6111 Hazeldean Road Phase 2

Transportation Impact Assessment

Grant Castle Corp.
Strategy Report

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ENGLOBE

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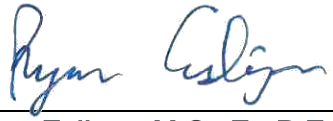

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Summary

A commercial development is proposed at 6111 Hazeldean Road, north of Hazeldean Road, as Phase 2 of an existing commercial site containing a car wash, auto maintenance shop, coffee shop, and retail buildings. Phase 2 will add nine commercial units within a strip-mall-style building, using the existing Hazeldean Road access with no new accesses required.

The Study examined the modes of transportation along the Hazeldean Road segment between Stittsville Main Street and Carp Road and analyzed the Level of Service (LOS) of the following intersections:

— Hazeldean Road @ Carp Road (signalized)

— Hazeldean Road @ 6111 Hazeldean Access (stop-controlled)

— Hazeldean Road @ Jackson Trails Centre (signalized)

— Hazeldean Road @ Stittsville Main Street (signalized)

— Stittsville Main Street @ Carp Road (signalized)

The results of the study indicate the following:

1. The proposed development is expected to generate 140 inbound and 110 outbound vehicle trips during the AM peak hour, and 103 inbound and 103 outbound vehicle trips during the PM peak hour. These trips were categorized as primary and pass-by trips.

2. The site will include 62 customer parking spaces, including 4 barrier-free spaces, which complies with City parking requirements.

3. The Site Plan includes 5 bicycle parking spaces, meeting the City's bicycle parking requirements.

4. The MMLOS assessment of the Hazeldean Road corridor determined that the bicycle level of service (BLOS) target is not achieved due to existing roadway conditions and posted speeds. The segment operates at BLOS D compared to the target of BLOS C.

5. The MMLOS assessment of study intersections indicates that all intersections will operate at acceptable automobile levels of service; however, bicycle (BLOS) and transit (TLOS) level of service targets are not achieved at several intersections.

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Introduction

A commercial development has been proposed on a parcel of land that is north of Hazeldean Road. The address of the proposed development is 6111 Hazeldean Road. This proposed commercial development represents Phase 2 of a previously developed area, which currently contains a car wash station, an auto maintenance shop, a coffee shop, and some retail/commercial buildings. In addition to the establishments currently present at 6111 Hazeldean Road, Phase 2 will add nine (9) commercial units in a strip mall style building. No additional accesses will be required, as access to the additional nine units will be provided by the existing access at Hazeldean Road.

The firm of Englobe Corp. was retained to prepare a Transportation Impact Assessment report in support of the Site Plan Application for the project. The following documents the study steps which conform to the revised City of Ottawa Transportation Impact Assessment Guidelines (2023).

Step 1 - Screening

A Screening Form was prepared by the Transportation Engineer for the project and is included in **Appendix A**. The form was previously submitted to the City of Ottawa, which determined that the Trip Generation Trigger was met, requiring the Transportation Impact Assessment (TIA) to proceed to the next stage. The following sections address the requirements outlined in the Scoping Document.

Step 2 - Scoping

Module 2.1 - Existing and Planned Conditions

Element 2.1.1 - Proposed Development

The proposed commercial development is located at 6111 Hazeldean Road, northwest of the area developed in Phase 1. The development will add an additional nine (9) units via a strip-mall style building. The building is expected to be approximately 68 metres long, 18 metres wide, and have a total gross floor area (G.F.A.) of 1,225 square metres. The total undeveloped land area is 0.51 hectares. The property is currently zoned AM9[1699]-H “Arterial Mainstreet” (soon to be MS2[1699]-h “Mainstreet Corridor”) which will support the development. A site plan is provided in **Appendix B**.

Currently it is expected that two (2) of the units will be used for quick service restaurants, one (1) of the units will be a bakery, and the remaining units will be a mix of small personal and professional services (barber shops, hair/nail salons, travel advisory companies, etc.). The site will provide 62 parking spaces, which includes 4 barrier-free spaces which will exceed City of Ottawa By-law requirements. In addition, there will be 5 bike parking spaces as per Section 111 of the City Zoning Bylaw. It is anticipated that the site will be developed in 2026, pending approvals.

Element 2.1.2 - Existing Conditions

Roads

The proposed commercial development is positioned along the north side of Hazeldean Road. Hazeldean Road is a City of Ottawa roadway classified as an arterial within the City's Transportation Master Plan (TMP). In 2010, the roadway was upgraded from a two-lane facility to a four-lane divided urban arterial. Pedestrian infrastructure is provided on both sides of the corridor, with a sidewalk directly adjacent to the curb along the site frontage on the north side, and a sidewalk separated by a 3.0 m boulevard on the south side. Hazeldean Road is also identified as a Spine Route and includes dedicated cycling lanes in both directions. The posted speed limit along this segment is 60 km/h.

Stittsville Main Street is also within the project study area and is classified as an arterial roadway as per the City's open data platform. The roadway generally features one lane for through traffic in each direction, with intermittent widening for turn lanes at key intersections and accesses. There is sidewalk on both sides of the roadway, primarily monolithic on the west side and separated from the curb on the east side by a boulevard that has a minimum width of approximately 2.5 m. There are no cycling facilities on Stittsville Main Street, and the posted speed limit is 50 km/h.

Carp Road is also within the project study area and is classified as an arterial roadway as per the City's open data platform. The roadway generally features one through lane in each direction but widens at both ends of the study area (near Hazeldean Road and Stittsville Main Street) to provide more intersection capacity. There is primarily monolithic sidewalk along the north side of the road, with a short section of sidewalk on the south side between Hobin Street and Stittsville Main Street. The majority of the south side of the road has a paved shoulder. The posted speed limit on Carp Road through the study area is 50 km/h.

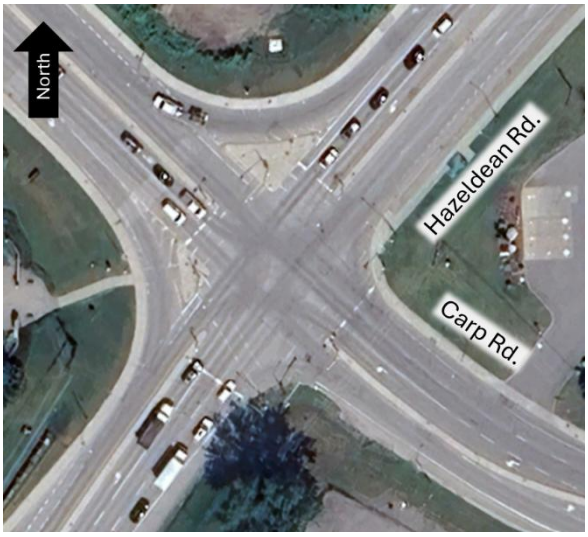
Intersections

In total five (5) intersections will be examined as part of the TIA. The intersections are described in detail below.

Hazeldean Road @ Carp Road

The intersection of Hazeldean at Carp Road is approximately 500 metres west of the planned development. The intersection is signalized with pedestrian crosswalks spanning each approach. There are also bike lanes on the north, south and east approaches. The intersection has the following configuration:

- **Northbound approach** - One through lane, one left turn lane & one shared through/right lane
- **Southbound approach** - One through lane, one left turn lane & a channelized right turn lane
- **Eastbound approach** - One through lane, one left turn lane & one shared through/right lane
- **Westbound approach** - One through lane, one left turn lane & one channelized right turn lane



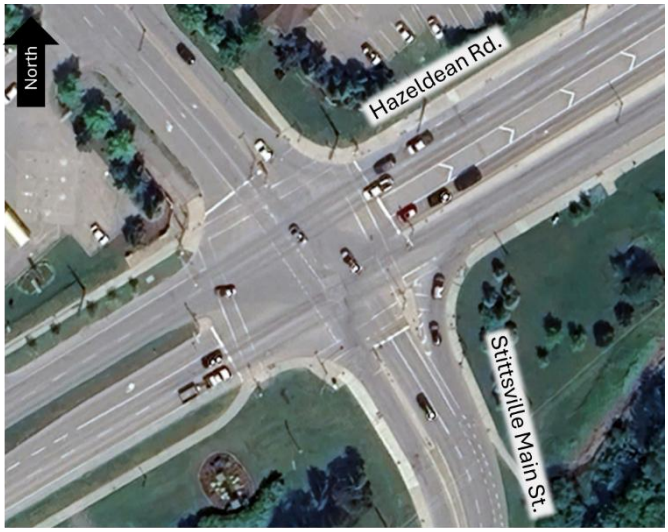
Hazeldean Road @ Jackson Trails Centre

The intersection of Hazeldean Road at Jackson Trail Centre is located to the east of the site and is a three-leg signalized “T” intersection. Jackson Trail Centre allows access to existing commercial properties as well as the new proposed development. Dedicated cycling lanes are provided along Hazeldean Road on both the eastbound and westbound approaches, and pedestrian crosswalks are present on the east and west Hazeldean Road approaches as well as the northbound Jackson Trails approach. The lane configuration for this intersection is described below:

- **Southbound approach** - One left turn lane & one right turn lane
- **Eastbound approach** - One left turn lane & two through lanes
- **Westbound approach** - One through lane & one shared through/right lane

Hazeldean Road @ Stittsville Main Street

The intersection of Hazeldean Road at Stittsville Main Street is located approximately 300 metres east of the site and is a four-leg signalized intersection. Hazeldean Road spans the east/west direction and is classified as an arterial road. Stittsville Main Street is oriented in the north/south direction and is a major collector road. There are cycling lanes on both the eastbound and westbound approaches on Hazeldean Road. There are pedestrian crosswalks and signals at all four approaches. The lane configuration for this intersection is described below:



- **Northbound approach** - One left turn lane (approx. 40 m storage), one through lane & one channelized right turn lane.
- **Southbound approach** - One left turn lane (approx. 55 m storage), one through lane & one right turn lane.
- **Eastbound approach** - One left turn lane (approx. 40 m storage), one through lane & one shared right/through lane.
- **Westbound approach** - One left turn lane (approx. 300 m storage), one through lane & one shared right/through lane.

Stittsville Main Street @ Carp Road

The intersection of Stittsville Main Street at Carp Road is located approximately 600 metres to the southeast of the site. Stittsville Main Street is oriented in the north/south direction and Carp Road is oriented in the east/west direction. Stittsville Main Street and Carp Road are both classified as arterials. There is sidewalk on each side of both roads and crosswalks with pedestrian signals at each approach. The lane configuration for this intersection is described below:

— **Northbound approach** - One left turn lane (approx. 100 m storage), one shared right turn/through lane.

— **Southbound approach** - One left turn lane (approx. 70 m storage), one through lane & one channelized right turn lane.

— **Eastbound approach** - One left turn lane (approx. 50 m storage), one through lane & one channelized right turn lane.

— **Westbound approach** - One left turn lane, one shared right turn/through lane.

Hazeldean Road @ 6111 Hazeldean Access

This intersection is a stop-controlled intersection, with vehicles being limited to right-in right-out movements on the access road. There is sidewalk along both sides of Hazeldean Road. This intersection was previously generated to provide access to the first phase of this development.

Traffic Data

The AM and PM peak hour traffic counts for the study area intersections are illustrated in Figure 1, with the full counts attached in **Appendix C**.

Transit

The study area is served by several OC Transit bus routes, which are detailed over the following list. Route maps are provided in **Appendix D**.

— The site is served by **Local Route 163**, which operates throughout the day, including weekends. This route travels along Hazeldean Road past the site, providing connections to Kanata and the Terry Fox Transitway Station.

— **Frequent Route 61** also operates along Hazeldean Road adjacent to the site, offering all-day service seven days a week with connections to the Eagleson Road Park & Ride and Tunney's Pasture Transitway Station.

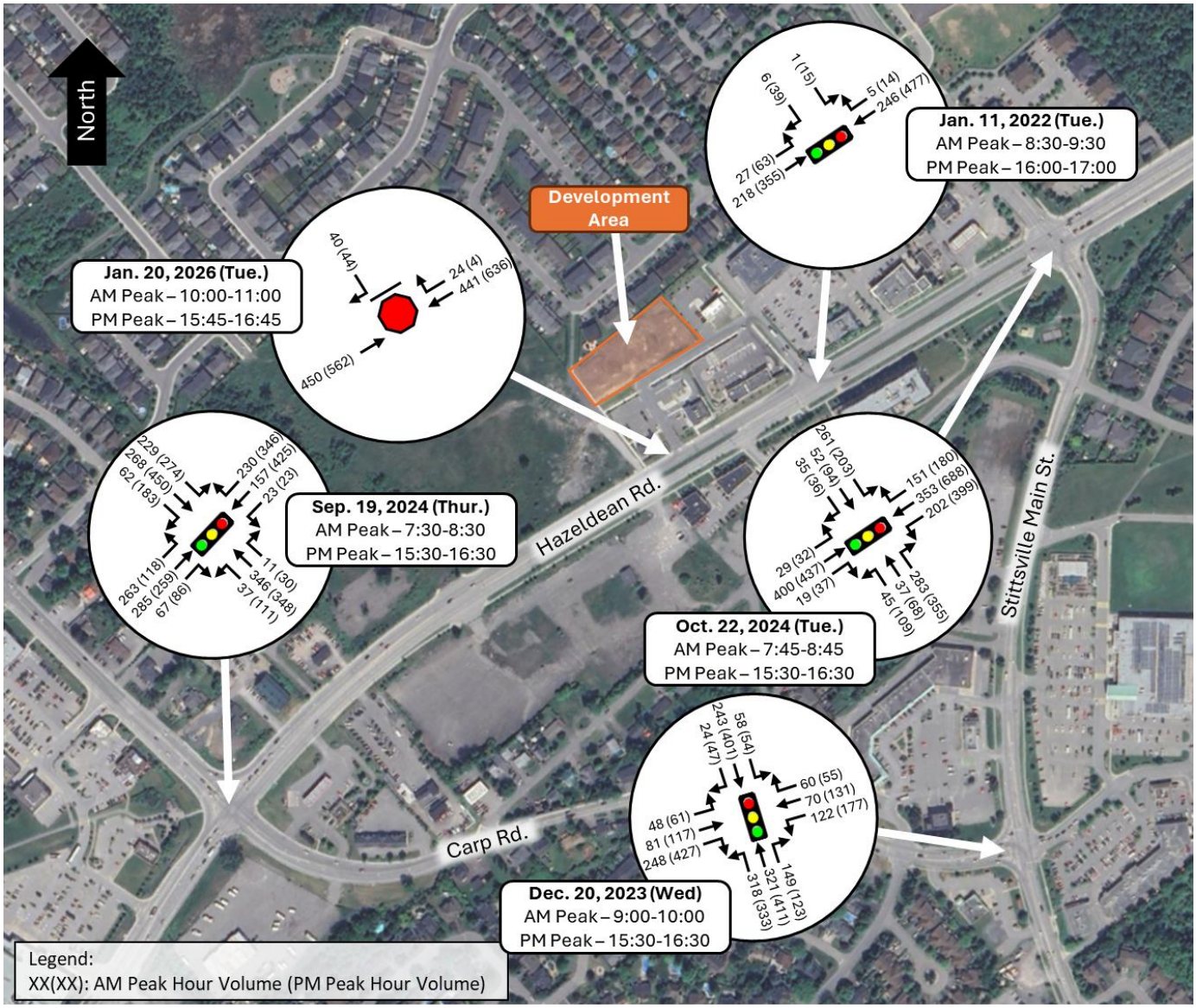
— **Connexion Route 261** operates during weekday peak periods, travelling along Stittsville Main Street with peak-period service to Tunney's Pasture in the morning and Kittiwake in the afternoon.

— **Connexion Route 263** operates during weekday peak periods, travelling along Stittsville Main Street with peak-period service to Tunney's Pasture in the morning and Richmond in the afternoon.

— **Local Route 301** operates on Mondays during peak periods only travelling along Stittsville Main Street to Carlingwood in the morning and to Richmond in the afternoon.

— **Local Route 303** operates on Wednesdays during peak periods only travelling along Sittsville Main Street and Carp Road to Carlingwood in the morning and Dunrobin in the afternoon.

Figure 1: Existing AM and PM Peak Traffic Counts



Collision History

Collision reports were obtained from the City of Ottawa through Open Data Ottawa for the 5-year period of 2019-2022 plus 2024; the 2023 data was unavailable through the Open Data platform, leading to a segmented 5-year period for review.

The collision reports were obtained for the signalized intersections within the road network (4 study intersections plus the intersection of Carp Road at Hobin Street / McCooeye Lane). Reported collisions were also obtained for the road segments between the study area intersections. Table 1 summarizes the collisions by year and type.

The two most notable intersections for collisions were the intersections of Hazeldean Road at Stittsville Main Street and Hazeldean Road at Carp Road, where both exhibited a high volume of rear end collisions. To address these collision patterns, the City could review the change intervals at both intersections and driver speed choice on the approach roads to determine if speed management tools or adjusting the signal timings could mitigate these collisions.

