Urbandale Corporation

801 Eagleson Road, Ottawa

Transportation Impact Assessment

Step 4: Final Report

July 16, 2025

801 Eagleson Road

Transportation Impact Assessment Step 4 Final Report

July 16, 2025

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1	1	2024-10-18	26	TIA Steps 1 & 2	David Hook
2	2	2024-01-21	55	TIA Step 3	Ben Pascolo-Neveu
3	3	2025-07-16	55	TIA Step 4	Ben Pascolo-Neveu

TIA Plan Reports - Certification

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 associate 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 licensed[1] or registered[1] professional in good standing, whose field of expertise [check √ appropriate field(s)] is either transportation engineering □ or transportation planning □.

[1] **License or 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.**

Dated at Ottawa this 16th day of July, 2025.
(City)

Name: Eric McLaren, P.Eng., RSP1

Professional Title: Transportation Engineer

Eric M Laren

Signature of Individual certifier that she/he meets the above four criteria

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Executive Summary

Arcadis was retained by Urbandale Corporation to undertake a Transportation Impact Assessment (TIA) in support of a Site Plan Control application for a proposed commercial development located at 801 Eagleson Road in the Bridlewood community in Ottawa. The proposed development will consist of retail and restaurant land uses, occupying a total of 3,936 m^2 of gross floor area. Access to the site will be via a new approach to an existing all-movements, signalized intersection on Eagleson Road at Fernbank Road and a new stop-controlled, all-movement access on Bridgestone Drive.

Based on the trip generation rates from the ITE Trip Generation Manual (11th Edition), it is anticipated that the proposed development will generate up to 610 two-way person-trips during the weekday morning, weekday afternoon and Saturday midday peak hours. Given the nature of the site, it is anticipated that the majority of site-generated person-trips will be via automobile. With consideration that 30-50% of the site's traffic generation already exists on the adjacent road network as pass-by trips, the site is anticipated to generate up to 200 *new* two-way vehicle-trips during the weekday morning, weekday afternoon and Saturday midday peak hours. These traffic volumes were distributed based on the concentrations of existing residential land uses within the surrounding community.

The 2013 Transportation Master Plan (TMP) outlines future road network modifications in the area and indicates that there is a planned widening of Eagleson Road from two to four lanes between Cope Drive and Terry Fox Drive. The 2024 City-wide and Area-Specific Development Charges (DC) Background Study (July 2024) suggests that this widening will be implemented some time between 2025 and 2029.

Intersection capacity analysis was completed for all study area intersections. The results of the intersection capacity analysis indicate that study area intersections are projected to operate at LOS ‘C’ or better within the timeframe of this study. The exception is the Eagleson & Bridgestone intersection which is projected to operate at LOS ‘F’ due to the long delays for westbound left-turning traffic. These delays, however, only impact a relatively low number of vehicles during the peak hours and are not as a result of site-generated traffic. It is understood that the City is currently undertaking a study to assess the potential signalization of the intersection or conversion to a roundabout.

Multi-Modal Level of Service analysis was conducted for the roadway segments and signalized intersections within the study area. Based on the results of the analysis, it is recommended that the City consider implementing the following measures:

- With the four-lane widening of Eagleson Road, include cycle tracks and wider boulevards along the roadway.
- When reconstructing study area intersections on Eagleson Road, ensure that the intersection designs adhere to protected intersection standards and consider implementing leading pedestrian intervals and high-visibility crosswalk markings.

A review of auxiliary left-turn lane storage requirements was completed at all existing/future signalized intersections within the study area under Future (2031) Total Traffic conditions. Based on the results of the auxiliary lane review, storage capacity deficiencies were noted at several locations within the study area as a result of background traffic. Remediation of these deficiencies should be considered by the City, though no modifications are required to safely accommodate site-generated traffic. A functional design in support of a Roadway Modification Application (RMA) has been prepared to illustrate the proposed modifications to the Eagleson & Fernbank intersection to accommodate access to the site, including the addition of a southbound left-turn lane with a minimum of 20m of storage.

Based on the findings of this study, it is the overall opinion of Arcadis that the proposed development will integrate well with and can be safely accommodated by the adjacent transportation network with consideration of the recommendations outlined above.

1 Introduction

Arcadis was retained by Urbandale Corporation to undertake a Transportation Impact Assessment (TIA) in support of a Site Plan Control application for a proposed commercial development to be located at 801 Eagleson Road in Ottawa.

In accordance with the City of Ottawa's Transportation Impact Assessment Guidelines (June 2017) and guideline revisions enacted in June 2023, the report is divided into three major components:

- **Screening:** Prior to the commencement of a TIA, an initial assessment of the proposed development is undertaken to establish the need for a comprehensive review of the site based on three triggers: Trip Generation, Location and Safety.
- **Scoping & Forecasting:** This component of the TIA report describes both the existing and planned conditions in the vicinity of the development and defines study parameters such as the study area, analysis periods and analysis years of the development. The anticipated trip generation of the proposed development is also established, taking into consideration the existing and future context of the site. Additionally, this section provides an opportunity to identify any scope exemptions that would eliminate elements of scope described in the TIA Guidelines but not relevant to the development proposal, based on consultation with City staff.
- **Analysis:** This component describes the background network travel demand and documents the results of any analyses undertaken to ensure that the transportation related features of the proposed development are in conformance with prescribed technical standards and that its impacts on the transportation network are both sustainable and effectively managed. It also identifies a development strategy to ensure that what is being proposed is aligned with the City of Ottawa's policies and city-building objectives.

Throughout the development of a TIA report, each of the three study components above are submitted in draft form to the City of Ottawa and undergo a review by a designated Transportation Project Manager. Any comments received are addressed to the satisfaction of the City's Transportation Project Manager before proceeding with subsequent components of the study.

Dependent on the findings of this report, the complete submission of this Transportation Impact Assessment may require Functional Design Drawings of recommended roadway improvements to support a Roadway Modification Application (RMA). The submission may also require a post-development Monitoring Plan to track performance of the planned TIA Strategy. The need for these two elements will be confirmed through the analysis undertaken for this report.

2 TIA Screening

An initial screening was completed to confirm the need for a Transportation Impact Assessment by reviewing the following three triggers:

- **Trip Generation**: Based on the proposed size of the commercial development, the minimum development size threshold has been exceeded and therefore the Trip Generation Trigger is satisfied.
- **Location**: The proposed development does not include an access driveway on a boundary street within the City's Transit priority, Rapid Transit or Crosstown Bikeway networks, therefore the Location Trigger is not satisfied.
- **Safety**: Boundary street conditions were reviewed to determine if there is an elevated potential for safety concerns adjacent to the site. Given that the proposed access driveway on Eagleson Road is within the limits of the Eagleson & Fernbank signalized intersection and a drive-through facility is included in the proposed development, the Safety Trigger is satisfied.

As the proposed development meets the Trip Generation and Safety triggers, the need to undertake a TIA is confirmed.

A copy of the Screening Form is provided in **Appendix A**.

3 Project Scoping

3.1 Proposed Development

3.1.1 Site Location

The proposed development is located at 801 Eagleson Road in the Bridlewood community. The site occupies the northeastern quadrant of the Eagleson & Bridgestone intersection and is bound by Bridgestone Drive to the south, Eagleson Road to the west, a residential development to the north and Maurice-Lapointe Elementary School to the east.

The site location and its surrounding context are illustrated in **Exhibit 3-1** below.

Based on the Official Plan (2022), the proposed development is located within the Suburban Transect and in an area that is designated as an Evolving Neighbourhood. Eagleson Road is also designated as a Mainstreet Corridor.

ARCADIS

801 Eagleson Road
Transportation Impact Assessment

Exhibit 3-1
Site Location

PROJECT No. 148185

SCALE: 0m 125m 250m

3.1.2 Land Use Details

Table 3-1 below summarizes the land uses included in the proposed development.

Table 3-1 Land Use Statistics

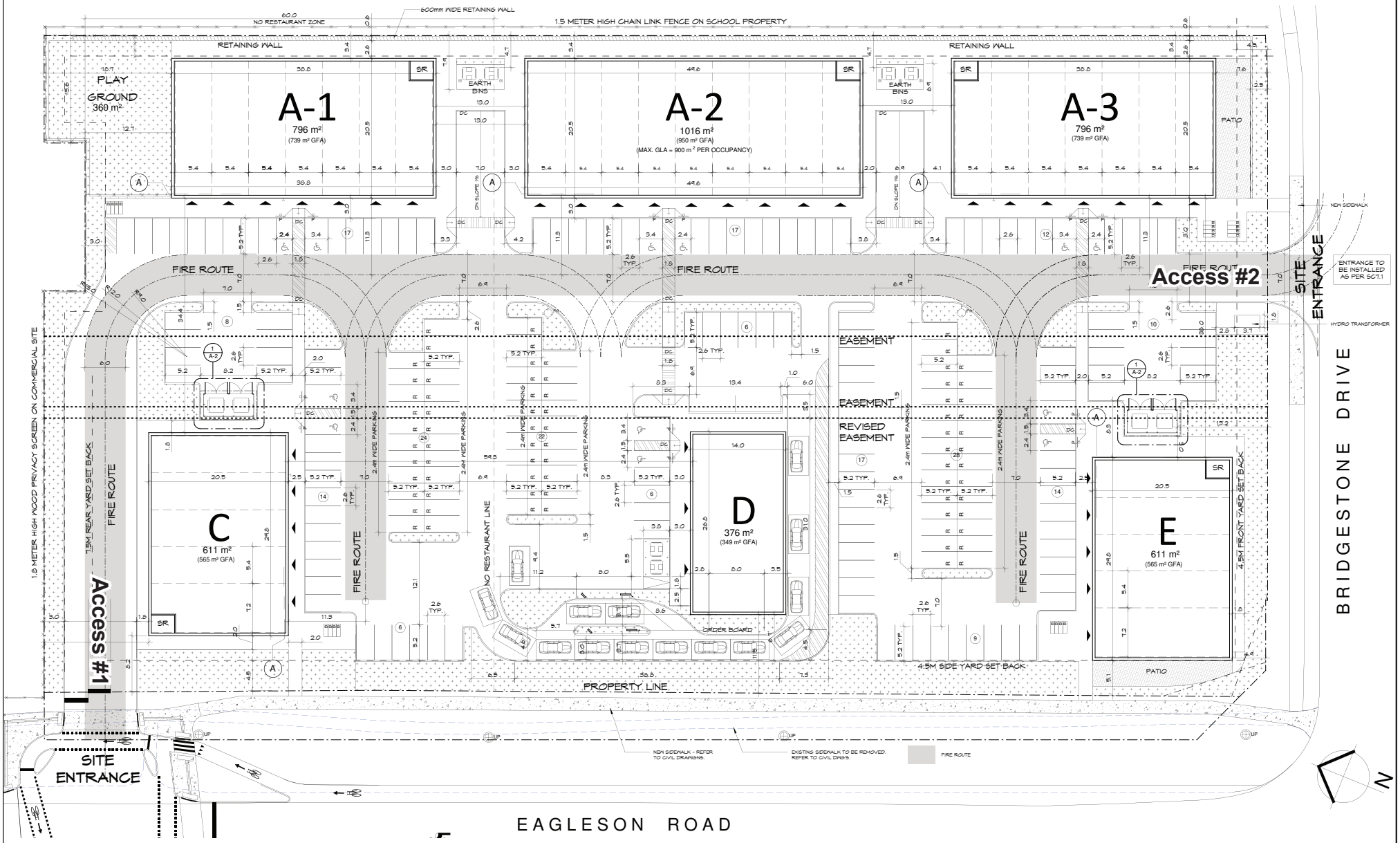
Land Use	Size (m^2)
934 – Fast-food Restaurant with Drive-Through Window	~376
822 – Strip Retail Plaza (<40k ft^2)	~3,560

The proposed development is illustrated in **Exhibit 3-2** below. Access to the site will be via a new approach to an existing three-legged signalized intersection on Eagleson Road at Fernbank Road and a new all-movement access on Bridgestone Drive.

The subject site is currently an undeveloped greenfield site and, according to GeoOttawa, is zoned LC7 [226] – Local Commercial.

3.1.3 Development Phasing

The proposed development is anticipated to be constructed in a single phase, with full buildout/occupancy by the end of 2026.



ARCADIS

801 Eagleson Road
Transportation Impact Assessment

Exhibit 3-2
Proposed Development

PROJECT No. 148185

SCALE: 0m 10m 20m

3.2 Existing Transportation Network

3.2.1 Existing Road Network

All major roads within the context area of the site are outlined in **Exhibit 3-1** above.

There are several driveways located within 200m of the proposed access locations as shown in **Figure 3-1** below. Two driveways along Bridgestone Drive, approximately 100m and 190m east of the proposed site access, provide access to the elementary school immediately east of the site. The two driveways along Eagleson Road, approximately 50m and 110m south of the site access, are on the west side of the road and serve the residential complex on the south-west corner of the Eagleson & Fernbank intersection.

Figure 3-1 Driveways within 200m from Site Access Driveways

3.2.1.1 Roadways

Table 3-3 below summarizes the existing roadways that were analyzed in this study. The protected right-of-way (ROW) for road segments within the study area were identified from Schedule C16 of the Official Plan (OP). The approximate existing ROW has also been provided.

Table 3-2 Existing Roadways

Name	Class	Jurisdiction	Orientation & extents	Cross-section	Existing ROW [m] (Official Plan ROW Protection [m])	Posted Speed Limit (km/h)
Eagleson Road	Arterial	City of Ottawa	North-South, Campeau to Brophy	2-Lane, Urban, Undivided	~41-45 (44.5)	60
Fernbank Road	Arterial	City of Ottawa	East-West, Dwyer Hill to Eagleson	2-Lane, Urban, Undivided	~32-34 (30)	60
Bridgestone Drive	Major Collector	City of Ottawa	North-South, Stonehaven to Eagleson	2-Lane, Urban, Undivided	~26 (N/A)	40
Cope Drive	Major Collector/ Collector	City of Ottawa	East-West, Goldhawk to Eagleson	2-Lane, Urban, Undivided	~26.5 (24)	50
Cadence Gate	Collector	City of Ottawa	East-West, Eagleson to Equestrian	2-Lane, Urban, Undivided	~25 (N/A)	40
Emerald Meadows Drive	Collector	City of Ottawa	East-West, Eagleson to Grassy Plains	2-Lane, Urban, Undivided	~24.5 (N/A)	40
Romina Street	Collector	City of Ottawa	East-West, Fernbank to Eagleson	2-Lane, Urban, Undivided	~24 (N/A)	40

Source: GeoOttawa

Within the study area, only Eagleson Road is designated as a truck route.

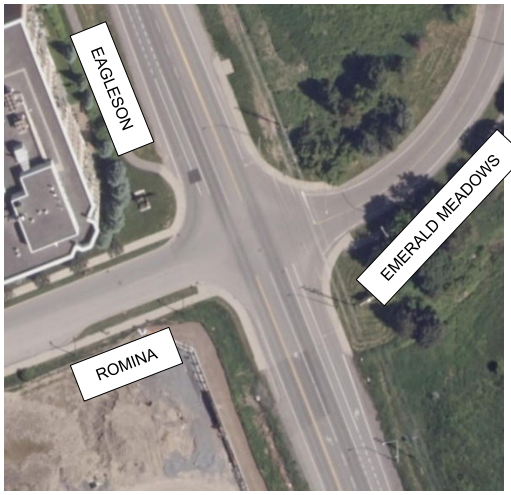
3.2.1.2 Existing Intersections

The following existing intersections are located within the study area:

Eagleson Road & Cope Drive / Cadence Gate is a four-legged, signalized intersection with two through lanes on the north and south legs, single through lanes on the east and west legs, and auxiliary left-turn lanes on all approaches. There are channelized right-turn lanes on all approaches with the exception of the northbound approach and there is a southbound bike lane on the north leg.

Eagleson Road & Fernbank Road is a three-legged signalized intersection with auxiliary left-turn lanes on all approaches. It also includes right-turn lanes and on-street pocket bike lanes on the north and west legs and single through lanes on the north and south legs. The proposed development will be accessed through a fourth leg introduced at this intersection. An RMA has been prepared to support the proposed modifications to this intersection.

Eagleson Road & Bridgestone Drive is a three-legged, unsignalized intersection with stop-control on the westbound approach. Both the southbound and westbound approaches include single through lanes and auxiliary left-turn lanes. The south leg is made up of a single through lane and an auxiliary right-turn lane.



Eagleson Road & Emerald Meadows Drive / Romina Street is a four-legged, signalized intersection with shared through-right turn lanes and left-turn lanes on the east and west legs, and auxiliary left and right-turn lanes as well as single through lanes on the north and south legs. This intersection was recently reconstructed as a protected intersection with physically separated bike lanes on all four approaches.

3.2.1.3 Existing Lane Configurations & Traffic Volumes

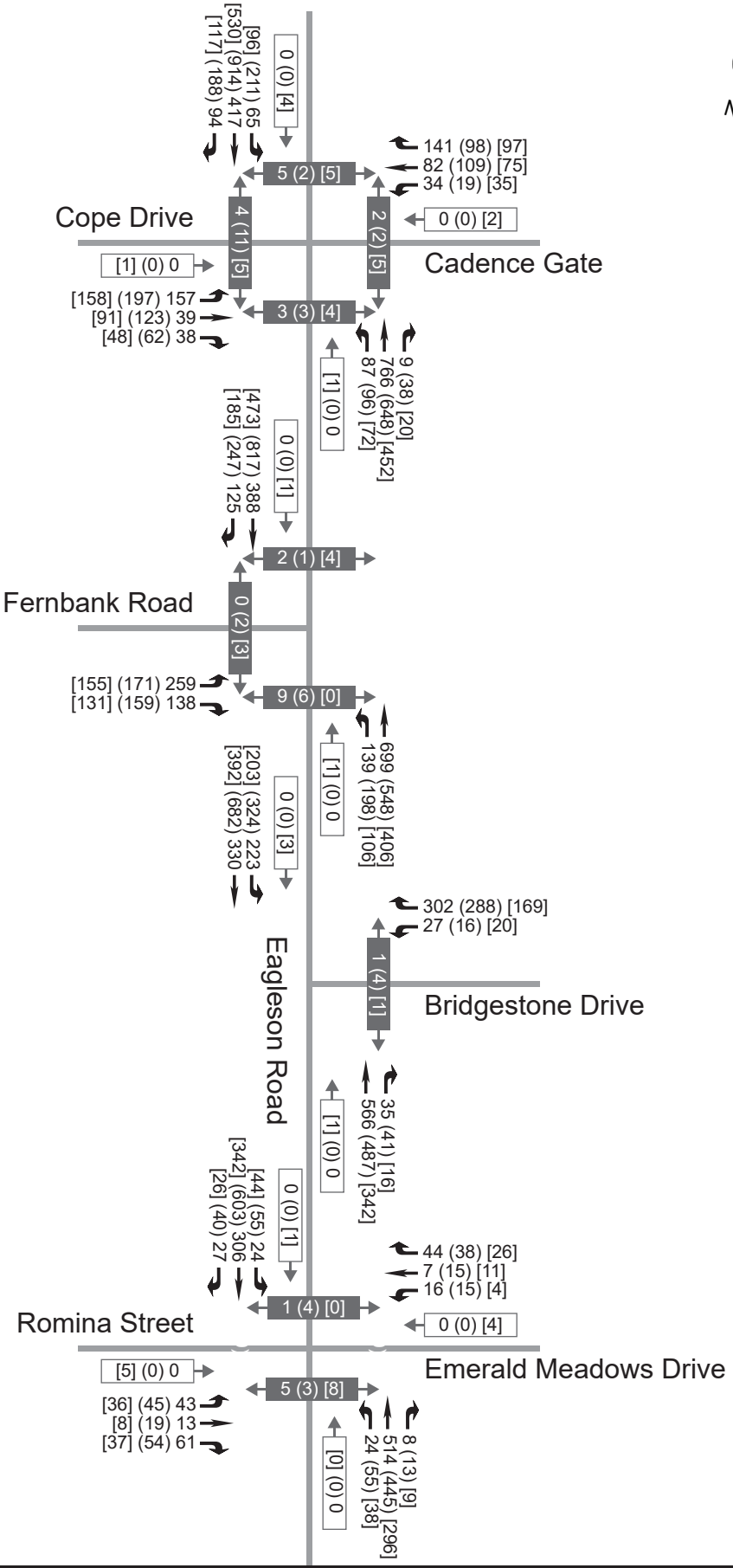
The following weekday morning, weekday afternoon and Saturday midday peak hour turning movement counts were obtained from the City of Ottawa or J & S Traffic Services:

- Weekday:
  - Eagleson & Bridgestone (City of Ottawa, March 2023)
  - Eagleson & Cope/Cadence (City of Ottawa, January 2024)
  - Eagleson & Fernbank (City of Ottawa, January 2024)
  - Eagleson & Emerald Meadows/Romina (City of Ottawa, December 2023)
- Saturday:
  - Eagleson & Bridgestone (J & S Traffic Services, July 2024)
  - Eagleson & Cope/Cadence (J & S Traffic Services, July 2024)
  - Eagleson & Fernbank (J & S Traffic Services, July 2024)
  - Eagleson & Emerald Meadows/Romina (J & S Traffic Services, July 2024)

It should be noted that the weekday traffic counts were undertaken during winter months and therefore active transportation volumes may be lower than they would otherwise be during warmer months.

Where applicable, a growth rate was applied to the arterial roadway approaches of the above noted turning movement count data to approximate existing traffic volumes. Based on historical intersection data provided through Open Ottawa, a growth rate of 1% was applied to volumes along Eagleson Road and Fernbank Road. As the residential communities to the east and west of Eagleson Road are mature, established neighbourhoods, traffic volumes are assumed to be stable and thus no growth rate was applied to Romina Street, Emerald Meadows Way, Cope Drive, Cadence Gate, and Bridgestone Drive.

Peak hour traffic volumes representative of typical conditions are shown in **Exhibit 3-3**. The traffic count data is provided in **Appendix B**. The lane configurations and intersection controls for the study area intersections are illustrated in **Exhibit 3-4**.



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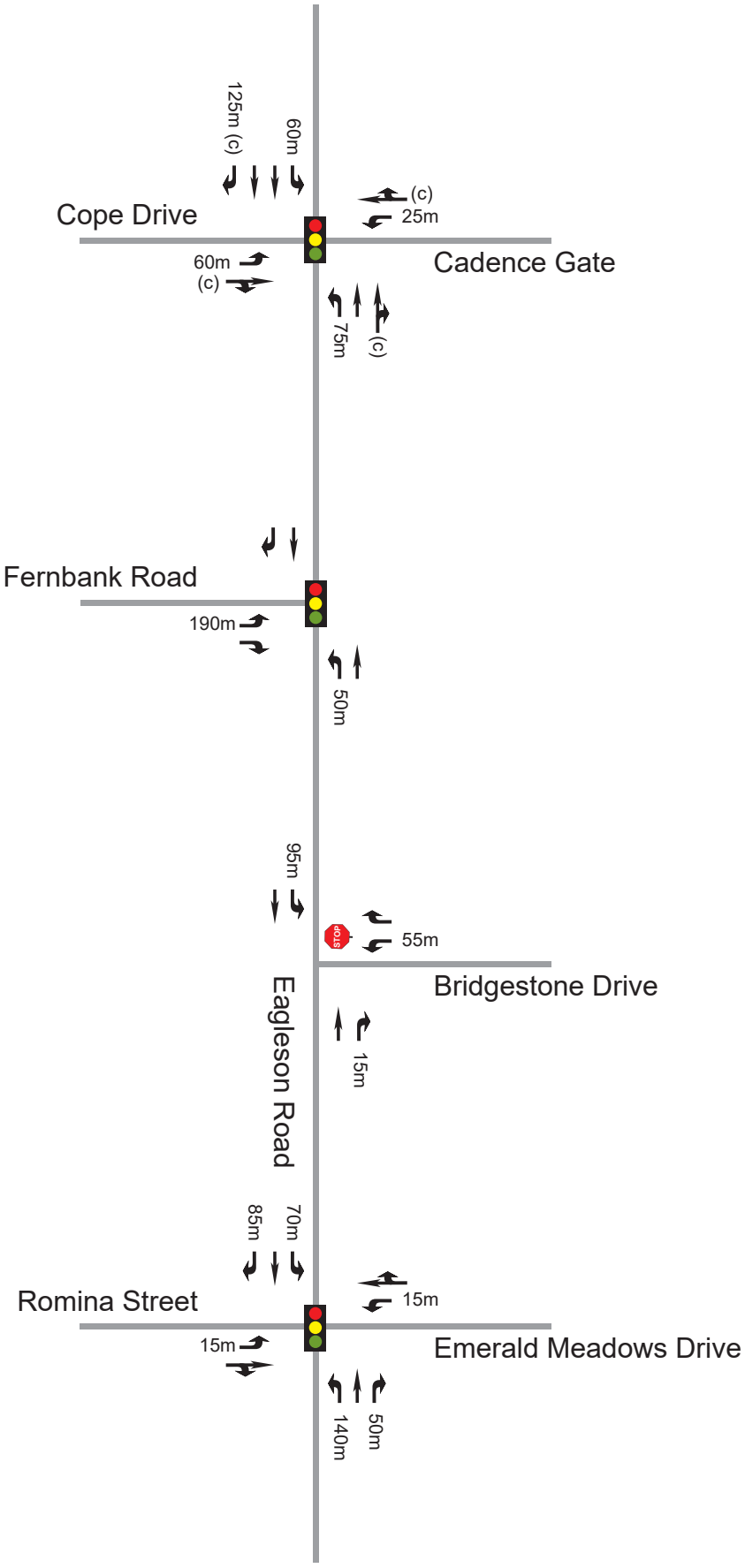
801 Eagleson Road
Transportation Impact Assessment

Exhibit 3-3
Existing Traffic

PROJECT No. 148185

SCALE: N.T.S.



ARCADIS

801 Eagleson Road
Transportation Impact Assessment

Exhibit 3-4
Existing Lane Configurations
& Intersection Controls

PROJECT No. 148185

SCALE: N.T.S.

3.2.2 Existing Bicycle and Pedestrian Facilities

The following cycling and pedestrian facilities exist within the context area:

- On Eagleson Road, there is an asphalt pathway on the east side of the road north of Bridgestone Drive and on the west side of the road north of Fernbank Road. A concrete sidewalk is provided along the frontage of the apartment complex across the road from the proposed development.
- Paved shoulders along Eagleson Road with pocket bike lanes at intersections. From Cope Drive to 220m south of Cope Drive, there is a multi-use path on the west side of Eagleson Road.
- A recently constructed protected intersection configuration at Eagleson & Romina/Emerald Meadows, with physically separated bike lanes on all corners.
- Concrete sidewalks and on-street bike lanes on both sides of Fernbank Road.
- A concrete sidewalk on the north side of Bridgestone Drive and an asphalt pathway on the south of Bridgestone Drive.

3.2.3 Existing Transit Facilities and Service

On April 27, 2025, OC Transpo introduced the 'New Ways to Bus' initiative, bringing significant changes to the existing bus network. **Table 3-4** summarizes the transit routes from the updated network that OC Transpo operates within close proximity to the proposed development.

Table 3-3 Existing Transit Routes

Route	Route Type	Route Start and End	Peak Period Frequency
#60	Regular, all-day	Cope to Terry Fox/Tunney's Pasture	30 minutes
#168	Regular, all-day	Hope Side to Terry Fox	30 minutes
#256	Weekday, peak period only	Tunney's Pasture to Bridlewood	30 minutes
#667	Weekday, peak period only	Holy Trinity High School to Summergaze	Five trips in the morning and six return trips in the afternoon
#668	Weekday, peak period only	Holy Trinity High School to Bridlewood	Five trips in the morning and five return trips in the afternoon
#681	Weekday, peak period only	Bell High School to Kanata	One trip in the morning and one return trip in the afternoon

The nearest bus stops to the proposed development are located on Eagleson Road. A southbound stop serving Route #168, is located south of the Eagleson/Fernbank intersection and approximately 55 m from the site access on Eagleson Road. A northbound stop serving Route #60 is located north of the Eagleson/Fernbank intersection and approximately 75 m from the site access on Eagleson Road. A westbound stop serving Route #168 is also present on the eastbound approach to the Eagleson & Fernbank intersection, approximately 200m from the site access on Eagleson Road.

Other nearby bus stops are located 25m east of Windways Crescent on Bridgestone Drive, providing access to Routes #168, #667, #668 and #681. Bus stops serving Route #256 are located approximately 500m north of the proposed development at the Cadence & Equestrian intersection. The transit service maps for the above routes are provided in **Appendix C**.

3.2.4 Collision History

A review of historical collision data has been conducted for the road network surrounding the proposed development. The TIA Guidelines require a safety review if at least six collisions for any one movement or of a discernible pattern, over a five-year period have occurred. **Table 3-5** summarizes all reported collisions between January 1, 2018, and December 31, 2022.

Table 3-4 Reported Collisions within Vicinity of Proposed Development

Location	# Of Reported Collisions							
	Approaching	Angle	Rear End	Sideswipe	Turning Movement	SMV	Other	Total
Intersections								
Eagleson & Cope/Cadence	-	**7**	3	1	**6**	2	1	**20**
Eagleson & Fernbank	-	1	**8**	1	1	-	-	**11**
Eagleson & Bridgestone	-	4	**6**	-	1	2	-	**13**
Eagleson & Romina/Emerald Meadows	-	3	-	-	-	1	-	**4**
Segments								
Eagleson – Cope to Emerald Meadows	1	-	4	2	-	1	-	**8**
Bridgestone – Eagleson to Windways	-	-	-	-	-	1	-	**1**

Based on the collision history noted above, angle and turning movement collisions at the Eagleson & Cope/Cadence intersection and rear end collisions at the intersections of Eagleson & Fernbank and Eagleson & Bridgestone meet the threshold to warrant further review, based on the number of collisions that have been reported.

Another method of evaluating the relative magnitude of collision frequency at one intersection compared to another is to quantify the average historical number of collisions against the daily volume of traffic entering the intersection. This is commonly expressed in terms of average collisions per year per Million Vehicles Entering (MVE) and a rate of greater than 1.0 is considered significant. The study area intersections have experienced the following collision rates:

- Eagleson & Cope / Cadence: 0.40
- Eagleson & Fernbank: 0.28
- Eagleson & Bridgestone: 0.41
- Eagleson & Romina/Emerald Meadows: 0.15

As indicated above, none of the study area intersections have experienced more than 1.0 collisions per MVE and therefore the overall frequency of collisions within the Study Area can be considered low.

Detailed collision records are provided in **Appendix D**.

3.3 Planned Transportation Network

3.3.1 Future Road Network

The 2013 Transportation Master Plan (TMP) outlines future road network modifications required in the 2031 'Affordable Network'. The 2024 City-wide and Area-Specific Development Charges (DC) Background Study (July 2024), published well after the 2013 TMP, provides updated timelines for projects within the study area. The following projects were noted that may have an impact on area traffic within the vicinity of the site:

- **Eagleson Road:** Planned widening from two to four lanes between Cope Drive and Terry Fox Drive. The DC study suggests that this widening will be implemented between 2025 and 2029.

Figure 3-2 below illustrates the planned changes to the arterial road network projects in the broader area, as per the 2013 TMP 'Affordable Network'.

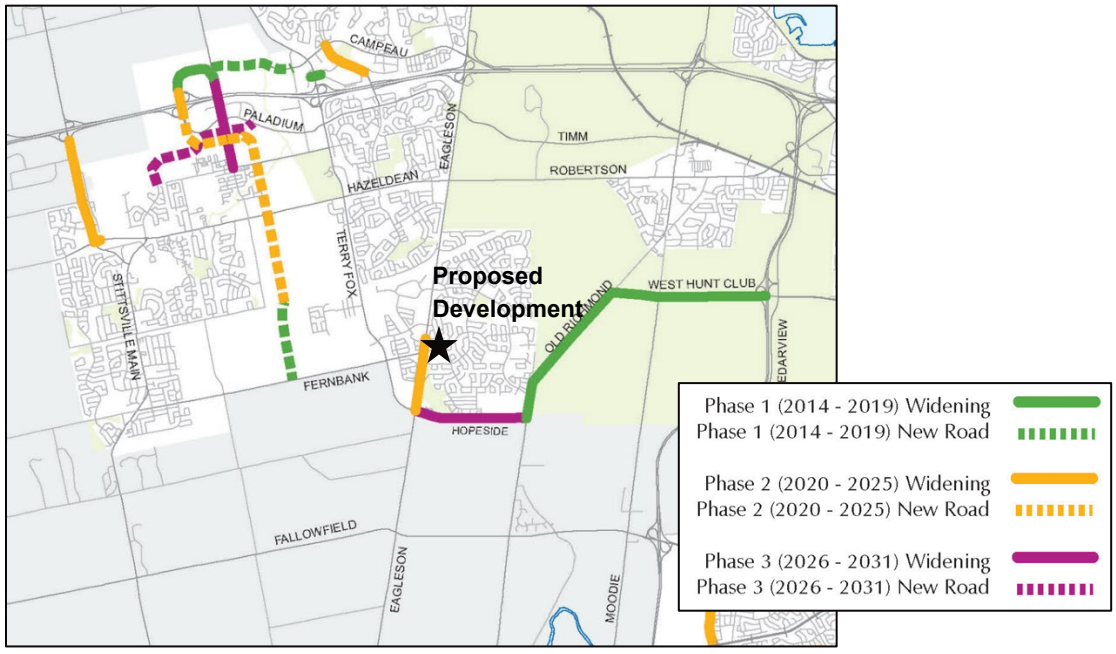


Figure 3-2 Future Road Network Projects
(Source: 2013 Transportation Master Plan – Map 11 '2031 Affordable Network')

It should be noted that the TMP is currently being updated by the City to align with the policies in the new Official Plan.

3.3.2 Future Bicycle and Pedestrian Facilities

The Transportation Master Plan (TMP) update identifies Terry Fox Drive and a short segment of Eagleson Road north of Cope Drive as Cross-town Bikeways. Schedule C3 of the Official Plan also identifies a major pathway which extends diagonally from the northwest to the southeast throughout green spaces around the site and along the portion of Eagleson Road directly adjacent to the site, as shown in **Figure 3-3**.

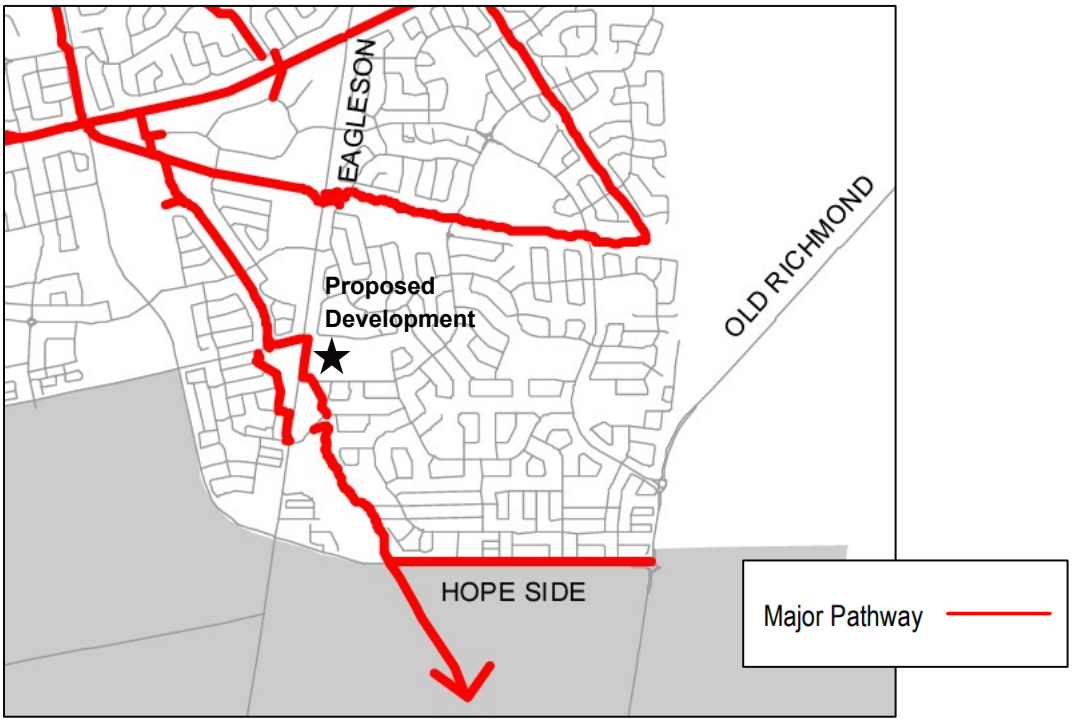


Figure 3-3 Official Plan Schedule C3: Active Transportation Network

3.3.3 Future Transit Facilities and Services

The 2013 TMP outlines the future rapid transit and transit priority (RTTP) network. No projects were noted in the 'Affordable RTTP Network' that may have a future impact on study area traffic, however the transit networks are subject to change with the ongoing update to the TMP. The Official Plan does not identify any updates to the transit network within the vicinity of the site in Schedules C1 or C2.

3.4 Future Adjacent Developments

The City of Ottawa Transportation Impact Assessment (TIA) Guidelines specify that all significant developments proposed within the surrounding area which are likely to occur within the study's horizon year must be identified and taken into consideration in the development of future background traffic projections.

No adjacent developments of significance were identified within the context area of the proposed development.

3.5 Time Periods

As the proposed development will consist of non-residential land uses, traffic generated during the weekday morning, weekday afternoon and Saturday midday peak hours are expected to result in the most significant impact to traffic operations on the adjacent network.

3.6 Analysis Years

The following future analysis years have been assessed in this study:

- Year 2026 – Buildout of Proposed Development
- Year 2031 – Buildout + 5-year horizon

3.7 Study Area

With consideration of the information presented thus far, a study area bound by Cope Drive to the north, Romina Street/Emerald Meadows Drive to the south, and Eagleson Road will provide a sufficient assessment of the development's impact on the adjacent transportation network. The proposed development is expected to attract the vast majority of trips from the local community, with a significant proportion of site-generated traffic being pass-by traffic, or traffic already present on the adjacent road network.

The following intersections have been identified as being most impacted by the proposed development and will be assessed for vehicular capacity as part of this study:

- Eagleson & Bridgestone (Unsignalized)
- Eagleson & Cope/Cadence (Signalized)
- Eagleson & Fernbank (Signalized)
- Eagleson & Romina/Emerald Meadows (Signalized)

An intersection-based Multi-Modal Level of Service (MMLOS) evaluation will be conducted for any existing or future signalized study area intersections listed above. Stop-controlled intersections and roundabouts are exempt from this analysis, as no methodology currently exists for evaluating MMLOS at unsignalized intersections. Segment-based MMLOS analysis will be conducted for the segments of Eagleson Road and Bridgestone Drive that are adjacent to the proposed development.

The intersection on Eagleson Road 200m south of Cope Drive/Cadence Gate was not included in the study area as site-generated traffic will only contribute to north-south through traffic at this location. North-south through traffic will receive the most green time at this location and therefore it is unlikely that the addition of site-generated traffic will trigger any capacity issues for those movements, negating the need for detailed analysis.

Intersections on Fernbank Road west of Eagleson Road were also not included in the study area. Site-generated traffic is only expected to contribute up to 30 vehicles per hour per direction on Fernbank Road (see Section 3.9.8) which is low and unlikely to trigger any capacity issues. Furthermore, it is expected that site-generated traffic will quickly disperse into the adjacent residential areas, thereby diluting the impact of site-generated traffic beyond the immediate vicinity of the site.

3.8 Demand Rationalization

The purpose of this section is to rationalize future travel demands within the study area to account for potential capacity limitations in the transportation network and its ability to effectively accommodate the additional demand generated by a new development. The results of the demand rationalization exercise will be used to inform the existing capacity constraints of the adjacent road network and define the site-generated trip characteristics for the proposed development.

3.8.1 Description of Capacity Issues

Table 3-6 below summarizes the existing traffic operational performance at the study area intersections based on Existing Traffic volumes. The intersection capacity analysis is based on locally-specific parameters as described in the TIA Guidelines and incorporates existing signal timing plans obtained from the City of Ottawa. Also, per the TIA Guidelines, a peak hour factor (PHF) of 0.90 has been considered in the analysis of existing conditions. The Synchro output files have been provided in **Appendix E**.

Table 3-5 Intersection Capacity Analysis: Existing Traffic

Intersection	Traffic Control	Peak Hour	Overall LOS (v/c or Delay)	Critical Movements (v/c or Delay)
Eagleson & Cope / Cadence	Signalized	AM	A (0.46)	**EBL (0.95)**
		PM	A (0.60)	**EBL (0.96)**
		SAT	A (0.34)	EBL (0.79)
Eagleson & Fernbank	Signalized	AM	B (0.67)	EBL (0.83)
		PM	D (0.84)	SBT (0.88)
		SAT	A (0.46)	EBL (0.60)
Eagleson & Bridgestone	Unsignalized	AM	**F (72.3s)**	**WBL (72.3s)**
		PM	**F (159.1s)**	**WBL (159.1s)**
		SAT	D (33.8s)	WBL (33.8s)
Eagleson & Romina / Emerald Meadows	Signalized	AM	A (0.41)	NBT (0.42)
		PM	A (0.48)	SBT (0.49)
		SAT	A (0.26)	SBT (0.26)

At the Eagleson & Bridgestone intersection, the high volumes of north-south traffic on Eagleson Road results in high delays for westbound left-turning traffic. It should be noted that these high delays only impact a relatively small number of vehicles (i.e., 15-30 vehicles per hour during the peak hours). It is understood that the City is currently undertaking a study to assess the potential signalization of the intersection or conversion to a roundabout.

The eastbound left-turn movement at the Eagleson & Cope/Cadence intersection is also approaching its theoretical capacity which is resulting in queue spillback during the weekday morning and afternoon peak hours.

It should be noted that there are currently back-to-back left-turn lanes located on Eagleson Road between Fernbank Road and Bridgestone Drive. The results of the intersection capacity analysis indicate that there are currently no queue spillback issues in these left-turn lanes. During the afternoon peak hour, however, the 95th percentile northbound left-turn queue at the Eagleson & Fernbank intersection is approximately 48m long and therefore utilizes

the full length of the left-turn lane. The southbound left-turn lane at the Eagleson & Bridgestone intersection has significant excess capacity.

3.8.2 Adjustment to Background Network Demands

Under existing conditions, the analysis of observed (i.e. processed) volumes cannot result in a condition that exceeds an intersection's theoretical capacity (i.e. v/c > 1.0). In situations where projected traffic demand results in volumes that exceed capacity, it is expected that the traffic demand will either spread out over a greater period of time (i.e. peak spreading) or shift to alternatives modes of transportation such as transit. In the analysis of future conditions, a peak hour factor (PHF) of 1.0 is therefore utilized in accordance with the City of Ottawa TIA Guidelines. It is also expected that signal timing optimization will occur on a regular basis.

3.8.3 Adjustments to Development Generated Demands

The proposed development will have an access on both Eagleson Road and Bridgestone Drive. It will therefore be possible for site-generated traffic to enter and exit the site without contributing significant traffic to the critical movement at the Bridgestone & Eagleson intersection. The assignment of site-generated traffic has considered the observed capacity constraints at the intersection.

3.9 Development Generated Traffic

3.9.1 Trip Generation Methodology

Peak hour site-generated traffic volumes were developed using the Institute of Transportation Engineers' (ITE) Trip Generation Manual (11th Edition). The TIA Guidelines indicate that vehicle-trip generation rates from the ITE Trip Generation Manual should be converted to person-trips through the application of a 1.28 vehicle-to-person-trip conversion factor. Internalization reduction factors were subsequently applied to account for person-trips that are anticipated to occur between the restaurant and commercial land uses within the proposed development.

Following the application of internalization reduction factors, person-trips were then subdivided based on representative mode share percentages applicable to the study area to determine the number of auto driver, auto passenger, transit, pedestrian and cycling trips. Auto driver trips were further subdivided into pass-by and non-pass-by vehicle-trips.

Mode share targets were developed based on the local mode share distributions from the Kanata/Stittsville Traffic Assessment Zone (TAZ) in the 2020 TRANS Trip Generation Summary Report for commercial land uses. These mode share targets were adjusted to account for the planned improvements of transportation infrastructure in the vicinity of the proposed development.

The extents of the Kanata/Stittsville Traffic Assessment Zone (TAZ) are illustrated in **Figure 3-4** below.

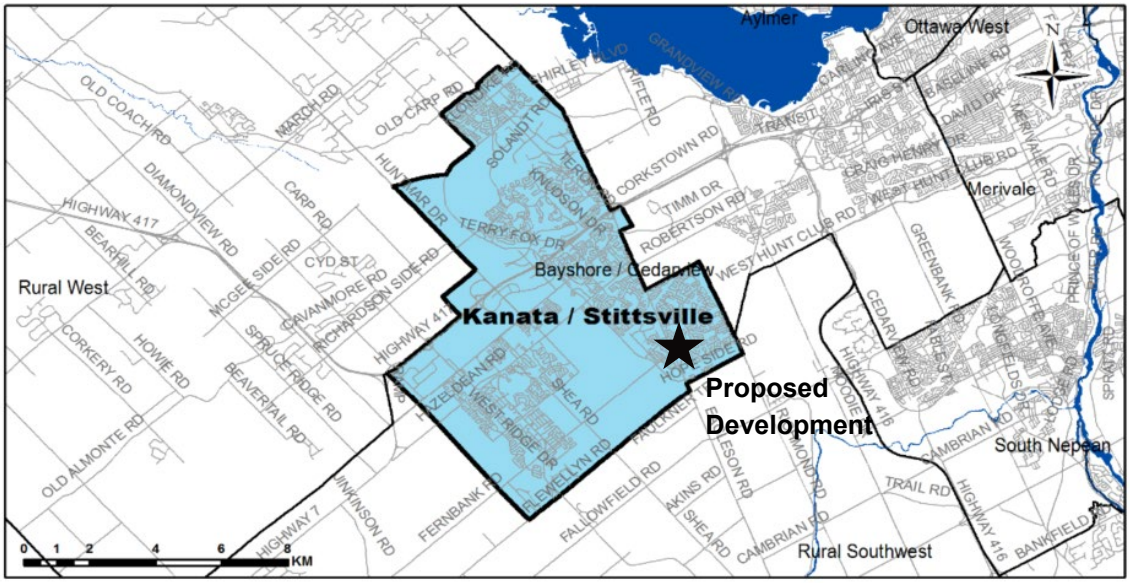


Figure 3-4 Kanata/Stittsville TAZ
(Source: 2011 O-D Survey)

3.9.2 Base Vehicle Trip Generation

Peak hour vehicular traffic volumes associated with the proposed development were determined using appropriate peak hour trip generation rates from the ITE Trip Generation Manual.

The vehicular trip generation results for the proposed development have been summarized in **Table 3-7** below.

Table 3-6 Base Vehicular Trip Generation Results

Land Use	Size (m^2)	Peak Hour	Base Vehicular Trips		
			In	Out	Total
934: Fast-Food Restaurant with Drive-Through Window	~376	AM	93	89	182
		PM	70	64	134
		SAT	115	110	225
822: Strip Retail Plaza (<40k)	~3,560	AM	42	28	70
		PM	101	101	202
		SAT	128	124	252
TOTAL		**AM**	**135**	**116**	**251**
		PM	**171**	**165**	**336**
		SAT	**243**	**233**	**476**

3.9.3 Person Trip Generation

The TIA Guidelines indicate that a 1.28 vehicle-to-person-trip conversion rate should be utilized to convert the base vehicular trip generation results into person trips, with consideration of the average automobile occupancy in Ottawa and the inclusion of a small proportion of non-auto trips inherent to the ITE rates.

The resulting number of site-generated person-trips is summarized in **Table 3-8** below.

Table 3-7 Person-Trip Generation

Land Use	Size (m^2)	Peak Hour	Person Trips (PPH)		
			In	Out	Total
934: Fast-Food Restaurant with Drive-Through Window	376	AM	119	113	232
		PM	90	82	172
		SAT	147	141	288
822: Strip Retail Plaza (<40k)	3,560	AM	54	36	90
		PM	129	129	258
		SAT	164	158	322
TOTAL		**AM**	**173**	**149**	**322**
		PM	**219**	**211**	**430**
		SAT	**311**	**299**	**610**

Notes: pph = person-trips per hour

3.9.4 Mode Share Targets

The 2011 Origin-Destination (OD) Survey Report provides approximations of the existing modal share within the Kanata/Stittsville Traffic Assessment Zone (TAZ) for 'within district' trips. Relevant extracts from the 2011 OD Survey Report are provided in **Appendix F**.

The 2013 Transportation Master Plan (TMP) indicates that for trips to the Kanata/Stittsville TAZ, the 2031 transit mode share target is 21% and the 2031 active transportation (i.e., walking and cycling) mode share target for local trips is 27%. The proposed development will be primarily local-serving, providing commercial amenities for the immediate community and less likely to draw trips from outside of the TAZ. The mode share targets can therefore be reasonably based on the 'within district' mode share distribution.

Land uses in the surrounding area are primarily residential and therefore these mode shares are heavily influenced by commuter (i.e., work based) travel patterns. Based on the 2020 TRANS Trip Generation Summary Report, the transit mode share for commercial land uses is generally 9% to 10% lower than it is for residential land uses, therefore, the following mode share targets are deemed appropriate for this development.

The existing mode shares for the TAZ and the proposed mode share targets for the proposed development are identified in **Table 3-9** below.

Table 3-8 Existing and Target Mode Share Distributions

Mode	Existing 'Within District' Mode Share Targets		2026 Mode Share Targets		2031 Mode Share Targets	
	AM	PM/SAT	AM	PM/SAT	AM	PM/SAT
Auto Driver	55%	60%	51%	55%	50%	54%
Auto Passenger	21%	25%	20%	23%	19%	22%
Transit	4%	2%	9%	9%	11%	11%
Bicycle	1%	1%	1%	1%	1%	1%
Walk	19%	12%	19%	12%	19%	12%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

3.9.5 Pass-By Trips

Based on the ITE Trip Generation Handbook (3rd Edition), it is expected that the following proportion of site-generated vehicle-trips will be pass-by trips diverted from existing traffic on Eagleson Road and Bridgestone Drive:

- 50% of restaurant trips in the weekday morning peak hour
- 55% of restaurant trips and 40% of retail trips in the weekday afternoon peak hour
- 55% of restaurant trips and 31% of retail trips in the Saturday peak hour

Extracts from the ITE Trip Generation Handbook (3rd Edition) are provided in **Appendix F**.

3.9.6 Internalization

Synergy/internalization occurs when developments contain two or more compatible land uses. These compatible land uses attract trips from each other and therefore some of the person-trip generation of the site is fulfilled internally, thereby reducing the overall number of new trips generated. As the proposed development is composed of solely commercial land uses, internalization is not considered a significant factor in the trip generation, though it is recognized that some degree of internalization is likely to occur.

3.9.7 Trip Generation Summary

The proposed development is expected to generate approximately 100 to 250 new two-way vehicle trips during the peak hours of adjacent street traffic, with the highest degree of the traffic generated during the Saturday mid-day peak hour. **Table 3-10** and **Table 3-11** summarizes the number of person-trips per mode generated by the proposed development.

Table 3-9 2026 – Peak Hour Person Trips by Mode

Mode	AM			PM			SAT		
	In	Out	Total	In	Out	Total	In	Out	Total
Auto Driver	88	76	164	122	117	239	173	166	339
New Trips	***58***	***46***	***104***	***67***	***62***	***129***	***102***	***95***	***197***
Pass-By	*30*	*30*	*60*	*55*	*55*	*110*	*71*	*71*	*142*
Auto Passenger	34	29	63	50	48	98	71	68	139
Transit	16	14	30	19	19	38	27	26	53
Cycling	2	2	4	2	2	4	3	3	6
Walking	33	28	61	26	25	51	37	36	73
Total	**173**	**149**	**322**	**219**	**211**	**430**	**311**	**299**	**610**

Table 3-10 – 2031 Peak Hour Person Trips by Mode

Mode	AM			PM			SAT		
	In	Out	Total	In	Out	Total	In	Out	Total
Auto Driver	86	75	161	118	114	232	168	161	329
New Trips	***57***	***46***	***103***	***65***	***61***	***126***	***99***	***92***	***191***
Pass-By	*29*	*29*	*58*	*53*	*53*	*106*	*69*	*69*	*138*
Auto Passenger	33	28	61	48	46	95	69	66	135
Transit	19	16	35	24	23	47	34	33	67
Cycling	2	2	4	2	2	4	3	3	6
Walking	33	28	61	27	25	52	37	36	73
Total	**173**	**149**	**322**	**219**	**211**	**430**	**311**	**299**	**610**

3.9.8 Trip Distribution and Assignment

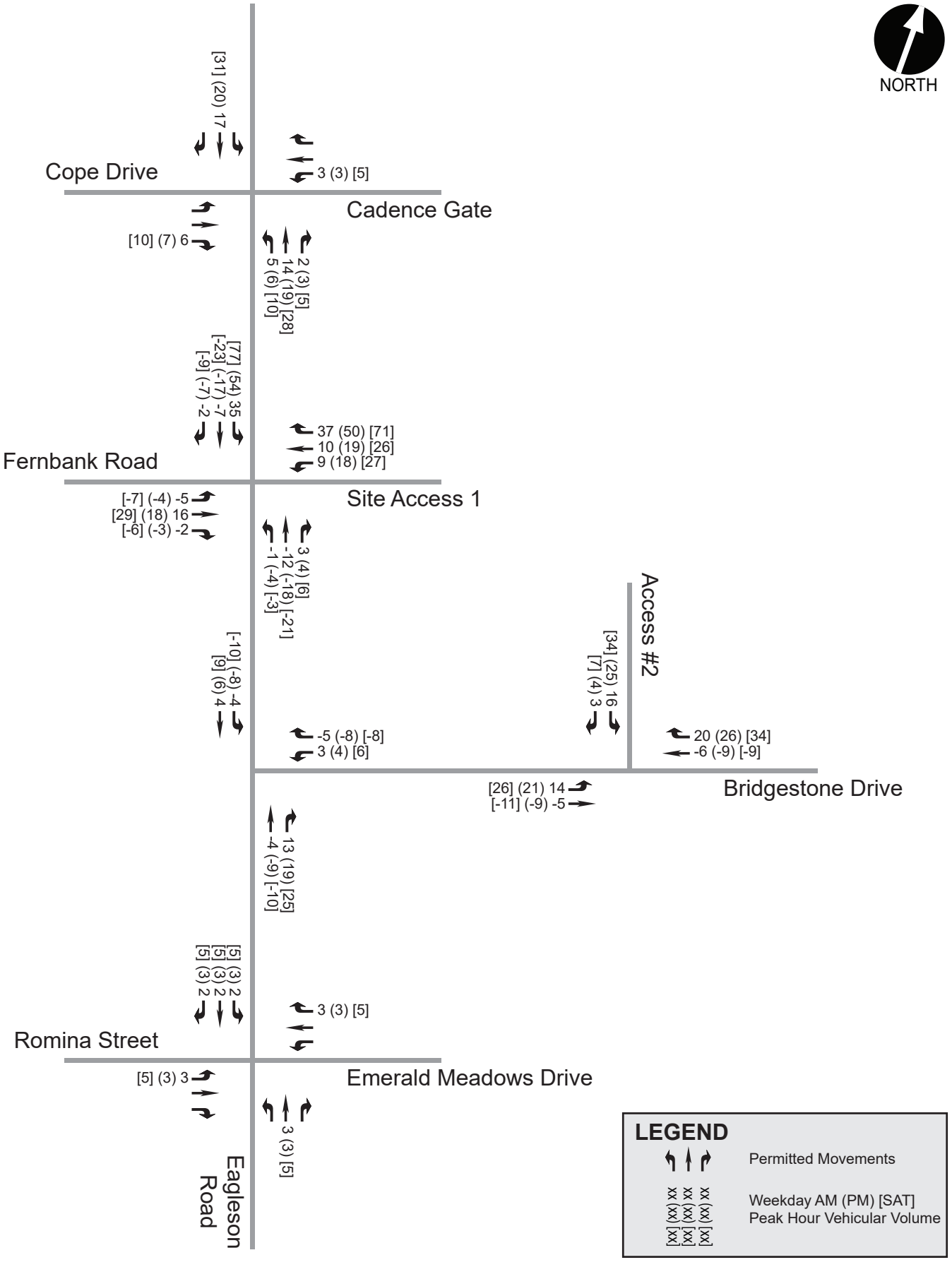
Given the small scale of the proposed development, it is not anticipated that it will draw regional traffic. The distribution of site-generated traffic was therefore based primarily on the concentrations of existing residential land uses within the surrounding community, with more weight assigned to neighbourhoods closer to the site. **Figure 3-5** illustrates the areas where the majority of site-generated traffic is expected to originate from.

Figure 3-5 Trip Distribution

Based on the above, site-generated traffic has been distributed as follows:

- 30% to/from the North via Eagleson Road
- 5% to/from the South via Eagleson Road
- 35% to/from the East
    - 25% via Bridgestone Drive
    - 5% via Emerald Meadows Way
    - 5% via Cadence Gate
- 30% to/from the West
    - 10% via Cope Drive
    - 15% via Fernbank Road
    - 5% via Romina Street

Applying the estimated number of new auto trips to the above distribution, future site-generated traffic volumes from **Table 3-10** and **Table 3-11** are illustrated at each of the study area intersections in **Exhibit 3-5** and **Exhibit 3-6**. Pass-by trips were distributed based on the relative volume of traffic on the site's two boundary streets.



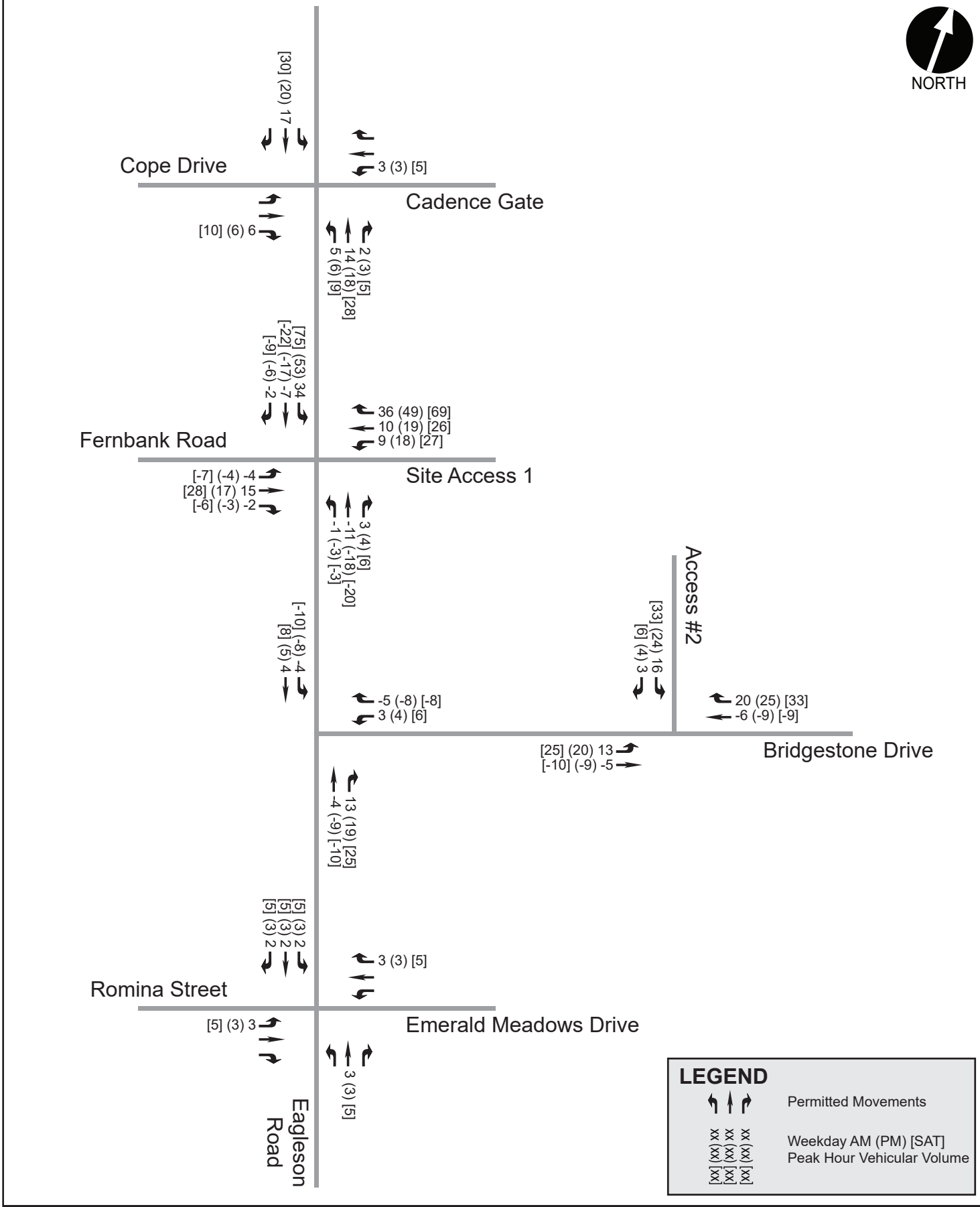
ARCADIS

801 Eagleson Road
Transportation Impact Assessment

Exhibit 3-5
2026 Site
Generated Traffic

PROJECT No. 148185

SCALE: N.T.S.



ARCADIS

801 Eagleson Road
Transportation Impact Assessment

Exhibit 3-6
2031 Site
Generated Traffic

PROJECT No. 148185

SCALE: N.T.S.

3.10 Exemptions Review

The TIA Guidelines provide exemption considerations for elements of the Design Review and Network Impact components. **Table 3-12** summarizes the TIA modules that are not applicable to this study.

Table 3-11 Exemptions Review

TIA Module	Element	Exemption Considerations	Required
Design Review Component			
4.1 Development Design	4.1.2 Circulation and Access	• Only required for site plans	✓
	4.1.3 New Street Networks	• Only required for plans of subdivision	✗
4.2 Parking	4.2.1 Parking Supply	• Only required for site plans	✓
	4.2.2 Spillover Parking	• No longer required based on the June 2023 revisions to the TIA guidelines.	✗
Network Impact Component			
4.5 Transportation Demand Management	All Elements	• Not required for site plans expected to have fewer than 60 employees and/or students on location at any given time	✓
4.6 Neighbourhood Traffic Calming	All Elements	• Only required when the following conditions are met: 1. Access via a collector or local road 2. Adjacent to a significant sensitive land use 3. Zoning By-Law Amendment or Draft Plan of Subdivision application 4. At least 75 vehicle-trips 5. Site-generated traffic will increase peak hour volumes by 50% or more	✗
4.7 Transit	4.7.1 Transit Route Capacity	• Only required when the proposed development generates 75 transit trips or more	✗
	4.7.2 Transit Priority Requirements	• Only required when the proposed development generates 75 vehicle trips or more	✓
4.8 Network Concept	All Elements	• Only required when proposed development generates more than 200 person-trips during the peak hour in excess of the equivalent volume permitted by established zoning	✓
4.9 Intersection Design	All Elements	• Only required when the proposed development generates 75 vehicle trips or more	✓

4 Analysis

4.1 Background Network Traffic

4.1.1 Changes to the Background Transportation Network

To properly assess future traffic conditions, planned modifications to the transportation network that may impact travel patterns or demand within the study area have been considered.

The Scoping section of this TIA reviewed the anticipated changes to the study area transportation network based on the Transportation Master Plan (TMP) and the 2024 DC study. Based on a review of these planning policy documents, it is anticipated that Eagleson Road will be widened to four lanes from approximately 200m south of Cope Drive to Hope Side Road between 2025 and 2029. For this study, it is assumed that the widening will not be in place by the buildout year of 2026 but will be in place by the 2031 horizon year.

4.1.2 General Background Growth Rates

The background growth rate is intended to represent regional growth from outside the study area that will travel along the adjacent road network. As discussed in Section 3.2.1.3, a 1% background traffic growth rate has been applied to volumes on Eagleson Road and Fernbank Road based on historical intersection data provided through Open Ottawa. These growth rates have only been applied to through movements on arterial roadways, as well as all movements at arterial-to-arterial intersections.

4.1.3 Other Area Developments

As discussed previously in Section 3.4, there are no adjacent developments of significance identified within the study area.

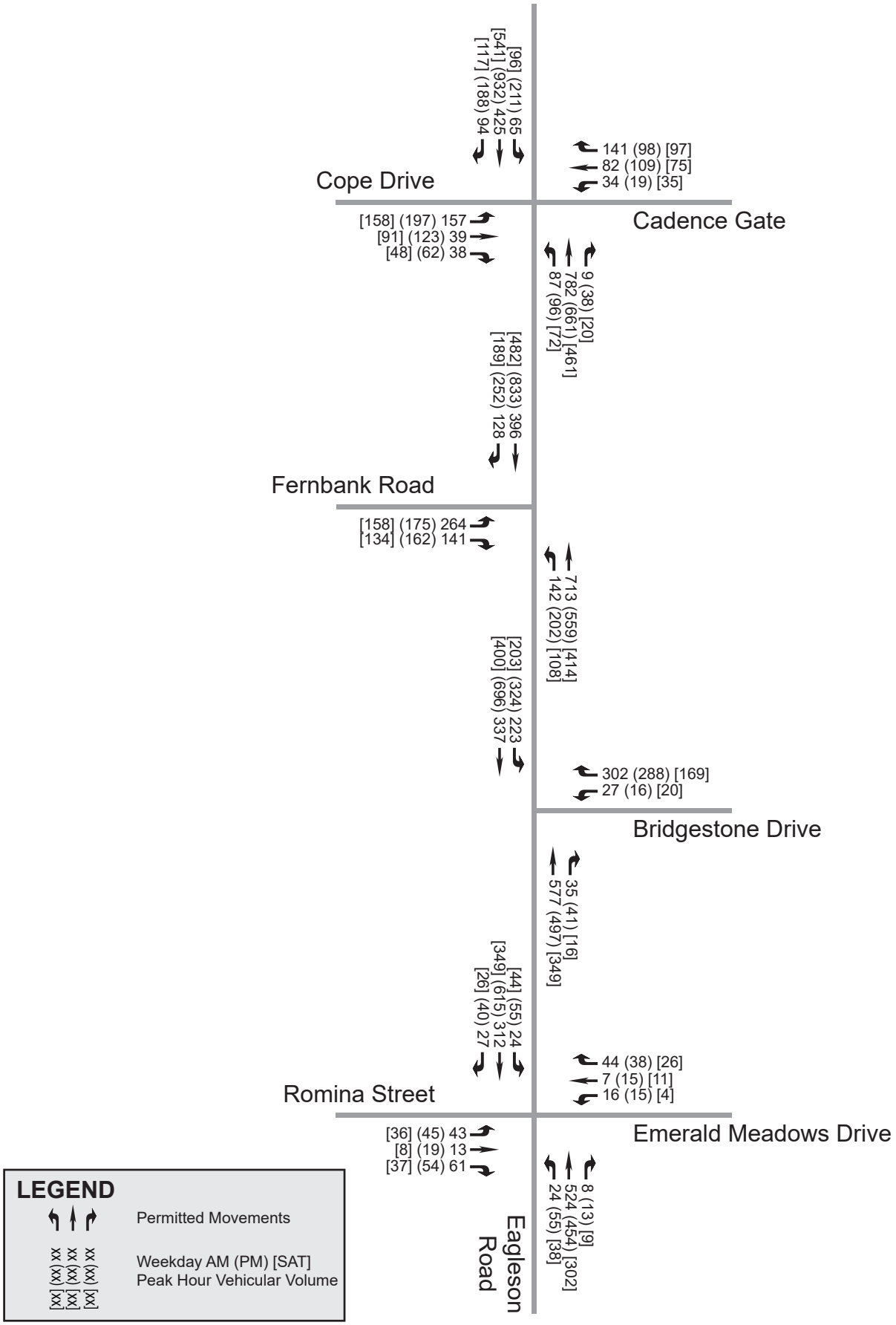
4.2 Future Traffic Volumes

4.2.1 Future Background Traffic Volumes

Future background traffic volumes projections have been established by applying growth rates to the existing traffic volumes, as discussed previously. **Exhibit 4-1** and **Exhibit 4-2** present the future background traffic volumes anticipated for the 2026 and 2031 analysis years, respectively.

4.2.2 Future Total Traffic Volumes

Future total volumes have been derived by combining the site-generated traffic volumes with future background volumes. **Exhibit 4-3** and **Exhibit 4-4** present the future total traffic volumes anticipated for the 2026 and 2031 analysis years, respectively.



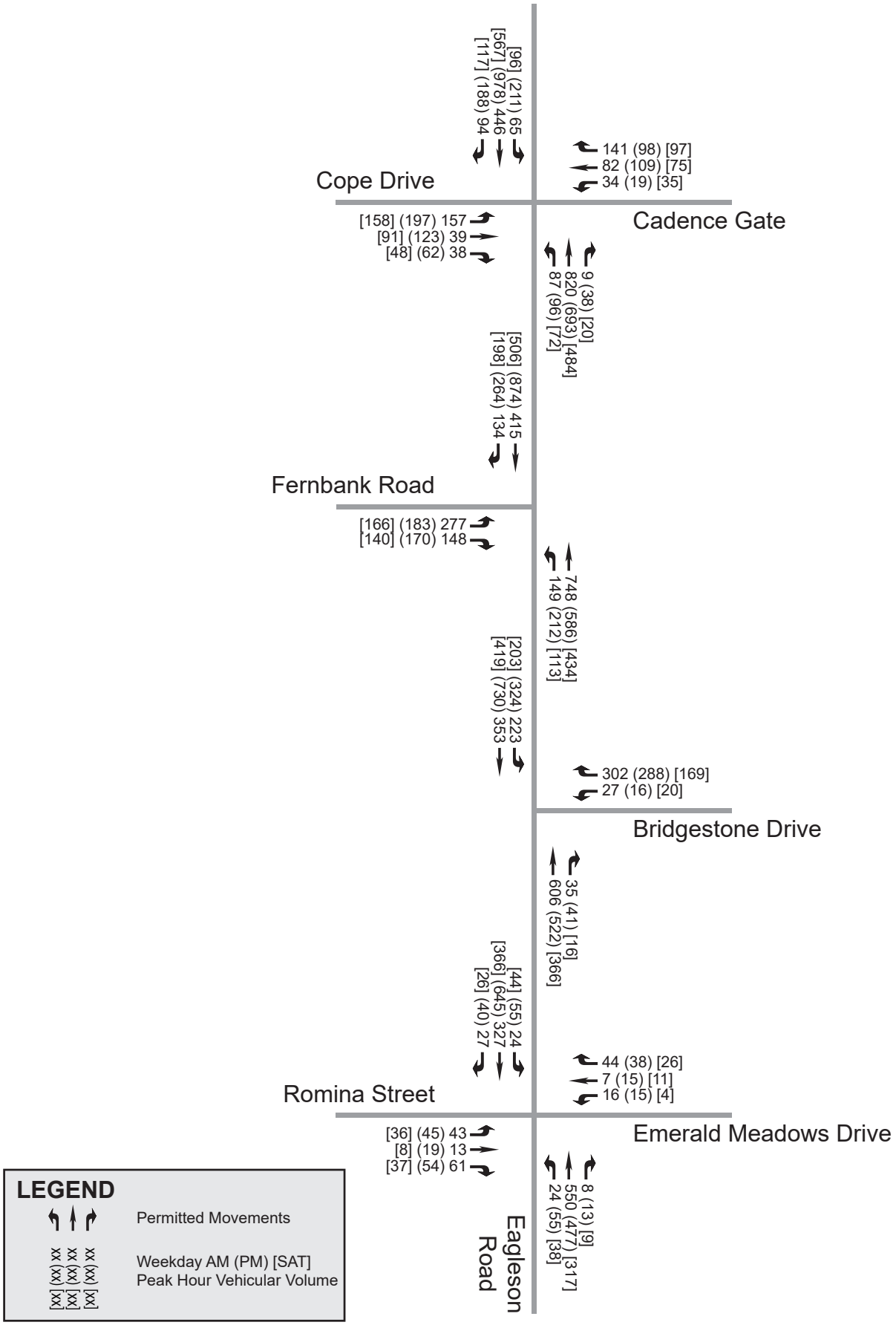
ARCADIS

801 Eagleson Road
Transportation Impact Assessment

Exhibit 4-1
Future (2026)
Background Traffic

PROJECT No. 148185

SCALE: N.T.S.



