Reductn	23		0	292	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.36		0.69	1.74	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 49 (52%), Referenced to phase 4:EBT and 8:WBTL, Start of Green					
Natural Cycle: 75					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.78					
Intersection Signal Delay: 25.4			Intersection LOS: C		
Intersection Capacity Utilization 70.5%			ICU Level of Service C		
Analysis Period (min) 15					

Splits and Phases: 8: Erindale Dr & Maitland Ave



Lanes, Volumes, Timings
9: Maitland Ave & Glenmount Ave

Total Projected 2022 AM
04/29/2020



Lane Group	EBL	EBT	WBT	SBL	Ø9
Lane Configurations		↕↕	↕↕	↕↕	
Traffic Volume (vph)	18	783	997	56	
Future Volume (vph)	18	783	997	56	
Lane Group Flow (vph)	0	801	1004	142	
Turn Type	Perm	NA	NA	Perm	
Protected Phases		4	8		9
Permitted Phases	4			6	
Detector Phase	4	4	8	6	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	22.5	22.5	29.1	31.0	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	8.4	8.4	1.8	2.1	0.0
Lost Time Adjust (s)		0.0	0.0	0.0	
Total Lost Time (s)		11.7	5.1	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)		66.6	73.2	11.3	
Actuated g/C Ratio		0.70	0.77	0.12	
v/c Ratio		0.37	0.38	0.54	
Control Delay		3.5	4.2	26.4	
Queue Delay		0.4	0.1	99.3	
Total Delay		3.9	4.3	125.7	
LOS		A	A	F	
Approach Delay		3.9	4.3	125.7	
Approach LOS		A	A	F	
Queue Length 50th (m)		11.4	23.0	10.8	
Queue Length 95th (m)		14.4	39.9	27.6	
Internal Link Dist (m)		13.1	488.7	48.4	
Turn Bay Length (m)					
Base Capacity (vph)		2169	2609	491	
Starvation Cap Reductn		816	0	0	
Spillback Cap Reductn		0	559	442	
Storage Cap Reductn		0	0	0	
Reduced v/c Ratio		0.59	0.49	2.90	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 49 (52%), Referenced to phase 4:EBTL and 8:WBT, Start of Green					
Natural Cycle: 70					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.54					
Intersection Signal Delay: 13.0			Intersection LOS: B		
Intersection Capacity Utilization 59.5%			ICU Level of Service B		
Analysis Period (min) 15					





















Splits and Phases: 9: Maitland Ave & Glenmount Ave



Lanes, Volumes, Timings
1: Clyde Ave & Baseline Rd

Total Projected 2022 PM

04/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	160	872	220	140	1148	540	311	796	411	617
Future Volume (vph)	160	872	220	140	1148	540	311	796	411	617
Lane Group Flow (vph)	160	872	220	140	1148	540	311	896	411	706
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9	11.6	39.9
Total Split (s)	18.5	46.7	46.7	21.1	49.3	49.3	22.1	40.0	22.2	40.1
Total Split (%)	14.2%	35.9%	35.9%	16.2%	37.9%	37.9%	17.0%	30.8%	17.1%	30.8%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6	3.3	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9	6.6	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	12.0	41.2	41.2	13.7	42.9	42.9	15.1	33.1	15.6	33.6
Actuated g/C Ratio	0.09	0.32	0.32	0.11	0.33	0.33	0.12	0.25	0.12	0.26
v/c Ratio	1.03	0.81	0.38	0.79	1.03	0.82	0.82	1.05	1.04	0.81
Control Delay	136.2	48.2	14.6	85.7	76.7	34.3	93.7	73.0	111.7	53.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	136.2	48.2	14.6	85.7	76.7	34.3	93.7	73.0	111.7	53.1
LOS	F	D	B	F	E	C	F	E	F	D
Approach Delay		53.5			64.9			78.3		74.7
Approach LOS		D			E			E		E
Queue Length 50th (m)	~43.5	109.1	14.4	35.3	~164.8	77.6	43.1	~131.2	~58.6	88.7
Queue Length 95th (m)	#87.2	134.8	35.6	#65.4	#206.6	#138.2	#62.7	#165.0	#90.4	112.0
Internal Link Dist (m)		24.7			271.0			387.0		105.7
Turn Bay Length (m)	100.0		15.0	75.0		40.0	60.0		105.0	
Base Capacity (vph)	156	1075	578	190	1118	655	392	856	394	869
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.81	0.38	0.74	1.03	0.82	0.79	1.05	1.04	0.81

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 53 (41%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 67.3

Intersection LOS: E

Intersection Capacity Utilization 103.8%

ICU Level of Service G

Analysis Period (min) 15

Lanes, Volumes, Timings 1: Clyde Ave & Baseline Rd

Total Projected 2022 PM

04/29/2020









~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Clyde Ave & Baseline Rd

 Ø1 22.2 s	 Ø2 40 s	 Ø3 21.1 s	 Ø4 (R) 46.7 s
 Ø5 22.1 s	 Ø6 40.1 s	 Ø7 18.5 s	 Ø8 (R) 49.3 s

Lanes, Volumes, Timings
2: Baseline Rd & Erindale Dr

Total Projected 2022 PM

04/29/2020



Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	16	1339	1425	29
Future Volume (vph)	16	1339	1425	29
Lane Group Flow (vph)	16	1339	1511	101
Sign Control		Free	Free	Stop

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 57.5% ICU Level of Service B

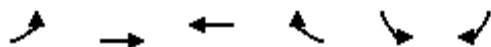
Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

2: Baseline Rd & Erindale Dr

Total Projected 2022 PM

04/29/2020













Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	16	1339	1425	86	29	72
Future Volume (Veh/h)	16	1339	1425	86	29	72
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	16	1339	1425	86	29	72
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1511				2170	756
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1511				2170	756
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				25	79
cM capacity (veh/h)	439				39	351
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	16	670	670	950	561	101
Volume Left	16	0	0	0	0	29
Volume Right	0	0	0	0	86	72
cSH	439	1700	1700	1700	1700	105
Volume to Capacity	0.04	0.39	0.39	0.56	0.33	0.96
Queue Length 95th (m)	0.9	0.0	0.0	0.0	0.0	44.7
Control Delay (s)	13.5	0.0	0.0	0.0	0.0	151.5
Lane LOS	B					F
Approach Delay (s)	0.2			0.0		151.5
Approach LOS						F
Intersection Summary						
Average Delay			5.2			
Intersection Capacity Utilization			57.5%		ICU Level of Service	B
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Clyde Ave & Access 1