Table 1: Collision Summary

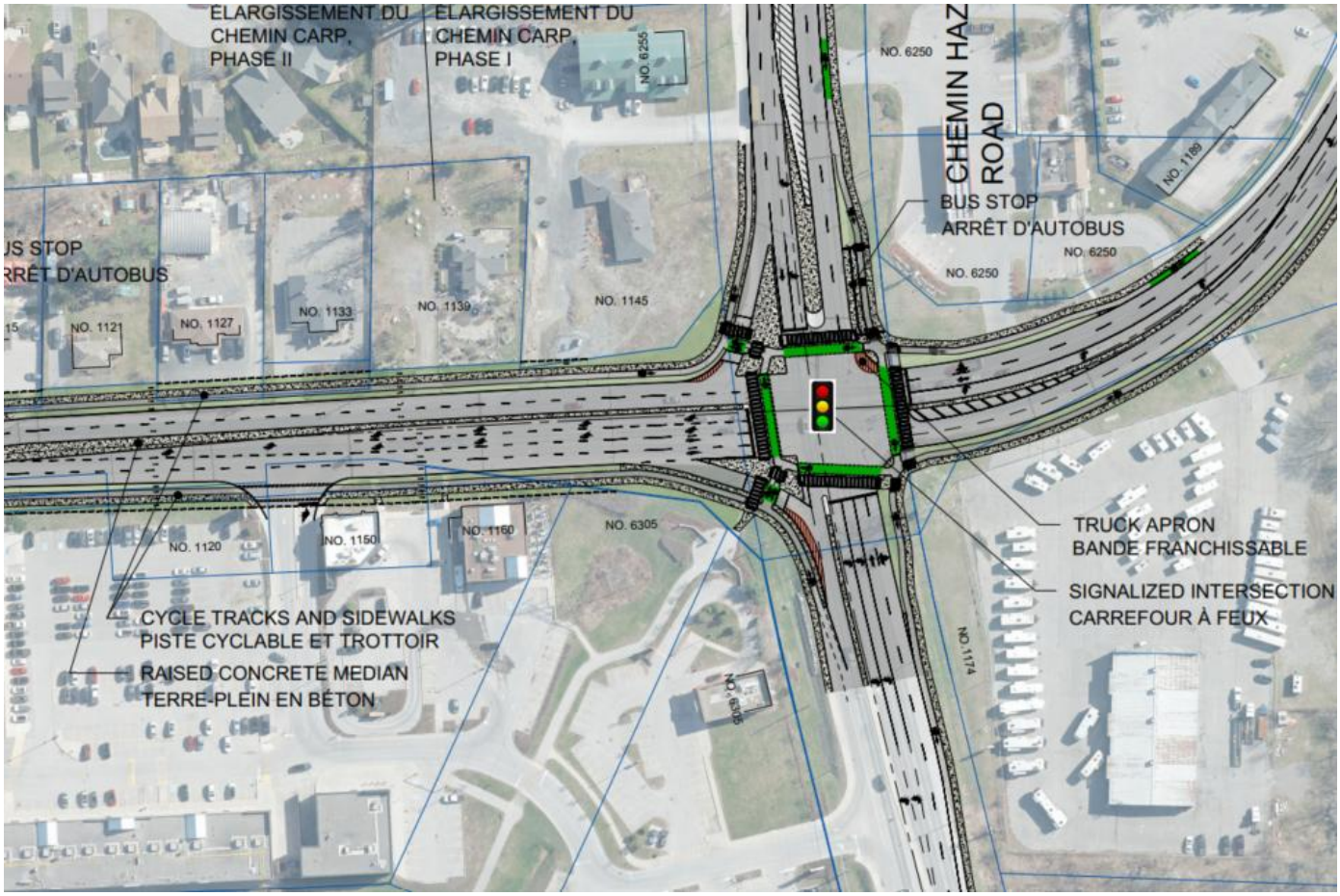
Intersection / Segment	YEAR	COLLISION TYPE					TOTAL
		REAR END	ANGULAR	TURNING	SIDESWIPE	OTHER (SMV)	
Jackson Trails Access at Hazeldean Road (250 m W of Stittsville Main) Intersection	2019	0	0	0	0	0	0
	2020	0	0	0	0	0	0
	2021	1	0	1	0	0	2
	2022	0	0	0	0	0	0
	2024	0	1	0	0	0	1
Stittsville Main Street at Hazeldean Road Intersection	2019	3	1	2	1	0	7
	2020	5	0	1	0	0	6
	2021	5	3	1	1	0	10
	2022	10	3	2	2	2	19
	2024	8	0	4	0	1	13
Carp Road at Hazeldean Road Intersection	2019	3	1	0	0	2	6
	2020	4	0	2	1	0	7
	2021	9	0	1	3	1	14
	2022	7	0	2	1	2	12
	2024	9	0	7	1	1	18
Carp Road at Stittsville Main Street Intersection	2019	6	0	1	0	1	8
	2020	3	1	1	0	1	6
	2021	3	0	0	0	0	3
	2022	0	0	2	0	1	3
	2024	2	1	2	0	0	5
Carp Road at Hobin Street / McCooeye Lane Intersection	2019	0	2	0	0	0	2
	2020	0	0	0	0	0	0
	2021	0	0	0	0	0	0
	2022	1	0	0	0	0	1
	2024	0	0	3	1	1	5
Hazeldean Road between Carp Road and Stittsville Main Street	2019	1	0	1	1	0	3
	2020	1	0	0	0	0	1
	2021	0	0	1	0	0	1
	2022	0	0	1	0	0	1
	2024	0	0	0	0	1	1
Carp Road between Hazeldean Road and Stittsville Main Street (excluding intersection at Hobin St / McCooeye Ln)	2019	2	2	0	0	1	5
	2020	0	0	0	1	1	2
	2021	1	0	0	0	2	3
	2022	1	1	1	0	1	4
	2024	0	0	4	1	1	6
Stittsville Main Street between Carp Road and Hazeldean Road	2019	0	0	0	0	0	0
	2020	0	0	0	0	0	0
	2021	0	0	0	0	1	1
	2022	0	0	0	0	2	2
	2024	0	0	1	0	1	2

Element 2.1.3 - Planned Conditions

In June of 2025, Ottawa published a new Transportation Master Plan (TMP). The following projects and designations were identified in the TMP that relate to the project study area:

- **Stittsville Main Street Improvement (Hazeldean Road to Bobcat Way)** - Implement the recommendations from the Stittsville Main Street Public Realm Plan. Deliver new sidewalks and cycle tracks along the corridor where feasible.
- **Carp Road South Widening** - Widening Carp Road from 2-lanes to 4-lanes between Highway 417 and Hazeldean Road. This will result in a reconfiguration of the Carp Road / Hazeldean Road intersection to include protected bicycle crossings and the following lane configuration (as illustrated in Figure 2):
    - **Northbound approach** - One through lane, one left turn lane & one shared through/right lane
    - **Southbound approach** - Two through lanes, two left turn lanes & a channelized right turn lane
    - **Eastbound approach** - One through lane, two left turn lanes & one shared through/right lane
    - **Westbound approach** - One through lane, one left turn lane & one channelized right turn lane

Figure 2: Carp Road Widening at Hazeldean Road



- **Hazeldean Road from Carp Road to West Ridge Drive** - Implement new pedestrian and cycling facilities on the south side and add a multi-use pathway on the north side.
- **Needs Based Transit Network** - Stittsville Main Street was identified as a Transit Priority Corridor through the study area.

Our team identified the following planned developments near the project site through reviewing the City's Development Applications Search portal:

- **5872, 5880 & 5884 Hazeldean / 7 Savage** - Development of two high-rise mixed-use towers and a low-rise apartment building, including 456 residential units and 438 m^2 of commercial space at grade.
- **6310 & 6320 Hazeldean** - Development of two high-rise buildings including 457 residential units, 553 vehicle parking spaces, and 462 bicycle parking spaces.

Module 2.2 - Study Area and Time Periods

Element 2.2.1 - Study Area

The study area for the proposed development will be confined to Hazeldean Road between Carp Road and Stittsville Main Street. The following intersections will be examined, as per discussions with City of Ottawa staff:

- Hazeldean Road @ Carp Road
- Hazeldean Road @ 6111 Hazeldean Access
- Hazeldean Road @ Jackson Trails Centre
- Hazeldean Road @ Stittsville Main Street
- Stittsville Main Street @ Carp Road

Element 2.2.2 - Time Periods

Weekday AM and PM peak hour volumes would be used during the Level of Service (LOS) analysis. This would represent the peak periods for traffic along Hazeldean Road past the site.

Element 2.2.3 - Horizon Years

The TIA will investigate the impact of the site generated trips from the proposed additional nine units at 6111 Hazeldean Road. The analysis horizon period will examine the impact of the added traffic at full buildout (2026) and also five years after full completion (2031).

Module 2.3 - Exemptions Review

The exemptions that provide potential scope reductions to the TIA were examined per Table 4: Possible Exemptions from the City's Transportation Impact Assessment Guidelines (2017). A summary of this exemptions review is detailed below in Table 2.

Table 2: Exemptions Review

Module	Element	Exemption Considerations
Design Review Component		
4.1 Development Design	4.1.2 Circulation and Access	**No** - The site access onto Hazeldean will be examined along with the circulation of traffic within the site.
	4.1.3 New Street Networks	**Yes** - Only required for subdivisions.

Module	Element	Exemption Considerations
4.2 Parking	4.2.1 Parking Supply	**No** - The parking supply will be examined with the supply of parking compared to the required as determined from City By-laws.
Network Impact Component		
4.6 Neighbourhood Traffic Calming		**Yes** - The site will have access onto an arterial road, so it does not meet the first criteria for this scope item.
4.7 Transit	4.7.1 Transit Route Capacity	**Yes** - The number of site transit trips is anticipated to be less than 75 during the peak hours (combined).
	4.7.2 Transit Priority Requirements	**No** - The number of auto site trips is anticipated to be greater than 75.
4.8 Network Concept		**Yes** - The site would not generate more than 200 person-trips per peak hour in excess of the volume permitted by established zoning.
4.9 Intersection Design	4.9.1 Transit Route Capacity	**No** - The number of auto site trips is anticipated to be greater than 75.
	4.9.2 Transit Priority Requirements	**No** - The number of auto site trips is anticipated to be greater than 75.

Module 2.4 - Development-Generated Travel Demand

The following will outline the process of trip generation, trip distribution, and trip assignment.

Element 2.4.1 - Trip Generation and Mode Shares

The new proposed development at 6111 Hazeldean Road, northwest of the previously developed area will add an additional nine (9) units via a strip-mall style building. Two (2) of the end units will be used for quick service restaurants, one (1) of the units will be a bakery, and the remaining units will be a mix of small personal and professional services (barber shops, hair/nail salons, travel advisory companies, etc.). Table 3 presents an inventory of the planned land use and unit size. Note that the order each unit type is presented in the table represents its location on the site plan (from left to right).

Note the ITE Trip Gen. Manual does not provide data for every possible commercial real estate type, so the closest or most appropriate land use code was used from the database to reflect the planned development.

Table 3: Inventory of Units

Unit Type	Most Appropriate ITE Land Use	ITE Land Use Code	Gross Floor Area
Quick Service Restaurant	Fast Food Restaurant without Drive-Through Window - Unit 9	933	232 m^2 / 2500 ft^2
Small personal and professional services	Strip Retail Plaza- Unit 8	822	139 m^2 / 1500ft^2
Small personal and professional services	Strip Retail Plaza- Unit 7	822	93 m^2 / 1000ft^2
Small personal and professional services	Strip Retail Plaza- Unit 6	822	93 m^2 / 1000ft^2
Bakery	Coffee/Donut Shop without Drive-Through Window- Unit 5	936	111 m^2 / 1200ft^2
Small personal and professional services	Strip Retail Plaza- Unit 4	822	93 m^2 / 1000ft^2
Small personal and professional services	Strip Retail Plaza- Unit 3	822	93 m^2 / 1000ft^2
Small personal and professional services	Strip Retail Plaza- Unit 2	822	139 m^2 / 1500ft^2
Quick Service Restaurant	Fast Food Restaurant without Drive-Through Window - Unit 1	933	232 m^2 / 2500 ft^2

The number of expected trips generated from the units was estimated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual 11th Edition.* The trip generation average rates for each land use are shown in Table 4.

Table 4: Vehicle Trip Generation Rates / Equations

ITE Land Use Code	AM Peak Hour Equation	PM Peak Hour Equation
933	43.18*(GFA)/ 1000 Sq. Ft.	33.21*(GFA)/ 1000 Sq. Ft.
822	Ln(T) = 0.66*Ln (x) +1.84	Ln(T) = 0.71*Ln (x)+2.72
936	93.08*(GFA)/ 1000 Sq. Ft.	32.29*(GFA)/ 1000 Sq. Ft.

The vehicle trips are shown in Table 5 and are a product of the gross floor area and the trip generation rates displayed in Table 4. To convert these vehicle trips to future person trips a factor of 1.28 was applied (as per TIA guidelines) to convert auto trips to person trips. Table 5 shows the expected number of vehicle and person trips generated by the proposed development.

Table 5: Generated Trips

Trips	GFA (ft^2)	Vehicle Trips		Person Trips	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Fast Food Restaurant without Drive-Through Window Units 9 & Unit 1	5,000	216	166	278	214
Retail Strip Plaza Units 8,7,6,4,3 & 2	7,000	17	46	26	62
Coffee/Donut Shop without Drive-Through Window Unit 5	1,200	112	39	143	50
Total	13,200	345	251	447	326

Trip Reduction Factors were applied to the generated trips (as per TIA Guidelines) which is discussed below:

— **Deduction of Existing Development Trips** - The parcel is currently vacant and is not expected to generate trips.

— **Pass-by Trips** - Pass-by trips are trips that are already on the road and are passing by the site on their way to a primary location. They are not considered new trips that are generated by the site. The ITE Trip Gen. Manual Appendices provide Pass-by Trip Percentages from 2021 studies. The closest or most appropriate land use code was used from the database to reflect the planned development which is described below:

  - Land Use Code 821 (Shopping Plaza) - 40% average pass-by rate.

— **Synergy or internalization** - The proposed development consists of a variety of different commercial real estate. Vehicles that visit more than one of these at a given time would reduce the number of new trips onto the road network. A 20% reduction was added to account for synergy/internalization. In the previous Phase 1 report, a 10% internalization factor was used. The 20% reflects an increase in synergy between the first phase and second phase developments.

The expected number of person trips that resulted from applying the Trip Reductions Factors is shown in Table 6.

Table 6: Total Peak Hour Site Generated Person Trips

Trips	Future Person Trips	
	AM Peak Hour	PM Peak Hour
Future Peak Hour Person Trips	479	396
Internal Trip Reduction (site synergy)	96	79
Total Peak Hour Person Trips	**383**	**317**
Units 9 &1	**222**	**171**
Primary Trips	133	103
Pass-by Trips	89	68
Units 8,7,6,4,3,2	**46**	**105**
Primary Trips	28	63
Pass-by Trips	18	42
Unit 5	**115**	**40**
Primary Trips	69	24
Pass-by Trips	46	16
Total Primary Trips	**230**	**190**
Total Pass-by Trips	**153**	**127**

The modal split of trips was determined from the City of Ottawa document, Origin Destination 2022 Household Travel Survey, October 2025. The data was extracted from *Figure 61 Mode shares by sub-area, 2022.* Note that the study area is located within the Suburban sub-area. Table 7 presents the mode share percentages. These percentages were used for both Primary and Pass-by trips.

Table 7: Study Area Trips by Future Mode Share

Travel Mode	Percentage	Rationale
Auto Driver	65%	Consistent with 2022 mode share by sub-area data and type of development, rounding up to account for removal of school bus & other trip categories
Auto Passenger	15%	
Transit	7%	
Bicycle + Micromobility	3%	
Walk	10%	
Total	100%	

The AM and PM Peak Hour person-trips by mode were determined using the mode share percentages and peak hour person trips. This data is displayed in Table 8.

Table 8: Site Generated Person-Trips

	Development Generated Person-Trips			
	Primary Trips		Pass-by Trips	
Travel Mode	Peak AM Hour	Peak PM Hour	Peak AM Hour	Peak PM Hour
Auto Driver	149	124	100	82
Auto Passenger	35	28	23	19
Transit	16	13	11	9
Bicycle	7	6	4	4
Walk	23	19	15	13
Total Trips	230	190	153	127

Element 2.4.2 - Trip Distribution

Primary trips will mainly originate from the residential development in the surrounding area; therefore, the distribution of primary trips was determined by assessing the size and proximity of the residential subdivisions adjacent to the proposed development. This is in accordance with the previous TIA (Phase 1). The primary trips were distributed onto the traffic network at the following proportions:

To/from the East along Hazeldean (60%):

- 5% to/from the North along Stittsville Main Street
- 5% to/from the East along Hazeldean Road
- 50% to/from the South along Stittsville Main Street

To/from the West along Hazeldean (40%)

- 5% to/from the North along Carp Road
- 10% to/from the South along Carp Road
- 25% to/from the West along Hazeldean Road

The distribution of pass-by trips was determined by examining the background traffic counts during the peak AM and PM hours. The pass-by traffic was distributed for both the pass-by trip volume and diverted trip volume.

Element 2.4.3 - Trip Assignment

The distribution of trips entering/exiting the proposed site was determined by using the directional distribution rates provided for each land use in the ITE Trip Gen. Manual. The distribution of entering/exiting vehicles was determined for the AM and PM Peak period. Table 9 displays the distribution of vehicle trips (Auto Driver) entering and exiting the site during the peak AM and PM period. These trip assignments are also illustrated in Figure 3 (Primary trips) and Figure 4 (Pass-by trips).

Table 9: Peak Hour Distribution of Vehicle Trips

Trip Type	AM Peak Hour			PM Peak Hour		
	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
Primary Trips	150	84 (56%)	66 (44%)	124	62 (50%)	62 (50%)
Pass-By Trips	100	56 (56%)	44 (44%)	82	41 (50%)	41 (50%)
Total Trips	**250**	**140**	**110**	**206**	**103**	**103**