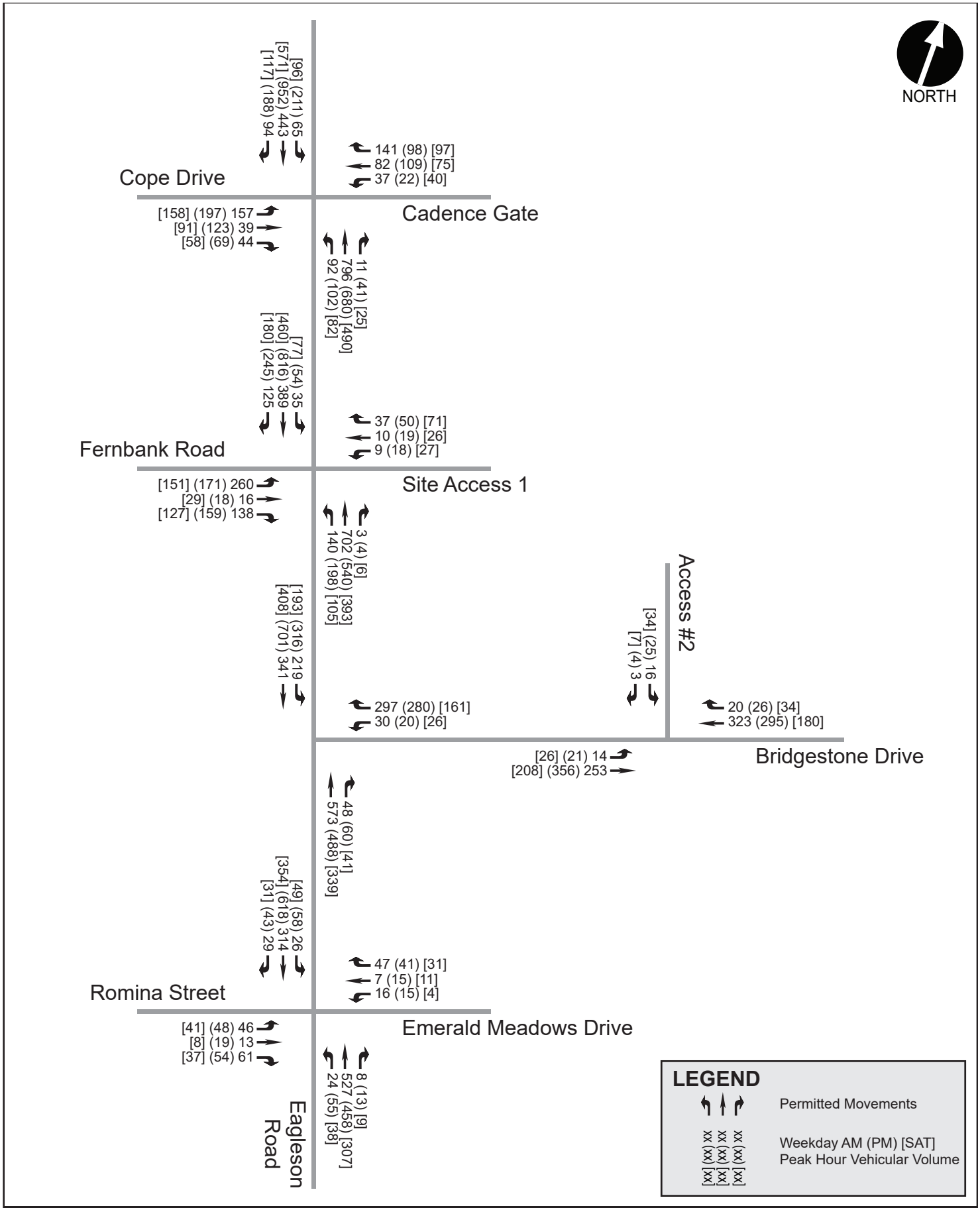
ARCADIS

801 Eagleson Road
Transportation Impact Assessment

Exhibit 4-2
Future (2031)
Background Traffic

PROJECT No. 148185

SCALE: N.T.S.



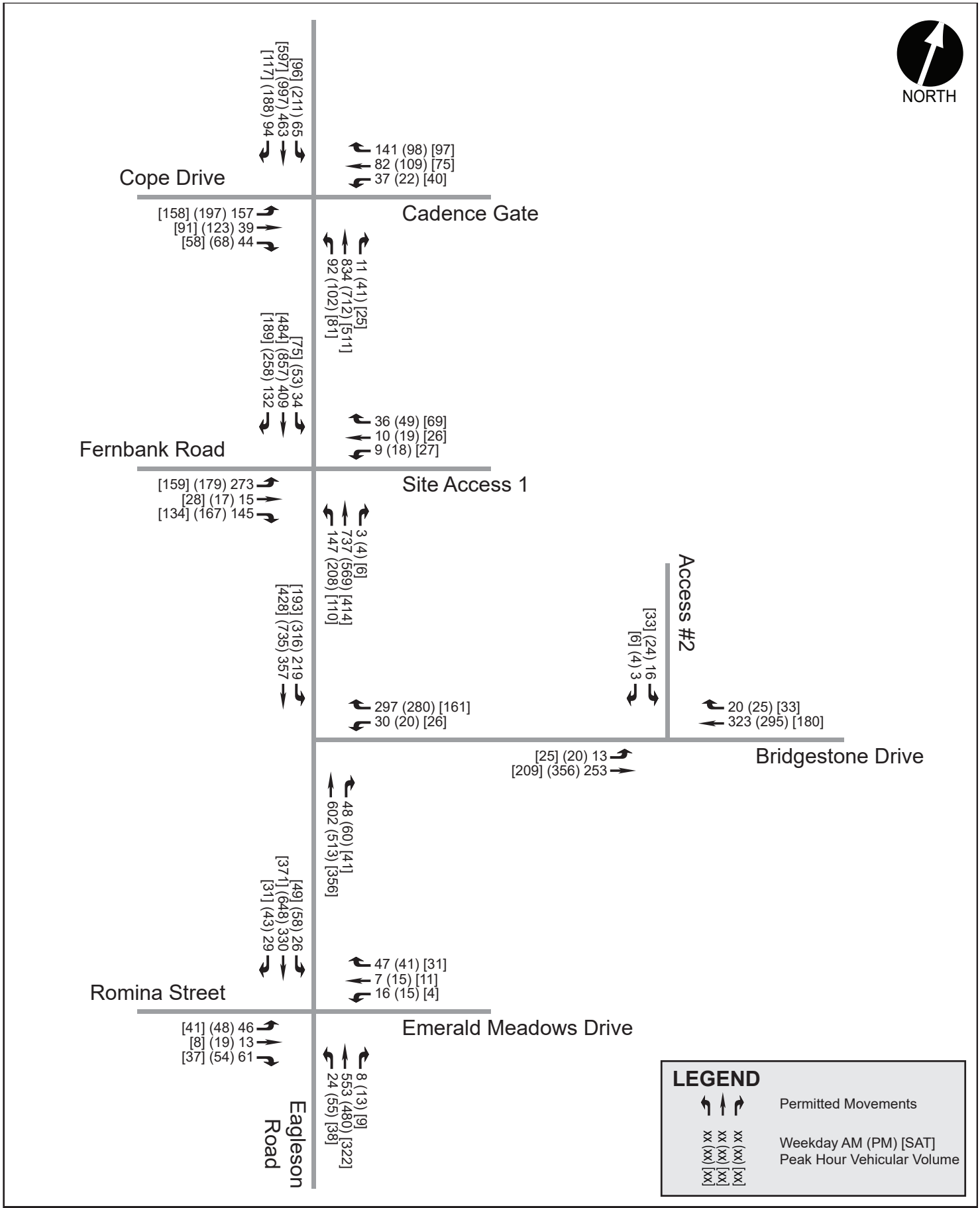
ARCADIS

801 Eagleson Road
Transportation Impact Assessment

Exhibit 4-3
Future (2026)
Total Traffic

PROJECT No. 148185

SCALE: N.T.S.



ARCADIS

801 Eagleson Road
Transportation Impact Assessment

Exhibit 4-4
Future (2031)
Total Traffic

PROJECT No. 148185

SCALE: N.T.S.

4.3 Development Design

4.3.1 Design for Sustainable Modes

Sidewalks have been provided throughout the site to ensure that employees and visitors walking, biking or taking transit to the proposed development can walk to/from the various buildings and experience minimal interactions with motorized traffic to protect these vulnerable road users. Crosswalks will be provided where pedestrian paths cross drive aisles. The existing asphalt sidewalk on Eagleson Road will be replaced with a new 1.9m wide concrete sidewalk. Two sidewalk connections will be provided to this new concrete sidewalk on Eagleson Road, as well as a link to the concrete sidewalk on Bridgestone Drive.

All buildings on the site will be within a 100-300m walk of the nearest bus stops on Bridgestone Drive and the nearest bus stop on Fernbank Road. The proposed development will therefore be easily accessible via transit.

Bicycle parking will be provided throughout the site as well to accommodate cyclists. The proposed parking supply meets and exceeds the minimum requirements of the Zoning By-law.

Additionally, a mix of restaurant and service land uses will be located on the site, allowing employees of these businesses to fulfill some daily needs (e.g., eating, shopping) within the site and minimizing midday errands.

The TDM-Supportive Development Design and Infrastructure Checklist was completed and is provided in **Appendix G**.

4.3.2 Circulation and Access

4.3.2.1 Site Access Design

Access to the proposed development will be provided via full-movement access driveways on Bridgestone Drive and Eagleson Road. The access on Eagleson Road will form the fourth leg of the Eagleson & Fernbank intersection.

A functional design in support of a Roadway Modification Application (RMA) has been prepared for the proposed modifications to the Eagleson & Fernbank intersection and has been provided in **Appendix H**. The design proposes modifying the intersection to introduce a westbound approach, and conversion of the painted median on the southbound approach and localized widening on the east side of Eagleson Road to provide a southbound left-turn lane into the site. As discussed in Section 4.12.2, a minimum of 20m of southbound left-turn storage is required at the site access. Protected intersection features including corner safety islands on the east side of the intersection, cross-rides on the north, south and east legs, and a crosswalk on the new east leg will be provided to allow pedestrians and cyclists to cross the new private approach safely and provide connectivity to existing cycling facilities on Eagleson Road and Fernbank Road. The eastbound bike lane on Fernbank Road will also be shifted to the right side of the right-turn lane.

Table 8.9.3 of the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads indicates that for a shopping centre less than 25,000 square metres in size a minimum clear throat length of 15m and 8m is recommended for driveways on arterial and collector roads, respectively. The private approaches on Eagleson Road and Bridgestone Drive provide approximately 66m and 21m of clear throat length and therefore exceed the minimum length recommended.

4.3.2.2 Internal Circulation

Designated fire routes are provided throughout the site, as required, and comply with the minimum requirements (i.e., clear width of 6.0 metres and centreline radius of 12.0 metres). Swept path analyses were undertaken to confirm the functionality of the site using a fire truck, front-loading waste collection vehicle, and a WB-40 tractor trailer. The results of this analysis are provided in **Appendix I**.

The draft site plan has been reviewed for conformance with the Private Approach By-law (2003-447), with particular confirmation of the following items:

- **Width:** A private approach shall have a minimum width of 2.4m and a maximum width of 9.0m.
  - Access #1 will have a width of 10.5m which exceeds the maximum width of 9.0m. The additional width is required in order to accommodate a left-turn lane on this approach.
  - Access #2 will be 7.0m wide. ✓
- **Quantity and Spacing of Private Approaches:** Based on the site's frontage on Eagleson Road and Bridgestone Drive, a maximum of one (1) two-way private approach and two (2) one-way private approaches, or two (2) two-way private approaches, per street is permitted.
  - A single two-way private approach is proposed on each street. ✓
- **Distance to Nearest Intersecting Street Line:** For a shopping centre adjacent to an arterial road with between 200 and 299 parking spaces, a minimum of 60m must be provided between a private approach and the nearest intersecting street line.
  - Access #1 is located approximately 168m from the street line of Bridgestone Drive. ✓
  - Access #2 is located approximately 65m from the street line of Eagleson Road. ✓
- **Distance from Other Private Approaches:** For a shopping centre adjacent to an arterial road with between 200 and 299 parking spaces, a minimum of 60m must be provided between a private approach and any other private approach.
  - There are no other private approaches near Access #1 on the east side of Eagleson Road. ✓
  - Access #2 is located approximately 76m from the nearest other private approach on the north side of Bridgestone Drive. ✓
- **Distance from Property Line:** Private approaches must be at least 3.0m from the abutting property line, however this requirement can be reduced to 0.3m provided that the access is a safe distance from the access serving the adjacent property, sight lines are adequate and that it does not create a traffic hazard.
  - Both private approaches are 3.0m or more from the property line. ✓

4.4 Parking

4.4.1 Parking Supply

Based on the size of the proposed shopping centre and the provisions for Area C of the Zoning By-law (2008-250), a minimum of 142 vehicle parking spaces and 16 bicycle parking spaces must be provided by the proposed development. The site proposes 210 vehicle parking spaces and 20 bicycle parking spaces. The proposed parking supply is therefore within the permissible range, as prescribed in the Zoning By-law.

The Zoning By-law and Accessibility Design Standards also specify the minimum dimensions for different parking spaces:

- Regular parking spaces: 2.6m by 5.2m (2.4m by 5.2m for reduced width parking)
- Type 'A' accessible parking spaces: 3.4m by 5.2m with adjacent 1.5m wide access aisle
- Type 'B' accessible parking spaces: 2.4m by 5.2m with adjacent 1.5m wide access aisle

All proposed parking spaces meet the above minimum dimensions.

The drive aisles within the site will range in width from 6.9m up to a maximum width of 12.1m. The Zoning By-law indicates that drive aisles adjacent to 90-degree parking spaces require a minimum adjacent drive aisle width of 6.7m, while a minimum of 6.0m is permitted for two-way drive aisles not adjacent to parking spaces. The proposed drive aisles therefore meet the Zoning By-law requirements.

The Zoning By-law states that for a shopping centre between 2,000 and 4,999 square metres in size, one loading space is required. Deliveries will be accommodated by a loading area located north of Building D. The drive aisle in this area is 9.4m wide and there is 21.1m of distance for parking which will provide sufficient space for a WB-40 truck to park while allowing two-way traffic to pass. The size of the loading area also meets the minimum dimensions required by the Zoning By-law.

4.5 Transportation Demand Management (TDM)

The City of Ottawa is committed to implementing Transportation Demand Management (TDM) measures on a City-wide basis in an effort to reduce automobile dependence, particularly during the weekday peak travel periods.

4.5.1 Context for TDM

As described in the Scoping section of this report, the mode share targets established for this proposed development were based on the mode share distribution of 'within district' trips within the Kanata/Stittsville TAZ. The proposed development is expected to be primarily local-serving and draw trips from the surrounding residential neighbourhoods.

4.5.2 Need and Opportunity

To promote the use of non-auto travel modes, direct pedestrian connections will be provided to the existing sidewalks on Eagleson Road and Bridgestone Drive. The proposed development is within walking distance of a large number of residential dwellings, as illustrated in **Figure 4-1**, which will help satisfy some of the daily needs of these residents and help lower their existing vehicle trip generation by replacing vehicle trips to further destinations with walking trips to the proposed development. The proposed development is also accessible via transit with stops located less than 300m from the site.

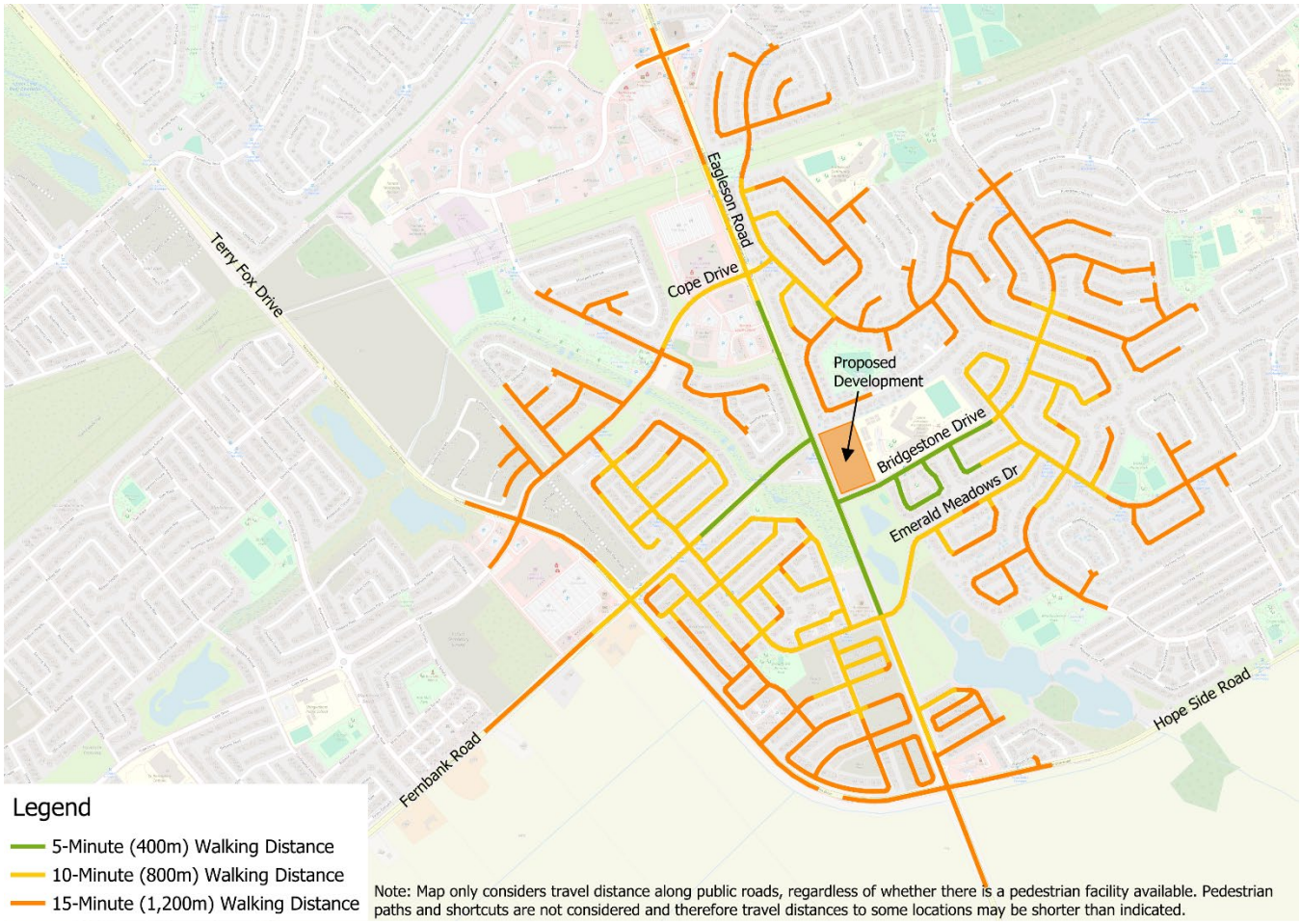


Figure 4-1 Areas Within Walking Distance

4.5.3 TDM Program

The proposed development conforms to the City's TDM principles by providing convenient and direct connections to adjacent pedestrian, cycling, and transit facilities where available.

There are no viable post-occupancy TDM measures that can be provided given that the retail units within the proposed development will be leased to a variety of small businesses. The focus for this site has instead been on ensuring that the design is supportive of non-auto travel, as described in Section 4.3.1. A blank copy of the TDM Measures Checklist has been provided in **Appendix G** for reference.

4.6 Collision Analysis

A summary of all reported collisions within the study period over the past five years was presented in Section 3.2.4. The City requires a safety review if at least six collisions of a discernible pattern have occurred over the study period. Based on these criteria, angle and turning movements collisions at the Eagleson & Cope/Cadence intersection and rear end collisions at the intersections of Eagleson & Fernbank and Eagleson & Bridgestone warrant further review.

Eagleson & Cope/Cadence

Of the seven angle collisions recorded, two resulted in minor or minimal injuries but occurred under ideal driving conditions (i.e., dry roads, clear weather, daylight conditions). It is therefore not possible to identify a contributing factor to those collisions. Of the five property-damage only (PDO) collisions, two occurred when it was dark and three occurred under wet or snowy roadway conditions. The angle collisions at this intersection involved vehicles travelling mostly northbound or southbound on Eagleson Road conflicting with vehicles travelling eastbound and westbound on Cope Drive.

Six turning movement collisions were recorded at this intersection. There is evidence that poor roadway conditions, adverse weather conditions and dark driving conditions, or a combination of these three factors, contributed to the majority of these collisions. The turning movement collisions at this intersection involved mostly northbound and southbound traffic making left turns.

Eagleson & Fernbank

Out of the eight rear end collisions recorded, three collisions resulted in a minor or minimal injury. Wet, slushy or snowy roadway conditions were the most common contributing factor to these collisions. These rear-end collisions involved vehicles travelling mostly northbound or southbound on Eagleson Road, often during slowing or stopping maneuvers.

Eagleson & Bridgestone

One of the six rear end collisions recorded at this location resulted in a minimal injury and occurred at dusk when the roadway was wet. Of the other five collisions, most occurred under ideal driving conditions and two occurred when the road was wet or snowy. The rear-end collisions at this intersection predominantly involve vehicles travelling eastbound or westbound on Bridgestone Drive, typically when moving vehicles hit a stopped vehicle.

4.7 Neighbourhood Traffic Management

Not Applicable: The Neighbourhood Traffic Management module is exempt from this TIA, as defined in the study scope. Relative to existing conditions, site-generated traffic is expected to increase traffic volumes on Bridgestone Drive (a collector road) by up to 12%. A minimum increase of 50% is required to trigger the need for further analysis, therefore, this module is exempt.

4.8 Transit

4.8.1 Transit Priority Measures

The addition of site-generated traffic to the existing study area intersections is anticipated to increase average intersection delays by 3s at the most. As such, no transit priority measures are deemed necessary as a consequence of this development.

4.9 Review of Network Concept

A screenline is an artificial boundary between areas of major traffic generation that captures all significant points of entry from one area to another to compare crossing demand with the available roadway capacity. Screenlines are

typically located along geographical barriers such as rivers, rail lines or within the Greenbelt. To capture existing flow and model future demand, count stations are established by the City of Ottawa at each crossing point along the screenline.

The nearest strategic planning screenlines adjacent to the development have been identified as follows:

- **SL10 – Eagleson:** This is one of the two nearby north-south screenlines. This screenline has nine crossing points: Carling Avenue, two bicycle paths, Corkstown Road, Highway 417, Timm Drive, Robertson Road, Stonehaven Drive, and Hope Side Road.
- **SL44 – Terry Fox:** This is the second of the two nearby north-south screenlines. This screenline has seven crossing points: Richardson Side Road, Highway 417, Palladium Drive, Maple Grove, Hazeldean Road, Fernbank Road, and Flewellyn Road
- **SL56 – Fallowfield West:** This is the nearest east-west screenline to the site. It has three crossing points: Eagleson Road, Shea Road, and Huntley Road.

SL10, SL44 and SL56 are shown in **Figure 4-2**, as determined from the City of Ottawa's Road Network Development Report (2013), a supporting document to the 2013 Transportation Master Plan (TMP).

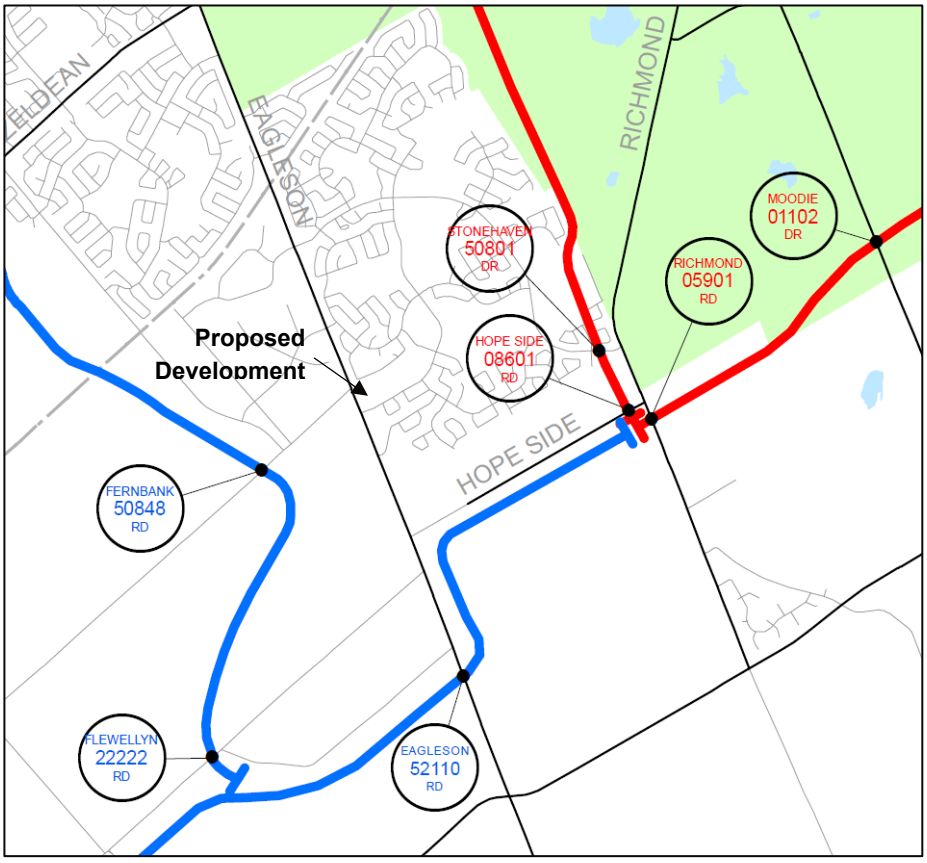


Figure 4-2 Screenlines

Table 4-1 summarizes the City 2031 Network Concept demand and capacity across these two screenlines.

Table 4-1 2031 Network Concept

Screenline	AM 2031 Preferred Inbound		
	Demand	Capacity	v/c Ratio
SL10 – Eagleson	12,339	13,400	0.92
SL44 – Terry Fox	7,902	18,200	0.43
SL56 – Fallowfield West	981	2,800	0.35

Source: Exhibit 4-8 of the Road Network Development Report: Final Report (December 2013)

The SL10 Eagleson screenline is expected to be approaching its maximum capacity by 2031, although given that the proposed development will be primarily local-serving it is not expected that the site will contribute a significant volume of traffic across this screenline.

4.10 Multi-Modal Level of Service

Segment- and intersection-based MMLOS analysis has been completed in accordance with the draft Multimodal Level of Service Guidelines Update (March 2024) to assess existing and future conditions, with the latter only evaluated for roadway segments or intersections that are expected to be modified within the timeframe of this study.

4.10.1 Segment-Based MMLOS

Segment-based MMLOS results for the portions of Eagleson Road and Bridgestone Drive adjacent to the proposed development are provided in **Table 4-2** below. The MMLOS analysis for Eagleson Road considers both its current two-lane configuration and a conceptual future 4-lane cross-section.

Table 4-2 Segment-based MMLOS Results

Segment	Travel Mode	Side	Overall LOS	Critical LOS	Target	Deviation
Existing Conditions						
Eagleson Road	Pedestrian	West	D	F	B	-2
		East	C	C		-1
	Bicycle	West	E	E	C	-2
		East	D	D		-1
	Transit	West	D	N/A	E	+1
		East	D			+1
	Public Realm	West	D	N/A	N/A	N/A
		East	D			N/A
Bridgestone Drive	Pedestrian	North	B	B	B	0
		South	C	C		-1
	Bicycle	North	D	D	C	-1
		South	D	D		-1
	Transit	North	C	N/A	E	+2
		South	C			+2
	Public Realm	North	C	N/A	N/A	N/A
		South	C			N/A
Ultimate Conditions with Conceptual 4-Lane Cross-Section[1]						
Eagleson Road	Pedestrian	West	B	B	B	0
		East	B	B		0
	Bicycle	West	A	A	C	+2
		East	A	A		+2
	Transit	West	C	N/A	E	+2
		East	C			+2
	Public Realm	West	C	N/A	N/A	N/A
		East	C			N/A

Eagleson Road is not currently meeting its pedestrian LOS target on the west side and is not achieving its bicycle LOS target on both sides. This is due to the lack of cycling facilities and the short offset between pedestrians and motorized traffic. It is assumed that the four-lane widening of Eagleson Road will include the addition of cycle tracks

[1] Based on cross-section #2 from the City of Ottawa arterial road cross-sections document: https://documents.ottawa.ca/sites/default/files/arterial_road_xsections_en.pdf

and wider boulevards. These measures would significantly improve conditions for pedestrians and cyclists and all MMLOS targets would be met.

Bridgestone Drive is not currently meeting its bicycle LOS target on both sides of the road due to the lack of separated cycling facilities. The south side of the road is also not meeting the pedestrian LOS target due to the slightly narrow width of the asphalt sidewalk on that side of the road.

4.10.2 Intersection-Based MMLOS

Intersection-based MMLOS results are summarized in **Table 4-3**. The Eagleson & Fernbank intersection was analyzed under three separate conditions: existing conditions, future interim conditions with two-lane Eagleson Road, and future ultimate conditions with four-lane Eagleson Road and a conceptual intersection configuration. The Eagleson & Romina/Emerald Meadows intersection was also analyzed under existing conditions and with the assumed four-lane Eagleson Road ultimate cross-section. The auto LOS for the MMLOS analysis is based on peak period volumes therefore the overall v/c ratios from the intersection capacity analysis in Section 4.11.3 has been multiplied by 0.84, in accordance with the MMLOS guidelines.

Table 4-3 Intersection-based MMLOS Results

Intersection	Travel Mode	Overall LOS	Critical LOS	Target	Deviation
Existing Conditions					
Eagleson & Cope/Cadence	Pedestrian	D	E	B	-2
	Bicycle	F	F	C	-3
	Transit	C	F	E	+2
	Auto	A	N/A	E	+4
Eagleson & Fernbank	Pedestrian	B	B	B	0
	Bicycle	D	D	C	-1
	Transit	B	C	E	+3
	Auto	B	N/A	E	+3
Eagleson & Romina/Emerald Meadows	Pedestrian	B	B	B	0
	Bicycle	B	B	C	+1
	Transit	B	C	E	+3
	Auto	A	N/A	E	+4
Interim Conditions[2]					
Eagleson & Fernbank	Pedestrian	B	C	B	0
	Bicycle	B	C	C	+1
	Transit	C	F	E	+2
	Auto	A	N/A	E	+4
Ultimate Conditions[3]					
Eagleson & Fernbank	Pedestrian	C	D	B	-1
	Bicycle	B	C	C	+1
	Transit	C	F	E	+2
	Auto	A	N/A	E	+4
Eagleson & Romina/Emerald Meadows	Pedestrian	B	C	B	0
	Bicycle	B	B	C	+1
	Transit	B	C	E	+3
	Auto	A	N/A	E	+4

Under existing conditions, PLOS targets are not met at the Eagleson & Cope/Cadence intersection. Also, the PLOS at the Eagleson & Fernbank intersection is expected to worsen in the future interim and ultimate conditions. Due to the distance that pedestrians must cross (with the road widening on Eagleson), it is not expected that the PLOS can be improved, however, by implementing leading pedestrian intervals (LPIs) and high visibility crosswalk markings, higher pedestrian safety and comfort could be achieved.

[2] Interim conditions assume Eagleson Road maintains its current two-lane cross-section and that the only modification is the addition of the site access at the Eagleson & Fernbank intersection.
[3] Ultimate conditions assumes that Eagleson Road is widened to four lanes and that these intersections will be rebuilt in accordance with the City's Protected Intersection Design Guidelines (2021).

BLOS targets are not met at the Eagleson & Cope/Cadence and Eagleson & Fernbank intersections under existing conditions. This is due to the lack of dedicated cycling facilities at these intersections. Achieving the BLOS target would require implementing a protected intersection design in conjunction with the Eagleson Road widening so that cyclists are not required to cross traffic lanes in order to turn left at these intersections.

The results of the analysis indicate that the intersections all achieve the transit and auto LOS targets.

The recommended measures listed above are intended only as suggestions to the City on how the MMLOS within the study area could be improved and do not identify measures to be implemented as a direct consequence of this development. The remediation measures described above would improve mobility and comfort for pedestrians and cyclists but are not required to accommodate the proposed development.

4.11 Intersection Operational Review

4.11.1 Intersection Control

The following section summarizes the results of traffic signal warrant analyses and roundabout analyses completed for the study area intersections.

4.11.1.1 Traffic Signal Warrants

All intersections within the study area are presently signalized with the exception of the Eagleson & Bridgestone intersection and the Bridgestone & Access #2. Traffic signal warrant analysis was completed for the two intersections under Future (2031) Total Traffic conditions and the results indicate that traffic signals are not warranted at either of these intersections.

The results of the traffic signal warrants are provided in **Appendix J.**

4.11.1.2 Roundabout Analysis

The City's Roundabout Implementation Policy indicates that intersections that satisfy any of the following criteria should be screened utilizing the Roundabout Initial Feasibility Screening Tool:

- At any new City intersection;
- Where traffic signals are warranted; and
- At intersections where capacity or safety problems are being experienced.

The Eagleson & Bridgestone intersection satisfies the third criteria as intersection capacity issues are being experienced under existing conditions. As such, the Roundabout Feasibility Screening Tool was utilized to assess a roundabout at this location. While technically feasible, the results of the screening tool indicate that a roundabout may be problematic due to significant differences in directional flows (i.e. north-south traffic is considerably higher than westbound traffic) and a lack of right of way space to implement a two-lane roundabout with a 60m inscribed circle diameter at this location. The results of the Roundabout Feasibility Screening Tool are provided in **Appendix J**.

4.11.2 Intersection Capacity Analysis Criteria

In qualitative terms, Level of Service (LOS) describes a user's perception of the operational conditions of a transportation facility. For vehicular LOS, these conditions are generally defined in terms of delay, speed and travel time, freedom to maneuver, traffic interruptions, safety, comfort and convenience. The two key metrics used to evaluate vehicular LOS are as follows:

- **Volume to Capacity (v/c) Ratio:** The ratio of traffic volume (either measured or forecast) to the capacity of the intersection or roadway.
- **Average Delay:** The average elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line, including the time required for a vehicle to travel from the last-in-queue position to the first-in-queue position.

LOS is given a letter designation from 'A' to 'F'. LOS 'A' represents the best operating conditions and LOS 'E' represents the level at which the intersection, or an approach to the intersection, is carrying the maximum traffic volume that can, practicably, be accommodated. LOS 'F' indicates that the facility is operating beyond its theoretical capacity.

For signalized intersections, the City of Ottawa has developed criteria for signalized intersections as part of the TIA Guidelines which directly relate the v/c ratio to a LOS designation. In contrast, the LOS for unsignalized intersections is based on average delay using the criteria outlined in the Highway Capacity Manual (HCM) 2010. These criteria are presented in **Table 4-4** below.

Table 4-4 Level of Service Thresholds

Level Of Service	Signalized	Unsignalized
	v/c Ratio	Delay (Seconds per Vehicle)
A	0 to 0.60	<10
B	0.61 to 0.70	>10 and <15
C	0.71 to 0.80	>15 and <25
D	0.81 to 0.90	>25 and <35
E	0.91 to 1.00	>35 and <50
F	> 1.00	>50

Based on the location of the proposed development, a Level of Service of 'E' or better is considered acceptable.

4.11.3 Intersection Capacity Analysis Results

The Level of Service calculation is based on locally-specific parameters as described in the TIA Guidelines and incorporates existing signal timing plans obtained from the City of Ottawa. The analysis of existing conditions utilized a Peak Hour Factor (PHF) of 0.90, while analysis of future conditions considers optimized signal timing plans and the use of a PHF of 1.0 to recognize peak 'spreading' beyond a 15-minute period in congested conditions.

Following the established intersection capacity analysis criteria described above, future traffic conditions were analyzed using the weekday peak hour traffic volumes derived in this study.

The subsequent sections present the results of the intersection capacity analysis. All tables summarize study area intersection LOS results during the weekday morning and weekday afternoon peak hour periods.

The intersection capacity analysis reports have been provided in **Appendix E**.

4.11.3.1 Future (2026) Background Traffic

An intersection capacity analysis has been undertaken using the Future (2026) Background Traffic volumes presented previously in **Exhibit 4-1**. The results of the intersection capacity analysis are summarized below.

Table 4-5 Intersection Capacity Analysis Results: Future (2026) Background Traffic

Intersection	Traffic Control	Peak Hour	Overall LOS (v/c or Delay)	Critical Movements (v/c or Delay)
Eagleson & Cope / Cadence	Signalized	AM	A (0.40)	EBL (0.90)
		PM	A (0.50)	EBL (0.90)
		SAT	A (0.29)	EBL (0.74)
Eagleson & Fernbank	Signalized	AM	B (0.62)	EBL (0.80)
		PM	C (0.73)	SBT (0.79)
		SAT	A (0.42)	EBL (0.58)
Eagleson & Bridgestone	Unsignalized	AM	**F (50.2s)**	**WBL (50.2s)**
		PM	**F (95.4s)**	**WBL (95.4s)**
		SAT	D (27.9s)	WBL (27.9s)
Eagleson & Romina / Emerald Meadows	Signalized	AM	A (0.38)	NBT (0.39)
		PM	A (0.44)	SBT (0.45)
		SAT	A (0.24)	SBT (0.24)

Based on the above results, the majority of study area intersections will function at an acceptable Level of Service (i.e., LOS 'D' or better) under Future (2026) Background Traffic conditions without any modifications to intersection geometry. The exception is the Eagleson & Bridgestone intersection which is projected to continue operating at LOS 'F' during the weekday morning and afternoon peak hours, as observed under existing conditions. High volumes of north-south traffic on Eagleson Road results in long delays for westbound left-turning traffic from Bridgestone Drive. As discussed in **Section 3.8.1**, these delays only impact a relatively small number of vehicles (i.e., 15-30 vehicles per hour during the peak hours).

Under Future (2026) Background Traffic conditions, the northbound left-turn queue at the Eagleson & Fernbank intersection is expected to extend up to 25m in length. This is shorter than the 48m projected under existing conditions and is due to the use of a PHF of 1.0 under future conditions instead of the PHF of 0.90 used for existing conditions. If a PHF of 0.90 was used for Future (2026) Background Traffic conditions, queue spillback could be mitigated through signal timing optimization. As such, there is no need to extend the left-turn lane at this location, however, actual PHFs should be used by the City when optimizing the signal timing plan in the future to ensure that the northbound-left queue is accurately projected and that any queue spillback is mitigated during the signal timing optimization.

4.11.3.2 Future (2031) Background Traffic

An intersection capacity analysis has been undertaken using the Future (2031) Background Traffic volumes presented previously in **Exhibit 4-2**. The results of the intersection capacity analysis are summarized below. For the purposes of this TIA, it is assumed that the four-lane widening of Eagleson Road will be in place by the 2031 study horizon year.

Table 4-6 Intersection Capacity Analysis Results: Future (2031) Background Traffic

Intersection	Traffic Control	Peak Hour	Overall LOS (v/c or Delay)	Critical Movements (v/c or Delay)
Eagleson & Cope / Cadence	Signalized	AM	A (0.41)	EBL (0.90)
		PM	A (0.52)	EBL (0.90)
		SAT	A (0.30)	EBL (0.74)
Eagleson & Fernbank	Signalized	AM	A (0.38)	EBL (0.81)
		PM	A (0.45)	EBL (0.74)
		SAT	A (0.26)	EBL (0.59)
Eagleson & Bridgestone	Unsignalized	AM	**F (55.8s)**	**WBL (55.8s)**
		PM	**F (72.3s)**	**WBL (72.3s)**
		SAT	D (25.1s)	WBL (25.1s)
Eagleson & Romina / Emerald Meadows	Signalized	AM	A (0.22)	EBTR (0.33)
		PM	A (0.25)	EBL (0.35)
		SAT	A (0.14)	EBTR (0.21)

Similar to the Future (2026) Background Traffic conditions, the study area intersections will function at an acceptable Level of Service (i.e., LOS 'D' or better) under Future (2031) Background Traffic conditions. The exception is the Eagleson & Bridgestone intersection which is projected to continue operating with an LOS 'F' during the weekday morning and afternoon peak hours.

The widening of Eagleson Road is anticipated to have a positive impact on traffic operations at the Eagleson & Fernbank intersection with the Level of Service improving from 'C' to 'A' during the weekday afternoon peak hour, with more modest improvements during the other peak hours.

As observed under Future (2026) Background Traffic conditions, no queue spillback issues are projected within the back-to-back left-turn lanes on Eagleson Road between Fernbank Road and Bridgestone Drive.

4.11.3.3 Future (2026) Total Traffic

An intersection capacity analysis has been undertaken using the Future (2026) Total Traffic volumes presented previously in **Exhibit 4-3**. The results of the intersection capacity analysis are summarized below.

Table 4-7 Intersection Capacity Analysis Results: Future (2026) Total Traffic

Intersection	Traffic Control	Peak Hour	Overall LOS (v/c or Delay)	Critical Movements (v/c or Delay)
Eagleson & Cope / Cadence	Signalized	AM	A (0.40)	EBL (0.90)
		PM	A (0.52)	EBL (0.90)
		SAT	A (0.30)	EBL (0.74)
Eagleson & Fernbank/Site Access 1	Signalized	AM	B (0.65)	EBL (0.90)
		PM	C (0.74)	EBL (0.84)
		SAT	A (0.43)	EBL (0.65)
Eagleson & Bridgestone	Unsignalized	AM	**F (51.3s)**	**WBL (51.3s)**
		PM	**F (99.0s)**	**WBL (99.0s)**
		SAT	D (27.6s)	WBL (27.6s)
Eagleson & Romina / Emerald Meadows	Signalized	AM	A (0.38)	NBT (0.39)
		PM	A (0.44)	SBT (0.45)
		SAT	A (0.25)	EBL (0.29)
Bridgestone & Site Access 2	Unsignalized	AM	B (12.8s)	SBRL (12.8s)
		PM	B (14.1s)	SBRL (14.1s)
		SAT	B (11.6s)	SBRL (11.6s)

As shown in **Table 4-7**, with the addition of site-generated traffic, the study area intersections are projected to operate with an overall LOS ‘C’ or better during the weekday morning, weekday afternoon and Saturday midday peak hours. The exception is the Eagleson & Bridgestone intersection which is projected to continue operating at LOS ‘F’ during both weekday morning and afternoon peak hours and at LOS ‘D’ during the Saturday midday peak hour. This is an existing condition which is not projected to be significantly impacted by site-generated traffic demand.

Due to the diversion of some traffic from the adjacent streets to the site, the northbound left-turn queue at the Eagleson & Fernbank intersection is expected to experience slightly shorter queues than projected under Future (2026) Background Traffic conditions. As noted previously, no queue spillback issues are projected within the back-to-back left-turn lanes on Eagleson Road between Fernbank Road and Bridgestone Drive, however, it is recommended that the City use actual PHFs when optimizing the Eagleson & Fernbank signal timing plan in the future to ensure that the northbound-left queue is accurately projected and that any queue spillback is mitigated during the signal timing optimization.

4.11.3.4 Future (2031) Total Traffic

An intersection capacity analysis has been undertaken using the Future (2031) Total Traffic volumes presented previously in **Exhibit 4-4**. The results of the intersection capacity analysis are summarized below.

Table 4-8 Intersection Capacity Analysis Results: Future (2031) Total Traffic

Intersection	Traffic Control	Peak Hour	Overall LOS (v/c or Delay)	Critical Movements (v/c or Delay)
Eagleson & Cope / Cadence	Signalized	AM	A (0.42)	EBL (0.90)
		PM	A (0.53)	EBL (0.90)
		SAT	A (0.32)	EBL (0.74)
Eagleson & Fernbank/Site Access 1	Signalized	AM	A (0.41)	EBL (0.79)
		PM	A (0.46)	EBL (0.86)
		SAT	A (0.26)	EBL (0.66)
Eagleson & Bridgestone	Unsignalized	AM	**F (56.4s)**	**WBL (56.4s)**
		PM	**F (73.2s)**	**WBL (73.2s)**
		SAT	C (24.8s)	WBL (24.8s)
Eagleson & Romina / Emerald Meadows	Signalized	AM	A (0.23)	EBTR (0.33)
		PM	A (0.26)	EBL (0.37)
		SAT	A (0.15)	EBL (0.22)
Bridgestone & Site Access 2	Unsignalized	AM	B (12.8s)	SBRL (12.8s)
		PM	B (14.0s)	SBRL (14.0s)
		SAT	B (11.6s)	SBRL (11.6s)

As shown in **Table 4-8** above, with the widening of Eagleson Road, the study area intersections are projected to operate with an overall LOS ‘C’ or better during the weekday morning, weekday afternoon and Saturday midday peak hours. The exception is the Eagleson & Bridgestone intersection which is projected to continue operating at LOS ‘F’ during both the weekday morning and afternoon peak hour.

None of the intersection capacity issues noted above are a result of site-generated traffic. These capacity issues are due to background traffic demand. The results of the intersection capacity analysis suggest that the addition of site-generated traffic to the study area intersection will only have a minor impact on traffic operations.

As noted previously, no queue spillback issues are projected within the back-to-back left-turn lanes on Eagleson Road between Fernbank Road and Bridgestone Drive.

4.12 Geometric Review

The following section reviews all geometric requirements for the study area intersections.

4.12.1 Sight Distance and Corner Clearance

Access #1 is proposed along a straight segment of Eagleson Road and will form the fourth leg of the Eagleson & Fernbank intersection. There is the potential that right turns on red will be permitted on this approach and therefore intersection sight distance requirements have been evaluated for this new approach. The proposed Access #2 is located along a straight segment of Bridgestone Drive via a new stop-controlled all-movement driveway and therefore left-turn intersection sight distance requirements must be evaluated at this location.

Assuming a design speed of 70 km/h (i.e., posted speed limit plus 10 km/h), the TAC Geometric Design Guide for Canadian Roads indicate that a minimum intersection sight distance (ISD) of 205m is required at Access #1 in order for delivery vehicles (i.e., typical single-unit or combination trucks used for deliveries) to safely turn right from a stop. For Access #2, a minimum ISD of 160m is required in order for vehicles to safely turn left, assuming a design speed of 50 km/h (i.e., posted speed limit plus 10 km/h).

A desktop review of the sightlines at both site accesses indicates that there are clear sightlines in both directions and sufficient sight distance exists to meet the minimum intersection sight distance requirements. The proposed hydro transformer adjacent to Access #2 is located approximately 7.8m from the edge of the road. TAC indicates that sightlines should be measured from 4.4m-5.4m from the edge of the road, therefore, the proposed hydro transformer will not block sightlines for drivers exiting the site.

The TAC Geometric Design Guide for Canadian Roads indicates that a minimum corner clearance of 55m should be provided for accesses on collector roads that are upstream or downstream of a signalized intersection. Under future ultimate conditions, the Eagleson & Bridgestone intersection may be upgraded from a stop-controlled intersection to a signalized intersection. Given that Access #2 on Bridgestone Drive will have a corner clearance of approximately 70m from the Eagleson & Bridgestone intersection, the corner clearance exceeds the minimum requirements.

4.12.2 Auxiliary Lane Analysis

Auxiliary turning lane requirements for all intersections within the study area are described below.

4.12.2.1 Unsignalized Auxiliary Left-Turn Requirements

An auxiliary left-turn lane warrant analysis was completed for the Bridgestone & Access #2 intersection and the results are provided in **Appendix K**. Based on the results of the analysis, a left-turn lane is not warranted at Access #2.

4.12.2.2 Signalized Auxiliary Left-Turn Requirements

A review of auxiliary left-turn lane storage requirements was completed at all existing/future signalized intersections within the study area under Future (2031) Total Traffic conditions. The review compared the projected 95th percentile queue lengths from Synchro operational results, and the standard queue length calculation based on the following equation:

$$Storage\ Length = \frac{N \times L}{C} \times 1.5$$

Where:
N = number of vehicles per hour
L = Length occupied by a vehicle in the queue = 7 m
C = number of traffic signal cycles per hour

The results of the auxiliary left-turn lane analysis are summarized below in **Table 4-9**.

Table 4-9 Auxiliary Left-Turn Storage Analysis at Signalized Intersections (2031)

Intersection	Approach	95th Percentile Queue Length (m)	Maximum Calculated Queue (m)	Existing/Future Parallel Lane Length (m)	Storage Deficiency (m)
Eagleson & Cope /Cadence	EB	70	70	60	10
	WB	15	15	25	-
	NB	25	40	75	-
	SB	40	75	60	15
Eagleson & Fernbank/ Access #1	EB	80	90	190	-
	WB	10	10	60[1]	-
	NB	30	75	50	25
	SB	15	20	20[2]	-
Eagleson & Romina/ Emerald Meadows	EB	15	15	15	-
	WB	15	5	15	-
	NB	10	15	140	-
	SB	10	20	70	-

[1] *Future parallel lane length was estimated based on the proposed site plan.*
[2] *Storage length required based on projected queue lengths.*

The results indicate that the eastbound left-turn queues at the Eagleson & Cope/Cadence intersection may exceed the available storage by approximately 10m. This is an existing issue, and the addition of site-generated traffic will not exacerbate it. The City may want to consider extending the pavement markings to provide a longer left-turn lane. Cope Drive is nearly 15m wide at this location and therefore there is sufficient space for extending the lane.

The theoretical queue length formula suggests that the southbound left-turn queue at the Eagleson & Cope/Cadence intersection will exceed the available storage capacity and spillback into the adjacent through lane. The Synchro analysis results, however, indicate that queue spillback is unlikely to occur based on the 95th percentile queue results. Given the number of collisions recorded at this intersection and the results of the theoretical queue length formula, it is recommended that the City consider extending the lane by at least 15m if the intersection is reconstructed in the future for any reason. It should be noted that the proposed development will not contribute any traffic to this turning movement and therefore this deficiency is a background traffic issue.

A southbound left-turn lane with a minimum of 20m of storage will be required at the Eagleson & Fernbank intersection and has been considered in the functional design prepared in support of the RMA. This auxiliary lane requirement should also be carried forward in the future design of the four-lane widening of Eagleson Road (by others).

Also, at the Eagleson/Fernbank intersection the calculated queue length based on projected traffic volumes indicates that storage of up to 75m may be required for the northbound left-turn lane, while the 95th percentile queue is indicated as being within the existing 50m storage that is available. The City should review the auxiliary lane requirements and consider a northbound left-turn lane of up to 75m storage, if feasible, though it is important to consider the back-to-back requirements of the left-turn lane onto Bridgestone Drive which experiences greater traffic demand.

4.12.2.3 Unsignalized Right-Turn Lane Requirements

Section 9.14 of TAC also provides guidance on the use of auxiliary right-turn lanes at unsignalized intersections and suggests that auxiliary right-turn lanes should be considered "when the volume of decelerating or accelerating vehicles compared with the through traffic volume causes undue hazard". As this condition is not expected at Access #2, no auxiliary right-turn lane is recommended.

The only other unsignalized intersection in this study area is the Eagleson & Bridgestone intersection which already has a dedicated right-turn lane in place on the northbound approach. Therefore, further evaluation of auxiliary right-turn lane warrants at an unsignalized intersection is not required.

4.12.2.4 Signalized Auxiliary Right-Turn Lane Requirements

For signalized intersections, Section 9.14 of TAC suggests that auxiliary right-turn lanes shall be considered when more than 10% of vehicles on an approach are turning right and when the peak hour demand exceeds 60 vehicles. The purpose of this guideline is to mitigate operational impacts to through-traffic, particularly on high-speed arterial roadways, and may not be applicable in all circumstances. The highest of the weekday morning, weekday afternoon and Saturday midday peak hour volumes under Future (2031) Total Traffic conditions were considered in this evaluation. Auxiliary right-turn lane warrants were not evaluated for movements with existing right-turn lanes.

The results of the auxiliary right-turn lane analysis are summarized below in **Table 4-10** below.

Table 4-10 Auxiliary Right-Turn Lane Storage Analysis at Signalized Intersections (2031)

Intersection	Approach	Maximum Right Turn Volume	Maximum Percentage of Vehicles Turning Right (%)	Right-Turn Lane Recommended?
Eagleson & Cope/ Cadence	EB	69	18%	No[1]
	WB	141	49%	No[1]
	NB	41	4%	No
Eagleson & Fernbank/ Access #1	EB	167	36%	No[2]
	WB	69	56%	No[3]
	NB	6	1%	No
Eagleson & Romina/ Emerald Meadows	EB	61	48%	No[3]
	WB	47	60%	No

[1] These are low-speed collector approaches. As the right-turn warrants are primarily applicable to high-speed arterials, right-turn lanes are not recommended at these locations. Furthermore, the right-turn channels provide some measure of separation between through and right-turning traffic.
[2] The shared through-right operates primarily as a right-turn lane as through traffic is only expected to range from 15 to 30 vehicles per hour. Given the low volume of through traffic, provision of a right-turn lane is not expected to provide significant safety benefits.
[3] These are low-speed local/collector approaches. As the right-turn warrants are primarily applicable to high-speed arterials, right-turn lanes are not recommended at these locations.

Although the eastbound and westbound approaches of the study area intersections above technically meet the criteria for a right-turn lane, the right-turn criteria are typically more applicable along high-speed arterial roads and is not considered appropriate in this context. Based on the results of **Table 4-10** above and confirmed through intersection capacity analyses, no modifications are recommended to accommodate right-turning traffic at the minor approaches of the Eagleson & Cope/Cadence, Eagleson & Fernbank/Access #1 and the Eagleson & Romina/Emerald Meadows intersections.

4.13 Summary of Recommended Modifications

Based on the results of the intersection capacity analysis, auxiliary lane analysis and MMLOS analysis, it is recommended that the City consider implementing the following measures when widening Eagleson Road in the future:

- Cycle tracks and wider boulevards along the roadway.
- Reconstruct intersections in accordance with protected intersection standards and consider providing high visibility crosswalk markings and leading pedestrian intervals (LPIs).
- Review feasibility of increasing the northbound left-turn storage at the Eagleson/Fernbank intersection based on future background traffic volume projections.

Additionally, the City should consider providing an additional 15m of southbound left-turn lane storage at the Eagleson & Cope/Cadence intersection to address future background storage deficiencies if the intersection were to require modifications in the future.

It is also recommended that the City consider extending the pavement markings for the eastbound left-turn lane at the Eagleson & Cope/Cadence intersection by at least 10m to address an existing storage deficiency.

As discussed in Section 4.3.2, an RMA has been provided in **Appendix H** which illustrates the proposed modifications to the Eagleson & Fernbank intersection to accommodate access to the proposed development. This includes the addition of a southbound left-turn lane with a minimum of 20m of storage. This should be considered in the future widening of Eagleson Road, by others.

5 Conclusion

The proposed development is expected to generate approximately 100 to 200 new two-way auto trips during the weekday morning, weekday afternoon and Saturday peak hours. These traffic volumes were distributed based on the concentrations of existing residential land uses within the surrounding community. Mode share targets were developed based on the local mode share distributions for the Kanata/Stittsville Traffic Assessment Zone (TAZ) and adjusted to account for the planned improvements to transportation infrastructure in the vicinity of the proposed development.

For the purposes of this study, it was assumed that the planned widening of Eagleson Road to four lanes will not be in place by the buildout year of 2026 but will be in place by the 2031 horizon year. As indicated by the analysis conducted for this study, it is not anticipated that site-generated traffic will trigger any intersection capacity issues within the study area. The results of the intersection capacity analysis indicate that the majority of study area intersections are projected to operate at LOS 'C' or better at the horizon year of the study. The exception is the Eagleson & Bridgestone intersection which is currently operating with at LOS 'F' due to the long delays for westbound left-turning traffic. It should be noted that these delays only impact a relatively small number of vehicles during the peak hours and are not as a result of site-generated traffic. It is understood that the City is currently undertaking a study to assess the potential signalization of the intersection or conversion to a roundabout.

Traffic signal warrant analyses were completed for the Eagleson & Bridgestone and Bridgestone & Access #2 intersections under Future (2031) Total Traffic conditions and the results indicated that traffic signals are not warranted at either of these intersections. Roundabout screening also suggests that a roundabout is not recommended at the Eagleson & Bridgestone intersection.

Based on the results of the auxiliary lane review, the following recommendations have been made:

- It is recommended that the City consider extending the eastbound left-turn lane at the Eagleson & Cope/Cadence intersection by at least 10m by adjustments to pavement markings.
- It is recommended that the City consider extending the southbound left-turn lane at the Eagleson & Cope/Cadence intersection by at least 15m if the intersection were to ever be reconstructed for any reason. This is recommended to address minor storage deficiencies as a result of background traffic demand.

A Multi-Modal Level of Service (MMLOS) analysis was conducted for the roadway segments and signalized intersections within the study area. Based on the results of the analysis, it is recommended that the City consider implementing the following measures:

- With the four-lane widening of Eagleson Road, include the addition of cycle tracks and wider boulevards along the roadway.
- When reconstructing study area intersections on Eagleson Road, ensure that the intersection designs adhere to protected intersection standards and consider implementing leading pedestrian intervals and high-visibility crosswalk markings.

It should be noted that the above recommendations would improve mobility and comfort for all travel modes but are not required to accommodate the proposed development. Level of Service for cyclists and pedestrians is largely dictated by the size of an intersection and therefore mitigation measures are often limited in these circumstances. The proposed measures are recommended in order to address existing deficiencies and not as a direct consequence of the proposed development.

A functional design in support of a Roadway Modification Application (RMA) has been prepared to illustrate the proposed modifications to the Eagleson & Fernbank intersection to accommodate access to the site, including the addition of a southbound left-turn lane with a minimum of 20m of storage. This auxiliary lane requirement should also be considered in the future widening of Eagleson Road, by others.

Based on the findings of this study, it is the overall opinion of Arcadis that the proposed development will integrate well with and can be safely accommodated by the adjacent transportation network with consideration of the recommendations outlined above.

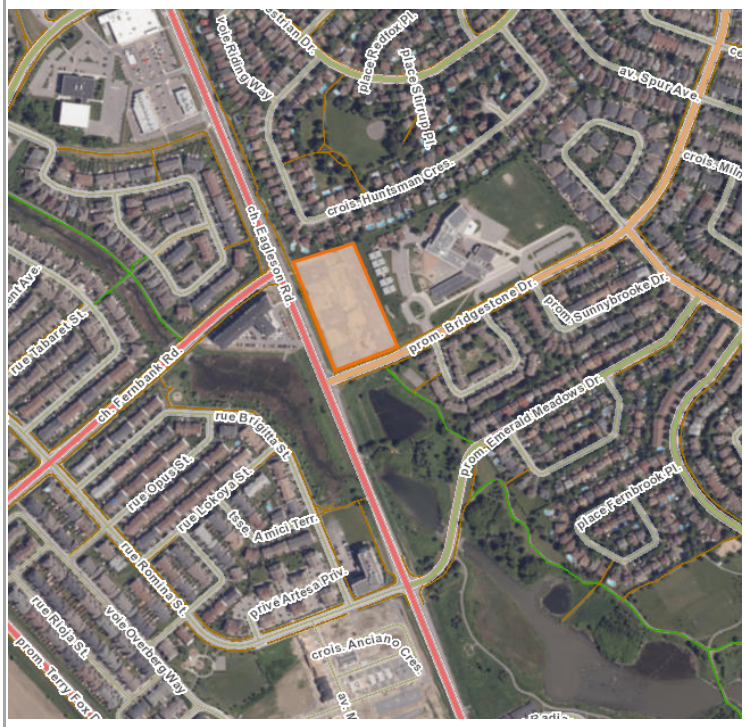
Appendix A

TIA Screening Form

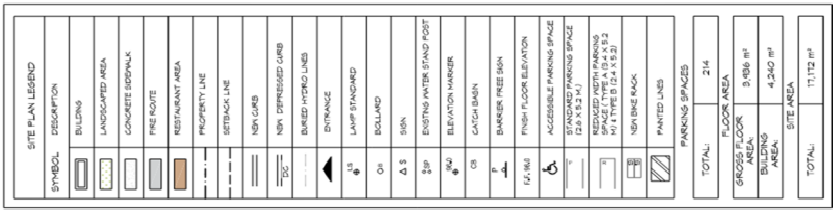
City of Ottawa 2017 TIA Guidelines Screening Form

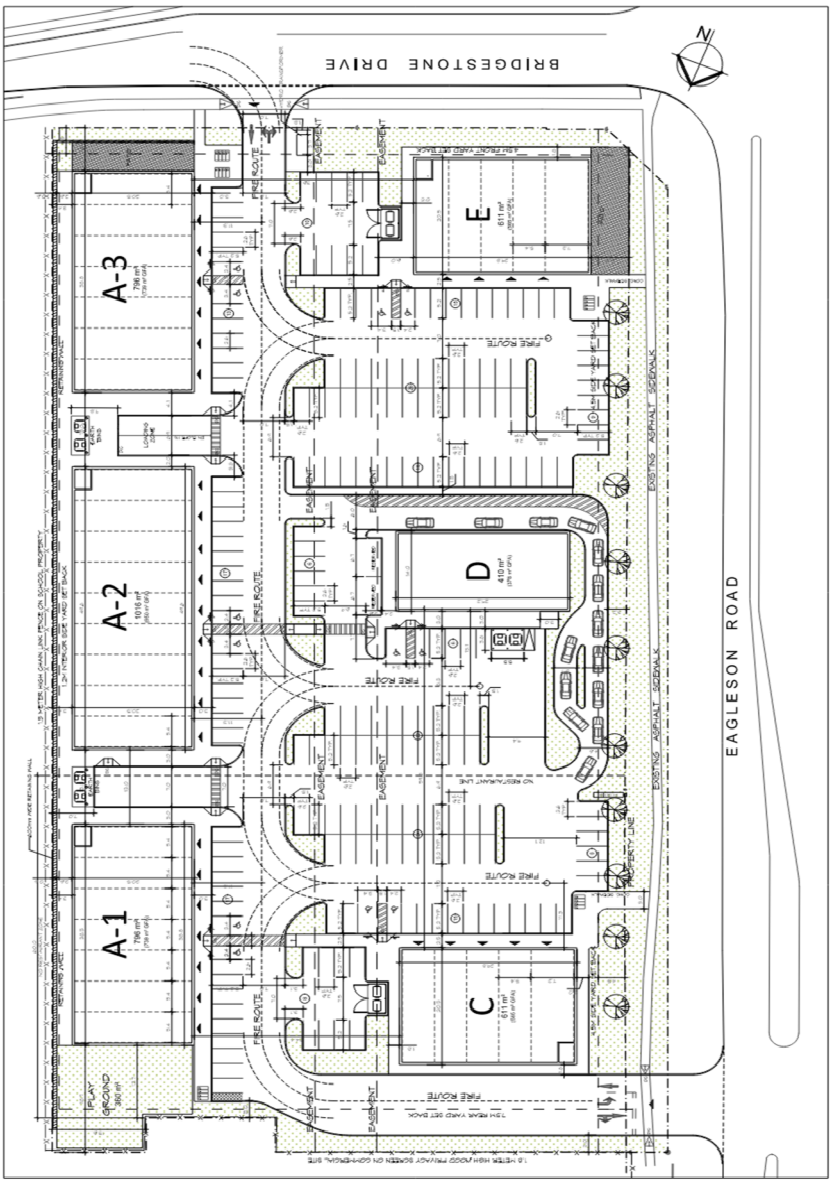
*Revised per City of Ottawa update to the TIA Guidelines, effective June 14, 2023

1. Description of Proposed Development

Municipal Address	801 Eagleson Road, Ottawa Ontario
Description of Location	The proposed development is located on an undeveloped site that is currently being used as additional parking. The site is bound by Bridgestone Drive to the south, Eagleson Rad to the west, residential development to the north and Maurice-Lapointe Elementary School to the east. 
Land Use Classification	Commercial
Development Size (units)	
Development Size (m^2)	~3,936
Number of Accesses and Locations	One Two-way Access on Eagleson Road approximately 175m north of Bridgestone Drive and one two-way access on Bridgestone Drive approximately 72m east of Eagleson Road.
Phase of Development	1 Single Phase
Buildout Year	2026

If available, please attach a sketch of the development or site plan to this form.





2. Trip Gen Trigger

Considering the Development's Land Use Type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

Land Use Type*	Minimum Development Size (60 person trips)	
Single-Detached[1]	60 units	
Multi-Use Family (Low-Rise)[1]	90 units	
Multi-Use Family (High-Rise)[1]	150 Units	
Office[2]	1,400 m^2	
Industrial[2]	7,000 m^2	
Fast-food restaurant or coffee shop[2]	110 m^2	✓
Destination Retail[2]	1,800 m^2	✓
Gas Station or convenience market[2]	90 m^2	

**If the development has a land use type other than what is presented in the table above, estimates of person trip generation may be made based on average trip generation characteristics represented in the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.*

[1] *Table 2, Table 3 & Table 4 TRANS Trip Generation Summary Report*

[2] *ITE Trip Generation Manual 11.1 Ed.*

Based on the above, the Trip Generation Trigger is satisfied.

3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Cross-Town Bikeways?		✓
Is the development in a Design Priority Area (DPA), Transit-oriented Development (TOD) zone or Hub?*		✓

**DPA and TOD are identified in the City of Ottawa Official Plan (DPA in Section 2.5.1 and Schedules A and B; TOD in Annex 6) See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA.*
Hubs are identified as Protected Major Transit Station Areas (PTMSAs) and identified in Schedule C1-Protected Major Transit Station Areas (PMTSAs).

Based on the above, the Location Trigger is not satisfied.

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street 80km/hr or greater?		✓
Are there any horizontal/vertical curvatures on a boundary street that limit sight lines at a proposed driveway?		✓
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/suburban conditions?)	✓	
Is the proposed driveway within auxiliary lanes of an intersection?		✓
Does the proposed driveway make use of an existing median break that serves an existing site?		✓
Is there a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		✓
Does the development include a drive-thru facility?	✓	

Based on the above, the Safety Trigger is satisfied.

5. Summary

	Yes	No
Does the development satisfy the Trip Generation Trigger?	✓	
Does the development satisfy the Location Trigger?		✓
Does the development satisfy the Safety Trigger?	✓	

Based on the results of the TIA Screening Form, the Trip Generation and Safety Triggers are satisfied. As such, a TIA is required for the proposed development.

Appendix B

Traffic Count Data

Transportation Services - Traffic Services

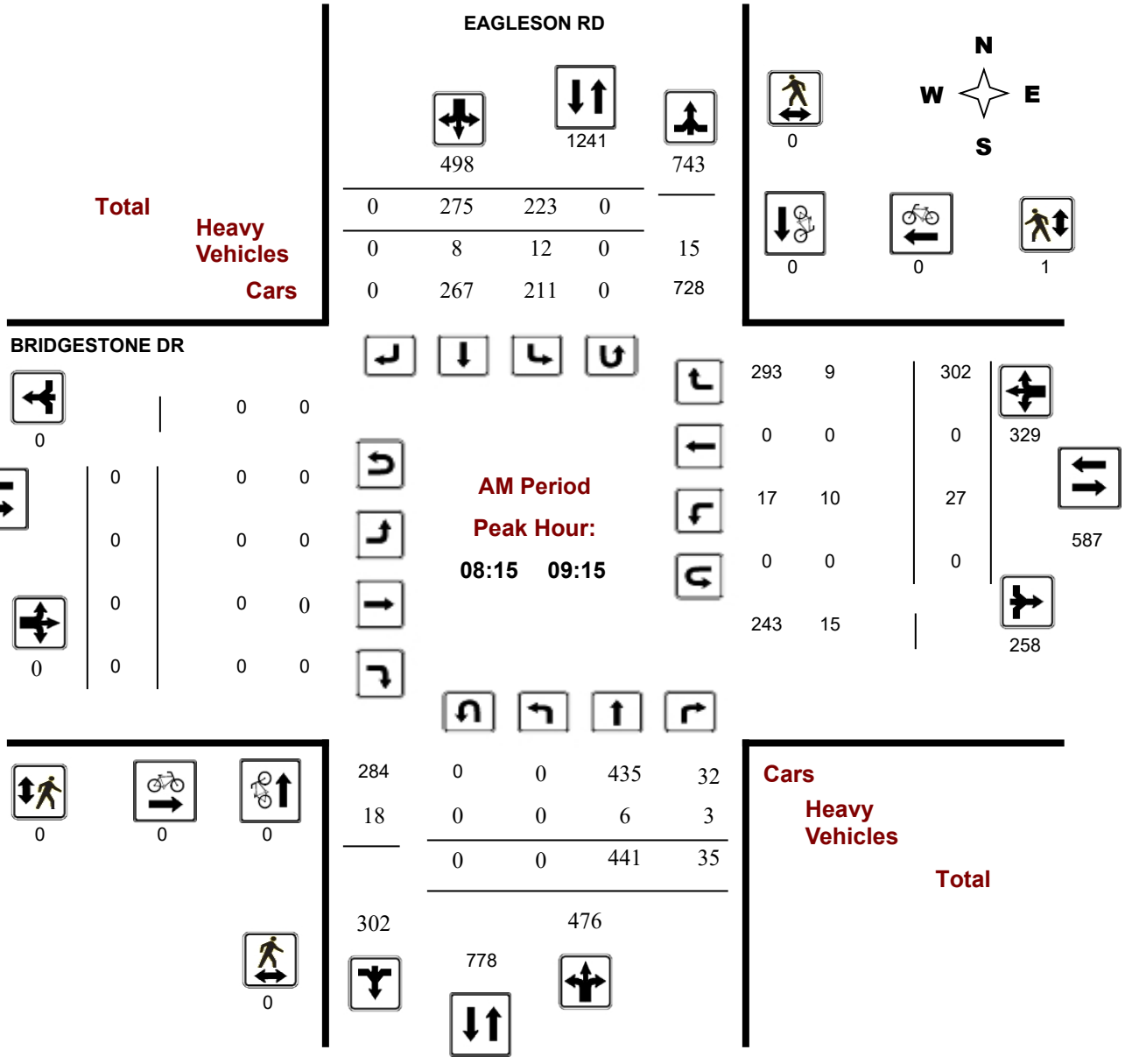
Turning Movement Count - Study Results

BRIDGESTONE DR @ EAGLESON RD

Survey Date: Tuesday, March 07, 2023 **WO No:** 40861

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

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

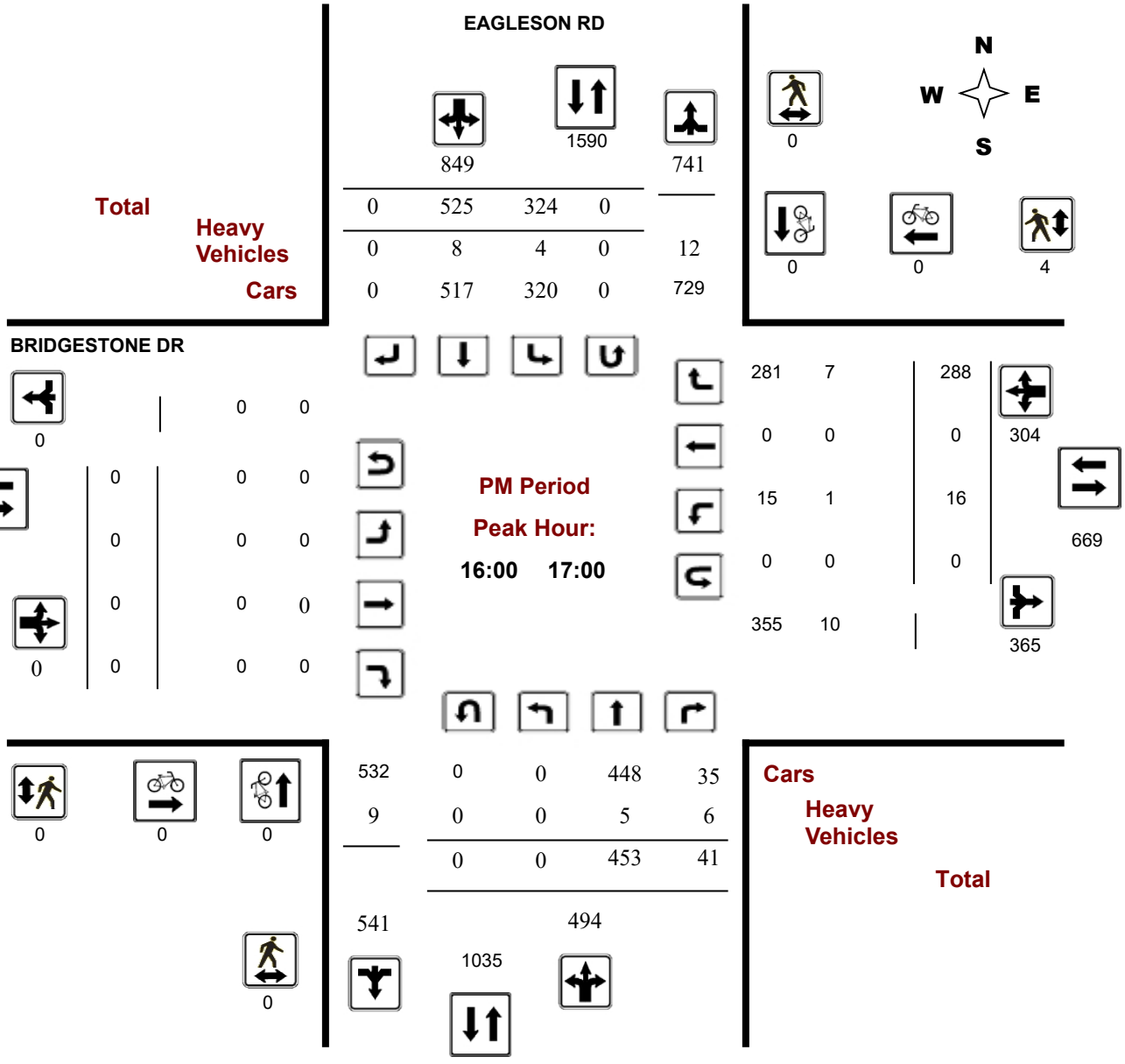
Turning Movement Count - Study Results

BRIDGESTONE DR @ EAGLESON RD

Survey Date: Tuesday, March 07, 2023 **WO No:** 40861

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BRIDGESTONE DR @ EAGLESON RD

Survey Date: Tuesday, March 07, 2023 **WO No:** 40861

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

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, March 07, 2023

Total Observed U-Turns

Northbound: 0 Southbound: 1

Eastbound: 0 Westbound: 0

AADT Factor

1.00

	EAGLESON RD									BRIDGESTONE 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	0	385	29	**414**	102	241	0	**343**	**757**	0	0	0	**0**	27	0	213	**240**	**240**	**997**
08:00 09:00	0	449	35	**484**	203	282	0	**485**	**969**	0	0	0	**0**	23	0	265	**288**	**288**	**1257**
09:00 10:00	0	313	14	**327**	180	233	0	**413**	**740**	0	0	0	**0**	19	0	252	**271**	**271**	**1011**
11:30 12:30	0	300	15	**315**	140	253	0	**393**	**708**	0	0	0	**0**	7	0	155	**162**	**162**	**870**
12:30 13:30	0	273	9	**282**	159	301	0	**460**	**742**	0	0	0	**0**	8	0	149	**157**	**157**	**899**
15:00 16:00	0	367	52	**419**	241	422	0	**663**	**1082**	0	0	0	**0**	18	0	231	**249**	**249**	**1331**
16:00 17:00	0	453	41	**494**	324	525	0	**849**	**1343**	0	0	0	**0**	16	0	288	**304**	**304**	**1647**
17:00 18:00	0	355	26	**381**	329	498	0	**827**	**1208**	0	0	0	**0**	12	0	236	**248**	**248**	**1456**
Sub Total	0	2895	221	**3116**	1678	2755	0	**4433**	**7549**	0	0	0	**0**	130	0	1789	**1919**	**1919**	**9468**
U Turns				**0**				**1**	**1**				**0**				**0**	**0**	**1**
Total	0	2895	221	**3116**	1678	2755	0	**4434**	**7550**	0	0	0	**0**	130	0	1789	**1919**	**1919**	**9469**
EQ 12Hr	0	4024	307	**4331**	2332	3829	0	**6163**	**10494**	0	0	0	**0**	181	0	2487	**2667**	**2667**	**13162**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	0	4024	307	**4331**	2332	5017	0	**6163**	**10494**	0	0	0	**0**	181	0	2487	**2667**	**2667**	**13162**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.00**					
AVG 24Hr	0	5271	402	**5674**	3055	6572	0	**8074**	**13747**	0	0	0	**0**	237	0	3258	**3494**	**3494**	**17242**
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.