Total Projected 2022 PM

04/29/2020











				
Lane Group	EBR	NBL	NBT	SBT
Lane Configurations			 	 
Traffic Volume (vph)	55	34	1498	954
Future Volume (vph)	55	34	1498	954
Lane Group Flow (vph)	55	34	1498	981
Sign Control			Free	Free
Intersection Summary				
Control Type: Unsignalized				
Intersection Capacity Utilization 47.0%			ICU Level of Service A	
Analysis Period (min) 15				

HCM Unsignalized Intersection Capacity Analysis

Total Projected 2022 PM

04/29/2020

4: Clyde Ave & Access 1

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	55	34	1498	954	27
Future Volume (Veh/h)	0	55	34	1498	954	27
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	55	34	1498	954	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				209		
pX, platoon unblocked	0.77					
vC, conflicting volume	1784	490	981			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1415	490	981			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	89	95			
cM capacity (veh/h)	94	524	699			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	55	34	749	749	636	345
Volume Left	0	34	0	0	0	0
Volume Right	55	0	0	0	0	27
cSH	524	699	1700	1700	1700	1700
Volume to Capacity	0.11	0.05	0.44	0.44	0.37	0.20
Queue Length 95th (m)	2.7	1.2	0.0	0.0	0.0	0.0
Control Delay (s)	12.7	10.4	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	12.7	0.2			0.0	
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			47.0%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: Clyde Ave & Access 2

Total Projected 2022 PM

04/29/2020



Lane Group	EBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	0	1496	966
Future Volume (vph)	0	1496	966
Lane Group Flow (vph)	73	1496	977
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 55.1% ICU Level of Service B










Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

5: Clyde Ave & Access 2

Total Projected 2022 PM

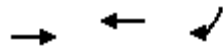
04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	73	0	1496	966	11
Future Volume (Veh/h)	0	73	0	1496	966	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	73	0	1496	966	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				130		
pX, platoon unblocked	0.76					
vC, conflicting volume	1720	488	977			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1311	488	977			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	86	100			
cM capacity (veh/h)	114	525	702			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	73	748	748	644	333	
Volume Left	0	0	0	0	0	
Volume Right	73	0	0	0	11	
cSH	525	1700	1700	1700	1700	
Volume to Capacity	0.14	0.44	0.44	0.38	0.20	
Queue Length 95th (m)	3.6	0.0	0.0	0.0	0.0	
Control Delay (s)	13.0	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	13.0	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			55.1%		ICU Level of Service	B
Analysis Period (min)			15			

Lanes, Volumes, Timings
6: Baseline Rd & Access 3

Total Projected 2022 PM

04/29/2020



Lane Group	EBT	WBT	SBR
Lane Configurations	↑↑	↑↑	↑
Traffic Volume (vph)	1245	1548	33
Future Volume (vph)	1245	1548	33
Lane Group Flow (vph)	1245	1548	33
Sign Control	Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 55.2% ICU Level of Service B

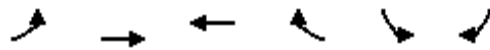
Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

Total Projected 2022 PM

6: Baseline Rd & Access 3

04/29/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (veh/h)	0	1245	1548	0	0	33
Future Volume (Veh/h)	0	1245	1548	0	0	33
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1245	1548	0	0	33
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)			49			
pX, platoon unblocked	0.67				0.67	0.67
vC, conflicting volume	1548				2170	774
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	843				1768	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	95
cM capacity (veh/h)	531				50	730
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	622	622	774	774	33	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	33	
cSH	1700	1700	1700	1700	730	
Volume to Capacity	0.37	0.37	0.46	0.46	0.05	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	1.1	
Control Delay (s)	0.0	0.0	0.0	0.0	10.2	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		10.2	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			55.2%		ICU Level of Service	B
Analysis Period (min)			15			

Lanes, Volumes, Timings
7: Merivale Rd & Lotta Ave & Clyde Ave

Total Projected 2022 PM

04/29/2020



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	37	57	808	130	64	822	611	90	868
Future Volume (vph)	37	57	808	130	64	822	611	90	868
Lane Group Flow (vph)	37	89	808	319	64	822	611	90	888
Turn Type	Prot	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases					2		2	6	
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	11.8	33.8	11.2	33.2	11.0	30.0	30.0	11.0	30.0
Total Split (s)	44.0	34.0	44.0	34.0	12.0	40.0	40.0	12.0	40.0
Total Split (%)	33.8%	26.2%	33.8%	26.2%	9.2%	30.8%	30.8%	9.2%	30.8%
Yellow Time (s)	3.0	3.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.8	3.8	2.5	2.5	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.2	6.2	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	8.3	11.8	35.6	44.3	56.1	47.9	47.9	60.1	51.7
Actuated g/C Ratio	0.06	0.09	0.27	0.34	0.43	0.37	0.37	0.46	0.40
v/c Ratio	0.34	0.52	0.90	0.54	0.29	0.66	0.66	0.37	0.66
Control Delay	66.0	54.1	59.0	33.5	22.9	38.7	7.6	30.8	52.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.0	54.1	59.0	33.5	22.9	38.7	7.6	30.8	52.1
LOS	E	D	E	C	C	D	A	C	D
Approach Delay		57.6		51.8		25.3			50.1
Approach LOS		E		D		C			D
Queue Length 50th (m)	9.3	17.2	100.5	58.1	8.6	93.1	4.8	19.8	124.0
Queue Length 95th (m)	20.2	33.4	125.2	87.3	18.1	127.2	42.4	m27.7	147.8
Internal Link Dist (m)		203.2		249.5		171.9			387.0
Turn Bay Length (m)	30.0		85.0		75.0			75.0	
Base Capacity (vph)	485	368	956	587	224	1248	926	246	1346
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.24	0.85	0.54	0.29	0.66	0.66	0.37	0.66