Figure 3: Primary Trip Assignment

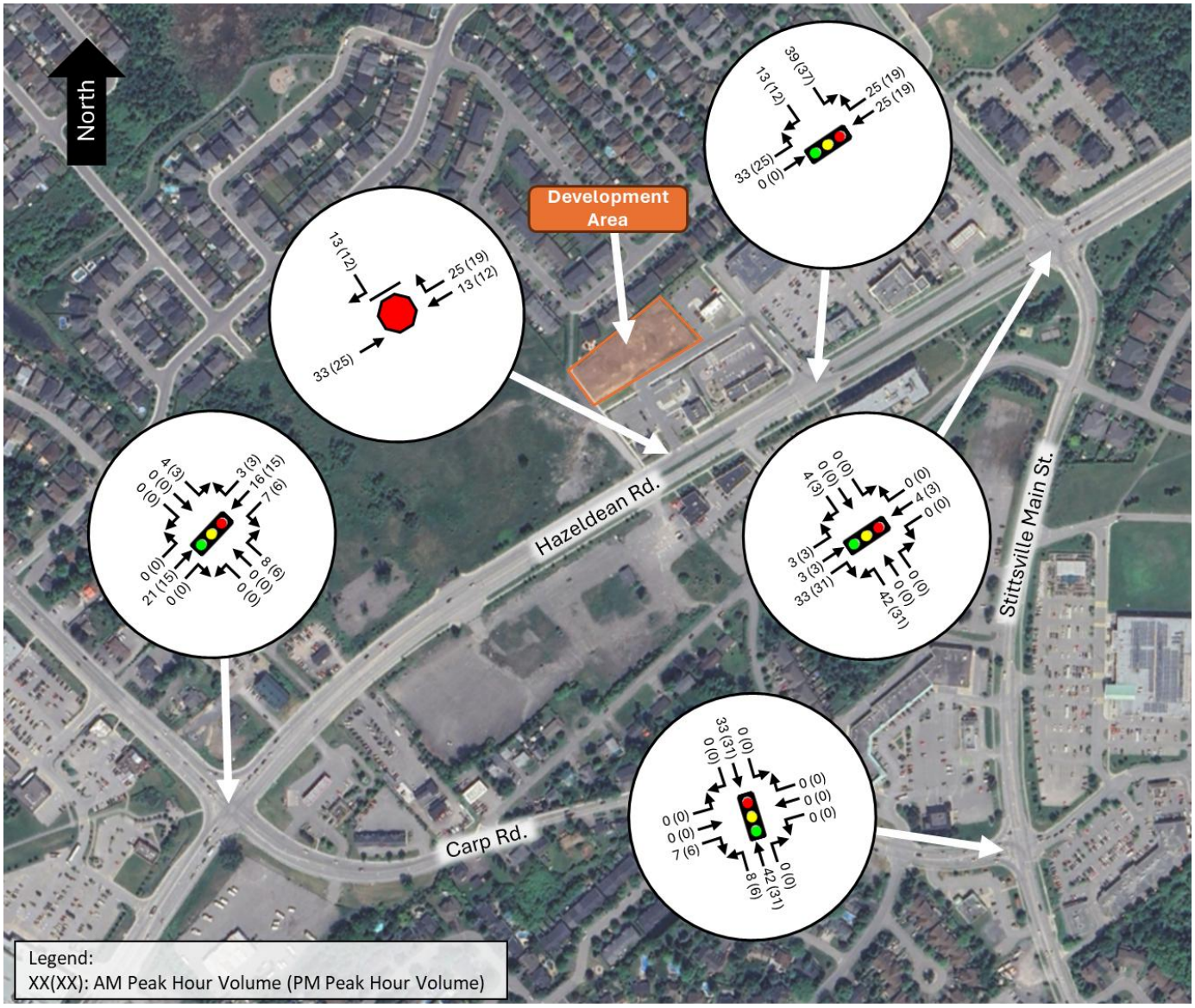
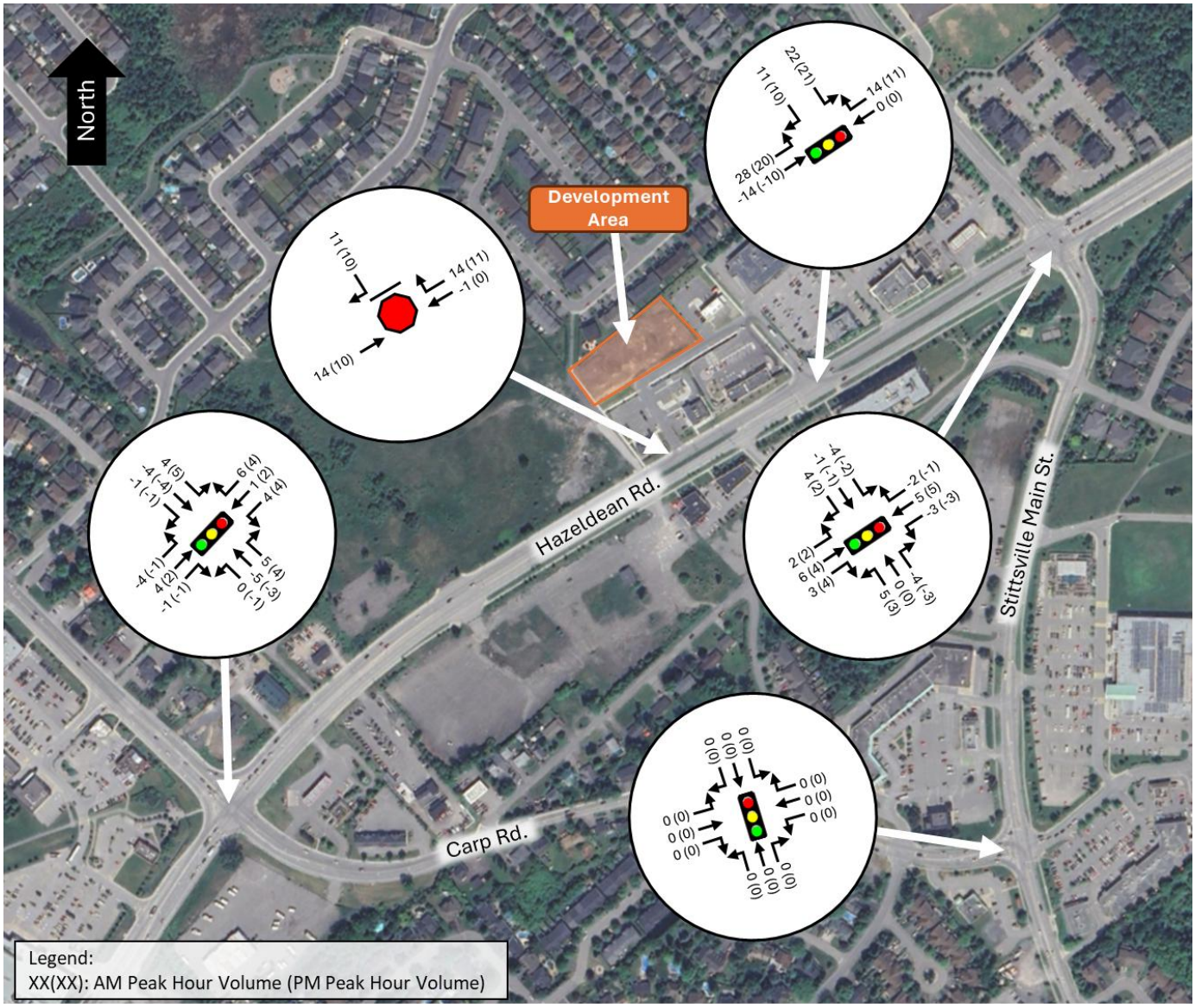


Figure 4: Pass-by Trip Assignment



Step 3 - Analysis

Module 3.1 - Background Network Travel Demand

Element 3.1.1 - Transportation Network Plans

The City of Ottawa Transportation Master Plan (TMP) 2025 was reviewed to identify transit and roadway projects in the vicinity of the proposed development. The most significant project is the Carp Road South Widening, which will expand Carp Road from 2-lanes to 4-lanes between Highway 417 and Hazeldean Road. Other planned improvements include pedestrian and cyclist improvements on Stittsville Main Street and Hazeldean Road, and expansion of the Needs Based Transit Network on Stittsville Main Street. More details on these were summarized in Element 2.1.3.

Element 3.1.2 - Background Growth

The background traffic volumes represent the future traffic counts, not including the added expected trips generated from the site. This traffic is comprised of the existing counts plus the added traffic from developments in proximity to the Study Area and accounts for future growth as the city expands with time. An annual average compounded growth rate of 2.0 percent was applied to the existing traffic volumes to account for this growth. This is consistent with the previous *6111 Hazeldean Road Transportation Impact Assessment Strategy Report*. Table 10 demonstrates how the 2.0 percent annual increase translates to growth factors given the year the count was collected.

Table 10: Growth Factors

Count	Count Year	2026 Factor	2031 Factor
Carp Road at Hazeldean Road	2024	1.040	1.149
Right-in-Right-out at Hazeldean Road	2026	1.00	1.104
Jackson Centre at Hazeldean Road	2022	1.082	1.195
Stittsville Main Street at Hazeldean Road	2024	1.040	1.149
Stittsville Main Street at Carp Road	2023	1.061	1.172

Element 3.1.3 - Other Developments

Our team identified the following planned developments near the project site through reviewing the City's Development Applications Search portal:

- **5872, 5880 & 5884 Hazeldean / 7 Savage** - Development of two high-rise mixed-use towers and a low-rise apartment building, including 456 residential units and 438 m^2 of commercial space at grade.
- **6310 & 6320 Hazeldean** - Development of two high-rise buildings including 457 residential units, 553 vehicle parking spaces, and 462 bicycle parking spaces.

The growth in background traffic is the sum of the 2.0% annual average growth rate applied to all approaches of all intersections plus the additional traffic generated by the aforementioned planned developments. The projected background traffic volumes in the study area for 2026 and 2031 are shown in Figure 5 and Figure 6, respectively. The projected total traffic volumes were determined by adding the generated and pass-by trips for the proposed development to the background volumes. The projected total traffic volumes in the study area for 2031 are shown in Figure 7.

Figure 5: 2026 Peak AM and PM Hour Background Traffic

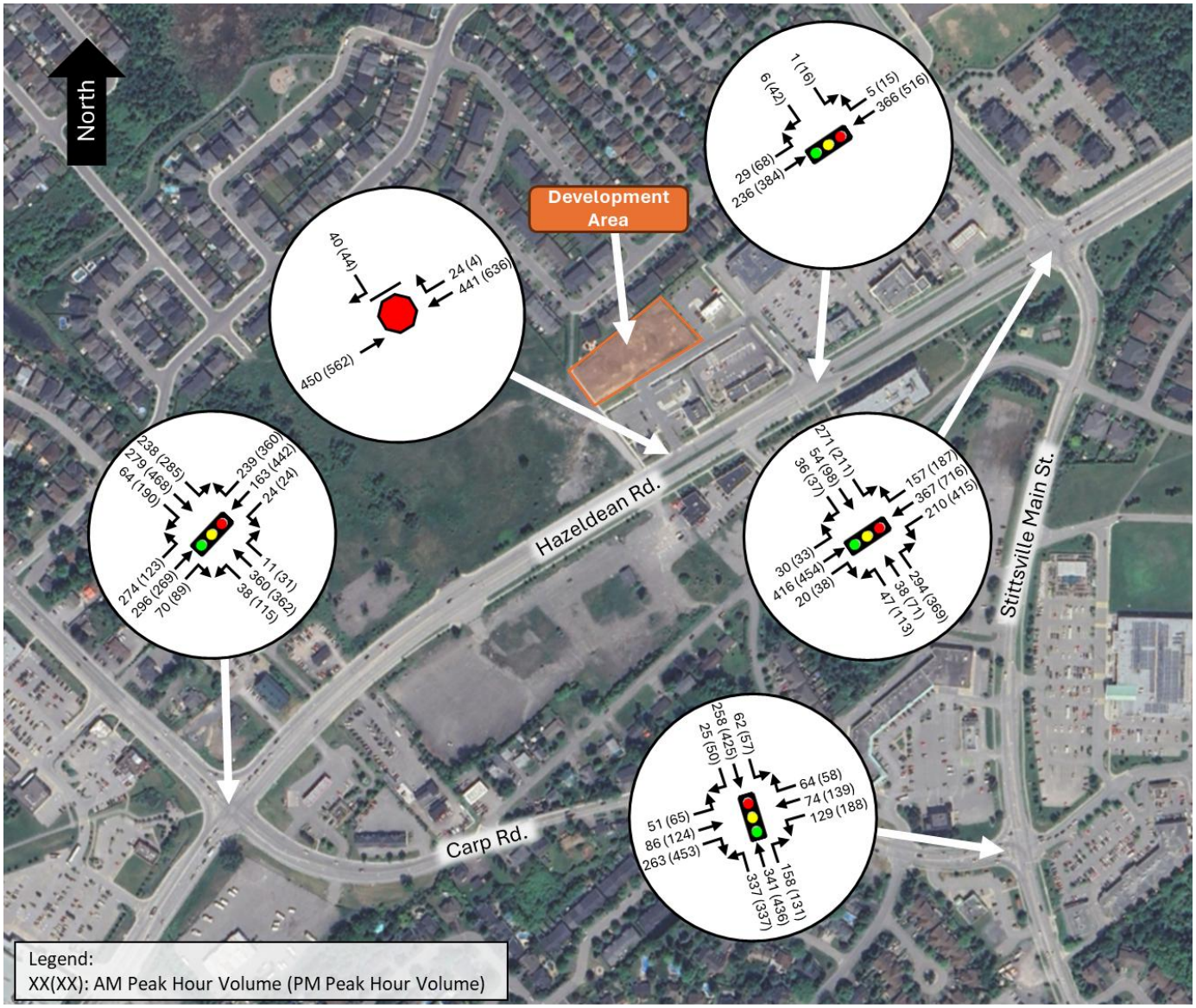


Figure 6: 2031 Peak AM and PM Hour Background Traffic

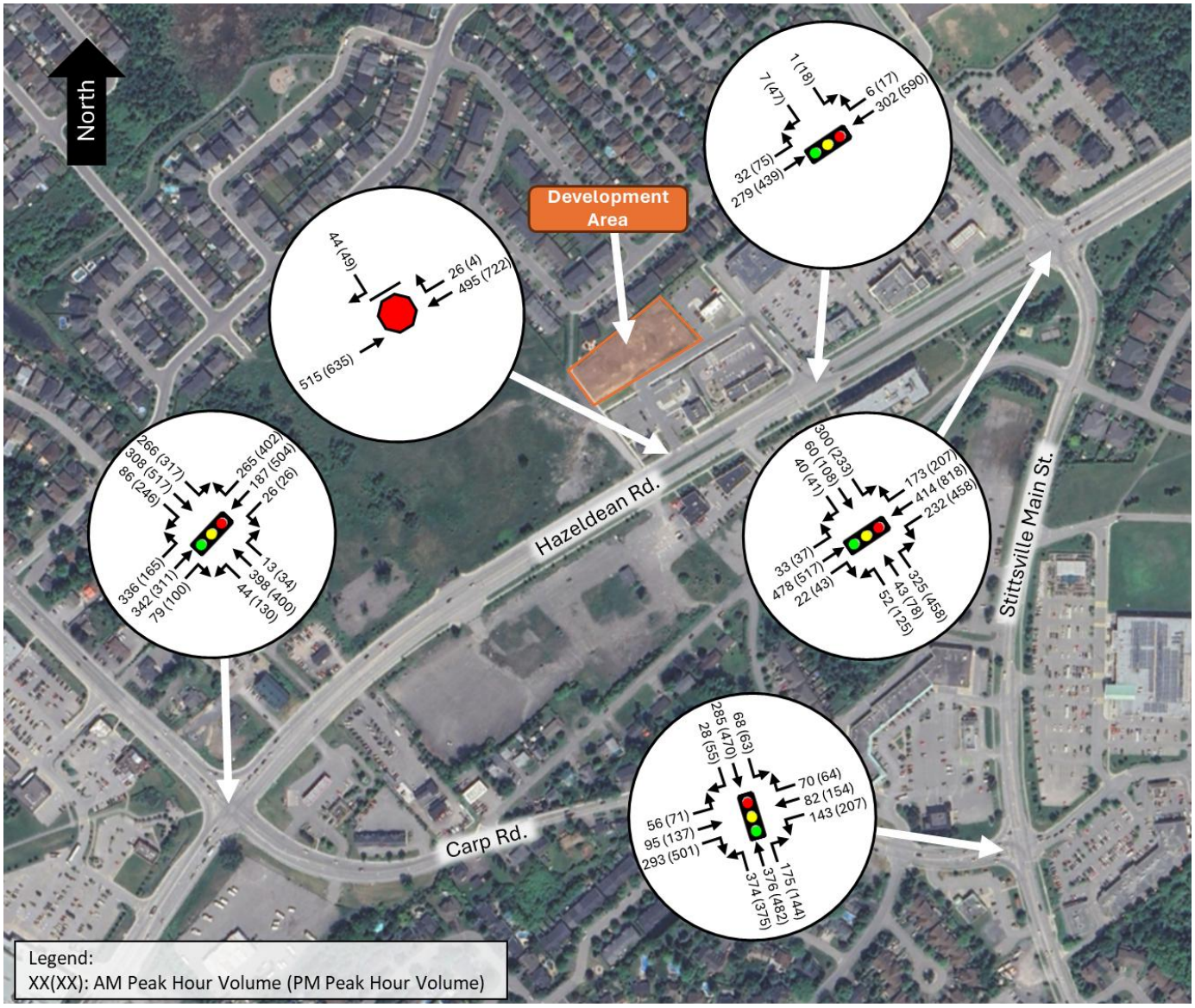
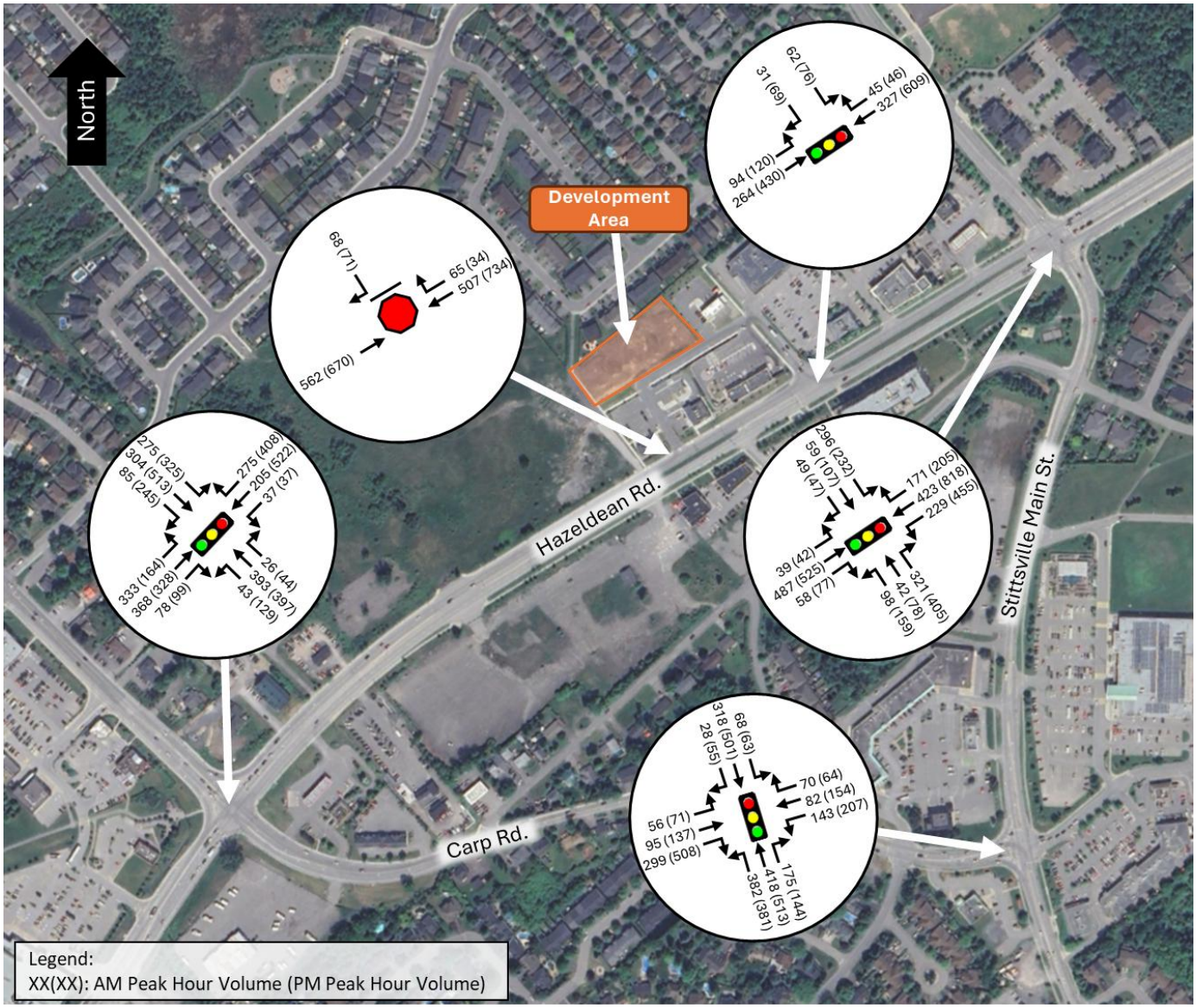


Figure 7: 2031 Peak AM and PM Hour Total Traffic



Module 3.2 - Demand Rationalization

Overall the network is well matched to the anticipated traffic demand. This is in part due to the widening of Hazeldean Road in 2010, which has not filled to capacity yet, and the planned widening of Carp Road to the north of Hazeldean Road, which is incorporated into the future scenario analyses in this study.