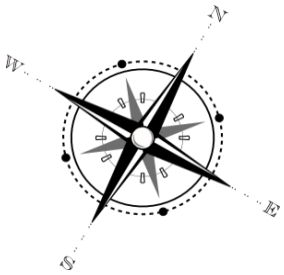
Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

Bridgestone Drive & Eagleson Road — Kanata, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Saturday, July 27, 2024
1100-1600
5 Hour Survey
City of Ottawa Ward ▶ 23

Total vehicle volume, all approaches. (A + C + D)



Eagleson Rd.

(A) 2825 — 5336 — 2511

2825: 1834 | 991 | 0

5488

1907 — 3590 — 1683 (C)

0 | 1604 | 79 → 1683

Bridgestone Dr.

907 | 73 | 0 → 980 (D)

980 — 2050 — 1070

All Pedestrian Crossings

0 — 19 — 0

Total: 19

AM Peak Hour Flow Diagram

Eagleson Rd.

(A) 0 — 0 — 0 — 0

0 | 0 | 0 | 0

Total vehicle volume, all approaches. (A + C + D)

0 (A+C+D)

0 | 0 | 0 | 0 → 0 (D)

0 | 0 | 0 | 0

0 | 0 | 0 | 0 → 0

(C) 0 — 0

Pedestrian Crossings During **AM** Peak Hr.
N/A | N/A | N/A

Bridgestone Dr.

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

PM Peak Hour Flow Diagram

Eagleson Rd.

(A) 536 — 1037 — 501

536 | 343 | 193 | 0

Total vehicle volume, all approaches. (A + C + D)

1065 (A+C+D)

156 | 14 | 0 → 170 (D)

156 | 14 | 0 | 170 | 377

207

0 | 345 | 14 → 359

357 — 716 — 359 (C)

Pedestrian Crossings During **PM** Peak Hr.
N/A | 0 | 5 | 0

Bridgestone Dr.

Summary - PM Peak Hr.	
Peak Hr.	1500-1600
Volume	1065
PHF	0.94

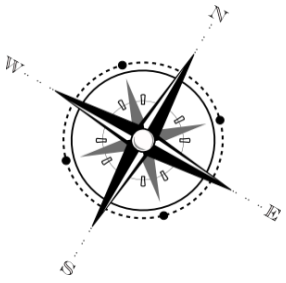
Turning Movement Count
Summary, OFF and EVENING Peak Hour Flow Diagrams
All Vehicles Except Bicycles

Bridgestone Drive & Eagleson Road — Kanata, ON

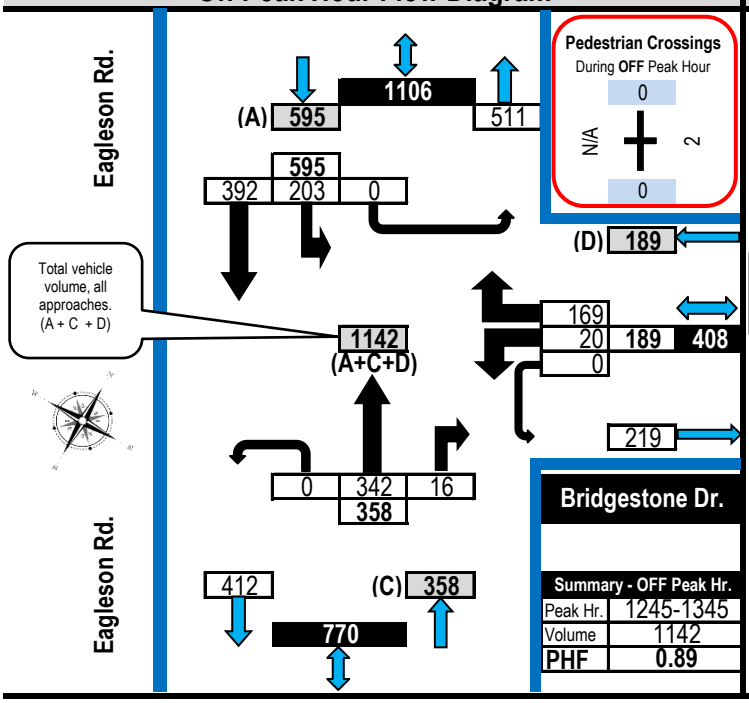
All Vehicles
(Except Bicycles & Electric Scooters)

Saturday, July 27, 2024
1100-1600
5 Hour Survey
City of Ottawa Ward ▶ 23

Total vehicle volume, all approaches. (A + C + D)

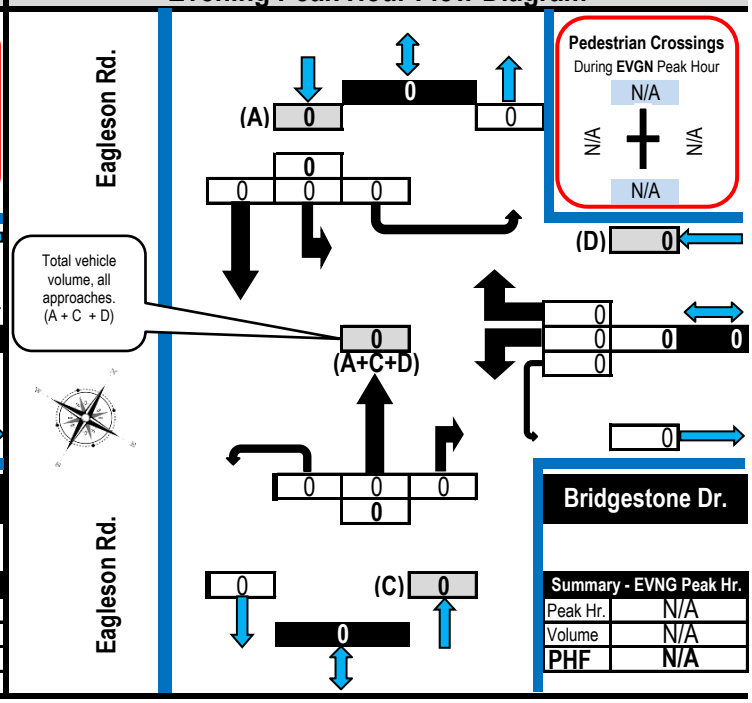


Off Peak Hour Flow Diagram



Summary - OFF Peak Hr.	
Peak Hr.	1245-1345
Volume	1142
PHF	0.89

Evening Peak Hour Flow Diagram

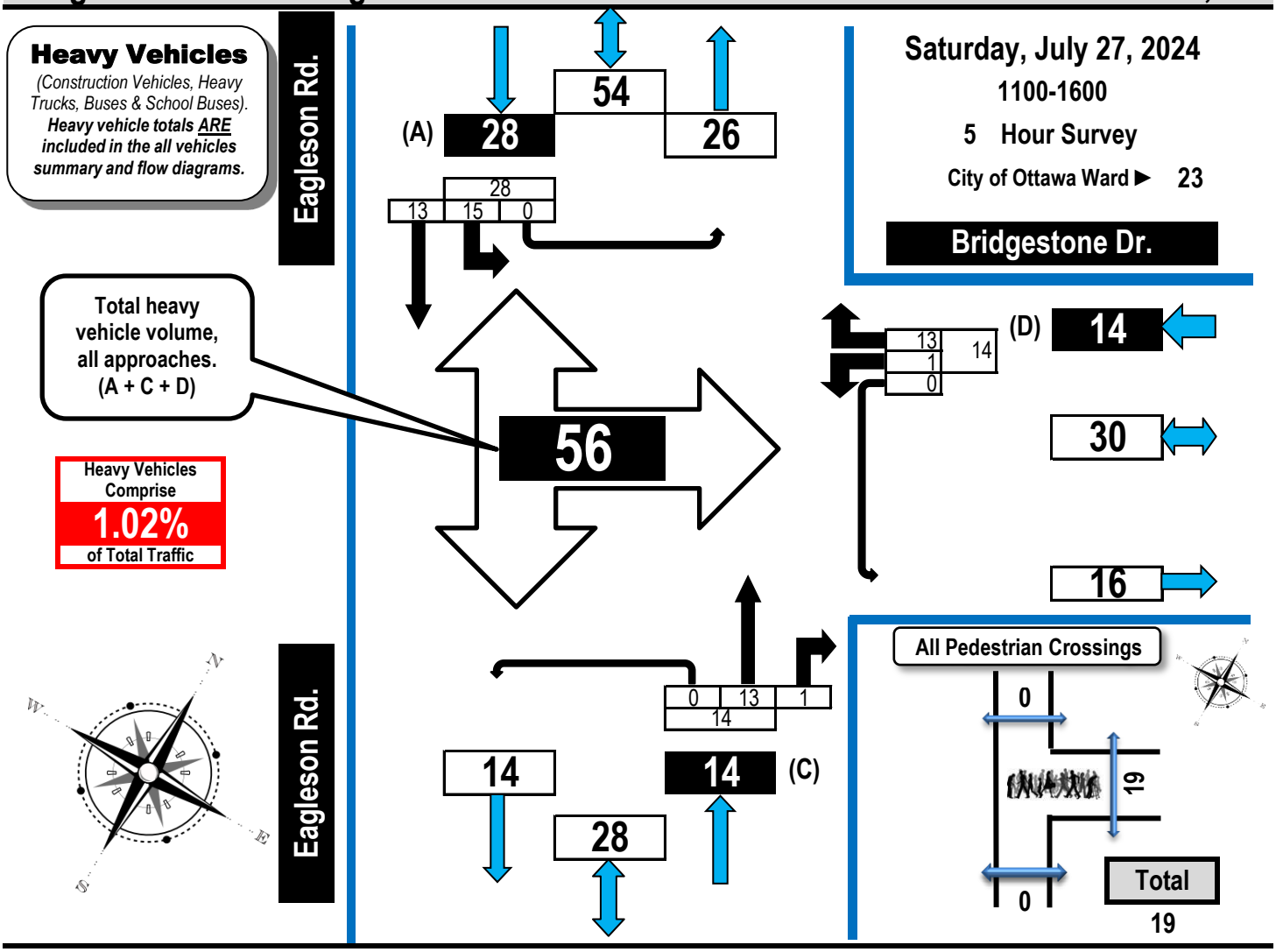


Summary - EVNG Peak Hr.	
Peak Hr.	N/A
Volume	N/A
PHF	N/A

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

Bridgestone Drive & Eagleson Road — Kanata, ON

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



	N/A					Bridgestone Dr.					Eagleson Rd.					Eagleson Rd.				
	Eastbound					Westbound					Northbound					Southbound				
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
1100-1200						0		3	0	3		3	1	0	4	2	3		0	5	12
1200-1300						0		3	0	3		4	0	0	4	3	5		0	8	15
1300-1400						1		3	0	4		3	0	0	3	3	0		0	3	10
1400-1500						0		2	0	2		2	0	0	2	4	5		0	9	13
1500-1600						0		2	0	2		1	0	0	1	3	0		0	3	6
Totals						1		13	0	14		13	1	0	14	15	13		0	28	56

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

Bridgestone Drive & Eagleson Road — Kanata, ON

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

Eagleson Rd.

Total bus volume, all approaches. (A + C + D)

21

All Buses Comprise **0.38%** of Total Traffic and **37.50%** of the Heavy Vehicle Traffic

Eagleson Rd.

Saturday, July 2024
1100-1600
5 Hour Survey
City of Ottawa Ward ► 23

Bridgestone Dr.

(A) 10 — 21 — 11
10 | 0 | 10 | 0

(D) 10 | 10 | 0 | 0 — 10
20
10

(C) 0 — 1 — 1
0 | 1 | 0 | 1

All Pedestrian Crossings
0 | 19 | 0
Total 19

	N/A					Bridgestone Dr.					Eagleson Rd.					Eagleson Rd.				
	Eastbound					Westbound					Northbound					Southbound				
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
1100-1200						0		2	0	2		0	0	0	0	2	0		0	2	4
1200-1300						0		2	0	2		1	0	0	1	2	0		0	2	5
1300-1400						0		2	0	2		0	0	0	0	2	0		0	2	4
1400-1500						0		2	0	2		0	0	0	0	2	0		0	2	4
1500-1600						0		2	0	2		0	0	0	0	2	0		0	2	4
Totals						0		10	0	10		1	0	0	1	10	0		0	10	21

Turning Movement Count
Bicycle Summary
Flow Diagram

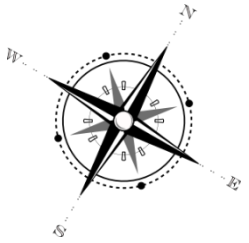
Bridgestone Drive & Eagleson Road — Kanata, ON

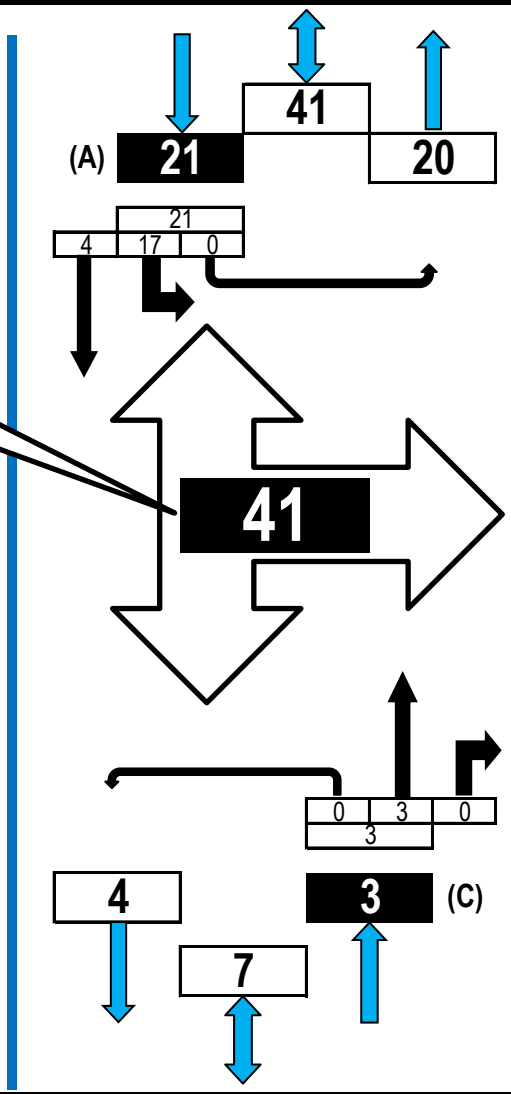
Bicycles
(Including electric bicycles and electric scooters)
Note:
Bicycle volumes are NOT included in vehicle totals.

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

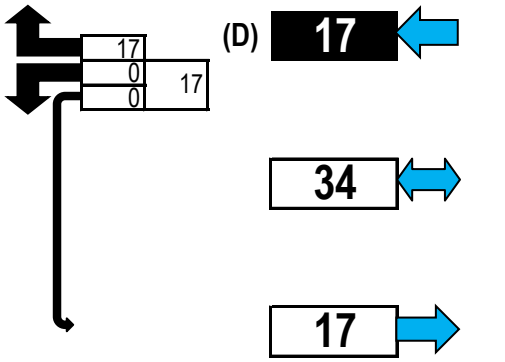
Bicycles comprise **0.74%** of total traffic

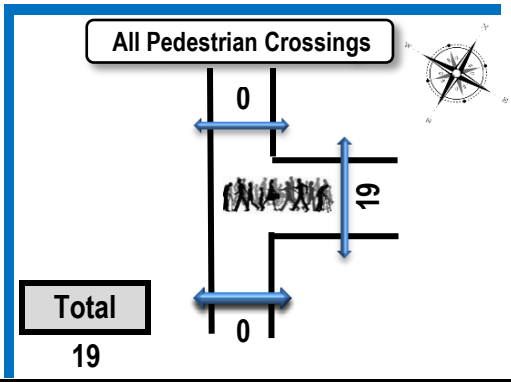
Includes all bicycles travelling on sidewalks.





Saturday, July 27, 2024
1100-1600
5 Hour Survey
City of Ottawa Ward ► 23





	N/A					Bridgestone Dr.					Eagleson Rd.					Eagleson Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
1100-1200						0		3	0	3		0	0	0	0	3	0		0	3	6
1200-1300						0		6	0	6		1	0	0	1	7	1		0	8	15
1300-1400						0		3	0	3		1	0	0	1	2	3		0	5	9
1400-1500						0		1	0	1		1	0	0	1	3	0		0	3	5
1500-1600						0		4	0	4		0	0	0	0	2	0		0	2	6
Totals						0		17	0	17		3	0	0	3	17	4		0	21	41

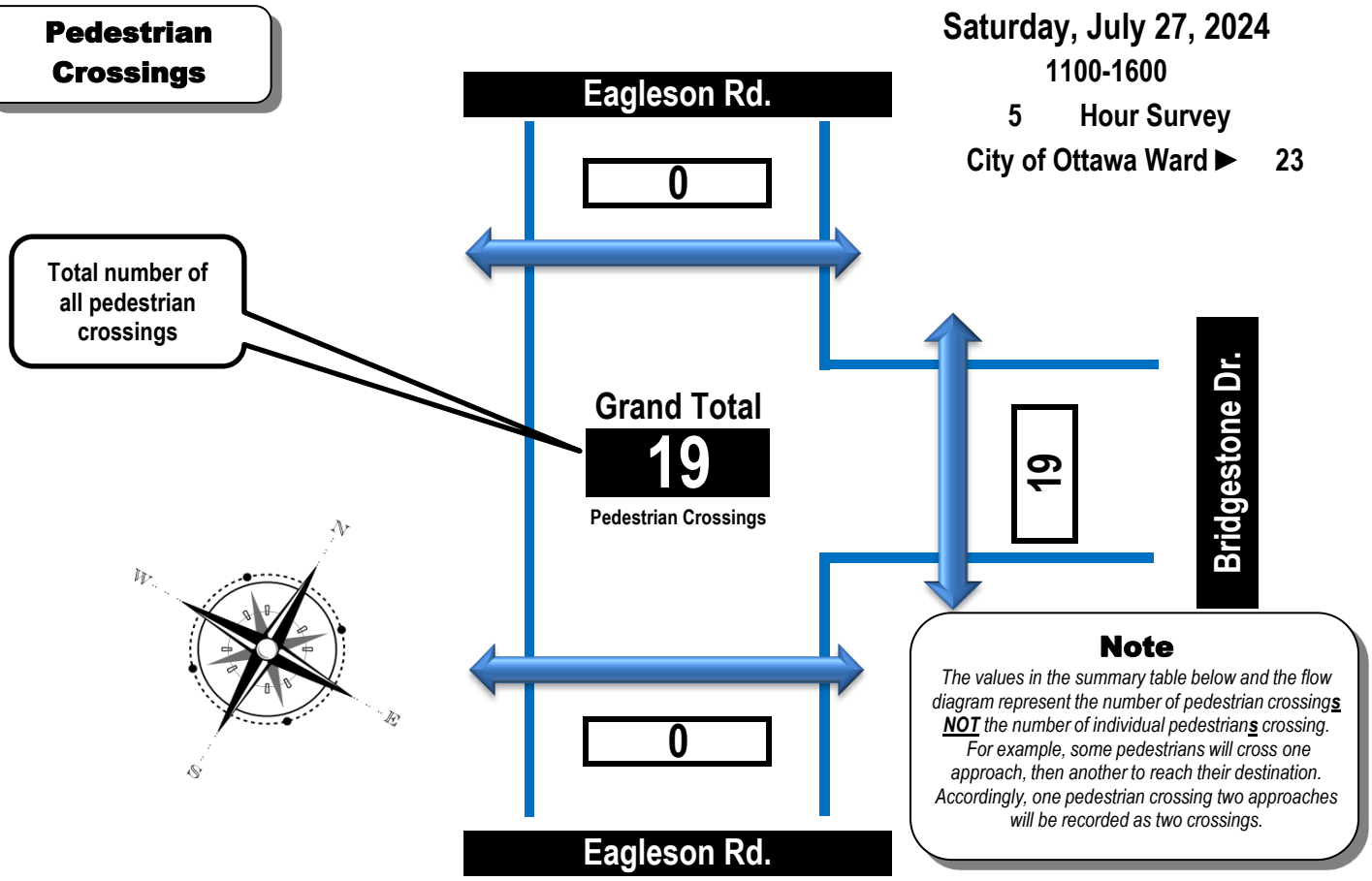
Turning Movement Count

Pedestrian Crossings Summary and Flow Diagram

Bridgestone Drive & Eagleson Road — Kanata, ON

Pedestrian Crossings

Saturday, July 27, 2024
1100-1600
5 Hour Survey
City of Ottawa Ward ▶ 23



Note

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

Time Period	West Side Crossing N/A	East Side Crossing Bridgestone Dr.	Street Total	South Side Crossing Eagleson Rd.	North Side Crossing Eagleson Rd.	Street Total	Grand Total
1100-1200		4	4	0	0	0	4
1200-1300		6	6	0	0	0	6
1300-1400		1	1	0	0	0	1
1400-1500		3	3	0	0	0	3
1500-1600		5	5	0	0	0	5
Totals		**19**	**19**	**0**	**0**	**0**	**19**

Comments:

OC Transpo buses comprise 37.50% of the heavy vehicle traffic.

Turning Movement Count
Summary Report
Including OFF Peak, PM Peak and PHF
All Vehicles Except Bicycles

Bridgestone Drive & Eagleson Road — Kanata, ON

Survey Date: Saturday, July 27, 2024 **Start Time:** 1100 **AADT Factor:** 1.1

Weather: AM: Mostly Sunny 24° C **Survey Duration:** 5 Hrs. **Survey Hours:** 1100 - 1600

Weather PM: Mostly Sunny 28° C **Surveyor(s):** J. Mousseau

	N/A					Bridgestone Dr.						Eagleson Rd.					Eagleson Rd.						
	Eastbound					Westbound						Northbound					Southbound						
Time Period	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot	Street Total	LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot	Street Total	Grand Total
1100-1200						14		199	0	**213**	**213**		310	17	0	**327**	208	391		0	**599**	**926**	**1139**
1200-1300						15		212	0	**227**	**227**		311	12	0	**323**	185	366		0	**551**	**874**	**1101**
1300-1400						21		168	0	**189**	**189**		333	20	0	**353**	215	384		0	**599**	**952**	**1141**
1400-1500						9		172	0	**181**	**181**		305	16	0	**321**	190	350		0	**540**	**861**	**1042**
1500-1600						14		156	0	**170**	**170**		345	14	0	**359**	193	343		0	**536**	**895**	**1065**
Totals						**73**		**907**	**0**	**980**	**980**		**1604**	**79**	**0**	**1683**	**991**	**1834**		**0**	**2825**	**4508**	**5488**

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

OFF Peak Hour Factor ➡					0.89							Highest Hourly Vehicle Volume Between 1100h & 1500h										
OFF Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	Gr. Tot.
1245-1345	0	0	0	0	**0**	20	0	169	0	**189**	**189**	0	342	16	0	**358**	203	392	0	0	**595**	**953**	**1142**

PM Peak Hour Factor ➡					0.94							Highest Hourly Vehicle Volume Between 1500h & 1900h										
PM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	Gr. Tot.
1500-1600	0	0	0	0	**0**	14	0	156	0	**170**	**170**	0	345	14	0	**359**	193	343	0	0	**536**	**895**	**1065**

Comments:

OC Transpo buses comprise 37.50% of the heavy vehicle traffic.

Notes:

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

Transportation Services - Traffic Services

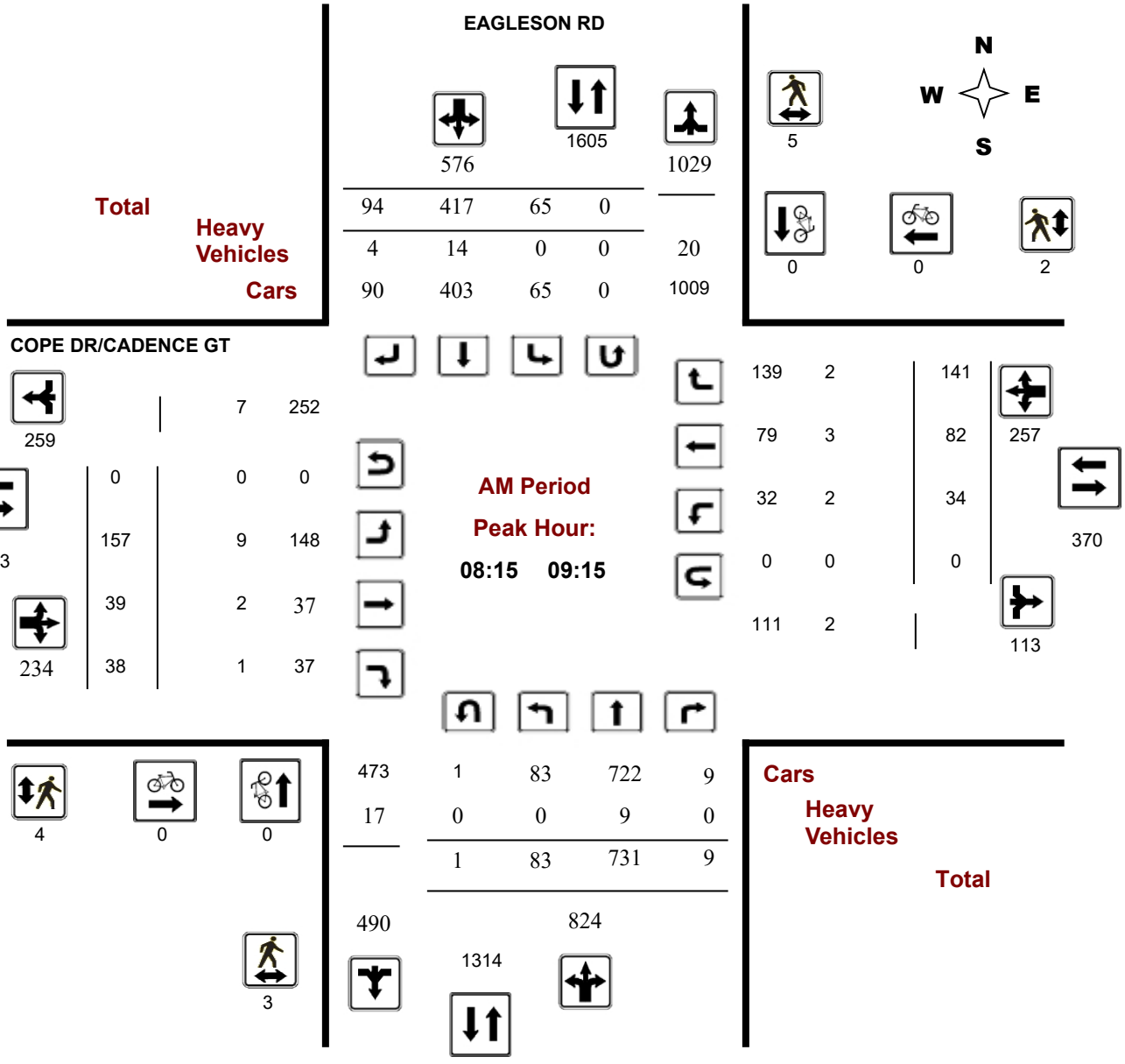
Turning Movement Count - Study Results

EAGLESON RD @ COPE DR/CADENCE GT

Survey Date: Wednesday, January 31, 2024 **WO No:** 41637

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

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

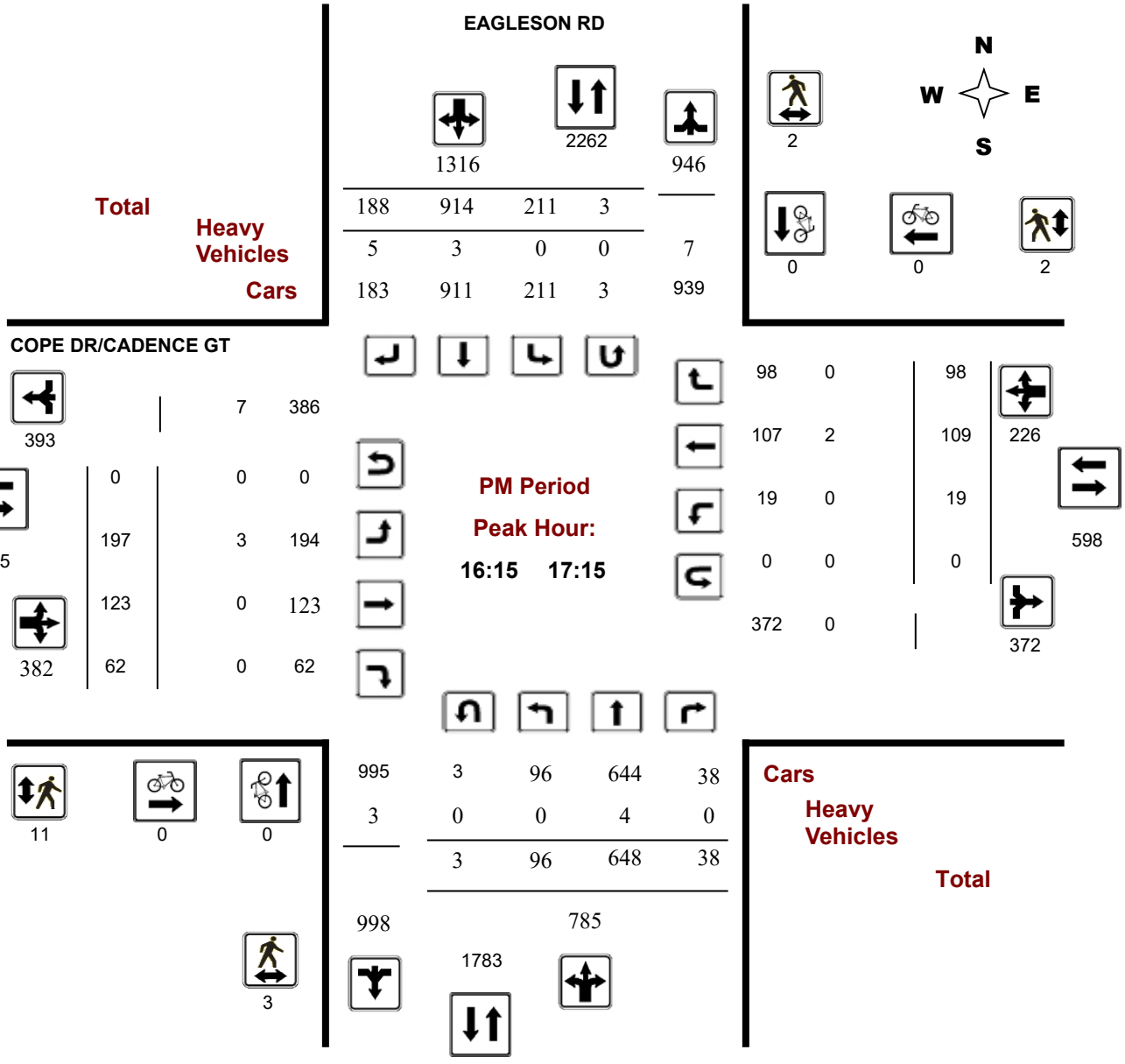
Turning Movement Count - Study Results

EAGLESON RD @ COPE DR/CADENCE GT

Survey Date: Wednesday, January 31, 2024 **WO No:** 41637

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

EAGLESON RD @ COPE DR/CADENCE GT

Survey Date: Wednesday, January 31, 2024 **WO No:** 41637

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

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, January 31, 2024

Total Observed U-Turns

Northbound: 9 Southbound: 20

Eastbound: 0 Westbound: 0

AADT Factor

1.00

	EAGLESON RD									COPE DR/CADENCE GT									
	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	37	672	16	**725**	37	300	51	**388**	**1113**	148	39	26	**213**	21	34	132	**187**	**400**	**1513**
08:00 09:00	82	707	12	**801**	59	406	97	**562**	**1363**	167	48	48	**263**	30	80	145	**255**	**518**	**1881**
09:00 10:00	54	624	17	**695**	68	387	95	**550**	**1245**	115	33	27	**175**	18	65	97	**180**	**355**	**1600**
11:30 12:30	42	411	17	**470**	77	438	80	**595**	**1065**	114	77	31	**222**	22	56	74	**152**	**374**	**1439**
12:30 13:30	56	365	19	**440**	82	399	117	**598**	**1038**	100	70	25	**195**	7	52	84	**143**	**338**	**1376**
15:00 16:00	72	494	24	**590**	111	754	150	**1015**	**1605**	102	103	50	**255**	35	83	99	**217**	**472**	**2077**
16:00 17:00	97	682	39	**818**	190	890	167	**1247**	**2065**	182	131	54	**367**	16	109	92	**217**	**584**	**2649**
17:00 18:00	96	591	30	**717**	181	860	183	**1224**	**1941**	216	116	71	**403**	19	91	107	**217**	**620**	**2561**
Sub Total	536	4546	174	**5256**	805	4434	940	**6179**	**11435**	1144	617	332	**2093**	168	570	830	**1568**	**3661**	**15096**
U Turns				**9**				**20**	**29**				**0**				**0**	**0**	**29**
Total	536	4546	174	**5265**	805	4434	940	**6199**	**11464**	1144	617	332	**2093**	168	570	830	**1568**	**3661**	**15125**
EQ 12Hr	745	6319	242	**7318**	1119	6163	1307	**8617**	**15935**	1590	858	461	**2909**	234	792	1154	**2180**	**5089**	**21024**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	745	6319	242	**7318**	1119	8074	1712	**8617**	**15935**	1590	858	461	**2909**	234	792	1154	**2180**	**5089**	**21024**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.00**					
AVG 24Hr	976	8278	317	**9587**	1466	10577	2243	**11288**	**20875**	2083	1124	604	**3811**	307	1038	1512	**2856**	**6667**	**27541**
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.

Turning Movement Count
Summary Report
Including OFF Peak, PM Peak and PHF
All Vehicles Except Bicycles

Cadence Gate/Cope Drive & Eagleson Road — Kanata, ON

Survey Date: Saturday, July 27, 2024 **Start Time:** 1100 **AADT Factor:** 1.1

Weather: AM: Mainly Sunny 24° C **Survey Duration:** 5 Hrs. **Survey Hours:** 1100 - 1600

Weather PM: Mainly Sunny 28° C **Surveyor(s):** J. Mousseau

	Cope Dr.					Cadence Gate						Eagleson Rd.					Eagleson Rd.						
	Eastbound					Westbound						Northbound					Southbound						
Time Period	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot	Street Total	LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot	Street Total	Grand Total
1100-1200	158	91	48	0	**297**	35	75	97	0	**207**	**504**	72	452	20	0	**544**	96	530	117	4	**747**	**1291**	**1795**
1200-1300	127	98	48	0	**273**	25	66	83	0	**174**	**447**	79	456	15	1	**551**	79	503	127	4	**713**	**1264**	**1711**
1300-1400	116	94	36	0	**246**	24	79	83	0	**186**	**432**	59	440	19	1	**519**	81	514	129	4	**728**	**1247**	**1679**
1400-1500	125	75	40	0	**240**	25	67	92	0	**184**	**424**	54	424	14	2	**494**	100	491	108	2	**701**	**1195**	**1619**
1500-1600	119	101	46	0	**266**	17	63	56	0	**136**	**402**	63	421	14	1	**499**	93	465	123	0	**681**	**1180**	**1582**
Totals	**645**	**459**	**218**	**0**	**1322**	**126**	**350**	**411**	**0**	**887**	**2209**	**327**	**2193**	**82**	**5**	**2607**	**449**	**2503**	**604**	**14**	**3570**	**6177**	**8386**

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

OFF Peak Hour Factor ➡ 0.91 — Highest Hourly Vehicle Volume Between 1100h & 1500h

OFF Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	Gr. Tot.
1100-1200	158	91	48	0	**297**	35	75	97	0	**207**	**504**	72	452	20	0	**544**	96	530	117	4	**747**	**1291**	**1795**

PM Peak Hour Factor ➡ 0.96 — Highest Hourly Vehicle Volume Between 1500h & 1900h

PM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	Gr. Tot.
1500-1600	119	101	46	0	**266**	17	63	56	0	**136**	**402**	63	421	14	1	**499**	93	465	123	0	**681**	**1180**	**1582**

Comments:
No buses were observed.

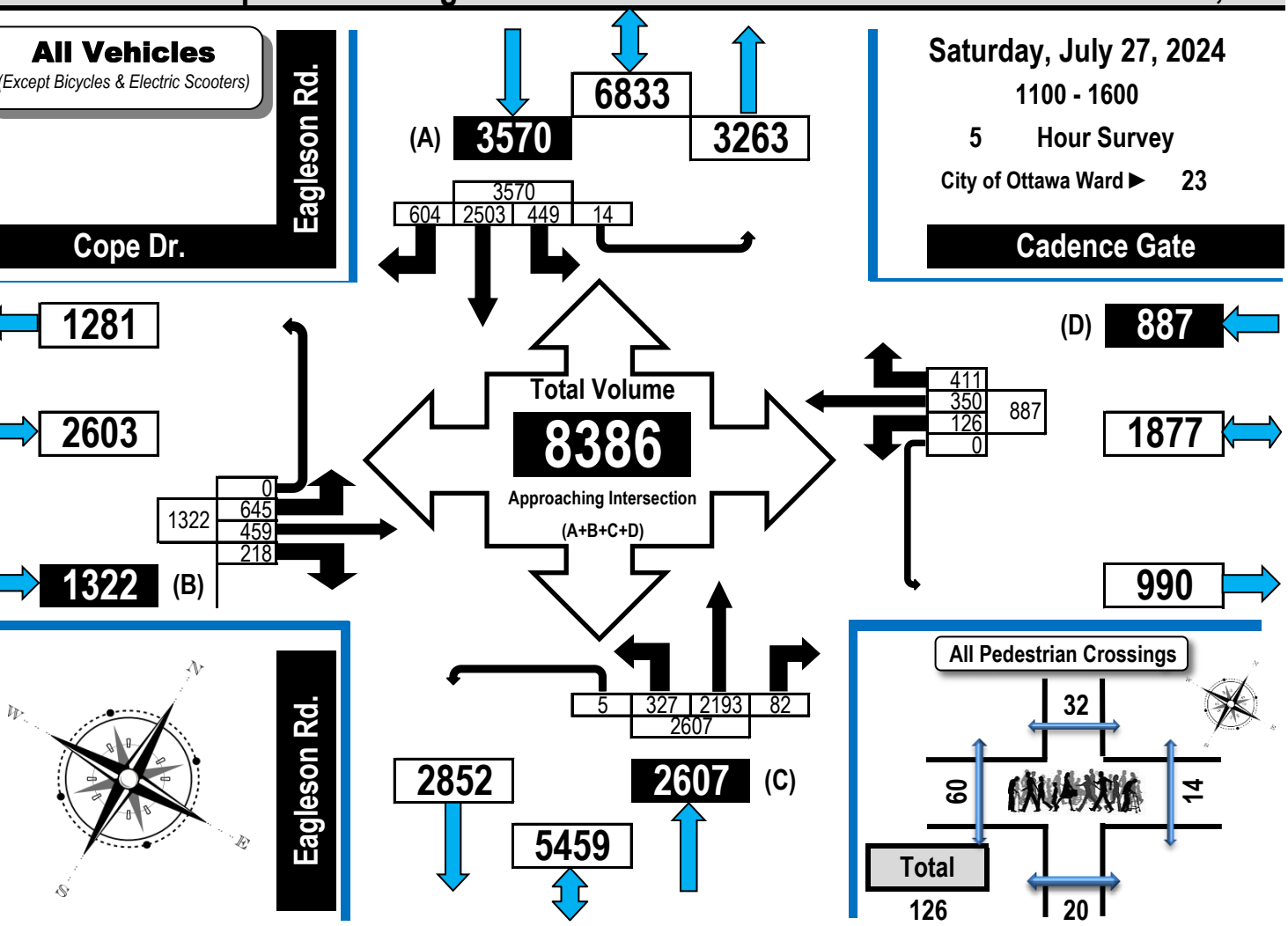
Notes:
1. Includes all vehicle types except bicycles and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

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

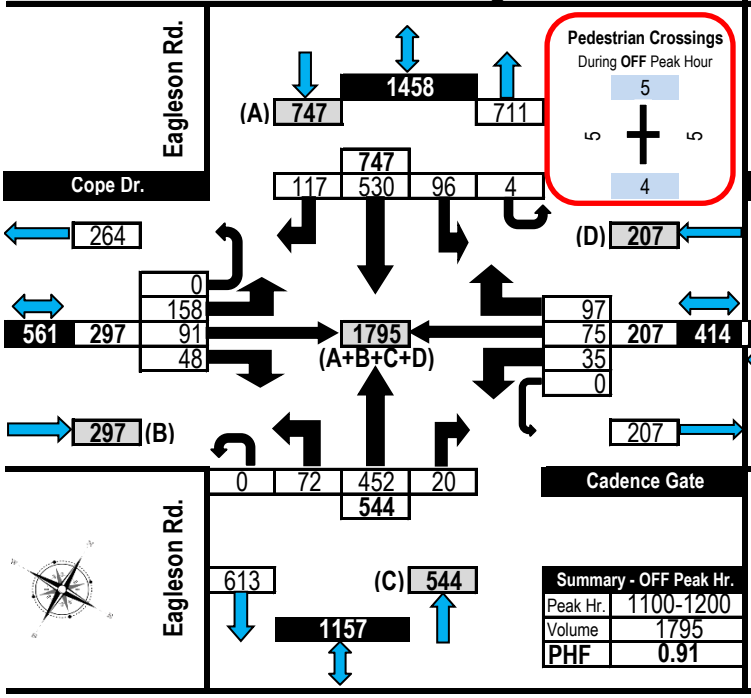
Cadence Gate/Cope Drive & Eagleson Road — Kanata, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Saturday, July 27, 2024
1100 - 1600
5 Hour Survey
City of Ottawa Ward ▶ 23

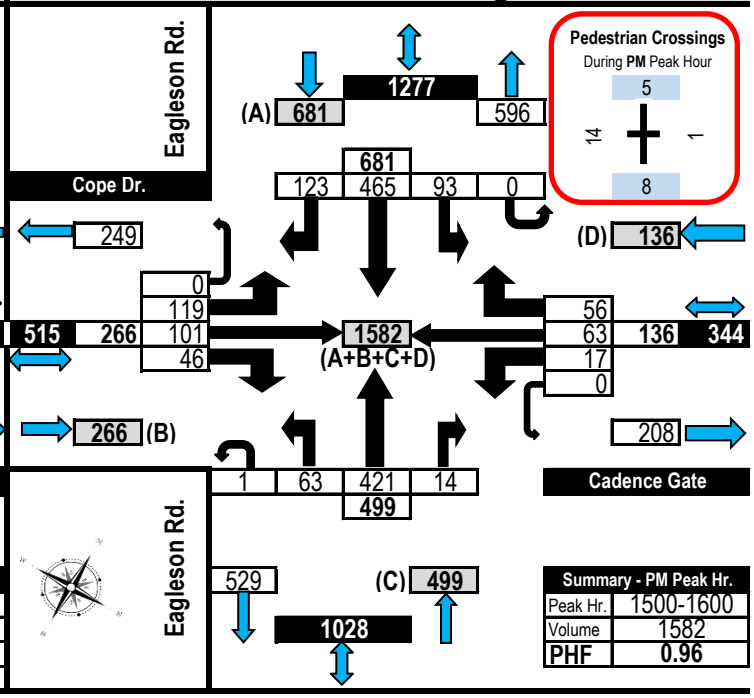


Off Peak Hour Flow Diagram



Summary - OFF Peak Hr.	
Peak Hr.	1100-1200
Volume	1795
PHF	0.91

PM Peak Hour Flow Diagram



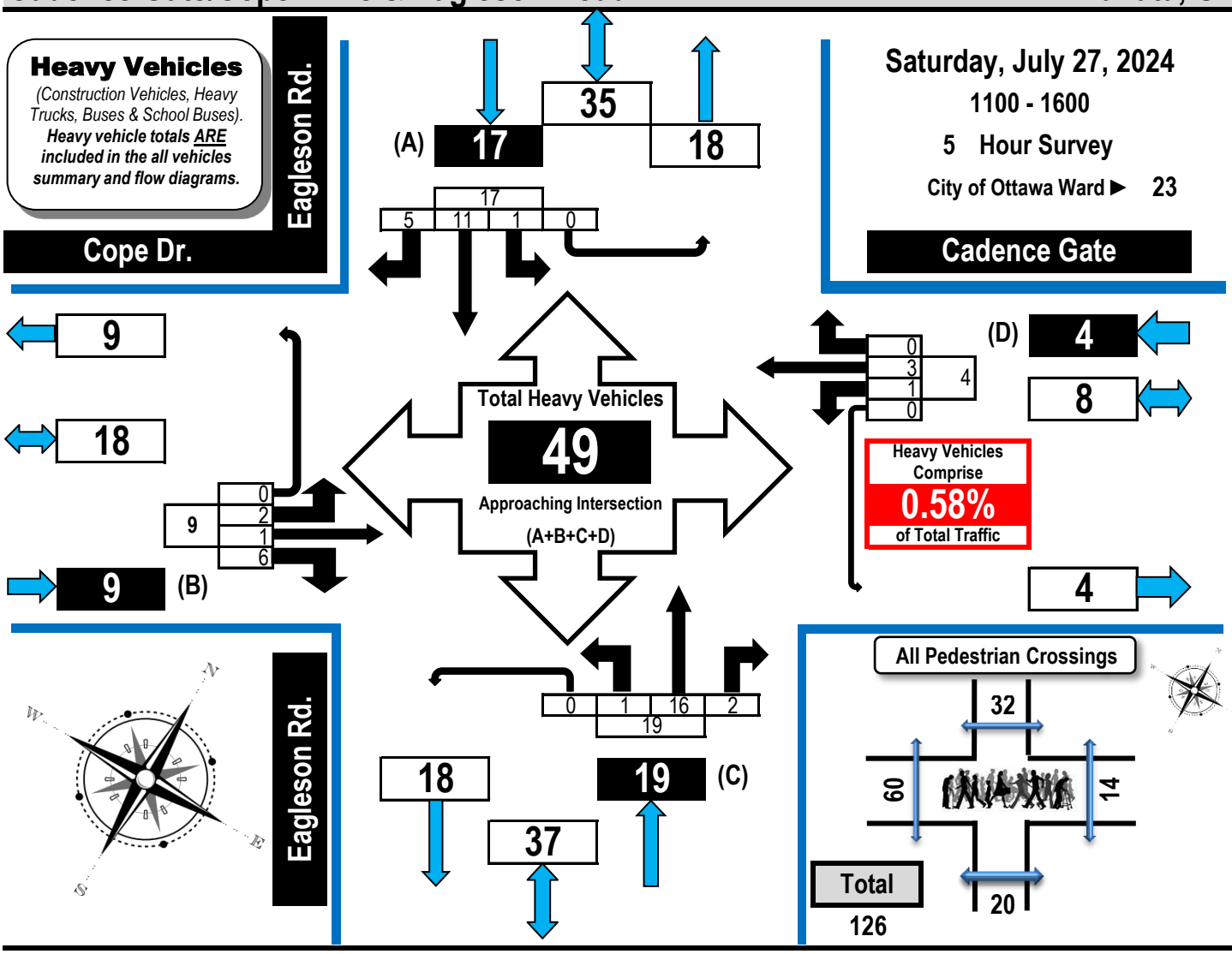
Summary - PM Peak Hr.	
Peak Hr.	1500-1600
Volume	1582
PHF	0.96

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

Cadence Gate/Cope Drive & Eagleson Road — Kanata, ON

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

Saturday, July 27, 2024
1100 - 1600
5 Hour Survey
City of Ottawa Ward ► 23



	Cope Dr.					Cadence Gate					Eagleson Rd.					Eagleson Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
1100-1200	1	1	0	0	2	1	0	0	0	1	0	7	0	0	7	0	2	0	0	2	12
1200-1300	0	0	4	0	4	0	0	0	0	0	1	1	1	0	3	0	3	1	0	4	11
1300-1400	0	0	0	0	0	0	2	0	0	2	0	5	0	0	5	1	2	0	0	3	10
1400-1500	0	0	2	0	2	0	0	0	0	0	0	1	1	0	2	0	3	1	0	4	8
1500-1600	1	0	0	0	1	0	1	0	0	1	0	2	0	0	2	0	1	3	0	4	8
Totals	2	1	6	0	9	1	3	0	0	4	1	16	2	0	19	1	11	5	0	17	49

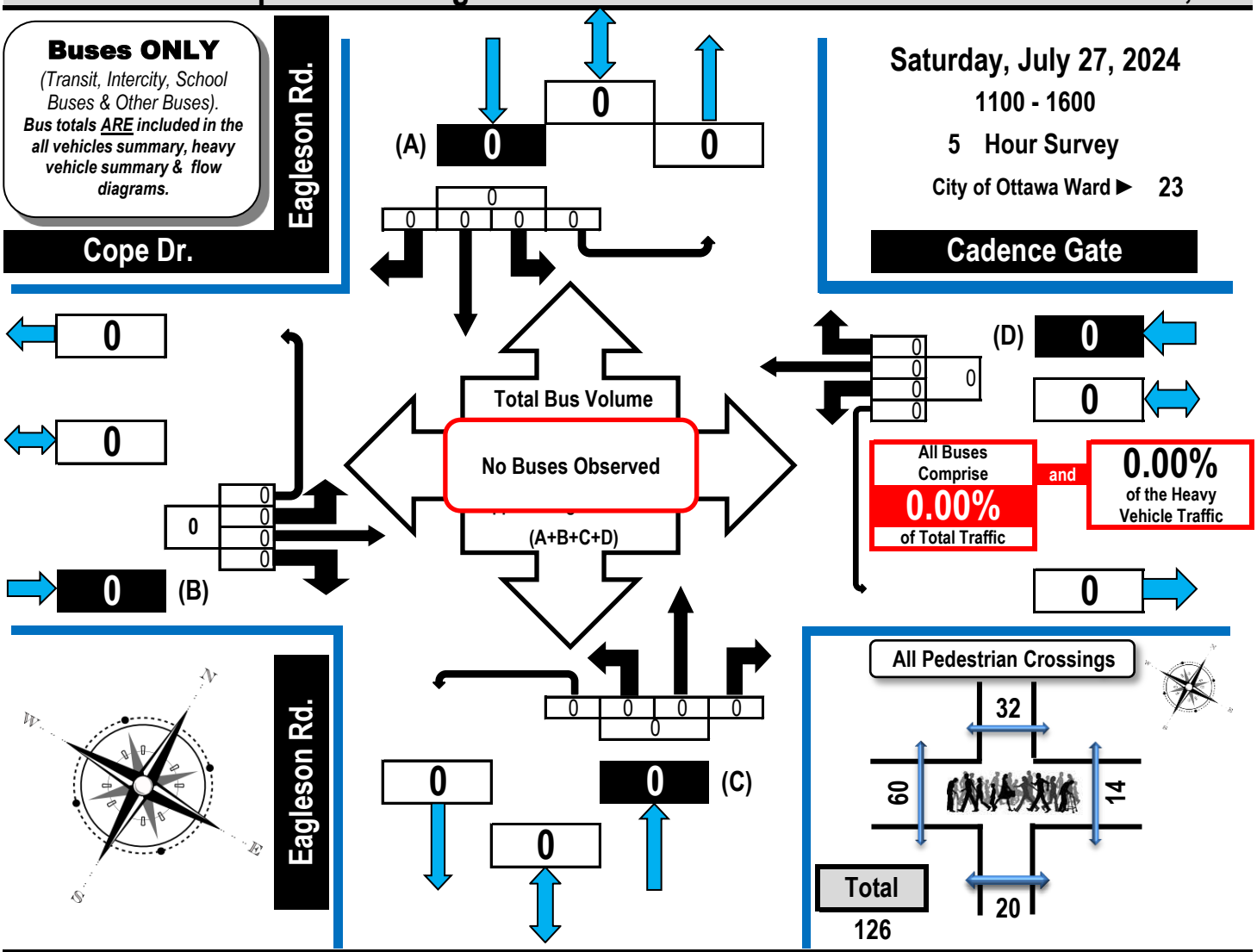
Comments:

No buses were observed.

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

Cadence Gate/Cope Drive & Eagleson Road — Kanata, ON

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



Saturday, July 27, 2024
1100 - 1600
5 Hour Survey
City of Ottawa Ward ▶ 23

	Cope Dr.					Cadence Gate					Eagleson Rd.					Eagleson Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
1100-1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200-1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300-1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400-1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500-1600	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

No Buses Observed

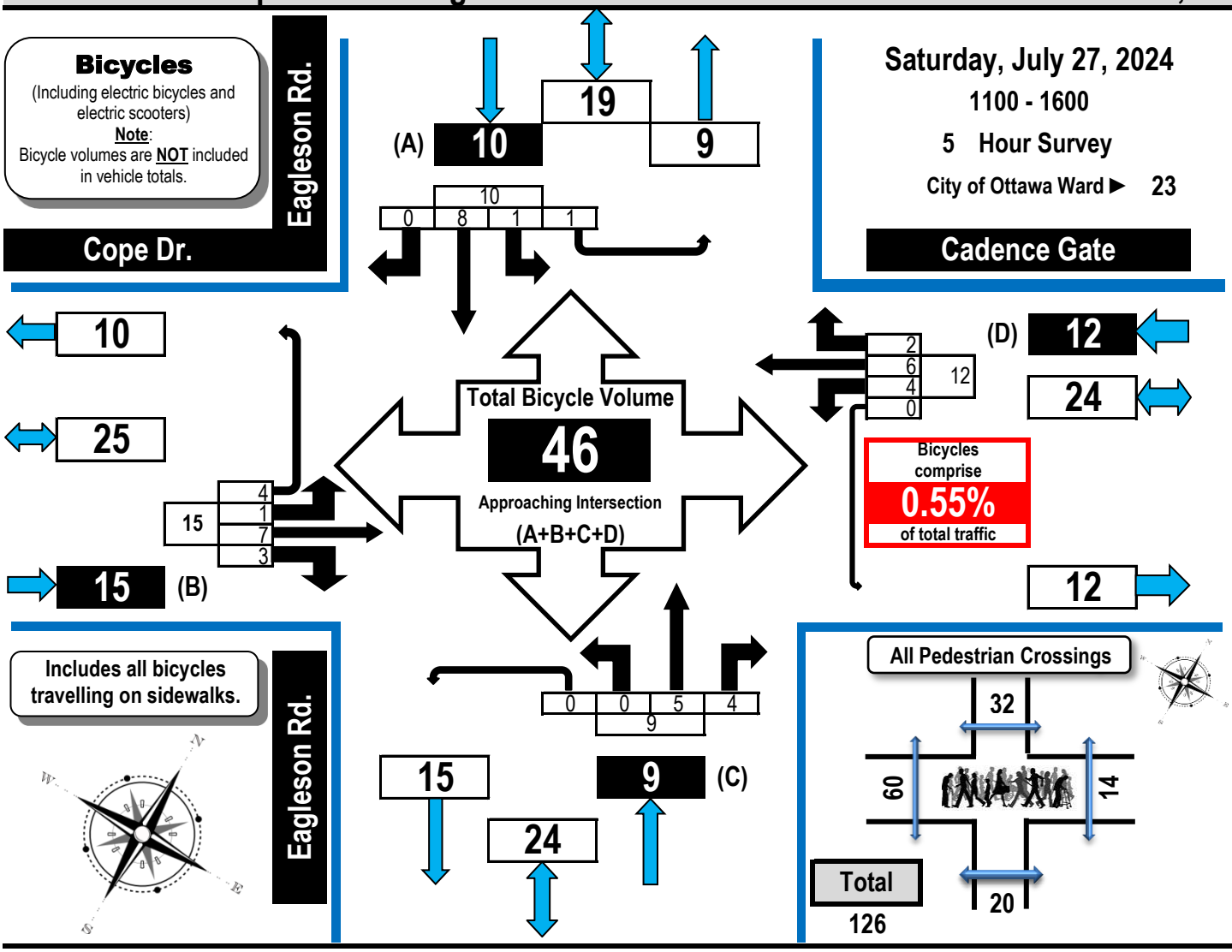
Comments:
No buses were observed.

Turning Movement Count
Bicycle Summary
Flow Diagram

Cadence Gate/Cope Drive & Eagleson Road — Kanata, ON

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

Saturday, July 27, 2024
1100 - 1600
5 Hour Survey
City of Ottawa Ward ► 23



	Cope Dr.					Cadence Gate					Eagleson Rd.					Eagleson Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
1100-1200	0	1	1	3	5	0	2	0	0	2	0	1	0	0	1	0	4	0	0	4	12
1200-1300	1	3	2	1	7	1	0	1	0	2	0	1	2	0	3	0	0	0	0	0	12
1300-1400	0	2	0	0	2	3	2	0	0	5	0	0	0	0	0	1	1	0	0	2	9
1400-1500	0	1	0	0	1	0	2	1	0	3	0	3	2	0	5	0	1	0	0	1	10
1500-1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3	3
Totals	1	7	3	4	15	4	6	2	0	12	0	5	4	0	9	1	8	0	1	10	46

Comments:

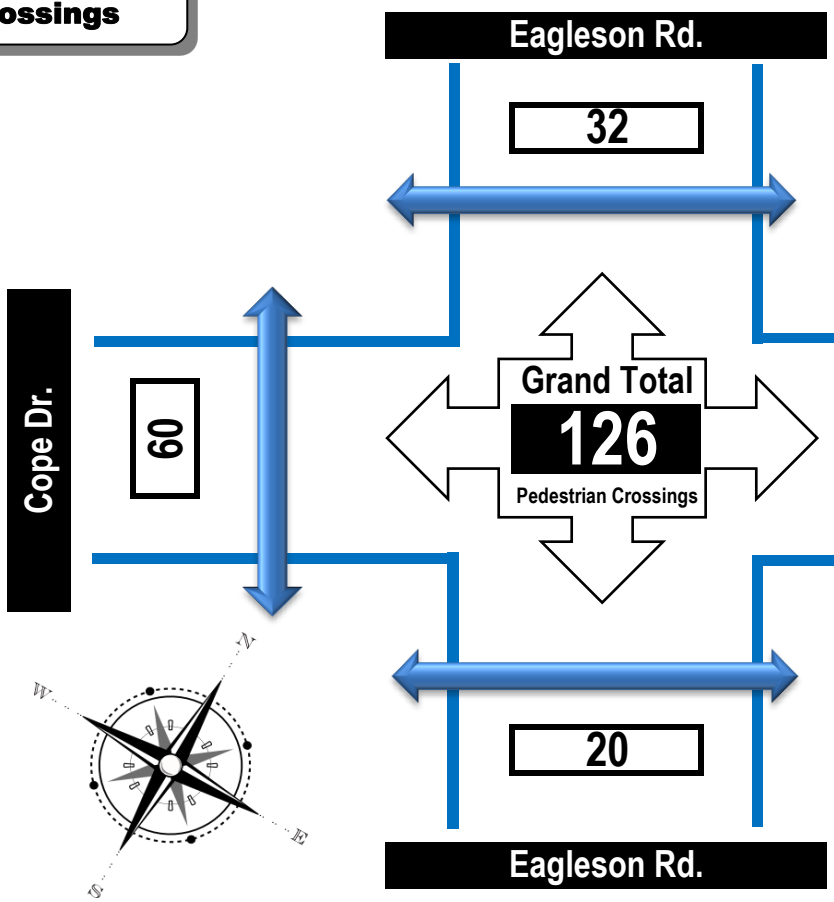
No buses were observed.

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Cadence Gate/Cope Drive & Eagleson Road — Kanata, ON

Pedestrian Crossings

Saturday, July 27, 2024
1100 - 1600
5 Hour Survey
City of Ottawa Ward ► 23



Note

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

Time Period	West Side Crossing Cope Dr.	East Side Crossing Cadence Gate	Street Total	South Side Crossing Eagleson Rd.	North Side Crossing Eagleson Rd.	Street Total	Grand Total
1100-1200	5	5	10	4	5	9	19
1200-1300	15	6	21	3	6	9	30
1300-1400	18	1	19	2	12	14	33
1400-1500	8	1	9	3	4	7	16
1500-1600	14	1	15	8	5	13	28
Totals	**60**	**14**	**74**	**20**	**32**	**52**	**126**

Comments:

No buses were observed.

Transportation Services - Traffic Services

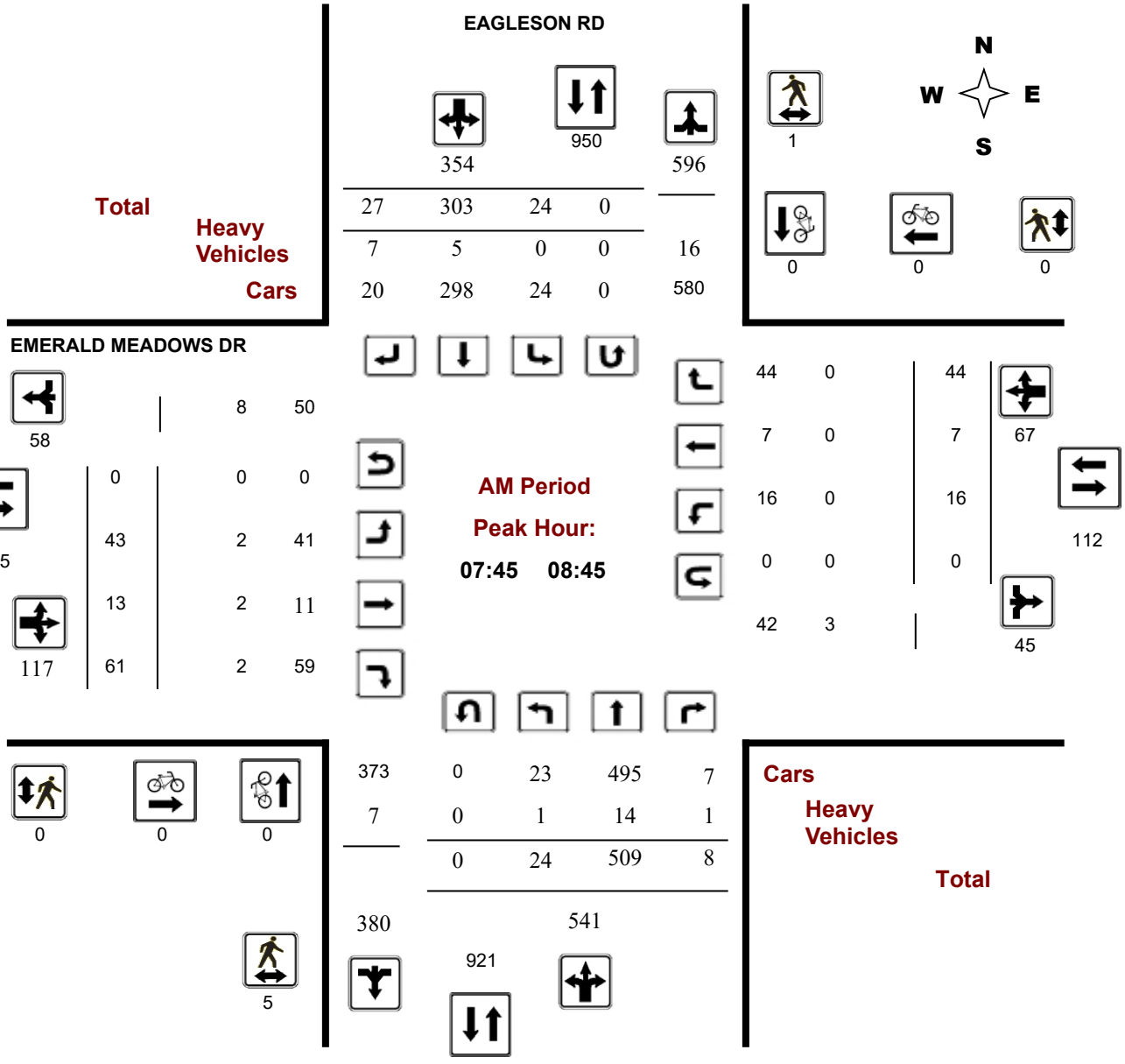
Turning Movement Count - Study Results

EAGLESON RD @ EMERALD MEADOWS DR

Survey Date: Thursday, December 14, 2023 **WO No:** 41388

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

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

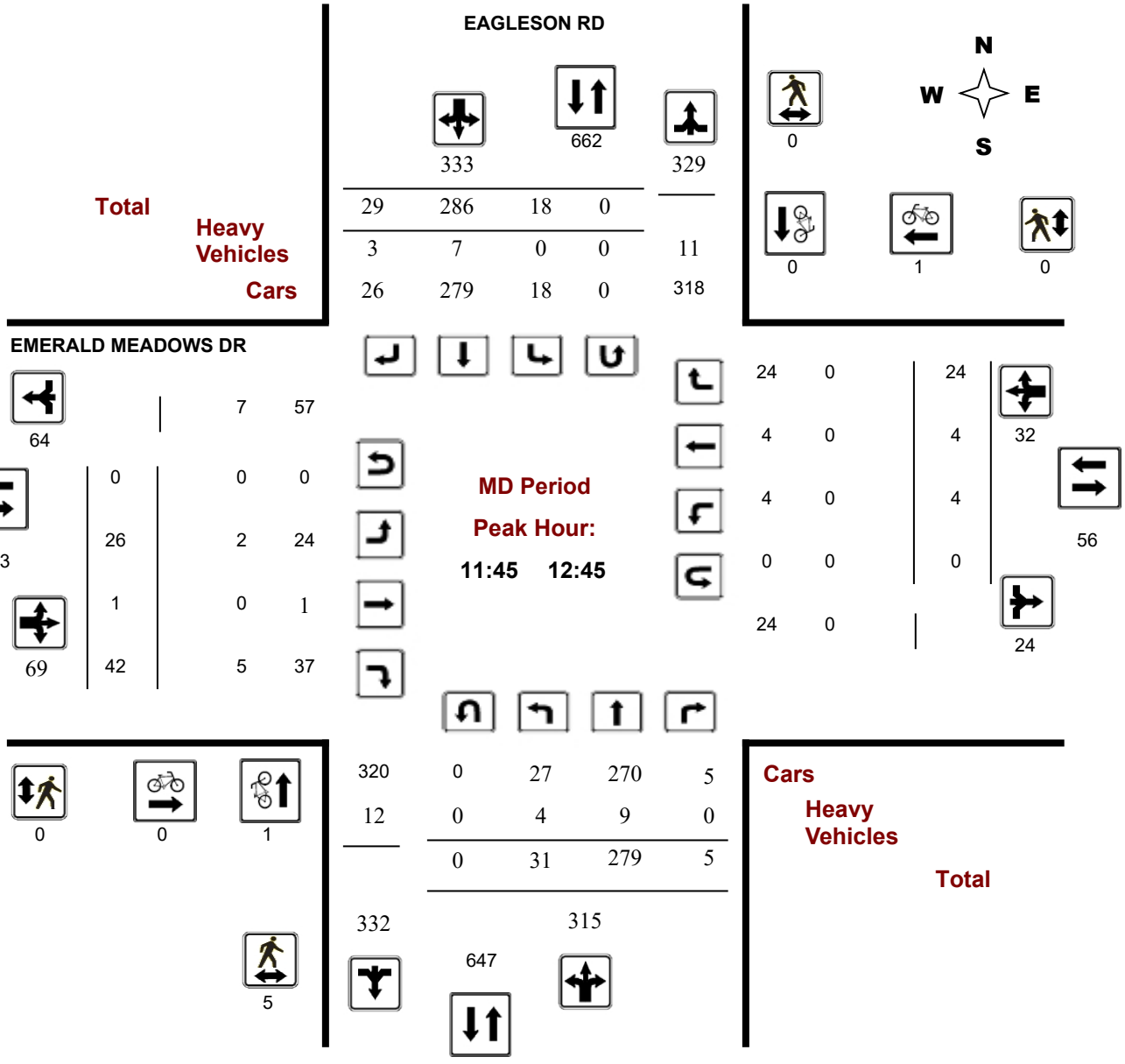
Turning Movement Count - Study Results

EAGLESON RD @ EMERALD MEADOWS DR

Survey Date: Thursday, December 14, 2023 **WO No:** 41388

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

MD Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

EAGLESON RD @ EMERALD MEADOWS DR

Survey Date: Thursday, December 14, 2023 **WO No:** 41388

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

Full Study Summary (8 HR Standard)

Survey Date: Thursday, December 14, 2023

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 0 Westbound: 1

AADT Factor

1.00

	EAGLESON RD									EMERALD MEADOWS 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	23	373	6	**402**	15	257	21	**293**	**695**	38	11	73	**122**	10	8	32	**50**	**172**	**867**
08:00 09:00	30	511	9	**550**	20	298	28	**346**	**896**	53	12	52	**117**	16	7	42	**65**	**182**	**1078**
09:00 10:00	15	388	5	**408**	19	231	27	**277**	**685**	38	6	30	**74**	10	4	27	**41**	**115**	**800**
11:30 12:30	36	284	5	**325**	18	268	19	**305**	**630**	34	4	47	**85**	4	2	21	**27**	**112**	**742**
12:30 13:30	29	260	4	**293**	24	282	35	**341**	**634**	33	5	28	**66**	1	11	16	**28**	**94**	**728**
15:00 16:00	41	398	16	**455**	42	486	37	**565**	**1020**	44	11	52	**107**	7	8	33	**48**	**155**	**1175**
16:00 17:00	55	430	17	**502**	53	608	42	**703**	**1205**	34	17	51	**102**	13	13	33	**59**	**161**	**1366**
17:00 18:00	70	419	15	**504**	57	459	45	**561**	**1065**	37	10	35	**82**	9	6	37	**52**	**134**	**1199**
Sub Total	299	3063	77	**3439**	248	2889	254	**3391**	**6830**	311	76	368	**755**	70	59	241	**370**	**1125**	**7955**
U Turns				**0**				**0**	**0**				**0**				**1**	**1**	**1**
Total	299	3063	77	**3439**	248	2889	254	**3391**	**6830**	311	76	368	**755**	70	59	241	**371**	**1126**	**7956**
EQ 12Hr	416	4258	107	**4780**	345	4016	353	**4713**	**9494**	432	106	512	**1049**	97	82	335	**516**	**1565**	**11059**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	416	4258	107	**4780**	345	5261	463	**4713**	**9494**	432	106	512	**1049**	97	82	335	**516**	**1565**	**11059**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.00**					
AVG 24Hr	545	5578	140	**6262**	452	6892	607	**6174**	**12437**	566	139	671	**1374**	127	107	439	**676**	**2050**	**14487**
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.

Turning Movement Count
Summary Report
Including OFF Peak, PM Peak and PHF
All Vehicles Except Bicycles

Eagleson Road & Emerald Meadows Drive/Romina Street — Kanata, ON

Survey Date: Saturday, July 27, 2024 **Start Time:** 1100 **AADT Factor:** 1.1

Weather: AM: Mostly Sunny 24° C **Survey Duration:** 5 Hrs. **Survey Hours:** 1100 - 1600

Weather PM: Mostly Sunny 28° C **Surveyor(s):** J. Mousseau

	Romina St.					Emerald Meadows Dr.						Eagleson Rd.					Eagleson Rd.						
	Eastbound					Westbound						Northbound					Southbound						
Time Period	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot	Street Total	LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot	Street Total	Grand Total
1100-1200	24	10	28	0	**62**	10	6	20	0	**36**	**98**	19	276	9	0	**304**	34	354	18	0	**406**	**710**	**808**
1200-1300	34	10	38	0	**82**	6	3	23	0	**32**	**114**	33	266	14	0	**313**	26	332	22	0	**380**	**693**	**807**
1300-1400	28	6	35	0	**69**	2	11	25	0	**38**	**107**	37	301	12	0	**350**	46	320	28	0	**394**	**744**	**851**
1400-1500	20	3	32	0	**55**	12	4	21	0	**37**	**92**	28	285	6	0	**319**	26	308	30	0	**364**	**683**	**775**
1500-1600	37	10	39	0	**86**	5	5	18	0	**28**	**114**	39	295	9	1	**344**	29	295	25	0	**349**	**693**	**807**
Totals	**143**	**39**	**172**	**0**	**354**	**35**	**29**	**107**	**0**	**171**	**525**	**156**	**1423**	**50**	**1**	**1630**	**161**	**1609**	**123**	**0**	**1893**	**3523**	**4048**

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

OFF Peak Hour Factor ➡ 0.85												Highest Hourly Vehicle Volume Between 1100h & 1500h											
OFF Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	Gr. Tot.
1245-1345	36	8	37	0	**81**	4	11	26	0	**41**	**122**	38	296	9	0	**343**	44	336	26	0	**406**	**749**	**871**

PM Peak Hour Factor ➡ 0.93												Highest Hourly Vehicle Volume Between 1500h & 1900h											
PM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	Gr. Tot.
1500-1600	37	10	39	0	**86**	5	5	18	0	**28**	**114**	39	295	9	1	**344**	29	295	25	0	**349**	**693**	**807**

Comments:

The single bus recorded comprised 3.33% of the heavy vehicle traffic.