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 98 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 40.9

Intersection LOS: D

Intersection Capacity Utilization 78.3%

ICU Level of Service D

Analysis Period (min) 15

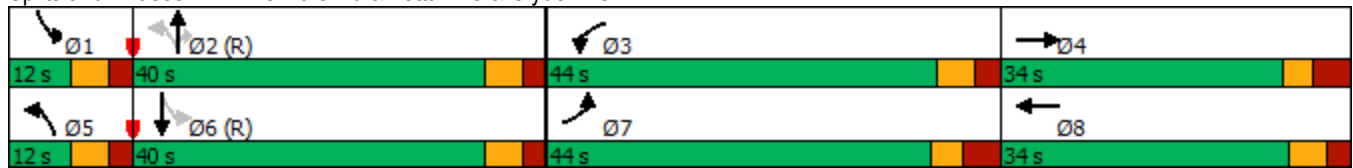
Lanes, Volumes, Timings
 7: Merivale Rd & Lotta Ave & Clyde Ave

Total Projected 2022 PM

04/29/2020

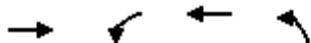
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Merivale Rd & Lotta Ave & Clyde Ave



Lanes, Volumes, Timings
8: Erindale Dr & Maitland Ave

Total Projected 2022 PM
04/29/2020



Lane Group	EBT	WBL	WBT	NBL	Ø9
Lane Configurations	↑↑		↑↑	↑↑	
Traffic Volume (vph)	939	20	1179	66	
Future Volume (vph)	939	20	1179	66	
Lane Group Flow (vph)	1043	0	1199	90	
Turn Type	NA	Perm	NA	Perm	
Protected Phases	4		8		9
Permitted Phases		8		2	
Detector Phase	4	8	8	2	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	29.1	24.5	24.5	30.4	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	1.8	8.4	8.4	2.1	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.1		11.7	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	77.6		72.3	11.0	
Actuated g/C Ratio	0.82		0.76	0.12	
v/c Ratio	0.38		0.51	0.43	
Control Delay	3.6		4.4	37.4	
Queue Delay	0.0		0.0	2.8	
Total Delay	3.6		4.4	40.2	
LOS	A		A	D	
Approach Delay	3.6		4.4	40.2	
Approach LOS	A		A	D	
Queue Length 50th (m)	23.8		14.9	12.4	
Queue Length 95th (m)	38.8		18.5	25.8	
Internal Link Dist (m)	140.4		13.1	185.7	
Turn Bay Length (m)					
Base Capacity (vph)	2731		2372	461	
Starvation Cap Reductn	0		119	0	
Spillback Cap Reductn	107		0	283	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.40		0.53	0.51	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 33 (35%), Referenced to phase 4:EBT and 8:WBTL, Start of Green					
Natural Cycle: 80					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.51					
Intersection Signal Delay: 5.4			Intersection LOS: A		
Intersection Capacity Utilization 72.0%			ICU Level of Service C		
Analysis Period (min) 15					

Splits and Phases: 8: Erindale Dr & Maitland Ave



Lanes, Volumes, Timings
9: Maitland Ave & Glenmount Ave

Total Projected 2022 PM
04/29/2020



Lane Group	EBL	EBT	WBT	SBL	Ø9
Lane Configurations		↕↕	↕↕	↕	
Traffic Volume (vph)	80	963	1138	33	
Future Volume (vph)	80	963	1138	33	
Lane Group Flow (vph)	0	1043	1144	74	
Turn Type	Perm	NA	NA	Perm	
Protected Phases		4	8		9
Permitted Phases	4			6	
Detector Phase	4	4	8	6	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	22.5	22.5	29.1	31.0	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	8.4	8.4	1.8	2.1	0.0
Lost Time Adjust (s)		0.0	0.0	0.0	
Total Lost Time (s)		11.7	5.1	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)		73.0	78.3	10.3	
Actuated g/C Ratio		0.77	0.82	0.11	
v/c Ratio		0.57	0.41	0.35	
Control Delay		5.2	3.5	25.8	
Queue Delay		0.0	0.0	1.7	
Total Delay		5.2	3.5	27.5	
LOS		A	A	C	
Approach Delay		5.2	3.5	27.5	
Approach LOS		A	A	C	
Queue Length 50th (m)		14.5	27.8	5.6	
Queue Length 95th (m)		17.7	39.1	18.2	
Internal Link Dist (m)		13.1	488.7	48.4	
Turn Bay Length (m)					
Base Capacity (vph)		1832	2792	464	
Starvation Cap Reductn		16	0	0	
Spillback Cap Reductn		0	150	279	
Storage Cap Reductn		0	0	0	
Reduced v/c Ratio		0.57	0.43	0.40	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 33 (35%), Referenced to phase 4:EBTL and 8:WBT, Start of Green					
Natural Cycle: 90					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.57					
Intersection Signal Delay: 5.1				Intersection LOS: A	
Intersection Capacity Utilization 90.8%				ICU Level of Service E	
Analysis Period (min) 15					