The only location where the anticipated travel demand would exceed capacity is the northbound left turn movement at the intersection of Stittsville Main Street and Carp Road during the PM peak hour. Using the provided traffic volumes and signal timings for the intersection, that movement has a v/c ratio of 1.14 under the existing 2026 conditions. One of the core challenges with this movement is that there does not appear to be a good alternative to it within the network; based on further travel patterns, most vehicles making this turn are heading towards either Highway 7 or Highway 417. Diverting some of the turning traffic to continue northbound on Stittsville Main Street towards Hazeldean Road has limited utility, as that movement is approaching capacity during the existing 2026 peak period (v/c = 0.93). To bring the northbound left turn movement demand under the available

capacity in the existing 2026 conditions, approximately **40 vehicle trips** would need to be reallocated in the network.

Due to the lack of alternatives, it is most likely that the reallocated trips would complete the same movement but stretched over a longer timeframe. This could either be through intentionally shifting trip times on the part of users, or through the development of queues that take longer than the peak hour to clear. It is also possible that there was queuing at the time of the traffic count completed by the City and that the actual peak hour demand for the movement is greater than what is reflected in traffic data.

Since this mismatch between demand and capacity was limited to a single movement for which there is no clear alternative detour for traffic, our team left the traffic data as-is. In all likelihood the excess demand will lead to queueing, and having the volume exceed demand for this one movement should reflect that more accurately than if we were to remove vehicle trips to keep the v/c ratio under 1.0. It is also notable that the proposed development has minimal impact on this movement, only generating 6 new northbound left turn movements at this intersection.

Module 3.3 - Development Design

Element 3.3.1 - Design for Sustainable Modes

It is expected that the proposed development will attract patrons that are travelling by other modes of transportation besides vehicles. Bicycle lanes are located on both sides of Hazeldean Road and there are 5 bike parking spaces shown on the site plan (as per city standard SF06). There are also bike racks provided at the entrance of each building just east of the proposed new development.

There are sidewalks along Hazeldean Road, Stittsville Main Street, and Carp Road, which would provide access to the development for pedestrians in nearby residential areas.

The area would be accessible by several OC Transpo routes providing both local and regional transit connections. Routes 61 and 163 operate along Hazeldean Road daily, connecting the site location to major transit stations (Terry Fox, Eagleson Park & Ride, Tunney's Pasture). Connexion 261 and Connexion 263 operate along Stittsville Main Street during weekday peak periods and service to Tunney's Pasture in the morning, and Kittiwake and Richmond in the afternoon, respectively. Local Routes 301 and 303 provide limited peak period service on specific weekdays. Route 301 operates on Mondays along Stittsville Main Street travelling to Carlingwood in the morning and Rhicmond in the afternoon, while Route 303 operates on Wednesdays and travels to Carlingwood in the morning and Dunrobin in the afternoon. Frequent Route 61 operates along Hazeldean Road adjacent to the site, providing daily all-day service with connections to the Eagleson Road Park & Ride and Tunney's Pasture Transitway Station.

As part of the study, the *TDM – Supportive Development Design and Infrastructure Checklist* was used. It explores the opportunity to implement more infrastructure that promotes sustainable modes of transportation and is provided below.

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	☒ Building is next to sidewalk
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	☒ Sidewalk and transit are nearby
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)*	☒ OC Transpo Route 61 and 163 are adjacent to the development site. OC Transpo 61 operates between Tunney's Pasture and Cardelrec Goulbourn Complex. OC Transpo 163 operates between Terry Fox to Kittiwake.
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)*	☒ The building entrances are close to the public sidewalk with only a short distance walk from Hazeldean Road.

		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	☒ Entrances are near sidewalk
BASIC	1.2.7	Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	☒ Sidewalk on both sides of Hazeldean with street lighting.
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)*	☒ 5 bike parking spots on site, and additional racks to the east of the development
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)*	☒ Bike parking meets City By-Laws
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	☒ Bike parking meets City By-Laws
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)*	☐ Not applicable
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	☐ Not applicable
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	☐ Not applicable
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☐ Not applicable
	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	☒ The number of parking spaces meets the needs of the land use.
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	☐

Element 3.3.2 - Circulation and Access

There are no new accesses proposed to connect the development site to Hazeldean Road. Access to the development will be facilitated through two existing accesses. All of these accesses were designed to accommodate fire routes and the required design vehicles for the site.

One of the existing accesses is a right-in/right-out access on Hazeldean Road. The access is 9.5 metres in width and has the right turn restriction enforced by a centre median on Hazeldean Road, which prevents left turning movements to and from Hazeldean Road.

The second access is through the Jackson Trails Centre Plaza entrance/exit. This access is controlled by traffic signals.

Element 3.3.3 - New Street Networks

This element is not required for this study as per the Scoping Document.

Module 3.4 - Parking

Element 3.4.1 - Parking Supply

According to the site plan, the development will provide 62 auto parking spaces, which includes 4 barrier-free spaces. This is in accordance with City of Ottawa By-laws. There are also five (5) bicycle spaces on the west side of the building. There is no on-street parking adjacent to the property. It is anticipated that this parking supply will be adequate for the types of land uses proposed for the development.

Note that the other various establishments near the new development have ample parking spaces, which could be shared between the businesses. Spillover parking is unlikely given the number of spaces available for customers.

Module 3.5 - Boundary Street Design

The City of Ottawa Complete Streets design concept allows for safe travel of everyone whether they are a pedestrian, cyclist, auto driver or using public transit. The boundary street for the development is the arterial road (Hazeldean Road). This route has dedicated bike lanes, sidewalk on both sides, and OC Transpo bus service which connects to major transit hubs. The collision reports for Hazeldean Road between Carp Road and Stittsville Main Street had seven (7) collisions during the five-year period between 2019 and 2024 (excluding 2023). The multi-modal level of service for the segment of road along Hazeldean Road was assessed using the City of Ottawa's *Multi-Modal Level of Service (MMLOS) Guidelines Update May 2025.* The following outlines MMLOS for the segment of street along Hazeldean Road within the Study Area.

Pedestrian Level of Service (PLOS) – Street Segment

Sidewalks are located on both the north and south sides of Hazeldean Road. The sidewalk on the north side of the road is 3 metres wide and is positioned directly adjacent to the curb. The sidewalk to the south side of Hazeldean has a 3-metre boulevard between the curb and sidewalk and is 2 metres wide.

The PLOS was determined using Exhibit 5 and Exhibit 6 from the *Multimodal Level of Service Guidelines (Update May 2025)*, in combination with *Multi-Modal Level of Service – Segments Form*. PLOS was examined for both north and south sides of Hazeldean. Hazeldean Road was broken into two segments "Majority" and "Critical" for the analysis based off the pedestrian facilities available along the route as per MMLOS Guidelines. **Table 11** displays the results of the PLOS analysis. **Appendix E** displays the *Multi-Modal Level of Service – Segments Form* with the results.

Table 11: PLOS Analysis

Hazeldean Road	Majority		Critical	
Description	Between Stittsville Main Street to Beginning of South Side Inner Boulevard		Between Carp Road to Beginning of South Side Inner Boulevard	
	North of Street	South of Street	North of Street	South of Street
Score	3.00	3.75	3.00	3.00
PLOS	C	B	C	C

Bicycle Level of Service (BLOS) – Street Segment

Hazeldean Road is an arterial four lane divided roadway. Painted cycling lanes are present along both sides of the route.

BLOS was determined using Exhibits 18-21 from the *Multimodal Level of Service Guidelines (Update May 2025)*, in combination with *Multi-Modal Level of Service – Segments Form*. BLOS was examined for both north and south sides of Hazeldean. Table 12 displays the results of the BLOS analysis. **Appendix E** displays the *Multi-Modal Level of Service – Segments Form* with the results.

Table 12: BLOS Analysis

Hazeldean Road	Majority		Critical	
Description	Between Stittsville Main Street to Beginning of South Side Inner Boulevard		Between Carp Road to Beginning of South Side Inner Boulevard	
	North of Street	South of Street	North of Street	South of Street
Score	2.03	2.03	2.03	2.45
BLOS	D	D	D	D

Transit Level of Service (TLOS) – Street Segment

Local Route 163 and Frequent Route 61 operate along Hazeldean Road and provide access to the site seven days a week. For the TLOS analysis, Hazeldean Road was examined as a complete segment as per MMLOS Guidelines.

TLOS was determined using Exhibit 32 from the *Multimodal Level of Service Guidelines (Update May 2025)*, in combination with *Multi-Modal Level of Service – Segments Form*. TLOS was examined for both north and south sides of Hazeldean. Table 13 displays the results of the TLOS analysis. **Appendix E** displays the *Multi-Modal Level of Service – Segments Form* with the results.

Table 13: TLOS Analysis

Hazeldean Road	Between Carp Road and Stittsville Main Street	
Description	North of Street	South of Street
Facility Type	Mixed Traffic	Mixed Traffic
TLOS	D	D

Public Realm (PRLOS) – Street Segment

Hazeldean Road was evaluated based on Public Realm Level of Service (PRLOS), which examines how the street impacts the overall user experience based on space allocated to sidewalks, trees and amenities in boulevards, ease of crossing, presence of cycling facilities, quality of transit stops, and adjacent vehicle speeds and number of travel lanes.

PRLOS was determined using Exhibit 36 and Exhibit 37 from the *Multimodal Level of Service Guidelines (Update May 2025)*, in combination with *Multi-Modal Level of Service – Segments Form*. PRLOS was examined for both north and south sides of Hazeldean. Table 14 displays the results of

the PRLOS analysis. **Appendix E** displays the *Multi-Modal Level of Service - Segments Form* with the results.

Table 14: PRLOS Analysis

Hazeldean Road	Between Carp Road and Stittsville Main Street	
Description	North of Street	South of Street
Score	14.70	13.80
PRLOS	D	D

MMLOS Street Segment Summary

The Hazeldean Road street segment between Carp Road and Stittsville Main Street was analyzed using the MMLOS Guidelines and compared to the City of Ottawa's MMLOS targets for pedestrians, bicycles, transit and public realm. The LOS Target grades were obtained from the *Multimodal Level of Service Guidelines (Update May 2025).* Table 15 summarizes the MMLOS results for the road segment.

Improving Bicycling LOS on Hazeldean Road is currently the highest priority based off this analysis as the target is currently not met. This is based off of the current cycling infrastructure and posted speed.

Table 15: MMLOS Street Segment Analysis

Mode	LOS Target	Overall MMLOS Score		Critical MMLOS Score	
		North Side	South Side	North Side	South Side
Pedestrian	C	C	B	C	C
Bicycle	C	D	D	D	D
Transit	D	D	D	-	-
Public Realm	-	D	D	-	-

Module 3.6 - Access Intersections Design

Element 3.6.1 - Location and Design of Access

No new accesses are required to access the proposed development. The development can be accessed through one of the following two (2) existing intersections:

— Hazeldean Road @ 6111 Hazeldean Access

— Hazeldean Road @ Jackson Trails Centre

Hazeldean Road at the 6111 Hazeldean access is a right-in/right-out stop-controlled intersection, and Hazeldean Road at Jackson Trails Centre is controlled by traffic signals.

Element 3.6.2 - Intersection Control

The volume of site generated tips is not expected to trigger any further traffic control measures to the existing two accesses described above.

Element 3.6.3 - Intersection Design

Study Area intersections were analyzed using a combination of *Multi-Modal Level of Service (MMLOS) Guidelines* and Synchro 11. The MMLOS Guidelines were used to assess pedestrian, bicycle and transit intersection LOS, while Synchro 11 was primarily used to examine vehicle LOS.

Vehicle Level of Service (LOS) – Intersection Capacity Analysis

Traffic conditions were modelled using Synchro 11, which is a traffic analysis software that uses the Highway Capacity Manual and Intersection Capacity Utilization procedures. The LOS is determined based on volume-to-capacity ratios and is expressed on a scale of A through F, where LOS A represents very short delays and LOS F represents very long delays. The City of Ottawa uses the following Volume-to-Capacity Ratios to evaluate vehicle LOS:

LOS	Volume-to-Capacity Ratio (v/c)
A	0 to 0.60
B	0.61 to 0.70
C	0.71 to 0.80
D	0.81 to 0.90
E	0.91 to 1.00
F	>1.00

The following tables summarize the results from modelling the performance of the access and study area intersections during the 2026 existing, 2031 background, and 2031 total traffic scenarios. Table 16 provides an overview of the results for each intersection, while Table 17 through Table 19 provide detailed results for each movement at the signalized intersections. Detailed Synchro Reports are provided in **Appendix F**. Discussion of these results is provided in Module 3.11.

Table 16: Intersection Overall LOS Results

Intersection	AM Peak						PM Peak					
	LOS (v/c)			v/c			LOS (v/c)			v/c		
	2026	2031 Back.	2031 Total	2026	2031 Back.	2031 Total	2026	2031 Back.	2031 Total	2026	2031 Back.	2031 Total
Signalized												
Hazeldean Rd @ Stittsville Main St	A	A	A	0.42	0.42	0.43	A	A	B	0.59	0.59	0.61
Hazeldean Rd @ Jackson Centre	A	A	A	0.09	0.09	0.16	A	A	A	0.21	0.22	0.28
Hazeldean Rd @ Carp Rd	A	A	A	0.36	0.42	0.44	C	B	B	0.79	0.69	0.70
Carp Rd @ Stittsville Main St	B	B	B	0.63	0.62	0.66	D	D	D	0.87	0.86	0.89
Stop-Controlled												
Hazeldean Rd @ Access	B	B	B	-	-	-	B	B	B	-	-	-

Table 17: Signalized Intersection Synchro Results - 2026 Existing Conditions

Intersection	Lane	AM Peak				PM Peak			
		LOS	V/C	Delay	Q (95th)	LOS	V/C	Delay	Q (95th)
Hazeldean Rd @ Stittsville Main St	EBL	A	0.10	21.3	13	A	0.15	17.4	12
	EBT/R	A	0.44	34.0	74	A	0.58	44.7	85
	WBL	A	0.57	28.2	82	C	0.77	27.7	186
	WBT/R	A	0.43	24.1	76	A	0.60	23.5	158
	NBL	A	0.18	23.3	13	A	0.39	34.8	33
	NBT	A	0.19	43.7	17	A	0.36	49.8	29
	NBR	C	0.75	19.3	34	C	0.76	14.4	30
	SBL	A	0.60	30.7	64	B	0.69	46.3	60
	SBT	A	0.13	30.9	19	A	0.44	51.7	38
	SBR	A	0.08	0.3	<1	A	0.12	0.8	<1
	Overall	**A**	**0.42**			**A**	**0.59**		
Hazeldean Rd @ Jackson Centre	EBL	A	0.04	1.1	4	A	0.12	5.9	4
	EBT	A	0.08	0.8	9	A	0.16	4.6	10
	WBT/R	A	0.10	0.6	12	A	0.22	11.6	36
	NB	-	-	-	-	-	-	-	-
	SB	A	0.06	29.6	6	A	0.31	21.8	5
	Overall	**A**	**0.09**			**A**	**0.21**		
Hazeldean Rd @ Carp Rd	EBL	C	0.71	39.4	94	C	0.73	51.3	58
	EBT/R	A	0.34	25.4	47	A	0.29	23.7	47
	WBL	A	0.20	45.1	14	A	0.12	35.2	14
	WBT	B	0.68	60.6	62	**E**	**0.97**	**79.2**	**201**
	WBR	A	0.59	10.3	22	A	0.60	10.1	41
	NBL	A	0.13	26.3	16	A	0.47	27.0	30
	NBT/R	A	0.54	46.4	69	B	0.61	49.3	74
	SBL	A	0.58	27.0	63	B	0.63	26.9	73
	SBT	A	0.54	39.2	93	D	0.87	56.9	185
	SBR	A	0.14	0.6	<1	A	0.34	6.7	21
	Overall	**A**	**0.36**			**C**	**0.79**		
Carp Rd @ Stittsville Main St	EBL	A	0.28	26.9	16	A	0.27	20.6	18
	EBT	A	0.23	24.3	22	A	0.21	18.4	27
	EBR	A	0.53	6.6	17	B	0.65	9.0	41
	WBL	C	0.75	43.1	53	C	0.74	33.3	82
	WBT/R	A	0.17	2.7	4	A	0.11	1.8	4
	NBL	B	0.64	16.1	64	**F**	**1.14**	**121.2**	**143**
	NBT/R	B	0.65	21.7	136	**E**	**0.93**	**52.8**	**209**
	SBL	A	0.17	8.7	10	A	0.29	17.6	14
	SBT	A	0.39	19.8	56	**E**	**0.91**	**54.7**	**141**
	SBR	A	0.04	0.1	<1	A	0.10	0.4	<1
	Overall	**B**	**0.63**			**D**	**0.87**		