Notes:

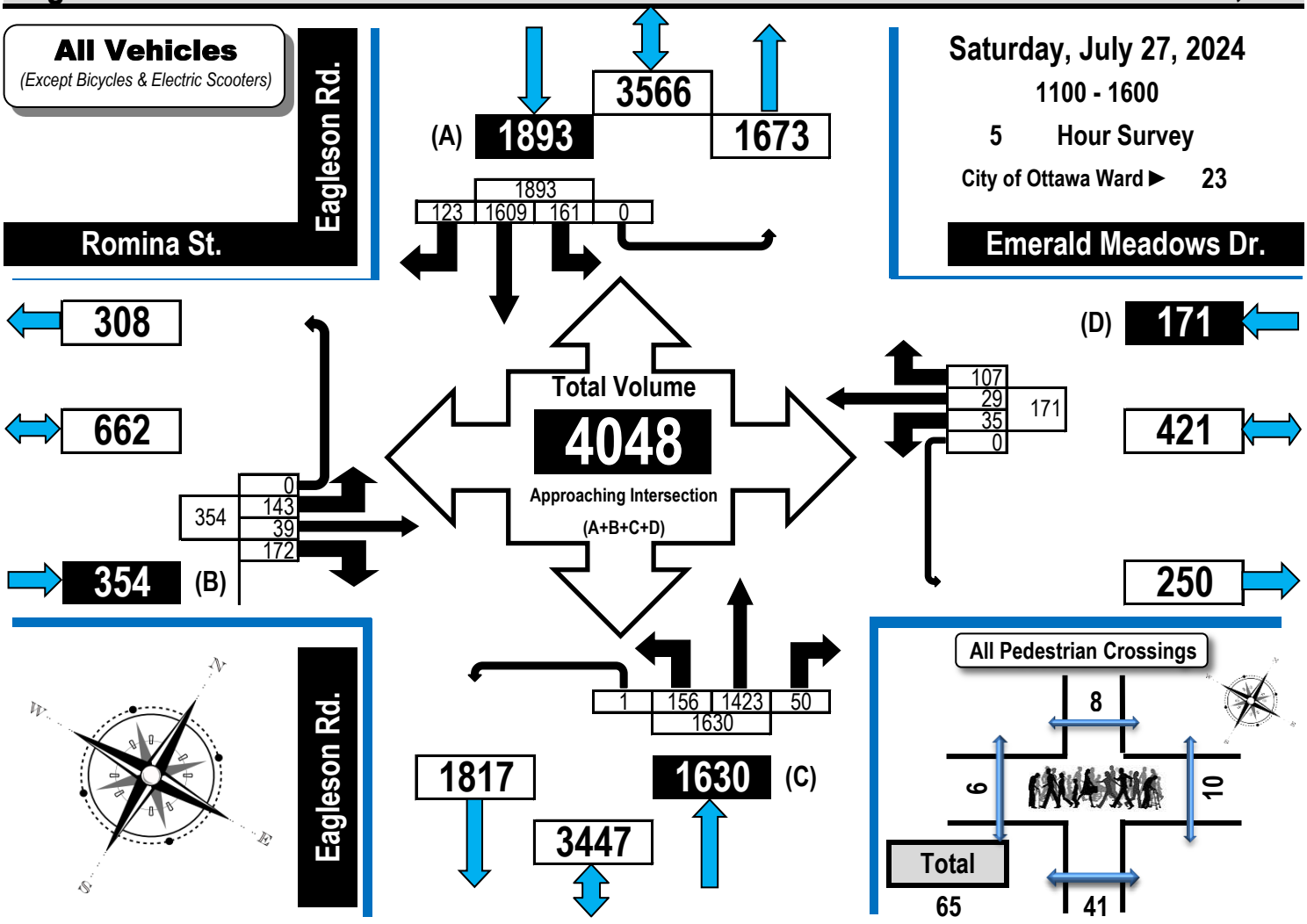
1. Includes all vehicle types except bicycles and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

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

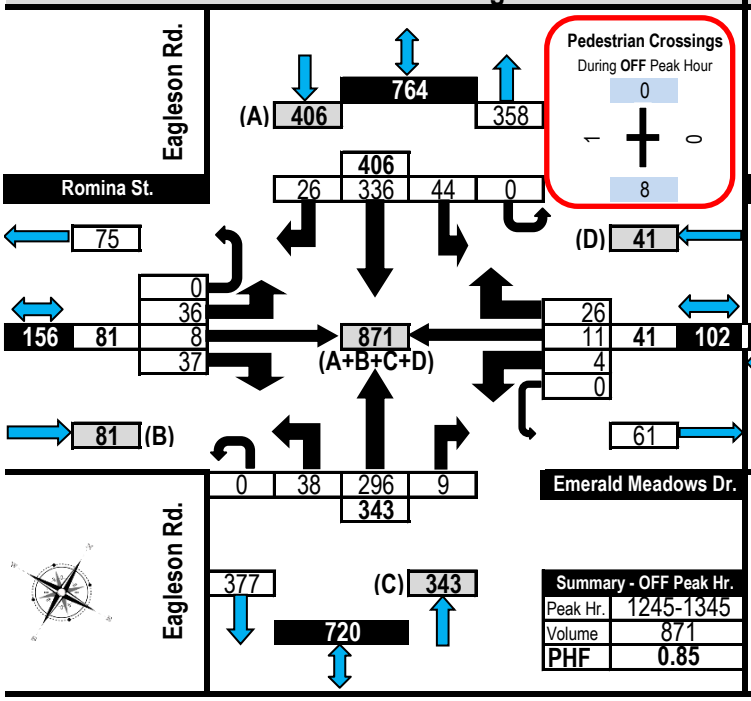
Eagleson Road & Emerald Meadows Drive/Romina Street — Kanata, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Saturday, July 27, 2024
1100 - 1600
5 Hour Survey
City of Ottawa Ward ▶ 23

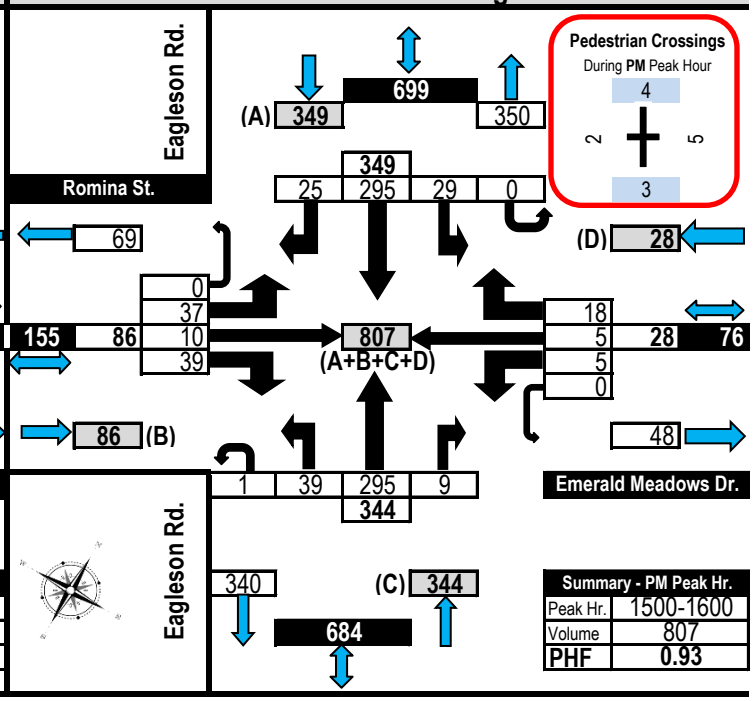


Off Peak Hour Flow Diagram



Summary - OFF Peak Hr.	
Peak Hr.	1245-1345
Volume	871
PHF	0.85

PM Peak Hour Flow Diagram



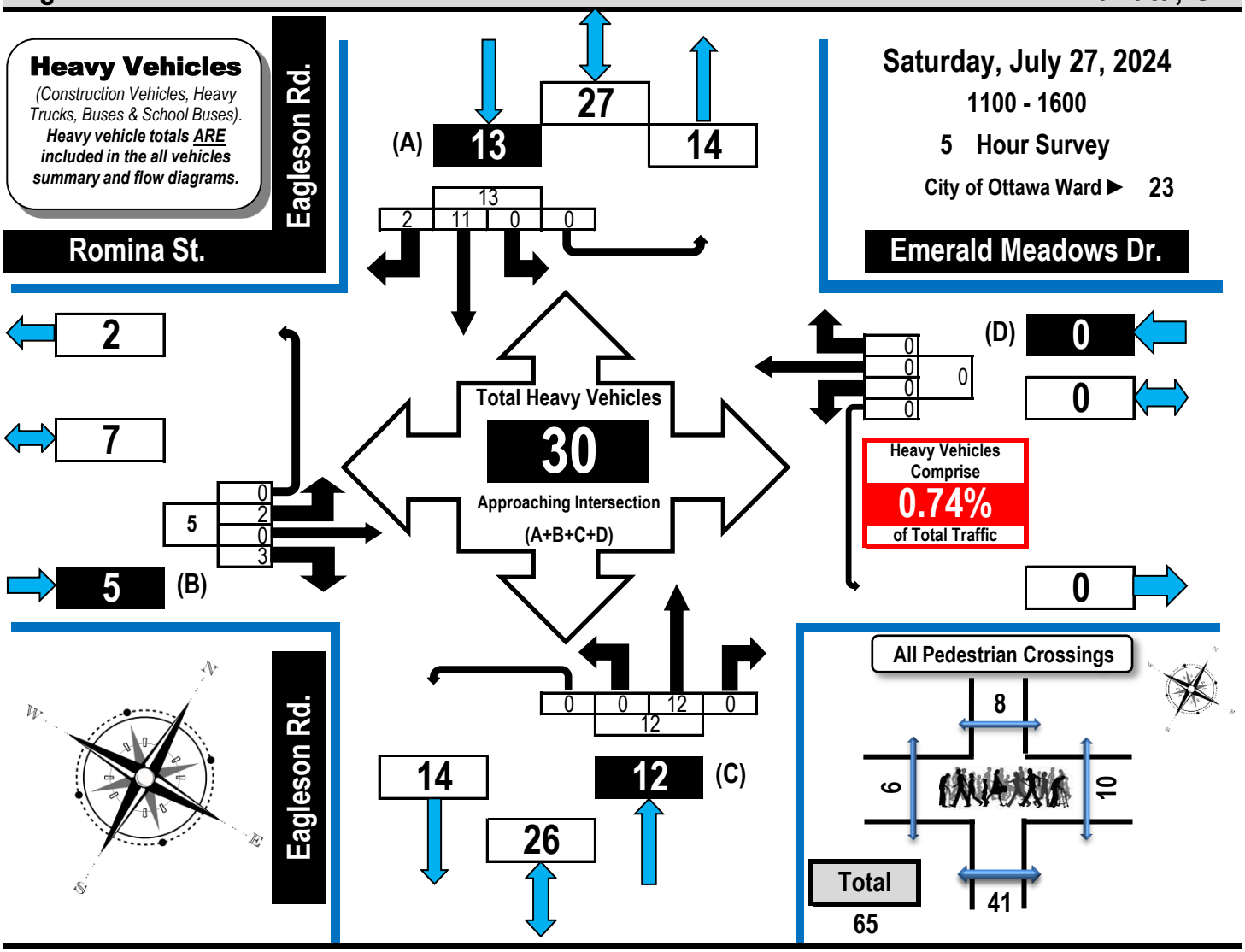
Summary - PM Peak Hr.	
Peak Hr.	1500-1600
Volume	807
PHF	0.93

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

Eagleson Road & Emerald Meadows Drive/Romina Street — **Kanata, ON**

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

Saturday, July 27, 2024
1100 - 1600
5 Hour Survey
City of Ottawa Ward ► 23



	Romina St.					Emerald Meadows Dr.					Eagleson Rd.					Eagleson Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
1100-1200	1	0	0	0	1	0	0	0	0	0	0	3	0	0	3	0	2	1	0	3	7
1200-1300	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	5	0	0	5	9
1300-1400	0	0	1	0	1	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	5
1400-1500	1	0	2	0	3	0	0	0	0	0	0	1	0	0	1	0	3	1	0	4	8
1500-1600	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Totals	2	0	3	0	5	0	0	0	0	0	0	12	0	0	12	0	11	2	0	13	30

Comments:

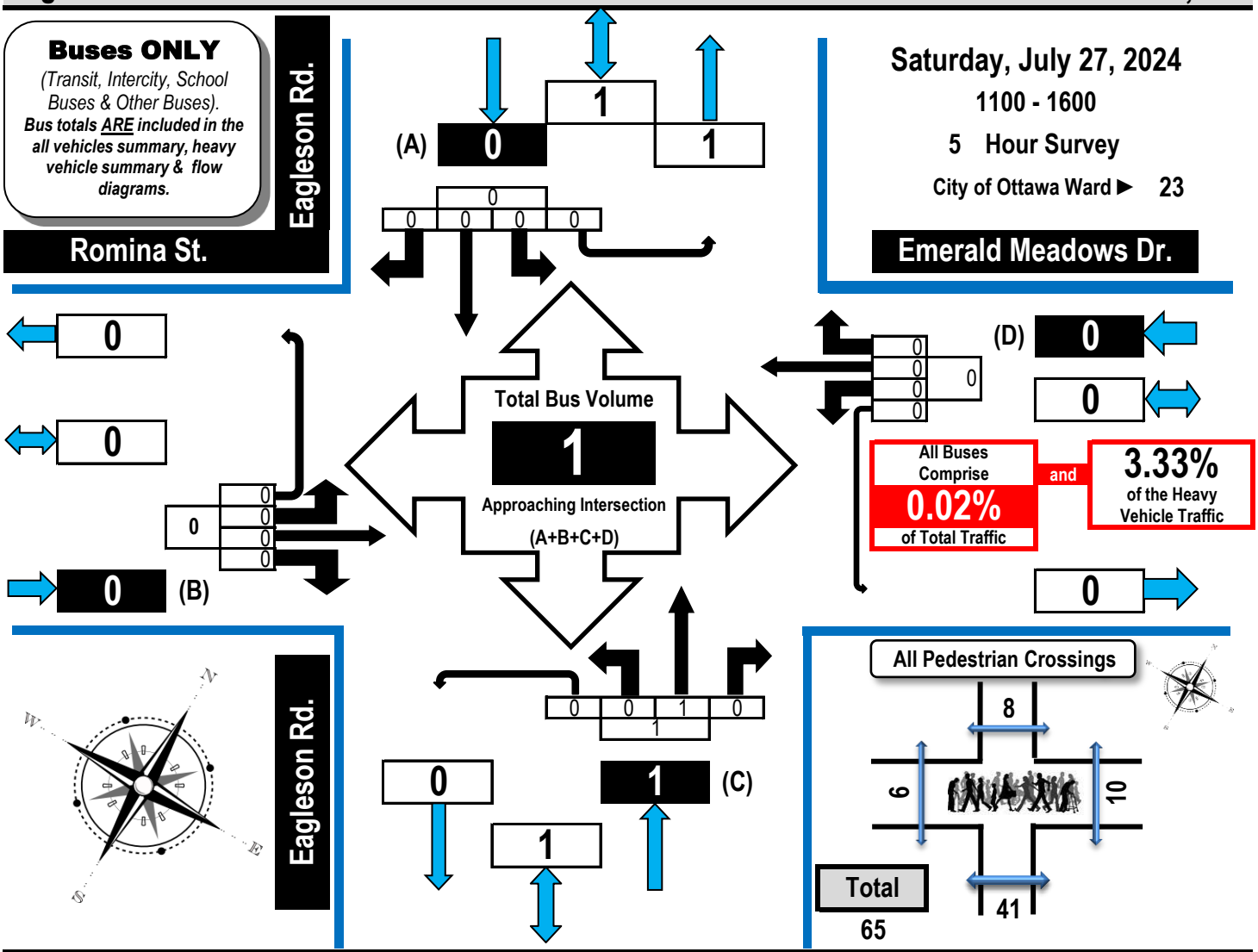
The single bus recorded comprised 3.33% of the heavy vehicle traffic.

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

Eagleson Road & Emerald Meadows Drive/Romina Street — **Kanata, ON**

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

Saturday, July 27, 2024
1100 - 1600
5 Hour Survey
City of Ottawa Ward ► 23



	Romina St.					Emerald Meadows Dr.					Eagleson Rd.					Eagleson Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
1100-1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200-1300	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
1300-1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400-1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500-1600	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	1	0	0	1	0	0	0	0	0	1

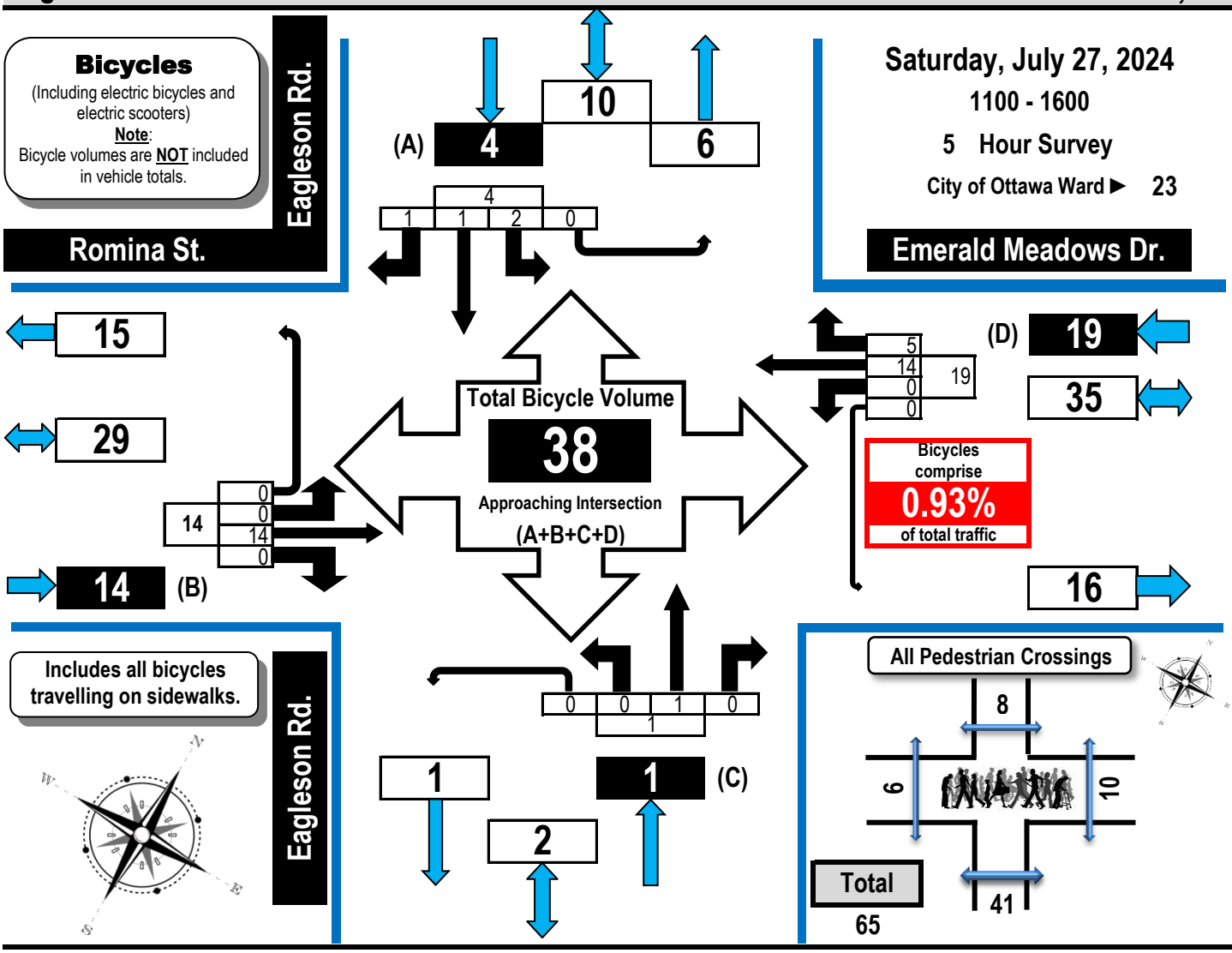
Comments:
The single bus recorded comprised 3.33% of the heavy vehicle traffic.

Turning Movement Count
Bicycle Summary
Flow Diagram

Eagleson Road & Emerald Meadows Drive/Romina Street — Kanata, ON

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

Saturday, July 27, 2024
1100 - 1600
5 Hour Survey
City of Ottawa Ward ► 23



	Romina St.					Emerald Meadows Dr.					Eagleson Rd.					Eagleson Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
1100-1200	0	4	0	0	4	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	10
1200-1300	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	1	0	1	5
1300-1400	0	5	0	0	5	0	3	4	0	7	0	0	0	0	0	2	1	0	0	3	15
1400-1500	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
1500-1600	0	1	0	0	1	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	4
Totals	0	14	0	0	14	0	14	5	0	19	0	1	0	0	1	2	1	1	0	4	38

Comments:

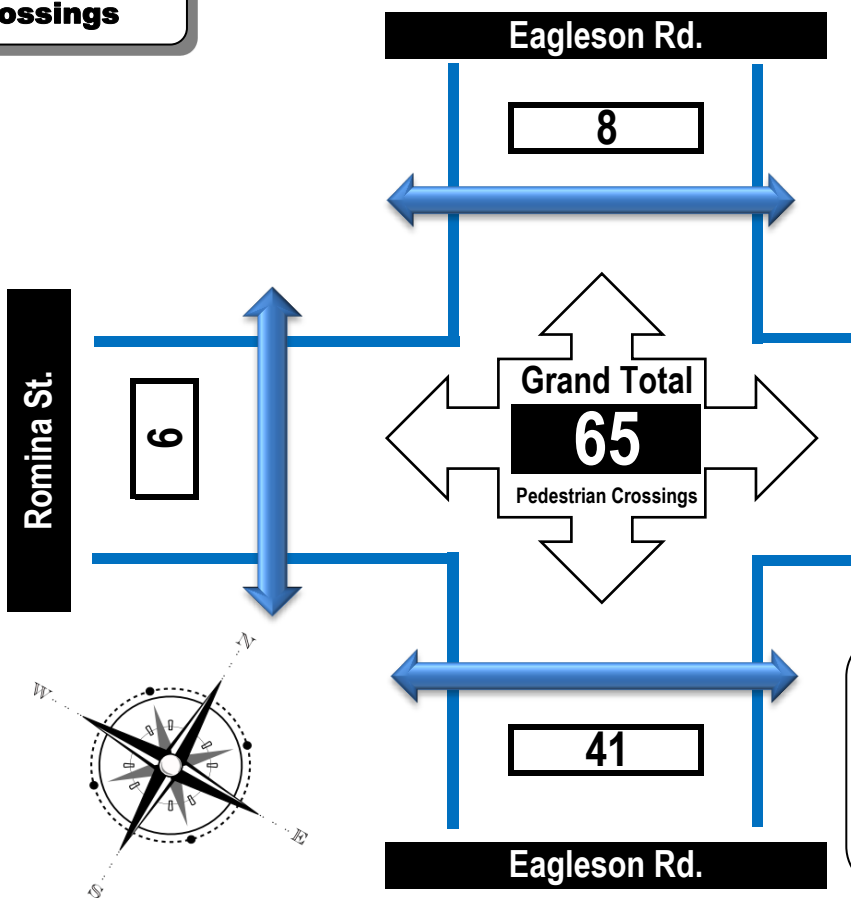
The single bus recorded comprised 3.33% of the heavy vehicle traffic.

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Eagleson Road & Emerald Meadows Drive/Romina Street — Kanata, ON

Pedestrian Crossings

Saturday, July 27, 2024
1100 - 1600
5 Hour Survey
City of Ottawa Ward ► 23



Note

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

Time Period	West Side Crossing Romina St.	East Side Crossing Emerald Meadows Dr.	Street Total	South Side Crossing Eagleson Rd.	North Side Crossing Eagleson Rd.	Street Total	Grand Total
1100-1200	3	2	5	18	2	20	25
1200-1300	1	1	2	8	0	8	10
1300-1400	0	0	0	8	0	8	8
1400-1500	0	2	2	4	2	6	8
1500-1600	2	5	7	3	4	7	14
Totals	**6**	**10**	**16**	**41**	**8**	**49**	**65**

Comments:

The single bus recorded comprised 3.33% of the heavy vehicle traffic.

Transportation Services - Traffic Services

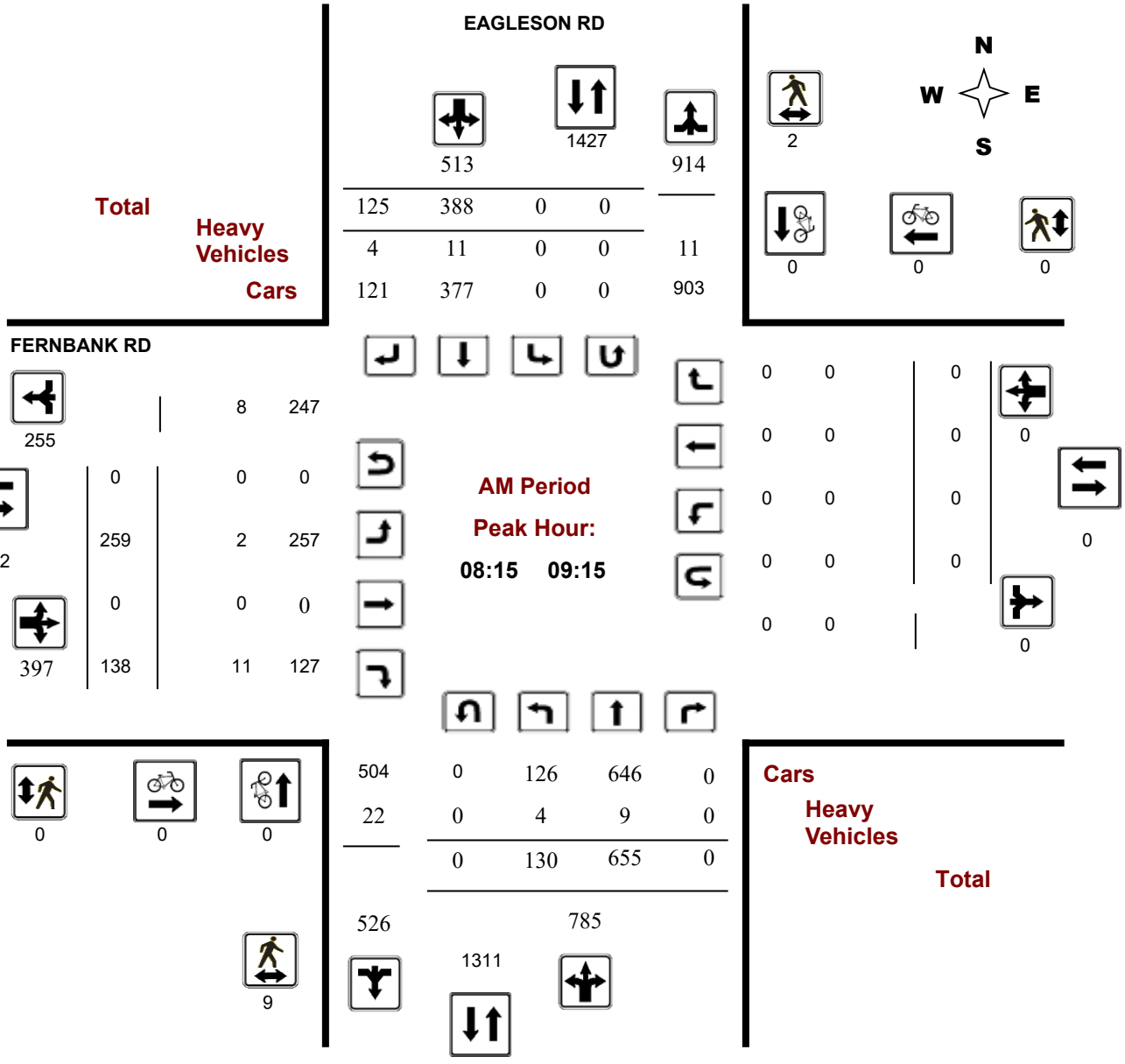
Turning Movement Count - Study Results

EAGLESON RD @ FERNBANK RD

Survey Date: Tuesday, January 09, 2024 **WO No:** 41497

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

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

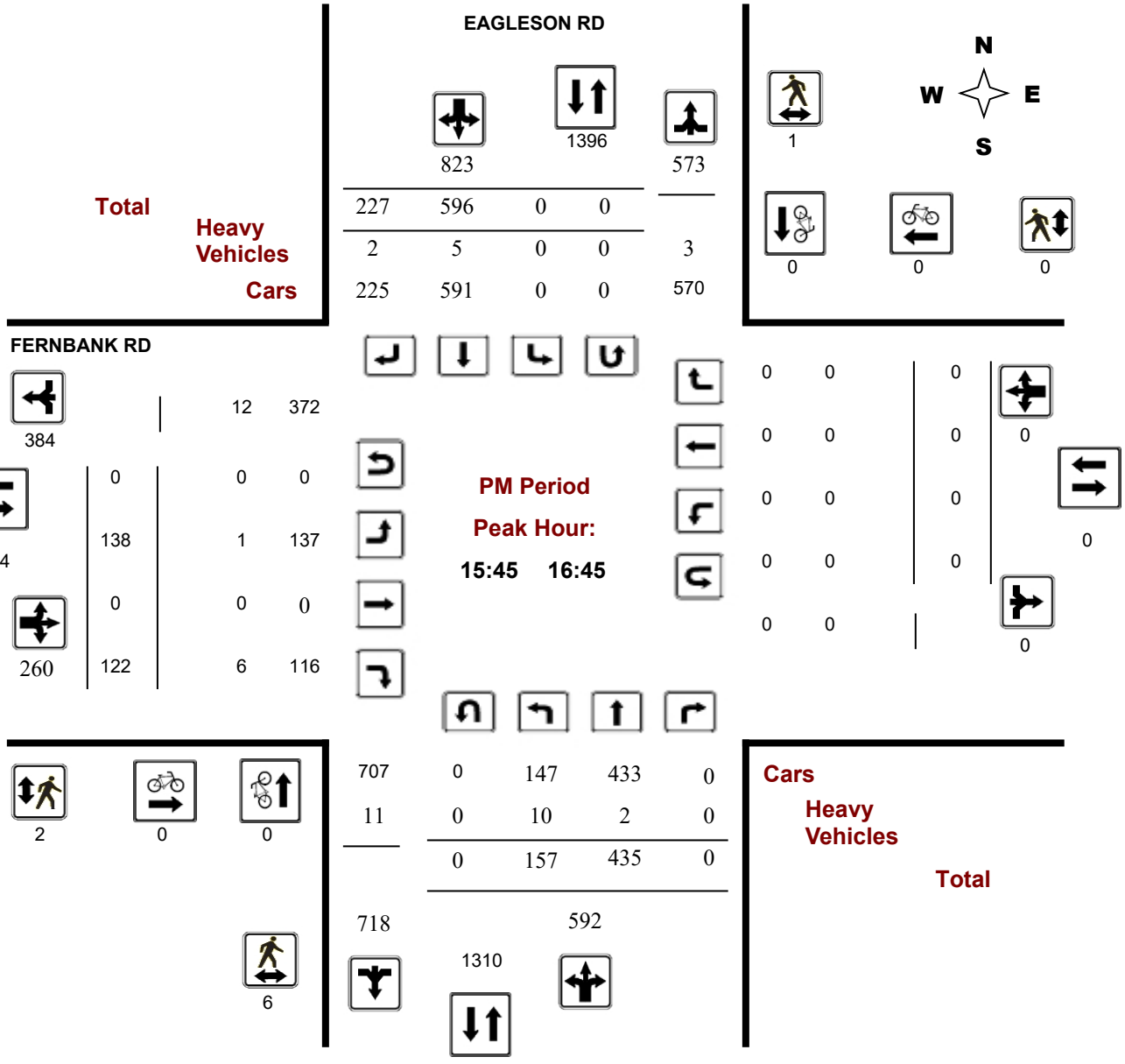
Turning Movement Count - Study Results

EAGLESON RD @ FERNBANK RD

Survey Date: Tuesday, January 09, 2024 **WO No:** 41497

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

EAGLESON RD @ FERNBANK RD

Survey Date: Tuesday, January 09, 2024 **WO No:** 41497

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

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, January 09, 2024

Total Observed U-Turns

Northbound: 1 Southbound: 0

Eastbound: 1 Westbound: 0

AADT Factor

1.10

	EAGLESON RD									FERNBANK RD									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	75	533	0	**608**	0	304	78	**382**	**990**	197	0	54	**251**	0	0	0	**0**	**251**	**1241**
08:00 09:00	115	597	0	**712**	0	391	120	**511**	**1223**	247	0	130	**377**	0	0	0	**0**	**377**	**1600**
09:00 10:00	124	532	0	**656**	0	311	105	**416**	**1072**	184	0	91	**275**	0	0	0	**0**	**275**	**1347**
11:30 12:30	68	354	0	**422**	0	381	108	**489**	**911**	118	0	85	**203**	0	0	0	**0**	**203**	**1114**
12:30 13:30	73	376	0	**449**	0	424	146	**570**	**1019**	119	0	78	**197**	0	0	0	**0**	**197**	**1216**
15:00 16:00	108	420	0	**528**	0	604	204	**808**	**1336**	113	0	117	**230**	0	0	0	**0**	**230**	**1566**
16:00 17:00	132	404	0	**536**	0	561	224	**785**	**1321**	129	0	115	**244**	0	0	0	**0**	**244**	**1565**
17:00 18:00	57	270	0	**327**	0	405	193	**598**	**925**	83	0	79	**162**	0	0	0	**0**	**162**	**1087**
Sub Total	752	3486	0	**4238**	0	3381	1178	**4559**	**8797**	1190	0	749	**1939**	0	0	0	**0**	**1939**	**10736**
U Turns				**1**				**0**	**1**				**1**				**0**	**1**	**2**
Total	752	3486	0	**4239**	0	3381	1178	**4559**	**8798**	1190	0	749	**1940**	0	0	0	**0**	**1940**	**10738**
EQ 12Hr	1045	4846	0	**5892**	0	4700	1637	**6337**	**12229**	1654	0	1041	**2697**	0	0	0	**0**	**2697**	**14926**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	1150	5331	0	**6481**	0	6772	2360	**6971**	**13452**	1819	0	1145	**2967**	0	0	0	**0**	**2967**	**16419**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.10**					
AVG 24Hr	1506	6984	0	**8490**	0	8871	3092	**9132**	**17622**	2383	0	1500	**3887**	0	0	0	**0**	**3887**	**21509**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

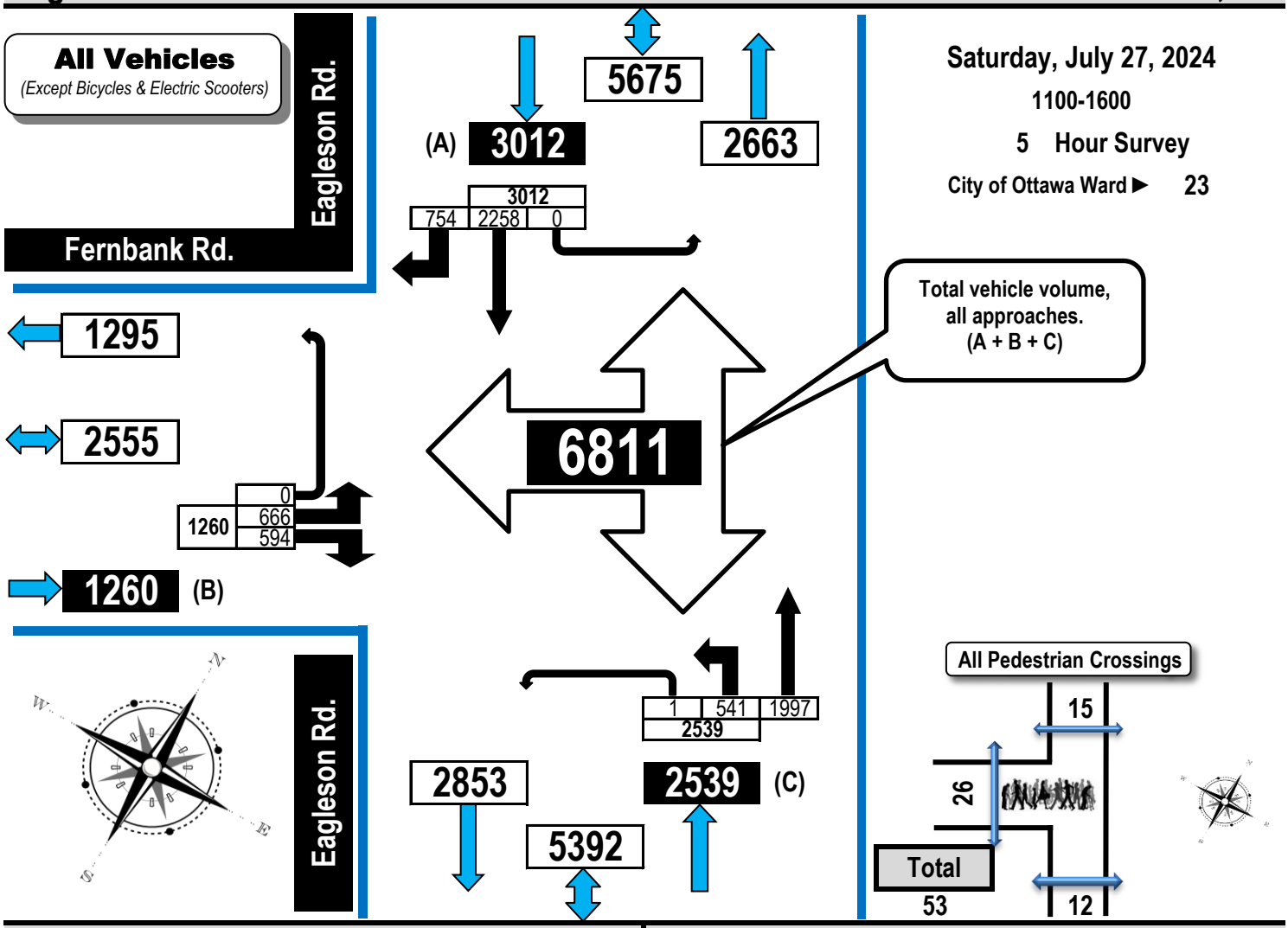
Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

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

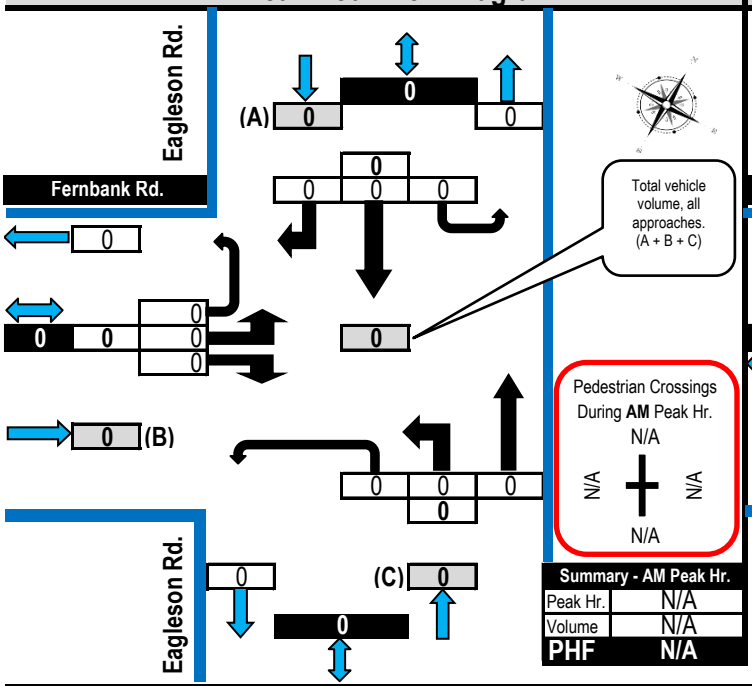
Eagleson Road & Fernbank Road — Kanata, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Saturday, July 27, 2024
1100-1600
5 Hour Survey
City of Ottawa Ward ▶ 23

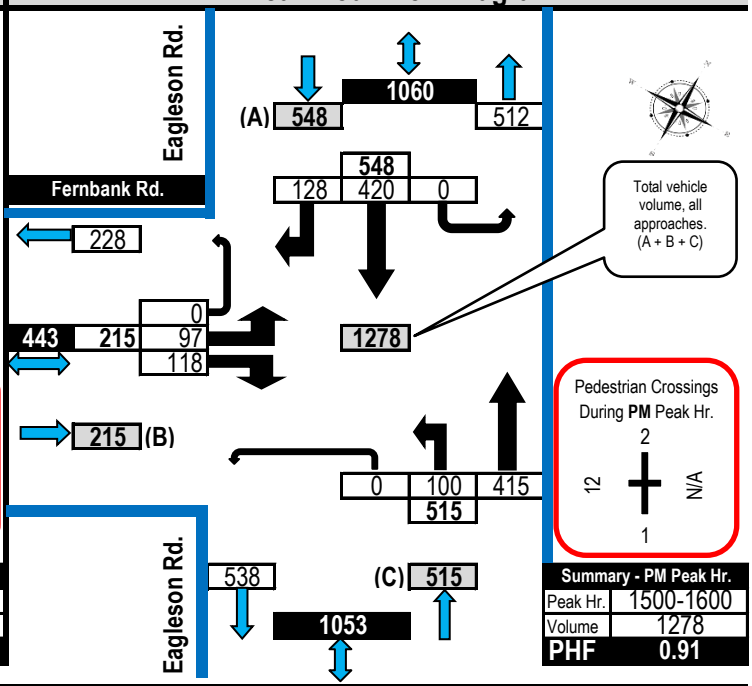


AM Peak Hour Flow Diagram



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

PM Peak Hour Flow Diagram



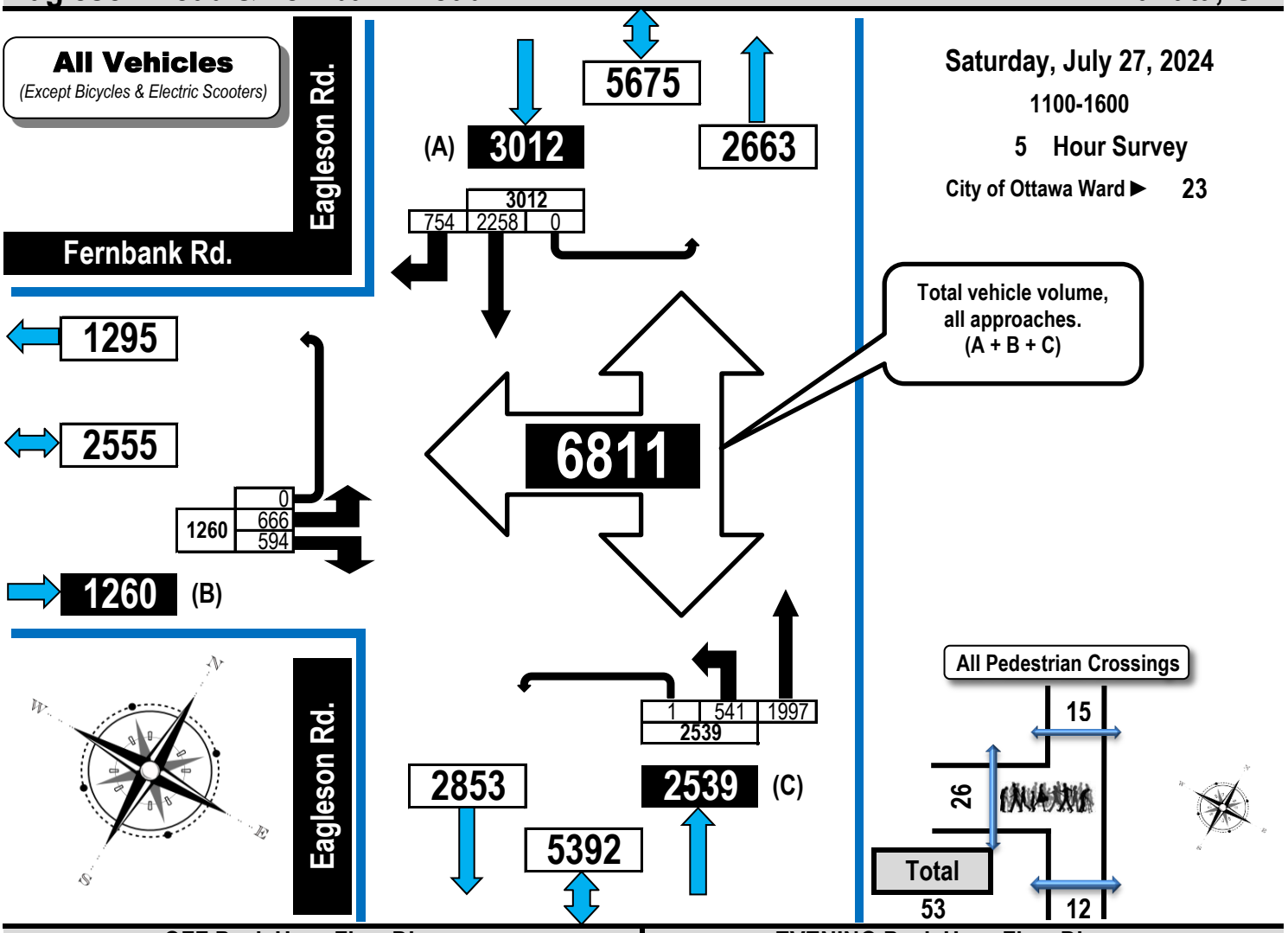
Summary - PM Peak Hr.	
Peak Hr.	1500-1600
Volume	1278
PHF	0.91

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

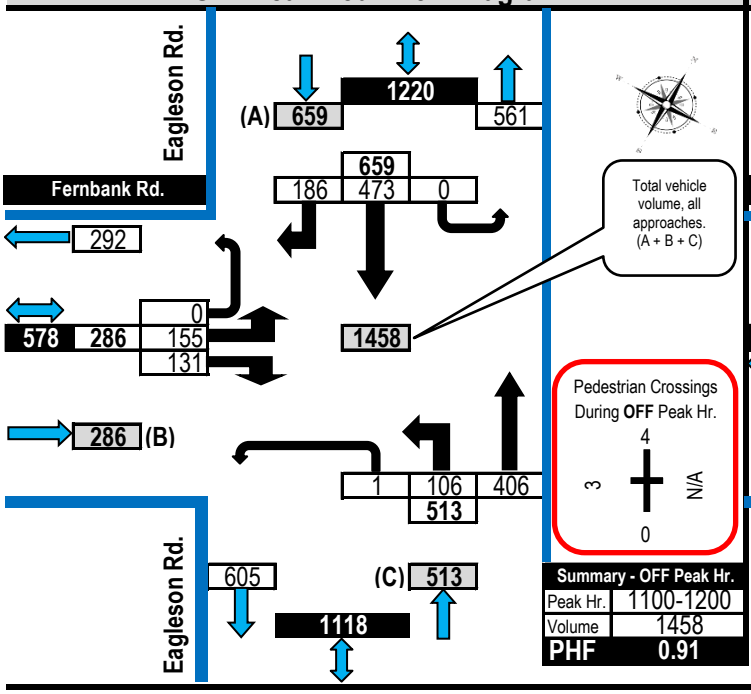
Eagleson Road & Fernbank Road — Kanata, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Saturday, July 27, 2024
1100-1600
5 Hour Survey
City of Ottawa Ward ▶ 23

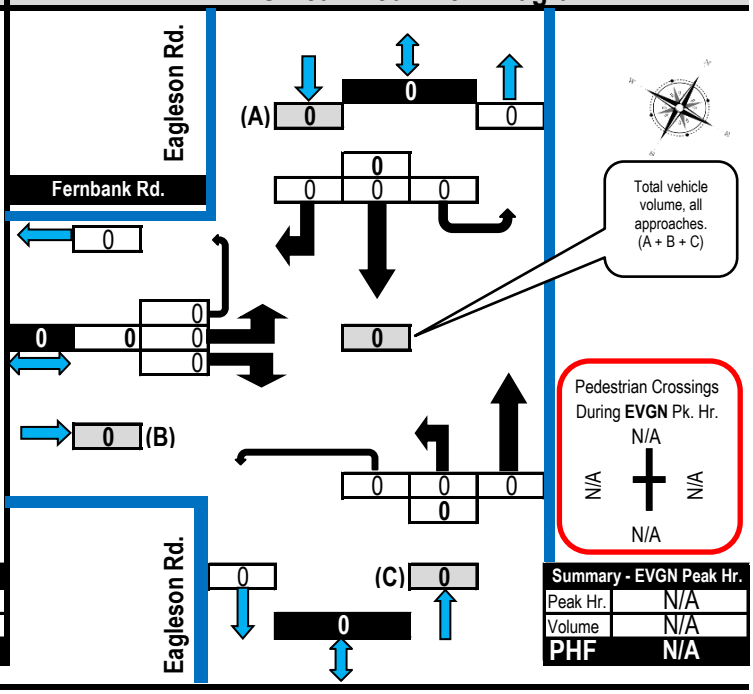


OFF Peak Hour Flow Diagram



Summary - OFF Peak Hr.	
Peak Hr.	1100-1200
Volume	1458
PHF	0.91

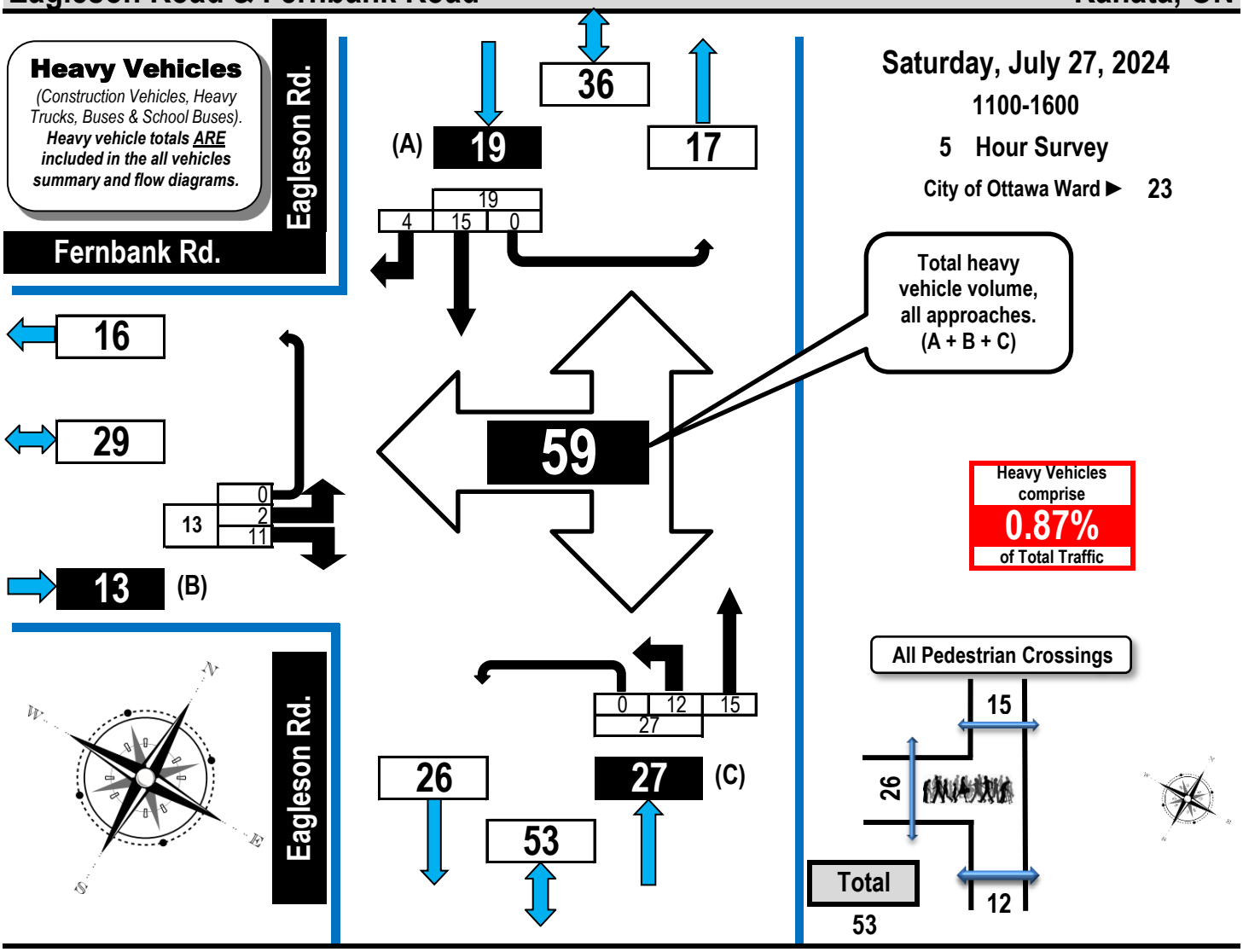
EVENING Peak Hour Flow Diagram



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

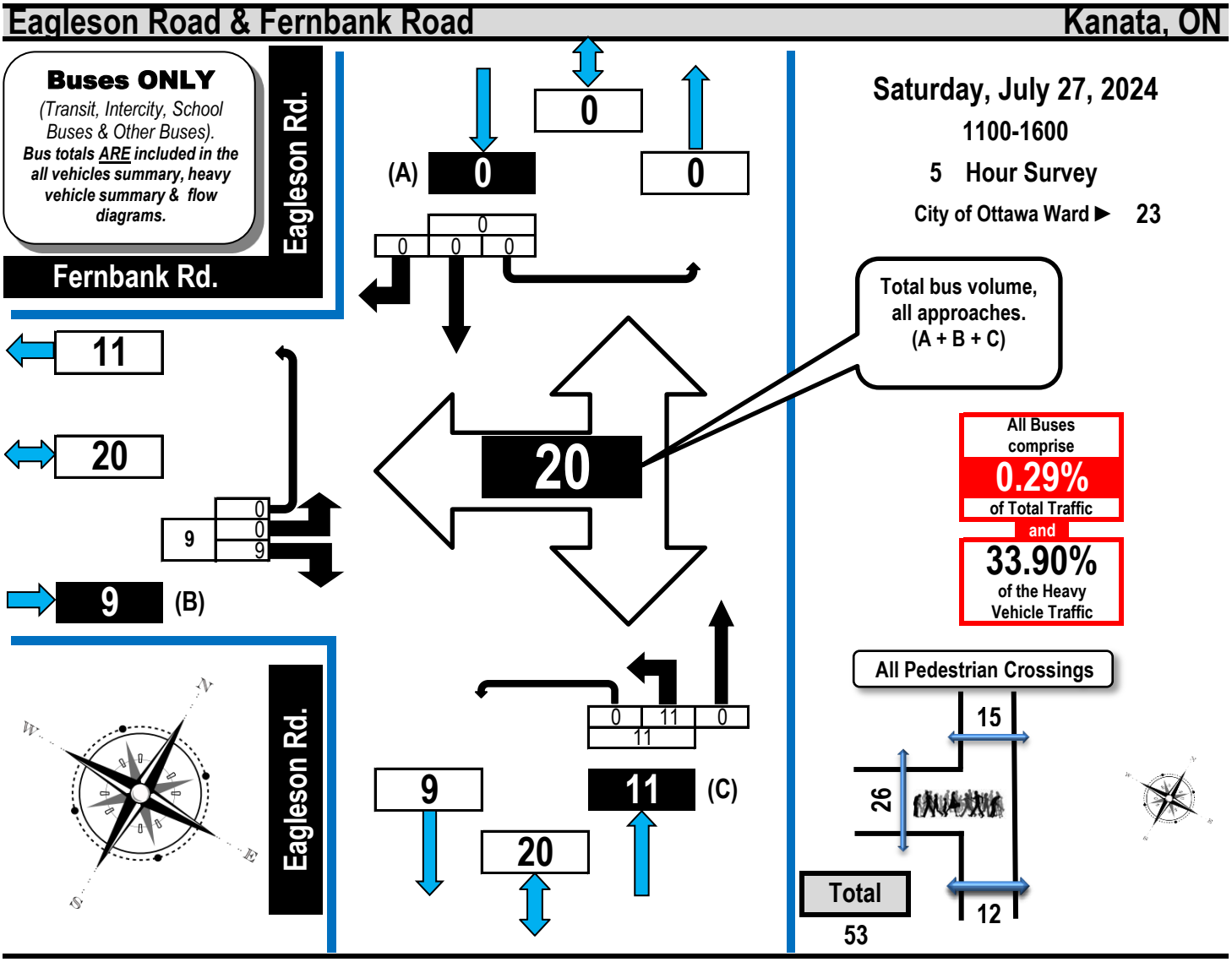
Turning Movement Count
Heavy Vehicle Summary (FHWA Class 4 to 13)
Flow Diagram

Eagleson Road & Fernbank Road — Kanata, ON



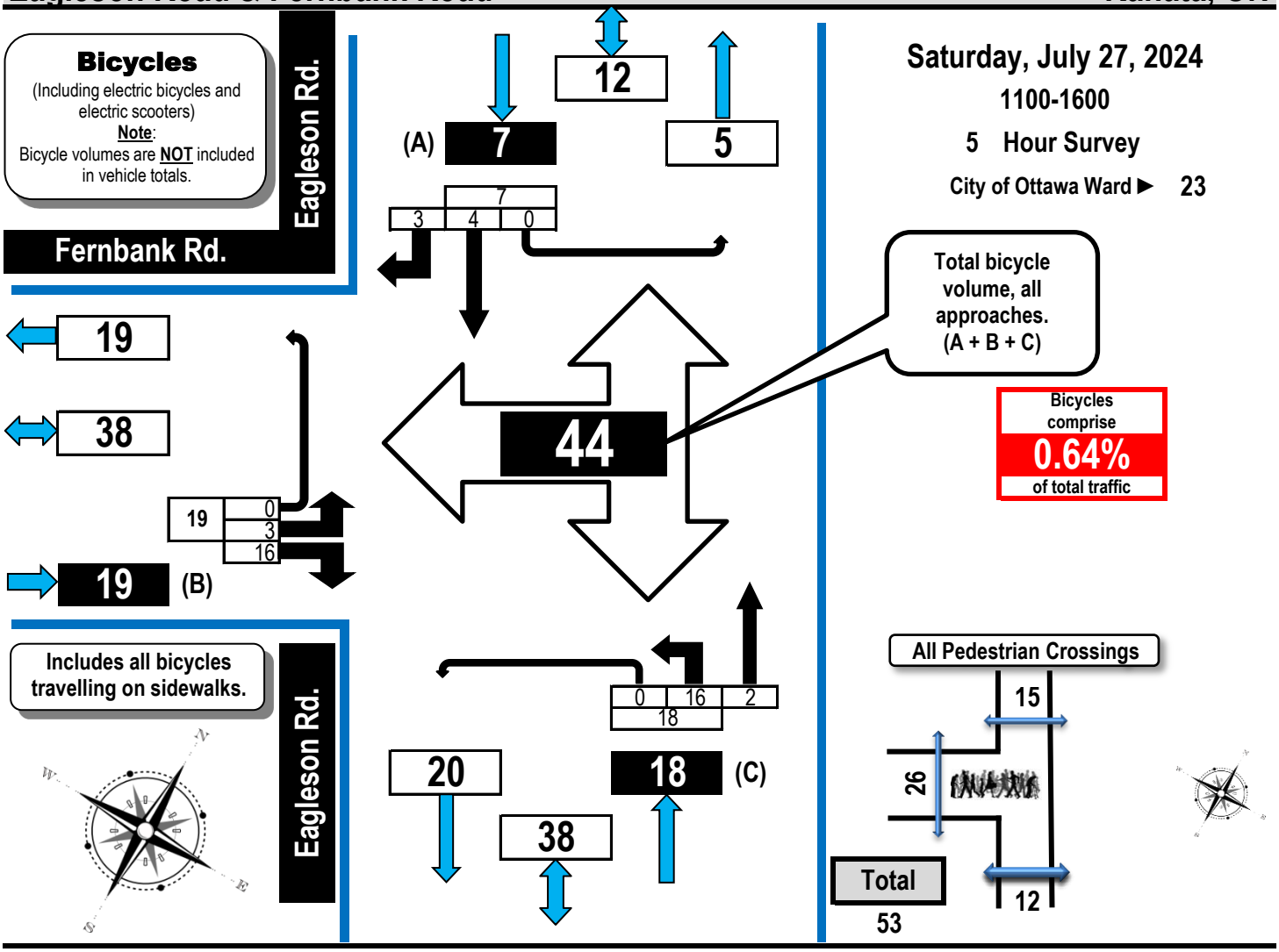
	Fernbank Rd.					N/A					Eagleson Rd.					Eagleson Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
1100-1200	1		1	0	2						2	5		0	7		3	1	0	4	13
1200-1300	0		2	0	2						4	3		0	7		6	1	0	7	16
1300-1400	1		2	0	3						2	4		0	6		1	0	0	1	10
1400-1500	0		3	0	3						2	2		0	4		5	1	0	6	13
1500-1600	0		3	0	3						2	1		0	3		0	1	0	1	7
Totals	2		11	0	13						12	15		0	27		15	4	0	19	59

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



	Fernbank Rd.					N/A					Eagleson Rd.					Eagleson Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
1100-1200	0		1	0	1						2	0		0	2		0	0	0	0	3
1200-1300	0		2	0	2						3	0		0	3		0	0	0	0	5
1300-1400	0		2	0	2						2	0		0	2		0	0	0	0	4
1400-1500	0		2	0	2						2	0		0	2		0	0	0	0	4
1500-1600	0		2	0	2						2	0		0	2		0	0	0	0	4
Totals	0		9	0	9						11	0		0	11		0	0	0	0	20

Turning Movement Count
Bicycle Summary
Flow Diagram



	Fernbank Rd.					N/A					Eagleson Rd.					Eagleson Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
1100-1200	0		1	0	1						2	1		0	3		1	0	0	1	5
1200-1300	0		5	0	5						5	1		0	6		2	1	0	3	14
1300-1400	0		6	0	6						1	0		0	1		0	2	0	2	9
1400-1500	3		2	0	5						2	0		0	2		1	0	0	1	8
1500-1600	0		2	0	2						6	0		0	6		0	0	0	0	8
Totals	3		16	0	19						16	2		0	18		4	3	0	7	44

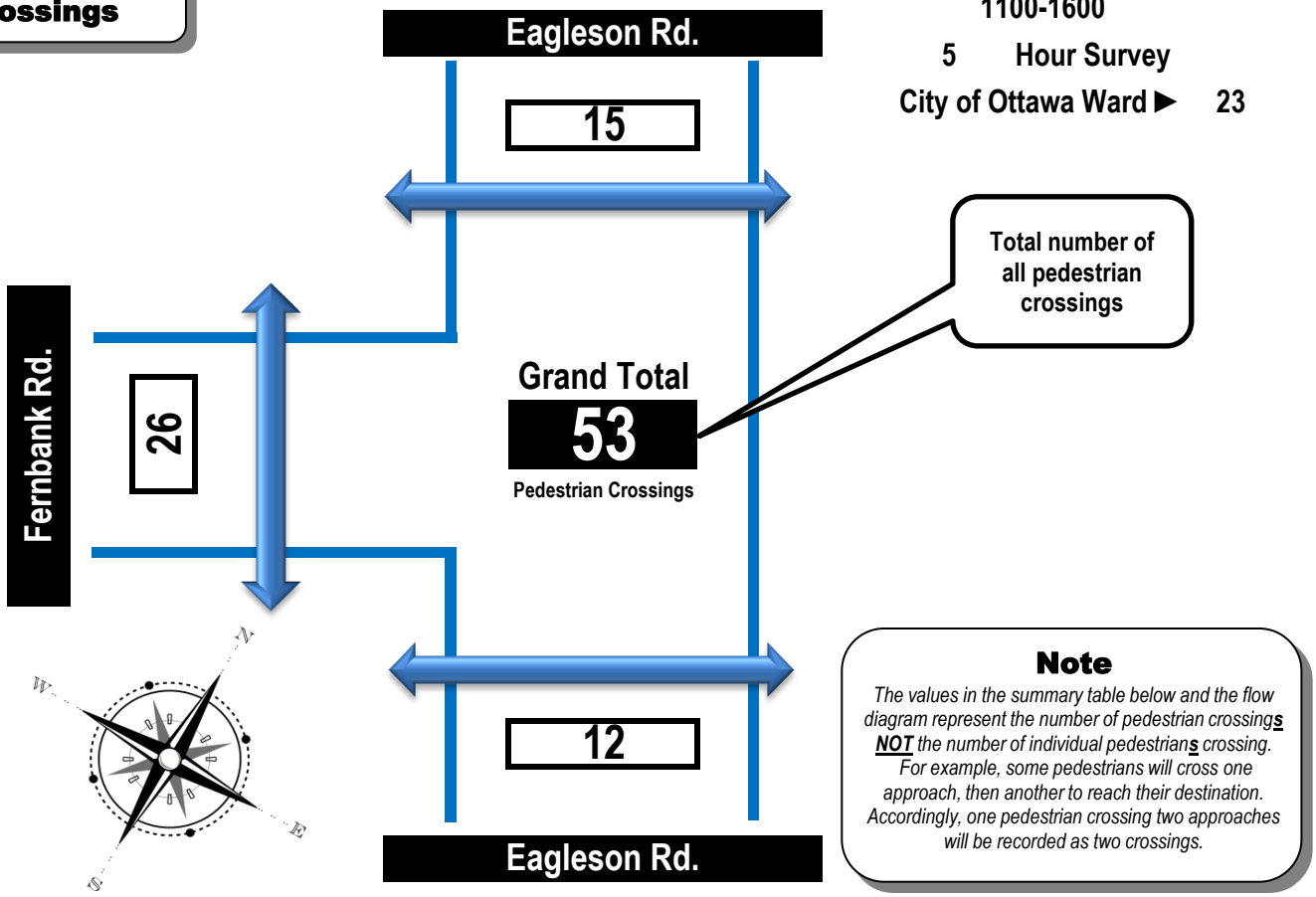
Turning Movement Count

Pedestrian Crossings Summary and Flow Diagram

Eagleson Road & Fernbank Road — Kanata, ON

Pedestrian Crossings

Saturday, July 27, 2024
1100-1600
5 Hour Survey
City of Ottawa Ward ▶ 23



Note

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

Time Period	West Side Crossing Fernbank Rd.	East Side Crossing N/A	Street Total	South Side Crossing Eagleson Rd.	North Side Crossing Eagleson Rd.	Street Total	Grand Total
1100-1200	3		3	0	4	4	7
1200-1300	3		3	1	4	5	8
1300-1400	7		7	6	0	6	13
1400-1500	1		1	4	5	9	10
1500-1600	12		12	1	2	3	15
Totals	**26**		**26**	**12**	**15**	**27**	**53**

Comments:

OC Transpo and Para Transpo buses, private buses and school buses comprise 33.90% of the heavy vehicle traffic.

Turning Movement Count
Summary Report
Including OFF Peak, PM Peak and PHF
All Vehicles Except Bicycles

Eagleson Road & Fernbank Road — Kanata, ON

Survey Date: Saturday, July 27, 2024 **Start Time:** 1100 **AADT Factor:** 1.1

Weather: AM: Mostly Sunny 24° C **Survey Duration:** 5 Hrs. **Survey Hours:** 1100 - 1600

Weather PM: Mostly Sunny 28° C **Surveyor(s):** J. Mousseau

	Fernbank Rd.					N/A						Eagleson Rd.					Eagleson Rd.						
	Eastbound					Westbound						Northbound					Southbound						
Time Period	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot	Street Total	LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot	Street Total	Grand Total
1100-1200	155		131	0	**286**						**286**	106	406		1	**513**		473	186	0	**659**	**1172**	**1458**
1200-1300	141		102	0	**243**						**243**	116	410		0	**526**		460	148	0	**608**	**1134**	**1377**
1300-1400	145		140	0	**285**						**285**	108	398		0	**506**		460	154	0	**614**	**1120**	**1405**
1400-1500	128		103	0	**231**						**231**	111	368		0	**479**		445	138	0	**583**	**1062**	**1293**
1500-1600	97		118	0	**215**						**215**	100	415		0	**515**		420	128	0	**548**	**1063**	**1278**
Totals	**666**		**594**	**0**	**1260**						**1260**	**541**	**1997**		**1**	**2539**		**2258**	**754**	**0**	**3012**	**5551**	**6811**

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

OFF Peak Hour Factor ➡	0.91											Highest Hourly Vehicle Volume Between 1100h & 1500h										
OFF Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	Gr. Tot.
1100-1200	155	0	131	0	**286**	0	0	0	0	**0**	**286**	106	406	0	1	**513**	0	473	186	0	**659**	**1172**	**1458**

PM Peak Hour Factor ➡	0.91											Highest Hourly Vehicle Volume Between 1500h & 1900h										
PM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	Gr. Tot.
1500-1600	97	0	118	0	**215**	0	0	0	0	**0**	**215**	100	415	0	0	**515**	0	420	128	0	**548**	**1063**	**1278**

Comments:

OC Transpo and Para Transpo buses, private buses and school buses comprise 33.90% of the heavy vehicle traffic.

Notes:

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

Appendix C

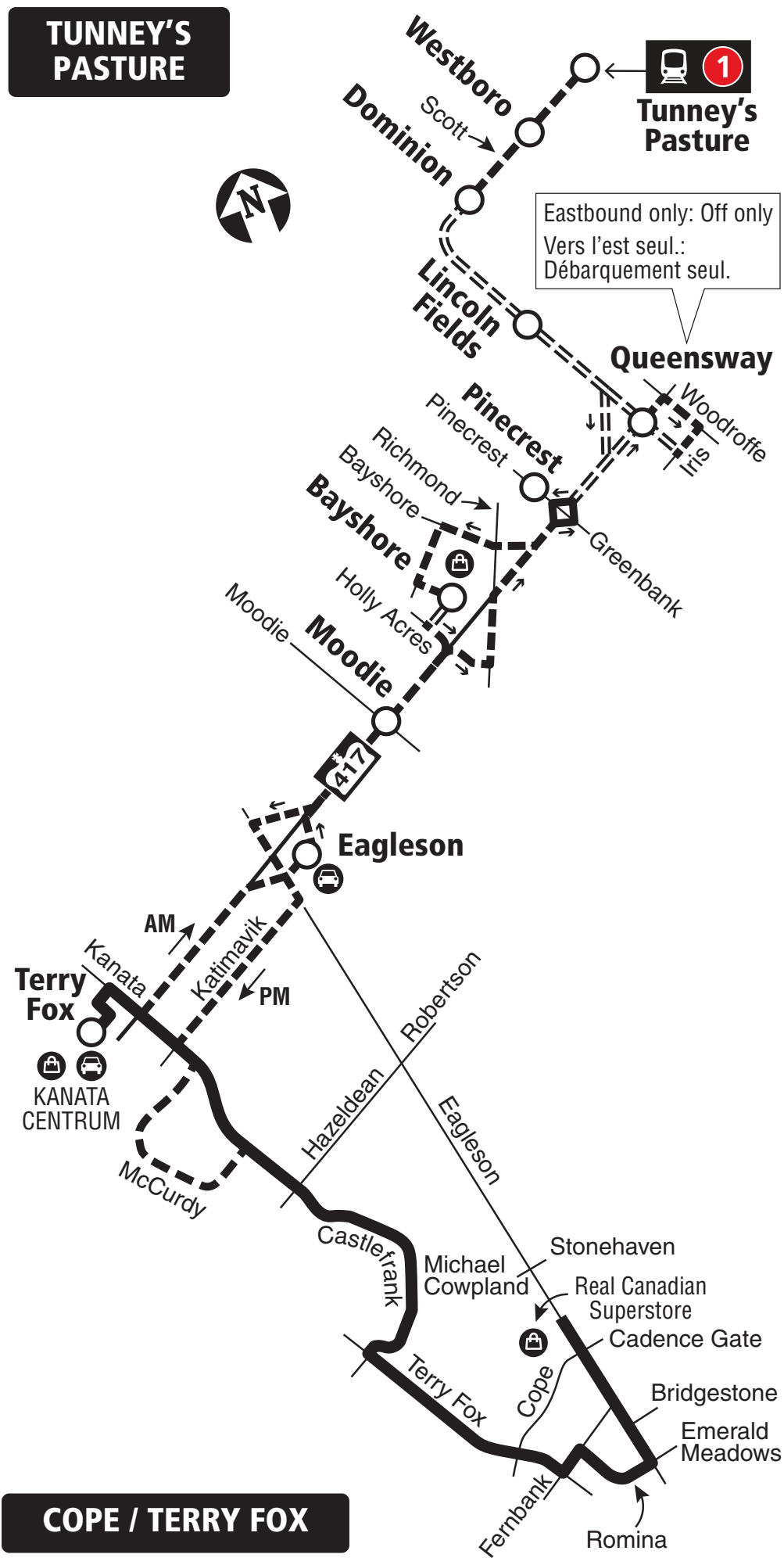
Transit Route Maps

60

COPE
TERRY FOX
TUNNEY'S PASTURE

Local

7 days a week / 7 jours par semaine
All day service
Service toute la journée



2024

- Station
- Transitway
- Peak Periods Only / Périodes de pointe seulement
- Park & Ride / Parc relais
- Shopping Centre / Centre commercial

2024

Future route starts when the New Ways to Bus network launches.

Les futurs circuits seront mis en service lors du lancement du réseau L'autobus réinventé.