Splits and Phases: 9: Maitland Ave & Glenmount Ave























Total Projected 2026

Lanes, Volumes, Timings
1: Clyde Ave & Baseline Rd

Total Projected 2026 AM

04/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	178	1070	128	81	488	387	87	744	381	525
Future Volume (vph)	178	1070	128	81	488	387	87	744	381	525
Lane Group Flow (vph)	178	1070	128	81	488	387	87	848	381	587
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9	11.6	39.9
Total Split (s)	23.1	45.4	45.4	13.2	35.5	35.5	13.8	39.9	21.5	47.6
Total Split (%)	19.3%	37.8%	37.8%	11.0%	29.6%	29.6%	11.5%	33.3%	17.9%	39.7%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6	3.3	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9	6.6	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	15.5	39.2	39.2	7.1	30.7	30.7	7.0	32.5	14.9	40.4
Actuated g/C Ratio	0.13	0.33	0.33	0.06	0.26	0.26	0.06	0.27	0.12	0.34
v/c Ratio	0.81	0.97	0.20	0.82	0.56	0.65	0.46	0.93	0.93	0.52
Control Delay	78.3	60.4	0.7	106.9	42.3	17.9	62.5	59.7	83.0	33.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.3	60.4	0.7	106.9	42.3	17.9	62.5	59.7	83.0	33.3
LOS	E	E	A	F	D	B	E	E	F	C
Approach Delay		57.2			37.9			59.9		52.9
Approach LOS		E			D			E		D
Queue Length 50th (m)	40.9	130.3	0.0	19.3	53.7	22.6	10.3	100.7	46.4	56.8
Queue Length 95th (m)	#73.9	#174.8	0.0	#48.4	71.3	57.8	18.7	#137.4	#75.0	74.2
Internal Link Dist (m)		24.7			271.0			387.0		105.7
Turn Bay Length (m)	100.0		15.0	75.0		40.0	60.0		105.0	
Base Capacity (vph)	234	1106	640	99	868	592	197	924	408	1138
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.97	0.20	0.82	0.56	0.65	0.44	0.92	0.93	0.52

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 19 (16%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 52.4

Intersection LOS: D

Intersection Capacity Utilization 94.6%

ICU Level of Service F

Analysis Period (min) 15

Lanes, Volumes, Timings
1: Clyde Ave & Baseline Rd

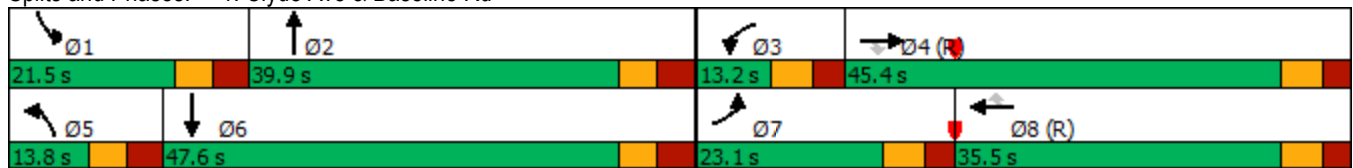
Total Projected 2026 AM

04/29/2020

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Clyde Ave & Baseline Rd



Lanes, Volumes, Timings
2: Baseline Rd & Erindale Dr

Total Projected 2026 AM

04/29/2020



Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	34	1387	707	16
Future Volume (vph)	34	1387	707	16
Lane Group Flow (vph)	34	1387	759	72
Sign Control		Free	Free	Stop

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 51.7% ICU Level of Service A

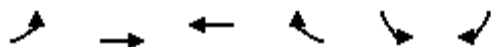
Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

2: Baseline Rd & Erindale Dr

Total Projected 2026 AM

04/29/2020











Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	1387	707	52	16	56
Future Volume (Veh/h)	34	1387	707	52	16	56
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	34	1387	707	52	16	56
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	759				1494	380
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	759				1494	380
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				85	91
cM capacity (veh/h)	848				109	618
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	34	694	694	471	288	72
Volume Left	34	0	0	0	0	16
Volume Right	0	0	0	0	52	56
cSH	848	1700	1700	1700	1700	304
Volume to Capacity	0.04	0.41	0.41	0.28	0.17	0.24
Queue Length 95th (m)	1.0	0.0	0.0	0.0	0.0	6.9
Control Delay (s)	9.4	0.0	0.0	0.0	0.0	20.5
Lane LOS	A					C
Approach Delay (s)	0.2			0.0		20.5
Approach LOS						C
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			51.7%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Clyde Ave & Access 1

Total Projected 2026 AM

04/29/2020











				
Lane Group	EBR	NBL	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	35	44	1299	900
Future Volume (vph)	35	44	1299	900
Lane Group Flow (vph)	35	44	1299	912
Sign Control			Free	Free
Intersection Summary				
Control Type: Unsignalized				
Intersection Capacity Utilization 41.2%			ICU Level of Service A	
Analysis Period (min) 15				

HCM Unsignalized Intersection Capacity Analysis

Total Projected 2026 AM

4: Clyde Ave & Access 1

04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	35	44	1299	900	12
Future Volume (Veh/h)	0	35	44	1299	900	12
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	35	44	1299	900	12
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				209		
pX, platoon unblocked	0.78					
vC, conflicting volume	1644	456	912			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1255	456	912			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	94	94			
cM capacity (veh/h)	120	551	743			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	35	44	650	650	600	312
Volume Left	0	44	0	0	0	0
Volume Right	35	0	0	0	0	12
cSH	551	743	1700	1700	1700	1700
Volume to Capacity	0.06	0.06	0.38	0.38	0.35	0.18
Queue Length 95th (m)	1.5	1.4	0.0	0.0	0.0	0.0
Control Delay (s)	12.0	10.2	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	12.0	0.3			0.0	
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			41.2%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: Clyde Ave & Access 2

Total Projected 2026 AM

04/29/2020



Lane Group	EBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	0	1309	906
Future Volume (vph)	0	1309	906
Lane Group Flow (vph)	40	1309	930
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 48.2% ICU Level of Service A










Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

5: Clyde Ave & Access 2

Total Projected 2026 AM

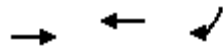
04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	40	0	1309	906	24
Future Volume (Veh/h)	0	40	0	1309	906	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	40	0	1309	906	24
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				130		
pX, platoon unblocked	0.77					
vC, conflicting volume	1572	465	930			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1135	465	930			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	93	100			
cM capacity (veh/h)	150	544	731			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	40	654	654	604	326	
Volume Left	0	0	0	0	0	
Volume Right	40	0	0	0	24	
cSH	544	1700	1700	1700	1700	
Volume to Capacity	0.07	0.39	0.39	0.36	0.19	
Queue Length 95th (m)	1.8	0.0	0.0	0.0	0.0	
Control Delay (s)	12.1	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	12.1	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			48.2%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
6: Baseline Rd & Access 3