Table 18: Signalized Intersection Synchro Results - 2031 Background Conditions

Intersection	Lane	AM Peak				PM Peak			
		LOS	V/C	Delay	Q (95th)	LOS	V/C	Delay	Q (95th)
Hazeldean Rd @ Stittsville Main St	EBL	A	0.10	21.4	13	A	0.15	18.0	12
	EBT/R	A	0.46	34.5	78	A	0.60	45.6	87
	WBL	A	0.58	29.6	83	C	0.77	28.0	186
	WBT/R	A	0.44	24.3	77	A	0.60	23.7	163
	NBL	A	0.18	23.3	13	A	0.39	34.8	33
	NBT	A	0.19	43.6	17	A	0.35	49.8	29
	NBR	C	0.76	20.2	36	C	0.76	14.6	31
	SBL	A	0.60	30.7	64	B	0.69	46.0	60
	SBT	A	0.13	30.9	19	A	0.44	51.6	38
	SBR	A	0.08	0.3	<1	A	0.12	0.8	<1
	Overall	**A**	**0.42**			**A**	**0.59**		
Hazeldean Rd @ Jackson Centre	EBL	A	0.04	1.1	3	A	0.12	6.0	16
	EBT	A	0.09	0.8	9	A	0.16	4.6	33
	WBT/R	A	0.10	0.9	12	A	0.23	11.7	88
	NB	-	-	-	-	-	-	-	-
	SB	A	0.06	29.6	5	A	0.31	21.8	16
	Overall	**A**	**0.09**			**A**	**0.22**		
Hazeldean Rd @ Carp Rd	EBL	B	0.61	54.7	78	B	0.64	69.7	40
	EBT/R	A	0.35	26.1	49	A	0.28	19.4	41
	WBL	A	0.19	44.6	13	A	0.10	29.4	12
	WBT	B	0.69	61.0	64	D	0.89	60.5	168
	WBR	A	0.58	10.1	22	A	0.57	8.2	36
	NBL	A	0.14	26.9	17	A	0.51	33.9	36
	NBT/R	A	0.52	43.7	69	A	0.60	49.2	73
	SBL	A	0.55	29.2	28	A	0.55	53.5	58
	SBT/R	A	0.34	26.7	50	C	0.74	41.8	114
	Overall	**A**	**0.42**			**B**	**0.69**		
Carp Rd @ Stittsville Main St	EBL	A	0.28	26.8	16	A	0.27	20.6	18
	EBT	A	0.23	24.3	22	A	0.21	18.5	27
	EBR	A	0.53	6.6	17	B	0.65	8.8	40
	WBL	C	0.75	43.0	53	C	0.74	33.3	82
	WBT/R	A	0.16	2.7	4	A	0.11	1.8	4
	NBL	B	0.63	16.0	64	**F**	**1.13**	116.5	142
	NBT/R	B	0.64	21.5	134	**E**	**0.92**	51.0	207
	SBL	A	0.16	8.7	1	A	0.29	17.4	14
	SBT	A	0.39	19.7	55	**E**	**0.91**	54.1	140
	SBR	A	0.04	0.1	<1	A	0.10	0.4	<1
	Overall	**B**	**0.62**			**D**	**0.86**		

Table 19: Signalized Intersection Synchro Results - 2031 Total Conditions

Intersection	Lane	AM Peak				PM Peak			
		LOS	V/C	Delay	Q (95th)	LOS	V/C	Delay	Q (95th)
Hazeldean Rd @ Stittsville Main St	EBL	A	0.11	21.3	13	A	0.17	17.0	14
	EBT/R	A	0.49	35.1	75	B	0.65	44.4	92
	WBL	A	0.59	28.8	84	C	0.79	30.1	166
	WBT/R	A	0.44	24.2	78	B	0.63	25.5	166
	NBL	A	0.31	25.8	22	A	0.48	37.1	41
	NBT	A	0.19	43.6	17	A	0.35	49.7	29
	NBR	C	0.75	20.1	35	C	0.75	14.1	30
	SBL	A	0.60	31.2	64	B	0.68	45.9	59
	SBT	A	0.14	33.4	20	A	0.45	52.4	37
	SBR	A	0.10	0.4	<1	A	0.14	0.9	<1
	Overall	**A**	**0.43**			**B**	**0.61**		
Hazeldean Rd @ Jackson Centre	EBL	A	0.14	3.7	10	A	0.23	7.7	25
	EBT	A	0.10	3.1	11	A	0.17	5.6	32
	WBT/R	A	0.15	5.5	37	A	0.27	12.9	86
	NB	-	-	-	-	-	-	-	-
	SB	A	0.50	46.9	33	B	0.62	47.2	43
	Overall	**A**	**0.16**			**A**	**0.28**		
Hazeldean Rd @ Carp Rd	EBL	B	0.63	55.6	79	B	0.64	69.5	40
	EBT/R	A	0.37	26.5	53	A	0.28	19.4	43
	WBL	A	0.27	46.5	18	A	0.14	30.1	15
	WBT	C	0.72	31.9	70	D	0.90	61.2	186
	WBR	A	0.58	9.8	22	A	0.57	8.3	37
	NBL	A	0.14	27.1	16	A	0.52	34.7	36
	NBT/R	A	0.55	44.5	70	B	0.62	50.2	74
	SBL	A	0.56	29.3	29	A	0.57	54.2	60
	SBT/R	A	0.34	27.0	50	C	0.74	42.4	112
	Overall	**A**	**0.44**			**B**	**0.70**		
Carp Rd @ Stittsville Main St	EBL	A	0.28	26.8	16	A	0.27	20.6	18
	EBT	A	0.23	24.3	22	A	0.21	18.5	27
	EBR	A	0.52	6.6	17	B	0.66	9.7	44
	WBL	C	0.75	43.0	53	C	0.74	33.3	82
	WBT/R	A	0.16	2.7	4	A	0.11	1.8	4
	NBL	B	0.67	17.8	73	**F**	**1.19**	141.5	150
	NBT/R	B	0.69	23.2	150	**E**	**0.97**	59.1	220
	SBL	A	0.17	8.9	10	A	0.30	17.6	14
	SBT	A	0.44	20.6	62	**E**	**0.97**	65.0	153
	SBR	A	0.04	0.1	<1	A	0.10	0.4	<1
	Overall	**B**	**0.66**			**D**	**0.89**		

Intersection MMLOS

The Intersection Pedestrian (PLOS), Bicycle (BLOS), and Transit (TLOS) MMLOS was determined utilizing the City of Ottawa's *Multi-Modal Level of Service Guidelines* for all of the Study Area signalized intersections. The results are displayed in Table 20 and the workbooks are presented in **Appendix G**.

The results suggest that **improving bicycling facilities at the Study Area intersections is the highest priority**. Improvement measures include implementing cyclist left turn treatments (bike boxes), implementing facilities that span through intersections, etc.

Table 20: Intersection MMLOS Results

MMLOS	Hazeldean Road at Carp Road	Hazeldean Road at Jackson Trails Centre	Hazeldean Road at Stittsville Main Street	Stittsville Main Street at Carp Road	Analysis
PLOS	C	B	C	C	Exhibit 7, 9, 12, 13, 14
BLOS	F	C	F	F	Exhibit 22, 23, 24, 26, 28
TLOS	E	E	E	E	Exhibit 33, 34

Module 3.7 - Transportation Demand Management

Element 3.7.1 - Context for TDM

The new development is located along a four-lane arterial road (Hazeldean) with pedestrian sidewalks and cycling lanes along both sides of the route. Transit is provided near the site with connections to several Transitway stations. There are no residential or recreational areas positioned along Hazeldean Road in close proximity to the site, where the generated trips would have a negative impact if the volumes were higher than forecasted.

Element 3.7.2 - Need and Opportunity

The site provides appropriate parking for vehicles and cyclists which exceed City By-law requirements. Automobiles are the primary mode of travel which is accounted for in the site generated trip modal share. No negative impacts are expected if there is a failure to meet the proposed sustainable mode share targets.

Element 3.7.3 - TDM Program

Transportation Demand Management (TDM) measures could be used to encourage sustainable modes of transportation for the proposed retail development. TDM measures that could reduce the number of automobile trips would be encouraging transit and cycling for patrons visiting the proposed retail development. The previous *6111 Hazeldean Road Transportation Impact Assessment Strategy Report* recommended providing information in the form of transit schedules/routes, and maps showing designated bike routes. This would also be ideal for the new proposed development.

The Study used the TDM Measures Checklist for a Non-Residential Development which examines the implementation of measures that support sustainable modes of transportation. The following provides

the checklist which was examined along with the Site Plan and transportation network components for the proposed development.

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	☒ Local walking/cycling routes can be displayed on an information board at retail 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	☒ Transit schedules and route maps can be displayed on an information board at the retail 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	☐

Module 3.8 - Neighbourhood Traffic Management

This module is not required for this study as per the Scoping Document.

Module 3.9 - Transit

Element 3.9.1 - Route Capacity

Six transit routes service the area, with Route 61 and 163 providing service throughout the day, seven days a week. Several bus stops exist along Hazeldean Road, many of which are just a few hundred metres from the proposed development.

Due to the low number of transit person trips generated from the proposed development, it is not expected that there is a need for additional capacity.

Element 3.9.2 - Transit Priority

No Transit Priority Measures were identified in the City of Ottawa's Transportation Master Plan (2025) for Hazeldean/Carp Road or Stittsville Main Street.

Module 3.10 - Review of Network Concept

This module is not required for this study as per the Scoping Document.

Module 3.11 - Intersection Design

Element 3.11.1 - Intersection Control

No new intersections are required to facilitate access to the proposed development. The study examined the following intersections:

- Hazeldean Road @ Carp Road (signalized)
- Hazeldean Road @ 6111 Hazeldean Access (stop-controlled)
- Hazeldean Road @ Jackson Trails Centre (signalized)
- Hazeldean Road @ Stittsville Main Street (signalized)
- Stittsville Main Street @ Carp Road (signalized)

No changes to intersection control are required.

Element 3.11.2 - Intersection Design

MMLOS for Study Area Intersections

The intersection MMLOS was determined utilizing the City of Ottawa's *Multi-Modal Level of Service Guidelines* for all the Study Area signalized intersections. The MMLOS results are presented in Table 21 followed by a discussion regarding the level of service for each intersection. The LOS values highlighted in red represent areas that could benefit from improvement.

Table 21: Intersection MMLOS

MMLOS	Hazeldean Road at Carp Road	Hazeldean Road at Jackson Trails Centre	Hazeldean Road at Stittsville Main Street	Stittsville Main Street at Carp Road
PLOS	C	B	C	C
PLOS Target	C			
BLOS	F	C	F	F
BLOS Target	C			
TLOS	E	E	E	E
TLOS Target	D			

Hazeldean Road at Carp Road

The Hazeldean Road/ Carp Road intersection is located approximately 500 metres west of the proposed development. The PLOS target was met, however, the BLOS and TLOS scores are under the target values.

The BLOS target was not met due to the lack of left turn treatment, the number of lanes crossed by cyclists, and the ADT. The TLOS target is not met due to a lack of transit priority measures.

The vehicle level of service for all scenarios is acceptable. For the existing conditions the intersection operates at LOS A during the AM peak, and LOS C during the PM peak. The background and future conditions scenarios are expected to both operate at LOS A during the AM peak, and LOS B during the PM peak. The improvement in LOS grade is contributed to changes with the intersection that are expected to occur between now and 2031. Overall, it is expected that the intersection will operate effectively.

Hazeldean Road at 6111 Hazeldean Access

The existing site access is a stop-controlled “T” intersection with right-in/right-out movements only.

The vehicle level of service for all scenarios is acceptable. The intersection operates at LOS B during the AM and PM peak across all the scenarios. Overall, it is expected that the intersection will operate effectively.

Hazeldean Road at Jackson Trails Centre

This signalized intersection is located to the east of the proposed development and will act as an additional point of access.

The intersection operates at LOS A during the AM and PM peak across all the scenarios for automobiles. The BLOS meets the target of LOS C. The PLOS target was met, however, the TLOS score is under the target value. TLOS target is not met due to a lack of transit priority measures.

Hazeldean Road at Stittsville Main Street

The Hazeldean Road/ Stittsville Main Street intersection is located east of the proposed development.

The intersection is expected to operate at a vehicle LOS A across all scenarios, except for the 2031 scenario with the added development traffic. In this scenario it is projected to operate at LOS B for vehicles.

The PLOS target was met, however, the BLOS and TLOS targets were not. The BLOS target was not met due to the lack of left turn treatment, the number of lanes crossed by cyclists, and the ADT. The TLOS target is not met due to a lack of transit priority measures.

Stittsville Main Street at Carp Road

The intersection of Carp Road and Stittsville Main Street is located south of the proposed development.

It is projected to operate at a vehicle LOS of B during the AM peak, and LOS D during the PM peak for all the analysis scenarios.

The PLOS target was met, however, the BLOS and TLOS targets were not. The BLOS target was not met due to the lack of left turn treatment, the number of lanes crossed by cyclists, and the ADT. The TLOS target is not met due to a lack of transit priority measures.

Summary

A commercial development is proposed at 6111 Hazeldean Road, north of Hazeldean Road, as Phase 2 of an existing commercial site containing a car wash, auto maintenance shop, coffee shop, and retail buildings. Phase 2 will add nine commercial units within a strip-mall-style building, using the existing Hazeldean Road access with no new accesses required.

The Study examined the modes of transportation along the Hazeldean Road segment between Stittsville Main Street and Carp Road and analyzed the Level of Service (LOS) of the following intersections:

— Hazeldean Road @ Carp Road (signalized)

— Hazeldean Road @ 6111 Hazeldean Access (stop-controlled)

— Hazeldean Road @ Jackson Trails Centre (signalized)

— Hazeldean Road @ Stittsville Main Street (signalized)

— Stittsville Main Street @ Carp Road (signalized)

The results of the study indicate the following:

1. The new development will generate 140 vehicle trips arriving and 110 vehicle trips departing during the AM peak, and 103 vehicle trips arriving and 103 vehicle trips departing during the PM peak. These trips were divided into primary and pass-by trips.
2. The site will provide 62 parking spaces for customers including 4 barrier free spaces. The number of parking spaces meets the requirements of the City.
3. The Site Plan provides 5 bike storage spaces, which meets the requirements of the City.
4. The MMLOS analysis of the Hazeldean Road street segment revealed that the bicycle (BLOS) level of service target is not met due to the existing infrastructure and posted speed. The street segment received a BLOS D (target BLOS C)
5. The MMLOS analysis of the intersections revealed that all intersections will operate at an acceptable level of service for automobiles, however, the BLOS (bicycle) and TLOS (transit) targets are not met for a variety of the intersections.

Appendix A
Screening Form

ENGLOBE

City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	6111 Hazeldean Road Ottawa
Description of Location	Vacant Grass Field
Land Use Classification	AM9 (1699)H9
Development Size (units)	
Development Size (m^2)	1,225
Number of Accesses and Locations	1
Phase of Development	Phase 2
Buildout Year	2026

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

2. Trip Generation 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
Single-family homes	40 units
Townhomes or apartments	90 units
Office	3,500 m^2
Industrial	5,000 m^2
Fast-food restaurant or coffee shop	100 m^2
Destination retail	1,000 m^2
Gas station or convenience market	75 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.*

If the proposed development size is greater than the sizes identified 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 Spine Bicycle Networks?		X
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?*	X	

**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).*

If any of the above questions were answered with 'Yes,' the Location Trigger is satisfied.

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 km/hr or greater?		X
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?		X
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)?		X
Is the proposed driveway within auxiliary lanes of an intersection?		X
Does the proposed driveway make use of an existing median break that serves an existing site?		X
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		X
Does the development include a drive-thru facility?		X

If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.

5. Summary

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

If none of the triggers are satisfied, the TIA Study is complete. If one or more of the triggers is satisfied, the TIA Study must continue into the next stage (Screening and Scoping).

Appendix B
Site Plan

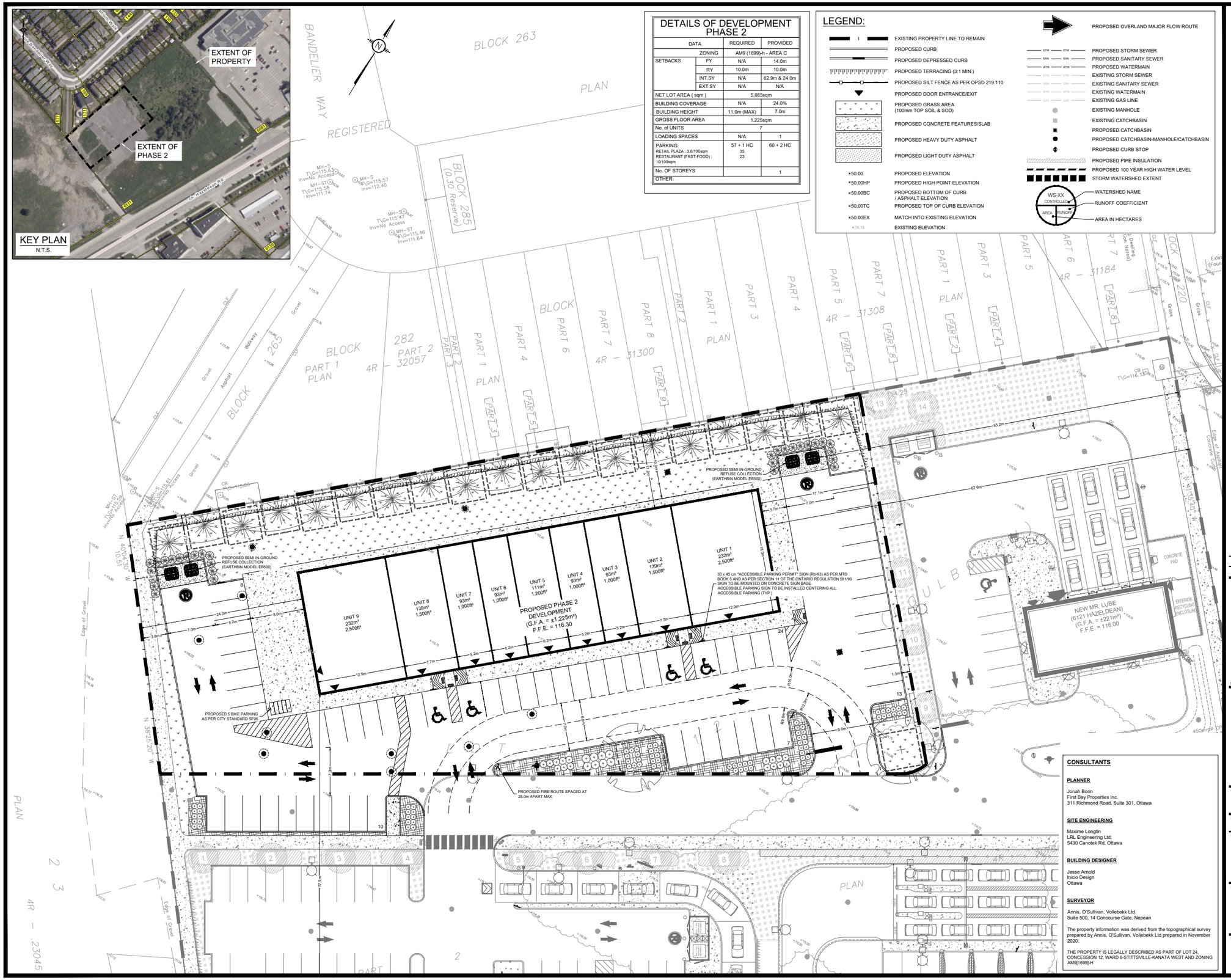
ENGLOBE

DETAILS OF DEVELOPMENT PHASE 2

DATA		REQUIRED	PROVIDED
ZONING		AM9 (1699)-h - AREA C	
SETBACKS	FY	N/A	14.0m
	RY	10.0m	10.0m
	INT.SY	N/A	62.9m & 24.0m
	EXT.SY	N/A	N/A
NET LOT AREA (sqm)		5,085sqm	
BUILDING COVERAGE		N/A	24.0%
BUILDING HEIGHT		11.0m (MAX)	7.0m
GROSS FLOOR AREA		1,225sqm	
No. of UNITS		7	
LOADING SPACES		N/A	1
PARKING: RETAIL PLAZA : 3.6/100sqm RESTAURANT (FAST-FOOD) : 10/100sqm		57 + 1 HC 35 23	60 + 2 HC
No. OF STOREYS			1
OTHER:			