Customer Service / Service à la clientèle … **613-560-5000**

Security / Sécurité …… **613-741-2478**

OC Transpo **octranspo.com**

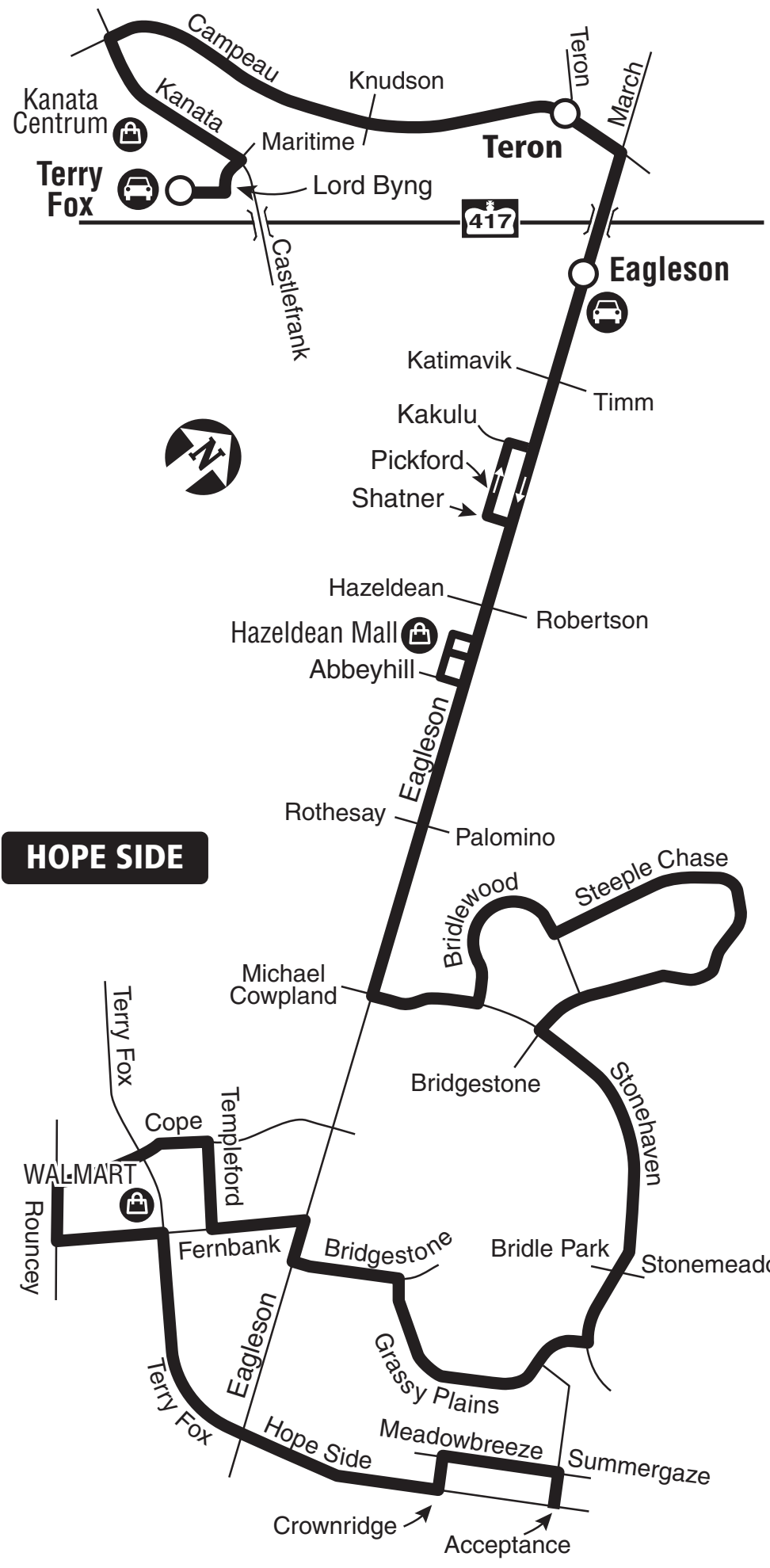
168 HOPE SIDE / TERRY FOX

Local

7 days a week / 7 jours par semaine

All day service
Service toute la journée

TERRY FOX



HOPE SIDE

2024

- Station
- Park & Ride / Parc relais
- Shopping Centre / Centre commercial

2024

Future route starts when the New Ways to Bus network launches.

Les futurs circuits seront mis en service lors du lancement du réseau L'autobus réinventé.

Customer Service / Service à la clientèle … **613-560-5000**

Security / Sécurité …… **613-741-2478**

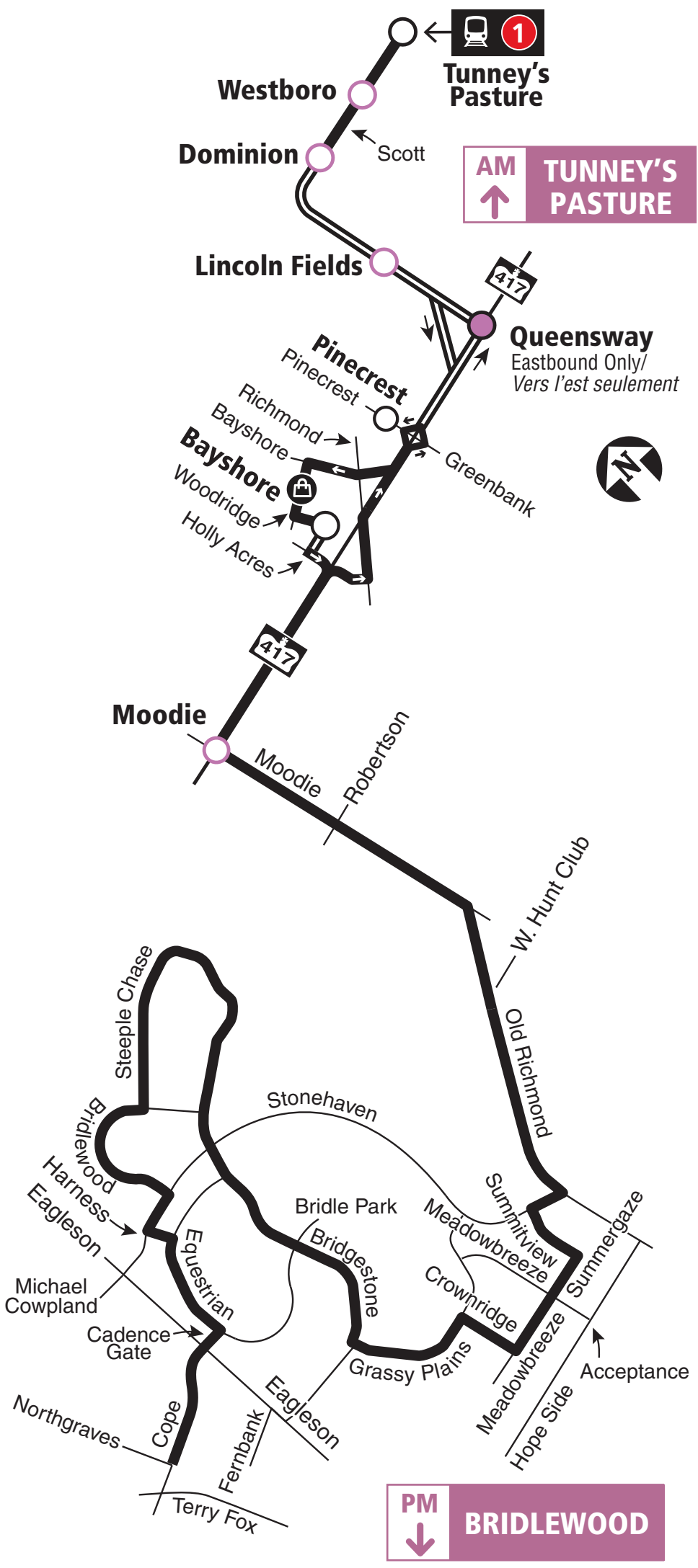
OC Transpo **octranspo.com**

256 Connexion

TUNNEY'S PASTURE
BRIDLEWOOD

Monday to Friday / Lundi au vendredi

Peak periods only
Périodes de pointe seulement



2024

- Transitway & Station
- Limited stops: Off only in AM / No stop in PM
  Arrêts limités : débarquement en AM seulement / aucun arrêt en PM
- AM: Off only - PM: Full Service
  AM : débarquement seul. - PM : service complet
- Shopping Centre / Centre commercial

2024

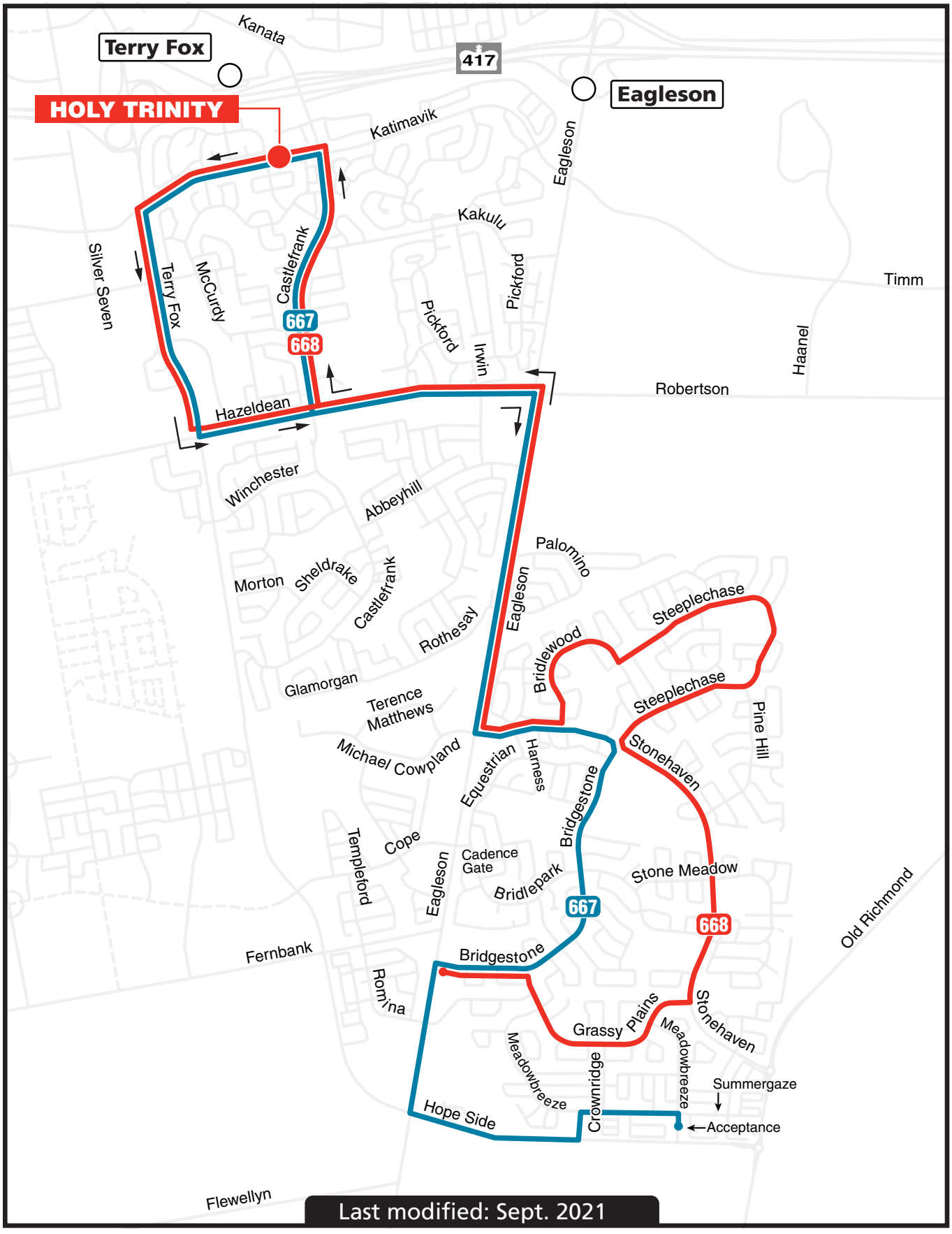
Future route starts when the New Ways to Bus network launches.

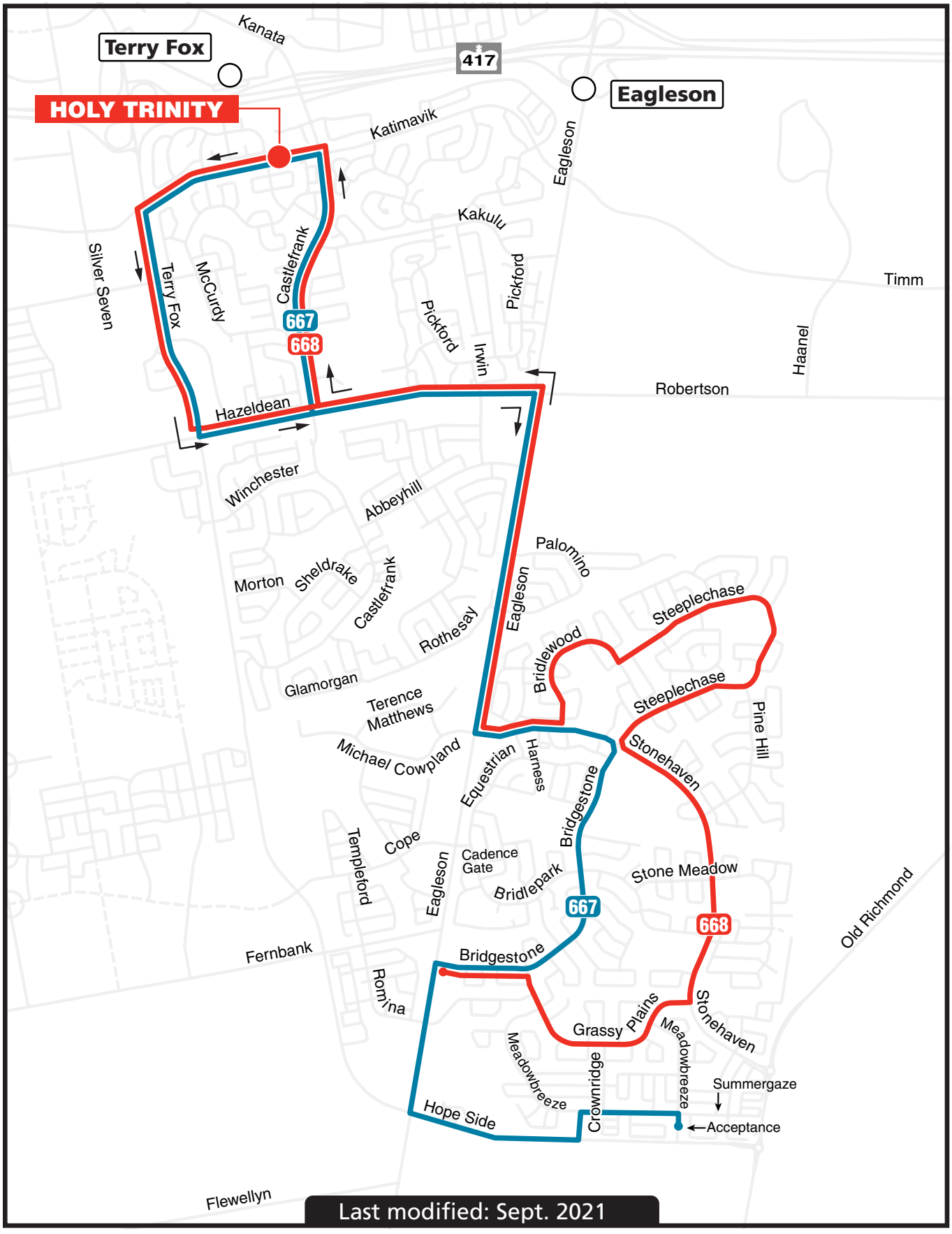
Les futurs circuits seront mis en service lors du lancement du réseau L'autobus réinventé.

Customer Service / Service à la clientèle ... **613-560-5000**

Security / Sécurité **613-741-2478**

OC Transpo **octranspo.com**


Terry Fox
Kanata
417
Eagleson
HOLY TRINITY
Katimavik
Eagleson
Kakulu
Silver Seven
Terry Fox
McCurdy
Castlefrank
667
668
Pickford
Pickford
Irwin
Timm
Haanel
Robertson
Hazeldean
Winchester
Abbeyhill
Palomino
Morton
Sheldrake
Castlefrank
Eagleson
Steeplechase
Rothesay
Bridlewood
Glamorgan
Terence Matthews
Steeplechase
Pine Hill
Michael Cowpland
Equestrian
Harness
Stonehaven
Bridgestone
Templeford
Cope
Eagleson
Cadence Gate
Bridlepark
Stone Meadow
667
668
Old Richmond
Fernbank
Bridgestone
Romina
Grassy Plains
Meadowbreeze
Crownridge
Meadowbreeze
Stonehaven
Summergaze
Hope Side
Acceptance
Flewellyn
Last modified: Sept. 2021


Terry Fox
Kanata
417
Eagleson
HOLY TRINITY
Katimavik
Eagleson
Kakulu
Silver Seven
Terry Fox
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Castlefrank
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Steeplechase
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Glamorgan
Terence Matthews
Steeplechase
Pine Hill
Michael Cowpland
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Templeford
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Cadence Gate
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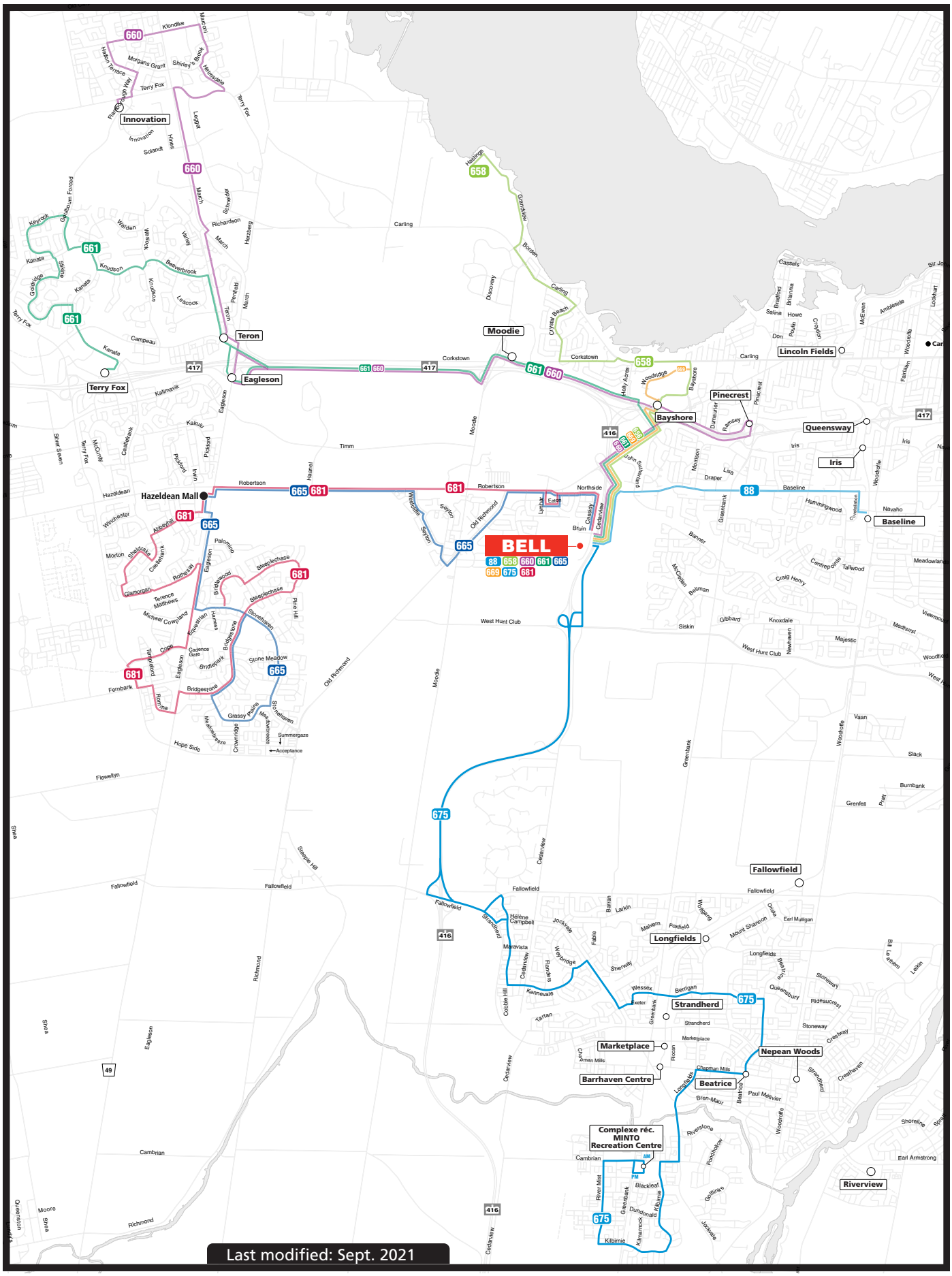
Grassy Plains
Meadowbreeze
Crownridge
Meadowbreeze
Stonehaven
Summergaze
Hope Side
Acceptance
Flewellyn
Last modified: Sept. 2021


Innovation
Teron
Eagleson
Terry Fox
Moodie
Corkstown
Carling
Lincoln Fields
Pinecrest
Bayshore
Queensway
Iris
Baseline
Navaho
Hazeldean Mall
BELL
88 658 660 661 665
669 675 681
Fallowfield
Longfields
Strandherd
Marketplace
Barrhaven Centre
Nepean Woods
Beatrice
Complexe réc. MINTO Recreation Centre
Riverview
West Hunt Club
Cambrian
Richmond
Last modified: Sept. 2021

Appendix D

Collision Data

ID	Accident_Date	Accident_Time	Location	Location_Type	Classification	Initial_Impact	Road_Surface	Environment	Light	Traffic_Control	Num_of_Veh	Num_Of_Ped	Num_of_Bicycles	Max_Injury
2017--3001	2017-03-24	8:04	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	03 - P.D. only	03 - Rear end	03 - Loose snow	03 - Snow	01 - Daylight	02 - Stop sign	2	0		
2017--4639	2017-05-19	11:00	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	02 - Stop sign	2	0		
2017--6974	2017-08-06	14:02	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	03 - P.D. only	02 - Angle	01 - Dry	01 - Clear	01 - Daylight	02 - Stop sign	3	0		
2018--15445	2018-01-25	9:00	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	03 - P.D. only	02 - Angle	01 - Dry	01 - Clear	01 - Daylight	02 - Stop sign	2	0		
2018--23060	2018-09-23	7:56	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	03 - P.D. only	07 - SMV other	01 - Dry	01 - Clear	01 - Daylight	02 - Stop sign	1	0		
2018--26506	2018-12-14	16:20	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	03 - P.D. only	02 - Angle	02 - Wet	02 - Rain	05 - Dusk	02 - Stop sign	2	0		
2019--29935	2019-01-21	17:03	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	02 - Non-fatal injury	03 - Rear end	02 - Wet	01 - Clear	05 - Dusk	02 - Stop sign	2	0		01 - Minimal
2019--36705	2019-07-19	12:26	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	02 - Non-fatal injury	05 - Turning movement	01 - Dry	01 - Clear	01 - Daylight	02 - Stop sign	2	0	1	01 - Minimal
2019--41378	2019-11-18	8:45	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	02 - Stop sign	2	0		
2019--43043	2019-12-23	10:30	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	03 - P.D. only	03 - Rear end	02 - Wet	01 - Clear	01 - Daylight	02 - Stop sign	2	0		
2020--50764	2020-08-09	11:55	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	02 - Non-fatal injury	07 - SMV other	02 - Wet	02 - Rain	01 - Daylight	02 - Stop sign	1	0		02 - Minor
2021--57079	2021-03-12	16:35	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	03 - P.D. only	02 - Angle	01 - Dry	01 - Clear	01 - Daylight	02 - Stop sign	2	0		
2021--63904	2021-12-31	9:56	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	02 - Stop sign	2	0		
2022--66373	2022-02-12	10:00	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	03 - P.D. only	02 - Angle	06 - Ice	04 - Freezing Rain	01 - Daylight	02 - Stop sign	2	0		
2022--67809	2022-03-28	12:50	BRIDGESTONE DR @ EAGLESON RD (0010095)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	02 - Stop sign	2	0		
2019--35830	2019-06-25	2:49	BRIDGESTONE DR btwn EAGLESON RD & WINDWAYS CRES (__3Z05EI)	Midblock	02 - Non-fatal injury	06 - SMV unattended vehicle	01 - Dry	01 - Clear	07 - Dark	10 - No control	1	0		02 - Minor
2017--2808	2017-03-17	17:43	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	02 - Non-fatal injury	05 - Turning movement	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		02 - Minor
2017--3478	2017-04-08	9:00	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		
2017--4300	2017-05-07	15:40	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	02 - Non-fatal injury	07 - SMV other	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	1	1		01 - Minimal
2017--5757	2017-06-23	16:01	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	02 - Angle	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		
2017--6539	2017-07-21	8:54	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	05 - Turning movement	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		
2017--9798	2017-11-01	18:22	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	05 - Turning movement	02 - Wet	02 - Rain	07 - Dark	01 - Traffic signal	2	0		
2017--9864	2017-11-03	8:31	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	02 - Angle	02 - Wet	01 - Clear	01 - Daylight	01 - Traffic signal	3	0		
2017--10762	2017-11-26	11:41	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	04 - Sideswipe	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		
2017--10253	2017-11-13	18:30	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	02 - Angle	01 - Dry	01 - Clear	07 - Dark	01 - Traffic signal	2	0		
2017--12304	2017-12-26	19:35	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	02 - Non-fatal injury	05 - Turning movement	01 - Dry	01 - Clear	07 - Dark	01 - Traffic signal	2	0		01 - Minimal
2018--15539	2018-01-27	17:01	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	02 - Non-fatal injury	07 - SMV other	02 - Wet	02 - Rain	05 - Dusk	01 - Traffic signal	1	1		02 - Minor
2018--17252	2018-03-14	11:14	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	02 - Angle	03 - Loose snow	03 - Snow	01 - Daylight	01 - Traffic signal	2	0		
2018--23013	2018-09-22	7:09	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	02 - Non-fatal injury	02 - Angle	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		02 - Minor
2019--30798	2019-02-03	16:45	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	05 - Turning movement	03 - Loose snow	03 - Snow	05 - Dusk	01 - Traffic signal	2	0		
2019--30306	2019-01-27	15:00	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	04 - Sideswipe	02 - Wet	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		
2019--34392	2019-05-15	20:14	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	05 - Turning movement	01 - Dry	01 - Clear	05 - Dusk	01 - Traffic signal	2	0		
2019--39120	2019-09-26	11:33	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	99 - Other	02 - Wet	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		
2020--50463	2020-07-25	5:06	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	02 - Non-fatal injury	07 - SMV other	01 - Dry	01 - Clear	03 - Dawn	01 - Traffic signal	1	0		02 - Minor
2020--50262	2020-07-15	17:00	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		
2020--53171	2020-11-25	9:58	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	02 - Angle	03 - Loose snow	02 - Rain	01 - Daylight	01 - Traffic signal	2	0		
2021--56281	2021-02-11	18:00	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	02 - Angle	01 - Dry	01 - Clear	07 - Dark	01 - Traffic signal	2	0		
2021--63453	2021-12-14	10:39	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	02 - Angle	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		
2022--65920	2022-01-27	20:40	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	05 - Turning movement	03 - Loose snow	03 - Snow	07 - Dark	01 - Traffic signal	2	0		
2022--66695	2022-02-18	17:00	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	02 - Angle	06 - Ice	01 - Clear	07 - Dark	01 - Traffic signal	2	0		
2022--66788	2022-02-20	16:00	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	05 - Turning movement	05 - Packed snow	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		
2022--67625	2022-03-20	11:11	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	02 - Non-fatal injury	02 - Angle	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		01 - Minimal
2022--69240	2022-05-27	11:30	EAGLESON RD @ COPE DR/CADENCE GT (0011923)	Intersection	03 - P.D. only	05 - Turning movement	02 - Wet	02 - Rain	01 - Daylight	01 - Traffic signal	2	0		
2018--14939	2018-01-12	17:45	EAGLESON RD @ EMERALD MEADOWS DR (0010422)	Intersection	03 - P.D. only	02 - Angle	06 - Ice	03 - Snow	07 - Dark	02 - Stop sign	2	0		
2019--42280	2019-12-09	7:36	EAGLESON RD @ EMERALD MEADOWS DR (0010422)	Intersection	03 - P.D. only	02 - Angle	02 - Wet	02 - Rain	03 - Dawn	02 - Stop sign	2	0		
2020--45941	2020-01-15	20:37	EAGLESON RD @ EMERALD MEADOWS DR (0010422)	Intersection	03 - P.D. only	02 - Angle	02 - Wet	01 - Clear	07 - Dark	02 - Stop sign	2	0		
2020--52079	2020-10-09	18:18	EAGLESON RD @ EMERALD MEADOWS DR (0010422)	Intersection	03 - P.D. only	05 - Turning movement	01 - Dry	01 - Clear	05 - Dusk	02 - Stop sign	2	0		
2017--5731	2017-06-22	22:13	EAGLESON RD @ FERNBANK RD (0011846)	Intersection	03 - P.D. only	05 - Turning movement	01 - Dry	01 - Clear	07 - Dark	01 - Traffic signal	2	0		
2017--9620	2017-10-28	15:38	EAGLESON RD @ FERNBANK RD (0011846)	Intersection	03 - P.D. only	05 - Turning movement	02 - Wet	02 - Rain	01 - Daylight	01 - Traffic signal	3	0		
2017--10770	2017-11-26	15:28	EAGLESON RD @ FERNBANK RD (0011846)	Intersection	02 - Non-fatal injury	05 - Turning movement	02 - Wet	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		02 - Minor
2018--14775	2018-01-08	7:45	EAGLESON RD @ FERNBANK RD (0011846)	Intersection	02 - Non-fatal injury	03 - Rear end	03 - Loose snow	03 - Snow	03 - Dawn	01 - Traffic signal	2	0		01 - Minimal
2018--21980	2018-08-21	18:00	EAGLESON RD @ FERNBANK RD (0011846)	Intersection	03 - P.D. only	03 - Rear end	02 - Wet	02 - Rain	01 - Daylight	01 - Traffic signal	3	0		
2019--32672	2019-03-21	17:21	EAGLESON RD @ FERNBANK RD (0011846)	Intersection	02 - Non-fatal injury	03 - Rear end	02 - Wet	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		01 - Minimal
2019--33336	2019-04-12	17:15	EAGLESON RD @ FERNBANK RD (0011846)	Intersection	03 - P.D. only	03 - Rear end	02 - Wet	02 - Rain	01 - Daylight	01 - Traffic signal	2	0		
2020--46615	2020-01-28	9:40	EAGLESON RD @ FERNBANK RD (0011846)	Intersection	03 - P.D. only	03 - Rear end	04 - Slush	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		
2021--62103	2021-10-25	16:30	EAGLESON RD @ FERNBANK RD (0011846)	Intersection	03 - P.D. only	04 - Sideswipe	01 - Dry	01 - Clear	05 - Dusk	01 - Traffic signal	2	0		
2021--62478	2021-11-03	8:10	EAGLESON RD @ FERNBANK RD (0011846)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		
2022--65767	2022-01-23	12:16	EAGLESON RD @ FERNBANK RD (0011846)	Intersection	02 - Non-fatal injury	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		02 - Minor
2022--66186	2022-02-05	9:00	EAGLESON RD @ FERNBANK RD (0011846)	Intersection	03 - P.D. only	05 - Turning movement	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		
2022--67448	2022-03-12	5:56	EAGLESON RD @ FERNBANK RD (0011846)	Intersection	03 - P.D. only	02 - Angle	03 - Loose snow	03 - Snow	03 - Dawn	01 - Traffic signal	2	0		
2022--73416	2022-11-23	14:00	EAGLESON RD @ FERNBANK RD (0011846)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0		
2018--17234	2018-03-14	6:30	EAGLESON RD btwn BRIDGESTONE DR & EMERALD MEADOWS DR/ROMINA ST (__3Z05CD)	Midblock	03 - P.D. only	07 - SMV other	05 - Packed snow	03 - Snow	03 - Dawn	10 - No control	1	0		
2020--49474	2020-06-03	20:31	EAGLESON RD btwn CADENCE GT/COPE DR & 240 S OF CADENCE GT/COPE DR (__3Z06FRA)	Midblock	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	05 - Dusk	10 - No control	2	0		
2022--67106	2022-03-01	12:05	EAGLESON RD btwn CADENCE GT/COPE DR & 240 S OF CADENCE GT/COPE DR (__3Z06FRA)	Midblock	03 - P.D. only	04 - Sideswipe	06 - Ice	03 - Snow	01 - Daylight	10 - No control	2	0		
2017--1551	2017-02-12	16:54	EAGLESON RD btwn FERNBANK RD & 240 S OF CADENCE GT/COPE DR (__3Z06FRB)	Midblock	02 - Non-fatal injury	01 - Approaching	03 - Loose snow	03 - Snow	05 - Dusk	10 - No control	2	0		01 - Minimal
2018--19148	2018-05-22	15:50	EAGLESON RD btwn FERNBANK RD & 240 S OF CADENCE GT/COPE DR (__3Z06FRB)	Midblock	02 - Non-fatal injury	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	10 - No control	2	0		02 - Minor
2019--34377	2019-05-15	16:12	EAGLESON RD btwn FERNBANK RD & 240 S OF CADENCE GT/COPE DR (__3Z06FRB)	Midblock	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	10 - No control	2	0		
2022--68790	2022-05-11	15:00	EAGLESON RD btwn FERNBANK RD & 240 S OF CADENCE GT/COPE DR (__3Z06FRB)	Midblock	03 - P.D. only	04 - Sideswipe	01 - Dry	01 - Clear	01 - Daylight	10 - No control	2	0		
2019--29413	2019-01-12	23:22	EAGLESON RD btwn FERNBANK RD & BRIDGESTONE DR (__3Z082Q)	Midblock	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	07 - Dark	10 - No control	3	0		

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: BRIDGESTONE DR @ EAGLESON RD

Traffic Control: Stop sign **Total Collisions:** 13

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Jan-25, Thu,09:00	Clear	Angle	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Passenger van	Other motor vehicle	
2018-Sep-23, Sun,07:56	Clear	SMV other	P.D. only	Dry	West	Unknown	Automobile, station wagon	Ran off road	0
2018-Dec-14, Fri,16:20	Rain	Angle	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jan-21, Mon,17:03	Clear	Rear end	Non-fatal injury	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jul-19, Fri,12:26	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2019-Nov-18, Mon,08:45	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Dec-23, Mon,10:30	Clear	Rear end	P.D. only	Wet	East	Stopped	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Aug-09, Sun,11:55	Rain	SMV other	Non-fatal injury	Wet	North	Turning right	Automobile, station wagon	Skidding/sliding	0
2021-Mar-12, Fri,16:35	Clear	Angle	P.D. only	Dry	West	Turning left	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Dec-31, Fri,09:56	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Passenger van	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2022-Feb-12, Sat,10:00	Freezing Rain	Angle	P.D. only	Ice	West	Slowing or stopping	Passenger van	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Mar-28, Mon,12:50	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2022-Oct-17, Mon,18:39	Clear	Rear end	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: EAGLESON RD @ COPE DR/CADENCE GT

Traffic Control: Traffic signal **Total Collisions:** 20

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Jan-27, Sat,17:01	Rain	SMV other	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Pedestrian	1
2018-Mar-14, Wed,11:14	Snow	Angle	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Skidding/sliding	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Sep-22, Sat,07:09	Clear	Angle	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jan-27, Sun,15:00	Clear	Sideswipe	P.D. only	Wet	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Feb-03, Sun,16:45	Snow	Turning movement	P.D. only	Loose snow	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2019-May-15, Wed,20:14	Clear	Turning movement	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Sep-26, Thu,11:33	Clear	Other	P.D. only	Wet	South	Going ahead	Truck - tractor	Debris falling off vehicle	0
					South	Going ahead	Unknown	Other	
2020-Jul-15, Wed,17:00	Clear	Rear end	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle	0
					East	Turning right	Pick-up truck	Other motor vehicle	
2020-Jul-25, Sat,05:06	Clear	SMV other	Non-fatal injury	Dry	East	Turning right	Automobile, station wagon	Pole (utility, power)	0
2020-Nov-25, Wed,09:58	Rain	Angle	P.D. only	Loose snow	South	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2021-Feb-11, Thu,18:00	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Dec-14, Tue,10:39	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Jan-27, Thu,20:40	Snow	Turning movement	P.D. only	Loose snow	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: EAGLESON RD @ COPE DR/CADENCE GT

Traffic Control: Traffic signal **Total Collisions:** 20

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2022-Feb-18, Fri,17:00	Clear	Angle	P.D. only	Ice	North	Turning right	Pick-up truck	Other motor vehicle	0
					West	Unknown	Unknown	Other motor vehicle	
2022-Feb-20, Sun,16:00	Clear	Turning movement	P.D. only	Packed snow	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Mar-20, Sun,11:11	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2022-May-27, Fri,11:30	Rain	Rear end	P.D. only	Wet	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Passenger van	Other motor vehicle	
2022-Jun-07, Tue,16:40	Rain	Turning movement	Non-fatal injury	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Intercity bus	Other motor vehicle	
2022-Dec-09, Fri,12:00	Clear	Turning movement	P.D. only	Dry	South	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Dec-31, Sat,04:35	Rain	Rear end	P.D. only	Wet	South	Stopped	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: EAGLESON RD @ FERNBANK RD

Traffic Control: Traffic signal **Total Collisions:** 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Jan-08, Mon,07:45	Snow	Rear end	Non-fatal injury	Loose snow	East	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Aug-21, Tue,18:00	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: EAGLESON RD @ FERNBANK RD

Traffic Control: Traffic signal **Total Collisions:** 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Mar-21, Thu,17:21	Clear	Rear end	Non-fatal injury	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Apr-12, Fri,17:15	Rain	Rear end	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Jan-28, Tue,09:40	Clear	Rear end	P.D. only	Slush	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2021-Oct-25, Mon,16:30	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Unknown	Unknown	Other motor vehicle	
2021-Nov-03, Wed,08:10	Clear	Rear end	P.D. only	Dry	North	Going ahead	Passenger van	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2022-Jan-23, Sun,12:16	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	
2022-Feb-05, Sat,09:00	Clear	Turning movement	P.D. only	Dry	North	Turning left	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Mar-12, Sat,05:56	Snow	Angle	P.D. only	Loose snow	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Truck - dump	Other motor vehicle	
2022-Nov-23, Wed,14:00	Clear	Rear end	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	

Appendix E

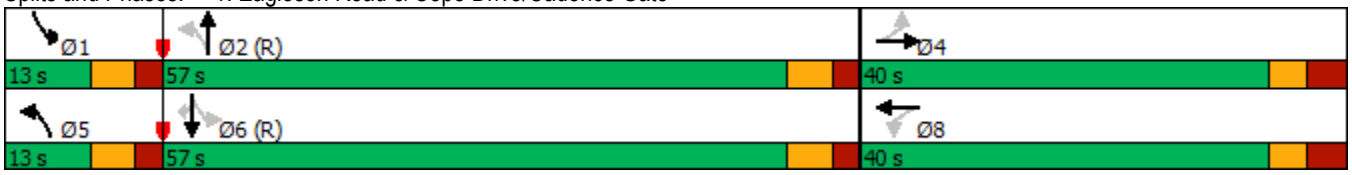
Intersection Capacity Analysis

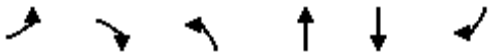
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	39	38	34	82	141	87	766	9	65	417	94
Future Volume (vph)	157	39	38	34	82	141	87	766	9	65	417	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00		0.97
Frt		0.926			0.905			0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1631	1608	0	1631	1595	0	1729	3416	0	1729	3357	1488
Flt Permitted	0.449			0.702			0.457			0.274		
Satd. Flow (perm)	768	1608	0	1201	1595	0	828	3416	0	498	3357	1443
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		42			81			1				104
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			491.1			267.4	
Travel Time (s)		11.9			14.4			29.5			16.0	
Confl. Peds. (#/hr)	5		3	3		5	4		2	2		4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	5%	3%	6%	4%	1%	0%	1%	0%	0%	3%	4%
Adj. Flow (vph)	174	43	42	38	91	157	97	851	10	72	463	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	174	85	0	38	248	0	97	861	0	72	463	104
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	28.0		11.0	28.0	28.0
Total Split (s)	40.0	40.0		40.0	40.0		13.0	57.0		13.0	57.0	57.0
Total Split (%)	36.4%	36.4%		36.4%	36.4%		11.8%	51.8%		11.8%	51.8%	51.8%
Maximum Green (s)	33.5	33.5		33.5	33.5		7.0	51.0		7.0	51.0	51.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	26.5	26.5		26.5	26.5		66.4	60.5		64.7	57.9	57.9
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.60	0.55		0.59	0.53	0.53
v/c Ratio	0.95	0.20		0.13	0.56		0.17	0.46		0.20	0.26	0.13

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	93.6	17.7		30.7	27.9		12.4	22.4		10.3	16.1	3.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	93.6	17.7		30.7	27.9		12.4	22.4		10.3	16.1	3.7
LOS	F	B		C	C		B	C		B	B	A
Approach Delay		68.7			28.2			21.4			13.4	
Approach LOS		E			C			C			B	
Queue Length 50th (m)	36.2	7.1		6.3	30.6		10.7	70.2		5.5	28.8	0.0
Queue Length 95th (m)	#67.6	18.1		13.8	51.4		m17.6	91.2		12.6	42.9	9.0
Internal Link Dist (m)		141.8			136.5			467.1			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	233	518		365	542		560	1879		375	1766	808
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	0.75	0.16		0.10	0.46		0.17	0.46		0.19	0.26	0.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 57 (52%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 25.6		Intersection LOS: C	
Intersection Capacity Utilization 72.0%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	259	138	139	699	388	125
Future Volume (vph)	259	138	139	699	388	125
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0	0.0	50.0			0.0
Storage Lanes	1	1	1			1
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.96				
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1712	1432	1679	1802	1767	1502
Flt Permitted	0.950		0.391			
Satd. Flow (perm)	1707	1371	691	1802	1767	1502
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		153				139
Link Speed (k/h)	60			60	60	
Link Distance (m)	183.9			188.9	491.1	
Travel Time (s)	11.0			11.3	29.5	
Confl. Peds. (#/hr)	2	9				
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	8%	3%	1%	3%	3%
Adj. Flow (vph)	288	153	154	777	431	139
Shared Lane Traffic (%)						
Lane Group Flow (vph)	288	153	154	777	431	139
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.0	27.0	11.0	27.0	27.0	27.0
Total Split (s)	32.0	32.0	28.0	78.0	50.0	50.0
Total Split (%)	29.1%	29.1%	25.5%	70.9%	45.5%	45.5%
Maximum Green (s)	26.0	26.0	22.0	72.0	44.0	44.0
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.3	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	22.5	22.5	75.5	75.5	60.4	60.4
Actuated g/C Ratio	0.20	0.20	0.69	0.69	0.55	0.55
v/c Ratio	0.83	0.38	0.28	0.63	0.44	0.16

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	61.5	8.5	7.9	13.0	13.3	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.5	8.5	7.9	13.0	13.3	4.7
LOS	E	A	A	B	B	A
Approach Delay	43.1			12.2	11.2	
Approach LOS	D			B	B	
Queue Length 50th (m)	58.8	0.0	10.7	85.7	64.4	7.3
Queue Length 95th (m)	86.9	15.7	19.3	131.4	99.4	25.4
Internal Link Dist (m)	159.9			164.9	467.1	
Turn Bay Length (m)	190.0		50.0			
Base Capacity (vph)	403	440	671	1237	970	887
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.35	0.23	0.63	0.44	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 18.9		Intersection LOS: B	
Intersection Capacity Utilization 64.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Eagleson Road & Fernbank Road

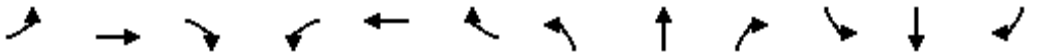
Intersection	
Int Delay, s/veh	8.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	302	566	35	223	330
Future Vol, veh/h	27	302	566	35	223	330
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	37	3	1	9	5	3
Mvmt Flow	30	336	629	39	248	367

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1493	630	0	0	669	0
Stage 1	630	-	-	-	-	-
Stage 2	863	-	-	-	-	-
Critical Hdwy	6.77	6.23	-	-	4.15	-
Critical Hdwy Stg 1	5.77	-	-	-	-	-
Critical Hdwy Stg 2	5.77	-	-	-	-	-
Follow-up Hdwy	3.833	3.327	-	-	2.245	-
Pot Cap-1 Maneuver	113	480	-	-	907	-
Stage 1	470	-	-	-	-	-
Stage 2	360	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	82	480	-	-	906	-
Mov Cap-2 Maneuver	82	-	-	-	-	-
Stage 1	470	-	-	-	-	-
Stage 2	261	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.7	0	4.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	82	480	906	-
HCM Lane V/C Ratio	-	-	0.366	0.699	0.273	-
HCM Control Delay (s)	-	-	72.3	28.1	10.5	-
HCM Lane LOS	-	-	F	D	B	-
HCM 95th %tile Q(veh)	-	-	1.4	5.4	1.1	-

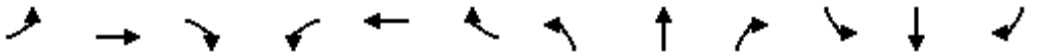


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	13	61	16	7	44	24	514	8	24	306	27
Future Volume (vph)	43	13	61	16	7	44	24	514	8	24	306	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98		0.99	0.98							
Frt		0.876			0.871				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1647	1480	0	1729	1555	0	1662	1767	1381	1729	1784	1228
Flt Permitted	0.720			0.704			0.556			0.425		
Satd. Flow (perm)	1246	1480	0	1270	1555	0	973	1767	1381	774	1784	1228
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		68			49				36			36
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			326.6	
Travel Time (s)		15.3			16.4			14.5			19.6	
Confl. Peds. (#/hr)	1		5	5		1						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	15%	3%	0%	0%	0%	4%	3%	12%	0%	2%	26%
Adj. Flow (vph)	48	14	68	18	8	49	27	571	9	27	340	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	82	0	18	57	0	27	571	9	27	340	30
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		53.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	41.1%	41.1%		41.1%	41.1%		58.9%	58.9%	58.9%	58.9%	58.9%	58.9%
Maximum Green (s)	31.0	31.0		31.0	31.0		47.1	47.1	47.1	47.1	47.1	47.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	8.1	8.1		8.1	8.1		52.7	52.7	52.7	52.7	52.7	52.7
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.76	0.76	0.76	0.76	0.76	0.76
v/c Ratio	0.33	0.35		0.12	0.25		0.04	0.42	0.01	0.05	0.25	0.03

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	33.4	14.4		27.9	13.4		3.7	5.5	0.1	3.8	4.2	1.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	14.4		27.9	13.4		3.7	5.5	0.1	3.8	4.2	1.4
LOS	C	B		C	B		A	A	A	A	A	A
Approach Delay		21.4			16.9			5.3			4.0	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	5.6	1.6		2.1	0.9		0.8	24.7	0.0	0.8	12.3	0.0
Queue Length 95th (m)	14.5	12.3		7.2	9.7		3.1	48.9	0.2	3.2	25.0	1.9
Internal Link Dist (m)		145.7			158.2			217.6			302.6	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	559	701		569	724		741	1346	1060	589	1359	944
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.12		0.03	0.08		0.04	0.42	0.01	0.05	0.25	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 69.2			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 7.3		Intersection LOS: A	
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive

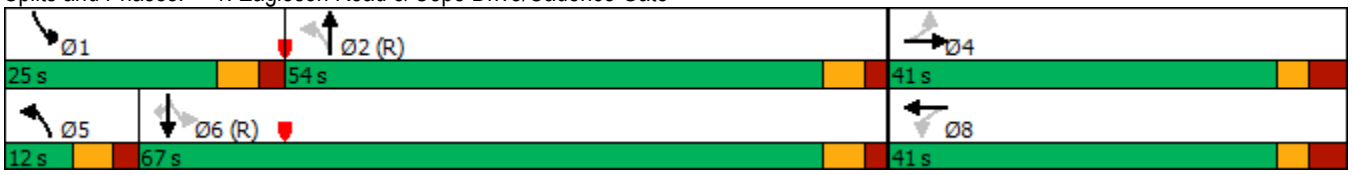


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	123	62	19	109	98	96	648	38	211	914	188
Future Volume (vph)	197	123	62	19	109	98	96	648	38	211	914	188
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		0.99	1.00		1.00		0.95
Frt		0.950			0.929			0.992				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1720	0	1729	1662	0	1729	3393	0	1729	3458	1502
Flt Permitted	0.490			0.531			0.226			0.259		
Satd. Flow (perm)	873	1720	0	964	1662	0	409	3393	0	471	3458	1428
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			38			6				209
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			491.1			267.4	
Travel Time (s)		11.9			14.4			29.5			16.0	
Confl. Peds. (#/hr)	2		3	3		2	11		2	2		11
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	0%	0%	0%	2%	0%	0%	1%	0%	0%	0%	3%
Adj. Flow (vph)	219	137	69	21	121	109	107	720	42	234	1016	209
Shared Lane Traffic (%)												
Lane Group Flow (vph)	219	206	0	21	230	0	107	762	0	234	1016	209
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	28.0		11.0	28.0	28.0
Total Split (s)	41.0	41.0		41.0	41.0		12.0	54.0		25.0	67.0	67.0
Total Split (%)	34.2%	34.2%		34.2%	34.2%		10.0%	45.0%		20.8%	55.8%	55.8%
Maximum Green (s)	34.5	34.5		34.5	34.5		6.0	48.0		19.0	61.0	61.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	31.6	31.6		31.6	31.6		63.5	57.2		74.6	63.5	63.5
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.53	0.48		0.62	0.53	0.53
v/c Ratio	0.96	0.44		0.08	0.49		0.37	0.47		0.55	0.56	0.24

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	92.3	35.3		32.5	34.2		11.7	17.9		15.2	20.8	2.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	92.3	35.3		32.5	34.2		11.7	17.9		15.2	20.8	2.8
LOS	F	D		C	C		B	B		B	C	A
Approach Delay		64.7			34.0			17.1			17.4	
Approach LOS		E			C			B			B	
Queue Length 50th (m)	49.1	35.0		3.6	36.9		7.7	59.1		23.4	84.7	0.0
Queue Length 95th (m)	#93.8	56.9		10.0	60.6		m13.1	72.2		36.0	104.4	11.5
Internal Link Dist (m)		141.8			136.5			467.1			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	250	509		277	504		286	1619		496	1830	854
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	0.88	0.40		0.08	0.46		0.37	0.47		0.47	0.56	0.24

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 14 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 25.4		Intersection LOS: C	
Intersection Capacity Utilization 78.0%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	171	159	198	548	817	247
Future Volume (vph)	171	159	198	548	817	247
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0	0.0	50.0			0.0
Storage Lanes	1	1	1			1
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.96				0.97
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1712	1547	1631	1820	1802	1532
Flt Permitted	0.950		0.098			
Satd. Flow (perm)	1709	1490	168	1820	1802	1492
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		177				196
Link Speed (k/h)	60			60	60	
Link Distance (m)	183.9			188.9	491.1	
Travel Time (s)	11.0			11.3	29.5	
Confl. Peds. (#/hr)	1	6	2			2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	0%	6%	0%	1%	1%
Adj. Flow (vph)	190	177	220	609	908	274
Shared Lane Traffic (%)						
Lane Group Flow (vph)	190	177	220	609	908	274
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.0	27.0	11.0	27.0	27.0	27.0
Total Split (s)	27.0	27.0	28.0	93.0	65.0	65.0
Total Split (%)	22.5%	22.5%	23.3%	77.5%	54.2%	54.2%
Maximum Green (s)	21.0	21.0	22.0	87.0	59.0	59.0
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.3	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	17.6	17.6	90.4	90.4	68.6	68.6
Actuated g/C Ratio	0.15	0.15	0.75	0.75	0.57	0.57
v/c Ratio	0.76	0.48	0.69	0.44	0.88	0.29

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	67.8	10.8	28.4	7.1	23.6	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.8	10.8	28.4	7.1	23.6	0.8
LOS	E	B	C	A	C	A
Approach Delay	40.3			12.8	18.3	
Approach LOS	D			B	B	
Queue Length 50th (m)	43.1	0.0	22.5	47.4	69.6	0.0
Queue Length 95th (m)	66.6	18.8	48.4	72.6	#305.2	0.0
Internal Link Dist (m)	159.9			164.9	467.1	
Turn Bay Length (m)	190.0		50.0			
Base Capacity (vph)	299	406	394	1370	1029	936
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.44	0.56	0.44	0.88	0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 29 (24%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 19.8		Intersection LOS: B	
Intersection Capacity Utilization 83.3%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: Eagleson Road & Fernbank Road

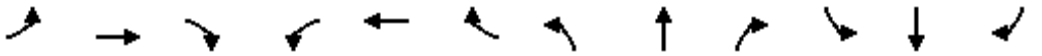
Intersection	
Int Delay, s/veh	6.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	288	487	41	324	682
Future Vol, veh/h	16	288	487	41	324	682
Conflicting Peds, #/hr	0	0	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	6	2	1	15	1	2
Mvmt Flow	18	320	541	46	360	758

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2023	545	0	0	591	0
Stage 1	545	-	-	-	-	-
Stage 2	1478	-	-	-	-	-
Critical Hdwy	6.46	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	62	538	-	-	990	-
Stage 1	573	-	-	-	-	-
Stage 2	205	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	39	536	-	-	986	-
Mov Cap-2 Maneuver	39	-	-	-	-	-
Stage 1	571	-	-	-	-	-
Stage 2	130	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.5	0	3.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	39	536	986	-
HCM Lane V/C Ratio	-	-	0.456	0.597	0.365	-
HCM Control Delay (s)	-	-	159.1	21.2	10.7	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	1.6	3.9	1.7	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	19	54	15	15	38	55	445	13	55	603	40
Future Volume (vph)	45	19	54	15	15	38	55	445	13	55	603	40
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.98		0.99	0.98							
Frt		0.889			0.893				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1394	1520	0	1729	1477	0	1695	1820	1547	1729	1802	1406
Flt Permitted	0.719			0.704			0.365			0.469		
Satd. Flow (perm)	1048	1520	0	1275	1477	0	651	1820	1547	854	1802	1406
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		60			42				36			44
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			326.6	
Travel Time (s)		15.3			16.4			14.5			19.6	
Confl. Peds. (#/hr)	4		3	3		4						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	24%	0%	6%	0%	20%	3%	2%	0%	0%	0%	1%	10%
Adj. Flow (vph)	50	21	60	17	17	42	61	494	14	61	670	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	50	81	0	17	59	0	61	494	14	61	670	44
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		53.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	41.1%	41.1%		41.1%	41.1%		58.9%	58.9%	58.9%	58.9%	58.9%	58.9%
Maximum Green (s)	31.0	31.0		31.0	31.0		47.1	47.1	47.1	47.1	47.1	47.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	8.7	8.7		8.7	8.7		52.7	52.7	52.7	52.7	52.7	52.7
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.76	0.76	0.76	0.76	0.76	0.76
v/c Ratio	0.38	0.33		0.11	0.27		0.12	0.36	0.01	0.09	0.49	0.04

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	35.8	15.2		27.1	15.6		4.8	5.2	0.5	4.4	6.5	1.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	15.2		27.1	15.6		4.8	5.2	0.5	4.4	6.5	1.6
LOS	D	B		C	B		A	A	A	A	A	A
Approach Delay		23.0			18.2			5.1			6.1	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	5.9	2.4		1.9	1.9		2.1	20.6	0.0	2.0	32.5	0.0
Queue Length 95th (m)	15.2	12.9		6.9	11.0		6.7	41.9	0.6	6.3	65.9	2.7
Internal Link Dist (m)		145.7			158.2			217.6			302.6	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	466	708		566	680		491	1374	1177	645	1360	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	0.11	0.11		0.03	0.09		0.12	0.36	0.01	0.09	0.49	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 69.8			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 7.7		Intersection LOS: A	
Intersection Capacity Utilization 62.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive

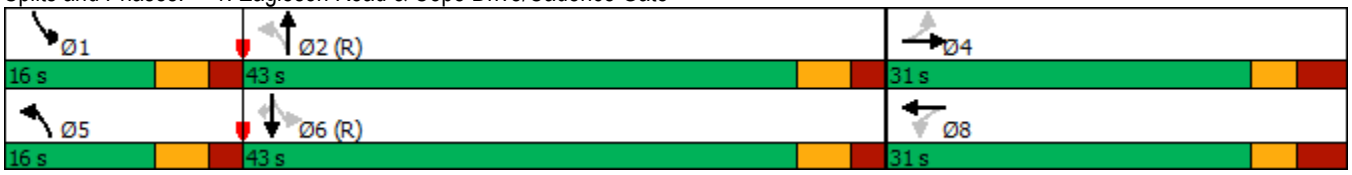
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	91	48	35	75	97	72	452	20	96	530	117
Future Volume (vph)	158	91	48	35	75	97	72	452	20	96	530	117
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00		0.97
Frt		0.948			0.915			0.994				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	1704	0	1679	1648	0	1729	3368	0	1729	3458	1547
Flt Permitted	0.572			0.654			0.407			0.433		
Satd. Flow (perm)	1027	1704	0	1152	1648	0	738	3368	0	784	3458	1495
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			72			6				130
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			491.1			267.4	
Travel Time (s)		11.9			14.4			29.5			16.0	
Confl. Peds. (#/hr)	5		4	4		5	5		5	5		5
Confl. Bikes (#/hr)			1			2			1			4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	0%	3%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	176	101	53	39	83	108	80	502	22	107	589	130
Shared Lane Traffic (%)												
Lane Group Flow (vph)	176	154	0	39	191	0	80	524	0	107	589	130
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	32.0		11.0	32.0	32.0
Total Split (s)	31.0	31.0		31.0	31.0		16.0	43.0		16.0	43.0	43.0
Total Split (%)	34.4%	34.4%		34.4%	34.4%		17.8%	47.8%		17.8%	47.8%	47.8%
Maximum Green (s)	24.5	24.5		24.5	24.5		10.0	37.0		10.0	37.0	37.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	18.9	18.9		18.9	18.9		53.2	47.2		54.3	47.7	47.7
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.59	0.52		0.60	0.53	0.53

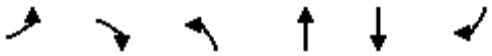
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.82	0.40		0.16	0.47		0.16	0.30		0.19	0.32	0.15
Control Delay	61.2	26.6		28.2	21.9		8.1	14.6		8.0	14.6	3.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	61.2	26.6		28.2	21.9		8.1	14.6		8.0	14.6	3.5
LOS	E	C		C	C		A	B		A	B	A
Approach Delay		45.0			22.9			13.7			12.0	
Approach LOS		D			C			B			B	
Queue Length 50th (m)	28.8	18.3		5.5	17.4		4.7	27.1		6.4	31.0	0.0
Queue Length 95th (m)	#49.9	33.0		12.9	34.3		11.2	44.5		14.3	49.4	9.8
Internal Link Dist (m)		141.8			136.5			467.1			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	279	484		313	501		562	1768		590	1833	853
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	0.63	0.32		0.12	0.38		0.14	0.30		0.18	0.32	0.15

Intersection Summary

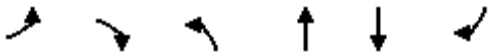
Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 22 (24%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 19.3 Intersection LOS: B
Intersection Capacity Utilization 66.4% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	155	131	106	406	473	185
Future Volume (vph)	155	131	106	406	473	185
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0	0.0	50.0			0.0
Storage Lanes	1	1	1			1
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		1.00			0.97
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1712	1532	1695	1802	1802	1532
Flt Permitted	0.950		0.430			
Satd. Flow (perm)	1704	1532	765	1802	1802	1491
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		146				206
Link Speed (k/h)	60			60	60	
Link Distance (m)	183.9			188.9	491.1	
Travel Time (s)	11.0			11.3	29.5	
Confl. Peds. (#/hr)	4		3			3
Confl. Bikes (#/hr)						1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	2%	1%	1%	1%
Adj. Flow (vph)	172	146	118	451	526	206
Shared Lane Traffic (%)						
Lane Group Flow (vph)	172	146	118	451	526	206
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	55.0	55.0	55.0	55.0
Total Split (%)	35.3%	35.3%	64.7%	64.7%	64.7%	64.7%
Maximum Green (s)	24.0	24.0	49.0	49.0	49.0	49.0
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.3	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0	14.0	14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	12.8	12.8	50.9	50.9	50.9	50.9
Actuated g/C Ratio	0.17	0.17	0.67	0.67	0.67	0.67



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.60	0.38	0.23	0.37	0.43	0.19
Control Delay	37.3	8.1	7.1	7.1	7.8	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	8.1	7.1	7.1	7.8	1.4
LOS	D	A	A	A	A	A
Approach Delay	23.9			7.1	6.0	
Approach LOS	C			A	A	
Queue Length 50th (m)	22.2	0.0	5.5	23.7	29.3	0.0
Queue Length 95th (m)	39.9	13.2	15.2	47.7	58.4	6.8
Internal Link Dist (m)	159.9			164.9	467.1	
Turn Bay Length (m)	190.0		50.0			
Base Capacity (vph)	540	585	514	1211	1211	1069
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.25	0.23	0.37	0.43	0.19

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 75.8			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 9.9		Intersection LOS: A	
Intersection Capacity Utilization 56.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Eagleson Road & Fernbank Road

Intersection	
Int Delay, s/veh	4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	169	342	16	203	392
Future Vol, veh/h	20	169	342	16	203	392
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	2	1	0	1	0
Mvmt Flow	22	188	380	18	226	436

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1269	381	0	0	399	0
Stage 1	381	-	-	-	-	-
Stage 2	888	-	-	-	-	-
Critical Hdwy	6.45	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	183	666	-	-	1165	-
Stage 1	684	-	-	-	-	-
Stage 2	397	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	147	665	-	-	1164	-
Mov Cap-2 Maneuver	147	-	-	-	-	-
Stage 1	683	-	-	-	-	-
Stage 2	320	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.8	0	3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	147	665	1164	-
HCM Lane V/C Ratio	-	-	0.151	0.282	0.194	-
HCM Control Delay (s)	-	-	33.8	12.5	8.8	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	1.2	0.7	-

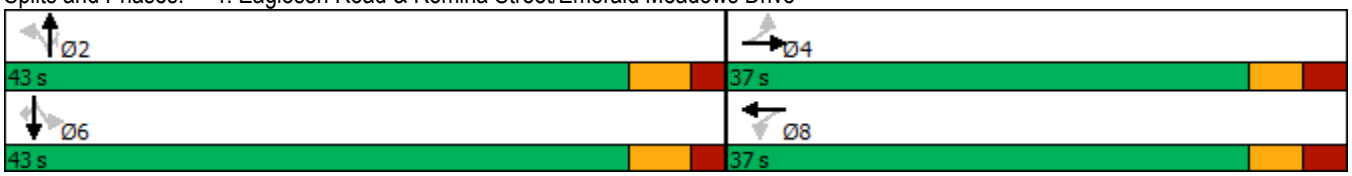
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	8	37	4	11	26	38	296	9	44	342	26
Future Volume (vph)	36	8	37	4	11	26	38	296	9	44	342	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97		0.99	0.98							0.98
Frt		0.877			0.894				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	1509	0	1729	1600	0	1729	1802	1547	1729	1820	1547
Flt Permitted	0.816			0.816			0.536			0.562		
Satd. Flow (perm)	1485	1509	0	1466	1600	0	976	1802	1547	1023	1820	1515
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		41			29				41			41
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			326.6	
Travel Time (s)		15.3			16.4			14.5			19.6	
Confl. Peds. (#/hr)			8	8								
Confl. Bikes (#/hr)			5			4						1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	40	9	41	4	12	29	42	329	10	49	380	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	50	0	4	41	0	42	329	10	49	380	29
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		43.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	46.3%	46.3%		46.3%	46.3%		53.8%	53.8%	53.8%	53.8%	53.8%	53.8%
Maximum Green (s)	31.0	31.0		31.0	31.0		37.1	37.1	37.1	37.1	37.1	37.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	7.3	7.3		7.1	7.1		46.2	46.2	46.2	46.2	46.2	46.2
Actuated g/C Ratio	0.13	0.13		0.12	0.12		0.79	0.79	0.79	0.79	0.79	0.79

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.22	0.22		0.02	0.19		0.05	0.23	0.01	0.06	0.26	0.02
Control Delay	25.1	12.6		21.5	13.9		3.8	3.9	0.1	3.8	4.1	1.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	12.6		21.5	13.9		3.8	3.9	0.1	3.8	4.1	1.2
LOS	C	B		C	B		A	A	A	A	A	A
Approach Delay		18.1			14.6			3.8			3.9	
Approach LOS		B			B			A			A	
Queue Length 50th (m)	4.0	0.9		0.4	1.2		1.2	11.2	0.0	1.4	13.3	0.0
Queue Length 95th (m)	10.8	8.3		2.5	8.0		4.1	22.9	0.2	4.6	26.7	1.6
Internal Link Dist (m)		145.7			158.2			217.6			302.6	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	791	823		781	865		774	1429	1235	811	1443	1210
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	0.05	0.06		0.01	0.05		0.05	0.23	0.01	0.06	0.26	0.02

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 58.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.26
Intersection Signal Delay: 5.6 Intersection LOS: A
Intersection Capacity Utilization 49.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive

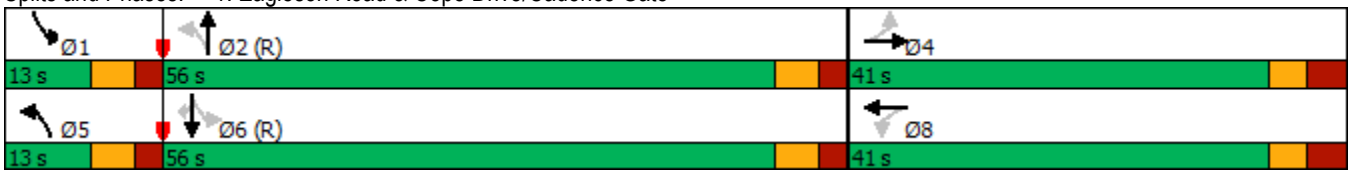


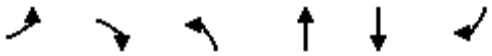
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	39	38	34	82	141	87	782	9	65	425	94
Future Volume (vph)	157	39	38	34	82	141	87	782	9	65	425	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		0.99	1.00		1.00		0.97
Frt		0.926			0.905			0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1631	1608	0	1631	1595	0	1729	3416	0	1729	3357	1488
Flt Permitted	0.471			0.707			0.495			0.306		
Satd. Flow (perm)	805	1608	0	1210	1595	0	896	3416	0	556	3357	1443
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			82			1				94
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			491.1			267.4	
Travel Time (s)		11.9			14.4			29.5			16.0	
Confl. Peds. (#/hr)	5		3	3		5	4		2	2		4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	5%	3%	6%	4%	1%	0%	1%	0%	0%	3%	4%
Adj. Flow (vph)	157	39	38	34	82	141	87	782	9	65	425	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	157	77	0	34	223	0	87	791	0	65	425	94
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	28.0		11.0	28.0	28.0
Total Split (s)	41.0	41.0		41.0	41.0		13.0	56.0		13.0	56.0	56.0
Total Split (%)	37.3%	37.3%		37.3%	37.3%		11.8%	50.9%		11.8%	50.9%	50.9%
Maximum Green (s)	34.5	34.5		34.5	34.5		7.0	50.0		7.0	50.0	50.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	23.8	23.8		23.8	23.8		69.2	63.2		68.5	62.9	62.9
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.63	0.57		0.62	0.57	0.57
v/c Ratio	0.90	0.20		0.13	0.54		0.14	0.40		0.16	0.22	0.11

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	87.4	18.8		32.1	27.2		11.5	20.2		9.2	14.1	3.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	87.4	18.8		32.1	27.2		11.5	20.2		9.2	14.1	3.7
LOS	F	B		C	C		B	C		A	B	A
Approach Delay		64.8			27.9			19.3			11.9	
Approach LOS		E			C			B			B	
Queue Length 50th (m)	33.0	6.8		5.9	26.5		8.9	59.3		4.4	23.7	0.0
Queue Length 95th (m)	52.9	16.7		12.6	44.4		m18.0	84.5		11.8	40.0	8.8
Internal Link Dist (m)		141.8			136.5			467.1			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	252	530		379	556		620	1964		424	1920	865
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	0.62	0.15		0.09	0.40		0.14	0.40		0.15	0.22	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 57 (52%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 23.7		Intersection LOS: C	
Intersection Capacity Utilization 72.5%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	264	141	142	713	396	128
Future Volume (vph)	264	141	142	713	396	128
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0	0.0	50.0			0.0
Storage Lanes	1	1	1			1
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.96				
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1712	1432	1679	1802	1767	1502
Flt Permitted	0.950		0.422			
Satd. Flow (perm)	1707	1371	746	1802	1767	1502
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		141				128
Link Speed (k/h)	60			60	60	
Link Distance (m)	183.9			188.9	491.1	
Travel Time (s)	11.0			11.3	29.5	
Confl. Peds. (#/hr)	2	9				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	8%	3%	1%	3%	3%
Adj. Flow (vph)	264	141	142	713	396	128
Shared Lane Traffic (%)						
Lane Group Flow (vph)	264	141	142	713	396	128
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.0	27.0	11.0	27.0	27.0	27.0
Total Split (s)	32.0	32.0	28.0	78.0	50.0	50.0
Total Split (%)	29.1%	29.1%	25.5%	70.9%	45.5%	45.5%
Maximum Green (s)	26.0	26.0	22.0	72.0	44.0	44.0
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.3	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	21.4	21.4	76.6	76.6	61.9	61.9
Actuated g/C Ratio	0.19	0.19	0.70	0.70	0.56	0.56
v/c Ratio	0.80	0.37	0.24	0.57	0.40	0.14

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	59.6	8.8	7.3	11.3	13.6	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	8.8	7.3	11.3	13.6	5.2
LOS	E	A	A	B	B	A
Approach Delay	41.9			10.7	11.6	
Approach LOS	D			B	B	
Queue Length 50th (m)	54.0	0.0	9.2	70.1	56.4	3.5
Queue Length 95th (m)	79.1	15.3	18.0	113.4	91.1	23.9
Internal Link Dist (m)	159.9			164.9	467.1	
Turn Bay Length (m)	190.0		50.0			
Base Capacity (vph)	403	431	706	1255	993	900
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.33	0.20	0.57	0.40	0.14

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 18.0		Intersection LOS: B	
Intersection Capacity Utilization 65.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Eagleson Road & Fernbank Road

Intersection	
Int Delay, s/veh	6.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	302	577	35	223	337
Future Vol, veh/h	27	302	577	35	223	337
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	37	3	1	9	5	3
Mvmt Flow	27	302	577	35	223	337

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1361	578	0	0	613	0
Stage 1	578	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Critical Hdwy	6.77	6.23	-	-	4.15	-
Critical Hdwy Stg 1	5.77	-	-	-	-	-
Critical Hdwy Stg 2	5.77	-	-	-	-	-
Follow-up Hdwy	3.833	3.327	-	-	2.245	-
Pot Cap-1 Maneuver	138	514	-	-	952	-
Stage 1	498	-	-	-	-	-
Stage 2	395	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	106	514	-	-	951	-
Mov Cap-2 Maneuver	106	-	-	-	-	-
Stage 1	498	-	-	-	-	-
Stage 2	303	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.9	0	4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	106	514	951	-
HCM Lane V/C Ratio	-	-	0.255	0.588	0.234	-
HCM Control Delay (s)	-	-	50.2	21.5	9.9	-
HCM Lane LOS	-	-	F	C	A	-
HCM 95th %tile Q(veh)	-	-	0.9	3.7	0.9	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	13	61	16	7	44	24	524	8	24	312	27
Future Volume (vph)	43	13	61	16	7	44	24	524	8	24	312	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98		0.99	0.98							
Frt		0.876			0.871				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1647	1480	0	1729	1555	0	1662	1767	1381	1729	1784	1228
Flt Permitted	0.724			0.709			0.571			0.454		
Satd. Flow (perm)	1253	1480	0	1279	1555	0	999	1767	1381	826	1784	1228
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			44				36			36
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			326.6	
Travel Time (s)		15.3			16.4			14.5			19.6	
Confl. Peds. (#/hr)	1		5	5		1						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	15%	3%	0%	0%	0%	4%	3%	12%	0%	2%	26%
Adj. Flow (vph)	43	13	61	16	7	44	24	524	8	24	312	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	74	0	16	51	0	24	524	8	24	312	27
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		53.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	41.1%	41.1%		41.1%	41.1%		58.9%	58.9%	58.9%	58.9%	58.9%	58.9%
Maximum Green (s)	31.0	31.0		31.0	31.0		47.1	47.1	47.1	47.1	47.1	47.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	7.9	7.9		7.9	7.9		53.5	53.5	53.5	53.5	53.5	53.5
Actuated g/C Ratio	0.11	0.11		0.11	0.11		0.77	0.77	0.77	0.77	0.77	0.77
v/c Ratio	0.30	0.33		0.11	0.24		0.03	0.39	0.01	0.04	0.23	0.03

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	33.1	14.7		27.9	13.6		3.5	5.0	0.0	3.6	4.0	1.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.1	14.7		27.9	13.6		3.5	5.0	0.0	3.6	4.0	1.2
LOS	C	B		C	B		A	A	A	A	A	A
Approach Delay		21.5			17.0			4.9			3.7	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	5.0	1.5		1.8	0.8		0.7	21.3	0.0	0.7	10.8	0.0
Queue Length 95th (m)	13.4	11.6		6.7	9.2		2.8	42.1	0.0	2.8	22.2	1.6
Internal Link Dist (m)		145.7			158.2			217.6			302.6	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	558	693		570	717		766	1355	1067	633	1368	950
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	0.08	0.11		0.03	0.07		0.03	0.39	0.01	0.04	0.23	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 69.7			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay: 7.0		Intersection LOS: A	
Intersection Capacity Utilization 49.7%		ICU Level of Service A	
Analysis Period (min) 15			