Total Projected 2026 AM

04/29/2020



Lane Group	EBT	WBT	SBR
Lane Configurations	↑↑	↑↑	↑
Traffic Volume (vph)	1370	631	40
Future Volume (vph)	1370	631	40
Lane Group Flow (vph)	1370	631	40
Sign Control	Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 43.3% ICU Level of Service A

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

Total Projected 2026 AM

6: Baseline Rd & Access 3

04/29/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (veh/h)	0	1370	631	0	0	40
Future Volume (Veh/h)	0	1370	631	0	0	40
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1370	631	0	0	40
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)			49			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	631				1316	316
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	300				1081	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	96
cM capacity (veh/h)	1104				186	951
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	685	685	316	316	40	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	40	
cSH	1700	1700	1700	1700	951	
Volume to Capacity	0.40	0.40	0.19	0.19	0.04	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	1.0	
Control Delay (s)	0.0	0.0	0.0	0.0	8.9	
Lane LOS					A	
Approach Delay (s)	0.0		0.0		8.9	
Approach LOS					A	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			43.3%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
7: Merivale Rd & Lotta Ave & Clyde Ave

Total Projected 2026 AM

04/29/2020



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	31	68	392	34	1	875	667	46	718
Future Volume (vph)	31	68	392	34	1	875	667	46	718
Lane Group Flow (vph)	31	87	392	108	1	875	667	46	725
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	7	4	3	8		2			6
Permitted Phases					2		2	6	
Detector Phase	7	4	3	8	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.8	33.8	11.2	33.2	30.0	30.0	30.0	30.0	30.0
Total Split (s)	33.0	34.0	33.0	34.0	63.0	63.0	63.0	63.0	63.0
Total Split (%)	25.4%	26.2%	25.4%	26.2%	48.5%	48.5%	48.5%	48.5%	48.5%
Yellow Time (s)	3.0	3.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.8	3.8	2.5	2.5	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.2	6.2	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	7.9	12.0	20.7	30.0	78.3	78.3	78.3	78.3	78.3
Actuated g/C Ratio	0.06	0.09	0.16	0.23	0.60	0.60	0.60	0.60	0.60
v/c Ratio	0.30	0.52	0.75	0.25	0.00	0.43	0.57	0.16	0.36
Control Delay	65.2	60.3	61.3	17.3	13.0	15.5	3.2	15.2	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	60.3	61.3	17.3	13.0	15.5	3.2	15.2	14.5
LOS	E	E	E	B	B	B	A	B	B
Approach Delay		61.6		51.8		10.2			14.5
Approach LOS		E		D		B			B
Queue Length 50th (m)	7.8	19.2	50.0	7.3	0.1	58.8	0.0	4.8	46.0
Queue Length 95th (m)	17.7	35.1	64.0	21.9	1.1	88.5	17.1	13.7	70.2
Internal Link Dist (m)		203.2		249.5		171.9			387.0
Turn Bay Length (m)	30.0		85.0		75.0			75.0	
Base Capacity (vph)	341	368	677	436	357	2041	1179	290	2039
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.24	0.58	0.25	0.00	0.43	0.57	0.16	0.36

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 9 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 20.5

Intersection LOS: C

Intersection Capacity Utilization 75.9%

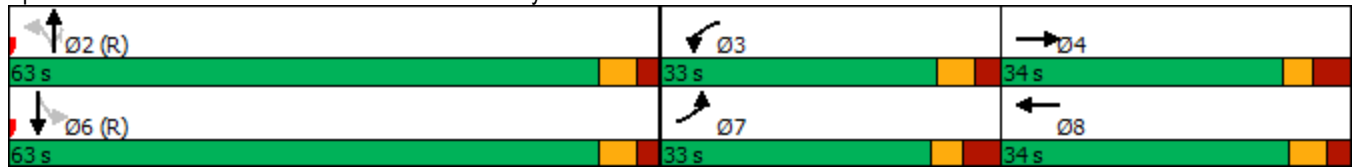
ICU Level of Service D

Analysis Period (min) 15

Lanes, Volumes, Timings
 7: Merivale Rd & Lotta Ave & Clyde Ave

Total Projected 2026 AM
 04/29/2020

Splits and Phases: 7: Merivale Rd & Lotta Ave & Clyde Ave



Lanes, Volumes, Timings
8: Erindale Dr & Maitland Ave

Total Projected 2026 AM
04/29/2020



Lane Group	EBT	WBL	WBT	NBL	Ø9
Lane Configurations	↑↑		↑↑	↑↑	
Traffic Volume (vph)	728	8	1070	267	
Future Volume (vph)	728	8	1070	267	
Lane Group Flow (vph)	786	0	1078	322	
Turn Type	NA	Perm	NA	Perm	
Protected Phases	4		8		9
Permitted Phases		8		2	
Detector Phase	4	8	8	2	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	29.1	24.5	24.5	30.4	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	1.8	8.4	8.4	2.1	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.1		11.7	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	61.7		55.1	22.8	
Actuated g/C Ratio	0.65		0.58	0.24	
v/c Ratio	0.36		0.58	0.79	
Control Delay	8.8		12.6	45.9	
Queue Delay	0.0		0.4	64.3	
Total Delay	8.8		13.0	110.2	
LOS	A		B	F	
Approach Delay	8.8		13.0	110.2	
Approach LOS	A		B	F	
Queue Length 50th (m)	30.6		63.8	53.6	
Queue Length 95th (m)	51.6		100.1	75.0	
Internal Link Dist (m)	140.4		13.1	185.7	
Turn Bay Length (m)					
Base Capacity (vph)	2182		1862	477	
Starvation Cap Reductn	0		318	0	
Spillback Cap Reductn	23		0	291	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.36		0.70	1.73	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 49 (52%), Referenced to phase 4:EBT and 8:WBTL, Start of Green					
Natural Cycle: 75					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.79					
Intersection Signal Delay: 25.8			Intersection LOS: C		
Intersection Capacity Utilization 70.5%			ICU Level of Service C		
Analysis Period (min) 15					