LEGEND:

- EXISTING PROPERTY LINE TO REMAIN
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- PROPOSED TERRACING (3:1 MIN.)
- PROPOSED SILT FENCE AS PER OPSD 219.110
- PROPOSED DOOR ENTRANCE/EXIT
- PROPOSED GRASS AREA (100mm TOP SOIL & SOD)
- PROPOSED CONCRETE FEATURES/SLAB
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED LIGHT DUTY ASPHALT
- ×50.00 PROPOSED ELEVATION
- ×50.00HP PROPOSED HIGH POINT ELEVATION
- ×50.00BC PROPOSED BOTTOM OF CURB / ASPHALT ELEVATION
- ×50.00TC PROPOSED TOP OF CURB ELEVATION
- ×50.00EX MATCH INTO EXISTING ELEVATION
- ×70.19 EXISTING ELEVATION
- PROPOSED OVERLAND MAJOR FLOW ROUTE
- STM STM PROPOSED STORM SEWER
- SAN SAN PROPOSED SANITARY SEWER
- WTR WTR PROPOSED WATERMAIN
- STM STM EXISTING STORM SEWER
- SAN SAN EXISTING SANITARY SEWER
- WTR WTR EXISTING WATERMAIN
- GAS GAS EXISTING GAS LINE
- EXISTING MANHOLE
- EXISTING CATCHBASIN
- PROPOSED CATCHBASIN
- PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
- PROPOSED CURB STOP
- PROPOSED PIPE INSULATION
- PROPOSED 100 YEAR HIGH WATER LEVEL
- STORM WATERSHED EXTENT
- WS-XX CONTROLLER — WATERSHED NAME
- AREA — RUNOFF — RUNOFF COEFFICIENT
- AREA IN HECTARES



SCALE: 1:250

USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OR OTHER ELECTRONIC MEDIA AND COPIES THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS "ISSUED FOR CONSTRUCTION", THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATES THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO DO THE WORK, OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT OF THE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK, AND THE BID PRICE. NO CLAIMS FOR EXTRA CHARGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

UNAUTHORIZED CHANGES:

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRL FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

IN ADDITION, THE CLIENT AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROPRIATE LANGUAGE THAT PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO LRL'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRL AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LRL AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

GENERAL NOTES:

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABLE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

CONSULTANTS

PLANNER

Jonah Bonn
First Bay Properties Inc.
311 Richmond Road, Suite 301, Ottawa

SITE ENGINEERING

Maxime Longtin
LRL Engineering Ltd.
5430 Canotek Rd, Ottawa

BUILDING DESIGNER

Jesse Arnold
Inicio Design
Ottawa

SURVEYOR

Annis, O'Sullivan, Vollebekk Ltd.
Suite 500, 14 Concourse Gate, Nepean

The property information was derived from the topographical survey prepared by Annis, O'Sullivan, Vollebekk Ltd prepared in November 2020.

THE PROPERTY IS LEGALLY DESCRIBED AS PART OF LOT 24, CONCESSION 12, WARD 6-STITTSVILLE-KANATA WEST AND ZONING AM9[1699]-H

No.	REVISIONS	BY	DATE
01	ISSUED FOR APPROVAL	M.L.	08 SEP 2025

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road I Ottawa, ON, K1J 9G2
www.lrl.ca I (613) 842-3434

CLIENT

GRANT CASTLE CORP.

DESIGNED BY:	DRAWN BY:	APPROVED BY:
S.V. / M.L.	S.V. / M.L.	M.B.

PROJECT

PROPOSED DEVELOPMENT - PHASE 2
6111 HAZELDEAN RD
STITTSVILLE, ON

DRAWING TITLE

SITE DEVELOPMENT PLAN

PROJECT NO.

250030

C201

Appendix C
Traffic Data

ENGLOBE

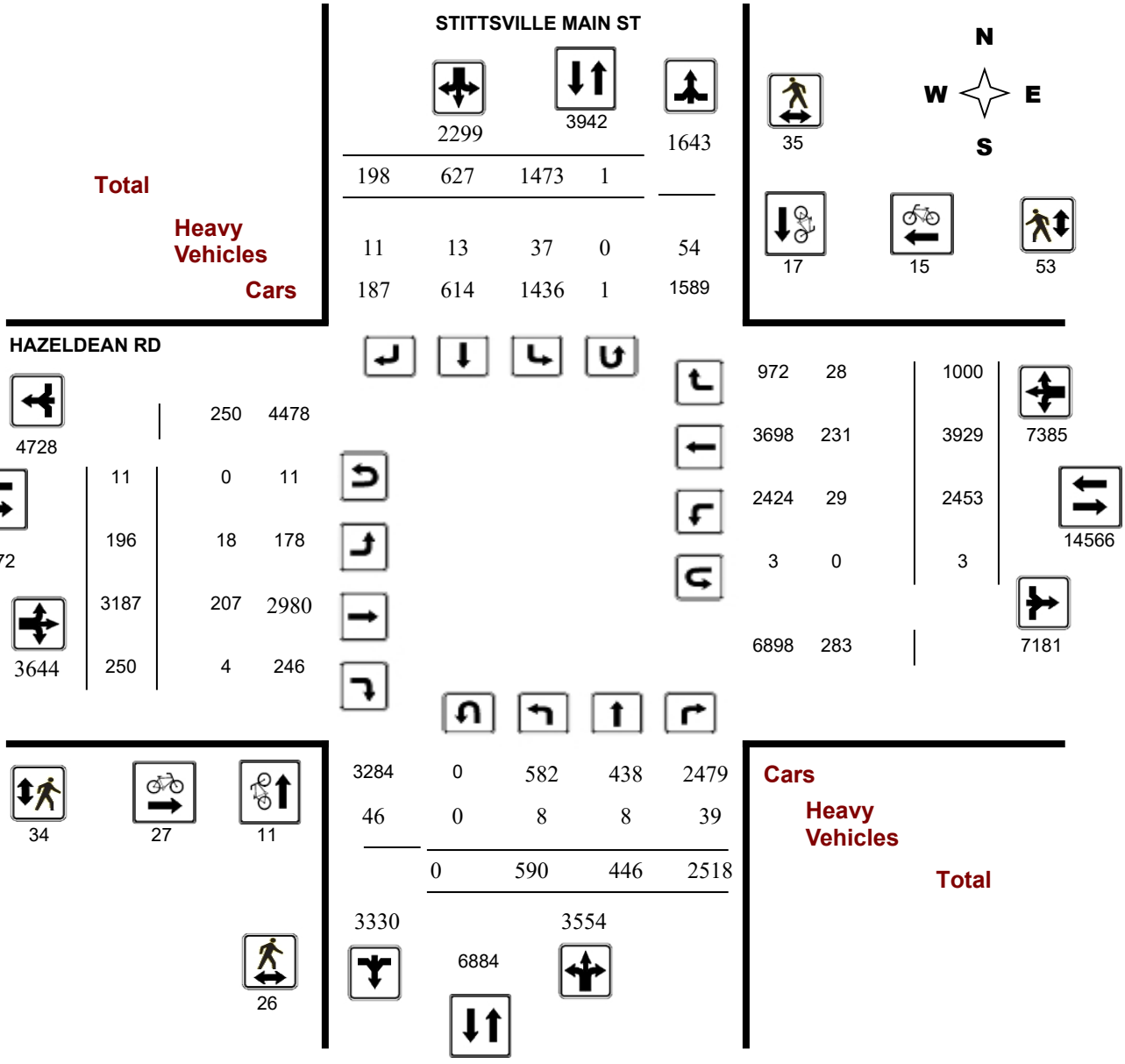
Transportation Services - Traffic Services

Turning Movement Count - Study Results

STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, October 22, 2024
Start Time: 07:00
WO No: 42176
Device: Miovision

Full Study Diagram



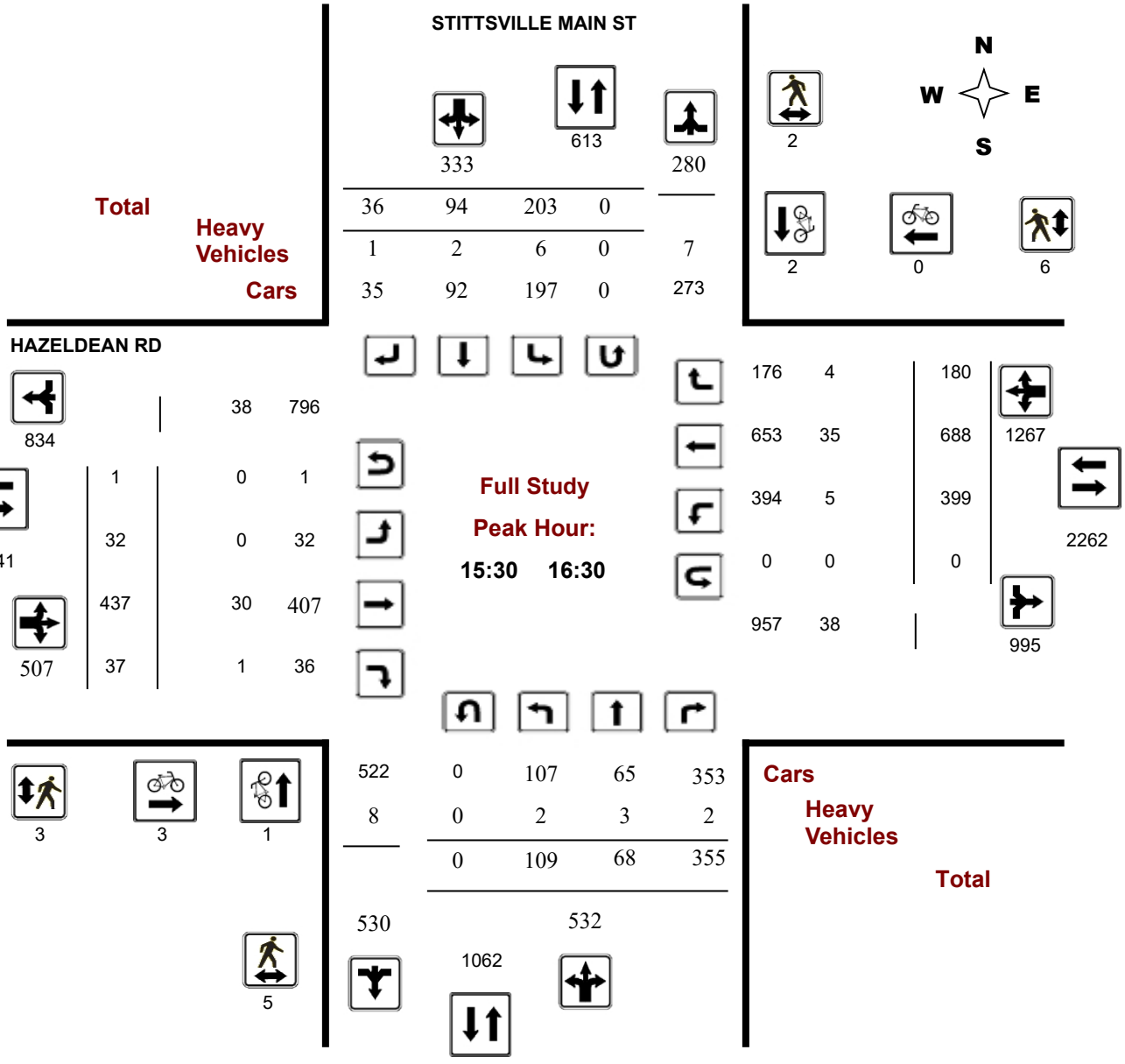
Transportation Services - Traffic Services

Turning Movement Count - Study Results

STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, October 22, 2024
Start Time: 07:00
WO No: 42176
Device: Miovision

Full Study Peak Hour Diagram



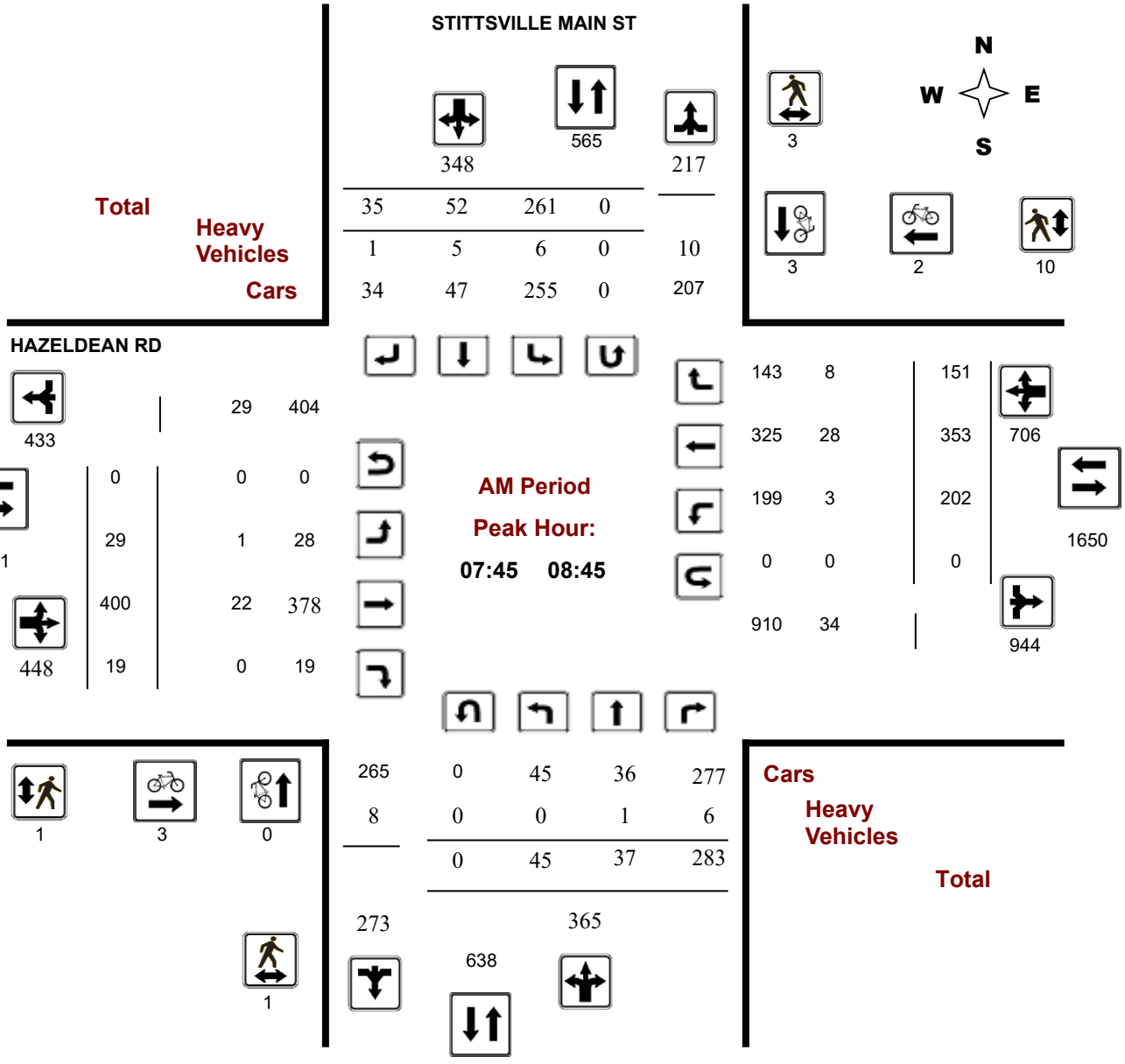
Transportation Services - Traffic Services

Turning Movement Count - Study Results

STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, October 22, 2024
Start Time: 07:00
WO No: 42176
Device: Miovision

AM Period Peak Hour Diagram



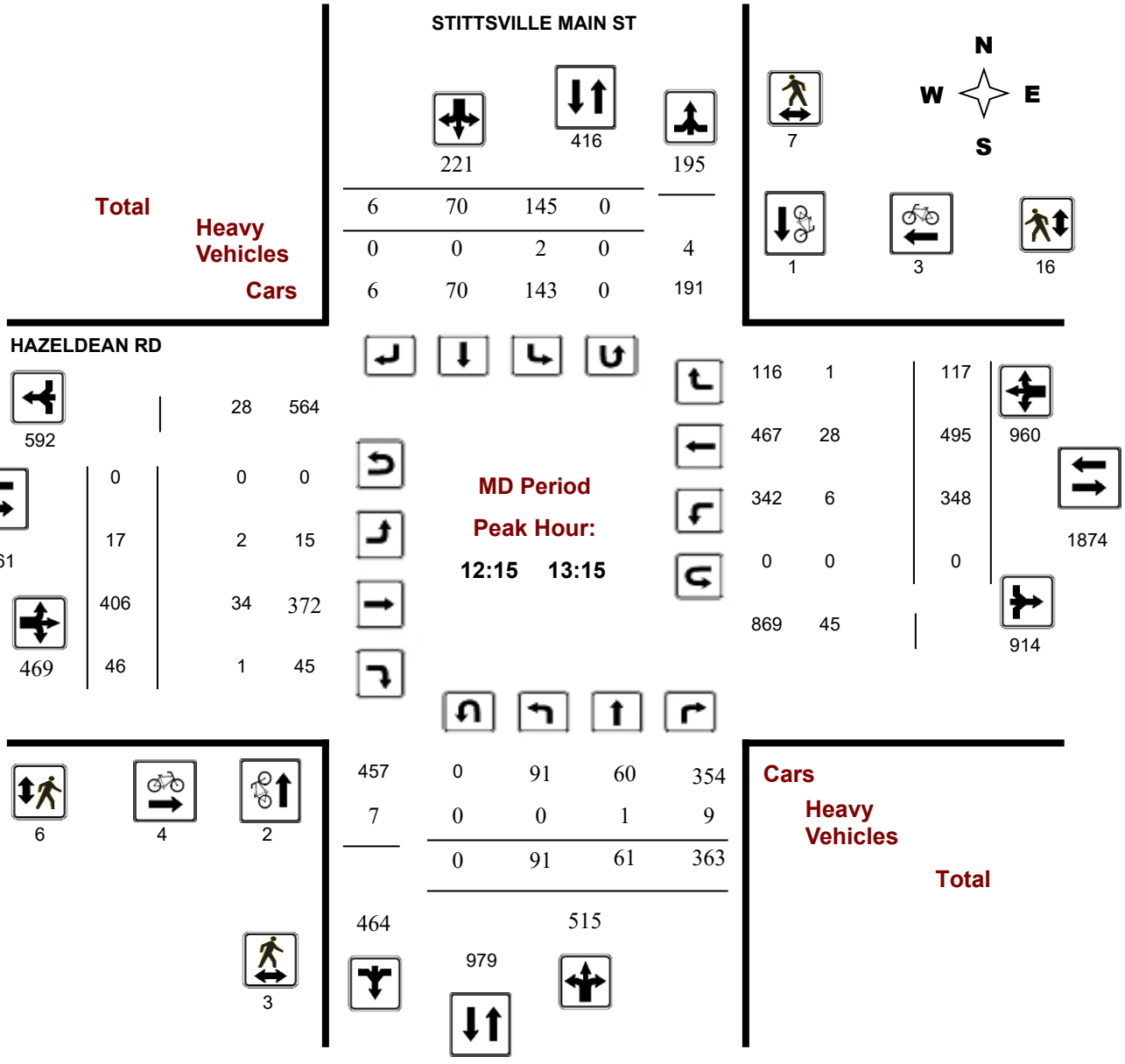
Transportation Services - Traffic Services