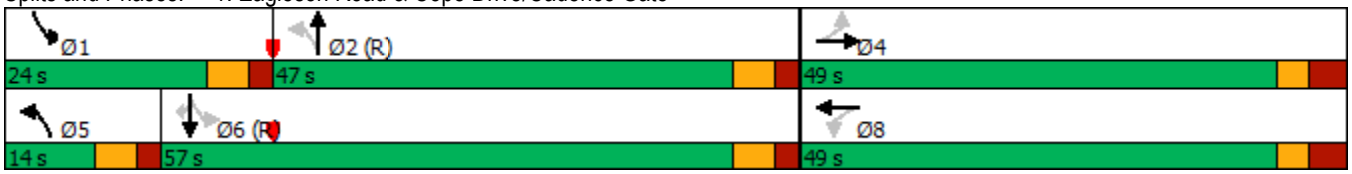
Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	123	62	19	109	98	96	661	38	211	932	188
Future Volume (vph)	197	123	62	19	109	98	96	661	38	211	932	188
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		0.99	1.00		1.00		0.95
Frt		0.950			0.929			0.992				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1720	0	1729	1662	0	1729	3394	0	1729	3458	1502
Flt Permitted	0.511			0.552			0.252			0.309		
Satd. Flow (perm)	910	1720	0	1002	1662	0	456	3394	0	562	3458	1428
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			42			5				188
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			491.1			267.4	
Travel Time (s)		11.9			14.4			29.5			16.0	
Confl. Peds. (#/hr)	2		3	3		2	11		2	2		11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	0%	0%	0%	2%	0%	0%	1%	0%	0%	0%	3%
Adj. Flow (vph)	197	123	62	19	109	98	96	661	38	211	932	188
Shared Lane Traffic (%)												
Lane Group Flow (vph)	197	185	0	19	207	0	96	699	0	211	932	188
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	28.0		11.0	28.0	28.0
Total Split (s)	49.0	49.0		49.0	49.0		14.0	47.0		24.0	57.0	57.0
Total Split (%)	40.8%	40.8%		40.8%	40.8%		11.7%	39.2%		20.0%	47.5%	47.5%
Maximum Green (s)	42.5	42.5		42.5	42.5		8.0	41.0		18.0	51.0	51.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	28.7	28.7		28.7	28.7		69.1	61.1		76.3	64.8	64.8
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.58	0.51		0.64	0.54	0.54
v/c Ratio	0.90	0.43		0.08	0.48		0.28	0.40		0.45	0.50	0.22

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	83.6	35.0		31.7	33.0		9.6	15.9		12.8	20.4	3.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	83.6	35.0		31.7	33.0		9.6	15.9		12.8	20.4	3.4
LOS	F	D		C	C		A	B		B	C	A
Approach Delay		60.1			32.9			15.1			16.8	
Approach LOS		E			C			B			B	
Queue Length 50th (m)	45.2	32.3		3.5	33.3		5.9	37.5		17.9	69.7	0.0
Queue Length 95th (m)	66.5	46.8		8.5	49.0		m13.9	72.0		37.1	110.8	13.2
Internal Link Dist (m)		141.8			136.5			467.1			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	322	624		354	615		356	1730		544	1867	857
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	0.61	0.30		0.05	0.34		0.27	0.40		0.39	0.50	0.22

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 14 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 23.7	Intersection LOS: C
Intersection Capacity Utilization 78.3%	ICU Level of Service D
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	175	162	202	559	833	252
Future Volume (vph)	175	162	202	559	833	252
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0	0.0	50.0			0.0
Storage Lanes	1	1	1			1
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.96				0.97
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1712	1547	1631	1820	1802	1532
Flt Permitted	0.950		0.157			
Satd. Flow (perm)	1709	1490	270	1820	1802	1492
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		162				196
Link Speed (k/h)	60			60	60	
Link Distance (m)	183.9			188.9	491.1	
Travel Time (s)	11.0			11.3	29.5	
Confl. Peds. (#/hr)	1	6	2			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	0%	6%	0%	1%	1%
Adj. Flow (vph)	175	162	202	559	833	252
Shared Lane Traffic (%)						
Lane Group Flow (vph)	175	162	202	559	833	252
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.0	27.0	11.0	27.0	27.0	27.0
Total Split (s)	27.0	27.0	28.0	93.0	65.0	65.0
Total Split (%)	22.5%	22.5%	23.3%	77.5%	54.2%	54.2%
Maximum Green (s)	21.0	21.0	22.0	87.0	59.0	59.0
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.3	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	16.9	16.9	91.1	91.1	70.7	70.7
Actuated g/C Ratio	0.14	0.14	0.76	0.76	0.59	0.59
v/c Ratio	0.73	0.46	0.55	0.40	0.79	0.26

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	66.2	11.2	11.5	6.5	16.8	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.2	11.2	11.5	6.5	16.8	0.7
LOS	E	B	B	A	B	A
Approach Delay	39.8			7.8	13.1	
Approach LOS	D			A	B	
Queue Length 50th (m)	39.7	0.0	11.5	40.1	160.7	0.0
Queue Length 95th (m)	61.6	18.2	25.2	64.2	#272.7	0.0
Internal Link Dist (m)	159.9			164.9	467.1	
Turn Bay Length (m)	190.0		50.0			
Base Capacity (vph)	299	394	454	1381	1061	959
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.41	0.44	0.40	0.79	0.26

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 29 (24%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 15.4		Intersection LOS: B	
Intersection Capacity Utilization 84.6%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: Eagleson Road & Fernbank Road

Intersection	
Int Delay, s/veh	5.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	288	497	41	324	696
Future Vol, veh/h	16	288	497	41	324	696
Conflicting Peds, #/hr	0	0	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	2	1	15	1	2
Mvmt Flow	16	288	497	41	324	696

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1845	501	0	0	542	0
Stage 1	501	-	-	-	-	-
Stage 2	1344	-	-	-	-	-
Critical Hdwy	6.46	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	80	570	-	-	1032	-
Stage 1	601	-	-	-	-	-
Stage 2	238	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	55	568	-	-	1028	-
Mov Cap-2 Maneuver	55	-	-	-	-	-
Stage 1	599	-	-	-	-	-
Stage 2	163	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.8	0	3.2
HCM LOS	C		

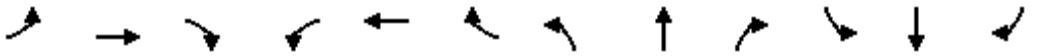
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	55	568	1028	-
HCM Lane V/C Ratio	-	-	0.291	0.507	0.315	-
HCM Control Delay (s)	-	-	95.4	17.7	10.1	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	1	2.9	1.4	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	19	54	15	15	38	55	454	13	55	615	40
Future Volume (vph)	45	19	54	15	15	38	55	454	13	55	615	40
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.98		0.99	0.98							
Frt		0.889			0.892				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1394	1520	0	1729	1476	0	1695	1820	1547	1729	1802	1406
Flt Permitted	0.722			0.709			0.398			0.495		
Satd. Flow (perm)	1052	1520	0	1284	1476	0	710	1820	1547	901	1802	1406
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		54			38				36			40
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			326.6	
Travel Time (s)		15.3			16.4			14.5			19.6	
Confl. Peds. (#/hr)	4		3	3		4						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	24%	0%	6%	0%	20%	3%	2%	0%	0%	0%	1%	10%
Adj. Flow (vph)	45	19	54	15	15	38	55	454	13	55	615	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	73	0	15	53	0	55	454	13	55	615	40
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		53.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	41.1%	41.1%		41.1%	41.1%		58.9%	58.9%	58.9%	58.9%	58.9%	58.9%
Maximum Green (s)	31.0	31.0		31.0	31.0		47.1	47.1	47.1	47.1	47.1	47.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	8.4	8.4		8.4	8.4		53.3	53.3	53.3	53.3	53.3	53.3
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.76	0.76	0.76	0.76	0.76	0.76
v/c Ratio	0.36	0.32		0.10	0.25		0.10	0.33	0.01	0.08	0.45	0.04

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	35.3	15.4		27.1	15.8		4.4	4.8	0.5	4.1	5.9	1.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	15.4		27.1	15.8		4.4	4.8	0.5	4.1	5.9	1.5
LOS	D	B		C	B		A	A	A	A	A	A
Approach Delay		23.0			18.3			4.7			5.5	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	5.3	2.2		1.7	1.7		1.8	18.0	0.0	1.8	27.9	0.0
Queue Length 95th (m)	14.0	12.3		6.3	10.2		5.9	36.3	0.5	5.6	55.7	2.5
Internal Link Dist (m)		145.7			158.2			217.6			302.6	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	466	703		569	675		540	1384	1185	685	1371	1079
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	0.10	0.10		0.03	0.08		0.10	0.33	0.01	0.08	0.45	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.1			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.45			
Intersection Signal Delay: 7.2		Intersection LOS: A	
Intersection Capacity Utilization 63.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive



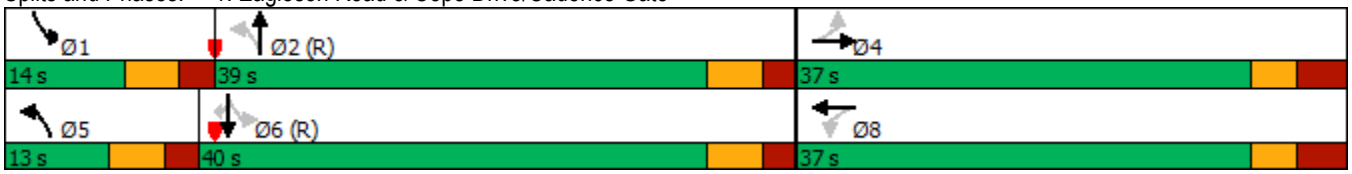
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	91	48	35	75	97	72	461	20	96	541	117
Future Volume (vph)	158	91	48	35	75	97	72	461	20	96	541	117
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00		0.97
Frt		0.948			0.915			0.994				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	1704	0	1679	1648	0	1729	3368	0	1729	3458	1547
Flt Permitted	0.607			0.668			0.436			0.464		
Satd. Flow (perm)	1089	1704	0	1176	1648	0	790	3368	0	840	3458	1495
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			78			5				117
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			491.1			267.4	
Travel Time (s)		11.9			14.4			29.5			16.0	
Confl. Peds. (#/hr)	5		4	4		5	5		5	5		5
Confl. Bikes (#/hr)			1			2			1			4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	0%	3%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	158	91	48	35	75	97	72	461	20	96	541	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	139	0	35	172	0	72	481	0	96	541	117
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	32.0		11.0	32.0	32.0
Total Split (s)	37.0	37.0		37.0	37.0		13.0	39.0		14.0	40.0	40.0
Total Split (%)	41.1%	41.1%		41.1%	41.1%		14.4%	43.3%		15.6%	44.4%	44.4%
Maximum Green (s)	30.5	30.5		30.5	30.5		7.0	33.0		8.0	34.0	34.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	17.7	17.7		17.7	17.7		54.6	48.7		55.5	49.2	49.2
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.61	0.54		0.62	0.55	0.55

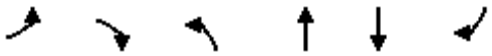
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.74	0.39		0.15	0.45		0.13	0.26		0.16	0.29	0.13
Control Delay	53.3	25.4		28.5	19.7		7.7	13.7		7.6	13.7	3.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	53.3	25.4		28.5	19.7		7.7	13.7		7.6	13.7	3.6
LOS	D	C		C	B		A	B		A	B	A
Approach Delay		40.2			21.2			12.9			11.3	
Approach LOS		D			C			B			B	
Queue Length 50th (m)	25.9	16.0		5.1	14.0		3.8	23.0		5.2	26.3	0.0
Queue Length 95th (m)	41.9	28.5		11.5	28.1		10.8	41.8		13.6	46.6	9.6
Internal Link Dist (m)		141.8			136.5			467.1			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	369	598		398	610		559	1824		604	1888	869
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	0.43	0.23		0.09	0.28		0.13	0.26		0.16	0.29	0.13

Intersection Summary

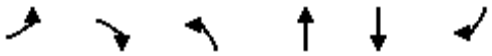
Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 22 (24%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 17.7 Intersection LOS: B
Intersection Capacity Utilization 66.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	158	134	108	414	482	189
Future Volume (vph)	158	134	108	414	482	189
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0	0.0	50.0			0.0
Storage Lanes	1	1	1			1
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		1.00			0.97
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1712	1532	1695	1802	1802	1532
Flt Permitted	0.950		0.461			
Satd. Flow (perm)	1704	1532	820	1802	1802	1491
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		134				189
Link Speed (k/h)	60			60	60	
Link Distance (m)	183.9			188.9	491.1	
Travel Time (s)	11.0			11.3	29.5	
Confl. Peds. (#/hr)	4		3			3
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	2%	1%	1%	1%
Adj. Flow (vph)	158	134	108	414	482	189
Shared Lane Traffic (%)						
Lane Group Flow (vph)	158	134	108	414	482	189
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	55.0	55.0	55.0	55.0
Total Split (%)	35.3%	35.3%	64.7%	64.7%	64.7%	64.7%
Maximum Green (s)	24.0	24.0	49.0	49.0	49.0	49.0
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.3	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0	14.0	14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	12.2	12.2	51.8	51.8	51.8	51.8
Actuated g/C Ratio	0.16	0.16	0.68	0.68	0.68	0.68



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.58	0.37	0.19	0.34	0.39	0.18
Control Delay	37.3	8.4	6.3	6.5	7.0	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	8.4	6.3	6.5	7.0	1.4
LOS	D	A	A	A	A	A
Approach Delay	24.0			6.5	5.4	
Approach LOS	C			A	A	
Queue Length 50th (m)	20.2	0.0	4.7	20.3	24.9	0.0
Queue Length 95th (m)	36.9	12.8	13.0	41.3	49.9	6.3
Internal Link Dist (m)	159.9			164.9	467.1	
Turn Bay Length (m)	190.0		50.0			
Base Capacity (vph)	540	576	558	1227	1227	1075
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.23	0.19	0.34	0.39	0.18

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 76			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 9.4		Intersection LOS: A	
Intersection Capacity Utilization 57.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Eagleson Road & Fernbank Road

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	169	349	16	203	400
Future Vol, veh/h	20	169	349	16	203	400
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	2	1	0	1	0
Mvmt Flow	20	169	349	16	203	400

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1156	350	0	0	366	0
Stage 1	350	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Critical Hdwy	6.45	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	214	693	-	-	1198	-
Stage 1	707	-	-	-	-	-
Stage 2	434	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	177	692	-	-	1197	-
Mov Cap-2 Maneuver	177	-	-	-	-	-
Stage 1	706	-	-	-	-	-
Stage 2	360	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.6	0	2.9
HCM LOS	B		

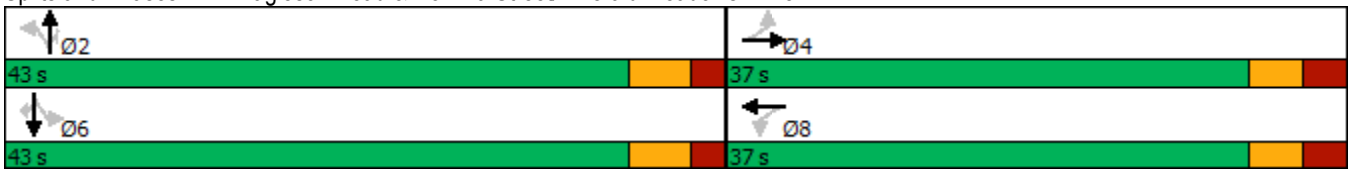
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	177	692	1197	-
HCM Lane V/C Ratio	-	-	0.113	0.244	0.17	-
HCM Control Delay (s)	-	-	27.9	11.9	8.6	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	1	0.6	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	8	37	4	11	26	38	302	9	44	349	26
Future Volume (vph)	36	8	37	4	11	26	38	302	9	44	349	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97		0.99	0.98							0.98
Frt		0.877			0.895				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	1509	0	1729	1602	0	1729	1802	1547	1729	1820	1547
Flt Permitted	0.833			0.833			0.552			0.576		
Satd. Flow (perm)	1516	1509	0	1496	1602	0	1005	1802	1547	1048	1820	1515
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			26				41			41
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			326.6	
Travel Time (s)		15.3			16.4			14.5			19.6	
Confl. Peds. (#/hr)			8	8								
Confl. Bikes (#/hr)			5			4						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	36	8	37	4	11	26	38	302	9	44	349	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	45	0	4	37	0	38	302	9	44	349	26
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		43.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	46.3%	46.3%		46.3%	46.3%		53.8%	53.8%	53.8%	53.8%	53.8%	53.8%
Maximum Green (s)	31.0	31.0		31.0	31.0		37.1	37.1	37.1	37.1	37.1	37.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	7.1	7.1		7.0	7.0		46.5	46.5	46.5	46.5	46.5	46.5
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.80	0.80	0.80	0.80	0.80	0.80

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.20	0.21		0.02	0.17		0.05	0.21	0.01	0.05	0.24	0.02
Control Delay	24.9	12.8		21.5	14.2		3.7	3.7	0.0	3.7	3.9	1.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.9	12.8		21.5	14.2		3.7	3.7	0.0	3.7	3.9	1.1
LOS	C	B		C	B		A	A	A	A	A	A
Approach Delay		18.2			14.9			3.6			3.7	
Approach LOS		B			B			A			A	
Queue Length 50th (m)	3.8	0.8		0.4	1.1		1.1	9.9	0.0	1.3	11.8	0.0
Queue Length 95th (m)	10.0	7.9		2.5	7.5		3.8	20.4	0.1	4.2	23.9	1.4
Internal Link Dist (m)		145.7			158.2			217.6			302.6	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	804	818		794	862		801	1436	1241	835	1450	1215
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	0.04	0.06		0.01	0.04		0.05	0.21	0.01	0.05	0.24	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 58.4			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.24			
Intersection Signal Delay: 5.5		Intersection LOS: A	
Intersection Capacity Utilization 49.6%		ICU Level of Service A	
Analysis Period (min) 15			

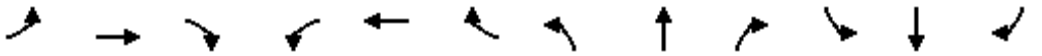
Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	33.0	14.6		27.8	13.6		3.6	3.5	0.0	3.7	3.3	1.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	14.6		27.8	13.6		3.6	3.5	0.0	3.7	3.3	1.2
LOS	C	B		C	B		A	A	A	A	A	A
Approach Delay		21.4			17.0			3.5			3.2	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	5.0	1.5		1.8	0.8		0.7	9.9	0.0	0.7	5.4	0.0
Queue Length 95th (m)	13.4	11.6		6.7	9.2		2.8	17.5	0.0	2.8	10.4	1.6
Internal Link Dist (m)		145.7			158.2			217.6			302.6	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	558	699		572	722		743	2573	1067	622	2598	949
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	0.08	0.11		0.03	0.07		0.03	0.21	0.01	0.04	0.13	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 69.7			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.33			
Intersection Signal Delay: 6.0		Intersection LOS: A	
Intersection Capacity Utilization 41.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive

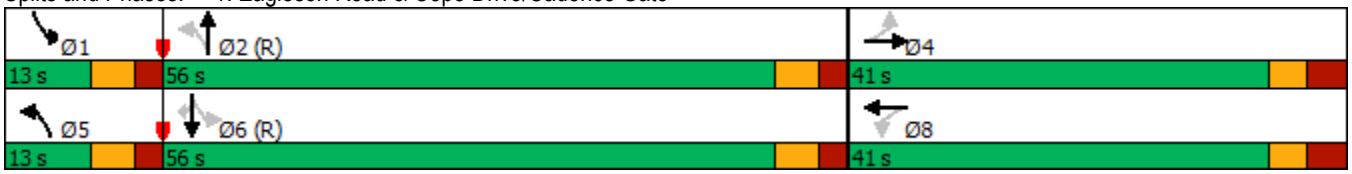


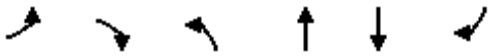
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	39	38	34	82	141	87	820	9	65	446	94
Future Volume (vph)	157	39	38	34	82	141	87	820	9	65	446	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		0.99	1.00		1.00		0.97
Frt		0.926			0.905			0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1631	1608	0	1631	1595	0	1729	3416	0	1729	3357	1488
Flt Permitted	0.471			0.707			0.482			0.290		
Satd. Flow (perm)	805	1608	0	1210	1595	0	873	3416	0	527	3357	1443
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			82			1				94
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			491.1			267.4	
Travel Time (s)		11.9			14.4			29.5			16.0	
Confl. Peds. (#/hr)	5		3	3		5	4		2	2		4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	5%	3%	6%	4%	1%	0%	1%	0%	0%	3%	4%
Adj. Flow (vph)	157	39	38	34	82	141	87	820	9	65	446	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	157	77	0	34	223	0	87	829	0	65	446	94
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	28.0		11.0	28.0	28.0
Total Split (s)	41.0	41.0		41.0	41.0		13.0	56.0		13.0	56.0	56.0
Total Split (%)	37.3%	37.3%		37.3%	37.3%		11.8%	50.9%		11.8%	50.9%	50.9%
Maximum Green (s)	34.5	34.5		34.5	34.5		7.0	50.0		7.0	50.0	50.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	23.8	23.8		23.8	23.8		69.2	63.2		68.5	62.9	62.9
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.63	0.57		0.62	0.57	0.57
v/c Ratio	0.90	0.20		0.13	0.54		0.14	0.42		0.16	0.23	0.11

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	87.4	18.8		32.1	27.2		13.4	21.7		9.3	14.2	3.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	87.4	18.8		32.1	27.2		13.4	21.7		9.3	14.2	3.7
LOS	F	B		C	C		B	C		A	B	A
Approach Delay		64.8			27.9			20.9			12.0	
Approach LOS		E			C			C			B	
Queue Length 50th (m)	33.0	6.8		5.9	26.5		8.9	62.8		4.4	25.1	0.0
Queue Length 95th (m)	52.9	16.7		12.6	44.4		m18.2	88.2		11.8	42.2	8.8
Internal Link Dist (m)		141.8			136.5			467.1			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	252	530		379	556		607	1964		407	1920	865
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	0.62	0.15		0.09	0.40		0.14	0.42		0.16	0.23	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 57 (52%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 24.2		Intersection LOS: C	
Intersection Capacity Utilization 73.6%		ICU Level of Service D	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	277	148	149	748	415	134
Future Volume (vph)	277	148	149	748	415	134
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0	0.0	50.0			0.0
Storage Lanes	1	1	1			1
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor	1.00	0.97				
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1712	1432	1679	3424	3357	1502
Flt Permitted	0.950		0.458			
Satd. Flow (perm)	1707	1395	809	3424	3357	1502
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		148				134
Link Speed (k/h)	60			60	60	
Link Distance (m)	183.9			188.9	491.1	
Travel Time (s)	11.0			11.3	29.5	
Confl. Peds. (#/hr)	2	9				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	8%	3%	1%	3%	3%
Adj. Flow (vph)	277	148	149	748	415	134
Shared Lane Traffic (%)						
Lane Group Flow (vph)	277	148	149	748	415	134
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.0	27.0	11.0	27.0	27.0	27.0
Total Split (s)	32.0	32.0	28.0	78.0	50.0	50.0
Total Split (%)	29.1%	29.1%	25.5%	70.9%	45.5%	45.5%
Maximum Green (s)	26.0	26.0	22.0	72.0	44.0	44.0
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.3	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	22.0	22.0	76.0	76.0	61.0	61.0
Actuated g/C Ratio	0.20	0.20	0.69	0.69	0.55	0.55
v/c Ratio	0.81	0.37	0.24	0.32	0.22	0.15

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	60.4	8.5	7.4	7.6	10.4	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.4	8.5	7.4	7.6	10.4	5.5
LOS	E	A	A	A	B	A
Approach Delay	42.3			7.6	9.2	
Approach LOS	D			A	A	
Queue Length 50th (m)	56.6	0.0	10.0	30.7	28.5	4.5
Queue Length 95th (m)	83.5	15.5	18.7	43.7	43.3	25.0
Internal Link Dist (m)	159.9			164.9	467.1	
Turn Bay Length (m)	190.0		50.0			
Base Capacity (vph)	403	442	733	2365	1862	892
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.33	0.20	0.32	0.22	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 15.9		Intersection LOS: B	
Intersection Capacity Utilization 52.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Eagleson Road & Fernbank Road

Intersection	
Int Delay, s/veh	5.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	302	606	35	223	353
Future Vol, veh/h	27	302	606	35	223	353
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	37	3	1	9	5	3
Mvmt Flow	27	302	606	35	223	353

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1230	304	0	0	642	0
Stage 1	607	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Critical Hdwy	7.54	6.96	-	-	4.2	-
Critical Hdwy Stg 1	6.54	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	-	-	-
Follow-up Hdwy	3.87	3.33	-	-	2.25	-
Pot Cap-1 Maneuver	128	689	-	-	918	-
Stage 1	420	-	-	-	-	-
Stage 2	412	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	97	688	-	-	917	-
Mov Cap-2 Maneuver	97	-	-	-	-	-
Stage 1	420	-	-	-	-	-
Stage 2	312	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.7	0	3.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	97	688	917	-
HCM Lane V/C Ratio	-	-	0.278	0.439	0.243	-
HCM Control Delay (s)	-	-	55.8	14.3	10.2	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	1	2.2	1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	13	61	16	7	44	24	550	8	24	327	27
Future Volume (vph)	43	13	61	16	7	44	24	550	8	24	327	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		0.99	0.99							
Frt		0.876			0.871				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1647	1495	0	1729	1567	0	1662	3357	1381	1729	3390	1228
Flt Permitted	0.724			0.709			0.554			0.446		
Satd. Flow (perm)	1254	1495	0	1284	1567	0	970	3357	1381	812	3390	1228
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			44				36			36
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			326.6	
Travel Time (s)		15.3			16.4			14.5			19.6	
Confl. Peds. (#/hr)	1		5	5		1						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	15%	3%	0%	0%	0%	4%	3%	12%	0%	2%	26%
Adj. Flow (vph)	43	13	61	16	7	44	24	550	8	24	327	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	74	0	16	51	0	24	550	8	24	327	27
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		53.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	41.1%	41.1%		41.1%	41.1%		58.9%	58.9%	58.9%	58.9%	58.9%	58.9%
Maximum Green (s)	31.0	31.0		31.0	31.0		47.1	47.1	47.1	47.1	47.1	47.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	7.9	7.9		7.9	7.9		53.4	53.4	53.4	53.4	53.4	53.4
Actuated g/C Ratio	0.11	0.11		0.11	0.11		0.77	0.77	0.77	0.77	0.77	0.77
v/c Ratio	0.30	0.33		0.11	0.24		0.03	0.21	0.01	0.04	0.13	0.03

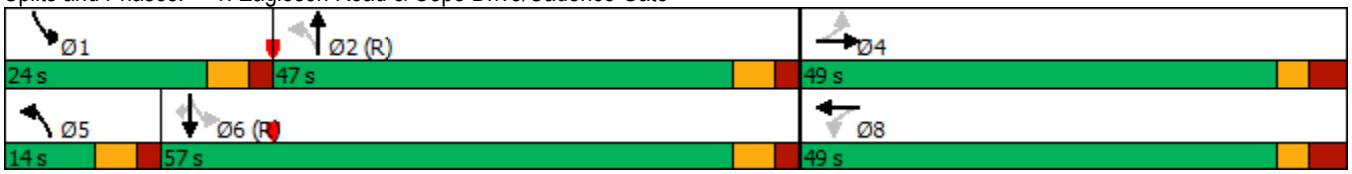
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	123	62	19	109	98	96	693	38	211	978	188
Future Volume (vph)	197	123	62	19	109	98	96	693	38	211	978	188
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		0.99	1.00		1.00		0.95
Frt		0.950			0.929			0.992				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1720	0	1729	1662	0	1729	3394	0	1729	3458	1502
Flt Permitted	0.511			0.552			0.233			0.295		
Satd. Flow (perm)	910	1720	0	1002	1662	0	422	3394	0	536	3458	1428
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			42			5				188
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			491.1			267.4	
Travel Time (s)		11.9			14.4			29.5			16.0	
Confl. Peds. (#/hr)	2		3	3		2	11		2	2		11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	0%	0%	0%	2%	0%	0%	1%	0%	0%	0%	3%
Adj. Flow (vph)	197	123	62	19	109	98	96	693	38	211	978	188
Shared Lane Traffic (%)												
Lane Group Flow (vph)	197	185	0	19	207	0	96	731	0	211	978	188
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	28.0		11.0	28.0	28.0
Total Split (s)	49.0	49.0		49.0	49.0		14.0	47.0		24.0	57.0	57.0
Total Split (%)	40.8%	40.8%		40.8%	40.8%		11.7%	39.2%		20.0%	47.5%	47.5%
Maximum Green (s)	42.5	42.5		42.5	42.5		8.0	41.0		18.0	51.0	51.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	28.7	28.7		28.7	28.7		69.1	61.1		76.3	64.8	64.8
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.58	0.51		0.64	0.54	0.54
v/c Ratio	0.90	0.43		0.08	0.48		0.29	0.42		0.46	0.52	0.22

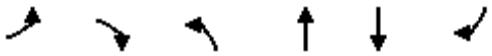
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	83.6	35.0		31.7	33.0		10.1	16.1		13.1	20.8	3.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	83.6	35.0		31.7	33.0		10.1	16.1		13.1	20.8	3.4
LOS	F	D		C	C		B	B		B	C	A
Approach Delay		60.1			32.9			15.4			17.3	
Approach LOS		E			C			B			B	
Queue Length 50th (m)	45.2	32.3		3.5	33.3		5.9	39.3		17.9	74.6	0.0
Queue Length 95th (m)	66.5	46.8		8.5	49.0		m13.8	75.0		37.1	118.1	13.2
Internal Link Dist (m)		141.8			136.5			467.1			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	322	624		354	615		339	1730		530	1867	857
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	0.61	0.30		0.05	0.34		0.28	0.42		0.40	0.52	0.22

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 14 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 23.8 Intersection LOS: C
Intersection Capacity Utilization 79.6% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	183	170	212	586	874	264
Future Volume (vph)	183	170	212	586	874	264
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0	0.0	50.0			0.0
Storage Lanes	1	1	1			1
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor	1.00	0.98	1.00			0.97
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1712	1547	1631	3458	3424	1532
Flt Permitted	0.950		0.262			
Satd. Flow (perm)	1709	1513	449	3458	3424	1492
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		170				264
Link Speed (k/h)	60			60	60	
Link Distance (m)	183.9			188.9	491.1	
Travel Time (s)	11.0			11.3	29.5	
Confl. Peds. (#/hr)	1	6	2			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	0%	6%	0%	1%	1%
Adj. Flow (vph)	183	170	212	586	874	264
Shared Lane Traffic (%)						
Lane Group Flow (vph)	183	170	212	586	874	264
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.0	27.0	11.0	27.0	27.0	27.0
Total Split (s)	27.0	27.0	28.0	93.0	65.0	65.0
Total Split (%)	22.5%	22.5%	23.3%	77.5%	54.2%	54.2%
Maximum Green (s)	21.0	21.0	22.0	87.0	59.0	59.0
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.3	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	17.3	17.3	90.7	90.7	74.6	74.6
Actuated g/C Ratio	0.14	0.14	0.76	0.76	0.62	0.62
v/c Ratio	0.74	0.47	0.48	0.22	0.41	0.26

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	67.1	10.9	8.4	4.8	3.7	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.1	10.9	8.4	4.8	3.7	0.6
LOS	E	B	A	A	A	A
Approach Delay	40.0			5.8	2.9	
Approach LOS	D			A	A	
Queue Length 50th (m)	41.6	0.0	12.3	18.8	10.7	0.0
Queue Length 95th (m)	64.4	18.3	21.8	27.4	13.3	0.1
Internal Link Dist (m)	159.9			164.9	467.1	
Turn Bay Length (m)	190.0		50.0			
Base Capacity (vph)	299	405	556	2613	2128	1027
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.42	0.38	0.22	0.41	0.26

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 29 (24%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 9.6		Intersection LOS: A	
Intersection Capacity Utilization 64.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Eagleson Road & Fernbank Road

Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	288	522	41	324	730
Future Vol, veh/h	16	288	522	41	324	730
Conflicting Peds, #/hr	0	0	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	2	1	15	1	2
Mvmt Flow	16	288	522	41	324	730

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1539	265	0	0	567	0
Stage 1	526	-	-	-	-	-
Stage 2	1013	-	-	-	-	-
Critical Hdwy	6.92	6.94	-	-	4.12	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.32	-	-	2.21	-
Pot Cap-1 Maneuver	102	733	-	-	1008	-
Stage 1	546	-	-	-	-	-
Stage 2	303	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	69	730	-	-	1004	-
Mov Cap-2 Maneuver	69	-	-	-	-	-
Stage 1	544	-	-	-	-	-
Stage 2	205	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.2	0	3.2
HCM LOS	C		

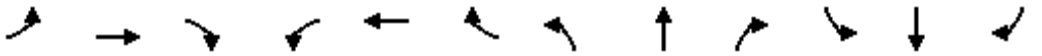
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	69	730	1004	-
HCM Lane V/C Ratio	-	-	0.232	0.395	0.323	-
HCM Control Delay (s)	-	-	72.3	13.1	10.3	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.8	1.9	1.4	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	19	54	15	15	38	55	477	13	55	645	40
Future Volume (vph)	45	19	54	15	15	38	55	477	13	55	645	40
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99							
Frt		0.889			0.892				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1394	1532	0	1729	1488	0	1695	3458	1547	1729	3424	1406
Flt Permitted	0.722			0.709			0.407			0.479		
Satd. Flow (perm)	1055	1532	0	1286	1488	0	726	3458	1547	872	3424	1406
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		54			38				36			40
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			326.6	
Travel Time (s)		15.3			16.4			14.5			19.6	
Confl. Peds. (#/hr)	4		3	3		4						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	24%	0%	6%	0%	20%	3%	2%	0%	0%	0%	1%	10%
Adj. Flow (vph)	45	19	54	15	15	38	55	477	13	55	645	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	73	0	15	53	0	55	477	13	55	645	40
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		53.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	41.1%	41.1%		41.1%	41.1%		58.9%	58.9%	58.9%	58.9%	58.9%	58.9%
Maximum Green (s)	31.0	31.0		31.0	31.0		47.1	47.1	47.1	47.1	47.1	47.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	8.5	8.5		8.5	8.5		53.4	53.4	53.4	53.4	53.4	53.4
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.76	0.76	0.76	0.76	0.76	0.76
v/c Ratio	0.35	0.31		0.10	0.25		0.10	0.18	0.01	0.08	0.25	0.04

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	35.1	15.3		27.0	15.8		4.3	3.6	0.5	4.1	3.9	1.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.1	15.3		27.0	15.8		4.3	3.6	0.5	4.1	3.9	1.6
LOS	D	B		C	B		A	A	A	A	A	A
Approach Delay		22.9			18.2			3.6			3.8	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	5.3	2.2		1.7	1.7		1.8	8.6	0.0	1.8	12.4	0.0
Queue Length 95th (m)	14.0	12.2		6.3	10.2		5.9	16.1	0.5	5.7	22.4	2.5
Internal Link Dist (m)		145.7			158.2			217.6			302.6	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	467	708		569	679		551	2628	1184	663	2602	1078
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	0.10	0.10		0.03	0.08		0.10	0.18	0.01	0.08	0.25	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.2			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.35			
Intersection Signal Delay: 5.9		Intersection LOS: A	
Intersection Capacity Utilization 48.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive



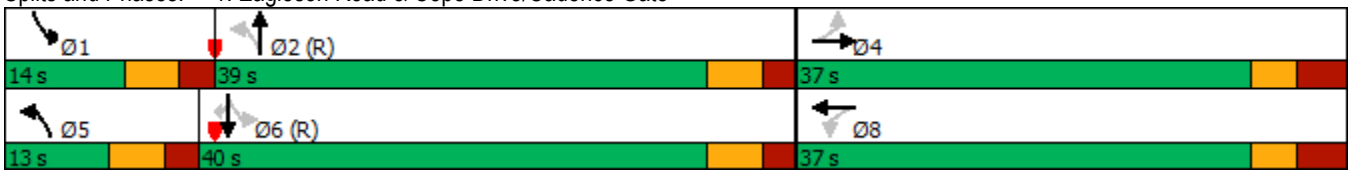
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	91	48	35	75	97	72	484	20	96	567	117
Future Volume (vph)	158	91	48	35	75	97	72	484	20	96	567	117
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00		0.97
Frt		0.948			0.915			0.994				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	1704	0	1679	1648	0	1729	3368	0	1729	3458	1547
Flt Permitted	0.607			0.668			0.421			0.450		
Satd. Flow (perm)	1089	1704	0	1176	1648	0	763	3368	0	815	3458	1495
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			78			5				117
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			491.1			267.4	
Travel Time (s)		11.9			14.4			29.5			16.0	
Confl. Peds. (#/hr)	5		4	4		5	5		5	5		5
Confl. Bikes (#/hr)			1			2			1			4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	0%	3%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	158	91	48	35	75	97	72	484	20	96	567	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	139	0	35	172	0	72	504	0	96	567	117
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	32.0		11.0	32.0	32.0
Total Split (s)	37.0	37.0		37.0	37.0		13.0	39.0		14.0	40.0	40.0
Total Split (%)	41.1%	41.1%		41.1%	41.1%		14.4%	43.3%		15.6%	44.4%	44.4%
Maximum Green (s)	30.5	30.5		30.5	30.5		7.0	33.0		8.0	34.0	34.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	17.7	17.7		17.7	17.7		54.6	48.7		55.5	49.2	49.2
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.61	0.54		0.62	0.55	0.55

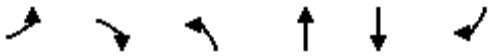
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.74	0.39		0.15	0.45		0.13	0.28		0.17	0.30	0.13
Control Delay	53.3	25.4		28.5	19.7		7.7	13.8		7.6	13.8	3.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	53.3	25.4		28.5	19.7		7.7	13.8		7.6	13.8	3.6
LOS	D	C		C	B		A	B		A	B	A
Approach Delay		40.2			21.2			13.0			11.5	
Approach LOS		D			C			B			B	
Queue Length 50th (m)	25.9	16.0		5.1	14.0		3.8	24.3		5.2	27.8	0.0
Queue Length 95th (m)	41.9	28.5		11.5	28.1		10.8	44.0		13.6	49.0	9.6
Internal Link Dist (m)		141.8			136.5			467.1			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	369	598		398	610		544	1824		591	1888	869
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	0.43	0.23		0.09	0.28		0.13	0.28		0.16	0.30	0.13

Intersection Summary

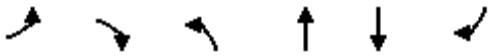
Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 22 (24%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 17.6 Intersection LOS: B
Intersection Capacity Utilization 66.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	166	140	113	434	506	198
Future Volume (vph)	166	140	113	434	506	198
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0	0.0	50.0			0.0
Storage Lanes	1	1	1			1
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor	1.00		1.00			0.97
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1712	1532	1695	3424	3424	1532
Flt Permitted	0.950		0.466			
Satd. Flow (perm)	1704	1532	829	3424	3424	1491
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		140				198
Link Speed (k/h)	60			60	60	
Link Distance (m)	183.9			188.9	491.1	
Travel Time (s)	11.0			11.3	29.5	
Confl. Peds. (#/hr)	4		3			3
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	2%	1%	1%	1%
Adj. Flow (vph)	166	140	113	434	506	198
Shared Lane Traffic (%)						
Lane Group Flow (vph)	166	140	113	434	506	198
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	55.0	55.0	55.0	55.0
Total Split (%)	35.3%	35.3%	64.7%	64.7%	64.7%	64.7%
Maximum Green (s)	24.0	24.0	49.0	49.0	49.0	49.0
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.3	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0	14.0	14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	12.5	12.5	51.2	51.2	51.2	51.2
Actuated g/C Ratio	0.16	0.16	0.68	0.68	0.68	0.68



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.59	0.38	0.20	0.19	0.22	0.18
Control Delay	37.3	8.2	6.5	5.3	5.4	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	8.2	6.5	5.3	5.4	1.4
LOS	D	A	A	A	A	A
Approach Delay	24.0			5.5	4.3	
Approach LOS	C			A	A	
Queue Length 50th (m)	21.4	0.0	5.1	10.1	12.1	0.0
Queue Length 95th (m)	38.6	13.1	13.9	19.0	22.2	6.7
Internal Link Dist (m)	159.9			164.9	467.1	
Turn Bay Length (m)	190.0		50.0			
Base Capacity (vph)	540	581	560	2314	2314	1072
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.24	0.20	0.19	0.22	0.18

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 75.8			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 8.6		Intersection LOS: A	
Intersection Capacity Utilization 48.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Eagleson Road & Fernbank Road

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	169	366	16	203	419
Future Vol, veh/h	20	169	366	16	203	419
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	2	1	0	1	0
Mvmt Flow	20	169	366	16	203	419

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	983	184	0	0	383	0
Stage 1	367	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Critical Hdwy	6.9	6.94	-	-	4.12	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.32	-	-	2.21	-
Pot Cap-1 Maneuver	241	827	-	-	1179	-
Stage 1	662	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	199	826	-	-	1178	-
Mov Cap-2 Maneuver	199	-	-	-	-	-
Stage 1	661	-	-	-	-	-
Stage 2	408	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	2.8
HCM LOS	B		

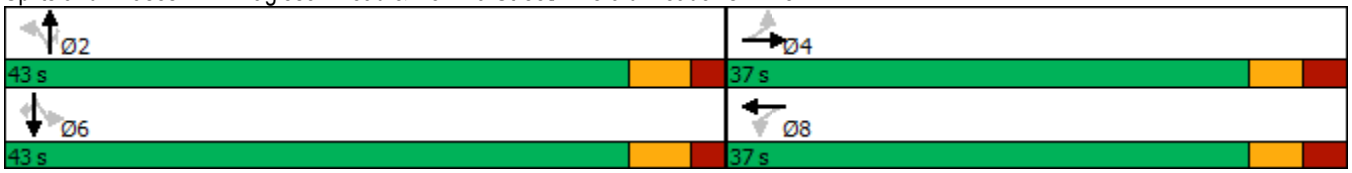
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	199	826	1178	-
HCM Lane V/C Ratio	-	-	0.101	0.205	0.172	-
HCM Control Delay (s)	-	-	25.1	10.5	8.7	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.8	0.6	-

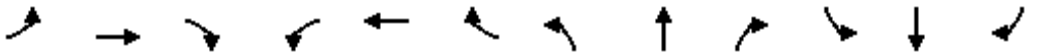
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	8	37	4	11	26	38	317	9	44	366	26
Future Volume (vph)	36	8	37	4	11	26	38	317	9	44	366	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor		0.98		0.99	0.99							0.98
Frt		0.877			0.895				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	1528	0	1729	1613	0	1729	3424	1547	1729	3458	1547
Flt Permitted	0.833			0.833			0.534			0.560		
Satd. Flow (perm)	1516	1528	0	1504	1613	0	972	3424	1547	1019	3458	1515
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			26				41			41
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			326.6	
Travel Time (s)		15.3			16.4			14.5			19.6	
Confl. Peds. (#/hr)			8	8								
Confl. Bikes (#/hr)			5			4						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	36	8	37	4	11	26	38	317	9	44	366	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	45	0	4	37	0	38	317	9	44	366	26
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		43.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	46.3%	46.3%		46.3%	46.3%		53.8%	53.8%	53.8%	53.8%	53.8%	53.8%
Maximum Green (s)	31.0	31.0		31.0	31.0		37.1	37.1	37.1	37.1	37.1	37.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	7.1	7.1		7.0	7.0		46.5	46.5	46.5	46.5	46.5	46.5
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.80	0.80	0.80	0.80	0.80	0.80

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.20	0.21		0.02	0.17		0.05	0.12	0.01	0.05	0.13	0.02
Control Delay	24.9	12.8		21.5	14.2		3.7	3.1	0.0	3.7	3.1	1.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.9	12.8		21.5	14.2		3.7	3.1	0.0	3.7	3.1	1.1
LOS	C	B		C	B		A	A	A	A	A	A
Approach Delay		18.2			14.9			3.0			3.0	
Approach LOS		B			B			A			A	
Queue Length 50th (m)	3.8	0.8		0.4	1.1		1.1	5.0	0.0	1.3	5.8	0.0
Queue Length 95th (m)	10.0	7.9		2.5	7.5		3.8	9.6	0.1	4.2	11.0	1.4
Internal Link Dist (m)		145.7			158.2			217.6			302.6	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	804	828		798	868		774	2728	1241	812	2755	1215
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	0.04	0.05		0.01	0.04		0.05	0.12	0.01	0.05	0.13	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 58.4			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.21			
Intersection Signal Delay: 4.9		Intersection LOS: A	
Intersection Capacity Utilization 40.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive



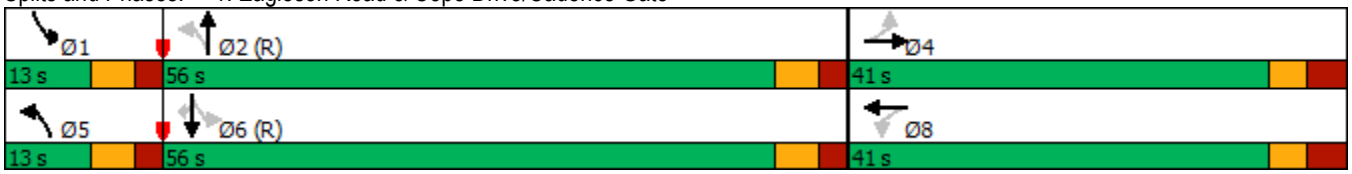


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	39	44	37	82	141	92	796	11	65	443	94
Future Volume (vph)	157	39	44	37	82	141	92	796	11	65	443	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		0.99	1.00		1.00		0.97
Frt		0.920			0.905			0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1631	1597	0	1631	1595	0	1729	3416	0	1729	3357	1488
Flt Permitted	0.471			0.703			0.483			0.300		
Satd. Flow (perm)	805	1597	0	1203	1595	0	875	3416	0	545	3357	1443
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			82			2				94
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			494.9			267.4	
Travel Time (s)		11.9			14.4			29.7			16.0	
Confl. Peds. (#/hr)	5		3	3		5	4		2	2		4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	5%	3%	6%	4%	1%	0%	1%	0%	0%	3%	4%
Adj. Flow (vph)	157	39	44	37	82	141	92	796	11	65	443	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	157	83	0	37	223	0	92	807	0	65	443	94
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	28.0		11.0	28.0	28.0
Total Split (s)	41.0	41.0		41.0	41.0		13.0	56.0		13.0	56.0	56.0
Total Split (%)	37.3%	37.3%		37.3%	37.3%		11.8%	50.9%		11.8%	50.9%	50.9%
Maximum Green (s)	34.5	34.5		34.5	34.5		7.0	50.0		7.0	50.0	50.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	23.8	23.8		23.8	23.8		69.2	63.2		68.5	62.9	62.9
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.63	0.57		0.62	0.57	0.57
v/c Ratio	0.90	0.22		0.14	0.54		0.15	0.41		0.16	0.23	0.11

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	87.4	17.8		32.5	27.2		10.9	19.8		9.2	14.2	3.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	87.4	17.8		32.5	27.2		10.9	19.8		9.2	14.2	3.7
LOS	F	B		C	C		B	B		A	B	A
Approach Delay		63.3			28.0			18.9			12.0	
Approach LOS		E			C			B			B	
Queue Length 50th (m)	33.0	6.8		6.5	26.5		9.3	59.6		4.4	25.0	0.0
Queue Length 95th (m)	52.9	17.1		13.5	44.4		m17.0	m83.3		11.8	41.8	8.8
Internal Link Dist (m)		141.8			136.5			470.9			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	252	531		377	556		609	1964		417	1918	864
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	0.62	0.16		0.10	0.40		0.15	0.41		0.16	0.23	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 57 (52%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 23.3		Intersection LOS: C	
Intersection Capacity Utilization 73.0%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate

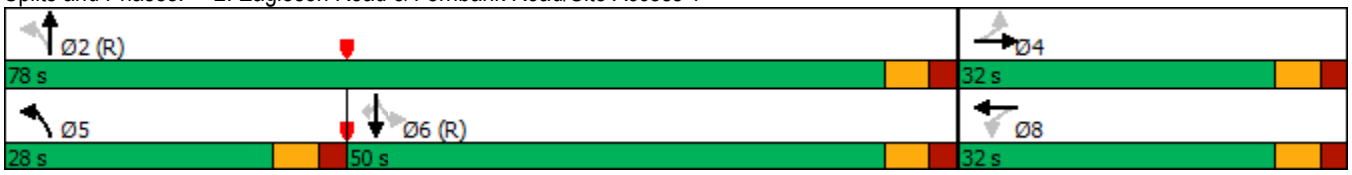


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	260	16	138	9	10	37	140	702	4	36	389	125
Future Volume (vph)	260	16	138	9	10	37	140	702	4	36	389	125
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0		0.0	60.0		0.0	50.0		0.0	60.0		0.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			2.5			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.96		0.98	0.99							
Frt		0.866			0.882			0.999				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	1414	0	1729	1586	0	1679	1800	0	1729	1767	1502
Flt Permitted	0.726			0.605			0.416			0.379		
Satd. Flow (perm)	1304	1414	0	1081	1586	0	735	1800	0	690	1767	1502
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		138			37			1				125
Link Speed (k/h)		60			48			60			60	
Link Distance (m)		183.9			101.4			186.8			494.9	
Travel Time (s)		11.0			7.6			11.2			29.7	
Confl. Peds. (#/hr)	2		9	9		2						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	0%	8%	0%	0%	0%	3%	1%	0%	0%	3%	3%
Adj. Flow (vph)	260	16	138	9	10	37	140	702	4	36	389	125
Shared Lane Traffic (%)												
Lane Group Flow (vph)	260	154	0	9	47	0	140	706	0	36	389	125
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	27.0	27.0		27.0	27.0		11.0	27.0		27.0	27.0	27.0
Total Split (s)	32.0	32.0		32.0	32.0		28.0	78.0		50.0	50.0	50.0
Total Split (%)	29.1%	29.1%		29.1%	29.1%		25.5%	70.9%		45.5%	45.5%	45.5%
Maximum Green (s)	26.0	26.0		26.0	26.0		22.0	72.0		44.0	44.0	44.0
Yellow Time (s)	3.7	3.7		3.7	3.7		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.3	2.3		2.3	2.3		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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	14.0			14.0		14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	0
Act Effct Green (s)	24.4	24.4		24.4	24.4		73.6	73.6		58.7	58.7	58.7
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.67	0.67		0.53	0.53	0.53
v/c Ratio	0.90	0.37		0.04	0.12		0.25	0.59		0.10	0.41	0.15

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	74.5	10.3		33.1	14.7		8.1	12.8		9.4	15.2	5.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	74.5	10.3		33.1	14.7		8.1	12.8		9.4	15.2	5.6
LOS	E	B		C	B		A	B		A	B	A
Approach Delay		50.6			17.6			12.0			12.6	
Approach LOS		D			B			B			B	
Queue Length 50th (m)	53.5	2.7		1.5	1.7		10.3	78.4		4.6	58.7	3.9
Queue Length 95th (m)	#97.1	19.0		5.6	11.0		17.7	111.3		12.0	88.4	23.2
Internal Link Dist (m)		159.9			77.4			162.8			470.9	
Turn Bay Length (m)	190.0			60.0			50.0			60.0		
Base Capacity (vph)	308	439		255	403		680	1204		367	942	859
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	0.84	0.35		0.04	0.12		0.21	0.59		0.10	0.41	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 20.9		Intersection LOS: C	
Intersection Capacity Utilization 80.3%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: Eagleson Road & Fernbank Road/Site Access 1



Intersection	
Int Delay, s/veh	6.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	297	573	48	219	341
Future Vol, veh/h	30	297	573	48	219	341
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	37	3	1	9	5	3
Mvmt Flow	30	297	573	48	219	341

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1353	574	0	0	622	0
Stage 1	574	-	-	-	-	-
Stage 2	779	-	-	-	-	-
Critical Hdwy	6.77	6.23	-	-	4.15	-
Critical Hdwy Stg 1	5.77	-	-	-	-	-
Critical Hdwy Stg 2	5.77	-	-	-	-	-
Follow-up Hdwy	3.833	3.327	-	-	2.245	-
Pot Cap-1 Maneuver	139	516	-	-	944	-
Stage 1	500	-	-	-	-	-
Stage 2	397	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	107	516	-	-	943	-
Mov Cap-2 Maneuver	107	-	-	-	-	-
Stage 1	500	-	-	-	-	-
Stage 2	305	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.8	0	3.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	107	516	943	-
HCM Lane V/C Ratio	-	-	0.28	0.576	0.232	-
HCM Control Delay (s)	-	-	51.3	21	10	-
HCM Lane LOS	-	-	F	C	A	-
HCM 95th %tile Q(veh)	-	-	1.1	3.6	0.9	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	13	61	16	7	47	24	527	8	26	314	29
Future Volume (vph)	46	13	61	16	7	47	24	527	8	26	314	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98		0.99	0.98							
Frt		0.876			0.869				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1647	1480	0	1729	1551	0	1662	1767	1381	1729	1784	1228
Flt Permitted	0.722			0.709			0.570			0.451		
Satd. Flow (perm)	1249	1480	0	1279	1551	0	998	1767	1381	821	1784	1228
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			47				36			36
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			325.2	
Travel Time (s)		15.3			16.4			14.5			19.5	
Confl. Peds. (#/hr)	1		5	5		1						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	15%	3%	0%	0%	0%	4%	3%	12%	0%	2%	26%
Adj. Flow (vph)	46	13	61	16	7	47	24	527	8	26	314	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	74	0	16	54	0	24	527	8	26	314	29
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		53.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	41.1%	41.1%		41.1%	41.1%		58.9%	58.9%	58.9%	58.9%	58.9%	58.9%
Maximum Green (s)	31.0	31.0		31.0	31.0		47.1	47.1	47.1	47.1	47.1	47.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	8.1	8.1		8.1	8.1		53.2	53.2	53.2	53.2	53.2	53.2
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.76	0.76	0.76	0.76	0.76	0.76
v/c Ratio	0.32	0.33		0.11	0.24		0.03	0.39	0.01	0.04	0.23	0.03

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	33.3	14.5		27.6	13.4		3.7	5.2	0.0	3.8	4.1	1.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.3	14.5		27.6	13.4		3.7	5.2	0.0	3.8	4.1	1.3
LOS	C	B		C	B		A	A	A	A	A	A
Approach Delay		21.7			16.6			5.0			3.8	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	5.4	1.5		1.8	0.8		0.7	21.8	0.0	0.8	11.0	0.0
Queue Length 95th (m)	13.9	11.6		6.7	9.5		2.9	43.1	0.0	3.0	22.9	1.8
Internal Link Dist (m)		145.7			158.2			217.6			301.2	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	557	693		570	717		762	1350	1063	627	1363	947
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	0.08	0.11		0.03	0.08		0.03	0.39	0.01	0.04	0.23	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 69.6			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay: 7.1		Intersection LOS: A	
Intersection Capacity Utilization 50.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	253	323	21	16	3
Future Vol, veh/h	14	253	323	21	16	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	253	323	21	16	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	344	0	-	0	615	334
Stage 1	-	-	-	-	334	-
Stage 2	-	-	-	-	281	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1226	-	-	-	458	712
Stage 1	-	-	-	-	730	-
Stage 2	-	-	-	-	771	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1226	-	-	-	452	712
Mov Cap-2 Maneuver	-	-	-	-	452	-
Stage 1	-	-	-	-	721	-
Stage 2	-	-	-	-	771	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1226	-	-	-	480
HCM Lane V/C Ratio	0.011	-	-	-	0.04
HCM Control Delay (s)	8	0	-	-	12.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

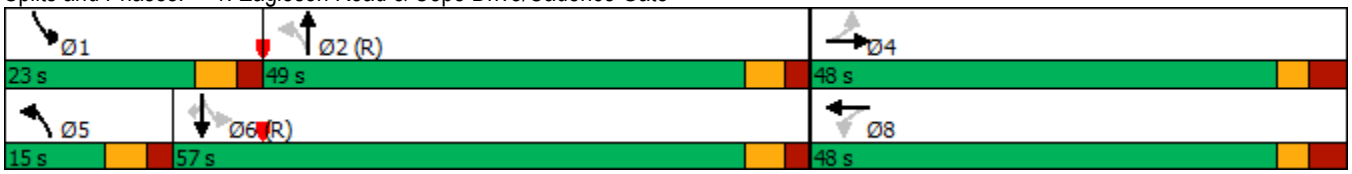
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	123	69	22	109	98	102	680	41	211	952	188
Future Volume (vph)	197	123	69	22	109	98	102	680	41	211	952	188
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		0.99	1.00		1.00		0.95
Frt		0.946			0.929			0.991				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1712	0	1729	1662	0	1729	3390	0	1729	3458	1502
Flt Permitted	0.511			0.540			0.243			0.300		
Satd. Flow (perm)	910	1712	0	980	1662	0	440	3390	0	545	3458	1428
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			41			6				188
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			494.9			267.4	
Travel Time (s)		11.9			14.4			29.7			16.0	
Confl. Peds. (#/hr)	2		3	3		2	11		2	2		11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	0%	0%	0%	2%	0%	0%	1%	0%	0%	0%	3%
Adj. Flow (vph)	197	123	69	22	109	98	102	680	41	211	952	188
Shared Lane Traffic (%)												
Lane Group Flow (vph)	197	192	0	22	207	0	102	721	0	211	952	188
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	28.0		11.0	28.0	28.0
Total Split (s)	48.0	48.0		48.0	48.0		15.0	49.0		23.0	57.0	57.0
Total Split (%)	40.0%	40.0%		40.0%	40.0%		12.5%	40.8%		19.2%	47.5%	47.5%
Maximum Green (s)	41.5	41.5		41.5	41.5		9.0	43.0		17.0	51.0	51.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	28.8	28.8		28.8	28.8		69.1	61.1		76.1	64.7	64.7
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.58	0.51		0.63	0.54	0.54
v/c Ratio	0.90	0.45		0.09	0.48		0.30	0.42		0.46	0.51	0.22

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	83.6	34.9		32.2	33.2		9.9	15.9		13.0	20.7	3.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	83.6	34.9		32.2	33.2		9.9	15.9		13.0	20.7	3.5
LOS	F	C		C	C		A	B		B	C	A
Approach Delay		59.6			33.1			15.2			17.1	
Approach LOS		E			C			B			B	
Queue Length 50th (m)	45.2	33.3		4.1	33.6		6.3	37.5		17.9	72.0	0.0
Queue Length 95th (m)	66.5	47.9		9.6	49.2		m13.4	74.8		37.1	113.9	13.2
Internal Link Dist (m)		141.8			136.5			470.9			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	314	609		338	601		357	1727		525	1863	856
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	0.63	0.32		0.07	0.34		0.29	0.42		0.40	0.51	0.22

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 14 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 23.7 Intersection LOS: C
Intersection Capacity Utilization 79.2% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate

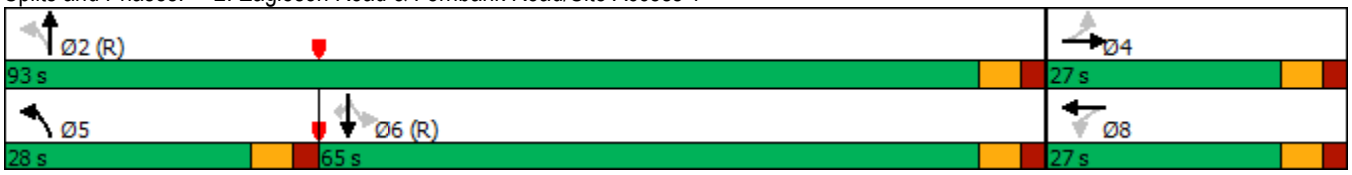


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	171	18	159	18	19	50	198	540	4	54	816	245
Future Volume (vph)	171	18	159	18	19	50	198	540	4	54	816	245
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0		0.0	60.0		0.0	50.0		0.0	60.0		0.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			2.5			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.97		0.99	0.99							0.97
Frt		0.865			0.891			0.999				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	1522	0	1729	1606	0	1631	1818	0	1729	1802	1532
Flt Permitted	0.712			0.475			0.159			0.461		
Satd. Flow (perm)	1281	1522	0	854	1606	0	273	1818	0	839	1802	1492
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		159			50			1				195
Link Speed (k/h)		60			48			60			60	
Link Distance (m)		183.9			101.4			186.8			494.9	
Travel Time (s)		11.0			7.6			11.2			29.7	
Confl. Peds. (#/hr)	1		6	6		1	2					2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	6%	0%	0%	0%	1%	1%
Adj. Flow (vph)	171	18	159	18	19	50	198	540	4	54	816	245
Shared Lane Traffic (%)												
Lane Group Flow (vph)	171	177	0	18	69	0	198	544	0	54	816	245
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	27.0	27.0		27.0	27.0		11.0	27.0		27.0	27.0	27.0
Total Split (s)	27.0	27.0		27.0	27.0		28.0	93.0		65.0	65.0	65.0
Total Split (%)	22.5%	22.5%		22.5%	22.5%		23.3%	77.5%		54.2%	54.2%	54.2%
Maximum Green (s)	21.0	21.0		21.0	21.0		22.0	87.0		59.0	59.0	59.0
Yellow Time (s)	3.7	3.7		3.7	3.7		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.3	2.3		2.3	2.3		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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	14.0			14.0		14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	0
Act Effct Green (s)	19.0	19.0		19.0	19.0		89.0	89.0		69.4	69.4	69.4
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.74	0.74		0.58	0.58	0.58
v/c Ratio	0.84	0.47		0.13	0.23		0.56	0.40		0.11	0.78	0.26

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	81.6	13.3		44.7	18.9		12.1	7.1		4.6	15.8	0.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	81.6	13.3		44.7	18.9		12.1	7.1		4.6	15.8	0.7
LOS	F	B		D	B		B	A		A	B	A
Approach Delay		46.9			24.3			8.4			11.9	
Approach LOS		D			C			A			B	
Queue Length 50th (m)	38.8	3.6		3.6	3.8		12.9	44.2		1.3	157.2	0.0
Queue Length 95th (m)	#72.5	23.3		10.4	16.5		23.8	61.8		m3.0	#256.3	0.0
Internal Link Dist (m)		159.9			77.4			162.8			470.9	
Turn Bay Length (m)	190.0			60.0			50.0			60.0		
Base Capacity (vph)	224	397		149	322		451	1348		484	1041	944
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	0.76	0.45		0.12	0.21		0.44	0.40		0.11	0.78	0.26

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 29 (24%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 16.6		Intersection LOS: B	
Intersection Capacity Utilization 88.7%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: Eagleson Road & Fernbank Road/Site Access 1



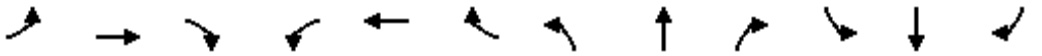
Intersection	
Int Delay, s/veh	5.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	280	488	60	316	701
Future Vol, veh/h	20	280	488	60	316	701
Conflicting Peds, #/hr	0	0	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	2	1	15	1	2
Mvmt Flow	20	280	488	60	316	701

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1825	492	0	0	552	0
Stage 1	492	-	-	-	-	-
Stage 2	1333	-	-	-	-	-
Critical Hdwy	6.46	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	83	577	-	-	1023	-
Stage 1	606	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	57	575	-	-	1019	-
Mov Cap-2 Maneuver	57	-	-	-	-	-
Stage 1	604	-	-	-	-	-
Stage 2	166	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.6	0	3.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	57	575	1019	-
HCM Lane V/C Ratio	-	-	0.351	0.487	0.31	-
HCM Control Delay (s)	-	-	99	17.1	10.1	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	1.3	2.7	1.3	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	19	54	15	15	41	55	458	13	58	618	43
Future Volume (vph)	48	19	54	15	15	41	55	458	13	58	618	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.98		0.99	0.98							
Frt		0.889			0.890				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1394	1520	0	1729	1476	0	1695	1820	1547	1729	1802	1406
Flt Permitted	0.720			0.709			0.395			0.492		
Satd. Flow (perm)	1049	1520	0	1284	1476	0	705	1820	1547	895	1802	1406
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		54			41				36			43
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			325.2	
Travel Time (s)		15.3			16.4			14.5			19.5	
Confl. Peds. (#/hr)	4		3	3		4						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	24%	0%	6%	0%	20%	3%	2%	0%	0%	0%	1%	10%
Adj. Flow (vph)	48	19	54	15	15	41	55	458	13	58	618	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	73	0	15	56	0	55	458	13	58	618	43
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		53.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	41.1%	41.1%		41.1%	41.1%		58.9%	58.9%	58.9%	58.9%	58.9%	58.9%
Maximum Green (s)	31.0	31.0		31.0	31.0		47.1	47.1	47.1	47.1	47.1	47.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	8.7	8.7		8.7	8.7		53.2	53.2	53.2	53.2	53.2	53.2
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.76	0.76	0.76	0.76	0.76	0.76
v/c Ratio	0.37	0.31		0.09	0.26		0.10	0.33	0.01	0.09	0.45	0.04

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	35.6	15.2		26.9	15.3		4.5	5.0	0.5	4.2	6.0	1.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	15.2		26.9	15.3		4.5	5.0	0.5	4.2	6.0	1.6
LOS	D	B		C	B		A	A	A	A	A	A
Approach Delay		23.3			17.8			4.8			5.6	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	5.6	2.2		1.7	1.7		1.8	18.5	0.0	1.9	28.4	0.0
Queue Length 95th (m)	14.6	12.3		6.3	10.5		6.0	37.7	0.5	6.0	57.8	2.6
Internal Link Dist (m)		145.7			158.2			217.6			301.2	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	464	702		568	676		534	1378	1180	678	1365	1075
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	0.10	0.10		0.03	0.08		0.10	0.33	0.01	0.09	0.45	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.2			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.45			
Intersection Signal Delay: 7.4		Intersection LOS: A	
Intersection Capacity Utilization 63.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive

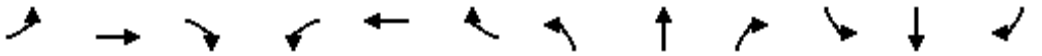
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	356	295	26	25	4
Future Vol, veh/h	21	356	295	26	25	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	21	356	295	26	25	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	321	0	-	0	706	308
Stage 1	-	-	-	-	308	-
Stage 2	-	-	-	-	398	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1250	-	-	-	405	737
Stage 1	-	-	-	-	750	-
Stage 2	-	-	-	-	683	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1250	-	-	-	396	737
Mov Cap-2 Maneuver	-	-	-	-	396	-
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	683	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	14.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1250	-	-	-	423
HCM Lane V/C Ratio	0.017	-	-	-	0.069
HCM Control Delay (s)	7.9	0	-	-	14.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2



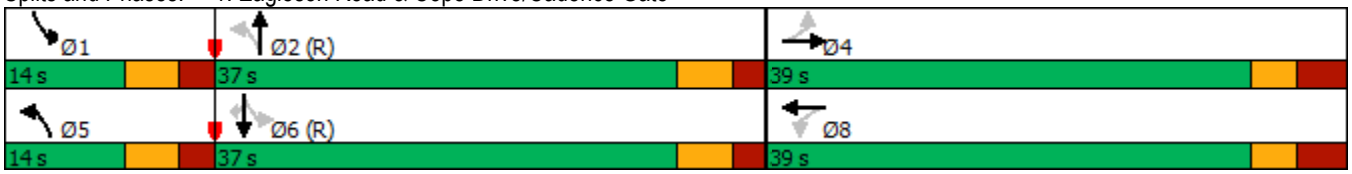
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	91	58	40	75	97	82	490	25	96	571	117
Future Volume (vph)	158	91	58	40	75	97	82	490	25	96	571	117
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00		0.97
Frt		0.942			0.915			0.993				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	1693	0	1679	1648	0	1729	3365	0	1729	3458	1547
Flt Permitted	0.607			0.661			0.416			0.445		
Satd. Flow (perm)	1089	1693	0	1164	1648	0	754	3365	0	806	3458	1494
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			81			6				117
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			494.9			267.4	
Travel Time (s)		11.9			14.4			29.7			16.0	
Confl. Peds. (#/hr)	5		4	4		5	5		5	5		5
Confl. Bikes (#/hr)			1			2			1			4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	0%	3%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	158	91	58	40	75	97	82	490	25	96	571	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	149	0	40	172	0	82	515	0	96	571	117
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	28.0		11.0	28.0	28.0
Total Split (s)	39.0	39.0		39.0	39.0		14.0	37.0		14.0	37.0	37.0
Total Split (%)	43.3%	43.3%		43.3%	43.3%		15.6%	41.1%		15.6%	41.1%	41.1%
Maximum Green (s)	32.5	32.5		32.5	32.5		8.0	31.0		8.0	31.0	31.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	17.7	17.7		17.7	17.7		54.7	48.6		55.2	48.9	48.9
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.61	0.54		0.61	0.54	0.54

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.74	0.41		0.17	0.44		0.15	0.28		0.17	0.30	0.14
Control Delay	52.9	24.5		28.9	19.1		7.8	13.9		7.7	14.0	3.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	52.9	24.5		28.9	19.1		7.8	13.9		7.7	14.0	3.7
LOS	D	C		C	B		A	B		A	B	A
Approach Delay		39.1			21.0			13.0			11.7	
Approach LOS		D			C			B			B	
Queue Length 50th (m)	25.9	16.4		5.8	13.5		4.4	24.8		5.2	28.1	0.0
Queue Length 95th (m)	41.7	29.1		12.6	27.5		12.0	45.1		13.7	50.0	9.7
Internal Link Dist (m)		141.8			136.5			470.9			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	393	636		420	646		552	1821		584	1878	865
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	0.40	0.23		0.10	0.27		0.15	0.28		0.16	0.30	0.14

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 22 (24%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 17.6 Intersection LOS: B
Intersection Capacity Utilization 66.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate



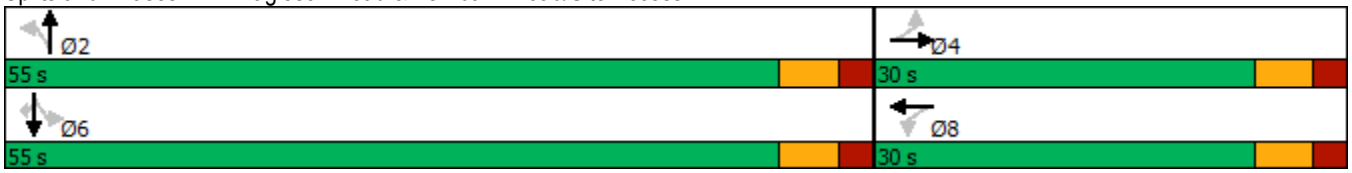
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	29	127	27	26	71	105	393	6	77	460	180
Future Volume (vph)	151	29	127	27	26	71	105	393	6	77	460	180
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0		0.0	60.0		0.0	50.0		0.0	60.0		0.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			2.5			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00				0.99		1.00	1.00				0.97
Frt		0.878			0.890			0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	1585	0	1729	1600	0	1695	1798	0	1729	1802	1532
Flt Permitted	0.694			0.658			0.468			0.511		
Satd. Flow (perm)	1245	1585	0	1198	1600	0	833	1798	0	930	1802	1491
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		127			71			2				180
Link Speed (k/h)		60			48			60			60	
Link Distance (m)		183.9			101.4			186.8			494.9	
Travel Time (s)		11.0			7.6			11.2			29.7	
Confl. Peds. (#/hr)	4					4	3					3
Confl. Bikes (#/hr)									1			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	0%	1%	0%	0%	0%	2%	1%	0%	0%	1%	1%
Adj. Flow (vph)	151	29	127	27	26	71	105	393	6	77	460	180
Shared Lane Traffic (%)												
Lane Group Flow (vph)	151	156	0	27	97	0	105	399	0	77	460	180
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0	27.0
Total Split (s)	30.0	30.0		30.0	30.0		55.0	55.0		55.0	55.0	55.0
Total Split (%)	35.3%	35.3%		35.3%	35.3%		64.7%	64.7%		64.7%	64.7%	64.7%
Maximum Green (s)	24.0	24.0		24.0	24.0		49.0	49.0		49.0	49.0	49.0
Yellow Time (s)	3.7	3.7		3.7	3.7		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.3	2.3		2.3	2.3		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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max		Max	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		14.0	14.0		14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)	14.5	14.5		14.5	14.5		50.7	50.7		50.7	50.7	50.7
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.66	0.66		0.66	0.66	0.66

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.65	0.39		0.12	0.27		0.19	0.34		0.13	0.39	0.17
Control Delay	41.6	10.5		25.6	11.9		7.5	7.6		6.9	8.2	1.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	41.6	10.5		25.6	11.9		7.5	7.6		6.9	8.2	1.6
LOS	D	B		C	B		A	A		A	A	A
Approach Delay		25.8			14.9			7.6			6.4	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	20.0	3.4		3.2	3.1		5.1	21.8		3.6	26.4	0.0
Queue Length 95th (m)	37.4	17.3		9.3	14.1		14.8	46.7		10.9	55.9	7.1
Internal Link Dist (m)		159.9			77.4			162.8			470.9	
Turn Bay Length (m)	190.0			60.0			50.0			60.0		
Base Capacity (vph)	388	581		373	547		547	1181		610	1183	1041
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	0.39	0.27		0.07	0.18		0.19	0.34		0.13	0.39	0.17

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 77.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 11.0 Intersection LOS: B
Intersection Capacity Utilization 68.3% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Eagleson Road & Fernbank Road/Site Access 1



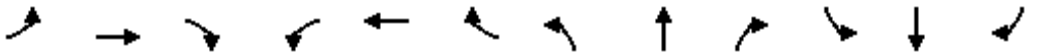
Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	161	339	41	193	408
Future Vol, veh/h	26	161	339	41	193	408
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	2	1	0	1	0
Mvmt Flow	26	161	339	41	193	408