Splits and Phases: 8: Erindale Dr & Maitland Ave



Lanes, Volumes, Timings
9: Maitland Ave & Glenmount Ave

Total Projected 2026 AM
04/29/2020



Lane Group	EBL	EBT	WBT	SBL	Ø9
Lane Configurations		↕↕	↕↕	↕↕	
Traffic Volume (vph)	18	783	984	56	
Future Volume (vph)	18	783	984	56	
Lane Group Flow (vph)	0	801	991	142	
Turn Type	Perm	NA	NA	Perm	
Protected Phases		4	8		9
Permitted Phases	4			6	
Detector Phase	4	4	8	6	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	22.5	22.5	29.1	31.0	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	8.4	8.4	1.8	2.1	0.0
Lost Time Adjust (s)		0.0	0.0	0.0	
Total Lost Time (s)		11.7	5.1	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)		66.6	73.2	11.3	
Actuated g/C Ratio		0.70	0.77	0.12	
v/c Ratio		0.37	0.38	0.54	
Control Delay		3.5	4.2	26.4	
Queue Delay		0.4	0.1	100.0	
Total Delay		3.9	4.3	126.4	
LOS		A	A	F	
Approach Delay		3.9	4.3	126.4	
Approach LOS		A	A	F	
Queue Length 50th (m)		11.5	22.6	10.8	
Queue Length 95th (m)		14.5	39.2	27.6	
Internal Link Dist (m)		13.1	488.7	48.4	
Turn Bay Length (m)					
Base Capacity (vph)		2169	2609	491	
Starvation Cap Reductn		820	0	0	
Spillback Cap Reductn		0	572	443	
Storage Cap Reductn		0	0	0	
Reduced v/c Ratio		0.59	0.49	2.96	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 49 (52%), Referenced to phase 4:EBTL and 8:WBT, Start of Green					
Natural Cycle: 70					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.54					
Intersection Signal Delay: 13.1			Intersection LOS: B		
Intersection Capacity Utilization 59.5%			ICU Level of Service B		
Analysis Period (min) 15					

Lanes, Volumes, Timings
 9: Maitland Ave & Glenmount Ave

Total Projected 2026 AM
 04/29/2020





















Splits and Phases: 9: Maitland Ave & Glenmount Ave



Lanes, Volumes, Timings
1: Clyde Ave & Baseline Rd

Total Projected 2026 PM

04/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	159	870	220	134	1145	537	311	795	385	613
Future Volume (vph)	159	870	220	134	1145	537	311	795	385	613
Lane Group Flow (vph)	159	870	220	134	1145	537	311	886	385	691
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	11.5	34.4	34.4	11.5	34.4	34.4	11.6	39.9	11.6	39.9
Total Split (s)	18.6	48.0	48.0	20.6	50.0	50.0	19.9	40.0	21.4	41.5
Total Split (%)	14.3%	36.9%	36.9%	15.8%	38.5%	38.5%	15.3%	30.8%	16.5%	31.9%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	2.7	2.7	2.8	2.7	2.7	3.3	3.6	3.3	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.6	6.9	6.6	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	12.1	42.5	42.5	13.2	43.6	43.6	13.3	33.1	14.8	34.6
Actuated g/C Ratio	0.09	0.33	0.33	0.10	0.34	0.34	0.10	0.25	0.11	0.27
v/c Ratio	1.01	0.79	0.37	0.78	1.01	0.81	0.93	1.04	1.03	0.77
Control Delay	133.1	46.0	14.1	85.8	71.6	32.8	108.3	69.6	110.0	50.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	133.1	46.0	14.1	85.8	71.6	32.8	108.3	69.6	110.0	50.3
LOS	F	D	B	F	E	C	F	E	F	D
Approach Delay		51.4			61.2			79.7		71.7
Approach LOS		D			E			E		E
Queue Length 50th (m)	~41.8	107.1	14.1	33.8	~156.2	75.5	43.6	~128.2	~54.2	85.2
Queue Length 95th (m)	#86.3	132.3	35.0	#63.4	#203.2	#125.8	#70.9	#162.3	#85.8	107.8
Internal Link Dist (m)		24.7			271.0			387.0		105.7
Turn Bay Length (m)	100.0		15.0	75.0		40.0	60.0		105.0	
Base Capacity (vph)	157	1107	591	183	1136	662	336	856	374	894
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.79	0.37	0.73	1.01	0.81	0.93	1.04	1.03	0.77

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 53 (41%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 65.2

Intersection LOS: E

Intersection Capacity Utilization 102.6%

ICU Level of Service G

Analysis Period (min) 15

Lanes, Volumes, Timings

1: Clyde Ave & Baseline Rd

Total Projected 2026 PM

04/29/2020

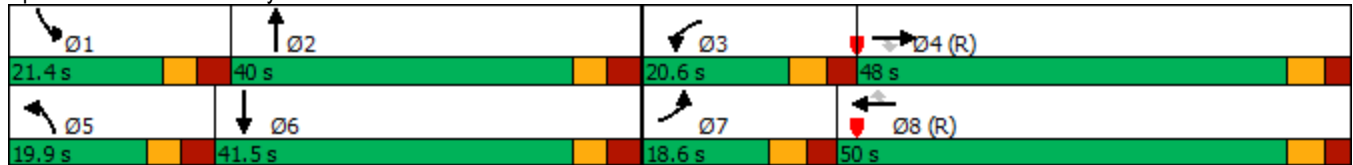
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Clyde Ave & Baseline Rd



Lanes, Volumes, Timings
2: Baseline Rd & Erindale Dr

Total Projected 2026 PM

04/29/2020



Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	15	1336	1417	29
Future Volume (vph)	15	1336	1417	29
Lane Group Flow (vph)	15	1336	1494	101
Sign Control		Free	Free	Stop

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 57.0% ICU Level of Service B

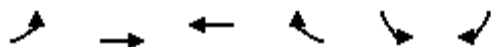
Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