Turning Movement Count - Study Results

STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, October 22, 2024
Start Time: 07:00
WO No: 42176
Device: Miovision

MD Period Peak Hour Diagram



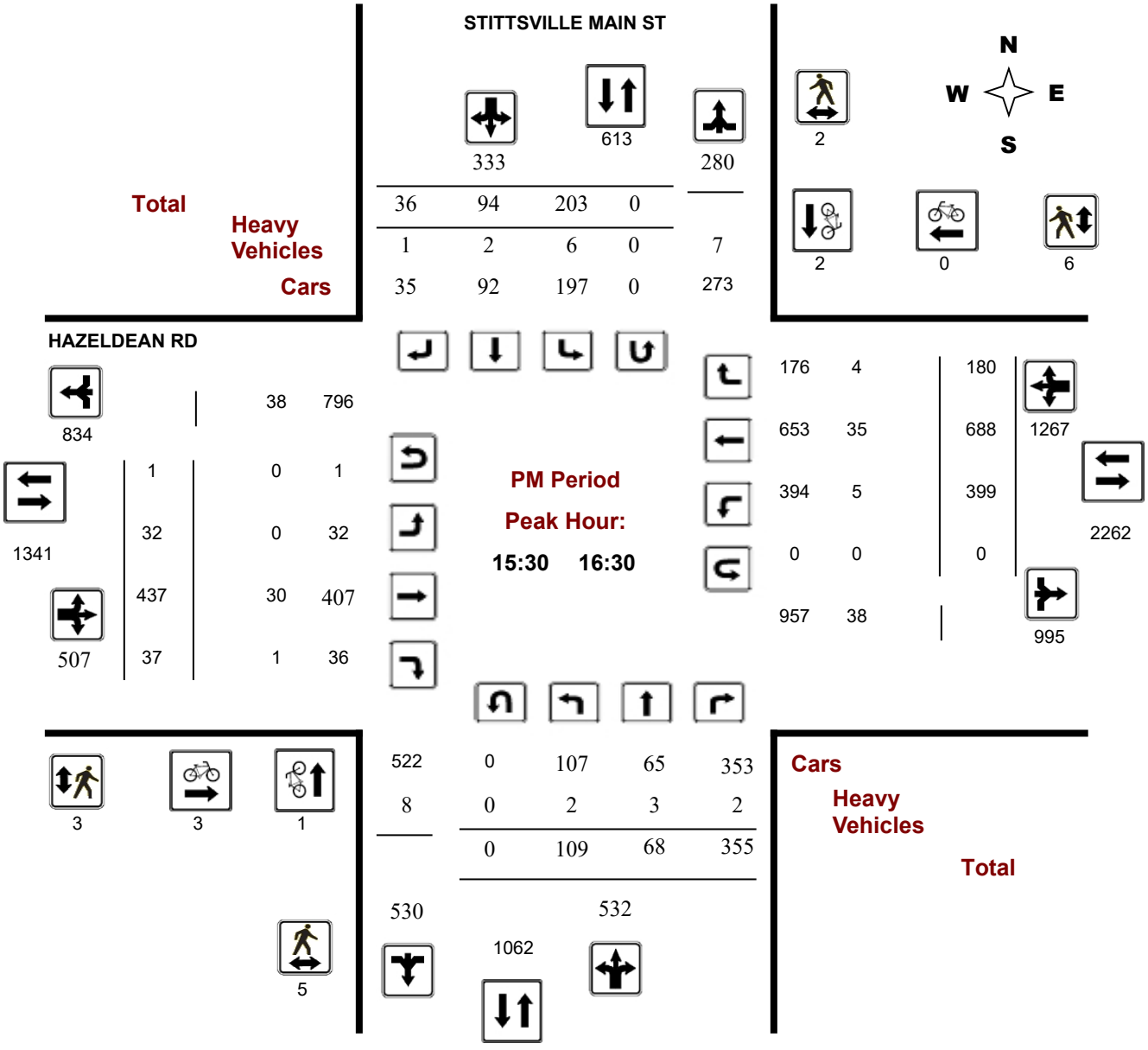
Transportation Services - Traffic Services

Turning Movement Count - Study Results

STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, October 22, 2024
Start Time: 07:00
WO No: 42176
Device: Miovision

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, October 22, 2024 **WO No:** 42176

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

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, October 22, 2024

Total Observed U-Turns

Northbound: 0 Southbound: 1

Eastbound: 11 Westbound: 3

AADT Factor

.90

	STITTSVILLE MAIN ST									HAZELDEAN 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	41	25	195	**261**	220	48	19	**287**	**548**	18	377	14	**409**	130	256	57	**443**	**852**	**1400**
08:00 09:00	50	43	275	**368**	225	63	34	**322**	**690**	24	353	24	**401**	217	363	144	**724**	**1125**	**1815**
09:00 10:00	61	44	305	**410**	146	69	19	**234**	**644**	22	314	22	**358**	256	383	54	**693**	**1051**	**1695**
11:30 12:30	83	47	341	**471**	143	64	15	**222**	**693**	22	414	36	**472**	341	537	108	**986**	**1458**	**2151**
12:30 13:30	91	63	378	**532**	152	84	9	**245**	**777**	16	381	41	**438**	349	481	110	**940**	**1378**	**2155**
15:00 16:00	83	59	353	**495**	210	103	42	**355**	**850**	30	433	39	**502**	413	657	175	**1245**	**1747**	**2597**
16:00 17:00	94	80	346	**520**	200	105	23	**328**	**848**	35	445	40	**520**	396	670	183	**1249**	**1769**	**2617**
17:00 18:00	87	85	325	**497**	177	91	37	**305**	**802**	29	470	34	**533**	351	582	169	**1102**	**1635**	**2437**
Sub Total	590	446	2518	**3554**	1473	627	198	**2298**	**5852**	196	3187	250	**3633**	2453	3929	1000	**7382**	**11015**	**16867**
U Turns				**0**				**1**	**1**				**11**				**3**	**14**	**15**
Total	590	446	2518	**3554**	1473	627	198	**2299**	**5853**	196	3187	250	**3644**	2453	3929	1000	**7385**	**11029**	**16882**
EQ 12Hr	820	620	3500	**4940**	2047	872	275	**3196**	**8136**	272	4430	348	**5065**	3410	5461	1390	**10265**	**15330**	**23466**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	738	558	3150	**4446**	1842	1028	324	**2876**	**7322**	245	3987	313	**4558**	3069	4915	1251	**9238**	**13797**	**21119**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**.90**					
AVG 24Hr	967	731	4126	**5824**	2413	1347	424	**3768**	**9592**	321	5223	410	**5971**	4020	6439	1639	**12102**	**18074**	**27666**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, October 22, 2024 **WO No:** 42176

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

Full Study 15 Minute Increments

		STITTSVILLE MAIN ST									HAZELDEAN RD									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	8	7	37	52	31	11	6	48	100	5	80	4	92	27	45	7	79	171	271
07:15	07:30	11	5	38	54	41	9	2	52	106	3	93	2	98	22	68	15	105	203	309
07:30	07:45	10	5	42	57	66	17	2	85	142	4	82	4	90	32	67	12	111	201	343
07:45	08:00	12	8	78	98	82	11	9	102	200	6	122	4	132	49	76	23	148	280	480
08:00	08:15	7	10	68	85	50	12	3	65	150	11	89	6	106	40	91	39	170	276	426
08:15	08:30	12	14	58	84	47	6	3	56	140	10	90	5	105	61	89	45	195	300	440
08:30	08:45	14	5	79	98	82	23	20	125	223	2	99	4	105	52	97	44	193	298	521
08:45	09:00	17	14	70	101	46	22	8	76	177	1	75	9	85	64	86	16	166	251	428
11:30	11:45	18	12	82	112	35	16	4	55	167	3	101	6	110	91	129	24	244	354	521
13:00	13:15	27	9	91	127	37	17	0	54	181	2	95	7	104	94	127	28	249	353	534
15:15	15:30	16	12	82	110	59	34	10	103	213	4	111	11	126	101	167	37	305	431	644
17:15	17:30	22	25	71	118	44	19	9	72	190	10	129	7	146	99	159	42	300	446	636
17:30	17:45	23	22	87	132	32	30	10	72	204	5	111	10	127	86	134	39	259	386	590
17:45	18:00	17	13	98	128	59	22	9	90	218	8	98	7	113	72	132	46	251	364	582
17:00	17:15	25	25	69	119	42	20	9	71	190	6	132	10	149	94	157	42	293	442	632
11:45	12:00	27	10	83	120	34	25	3	62	182	6	102	8	117	87	144	24	256	373	555
09:00	09:15	16	7	81	104	42	17	5	64	168	7	81	6	94	52	81	13	146	240	408
09:15	09:30	15	11	68	94	31	13	7	51	145	6	66	6	80	69	81	16	167	247	392
09:30	09:45	25	13	73	111	40	17	4	61	172	1	80	4	85	58	103	9	170	255	427
09:45	10:00	5	13	83	101	33	22	3	58	159	8	87	6	101	77	118	16	211	312	471
12:00	12:15	18	12	81	111	42	13	6	61	172	4	101	8	113	76	122	22	220	333	505
12:15	12:30	20	13	95	128	32	10	2	44	172	9	110	14	133	87	142	38	267	400	572
12:30	12:45	22	20	92	134	36	23	1	60	194	3	101	15	119	76	118	23	217	336	530
12:45	13:00	22	19	85	126	40	20	3	63	189	3	100	10	113	91	108	28	227	340	529
13:15	13:30	20	15	110	145	39	24	5	68	213	8	85	9	102	88	128	31	247	349	562
15:00	15:15	14	19	89	122	53	23	8	85	207	12	115	10	137	106	157	44	307	444	651
15:30	15:45	28	17	86	131	54	18	14	86	217	4	92	9	105	100	158	41	299	404	621
15:45	16:00	25	11	96	132	44	28	10	82	214	10	115	9	135	106	175	53	334	469	683
16:00	16:15	29	16	95	140	53	22	7	82	222	11	104	9	124	88	188	42	318	442	664
16:15	16:30	27	24	78	129	52	26	5	83	212	7	126	10	143	105	167	44	316	459	671
16:30	16:45	23	16	89	128	49	24	5	78	206	4	101	6	111	87	157	52	296	407	613
16:45	17:00	15	24	84	123	46	33	6	85	208	13	114	15	144	116	158	45	319	463	671
Total:		590	446	2518	3554	1473	627	198	2299	5853	196	3187	250	3644	2453	3929	1000	7385	11029	16,882

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, October 22, 2024 **WO No:** 42176

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

Full Study Cyclist Volume

Time Period		STITTSVILLE MAIN ST			HAZELDEAN RD			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	0	0	1	0	1	1
07:15	07:30	0	2	2	0	0	0	2
07:30	07:45	0	0	0	0	0	0	0
07:45	08:00	0	0	0	0	1	1	1
08:00	08:15	0	0	0	2	0	2	2
08:15	08:30	0	2	2	0	1	1	3
08:30	08:45	0	1	1	1	0	1	2
08:45	09:00	1	0	1	1	1	2	3
11:30	11:45	1	0	1	0	0	0	1
13:00	13:15	1	1	2	0	1	1	3
15:15	15:30	0	0	0	1	1	2	2
17:15	17:30	0	1	1	2	1	3	4
17:30	17:45	1	1	2	1	0	1	3
17:45	18:00	0	1	1	1	1	2	3
17:00	17:15	1	2	3	1	1	2	5
11:45	12:00	0	0	0	0	1	1	1
09:00	09:15	0	1	1	1	0	1	2
09:15	09:30	0	1	1	3	0	3	4
09:30	09:45	0	0	0	0	1	1	1
09:45	10:00	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	1	1	1
12:15	12:30	0	0	0	0	1	1	1
12:30	12:45	1	0	1	3	0	3	4
12:45	13:00	0	0	0	1	1	2	2
13:15	13:30	1	0	1	0	0	0	1
15:00	15:15	1	0	1	0	1	1	2
15:30	15:45	0	0	0	1	0	1	1
15:45	16:00	0	2	2	0	0	0	2
16:00	16:15	1	0	1	2	0	2	3
16:15	16:30	0	0	0	0	0	0	0
16:30	16:45	0	1	1	3	1	4	5
16:45	17:00	2	1	3	2	0	2	5
Total		11	17	**28**	27	15	42	70

Transportation Services - Traffic Services

Turning Movement Count - Study Results

STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, October 22, 2024 **WO No:** 42176

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

Full Study Pedestrian Volume

	STITTSVILLE MAIN ST			HAZELDEAN RD			
Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	**Total**	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	**Total**	**Grand Total**
07:00 07:15	1	1	**2**	1	1	**2**	**4**
07:15 07:30	0	1	**1**	0	2	**2**	**3**
07:30 07:45	0	2	**2**	1	1	**2**	**4**
07:45 08:00	0	1	**1**	0	4	**4**	**5**
08:00 08:15	1	1	**2**	1	2	**3**	**5**
08:15 08:30	0	1	**1**	0	3	**3**	**4**
08:30 08:45	0	0	**0**	0	1	**1**	**1**
08:45 09:00	0	2	**2**	2	1	**3**	**5**
11:30 11:45	0	0	**0**	1	0	**1**	**1**
13:00 13:15	0	5	**5**	0	5	**5**	**10**
15:15 15:30	1	0	**1**	4	0	**4**	**5**
17:15 17:30	2	0	**2**	5	0	**5**	**7**
17:30 17:45	1	1	**2**	0	2	**2**	**4**
17:45 18:00	2	3	**5**	1	5	**6**	**11**
17:00 17:15	0	0	**0**	0	2	**2**	**2**
11:45 12:00	0	1	**1**	1	0	**1**	**2**
09:00 09:15	3	2	**5**	0	1	**1**	**6**
09:15 09:30	0	1	**1**	1	0	**1**	**2**
09:30 09:45	0	2	**2**	0	2	**2**	**4**
09:45 10:00	0	1	**1**	1	0	**1**	**2**
12:00 12:15	0	2	**2**	1	2	**3**	**5**
12:15 12:30	2	0	**2**	0	8	**8**	**10**
12:30 12:45	1	2	**3**	6	2	**8**	**11**
12:45 13:00	0	0	**0**	0	1	**1**	**1**
13:15 13:30	5	0	**5**	3	0	**3**	**8**
15:00 15:15	0	1	**1**	0	0	**0**	**1**
15:30 15:45	0	0	**0**	0	1	**1**	**1**
15:45 16:00	0	0	**0**	0	3	**3**	**3**
16:00 16:15	4	0	**4**	1	0	**1**	**5**
16:15 16:30	1	2	**3**	2	2	**4**	**7**
16:30 16:45	2	2	**4**	1	2	**3**	**7**
16:45 17:00	0	1	**1**	1	0	**1**	**2**
Total	26	35	**61**	34	53	**87**	**148**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, October 22, 2024 **WO No:** 42176

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

Full Study Heavy Vehicles

		STITTSVILLE MAIN ST									HAZELDEAN RD									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
07:00	07:15	0	0	1	**1**	0	1	0	**1**	**2**	2	11	0	**13**	2	2	0	**4**	**17**	**19**
07:15	07:30	0	0	0	**0**	0	2	0	**2**	**2**	2	8	0	**10**	3	7	2	**12**	**22**	**24**
07:30	07:45	0	0	0	**0**	6	0	0	**6**	**6**	0	5	0	**5**	1	5	1	**7**	**12**	**18**
07:45	08:00	0	0	2	**2**	1	1	0	**2**	**4**	0	1	0	**1**	0	3	1	**4**	**5**	**9**
08:00	08:15	0	1	0	**1**	0	1	0	**1**	**2**	0	7	0	**7**	1	8	0	**9**	**16**	**18**
08:15	08:30	0	0	2	**2**	2	0	1	**3**	**5**	0	9	0	**9**	1	8	1	**10**	**19**	**24**
08:30	08:45	0	0	2	**2**	3	3	0	**6**	**8**	1	5	0	**6**	1	9	6	**16**	**22**	**30**
08:45	09:00	1	0	1	**2**	2	0	1	**3**	**5**	0	6	1	**7**	2	10	0	**12**	**19**	**24**
11:30	11:45	1	0	2	**3**	1	1	2	**4**	**7**	0	11	0	**11**	0	7	1	**8**	**19**	**26**
13:00	13:15	0	0	4	**4**	0	0	0	**0**	**4**	0	7	0	**7**	2	8	0	**10**	**17**	**21**
15:15	15:30	1	0	0	**1**	5	0	1	**6**	**7**	1	9	0	**10**	1	8	3	**12**	**22**	**29**
17:15	17:30	0	0	1	**1**	0	0	0	**0**	**1**	0	1	0	**1**	0	5	0	**5**	**6**	**7**
17:30	17:45	0	0	2	**2**	1	0	0	**1**	**3**	0	1	0	**1**	0	3	0	**3**	**4**	**7**
17:45	18:00	0	0	1	**1**	0	0	0	**0**	**1**	1	0	0	**1**	1	3	0	**4**	**5**	**6**
17:00	17:15	0	1	1	**2**	0	0	1	**1**	**3**	0	2	0	**2**	0	4	0	**4**	**6**	**9**
11:45	12:00	0	0	0	**0**	1	0	0	**1**	**1**	1	7	0	**8**	0	10	0	**10**	**18**	**19**
09:00	09:15	1	0	1	**2**	0	1	2	**3**	**5**	0	11	0	**11**	0	12	0	**12**	**23**	**28**
09:15	09:30	1	0	1	**2**	1	0	0	**1**	**3**	0	6	0	**6**	1	8	0	**9**	**15**	**18**
09:30	09:45	0	0	3	**3**	0	0	0	**0**	**3**	0	8	0	**8**	1	10	0	**11**	**19**	**22**
09:45	10:00	0	0	0	**0**	0	0	0	**0**	**0**	1	5	1	**7**	0	13	0	**13**	**20**	**20**
12:00	12:15	0	0	4	**4**	1	0	0	**1**	**5**	1	7	0	**8**	0	5	3	**8**	**16**	**21**
12:15	12:30	0	0	2	**2**	1	0	0	**1**	**3**	1	8	0	**9**	3	8	1	**12**	**21**	**24**
12:30	12:45	0	0	1	**1**	0	0	0	**0**	**1**	1	10	1	**12**	0	8	0	**8**	**20**	**21**
12:45	13:00	0	1	2	**3**	1	0	0	**1**	**4**	0	9	0	**9**	1	4	0	**5**	**14**	**18**
13:15	13:30	0	0	0	**0**	3	0	0	**3**	**3**	1	6	0	**7**	1	4	1	**6**	**13**	**16**
15:00	15:15	0	1	3	**4**	2	1	0	**3**	**7**	5	7	0	**12**	1	11	4	**16**	**28**	**35**
15:30	15:45	1	1	0	**2**	2	1	0	**3**	**5**	0	15	0	**15**	1	5	1	**7**	**22**	**27**
15:45	16:00	1	0	0	**1**	1	1	0	**2**	**3**	0	3	1	**4**	3	11	2	**16**	**20**	**23**
16:00	16:15	0	0	1	**1**	2	0	0	**2**	**3**	0	5	0	**5**	1	10	0	**11**	**16**	**19**
16:15	16:30	0	2	1	**3**	1	0	1	**2**	**5**	0	7	0	**7**	0	9	1	**10**	**17**	**22**
16:30	16:45	1	0	1	**2**	0	0	1	**1**	**3**	0	6	0	**6**	0	4	0	**4**	**10**	**13**
16:45	17:00	0	1	0	**1**	0	0	1	**1**	**2**	0	4	0	**4**	1	9	0	**10**	**14**	**16**
Total:	None	8	8	39	**55**	37	13	11	**61**	**116**	18	207	4	**229**	29	231	28	**288**	**517**	**633**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, October 22, 2024 **WO No:** 42176