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1134	340	0	0	381	0
Stage 1	340	-	-	-	-	-
Stage 2	794	-	-	-	-	-
Critical Hdwy	6.45	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	221	702	-	-	1183	-
Stage 1	714	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	185	701	-	-	1182	-
Mov Cap-2 Maneuver	185	-	-	-	-	-
Stage 1	713	-	-	-	-	-
Stage 2	368	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	2.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	185	701	1182	-
HCM Lane V/C Ratio	-	-	0.141	0.23	0.163	-
HCM Control Delay (s)	-	-	27.6	11.7	8.6	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.9	0.6	-



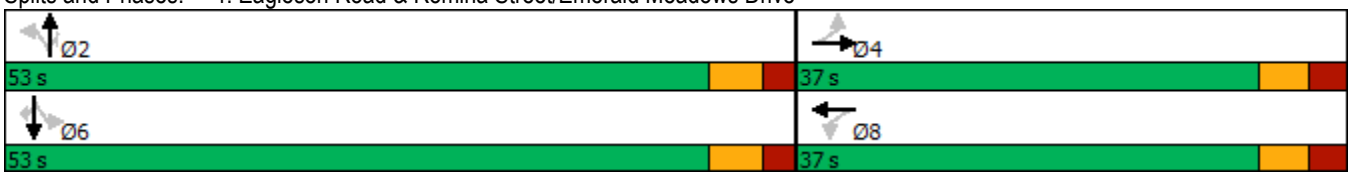
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	8	37	4	11	31	38	307	9	49	354	31
Future Volume (vph)	41	8	37	4	11	31	38	307	9	49	354	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97		0.99	0.98							0.98
Frt		0.877			0.889				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	1506	0	1729	1589	0	1729	1802	1547	1729	1820	1547
Flt Permitted	0.730			0.728			0.549			0.573		
Satd. Flow (perm)	1329	1506	0	1305	1589	0	999	1802	1547	1043	1820	1515
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			31				36			36
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			325.2	
Travel Time (s)		15.3			16.4			14.5			19.5	
Confl. Peds. (#/hr)			8	8								
Confl. Bikes (#/hr)			5			4						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	41	8	37	4	11	31	38	307	9	49	354	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	45	0	4	42	0	38	307	9	49	354	31
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		53.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	41.1%	41.1%		41.1%	41.1%		58.9%	58.9%	58.9%	58.9%	58.9%	58.9%
Maximum Green (s)	31.0	31.0		31.0	31.0		47.1	47.1	47.1	47.1	47.1	47.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	7.7	7.7		7.7	7.7		55.1	55.1	55.1	55.1	55.1	55.1
Actuated g/C Ratio	0.11	0.11		0.11	0.11		0.77	0.77	0.77	0.77	0.77	0.77

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	0.23		0.03	0.21		0.05	0.22	0.01	0.06	0.25	0.03
Control Delay	33.0	14.9		26.2	16.0		3.5	3.8	0.1	3.5	3.9	1.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	14.9		26.2	16.0		3.5	3.8	0.1	3.5	3.9	1.3
LOS	C	B		C	B		A	A	A	A	A	A
Approach Delay		23.6			16.9			3.7			3.7	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	5.1	1.0		0.5	1.3		1.1	10.5	0.0	1.5	12.4	0.0
Queue Length 95th (m)	12.8	9.0		2.9	8.9		3.8	21.2	0.2	4.5	24.6	1.8
Internal Link Dist (m)		145.7			158.2			217.6			301.2	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	582	680		571	713		774	1396	1206	808	1410	1182
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	0.07	0.07		0.01	0.06		0.05	0.22	0.01	0.06	0.25	0.03

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 71.1
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.29
Intersection Signal Delay: 6.2 Intersection LOS: A
Intersection Capacity Utilization 50.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive



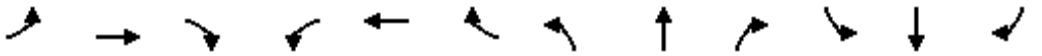
Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	26	208	180	34	34	7
Future Vol, veh/h	26	208	180	34	34	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	26	208	180	34	34	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	214	0	-	0	457	197
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	260	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1368	-	-	-	565	849
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	788	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1368	-	-	-	553	849
Mov Cap-2 Maneuver	-	-	-	-	553	-
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	788	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1368	-	-	-	588
HCM Lane V/C Ratio	0.019	-	-	-	0.07
HCM Control Delay (s)	7.7	0	-	-	11.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

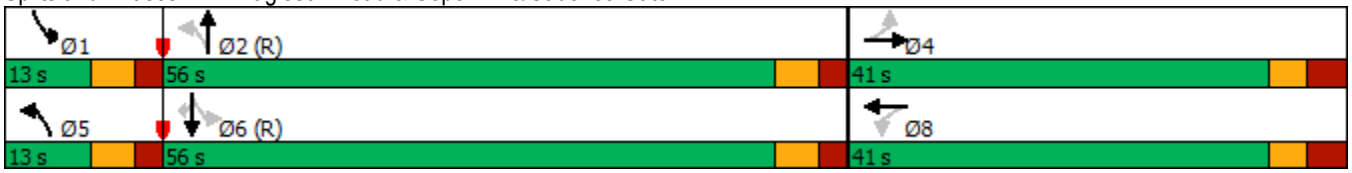


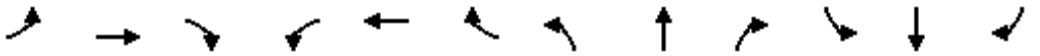
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	39	44	37	82	141	92	834	11	65	464	94
Future Volume (vph)	157	39	44	37	82	141	92	834	11	65	464	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00		0.97
Frt		0.920			0.905			0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1631	1597	0	1631	1595	0	1729	3416	0	1729	3357	1488
Flt Permitted	0.471			0.703			0.470			0.284		
Satd. Flow (perm)	805	1597	0	1203	1595	0	851	3416	0	516	3357	1443
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			82			2				94
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			491.1			267.4	
Travel Time (s)		11.9			14.4			29.5			16.0	
Confl. Peds. (#/hr)	5		3	3		5	4		2	2		4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	5%	3%	6%	4%	1%	0%	1%	0%	0%	3%	4%
Adj. Flow (vph)	157	39	44	37	82	141	92	834	11	65	464	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	157	83	0	37	223	0	92	845	0	65	464	94
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	28.0		11.0	28.0	28.0
Total Split (s)	41.0	41.0		41.0	41.0		13.0	56.0		13.0	56.0	56.0
Total Split (%)	37.3%	37.3%		37.3%	37.3%		11.8%	50.9%		11.8%	50.9%	50.9%
Maximum Green (s)	34.5	34.5		34.5	34.5		7.0	50.0		7.0	50.0	50.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	23.8	23.8		23.8	23.8		69.2	63.2		68.5	62.9	62.9
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.63	0.57		0.62	0.57	0.57
v/c Ratio	0.90	0.22		0.14	0.54		0.16	0.43		0.16	0.24	0.11

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	87.4	17.8		32.5	27.2		13.8	21.5		9.3	14.3	3.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	87.4	17.8		32.5	27.2		13.8	21.5		9.3	14.3	3.7
LOS	F	B		C	C		B	C		A	B	A
Approach Delay		63.3			28.0			20.7			12.2	
Approach LOS		E			C			C			B	
Queue Length 50th (m)	33.0	6.8		6.5	26.5		7.7	54.0		4.4	26.3	0.0
Queue Length 95th (m)	52.9	17.1		13.5	44.4		23.2	100.5		11.8	43.8	8.8
Internal Link Dist (m)		141.8			136.5			467.1			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	252	531		377	556		595	1964		401	1918	864
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	0.62	0.16		0.10	0.40		0.15	0.43		0.16	0.24	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 57 (52%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 24.0		Intersection LOS: C	
Intersection Capacity Utilization 74.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate



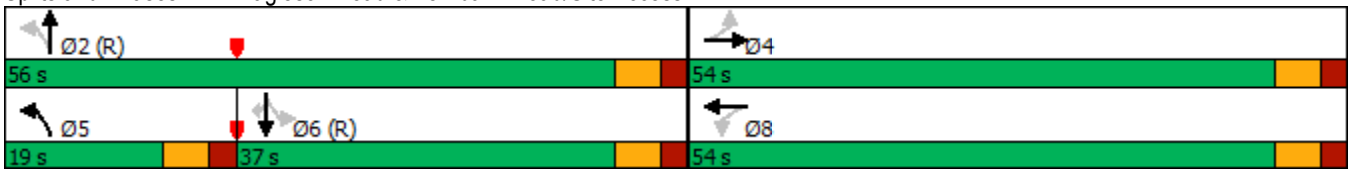


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	273	15	145	9	10	36	147	737	3	35	409	132
Future Volume (vph)	273	15	145	9	10	36	147	737	3	35	409	132
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0		0.0	60.0		0.0	50.0		0.0	60.0		0.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			2.5			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.98		0.99	0.99							
Frt		0.864			0.883			0.999				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	1432	0	1729	1588	0	1679	3420	0	1729	3357	1502
Flt Permitted	0.727			0.613			0.445			0.371		
Satd. Flow (perm)	1306	1432	0	1103	1588	0	786	3420	0	675	3357	1502
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		145			36							132
Link Speed (k/h)		60			48			60			60	
Link Distance (m)		183.9			89.9			188.9			491.1	
Travel Time (s)		11.0			6.7			11.3			29.5	
Confl. Peds. (#/hr)	2		9	9		2						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	0%	8%	0%	0%	0%	3%	1%	0%	0%	3%	3%
Adj. Flow (vph)	273	15	145	9	10	36	147	737	3	35	409	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	273	160	0	9	46	0	147	740	0	35	409	132
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	27.0	27.0		27.0	27.0		11.0	27.0		27.0	27.0	27.0
Total Split (s)	54.0	54.0		54.0	54.0		19.0	56.0		37.0	37.0	37.0
Total Split (%)	49.1%	49.1%		49.1%	49.1%		17.3%	50.9%		33.6%	33.6%	33.6%
Maximum Green (s)	48.0	48.0		48.0	48.0		13.0	50.0		31.0	31.0	31.0
Yellow Time (s)	3.7	3.7		3.7	3.7		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.3	2.3		2.3	2.3		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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	14.0			14.0		14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	0
Act Effct Green (s)	29.2	29.2		29.2	29.2		68.8	68.8		53.1	53.1	53.1
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.63	0.63		0.48	0.48	0.48
v/c Ratio	0.79	0.33		0.03	0.10		0.26	0.35		0.11	0.25	0.17

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	53.0	7.5		25.6	11.2		11.3	11.5		14.9	14.3	5.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	53.0	7.5		25.6	11.2		11.3	11.5		14.9	14.3	5.1
LOS	D	A		C	B		B	B		B	B	A
Approach Delay		36.2			13.5			11.5			12.3	
Approach LOS		D			B			B			B	
Queue Length 50th (m)	54.5	2.4		1.4	1.6		12.0	36.9		4.7	30.8	5.0
Queue Length 95th (m)	74.1	15.5		4.6	8.9		26.4	61.6		14.2	52.0	25.0
Internal Link Dist (m)		159.9			65.9			164.9			467.1	
Turn Bay Length (m)	190.0			60.0			50.0			60.0		
Base Capacity (vph)	569	706		481	713		598	2140		325	1619	793
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	0.48	0.23		0.02	0.06		0.25	0.35		0.11	0.25	0.17

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 17.2		Intersection LOS: B	
Intersection Capacity Utilization 63.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Eagleson Road & Fernbank Road/Site Access 1



Intersection	
Int Delay, s/veh	5.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	297	602	48	219	357
Future Vol, veh/h	30	297	602	48	219	357
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	37	3	1	9	5	3
Mvmt Flow	30	297	602	48	219	357

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1220	302	0	0	651	0
Stage 1	603	-	-	-	-	-
Stage 2	617	-	-	-	-	-
Critical Hdwy	7.54	6.96	-	-	4.2	-
Critical Hdwy Stg 1	6.54	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	-	-	-
Follow-up Hdwy	3.87	3.33	-	-	2.25	-
Pot Cap-1 Maneuver	130	691	-	-	911	-
Stage 1	423	-	-	-	-	-
Stage 2	415	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	99	690	-	-	910	-
Mov Cap-2 Maneuver	99	-	-	-	-	-
Stage 1	423	-	-	-	-	-
Stage 2	315	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18	0	3.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	99	690	910	-
HCM Lane V/C Ratio	-	-	0.303	0.43	0.241	-
HCM Control Delay (s)	-	-	56.4	14.1	10.2	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	1.2	2.2	0.9	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	13	61	16	7	47	24	553	8	26	330	29
Future Volume (vph)	46	13	61	16	7	47	24	553	8	26	330	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		0.99	0.99							
Frt		0.876			0.869				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1647	1495	0	1729	1563	0	1662	3357	1381	1729	3390	1228
Flt Permitted	0.722			0.709			0.553			0.445		
Satd. Flow (perm)	1250	1495	0	1284	1563	0	968	3357	1381	810	3390	1228
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			47				36			36
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			326.6	
Travel Time (s)		15.3			16.4			14.5			19.6	
Confl. Peds. (#/hr)	1		5	5		1						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	15%	3%	0%	0%	0%	4%	3%	12%	0%	2%	26%
Adj. Flow (vph)	46	13	61	16	7	47	24	553	8	26	330	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	74	0	16	54	0	24	553	8	26	330	29
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		53.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	41.1%	41.1%		41.1%	41.1%		58.9%	58.9%	58.9%	58.9%	58.9%	58.9%
Maximum Green (s)	31.0	31.0		31.0	31.0		47.1	47.1	47.1	47.1	47.1	47.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	8.0	8.0		8.0	8.0		53.2	53.2	53.2	53.2	53.2	53.2
Actuated g/C Ratio	0.11	0.11		0.11	0.11		0.76	0.76	0.76	0.76	0.76	0.76
v/c Ratio	0.32	0.33		0.11	0.24		0.03	0.22	0.01	0.04	0.13	0.03

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	33.3	14.5		27.6	13.4		3.6	3.6	0.0	3.7	3.3	1.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.3	14.5		27.6	13.4		3.6	3.6	0.0	3.7	3.3	1.3
LOS	C	B		C	B		A	A	A	A	A	A
Approach Delay		21.7			16.6			3.6			3.2	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	5.4	1.5		1.8	0.8		0.7	10.1	0.0	0.8	5.5	0.0
Queue Length 95th (m)	13.9	11.6		6.7	9.4		2.8	18.0	0.0	3.0	10.6	1.8
Internal Link Dist (m)		145.7			158.2			217.6			302.6	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	557	700		573	723		740	2566	1064	619	2592	947
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	0.08	0.11		0.03	0.07		0.03	0.22	0.01	0.04	0.13	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 69.6			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.33			
Intersection Signal Delay: 6.1		Intersection LOS: A	
Intersection Capacity Utilization 43.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	253	323	20	16	3
Future Vol, veh/h	13	253	323	20	16	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	253	323	20	16	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	343	0	-	0	612	333
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	279	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1227	-	-	-	460	713
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	773	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1227	-	-	-	454	713
Mov Cap-2 Maneuver	-	-	-	-	454	-
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	773	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12.8
HCM LOS			B

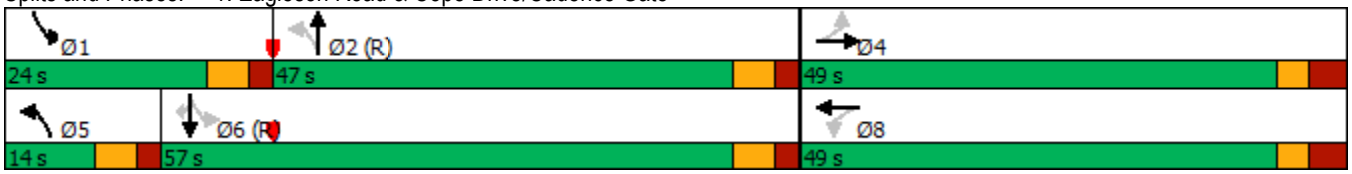
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1227	-	-	-	482
HCM Lane V/C Ratio	0.011	-	-	-	0.039
HCM Control Delay (s)	8	0	-	-	12.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	123	68	22	109	98	102	712	41	211	997	188
Future Volume (vph)	197	123	68	22	109	98	102	712	41	211	997	188
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		0.99	1.00				0.95
Frt		0.947			0.929			0.992				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1714	0	1729	1662	0	1729	3394	0	1729	3458	1502
Flt Permitted	0.511			0.541			0.226			0.285		
Satd. Flow (perm)	910	1714	0	982	1662	0	409	3394	0	519	3458	1428
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			42			5				188
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			491.1			267.4	
Travel Time (s)		11.9			14.4			29.5			16.0	
Confl. Peds. (#/hr)	2		3	3		2	11		2	2		11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	0%	0%	0%	2%	0%	0%	1%	0%	0%	0%	3%
Adj. Flow (vph)	197	123	68	22	109	98	102	712	41	211	997	188
Shared Lane Traffic (%)												
Lane Group Flow (vph)	197	191	0	22	207	0	102	753	0	211	997	188
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	28.0		11.0	28.0	28.0
Total Split (s)	49.0	49.0		49.0	49.0		14.0	47.0		24.0	57.0	57.0
Total Split (%)	40.8%	40.8%		40.8%	40.8%		11.7%	39.2%		20.0%	47.5%	47.5%
Maximum Green (s)	42.5	42.5		42.5	42.5		8.0	41.0		18.0	51.0	51.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	28.7	28.7		28.7	28.7		69.2	61.1		76.2	64.7	64.7
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.58	0.51		0.64	0.54	0.54
v/c Ratio	0.90	0.44		0.09	0.48		0.31	0.44		0.47	0.53	0.22

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	83.6	34.8		32.1	33.0		10.4	16.2		13.3	21.1	3.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	83.6	34.8		32.1	33.0		10.4	16.2		13.3	21.1	3.5
LOS	F	C		C	C		B	B		B	C	A
Approach Delay		59.6			33.0			15.5			17.5	
Approach LOS		E			C			B			B	
Queue Length 50th (m)	45.2	33.1		4.1	33.3		6.2	40.4		17.9	76.8	0.0
Queue Length 95th (m)	66.5	47.6		9.6	49.0		m13.4	78.8		37.1	121.1	13.2
Internal Link Dist (m)		141.8			136.5			467.1			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	322	623		347	615		332	1730		522	1864	856
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	0.61	0.31		0.06	0.34		0.31	0.44		0.40	0.53	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 14 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 23.9		Intersection LOS: C	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate

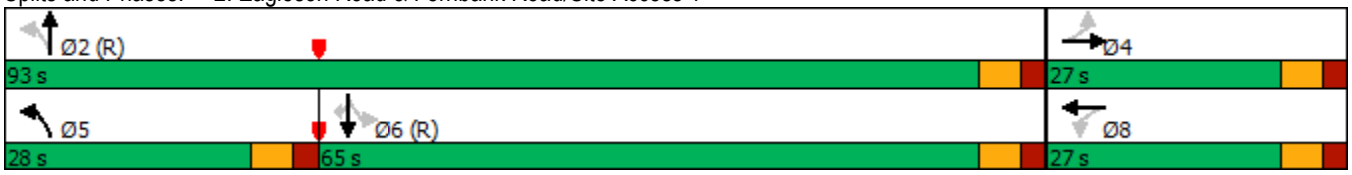


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	17	167	18	19	49	208	569	4	53	857	258
Future Volume (vph)	179	17	167	18	19	49	208	569	4	53	857	258
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0		0.0	60.0		0.0	50.0		0.0	60.0		0.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			2.5			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.98		0.99	0.99		1.00					0.97
Frt		0.864			0.892			0.999				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	1541	0	1729	1607	0	1631	3455	0	1729	3424	1532
Flt Permitted	0.713			0.461			0.263			0.436		
Satd. Flow (perm)	1283	1541	0	833	1607	0	451	3455	0	794	3424	1492
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		167			49			1				258
Link Speed (k/h)		60			48			60			60	
Link Distance (m)		183.9			89.9			188.9			491.1	
Travel Time (s)		11.0			6.7			11.3			29.5	
Confl. Peds. (#/hr)	1		6	6		1	2					2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	6%	0%	0%	0%	1%	1%
Adj. Flow (vph)	179	17	167	18	19	49	208	569	4	53	857	258
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	184	0	18	68	0	208	573	0	53	857	258
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	27.0	27.0		27.0	27.0		11.0	27.0		27.0	27.0	27.0
Total Split (s)	27.0	27.0		27.0	27.0		28.0	93.0		65.0	65.0	65.0
Total Split (%)	22.5%	22.5%		22.5%	22.5%		23.3%	77.5%		54.2%	54.2%	54.2%
Maximum Green (s)	21.0	21.0		21.0	21.0		22.0	87.0		59.0	59.0	59.0
Yellow Time (s)	3.7	3.7		3.7	3.7		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.3	2.3		2.3	2.3		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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	14.0			14.0		14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	0
Act Effct Green (s)	19.4	19.4		19.4	19.4		88.6	88.6		72.3	72.3	72.3
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.74	0.74		0.60	0.60	0.60
v/c Ratio	0.86	0.47		0.13	0.23		0.48	0.22		0.11	0.42	0.26

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	84.3	12.8		44.8	19.1		8.8	5.3		4.1	4.3	0.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	84.3	12.8		44.8	19.1		8.8	5.3		4.1	4.3	0.6
LOS	F	B		D	B		A	A		A	A	A
Approach Delay		48.1			24.5			6.3			3.5	
Approach LOS		D			C			A			A	
Queue Length 50th (m)	40.8	3.4		3.6	3.8		13.6	20.5		1.3	11.3	0.0
Queue Length 95th (m)	#77.3	23.2		10.5	16.3		21.3	26.8		m2.6	13.8	0.2
Internal Link Dist (m)		159.9			65.9			164.9			467.1	
Turn Bay Length (m)	190.0			60.0			50.0			60.0		
Base Capacity (vph)	224	407		145	321		549	2550		478	2063	1001
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	0.80	0.45		0.12	0.21		0.38	0.22		0.11	0.42	0.26

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 29 (24%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 11.9		Intersection LOS: B	
Intersection Capacity Utilization 69.4%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: Eagleson Road & Fernbank Road/Site Access 1



Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	280	513	60	316	735
Future Vol, veh/h	20	280	513	60	316	735
Conflicting Peds, #/hr	0	0	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	2	1	15	1	2
Mvmt Flow	20	280	513	60	316	735

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1517	261	0	0	577	0
Stage 1	517	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Critical Hdwy	6.92	6.94	-	-	4.12	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.32	-	-	2.21	-
Pot Cap-1 Maneuver	106	738	-	-	999	-
Stage 1	552	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	72	735	-	-	995	-
Mov Cap-2 Maneuver	72	-	-	-	-	-
Stage 1	550	-	-	-	-	-
Stage 2	210	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.9	0	3.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	72	735	995	-
HCM Lane V/C Ratio	-	-	0.278	0.381	0.318	-
HCM Control Delay (s)	-	-	73.2	12.9	10.3	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	1	1.8	1.4	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	19	54	15	15	41	55	480	13	58	648	43
Future Volume (vph)	48	19	54	15	15	41	55	480	13	58	648	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99							
Frt		0.889			0.890				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1394	1532	0	1729	1488	0	1695	3458	1547	1729	3424	1406
Flt Permitted	0.720			0.709			0.406			0.478		
Satd. Flow (perm)	1052	1532	0	1286	1488	0	724	3458	1547	870	3424	1406
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		54			41				36			43
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			326.6	
Travel Time (s)		15.3			16.4			14.5			19.6	
Confl. Peds. (#/hr)	4		3	3		4						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	24%	0%	6%	0%	20%	3%	2%	0%	0%	0%	1%	10%
Adj. Flow (vph)	48	19	54	15	15	41	55	480	13	58	648	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	73	0	15	56	0	55	480	13	58	648	43
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		53.0	53.0	53.0	53.0	53.0	53.0
Total Split (%)	41.1%	41.1%		41.1%	41.1%		58.9%	58.9%	58.9%	58.9%	58.9%	58.9%
Maximum Green (s)	31.0	31.0		31.0	31.0		47.1	47.1	47.1	47.1	47.1	47.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	8.6	8.6		8.6	8.6		53.1	53.1	53.1	53.1	53.1	53.1
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.76	0.76	0.76	0.76	0.76	0.76
v/c Ratio	0.37	0.31		0.09	0.26		0.10	0.18	0.01	0.09	0.25	0.04

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	35.6	15.2		26.9	15.3		4.4	3.7	0.5	4.3	4.0	1.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	15.2		26.9	15.3		4.4	3.7	0.5	4.3	4.0	1.5
LOS	D	B		C	B		A	A	A	A	A	A
Approach Delay		23.2			17.7			3.7			3.9	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	5.6	2.2		1.7	1.7		1.8	8.8	0.0	1.9	12.6	0.0
Queue Length 95th (m)	14.6	12.2		6.3	10.6		5.9	16.5	0.5	5.9	22.8	2.6
Internal Link Dist (m)		145.7			158.2			217.6			302.6	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	465	708		569	681		548	2620	1181	659	2595	1076
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	0.10	0.10		0.03	0.08		0.10	0.18	0.01	0.09	0.25	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.1			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay: 6.0		Intersection LOS: A	
Intersection Capacity Utilization 48.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive

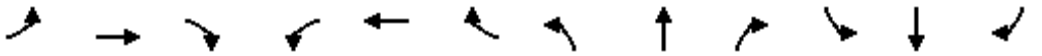
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	356	295	25	24	4
Future Vol, veh/h	20	356	295	25	24	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	20	356	295	25	24	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	320	0	-	0	704	308
Stage 1	-	-	-	-	308	-
Stage 2	-	-	-	-	396	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1251	-	-	-	406	737
Stage 1	-	-	-	-	750	-
Stage 2	-	-	-	-	684	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1251	-	-	-	398	737
Mov Cap-2 Maneuver	-	-	-	-	398	-
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	684	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	14
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1251	-	-	-	426
HCM Lane V/C Ratio	0.016	-	-	-	0.066
HCM Control Delay (s)	7.9	0	-	-	14
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2



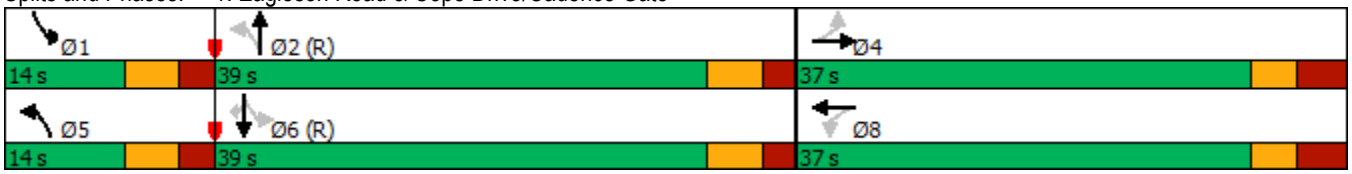
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	91	58	40	75	97	81	511	25	96	597	117
Future Volume (vph)	158	91	58	40	75	97	81	511	25	96	597	117
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	25.0		0.0	75.0		0.0	60.0		125.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00		0.97
Frt		0.942			0.915			0.993				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	1693	0	1679	1648	0	1729	3365	0	1729	3458	1547
Flt Permitted	0.607			0.661			0.403			0.432		
Satd. Flow (perm)	1089	1693	0	1164	1648	0	731	3365	0	783	3458	1494
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39			78			6				117
Link Speed (k/h)		50			40			60			60	
Link Distance (m)		165.8			160.5			491.1			267.4	
Travel Time (s)		11.9			14.4			29.5			16.0	
Confl. Peds. (#/hr)	5		4	4		5	5		5	5		5
Confl. Bikes (#/hr)			1			2			1			4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	0%	3%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	158	91	58	40	75	97	81	511	25	96	597	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	149	0	40	172	0	81	536	0	96	597	117
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.5	32.5		32.5	32.5		11.0	32.0		11.0	32.0	32.0
Total Split (s)	37.0	37.0		37.0	37.0		14.0	39.0		14.0	39.0	39.0
Total Split (%)	41.1%	41.1%		41.1%	41.1%		15.6%	43.3%		15.6%	43.3%	43.3%
Maximum Green (s)	30.5	30.5		30.5	30.5		8.0	33.0		8.0	33.0	33.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		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)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0			15.0			15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	17.7	17.7		17.7	17.7		54.7	48.7		55.3	49.0	49.0
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.61	0.54		0.61	0.54	0.54

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.74	0.41		0.18	0.45		0.15	0.29		0.17	0.32	0.14
Control Delay	53.3	24.8		29.1	19.7		7.8	13.9		7.7	14.1	3.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	53.3	24.8		29.1	19.7		7.8	13.9		7.7	14.1	3.7
LOS	D	C		C	B		A	B		A	B	A
Approach Delay		39.5			21.5			13.1			11.8	
Approach LOS		D			C			B			B	
Queue Length 50th (m)	25.9	16.5		5.8	14.0		4.3	26.1		5.2	29.6	0.0
Queue Length 95th (m)	41.9	29.4		12.7	28.1		11.9	46.8		13.6	52.1	9.6
Internal Link Dist (m)		141.8			136.5			467.1			243.4	
Turn Bay Length (m)	60.0			25.0			75.0			60.0		125.0
Base Capacity (vph)	369	599		394	610		540	1823		573	1882	866
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	0.43	0.25		0.10	0.28		0.15	0.29		0.17	0.32	0.14

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 22 (24%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 17.6 Intersection LOS: B
Intersection Capacity Utilization 66.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Eagleson Road & Cope Drive/Cadence Gate



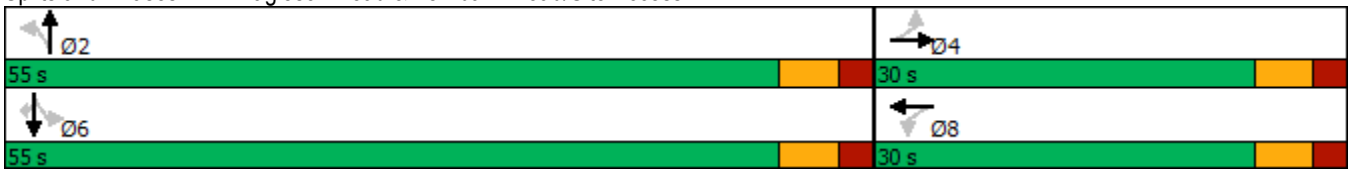
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	28	134	27	26	69	110	414	6	75	484	189
Future Volume (vph)	159	28	134	27	26	69	110	414	6	75	484	189
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	190.0		0.0	60.0		0.0	50.0		0.0	60.0		0.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.6			2.5			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00				0.99		1.00	1.00				0.97
Frt		0.876			0.891			0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	1581	0	1729	1602	0	1695	3416	0	1729	3424	1532
Flt Permitted	0.695			0.647			0.476			0.506		
Satd. Flow (perm)	1247	1581	0	1178	1602	0	847	3416	0	921	3424	1491
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		134			69			3				189
Link Speed (k/h)		60			48			60			60	
Link Distance (m)		183.9			89.9			188.9			491.1	
Travel Time (s)		11.0			6.7			11.3			29.5	
Confl. Peds. (#/hr)	4					4	3					3
Confl. Bikes (#/hr)									1			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	0%	1%	0%	0%	0%	2%	1%	0%	0%	1%	1%
Adj. Flow (vph)	159	28	134	27	26	69	110	414	6	75	484	189
Shared Lane Traffic (%)												
Lane Group Flow (vph)	159	162	0	27	95	0	110	420	0	75	484	189
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	27.0	27.0		27.0	27.0		27.0	27.0		27.0	27.0	27.0
Total Split (s)	30.0	30.0		30.0	30.0		55.0	55.0		55.0	55.0	55.0
Total Split (%)	35.3%	35.3%		35.3%	35.3%		64.7%	64.7%		64.7%	64.7%	64.7%
Maximum Green (s)	24.0	24.0		24.0	24.0		49.0	49.0		49.0	49.0	49.0
Yellow Time (s)	3.7	3.7		3.7	3.7		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.3	2.3		2.3	2.3		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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max		Max	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		14.0	14.0		14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)	15.0	15.0		15.0	15.0		50.4	50.4		50.4	50.4	50.4
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.65	0.65		0.65	0.65	0.65

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.66	0.39		0.12	0.26		0.20	0.19		0.12	0.22	0.18
Control Delay	41.8	10.0		25.4	11.8		7.8	6.3		7.1	6.5	1.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	41.8	10.0		25.4	11.8		7.8	6.3		7.1	6.5	1.7
LOS	D	B		C	B		A	A		A	A	A
Approach Delay		25.8			14.8			6.6			5.3	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	21.2	3.3		3.2	3.1		5.5	10.9		3.6	12.9	0.0
Queue Length 95th (m)	39.3	17.1		9.3	13.8		15.9	21.8		11.0	25.3	7.5
Internal Link Dist (m)		159.9			65.9			164.9			467.1	
Turn Bay Length (m)	190.0			60.0			50.0			60.0		
Base Capacity (vph)	387	583		366	545		551	2225		600	2230	1037
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	0.41	0.28		0.07	0.17		0.20	0.19		0.13	0.22	0.18

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 77.4
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 10.2 Intersection LOS: B
Intersection Capacity Utilization 60.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Eagleson Road & Fernbank Road/Site Access 1



Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	161	356	41	193	428
Future Vol, veh/h	26	161	356	41	193	428
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	55	0	-	15	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	2	1	0	1	0
Mvmt Flow	26	161	356	41	193	428

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	957	179	0	0	398	0
Stage 1	357	-	-	-	-	-
Stage 2	600	-	-	-	-	-
Critical Hdwy	6.9	6.94	-	-	4.12	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.32	-	-	2.21	-
Pot Cap-1 Maneuver	250	833	-	-	1164	-
Stage 1	670	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	208	832	-	-	1163	-
Mov Cap-2 Maneuver	208	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	420	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	2.7
HCM LOS	B		

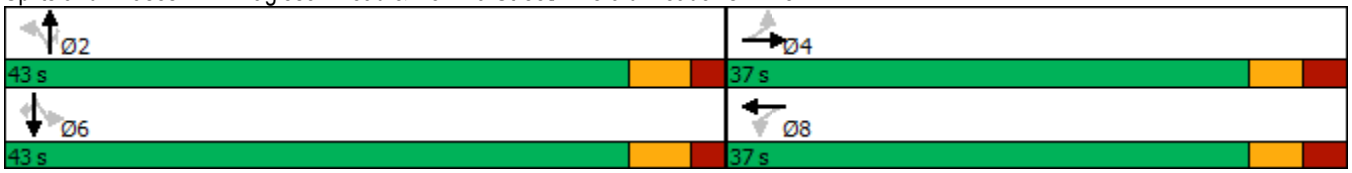
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	208	832	1163	-
HCM Lane V/C Ratio	-	-	0.125	0.194	0.166	-
HCM Control Delay (s)	-	-	24.8	10.4	8.7	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.7	0.6	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	8	37	4	11	31	38	322	9	49	371	31
Future Volume (vph)	41	8	37	4	11	31	38	322	9	49	371	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	15.0		0.0	15.0		0.0	140.0		50.0	70.0		85.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor		0.98		0.99	0.99							0.98
Frt		0.877			0.889				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	1528	0	1729	1601	0	1729	3424	1547	1729	3458	1547
Flt Permitted	0.816			0.816			0.531			0.557		
Satd. Flow (perm)	1485	1528	0	1473	1601	0	966	3424	1547	1014	3458	1515
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			31				41			41
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		169.7			182.2			241.6			326.6	
Travel Time (s)		15.3			16.4			14.5			19.6	
Confl. Peds. (#/hr)			8	8								
Confl. Bikes (#/hr)			5			4						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	41	8	37	4	11	31	38	322	9	49	371	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	45	0	4	42	0	38	322	9	49	371	31
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.0	29.0		29.0	29.0		25.9	25.9	25.9	25.9	25.9	25.9
Total Split (s)	37.0	37.0		37.0	37.0		43.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	46.3%	46.3%		46.3%	46.3%		53.8%	53.8%	53.8%	53.8%	53.8%	53.8%
Maximum Green (s)	31.0	31.0		31.0	31.0		37.1	37.1	37.1	37.1	37.1	37.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.7	2.7		2.7	2.7		2.2	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)	15.0	15.0		15.0	15.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		13.0	13.0	13.0	13.0	13.0	13.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	7.3	7.3		7.2	7.2		46.2	46.2	46.2	46.2	46.2	46.2
Actuated g/C Ratio	0.13	0.13		0.12	0.12		0.79	0.79	0.79	0.79	0.79	0.79

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.22	0.20		0.02	0.19		0.05	0.12	0.01	0.06	0.14	0.03
Control Delay	25.2	12.5		21.5	13.5		3.8	3.2	0.0	3.8	3.2	1.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	12.5		21.5	13.5		3.8	3.2	0.0	3.8	3.2	1.3
LOS	C	B		C	B		A	A	A	A	A	A
Approach Delay		18.5			14.2			3.1			3.1	
Approach LOS		B			B			A			A	
Queue Length 50th (m)	4.2	0.8		0.4	1.1		1.1	5.1	0.0	1.4	6.0	0.0
Queue Length 95th (m)	11.0	7.9		2.5	7.9		3.9	10.0	0.1	4.7	11.4	1.8
Internal Link Dist (m)		145.7			158.2			217.6			302.6	
Turn Bay Length (m)	15.0			15.0			140.0		50.0	70.0		85.0
Base Capacity (vph)	789	829		783	865		766	2715	1235	804	2742	1210
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	0.05	0.05		0.01	0.05		0.05	0.12	0.01	0.06	0.14	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 58.3			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.22			
Intersection Signal Delay: 5.1		Intersection LOS: A	
Intersection Capacity Utilization 41.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Eagleson Road & Romina Street/Emerald Meadows Drive



Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	209	180	33	33	6
Future Vol, veh/h	25	209	180	33	33	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	25	209	180	33	33	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	213	0	-	0	456	197
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	259	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1369	-	-	-	566	849
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	789	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1369	-	-	-	554	849
Mov Cap-2 Maneuver	-	-	-	-	554	-
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	789	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1369	-	-	-	585
HCM Lane V/C Ratio	0.018	-	-	-	0.067
HCM Control Delay (s)	7.7	0	-	-	11.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Appendix F

Trip Generation Data

Strip Retail Plaza (<40k)
(822)

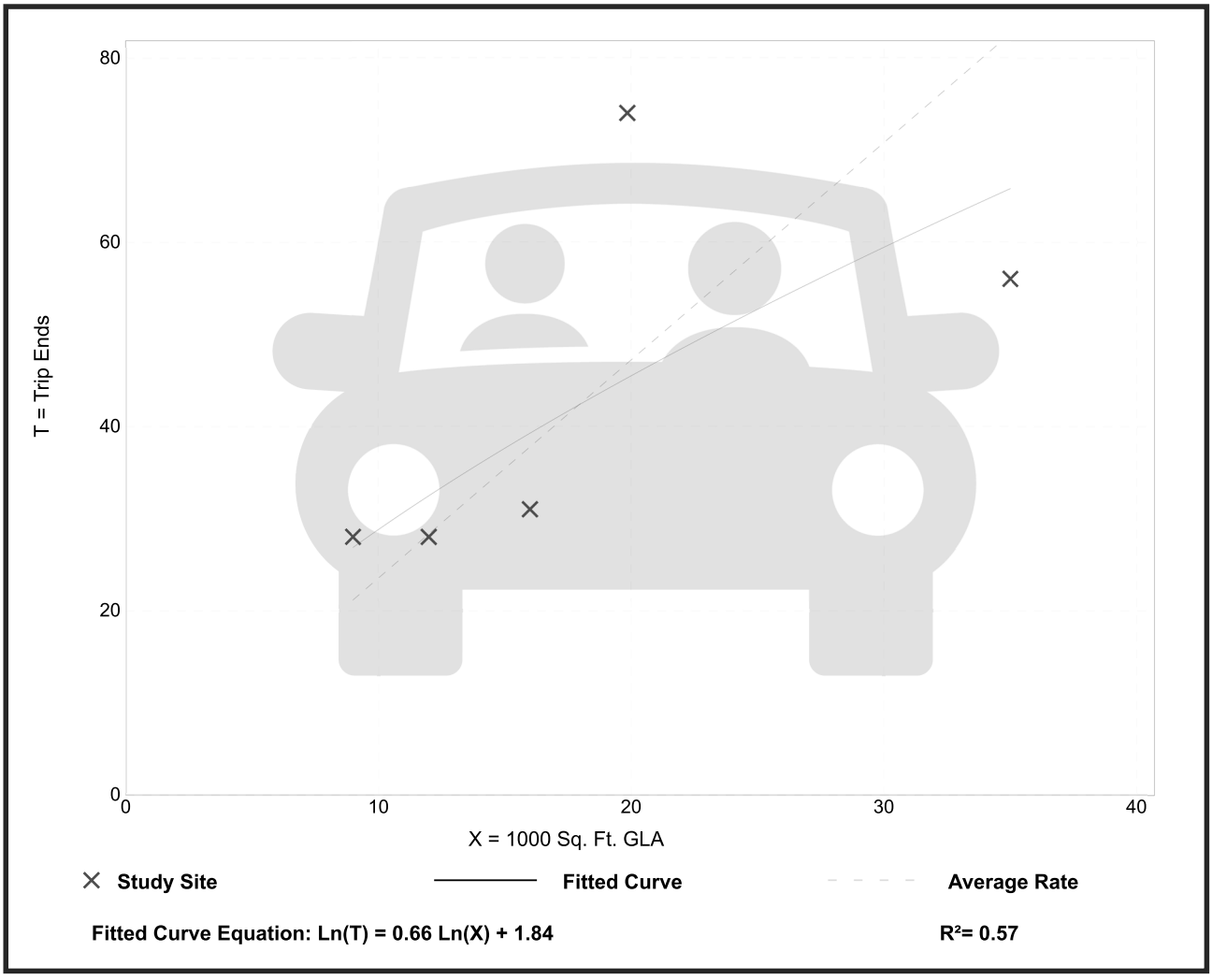
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. 1000 Sq. Ft. GLA: 18
Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.36	1.60 - 3.73	0.94

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Ln(T) = 0.66 Ln(X) + 1.84

R^2= 0.57

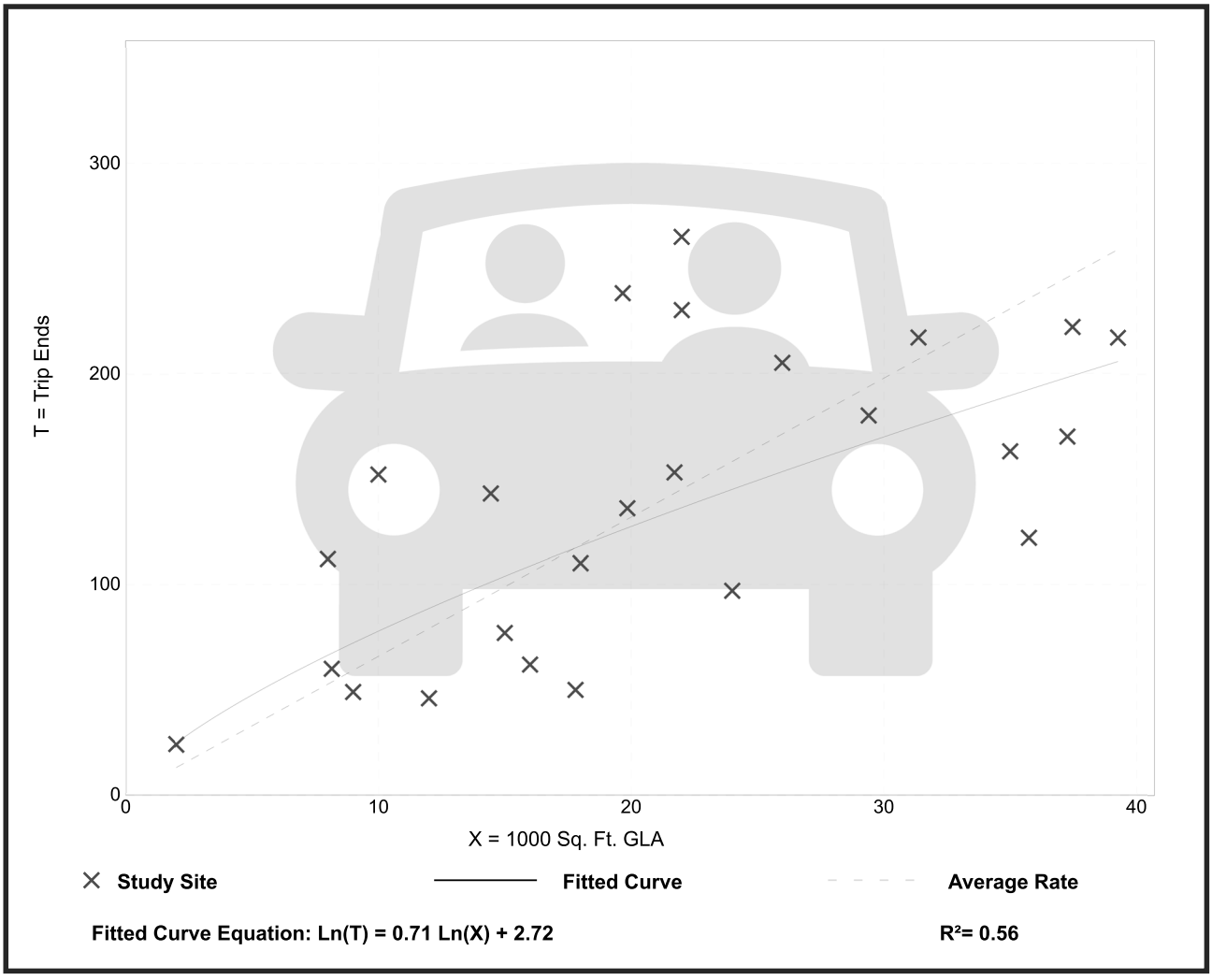
Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 25
Avg. 1000 Sq. Ft. GLA: 21
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.59	2.81 - 15.20	2.94

Data Plot and Equation



Strip Retail Plaza (<40k)
(822)

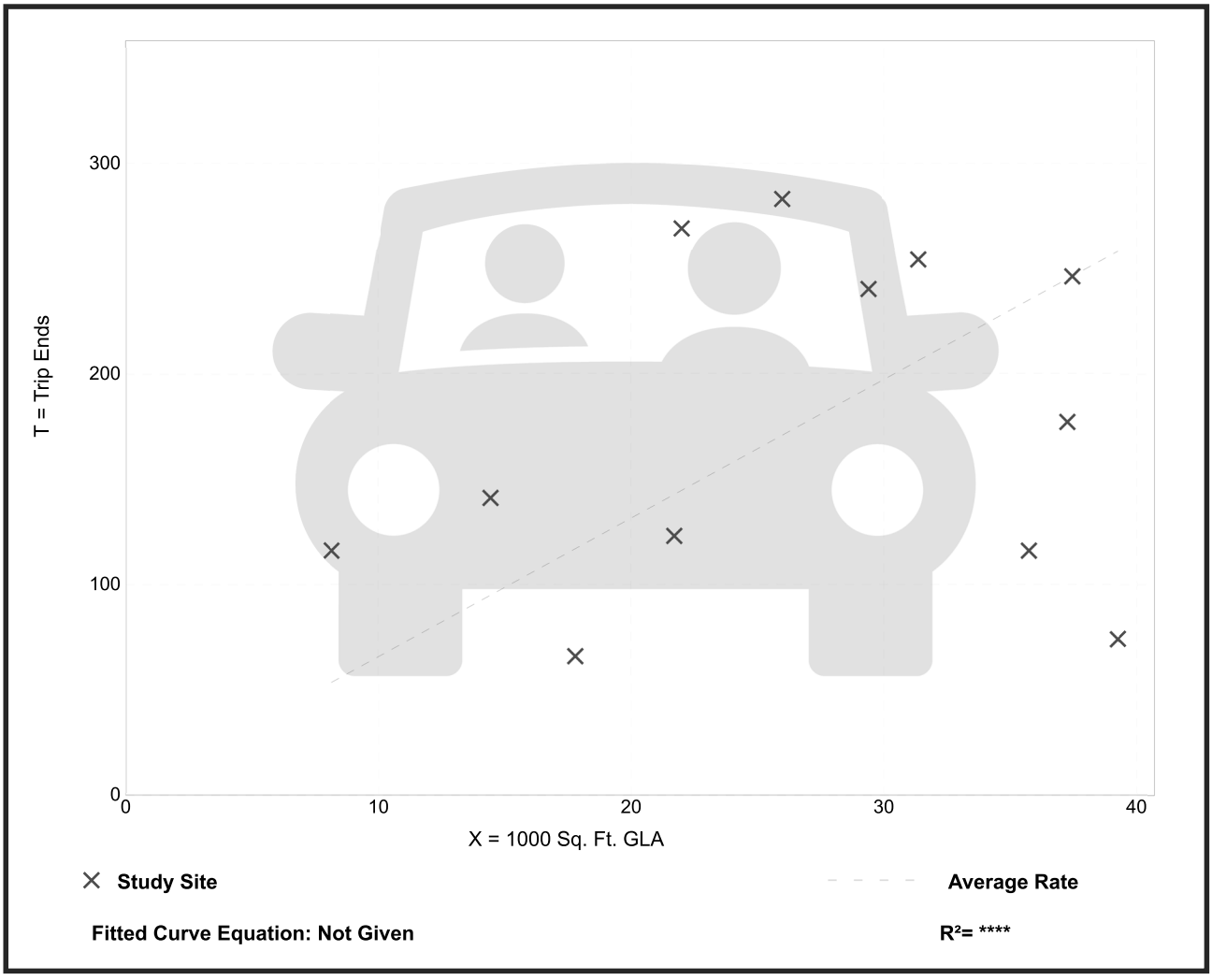
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 12
Avg. 1000 Sq. Ft. GLA: 27
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.57	1.88 - 14.23	3.45

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

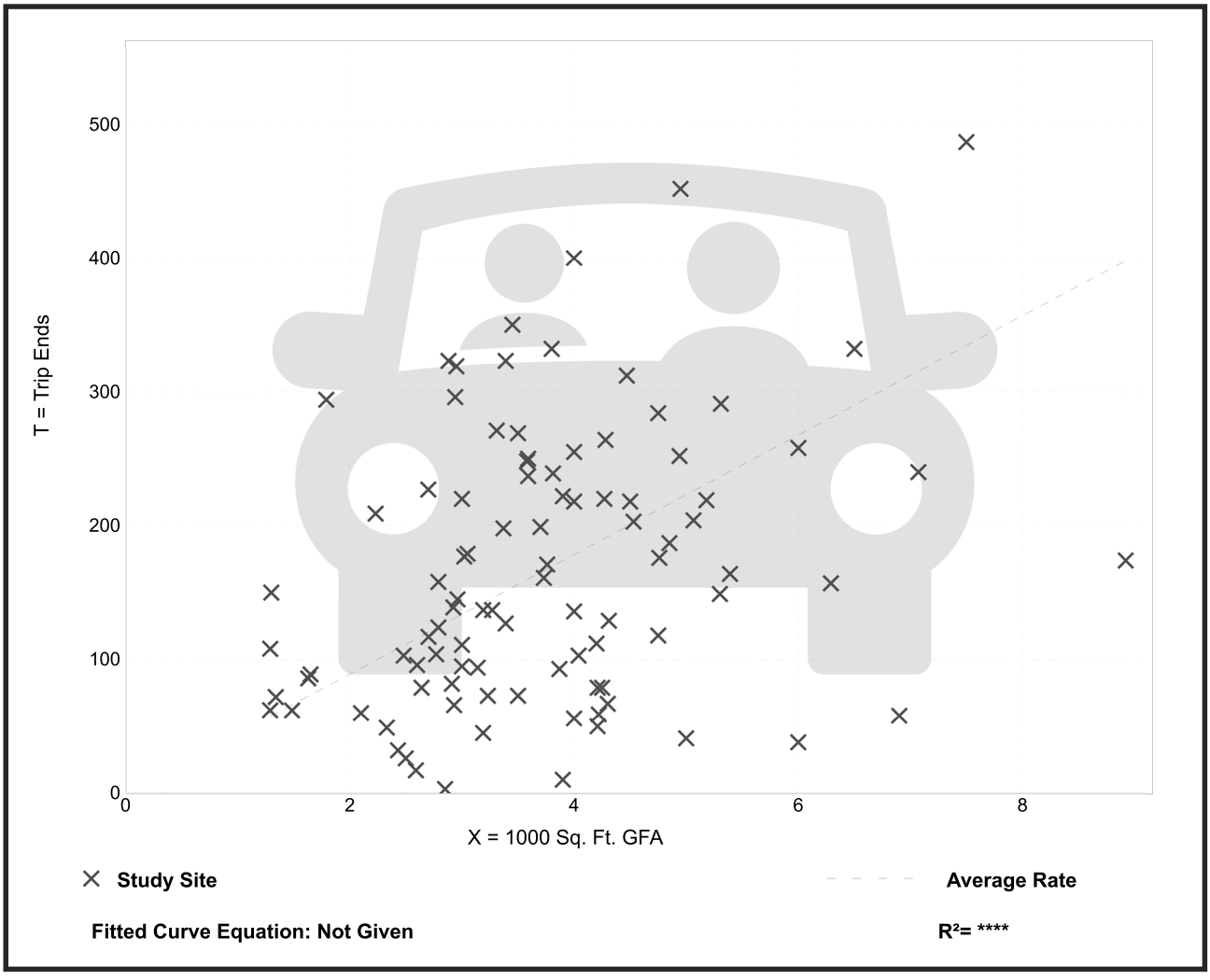
Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 96
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
44.61	1.05 - 164.25	27.14

Data Plot and Equation



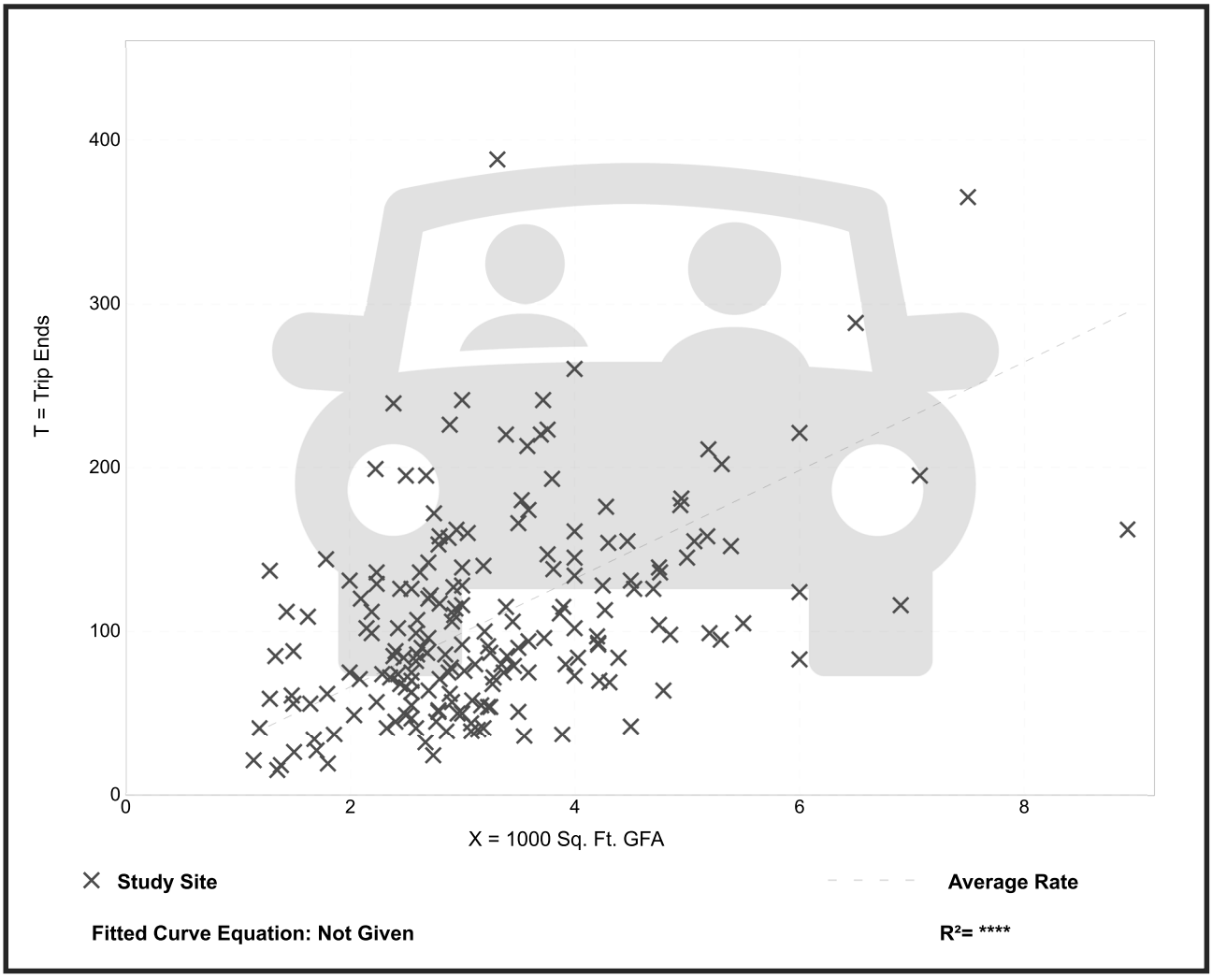
Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	190
Avg. 1000 Sq. Ft. GFA:	3
Directional Distribution:	52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
33.03	8.77 - 117.22	17.59

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window
(934)

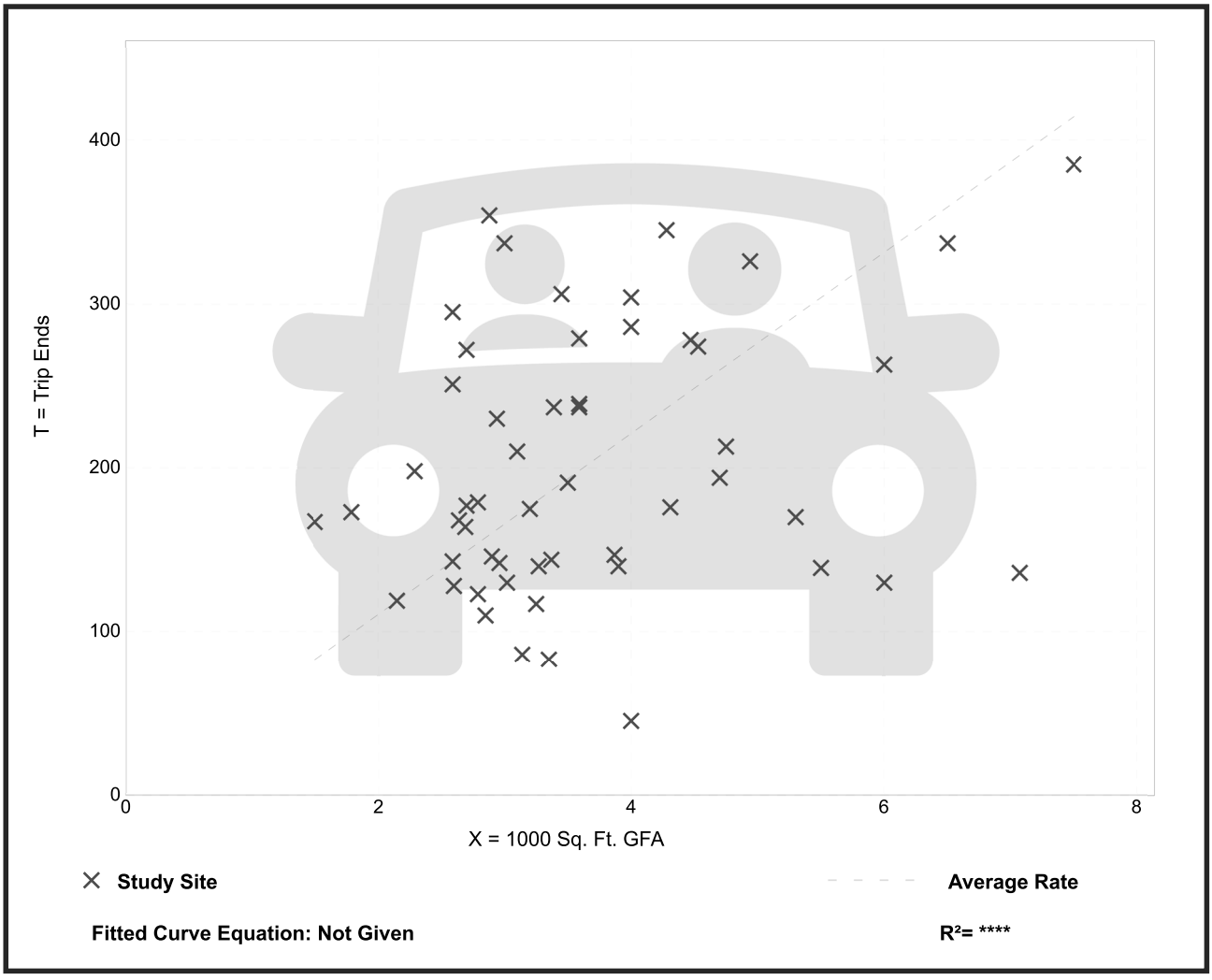
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 53
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
55.25	11.25 - 122.92	24.62

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	821
Land Use	Shopping Plaza (40 - 150k)
Setting	General Urban/Suburban
Time Period	Weekday PM Peak Period
# Data Sites	15
Average Pass-By Rate	40%

Pass-By Characteristics for Individual Sites

GLA (000)	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	Source
					Primary (%)	Diverted (%)	Total (%)		
45	Florida	1992	844	56	24	20	44	—	30
50	Florida	1992	555	41	41	18	59	—	30
52	Florida	1995	665	42	33	25	58	—	30
53	Florida	1993	162	59	—	—	41	—	30
57.23	Kentucky	1993	247	31	53	16	69	2659	34
60	Florida	1995	1583	40	38	22	60	—	30
69.4	Kentucky	1993	109	25	42	33	75	1559	34
77	Florida	1992	365	46	—	—	54	—	30
78	Florida	1991	702	55	23	22	45	—	30
82	Florida	1992	336	34	—	—	66	—	30
92.857	Kentucky	1993	133	22	50	28	78	3555	34
100.888	Kentucky	1993	281	28	50	22	72	2111	34
121.54	Kentucky	1993	210	53	30	17	47	2636	34
144	New Jersey	1990	176	32	44	24	68	—	24
146.8	Kentucky	1993	—	36	39	25	64	—	34

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	821								
Land Use	Shopping Plaza (40 - 150k)								
Setting	General Urban/Suburban								
Time Period	Saturday Midday								
# Data Sites	1								
Average Pass-By Rate	31%								
	Pass-By Characteristics for Individual Sites								
	State or	Survey		Pass-By	Non-Pass-By Trips			Adjacent Street	
GLA (000)	Province	Year	# Interviews	Trip (%)	Primary (%)	Diverted (%)	Total (%)	Daily Volume	Source
144	New Jersey	1990	264	31	47	22	69	63362	24

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	934
Land Use	Fast-Food Restaurant with Drive-Through Window
Setting	General Urban/Suburban
Time Period	Weekday AM Peak Period
# Data Sites	5
Average Pass-By Rate	50%

Pass-By Characteristics for Individual Sites

GFA (000)	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	Source
					Primary (%)	Diverted (%)	Total (%)		
1.4	Kentucky	1993	—	62	22	16	38	1407	2
3	Kentucky	1993	—	43	14	43	57	2903	2
3.3	--	1996	—	68	—	—	32	—	21
3.6	Kentucky	1993	—	32	47	21	68	437	2
4.2	Indiana	1993	—	46	23	31	54	1049	2

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	934
Land Use	Fast-Food Restaurant with Drive-Through Window
Setting	General Urban/Suburban
Time Period	Weekday PM Peak Period
# Data Sites	11
Average Pass-By Rate	55%

Pass-By Characteristics for Individual Sites

GFA (000)	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	Source
					Primary (%)	Diverted (%)	Total (%)		
1.3	Kentucky	1993	—	68	22	10	32	2055	2
1.9	Kentucky	1993	33	67	24	9	33	2447	2
2.8	Florida	1995	47	66	—	—	34	—	30
2.9	Florida	1996	271	41	41	18	59	—	30
3	Kentucky	1993	—	31	31	38	69	4250	2
3.1	Florida	1995	28	71	—	—	29	—	30
3.1	Florida	1996	29	38	—	—	62	—	30
3.2	Florida	1996	202	40	39	21	60	—	30
3.3	—	1996	—	62	—	—	38	—	21
4.2	Indiana	1993	—	56	25	19	44	1632	2
4.3	Florida	1994	304	62	—	—	38	—	30

Kanata - Stittsville

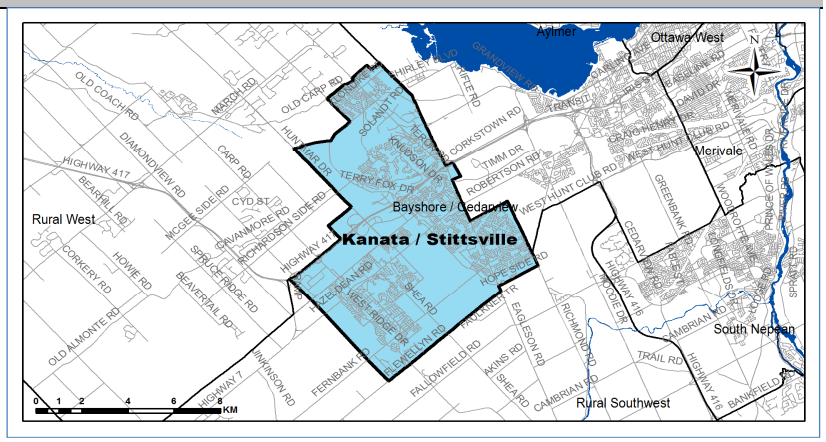
Demographic Characteristics

Population	105,210	Actively Travelled	83,460
Employed Population	49,640	Number of Vehicles	64,540
Households	38,010	Area (km^2)	82.6

Occupation Status (age 5+)	Male	Female	Total
Full Time Employed	24,670	19,590	44,260
Part Time Employed	1,540	3,840	5,380
Student	13,630	13,410	27,040
Retiree	6,480	8,350	14,820
Unemployed	850	940	1,790
Homemaker	160	3,310	3,470
Other	350	1,010	1,360
Total:	47,690	50,440	98,120

Traveller Characteristics	Male	Female	Total
Transit Pass Holders	5,940	6,920	12,860
Licensed Drivers	36,280	36,790	73,070
Telecommuters	200	380	580
Trips made by residents	135,300	143,330	278,630

Selected Indicators	
Daily Trips per Person (age 5+)	2.84
Vehicles per Person	0.61
Number of Persons per Household	2.77
Daily Trips per Household	7.33
Vehicles per Household	1.70
Workers per Household	1.31
Population Density (Pop/km2)	1270

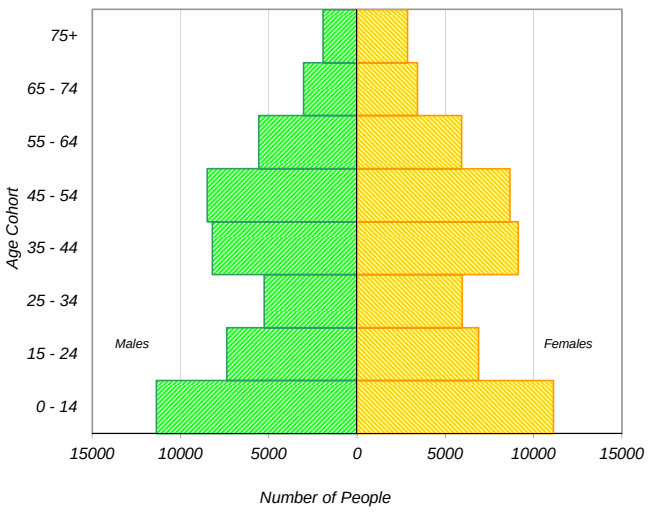


Household Size		
1 person	5,810	15%
2 persons	11,660	31%
3 persons	7,490	20%
4 persons	8,890	23%
5+ persons	4,160	11%
Total:	38,010	100%

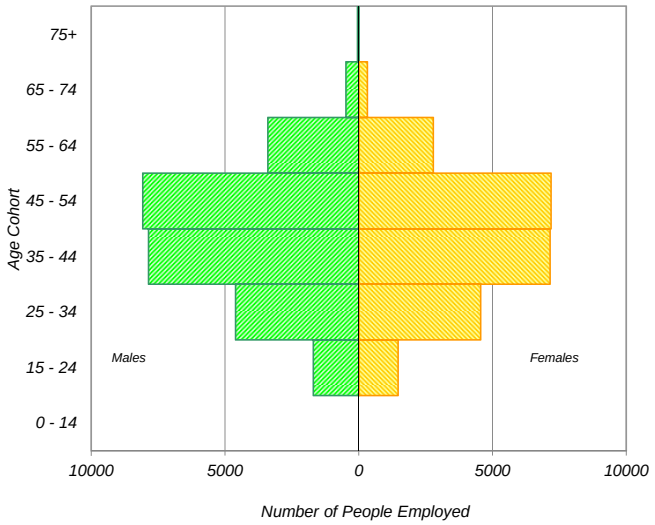
Households by Vehicle Availability		
0 vehicles	1,050	3%
1 vehicle	14,090	37%
2 vehicles	19,110	50%
3 vehicles	3,000	8%
4+ vehicles	770	2%
Total:	38,010	100%

Households by Dwelling Type		
Single-detached	21,610	57%
Semi-detached	3,890	10%
Townhouse	10,550	28%
Apartment/Condo	1,960	5%
Total:	38,010	100%

Population



Employed Population

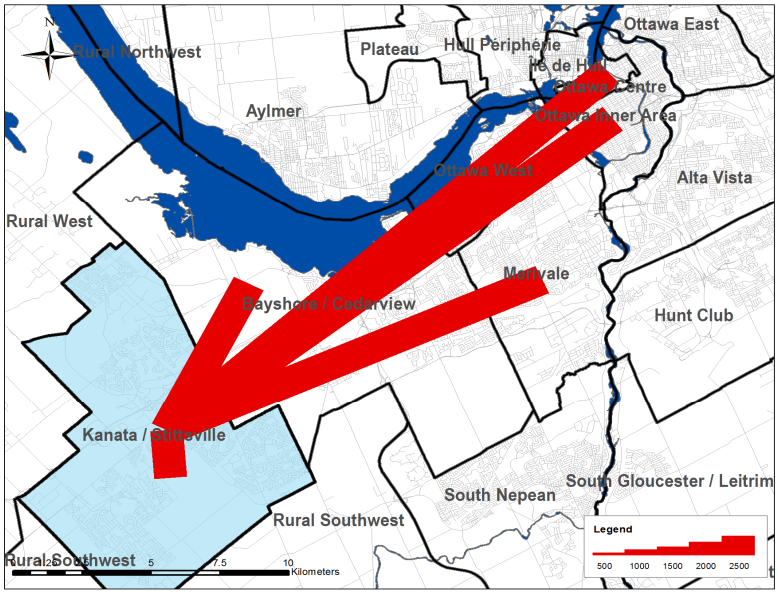


* In 2005 data was only collected for household members aged 11$^+$ therefore these results cannot be compared to the 2011 data.