2: Baseline Rd & Erindale Dr

Total Projected 2026 PM

04/29/2020











Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	1336	1417	77	29	72
Future Volume (Veh/h)	15	1336	1417	77	29	72
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	15	1336	1417	77	29	72
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1494				2154	747
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1494				2154	747
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				27	80
cM capacity (veh/h)	445				40	355
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	15	668	668	945	549	101
Volume Left	15	0	0	0	0	29
Volume Right	0	0	0	0	77	72
cSH	445	1700	1700	1700	1700	108
Volume to Capacity	0.03	0.39	0.39	0.56	0.32	0.93
Queue Length 95th (m)	0.8	0.0	0.0	0.0	0.0	43.6
Control Delay (s)	13.4	0.0	0.0	0.0	0.0	143.0
Lane LOS	B					F
Approach Delay (s)	0.1			0.0		143.0
Approach LOS						F
Intersection Summary						
Average Delay			5.0			
Intersection Capacity Utilization			57.0%		ICU Level of Service	B
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Clyde Ave & Access 1

Total Projected 2026 PM

04/29/2020











				
Lane Group	EBR	NBL	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	29	59	1488	938
Future Volume (vph)	29	59	1488	938
Lane Group Flow (vph)	29	59	1488	954
Sign Control			Free	Free
Intersection Summary				
Control Type: Unsignalized				
Intersection Capacity Utilization 46.8%			ICU Level of Service A	
Analysis Period (min) 15				

HCM Unsignalized Intersection Capacity Analysis

Total Projected 2026 PM

4: Clyde Ave & Access 1

04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	29	59	1488	938	16
Future Volume (Veh/h)	0	29	59	1488	938	16
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	29	59	1488	938	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				209		
pX, platoon unblocked	0.77					
vC, conflicting volume	1808	477	954			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1449	477	954			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	92			
cM capacity (veh/h)	86	534	716			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	29	59	744	744	625	329
Volume Left	0	59	0	0	0	0
Volume Right	29	0	0	0	0	16
cSH	534	716	1700	1700	1700	1700
Volume to Capacity	0.05	0.08	0.44	0.44	0.37	0.19
Queue Length 95th (m)	1.3	2.0	0.0	0.0	0.0	0.0
Control Delay (s)	12.1	10.5	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	12.1	0.4			0.0	
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			46.8%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
5: Clyde Ave & Access 2

Total Projected 2026 PM

04/29/2020



Lane Group	EBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	0	1490	927
Future Volume (vph)	0	1490	927
Lane Group Flow (vph)	34	1490	959
Sign Control	Stop	Free	Free

Intersection Summary










Control Type: Unsignalized

Intersection Capacity Utilization 53.5% ICU Level of Service A

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis 5: Clyde Ave & Access 2

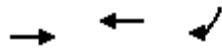
Total Projected 2026 PM
04/29/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	34	0	1490	927	32
Future Volume (Veh/h)	0	34	0	1490	927	32
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	34	0	1490	927	32
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked	0.76					
vC, conflicting volume	1688	480	959			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1270	480	959			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	94	100			
cM capacity (veh/h)	121	532	713			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	34	745	745	618	341	
Volume Left	0	0	0	0	0	
Volume Right	34	0	0	0	32	
cSH	532	1700	1700	1700	1700	
Volume to Capacity	0.06	0.44	0.44	0.36	0.20	
Queue Length 95th (m)	1.6	0.0	0.0	0.0	0.0	
Control Delay (s)	12.2	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	12.2	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			53.5%	ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings
6: Baseline Rd & Access 3

Total Projected 2026 PM

04/29/2020



Lane Group	EBT	WBT	SBR
Lane Configurations	↑↑	↑↑	↑
Traffic Volume (vph)	1245	1536	34
Future Volume (vph)	1245	1536	34
Lane Group Flow (vph)	1245	1536	34
Sign Control	Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 54.8% ICU Level of Service A

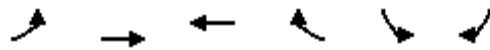
Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

Total Projected 2026 PM

6: Baseline Rd & Access 3

04/29/2020
























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (veh/h)	0	1245	1536	0	0	34
Future Volume (Veh/h)	0	1245	1536	0	0	34
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1245	1536	0	0	34
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)			49			
pX, platoon unblocked	0.67				0.67	0.67
vC, conflicting volume	1536				2158	768
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	808				1740	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	95
cM capacity (veh/h)	543				52	724
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	622	622	768	768	34	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	34	
cSH	1700	1700	1700	1700	724	
Volume to Capacity	0.37	0.37	0.45	0.45	0.05	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	1.1	
Control Delay (s)	0.0	0.0	0.0	0.0	10.2	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		10.2	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			54.8%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
7: Merivale Rd & Lotta Ave & Clyde Ave

Total Projected 2026 PM

04/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations			 			 			 
Traffic Volume (vph)	37	57	808	130	64	812	611	90	858
Future Volume (vph)	37	57	808	130	64	812	611	90	858
Lane Group Flow (vph)	37	89	808	319	64	812	611	90	878
Turn Type	Prot	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases					2		2	6	
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	11.8	33.8	11.2	33.2	11.0	30.0	30.0	11.0	30.0
Total Split (s)	44.0	34.0	44.0	34.0	12.0	40.0	40.0	12.0	40.0
Total Split (%)	33.8%	26.2%	33.8%	26.2%	9.2%	30.8%	30.8%	9.2%	30.8%
Yellow Time (s)	3.0	3.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.8	3.8	2.5	2.5	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.2	6.2	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	8.3	11.8	35.6	44.3	56.1	47.9	47.9	60.1	51.7
Actuated g/C Ratio	0.06	0.09	0.27	0.34	0.43	0.37	0.37	0.46	0.40
v/c Ratio	0.34	0.52	0.90	0.54	0.28	0.65	0.66	0.36	0.65
Control Delay	66.0	54.1	59.0	33.5	22.8	38.5	7.2	31.3	52.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.0	54.1	59.0	33.5	22.8	38.5	7.2	31.3	52.4
LOS	E	D	E	C	C	D	A	C	D
Approach Delay		57.6		51.8		25.0			50.5
Approach LOS		E		D		C			D
Queue Length 50th (m)	9.3	17.2	100.5	58.1	8.6	91.6	3.5	19.8	122.2
Queue Length 95th (m)	20.2	33.4	125.2	87.3	18.1	125.5	39.4	m28.7	146.5
Internal Link Dist (m)		203.2		249.5		171.9			387.0
Turn Bay Length (m)	30.0		85.0		75.0			75.0	
Base Capacity (vph)	485	368	956	587	227	1248	931	250	1346
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.24	0.85	0.54	0.28	0.65	0.66	0.36	0.65

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 98 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 40.9

Intersection LOS: D

Intersection Capacity Utilization 78.0%

ICU Level of Service D

Analysis Period (min) 15

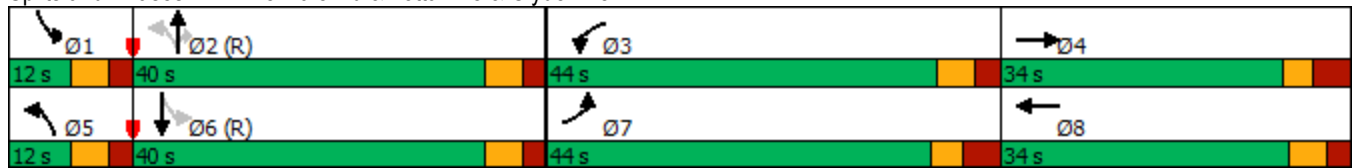
Lanes, Volumes, Timings
 7: Merivale Rd & Lotta Ave & Clyde Ave

Total Projected 2026 PM

04/29/2020

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

Splits and Phases: 7: Merivale Rd & Lotta Ave & Clyde Ave



Lanes, Volumes, Timings
8: Erindale Dr & Maitland Ave

Total Projected 2026 PM
04/29/2020



Lane Group	EBT	WBL	WBT	NBL	Ø9
Lane Configurations	↑↑		↑↑	↑↑	
Traffic Volume (vph)	924	20	1169	58	
Future Volume (vph)	924	20	1169	58	
Lane Group Flow (vph)	1028	0	1189	80	
Turn Type	NA	Perm	NA	Perm	
Protected Phases	4		8		9
Permitted Phases		8		2	
Detector Phase	4	8	8	2	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	29.1	24.5	24.5	30.4	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	1.8	8.4	8.4	2.1	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.1		11.7	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	77.9		72.6	10.7	
Actuated g/C Ratio	0.82		0.76	0.11	
v/c Ratio	0.37		0.50	0.39	
Control Delay	3.4		4.1	36.0	
Queue Delay	0.0		0.0	2.2	
Total Delay	3.5		4.2	38.2	
LOS	A		A	D	
Approach Delay	3.5		4.2	38.2	
Approach LOS	A		A	D	
Queue Length 50th (m)	23.3		14.8	10.4	
Queue Length 95th (m)	36.3		18.4	23.5	
Internal Link Dist (m)	140.4		13.1	185.7	
Turn Bay Length (m)					
Base Capacity (vph)	2742		2385	461	
Starvation Cap Reductn	0		139	0	
Spillback Cap Reductn	105		0	283	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.39		0.53	0.45	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 33 (35%), Referenced to phase 4:EBT and 8:WBTL, Start of Green					
Natural Cycle: 80					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.50					
Intersection Signal Delay: 5.0			Intersection LOS: A		
Intersection Capacity Utilization 71.7%			ICU Level of Service C		
Analysis Period (min) 15					

Splits and Phases: 8: Erindale Dr & Maitland Ave



Lanes, Volumes, Timings
9: Maitland Ave & Glenmount Ave

Total Projected 2026 PM
04/29/2020



Lane Group	EBL	EBT	WBT	SBL	Ø9
Lane Configurations		↕↕	↕↕	↕↕	
Traffic Volume (vph)	80	946	1128	33	
Future Volume (vph)	80	946	1128	33	
Lane Group Flow (vph)	0	1026	1134	74	
Turn Type	Perm	NA	NA	Perm	
Protected Phases		4	8		9
Permitted Phases	4			6	
Detector Phase	4	4	8	6	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	22.5	22.5	29.1	31.0	5.0
Total Split (s)	59.0	59.0	59.0	31.0	5.0
Total Split (%)	62.1%	62.1%	62.1%	32.6%	5%
Yellow Time (s)	3.3	3.3	3.3	3.3	2.0
All-Red Time (s)	8.4	8.4	1.8	2.1	0.0
Lost Time Adjust (s)		0.0	0.0	0.0	
Total Lost Time (s)		11.7	5.1	5.4	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)		73.0	78.3	10.3	
Actuated g/C Ratio		0.77	0.82	0.11	
v/c Ratio		0.56	0.41	0.35	
Control Delay		5.1	3.5	25.8	
Queue Delay		0.0	0.0	1.6	
Total Delay		5.1	3.5	27.4	
LOS		A	A	C	
Approach Delay		5.1	3.5	27.4	
Approach LOS		A	A	C	
Queue Length 50th (m)		14.2	27.5	5.6	
Queue Length 95th (m)		17.2	38.7	18.2	
Internal Link Dist (m)		13.1	488.7	48.4	
Turn Bay Length (m)					
Base Capacity (vph)		1835	2792	464	
Starvation Cap Reductn		9	0	0	
Spillback Cap Reductn		0	140	274	
Storage Cap Reductn		0	0	0	
Reduced v/c Ratio		0.56	0.43	0.39	
Intersection Summary					
Cycle Length: 95					
Actuated Cycle Length: 95					
Offset: 33 (35%), Referenced to phase 4:EBTL and 8:WBT, Start of Green					
Natural Cycle: 90					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.56					
Intersection Signal Delay: 5.1				Intersection LOS: A	
Intersection Capacity Utilization 90.0%				ICU Level of Service E	
Analysis Period (min) 15					

Splits and Phases: 9: Maitland Ave & Glenmount Ave