Travel Patterns

Top Five Destinations of Trips from Kanata - Stittsville

AM Peak Period



Summary of Trips to and from Kanata - Stittsville

AM Peak Period (6:30 - 8:59)	Destinations of Trips From District	% Total	Origins of Trips To District	% Total
Districts				
Ottawa Centre	4,560	8%	140	0%
Ottawa Inner Area	3,350	6%	970	2%
Ottawa East	660	1%	260	1%
Beacon Hill	280	0%	170	0%
Alta Vista	1,810	3%	660	1%
Hunt Club	490	1%	420	1%
Merivale	3,410	6%	1,200	3%
Ottawa West	2,020	4%	840	2%
Bayshore / Cedarview	5,010	9%	2,420	5%
Orléans	290	1%	500	1%
Rural East	100	0%	30	0%
Rural Southeast	50	0%	260	1%
South Gloucester / Leitrim	60	0%	140	0%
South Nepean	690	1%	1,800	4%
Rural Southwest	1,130	2%	1,850	4%
Kanata / Stittsvile	30,360	54%	30,360	66%
Rural West	1,050	2%	3,250	7%
Île de Hull	670	1%	30	0%
Hull Périphérie	160	0%	30	0%
Plateau	100	0%	230	0%
Aylmer	0	0%	190	0%
Rural Northwest	20	0%	60	0%
Pointe Gatineau	20	0%	80	0%
Gatineau Est	0	0%	60	0%
Rural Northeast	30	0%	50	0%
Buckingham / Masson-Angers	30	0%	10	0%
Ontario Sub-Total:	55,320	98%	45,270	98%
Québec Sub-Total:	1,030	2%	740	2%
Total:	56,350	100%	46,010	100%

Trips by Trip Purpose

24 Hours	From District		To District		Within District	
Work or related	27,180	29%	17,020	18%	14,550	9%
School	7,070	7%	2,500	3%	15,110	9%
Shopping	6,070	6%	9,150	10%	22,480	14%
Leisure	8,450	9%	10,590	11%	17,090	11%
Medical	2,520	3%	1,170	1%	2,660	2%
Pick-up / drive passenger	6,570	7%	5,470	6%	15,190	9%
Return Home	33,610	35%	45,620	48%	65,770	41%
Other	3,560	4%	3,590	4%	8,440	5%
Total:	95,030	100%	95,110	100%	161,290	100%

AM Peak (06:30 - 08:59)	From District		To District		Within District	
Work or related	18,030	69%	11,020	70%	7,430	24%
School	4,890	19%	2,280	15%	11,740	39%
Shopping	170	1%	320	2%	760	3%
Leisure	340	1%	400	3%	780	3%
Medical	330	1%	230	1%	350	1%
Pick-up / drive passenger	1,260	5%	580	4%	4,760	16%
Return Home	290	1%	380	2%	1,980	7%
Other	670	3%	430	3%	2,560	8%
Total:	25,980	100%	15,640	100%	30,360	100%

PM Peak (15:30 - 17:59)	From District		To District		Within District	
Work or related	390	2%	350	1%	930	2%
School	370	2%	0	0%	90	0%
Shopping	1,030	5%	1,910	7%	5,100	14%
Leisure	2,140	11%	3,080	11%	4,130	11%
Medical	230	1%	180	1%	400	1%
Pick-up / drive passenger	1,980	10%	1,980	7%	3,410	9%
Return Home	12,130	64%	20,550	71%	21,560	58%
Other	680	4%	860	3%	1,850	5%
Total:	18,950	100%	28,910	100%	37,470	100%

Peak Period (%)	Total:	% of 24 Hours	Within District (%)
24 Hours	351,430		46%
AM Peak Period	71,980	20%	42%
PM Peak Period	85,330	24%	44%

Trips by Primary Travel Mode

24 Hours	From District		To District		Within District	
Auto Driver	63,470	67%	63,830	67%	92,190	57%
Auto Passenger	15,220	16%	14,920	16%	31,880	20%
Transit	12,200	13%	12,270	13%	4,050	3%
Bicycle	360	0%	410	0%	960	1%
Walk	40	0%	50	0%	21,080	13%
Other	3,730	4%	3,660	4%	11,130	7%
Total:	95,020	100%	95,140	100%	161,290	100%

AM Peak (06:30 - 08:59)	From District		To District		Within District	
Auto Driver	15,360	59%	11,530	74%	13,630	45%
Auto Passenger	2,450	9%	1,160	7%	5,050	17%
Transit	6,230	24%	1,290	8%	1,210	4%
Bicycle	30	0%	80	1%	220	1%
Walk	0	0%	40	0%	5,730	19%
Other	1,900	7%	1,560	10%	4,510	15%
Total:	25,970	100%	15,660	100%	30,350	100%

PM Peak (15:30 - 17:59)	From District		To District		Within District	
Auto Driver	13,850	73%	17,660	61%	21,240	57%
Auto Passenger	3,240	17%	4,270	15%	8,570	23%
Transit	1,270	7%	5,980	21%	670	2%
Bicycle	40	0%	100	0%	260	1%
Walk	40	0%	0	0%	4,570	12%
Other	520	3%	910	3%	2,160	6%
Total:	18,960	100%	28,920	100%	37,470	100%

Avg Vehicle Occupancy	From District	To District	Within District
24 Hours	1.24	1.23	1.35
AM Peak Period	1.16	1.10	1.37
PM Peak Period	1.23	1.24	1.40

Transit Modal Split	From District	To District	Within District
24 Hours	13%	13%	3%
AM Peak Period	26%	9%	6%
PM Peak Period	7%	21%	2%

Appendix G

TDM Checklists

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

Legend

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

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	1.	**WALKING & CYCLING: ROUTES**	
	1.1	**Building location & access points**	
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	☑
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	☑
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	☑
	1.2	**Facilities for walking & cycling**	
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations *(see Official Plan policy 4.3.3)*	☒ N/A - No rapid transit facilities within 600m
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible *(see Official Plan policy 4.3.12)*	☑

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

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible *(see Official Plan policy 4.3.6)*	☑
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas *(see Zoning By-law Section 111)*	☑
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored *(see Zoning By-law Section 111)*	☑
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met), plus the expected peak number of customer/visitor cyclists	☑ Zoning requires 16 spaces and 20 are proposed
BETTER	2.1.5	Provide bicycle parking spaces equivalent to the expected number of commuter and customer/visitor cyclists, plus an additional buffer (e.g. 25 percent extra) to encourage other cyclists and ensure adequate capacity in peak cycling season	☒
	2.2	**Secure bicycle parking**	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single office building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers *(see Zoning By-law Section 111)*	☒
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met)	☒
	2.3	**Shower & change facilities**	
BASIC	2.3.1	Provide shower and change facilities for the use of active commuters	☒
BETTER	2.3.2	In addition to shower and change facilities, provide dedicated lockers, grooming stations, drying racks and laundry facilities for the use of active commuters	☒
	2.4	**Bicycle repair station**	
BETTER	2.4.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	☒

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	3.	**TRANSIT**	
	3.1	**Customer amenities**	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	☐ N/A
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	☐ N/A
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☐ N/A
	4.	**RIDESHARING**	
	4.1	**Pick-up & drop-off facilities**	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	☒
	4.2	**Carpool parking**	
BASIC	4.2.1	Provide signed parking spaces for carpools in a priority location close to a major building entrance, sufficient in number to accommodate the mode share target for carpools	☒
BETTER	4.2.2	At large developments, provide spaces for carpools in a separate, access-controlled parking area to simplify enforcement	☒
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	5.1.1	Provide carshare parking spaces in permitted non-residential zones, occupying either required or provided parking spaces *(see Zoning By-law Section 94)*	☒
	5.2	**Bikeshare station location**	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	☒

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	6.	**PARKING**	
	6.1	**Number of parking spaces**	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	☑
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	☒
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly *(see Zoning By-law Section 104)*	☒
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking *(see Zoning By-law Section 111)*	☒
	6.2	**Separate long-term & short-term parking areas**	
BETTER	6.2.1	Separate short-term and long-term parking areas using signage or physical barriers, to permit access controls and simplify enforcement (i.e. to discourage employees from parking in visitor spaces, and vice versa)	☒
	7.	**OTHER**	
	7.1	**On-site amenities to minimize off-site trips**	
BETTER	7.1.1	Provide on-site amenities to minimize mid-day or mid-commute errands	☑ Mix of restaurant and service land uses can be used by employees of other businesses on site

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

Legend

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

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

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

		TDM measures: *Non-residential developments*	Check if proposed & add descriptions
	1.	**TDM PROGRAM MANAGEMENT**	
	1.1	**Program coordinator**	
BASIC ★	1.1.1	Designate an internal coordinator, or contract with an external coordinator	☐
	1.2	**Travel surveys**	
BETTER	1.2.1	Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	☐
	2.	**WALKING AND CYCLING**	
	2.1	**Information on walking/cycling routes & destinations**	
BASIC	2.1.1	Display local area maps with walking/cycling access routes and key destinations at major entrances	☐
	2.2	**Bicycle skills training**	
		Commuter travel	
BETTER ★	2.2.1	Offer on-site cycling courses for commuters, or subsidize off-site courses	☐
	2.3	**Valet bike parking**	
		Visitor travel	
BETTER	2.3.1	Offer secure valet bike parking during public events when demand exceeds fixed supply (e.g. for festivals, concerts, games)	☐

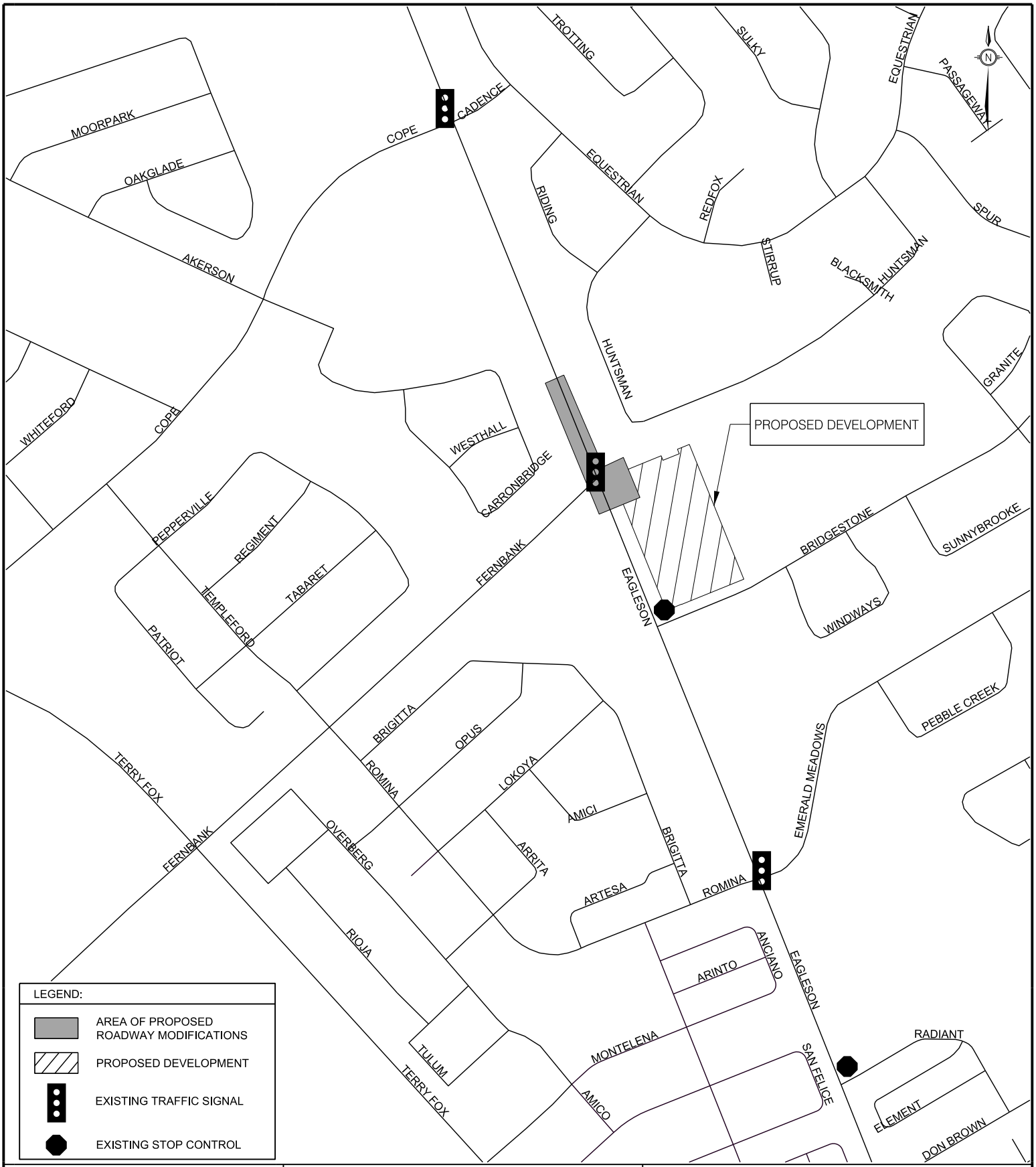
			TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		3.	**TRANSIT**	
		3.1	**Transit information**	
BASIC		3.1.1	Display relevant transit schedules and route maps at entrances	☐
BASIC		3.1.2	Provide online links to OC Transpo and STO information	☐
BETTER		3.1.3	Provide real-time arrival information display at entrances	☐
		3.2	**Transit fare incentives**	
			Commuter travel	
BETTER		3.2.1	Offer preloaded PRESTO cards to encourage commuters to use transit	☐
BETTER	★	3.2.2	Subsidize or reimburse monthly transit pass purchases by employees	☐
			Visitor travel	
BETTER		3.2.3	Arrange inclusion of same-day transit fare in price of tickets (e.g. for festivals, concerts, games)	☐
		3.3	**Enhanced public transit service**	
			Commuter travel	
BETTER		3.3.1	Contract with OC Transpo to provide enhanced transit services (e.g. for shift changes, weekends)	☐
			Visitor travel	
BETTER		3.3.2	Contract with OC Transpo to provide enhanced transit services (e.g. for festivals, concerts, games)	☐
		3.4	**Private transit service**	
			Commuter travel	
BETTER		3.4.1	Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for shift changes, weekends)	☐
			Visitor travel	
BETTER		3.4.2	Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for festivals, concerts, games)	☐

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

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

Appendix H

RMA Design



Ottawa

PLANNING, DEVELOPMENT AND BUILDING SERVICES

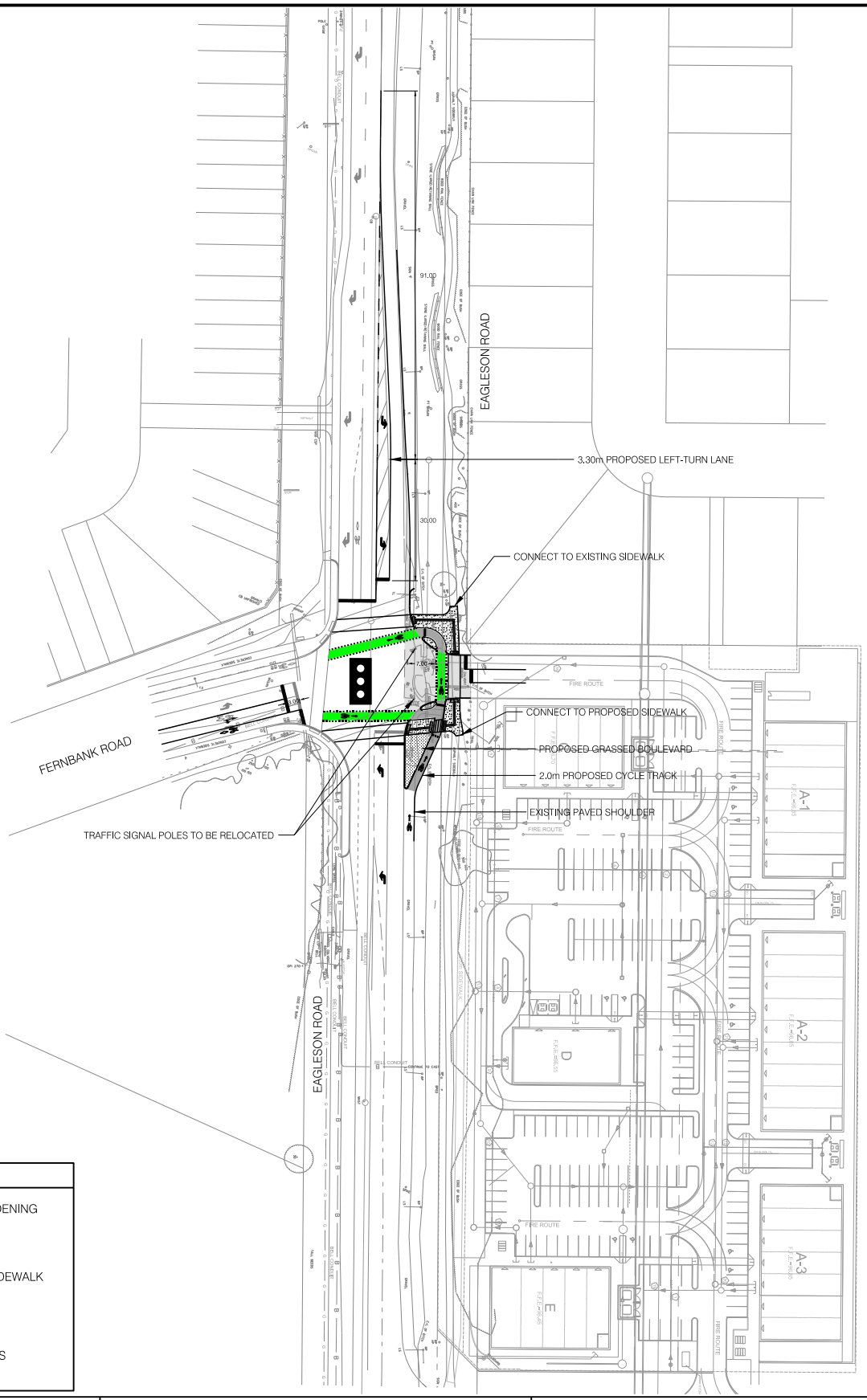
KEY PLAN

EAGLESON ROAD / FERBANK ROAD

DRAFT INTERSECTION MODIFICATIONS

Transportation Engineering Services

Approved By: E.Proulx	Drawing No.: RMA-2025-TPD-012A
Completed By: ARCADIS	
Scale: N.T.S.	Date: MAY 2025



LEGEND:

- PROPOSED ROADWAY WIDENING
- PROPOSED CYCLE TRACK
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SOD
- EXISTING TRAFFIC SIGNALS

Ottawa

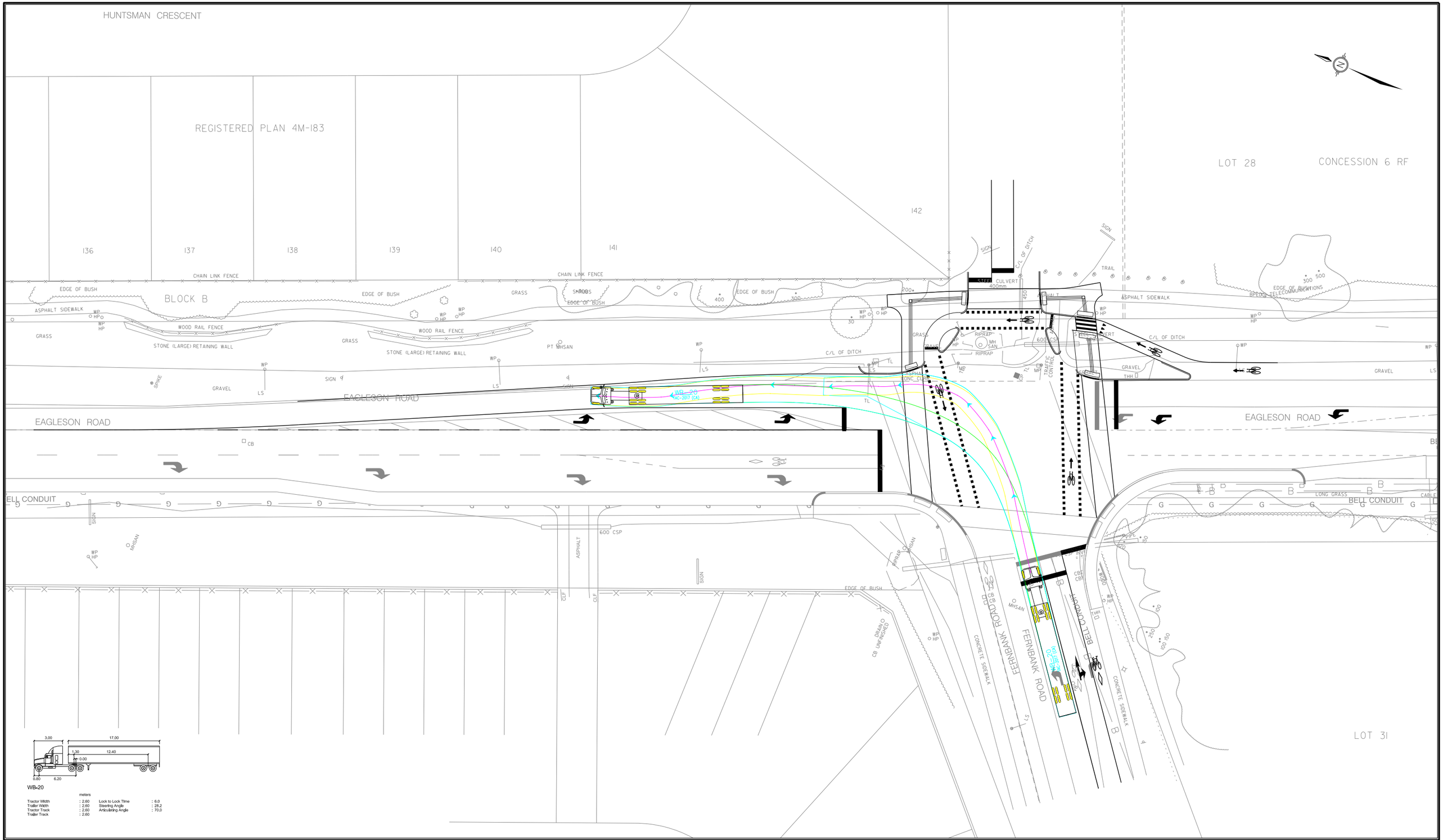
PLANNING, DEVELOPMENT AND BUILDING SERVICES

PROPOSED INTERSECTION MODIFICATIONS

EAGLESON ROAD / FERBANK ROAD

Transportation Engineering Services

Approved By: E.Proulx	Drawing No.: RMA-2025-TPD-012B
Completed By: ARCADIS	
Scale: N.T.S.	Date: MAY 2025



WB-20

meters

Tractor Width	: 2.60	Lock to Lock Time	: 6.0
Trailer Width	: 2.60	Steering Angle	: 28.2
Tractor Track	: 2.60	Articulating Angle	: 70.0
Trailer Track	: 2.60		

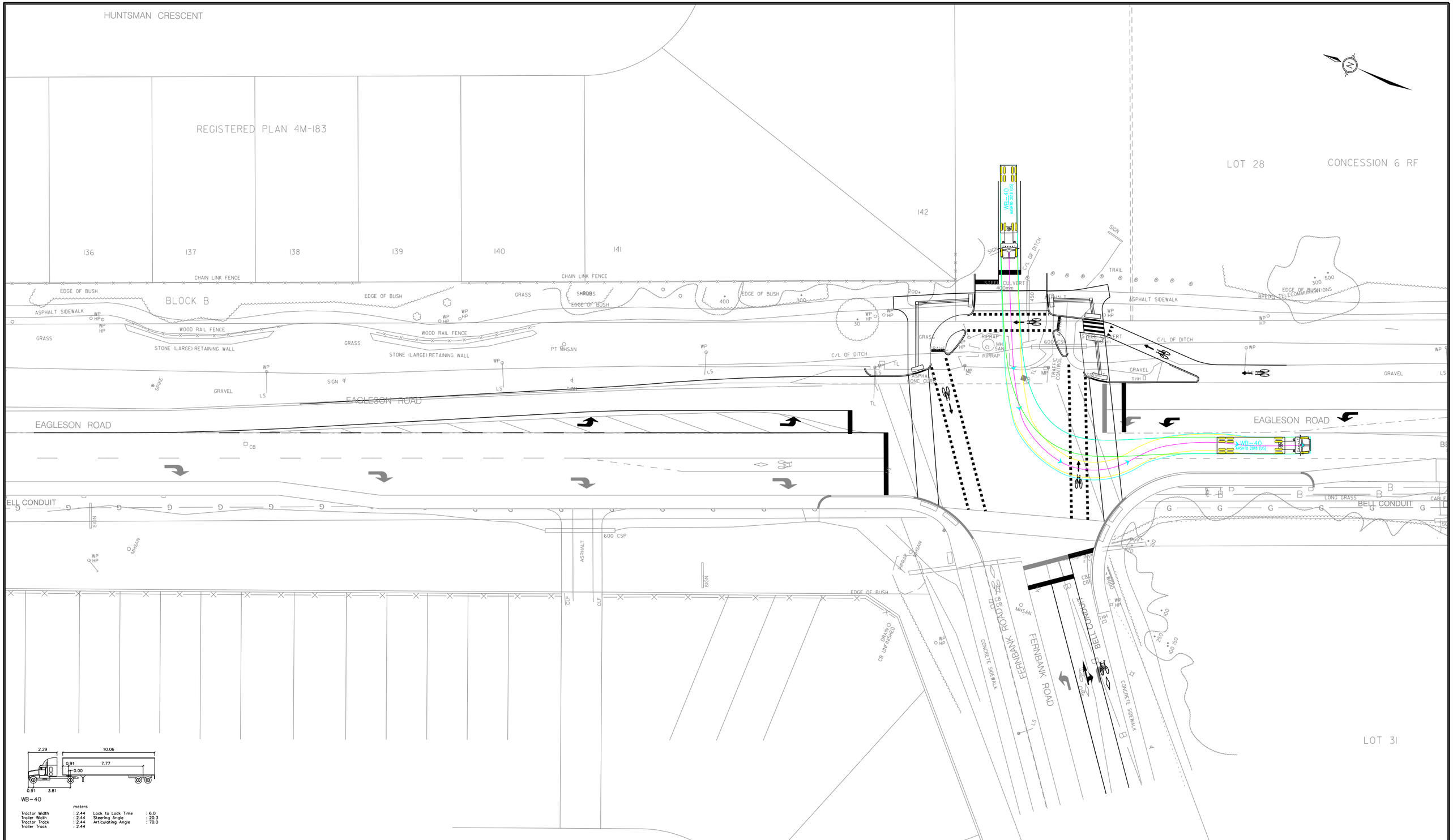
EXHIBIT - 1

EAGLESON ROAD AND FERBANK ROAD INTERSECTION MODIFICATION

WB-20 TURNING MOVEMENT - LEFT TURN

ARCADIS
333 Preston Street - Suite 500
Ottawa ON K1S 5N4 Canada
tel 613 225 1311
www.arcadis.com

PROJECT No.	148185
SCALE:	N.T.S.
DATE:	June 27, 2025



WB – 40

meters

Tractor Width	: 2.44	Lock to Lock Time	: 6.0
Trailer Width	: 2.44	Steering Angle	: 20.3
Tractor Track	: 2.44	Articulating Angle	: 70.0
Trailer Track	: 2.44		

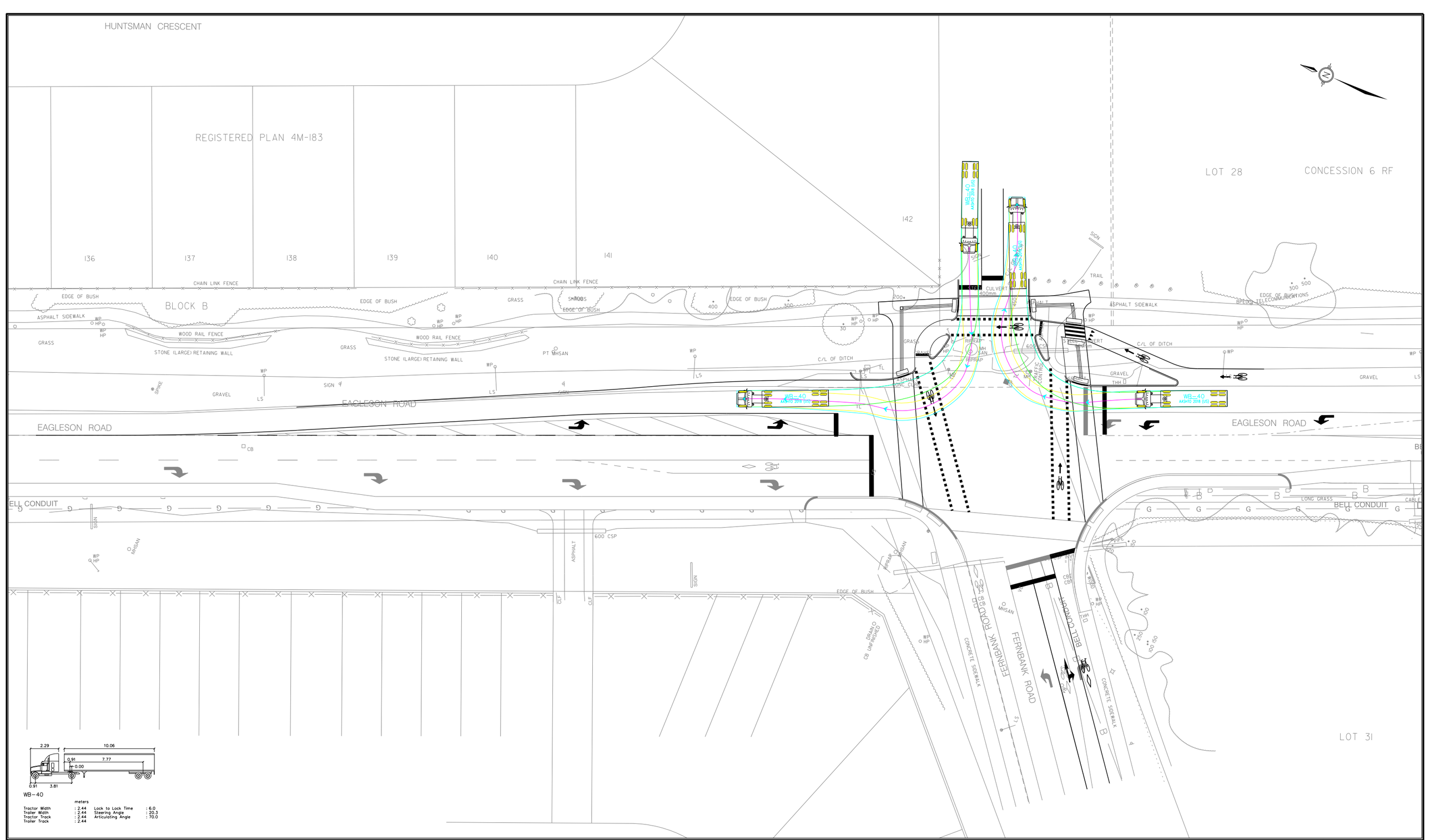
EXHIBIT - 2

EAGLESON ROAD AND FERBANK ROAD INTERSECTION MODIFICATION

WB-40 TURNING MOVEMENT - LEFT TURN

ARCADIS
333 Preston Street - Suite 500
Ottawa ON K1S 5N4 Canada
tel 613 225 1311
www.arcadis.com

PROJECT No.	148185
SCALE:	N.T.S.
DATE:	June 27, 2025



WB–40

meters

Tractor Width	: 2.44	Lock to Lock Time	: 6.0
Trailer Width	: 2.44	Steering Angle	: 20.3
Tractor Track	: 2.44	Articulating Angle	: 70.0
Trailer Track	: 2.44		

ARCADIS
333 Preston Street - Suite 500
Ottawa ON K1S 5N4 Canada
tel 613 225 1311
www.arcadis.com

EXHIBIT - 3

EAGLESON ROAD AND FERBANK ROAD INTERSECTION MODIFICATION

WB-40 TURNING MOVEMENT - RIGHT TURN

PROJECT No.	148185
SCALE:	N.T.S.
DATE:	June 27, 2025

801 Eagleson Road

Intersection Modification at Eagleson Road and Fernbank Road

Class C Cost Estimate

Arcadis Project No.: 148185

DESCRIPTION	ESTIMATED COST	
Construction Total		**$ 855,162.52**
Section A - General	$ 201,252.52	
Section B - Road	$ 287,825.00	
Section C - Traffic Signals	$ 350,000.00	
Section D - Reinstatements	$ 3,500.00	
Section E - Labour and Equipment	$ 12,585.00	
Engineering Services		**$ 213,790.63**
Design & Services During Construction (25%)	$ 213,790.63	
Internal City Fees (8%)		**$ 68,413.00**
Project Design Review, Project Management, Traffic Signal Design, etc	$ 68,413.00	
Utilities		**$ 128,274.38**
Utility Relocation / Protection (15%)	$ 128,274.38	
Miscellaneous 5%		**$ 42,758.13**
Subtotal		$ 1,308,398.65
Overall Contingency 20%		$ 261,679.73
GRAND TOTAL (Roundup)		**$ 1,571,000.00**

Project Name: **Intersection Modification at Eagleson Road and Fernbank Road** **Class C Estimate**

Project Location: 801 Eagleson Road

Project Manager:

Arcadis Project No: 148185

Item	Specification Number	Description	Unit	Estimated Quantity	Planned Quantity	Unit Price	Total Cost
Section A: General							
A010.02	F-1001	Field Office for Contract Administrator 35 - 70 m2	wk	20.00		$ 1,042.73	$ 20,854.60
A020.01	F-1010	Traffic control plan	LS	1.00		$ 39,066.18	$ 39,066.18
A020.03	F-1019	Supply, Maintain, and Remove Portable Variable Message Sign (PVMS)	wk	8.00		$ 800.00	$ 6,400.00
A030.01	F-1013	Construction Site Pedestrian Control Plan	LS	1.00		$ 131,414.40	$ 131,414.40
A040.02	805 F-1005	Erosion and sediment control	LS	1.00		$ 2,194.13	$ 2,194.13
A080.01	F-1002	Adjustments to Fuel Price Index	LS	1.00		$ 1.00	$ 1.00
A110.01	F-1006	Contract Initiation (max 2% of Total Tender Price)	LS	1.00		$ 17,176.81	$ 17,176.81
A999.01		Soil Management Plan and Excess Soil Documentation	LS	1.00		$ 5,000.00	$ 5,000.00
						Section A Sub-Total	**$ 201,252.52**

Section B: Road							
L040.37	510 F-5103	Removal of asphalt pavement by dry grinding	m2	70.00		$ 35.00	$ 2,450.00
L120.02	206 510 F-2060 F-4104	Earth excavation - grading, including all removals	m3	1000.00		$ 50.00	$ 50,000.00
L210.01	314 501 F-3147	Granular 'A'	t	280.00		$ 50.00	$ 14,000.00
L210.03	314 501 F-3147	Granular 'B' Type II	t	480.00		$ 42.00	$ 20,160.00
L220.02	506	Water for dust suppression	m3	9.00		$ 110.00	$ 990.00
L220.04	506	Calcium chloride flake	kg	250.00		$ 2.50	$ 625.00
L250.06	351 904 F-3510 F-9040 F-9045	Concrete sidewalks, boulevards and islands	m2	140.00		$ 220.00	$ 30,800.00
L250.11	351, F-3512	TWSI	m2	8.00		$ 1,060.00	$ 8,480.00
L250.12	351, F-3512	Directional TWSI	m2	12.00		$ 1,460.00	$ 17,520.00
L260.01	353 904 F-3531 F-9040 F-9045	Concrete barrier curb as per SC1.1	m	65.00		$ 220.00	$ 14,300.00
L260.08	353, 904, F-3531, F-9040, F-9045	Concrete half-height Curb	m	25.00		$ 125.00	$ 3,125.00
L265.04	311 F-3101 F-3130	HL3F mix with PGAC 58-34 for Residential Driveways/ Private Walks/ Commercial Driveway	t	12.00		$ 470.00	$ 5,640.00
L380.18	F-3101 F-3106 F-3130	Performance Graded Superpave 12.5mm FC2 Level D (PG 64-34)	t	55.00		$ 450.00	$ 24,750.00
L390.05	F-3101 F-3106 F-3130	Performance Graded Superpave 19mm Level D (PG 64-34)	t	90.00		$ 265.00	$ 23,850.00
L999.01		Pavement Markings	LS	1.00		$ 38,000.00	$ 38,000.00
						Section B Sub-Total	**$ 287,825.00**

Project Name: **Intersection Modification at Eagleson Road and Fernbank Road** **Class C Estimate**

Project Location: 801 Eagleson Road

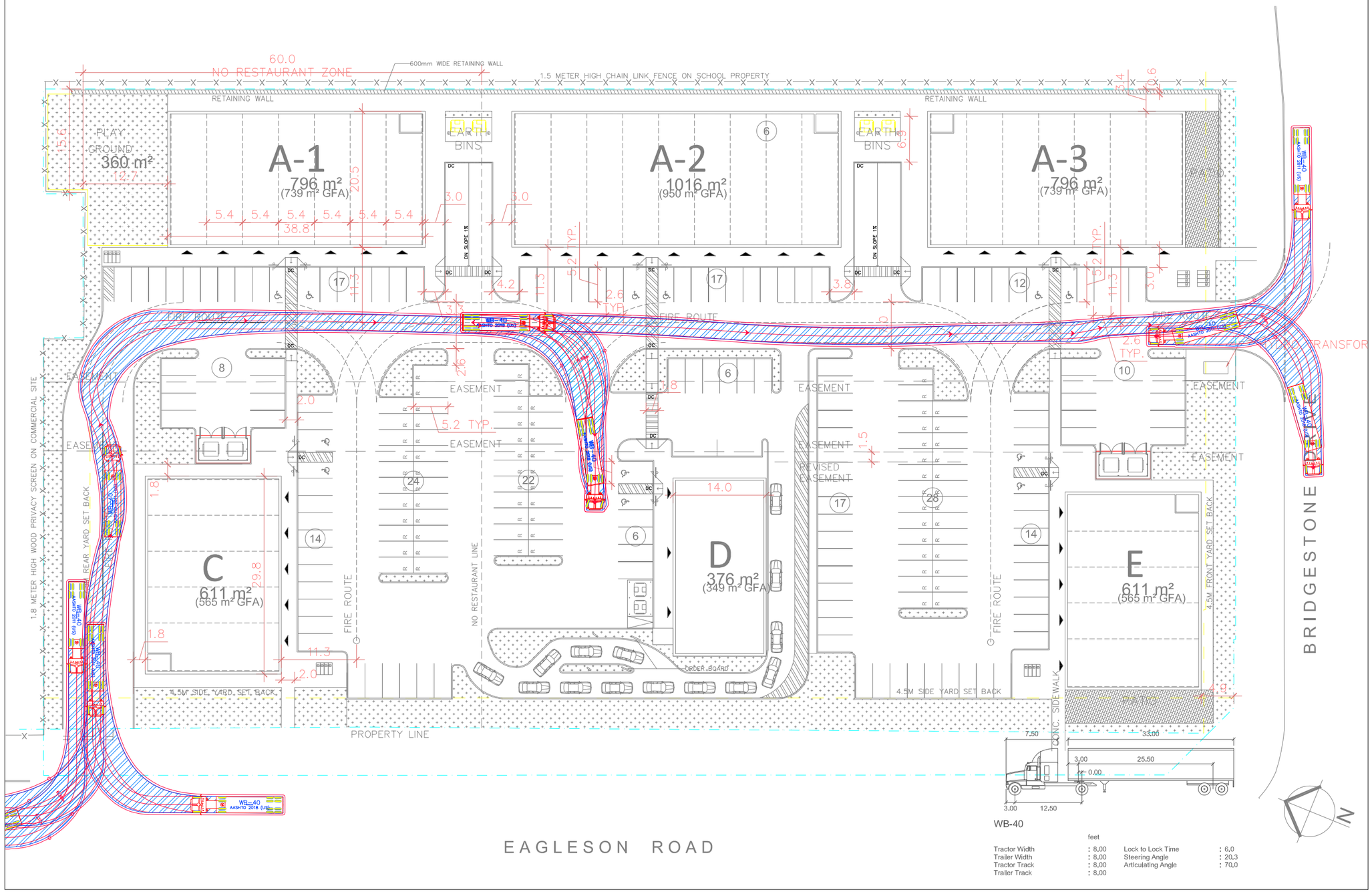
Project Manager:

Arcadis Project No: 148185

Item	Specification Number	Description	Unit	Estimated Quantity	Planned Quantity	Unit Price	Total Cost
Section C - Traffic Signals							
	128, F-6202, F-6203, F-6209	Traffic Signals	LS	1.00		$ 350,000.00	$ 350,000.00
						Section C Sub-Total	**$ 350,000.00**
Section D - Reinstatements							
T020.03	802 F-8021	Topsoil, imported (100mm thick)	m3	10		$ 100.00	$ 1,000.00
T030.05	803 F-8031	Sodding including watering	m2	100		$ 25.00	$ 2,500.00
						Section D Sub-Total	**$ 3,500.00**
Section E: Labour and Equipment							
U010.01	127 F-8025	Unskilled labour (including supervision where not otherwise provi	hr	10.00		$ 68.50	$ 685.00
U010.02	127 F-8025	Skilled labour (including supervision where not otherwise provide	hr	10.00		$ 70.00	$ 700.00
U020.11	127 F-8026	Dump Truck, tri Axle, 32,000 GVW min. (operated)	hr	10.00		$ 130.00	$ 1,300.00
U020.12	127 F-8026	Front end loader backhoe, rubber tired 45 kW min (operated)	hr	10.00		$ 170.00	$ 1,700.00
U020.23	127 F-8028	Sweeper (Operated)	hr	10.00		$ 150.00	$ 1,500.00
U020.25	127 F-8028	Flusher (Operated)	hr	10.00		$ 150.00	$ 1,500.00
U020.28	127 F-8026	Hydro Excavating / Vacuum Truck (Operated)	hr	16.00		$ 325.00	$ 5,200.00
						Section E Sub-Total	**$ 12,585.00**
						Total Construction Cost	**$ 855,162.52**

Appendix I

Swept Path Analysis



SITE PLAN LEGEND

SYMBOL	DESCRIPTION
	BUILDING
	LANDSCAPED AREA
	CONCRETE SIDEWALK
	FIRE ROUTE
	RESTAURANT AREA
	PROPERTY LINE
	SETBACK LINE
	NEW CURB
DC	NEW DEPRESSED CURB
	BURIED HYDRO LINES
	ENTRANCE
LS	LAMP STANDARD
B	BOLLARD
S	SIGN
SP	EXISTING WATER STAND POST
96.0	ELEVATION MARKER
CB	CATCH BASIN
P	BARRIER FREE SIGN
F.F. 96.0	FINISH FLOOR ELEVATION
	ACCESSIBLE PARKING SPACE
	STANDARD PARKING SPACE (2.6 X 5.2 M.)
	REDUCED WIDTH PARKING SPACE (2.4 X 5.2)
	NEW BIKE RACK
	PAINTED LINES

PARKING SPACES

TOTAL:	210

FLOOR AREA

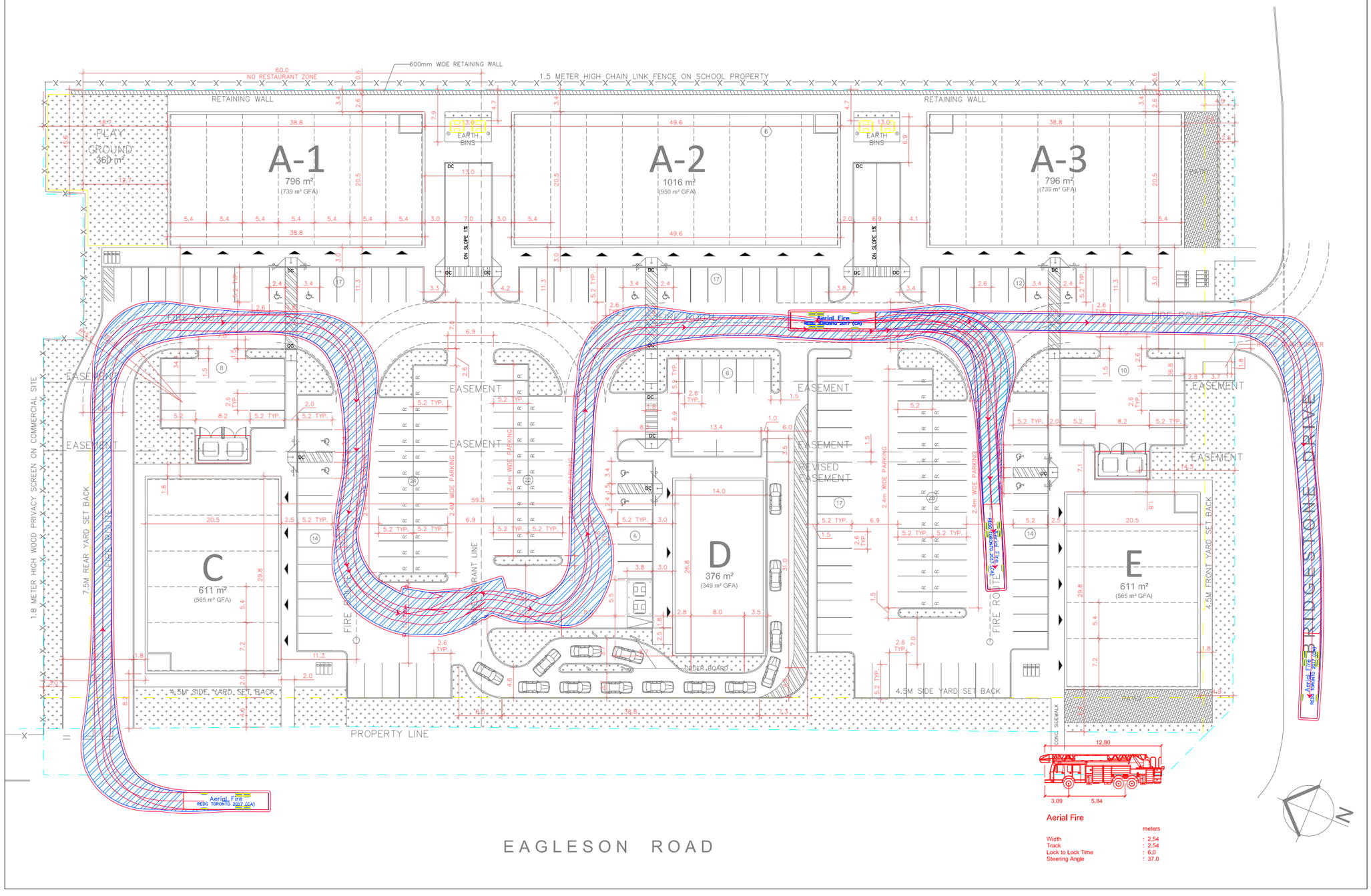
GROSS FLOOR AREA:	3,936 m²
BUILDING AREA:	4,240 m²

SITE AREA

TOTAL:	17,172 m²

801 EAGLESON - REVISED SITE PLAN

SCALE 1:600 2024-11-04



SITE PLAN LEGEND

SYMBOL	DESCRIPTION
	BUILDING
	LANDSCAPED AREA
	CONCRETE SIDEWALK
	FIRE ROUTE
	RESTAURANT AREA
	PROPERTY LINE
	SETBACK LINE
	NEW CURB
DC	NEW DEPRESSED CURB
	BURIED HYDRO LINES
	ENTRANCE
LS	LAMP STANDARD
B	BOLLARD
S	SIGN
SP	EXISTING WATER STAND POST
96.0	ELEVATION MARKER
CB	CATCH BASIN
P	BARRIER FREE SIGN
F.F. 96.0	FINISH FLOOR ELEVATION
	ACCESSIBLE PARKING SPACE
	STANDARD PARKING SPACE (2.6 X 5.2 M.)
	REDUCED WIDTH PARKING SPACE (2.4 X 5.2)
	NEW BIKE RACK
	PAINTED LINES

PARKING SPACES

TOTAL:	210

FLOOR AREA

GROSS FLOOR AREA:	3,936 m²
BUILDING AREA:	4,240 m²

SITE AREA

TOTAL:	17,172 m²

801 EAGLESON - REVISED SITE PLAN

SCALE 1:600 2024-11-04

60.0
NO RESTAURANT ZONE
600mm WIDE RETAINING WALL
1.5 METER HIGH CHAIN LINK FENCE ON SCHOOL PROPERTY
RETAINING WALL
RETAINING WALL
PLAY GROUND
360 m²
A-1
796 m²
(739 m² GFA)
A-2
1016 m²
(950 m² GFA)
A-3
796 m²
(739 m² GFA)
EARTH BINS
EARTH BINS
PATIO
FIRE ROUTE
FIRE ROUTE
FIRE ROUTE
TRANSFORMER
EASEMENT
EASEMENT
EASEMENT
EASEMENT
REVISED EASEMENT
1.8 METER HIGH WOOD PRIVACY SCREEN ON COMMERCIAL SITE
7.5M REAR YARD SET BACK
FIRE ROUTE
C
611 m²
(565 m² GFA)
D
376 m²
(349 m² GFA)
E
611 m²
(565 m² GFA)
NO RESTAURANT LINE
ORDER BOARD
FIRE ROUTE
4.5M FRONT YARD SET BACK
4.5M SIDE YARD SET BACK
4.5M SIDE YARD SET BACK
CONC. SIDEWALK
PATIO
PROPERTY LINE
BRIDGESTONE DRIVE
EAGLESON ROAD
406.0
58.4
212.0
Wayne Titan
inches
Width : 101.5
Track : 96.0
Lock to Lock Time : 6.0
Steering Angle : 45.0
N

Appendix J

Intersection Control Warrants

IBI

OTM BOOK 12* - TRAFFIC SIGNAL WARRANT

Project: 801 Eagleson TIS **Date:** January 06, 2025

Project #: 148185

Location: Eagleson (Major Roadway) at Bridgestone (Minor Roadway)

Orientation: North/South East/West

Municipality: City of Ottawa **Scenario:** Future (2031) Total Projected Conditions

Justification 1 - Minimum Vehicle Volume

WARRANT	MINIMUM REQUIREMENT				COMPLIANCE								SECTIONAL PERCENT
	FREE FLOW	RESTR. FLOW	ADJUST. FREE FLOW	ADJUST. RESTR. FLOW	7:00 AM	8:00 AM	9:00 AM	10:00 AM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	
A. Vehicle volumes, all approaches	480	720	600	**900**	1553 100%	777 86%	777 86%	777 86%	1925 100%	963 100%	963 100%	963 100%	95%
B. Vehicle volume along minor roads	120	170	180	**255**	327 100%	164 64%	164 64%	164 64%	300 100%	150 59%	150 59%	150 59%	71%

Justification 2 - Delay to Cross Traffic

WARRANT	MINIMUM REQUIREMENT				COMPLIANCE								SECTIONAL PERCENT
	FREE FLOW	RESTR. FLOW	ADJUST. FREE FLOW	ADJUST. RESTR. FLOW	7:00 AM	8:00 AM	9:00 AM	10:00 AM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	
A. Vehicle volumes, along artery	480	720	600	**900**	1226 100%	613 68%	613 68%	613 68%	1625 100%	813 90%	813 90%	813 90%	84%
B. Combined vehicle and pedestrian volume crossing artery from minor roads	50	70	50	**70**	331 100%	15 21%	15 21%	15 21%	178 100%	10 14%	10 14%	10 14%	38%

Justification 3 - Volume/Delay Combination

JUSTIFICATION	SATISFIED TO 80% OR MORE?	BOTH SATISFIED TO 80% OR MORE?
Justification 1 - Minimum Vehicular Volume	NO	NO
Justification 2 - Delay to Cross Traffic	NO	

Justification 7 - Projected Volumes

WARRANT	DESCRIPTION	MINIMUM REQUIREMENT				COMPLIANCE		
		FREE FLOW	RESTRICTED FLOW	ADJUSTED FREE FLOW	ADJUSTED RESTRICTED FLOW	SECTIONAL AHV	SECTIONAL %	ENTIRE %
1. MINIMUM VEHICULAR VOLUME	A. Vehicle volumes, all approaches (Average Hour)	480	720	720	**1080**	870	81%	51%
	B. Vehicle volume along minor roads (Average Hour)	120	170	216	**306**	157	51%	
2. DELAY TO CROSS TRAFFIC	A. Vehicle volumes, along artery (Average Hour)	480	720	720	**1080**	713	66%	14%
	B. Combined vehicle and pedestrian volume crossing artery from minor roads (Average Hour)	50	75	60	**90**	13	14%	

Projected Traffic Volumes:

Average Hourly Volume (AHV) Equation: AHV = (amPHV + pmPHV)/4

AM Peak Hour Volumes

			↖	297				
0	357	219	←	0				
↙	↓	↘	↙	30				
	0	↗	↖	↑	↗			
	0	→	602	48	0			
	0	↘						

PM Peak Hour Volumes

			↖	280				
0	736	316	←	0				
↙	↓	↘	↙	20				
	0	↗	↖	↑	↗			
	0	→	0	513	60			
	0	↘						

Average Hourly Volumes (AHV)

			↖	144				
0	273	134	←	0				
↙	↓	↘	↙	13				
	0	↗	↖	↑	↗			
	0	→	151	140	15			
	0	↘						

Eight Hour Traffic Volumes:**

Hour	Major Road						Minor Road						Ped*
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
7:00 AM	602	48	0	219	357	0	0	0	0	30	0	297	0
8:00 AM	301	24	0	110	179	0	0	0	0	15	0	149	0
9:00 AM	301	24	0	110	179	0	0	0	0	15	0	149	0
10:00 AM	301	24	0	110	179	0	0	0	0	15	0	149	0
3:00 PM	0	513	60	316	736	0	0	0	0	20	0	280	0
4:00 PM	0	257	30	158	368	0	0	0	0	10	0	140	0
5:00 PM	0	257	30	158	368	0	0	0	0	10	0	140	0
6:00 PM	0	257	30	158	368	0	0	0	0	10	0	140	0

** Number of pedestrians crossing the major road*
*** These are projected 8-hour traffic volumes.*

Notes:

1. Vehicle volume warrant (1A) and (2A) for intersections of roadways having two or more moving lanes in one direction should be 25% higher than the values given above.

2+ Lanes per Direction

2. Warrant values for free flow apply when the 85th percentile speed of artery traffic equals or exceeds 70 km/h or when the intersection lies within the built-up area of an isolated community having a population of less than 10,000. Warrant values for restricted flow apply to large urban communities when the 85th percentile speed of artery traffic does not exceed 70 km/h.

Restricted Flow

3. The lowest sectional percentage governs the entire warrant.

4. For "T" intersections the warrant values for the minor road should be increased by 50% (Warrant 1B only).

3-legged Intersection

5. All flow values for Justification 1 and 2 are to be increased by 20% in the case of new intersections, Justification 3 is to only be used for existing intersections and all flow values for Warrant 1 and Warrant 2 of Justification 7 are to be increased by 20% for existing intersections and by 50% in the case of new intersections.

Existing Intersection

6. The crossing volumes are defined as the sum of:
   (a) Left-turns from both minor road approaches.
   (b) The heaviest through volume from the minor road.
   (c) 50% of the heavier left turn movement from major road when both of the following are met:
      (i) the left-turn volume >120 vph
      (ii) the left-turn volume plus the opposing volume >720 vph
   (d) Pedestrians crossing the main road.

CONCLUSION: The intersection does NOT meet the minimum warrants for traffic control signals.

* "Ontario Traffic Manual, Book 12 (March 2012)", Ontario Ministry of Transportation.

City of Ottawa
Roundabout Initial Feasability Screening Tool

The intent of this screening tool is to provide a relatively quick assessment of the feasibility of a roundabout at a particular intersection in comparison to other appropriate forms of traffic control or road modifications including all-way stop control, traffic signals, auxiliary lanes, etc. The intended outcome of this tool is to provide enough information to assist staff in deciding whether or not to proceed with an Intersection Control Study to investigate the feasibility of a roundabout in more detail.

1	Project Name:	801 Eagleson TIA
2	Intersection:	Eagleson Road & Bridgestone Drive
3	Location and Description of Intersection: Lane Configuration, total or approach AADT, distance to nearby intersection(s), etc. Attach or sketch a diagram and include existing and/or horizon-year turning movements. If an existing intersection then indicate type of control	Eagleson Road & Bridgestone Drive is a three-legged, unsignalized intersection with stop-control on the westbound approach. Both the southbound and westbound approaches include single through lanes and auxiliary left-turn lanes. The south leg is made up of a single through lane and an auxiliary right-turn lane.
4	What traditional modifications are proposed? All-way stop control, traffic signals, auxiliary lanes, etc. Attach or sketch a diagram if necessary.	Traffic signal control
5	What size of roundabout is being considered? Describe, and attach a Roundabout Traffic Flow Worksheet	single-lane entry and exit on westbound approach, double lane entry and exit on northbound and southbound approach
6	Why is a roundabout being considered?	Intersection capacity concerns due to long delays on the westbound approach

7 Are there contra-indications for a roundabout?

If "Yes" is indicated for one or more of the contra-indications then a roundabout may be problematic at the subject intersection. That is not to say that a

No.	Contra-Indication	Outcome
1	Is there insufficient property at the intersection (i.e. less than 44 metres diameter if considering a single-lane roundabout, and less than 60 metres if considering a two-lane roundabout) or property constraints that would require demolition of adjacent structures?	Yes [X] No [ ]
2	Are there any instances where stopping sight distance (SSD) of a roundabout yield line may not be attainable (i.e. the intersection is on a crest vertical curve)?	Yes [ ] No [X]
3	Is there an existing uncontrolled approach with a grade in excess of 4 percent?	Yes [ ] No [X]
4	Is the intersection located within a coordinated signal system?	Yes [ ] No [X]
5	Is there a closely-spaced traffic signal or railway crossing that could not be controlled with a nearby roundabout?	Yes [ ] No [X]
6	Are significant differences in directional flows or any situations of sudden high demand expected?	Yes [X] No [ ]
7	Are there known visually-impaired pedestrians that cross this intersection?	Yes [ ] No [X]

8 Are there suitability factors for a roundabout?

If "Yes" is indicated for two or more of the suitability factors then a roundabout should be technically feasible at the subject intersection..

No.	Suitability Factor	Outcome
1	Does the intersection currently experience an average collision frequency of more than 1.5 injury crashes per year, or a collision rate in excess of 1 injury crash per 1 million vehicles entering (MVE)?	Yes [X] No [ ]
2	Has there been a fatal crash at the intersection in the last 10 years?	Yes [ ] No [X]
3	Are capacity problems currently being experienced, or expected in the future?	Yes [X] No [ ]
4	Are traffic signals warranted, or expected to be warranted in the future?	Yes [ ] No [X]
5	Does the intersection have more than 4 legs, or unusual geometry?	Yes [ ] No [X]
6	Will Planned modifications to the intersection require that nearby structures be widened (i.e. to accommodate left-turn lanes)?	Yes [ ] No [X]
7	Is the intersection located at a transition between rural and urban environments (i.e. an urban boundary) such that a roundabout could act as a means of speed transition?	Yes [ ] No [X]

9	Conclusions/recommendation whether to proceed with an Intersection Control Study:	Although the intersection meets two of the suitability factors for a roundabout, the lack of property for a roundabout suggest that a roundabout may not be feasible at this location.

OTM BOOK 12* - TRAFFIC SIGNAL WARRANT

Project: 801 Eagleson TIS **Date:** January 06, 2025

Project #: 148185

Location: Bridgestone (Major Roadway) at Site Access 2 (Minor Roadway)

Orientation: East/West North/South

Municipality: City of Ottawa **Scenario:** Future (2031) Total Projected Conditions

Justification 1 - Minimum Vehicle Volume

WARRANT	MINIMUM REQUIREMENT				COMPLIANCE								SECTIONAL PERCENT
	FREE FLOW	RESTR. FLOW	ADJUST. FREE FLOW	ADJUST. RESTR. FLOW	7:00 AM	8:00 AM	9:00 AM	10:00 AM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	
A. Vehicle volumes, all approaches	480	720	576	**864**	628 73%	314 36%	314 36%	314 36%	724 84%	362 42%	362 42%	362 42%	49%
B. Vehicle volume along minor roads	120	170	216	**306**	19 6%	10 3%	10 3%	10 3%	28 9%	14 5%	14 5%	14 5%	5%

Justification 2 - Delay to Cross Traffic

WARRANT	MINIMUM REQUIREMENT				COMPLIANCE								SECTIONAL PERCENT
	FREE FLOW	RESTR. FLOW	ADJUST. FREE FLOW	ADJUST. RESTR. FLOW	7:00 AM	8:00 AM	9:00 AM	10:00 AM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	
A. Vehicle volumes, along artery	480	720	576	**864**	609 70%	305 35%	305 35%	305 35%	696 81%	348 40%	348 40%	348 40%	47%
B. Combined vehicle and pedestrian volume crossing artery from minor roads	50	70	60	**84**	16 19%	8 10%	8 10%	8 10%	24 29%	12 14%	12 14%	12 14%	15%

Justification 3 - Volume/Delay Combination

JUSTIFICATION	SATISFIED TO 80% OR MORE?	BOTH SATISFIED TO 80% OR MORE?
Justification 1 - Minimum Vehicular Volume	N/A	N/A
Justification 2 - Delay to Cross Traffic	N/A	

Justification 7 - Projected Volumes

WARRANT	DESCRIPTION	MINIMUM REQUIREMENT				COMPLIANCE		
		FREE FLOW	RESTRICTED FLOW	ADJUSTED FREE FLOW	ADJUSTED RESTRICTED FLOW	SECTIONAL AHV	SECTIONAL %	ENTIRE %
1. MINIMUM VEHICULAR VOLUME	A. Vehicle volumes, all approaches (Average Hour)	480	720	720	**1080**	339	31%	3%
	B. Vehicle volume along minor roads (Average Hour)	120	170	270	**383**	12	3%	
2. DELAY TO CROSS TRAFFIC	A. Vehicle volumes, along artery (Average Hour)	480	720	720	**1080**	327	30%	9%
	B. Combined vehicle and pedestrian volume crossing artery from minor roads (Average Hour)	50	75	75	**113**	10	9%	

Projected Traffic Volumes:

Average Hourly Volume (AHV) Equation: AHV = (amPHV + pmPHV)/4

AM Peak Hour Volumes

			↖	20				
3	0	16	←	323				
↙	↓	↘	↙	0				
	13	↗	↖	↑	↗			
	253	→	0	0	0			
	0	↘						

PM Peak Hour Volumes

			↖	25				
4	0	24	←	295				
↙	↓	↘	↙	0				
	20	↗	↖	↑	↗			
	356	→	0	0	0			
	0	↘						

Average Hourly Volumes (AHV)

			↖	11				
2	0	10	←	155				
↙	↓	↘	↙	0				
	8	↗	↖	↑	↗			
	152	→	0	0	0			
	0	↘						

Eight Hour Traffic Volumes:**

Hour	Major Road						Minor Road						Ped*
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
7:00 AM	13	253	0	0	323	20	0	0	0	16	0	3	0
8:00 AM	7	127	0	0	162	10	0	0	0	8	0	2	0
9:00 AM	7	127	0	0	162	10	0	0	0	8	0	2	0
10:00 AM	7	127	0	0	162	10	0	0	0	8	0	2	0
3:00 PM	20	356	0	0	295	25	0	0	0	24	0	4	0
4:00 PM	10	178	0	0	148	13	0	0	0	12	0	2	0
5:00 PM	10	178	0	0	148	13	0	0	0	12	0	2	0
6:00 PM	10	178	0	0	148	13	0	0	0	12	0	2	0

** Number of pedestrians crossing the major road*
*** These are projected 8-hour traffic volumes.*

Notes:

1. Vehicle volume warrant (1A) and (2A) for intersections of roadways having two or more moving lanes in one direction should be 25% higher than the values given above.

1 Lane per Direction

2. Warrant values for free flow apply when the 85th percentile speed of artery traffic equals or exceeds 70 km/h or when the intersection lies within the built-up area of an isolated community having a population of less than 10,000. Warrant values for restricted flow apply to large urban communities when the 85th percentile speed of artery traffic does not exceed 70 km/h.

Restricted Flow

3. The lowest sectional percentage governs the entire warrant.

4. For "T" intersections the warrant values for the minor road should be increased by 50% (Warrant 1B only).

3-legged Intersection

5. All flow values for Justification 1 and 2 are to be increased by 20% in the case of new intersections, Justification 3 is to only be used for existing intersections and all flow values for Warrant 1 and Warrant 2 of Justification 7 are to be increased by 20% for existing intersections and by 50% in the case of new intersections.

New Intersection

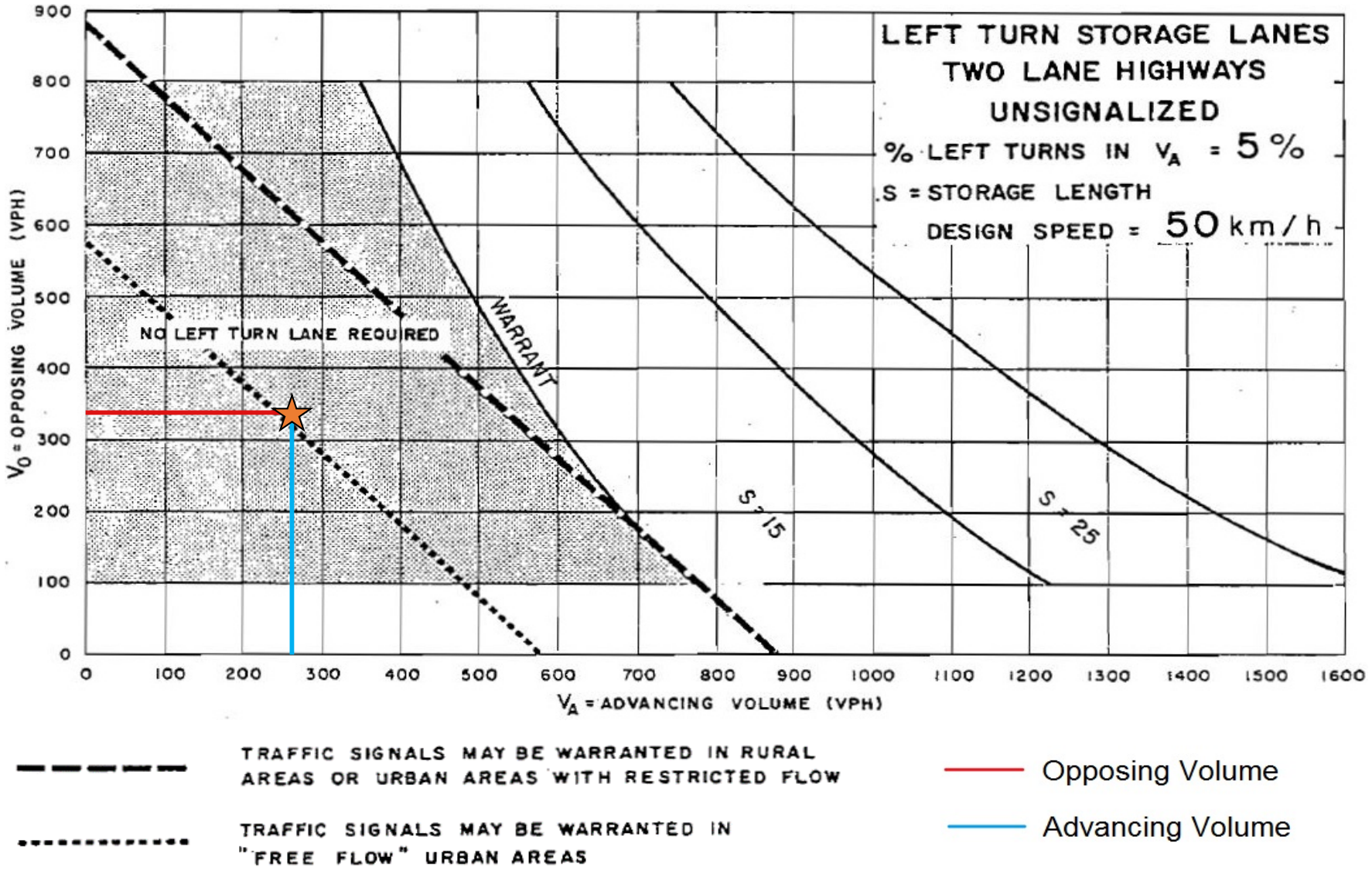
6. The crossing volumes are defined as the sum of:
   (a) Left-turns from both minor road approaches.
   (b) The heaviest through volume from the minor road.
   (c) 50% of the heavier left turn movement from major road when both of the following are met:
      (i) the left-turn volume >120 vph
      (ii) the left-turn volume plus the opposing volume >720 vph
   (d) Pedestrians crossing the main road.

CONCLUSION: The intersection does NOT meet the minimum warrants for traffic control signals.

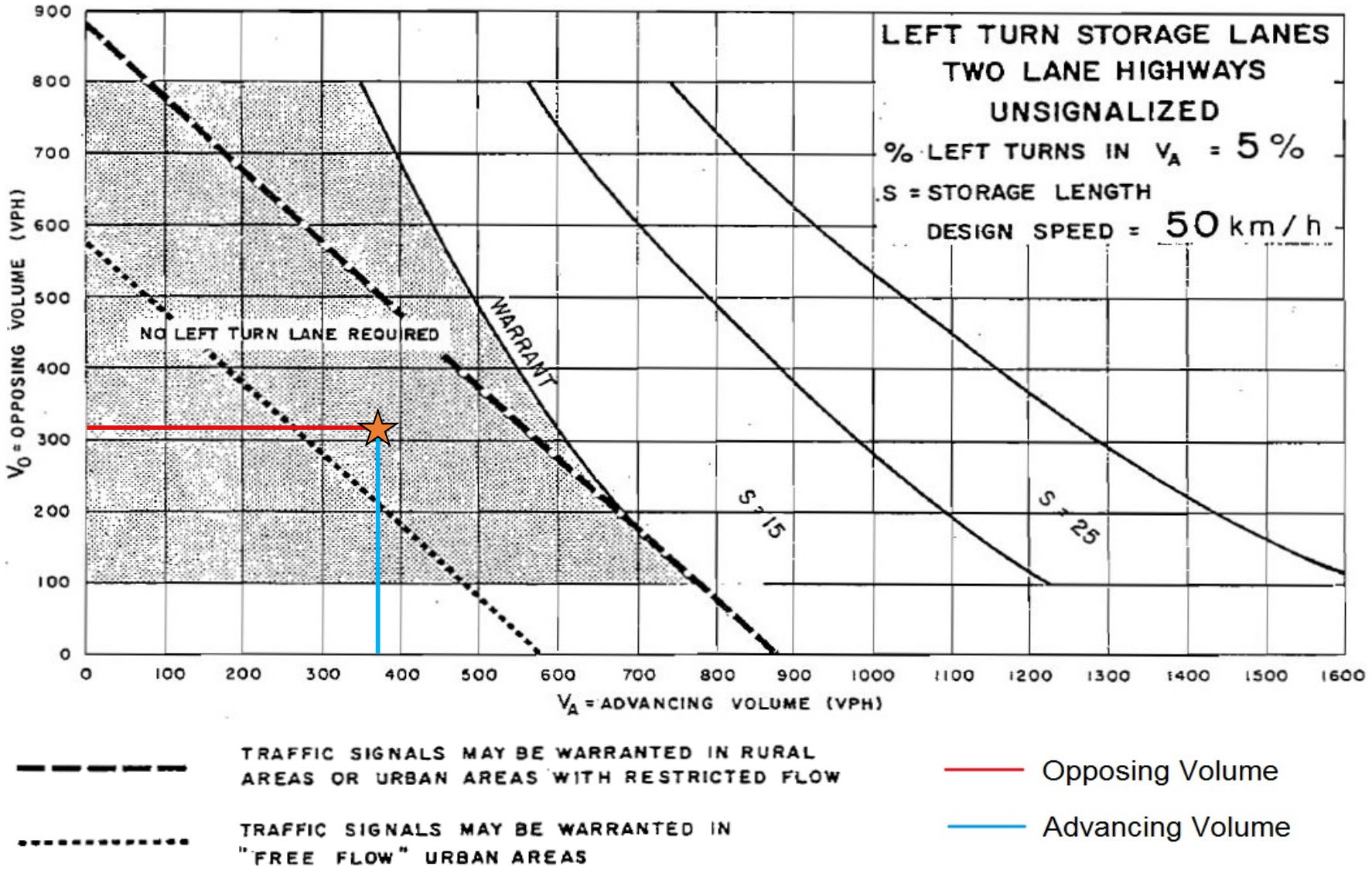
* "Ontario Traffic Manual, Book 12 (March 2012)", Ontario Ministry of Transportation.

Appendix K

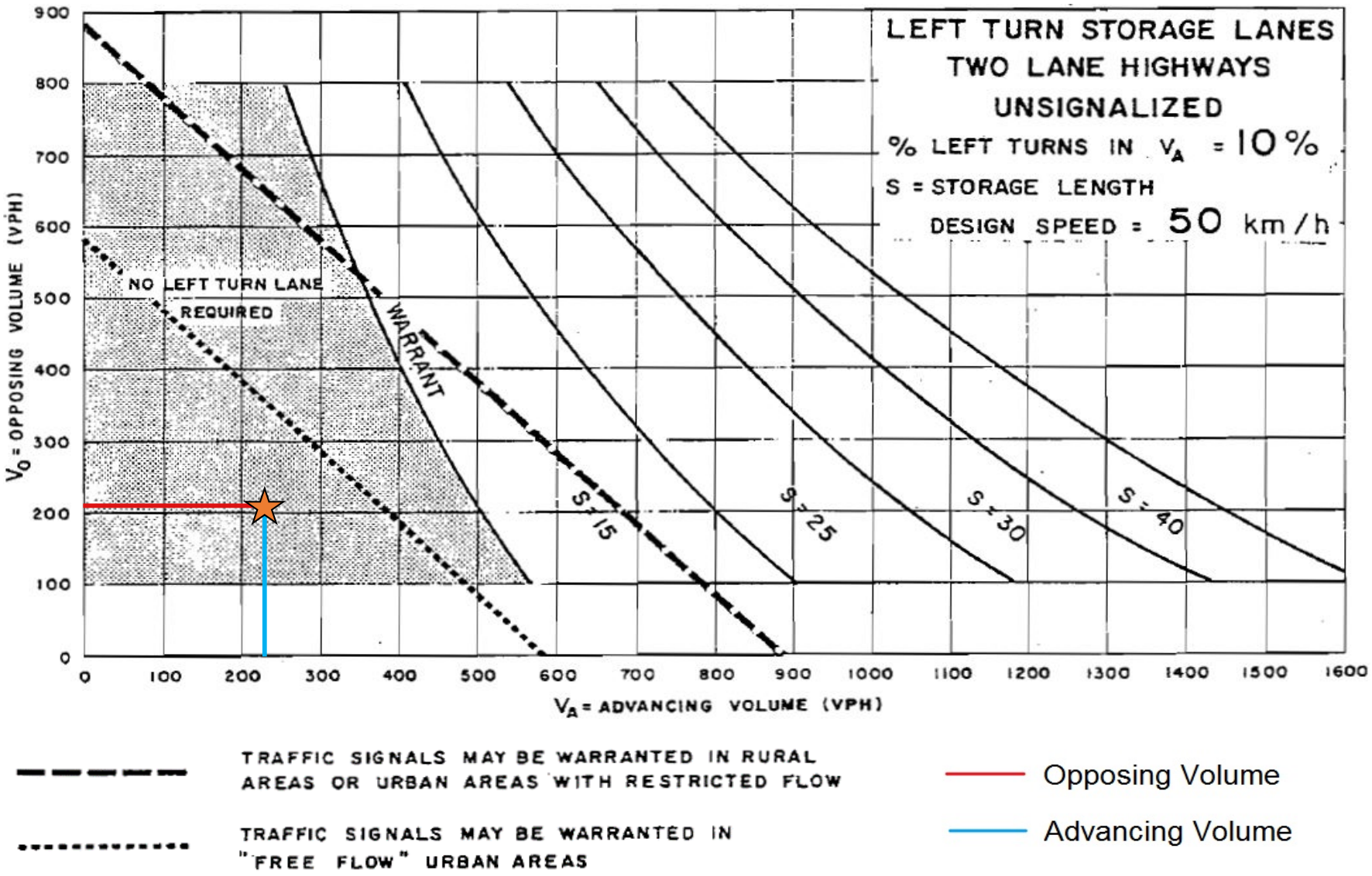
Left-Turn Lane Warrants



Bridgestone & Access #2 | Eastbound Left-Turn | AM Peak Hour



Bridgestone & Access #2 | Eastbound Left-Turn | PM Peak Hour



Bridgestone & Access #2 | Eastbound Left-Turn | SAT Peak Hour

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