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

Full Study 15 Minute U-Turn Total

		STITTSVILLE MAIN ST		HAZELDEAN RD		
Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	3	0	3
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
13:00	13:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	1	0	1
17:45	18:00	0	0	0	1	1
17:00	17:15	0	0	1	0	1
11:45	12:00	0	0	1	1	2
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	2	1	3
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:00	15:15	0	1	0	0	1
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	1	0	1
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	2	0	2
Total		0	1	11	3	15

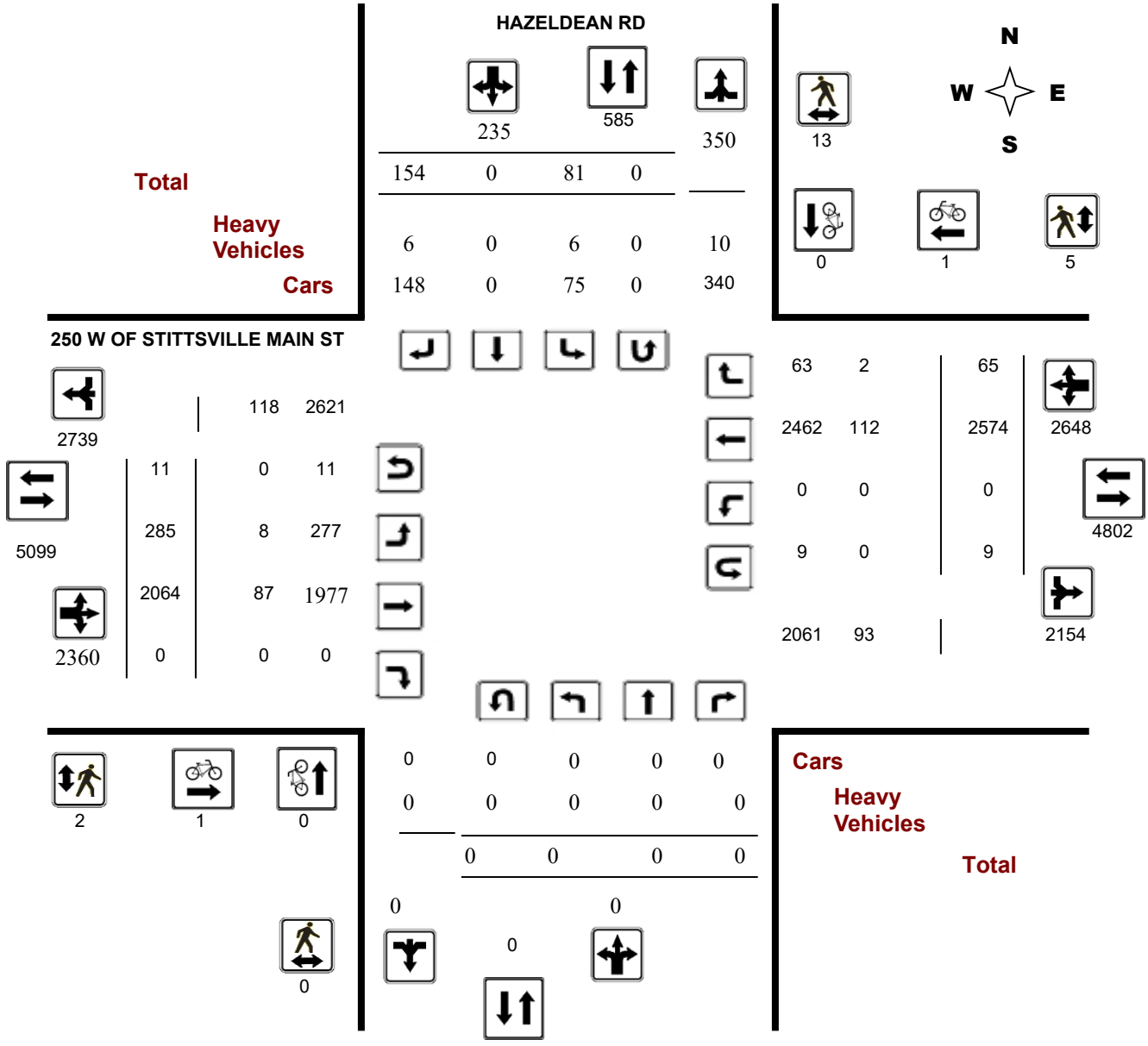
Transportation Services - Traffic Services

Turning Movement Count - Study Results

250 W OF STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, January 11, 2022
Start Time: 07:00
WO No: 40033
Device: Miovision

Full Study Diagram



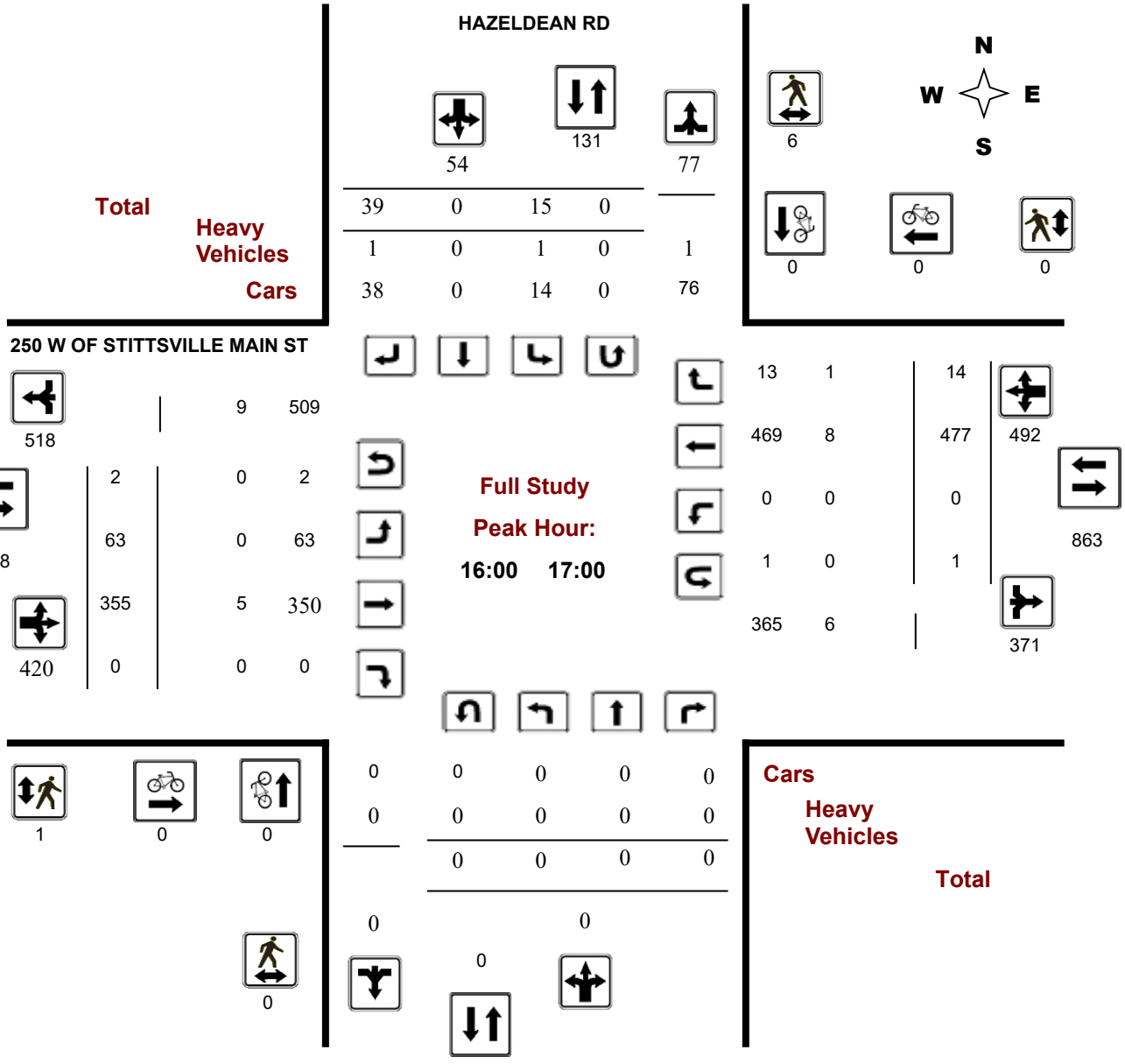
Transportation Services - Traffic Services

Turning Movement Count - Study Results

250 W OF STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, January 11, 2022
Start Time: 07:00
WO No: 40033
Device: Miovision

Full Study Peak Hour Diagram



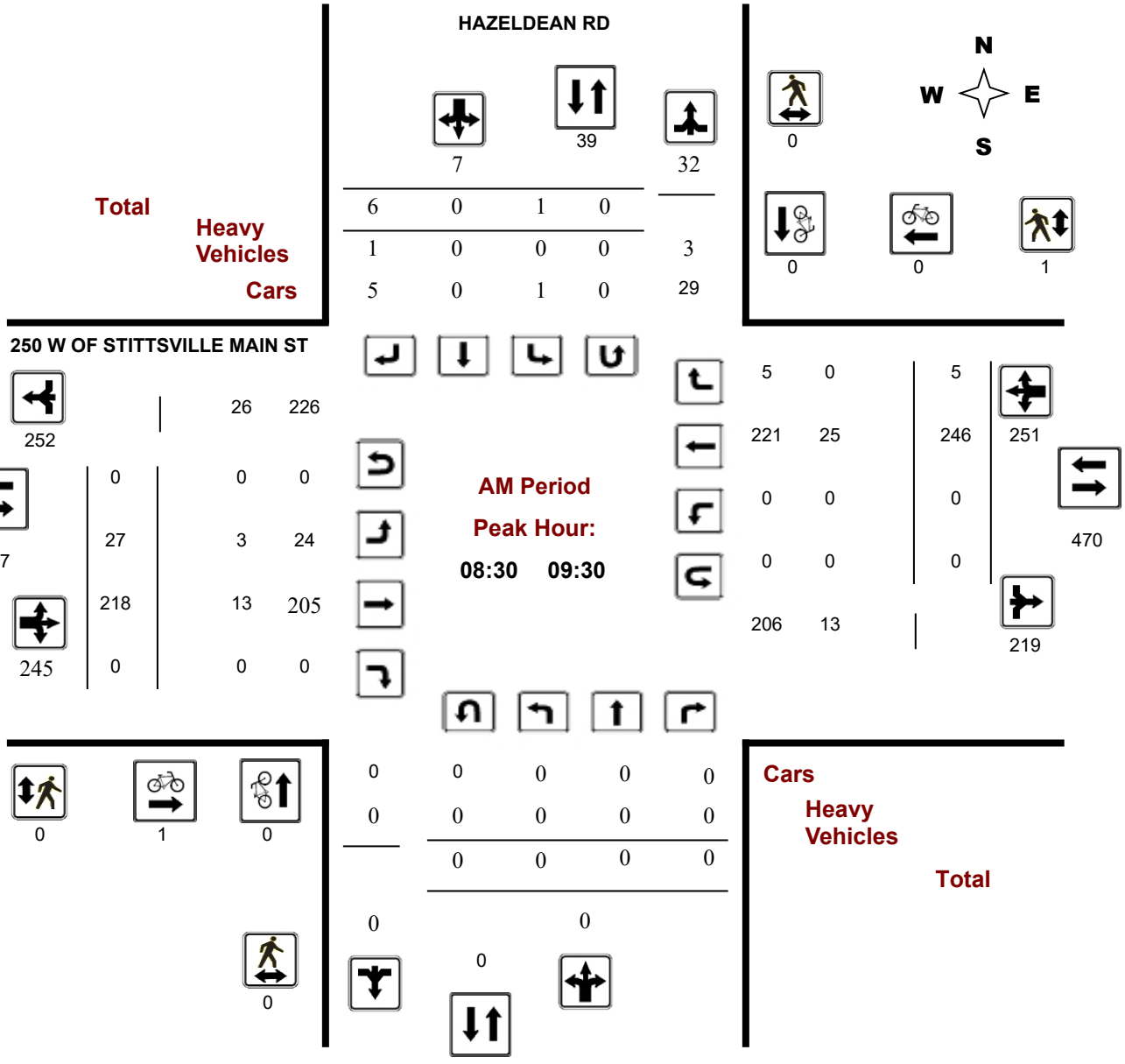
Transportation Services - Traffic Services

Turning Movement Count - Study Results

250 W OF STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, January 11, 2022
Start Time: 07:00
WO No: 40033
Device: Miovision

AM Period Peak Hour Diagram



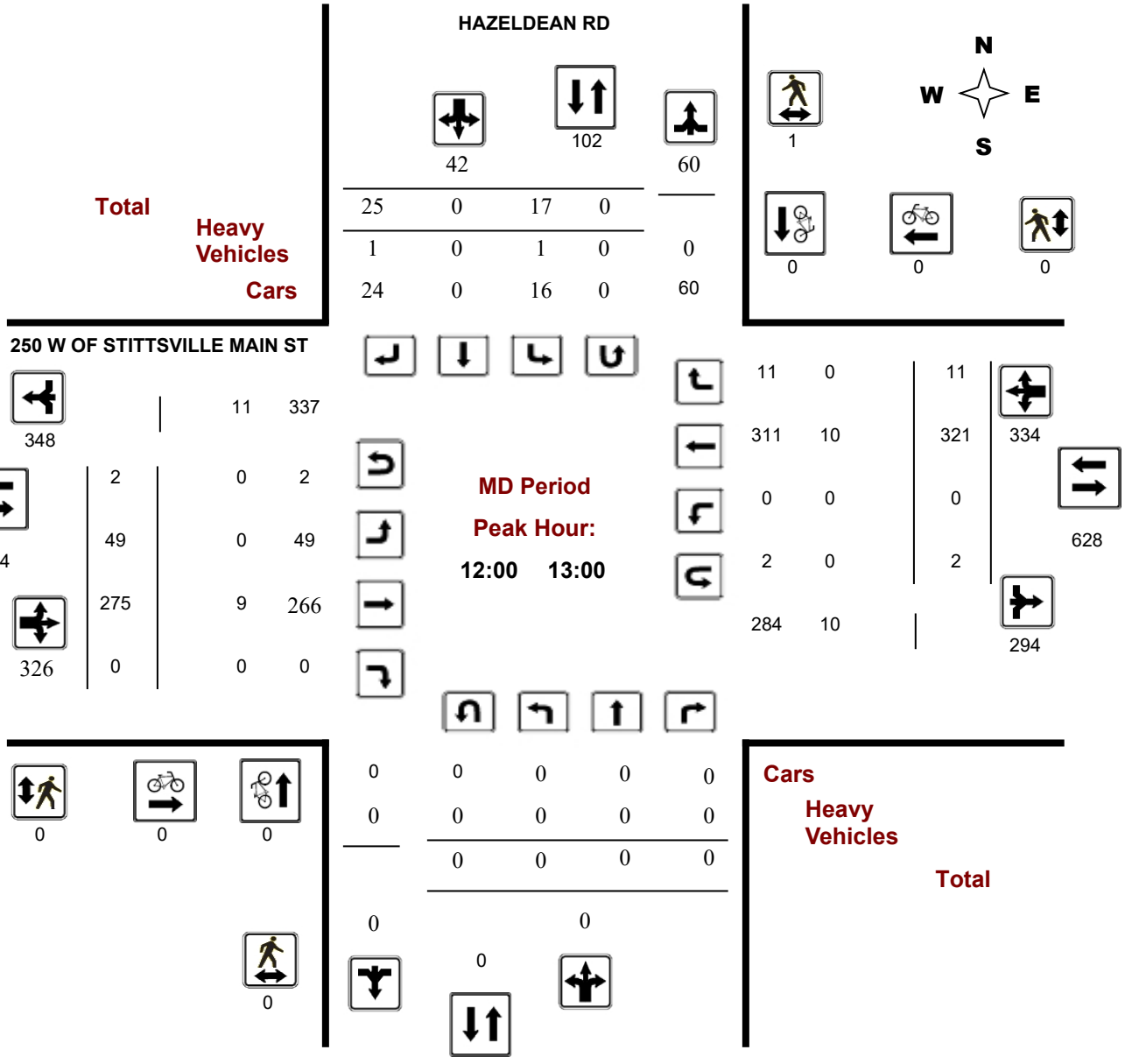
Transportation Services - Traffic Services

Turning Movement Count - Study Results

250 W OF STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, January 11, 2022
Start Time: 07:00
WO No: 40033
Device: Miovision

MD Period Peak Hour Diagram



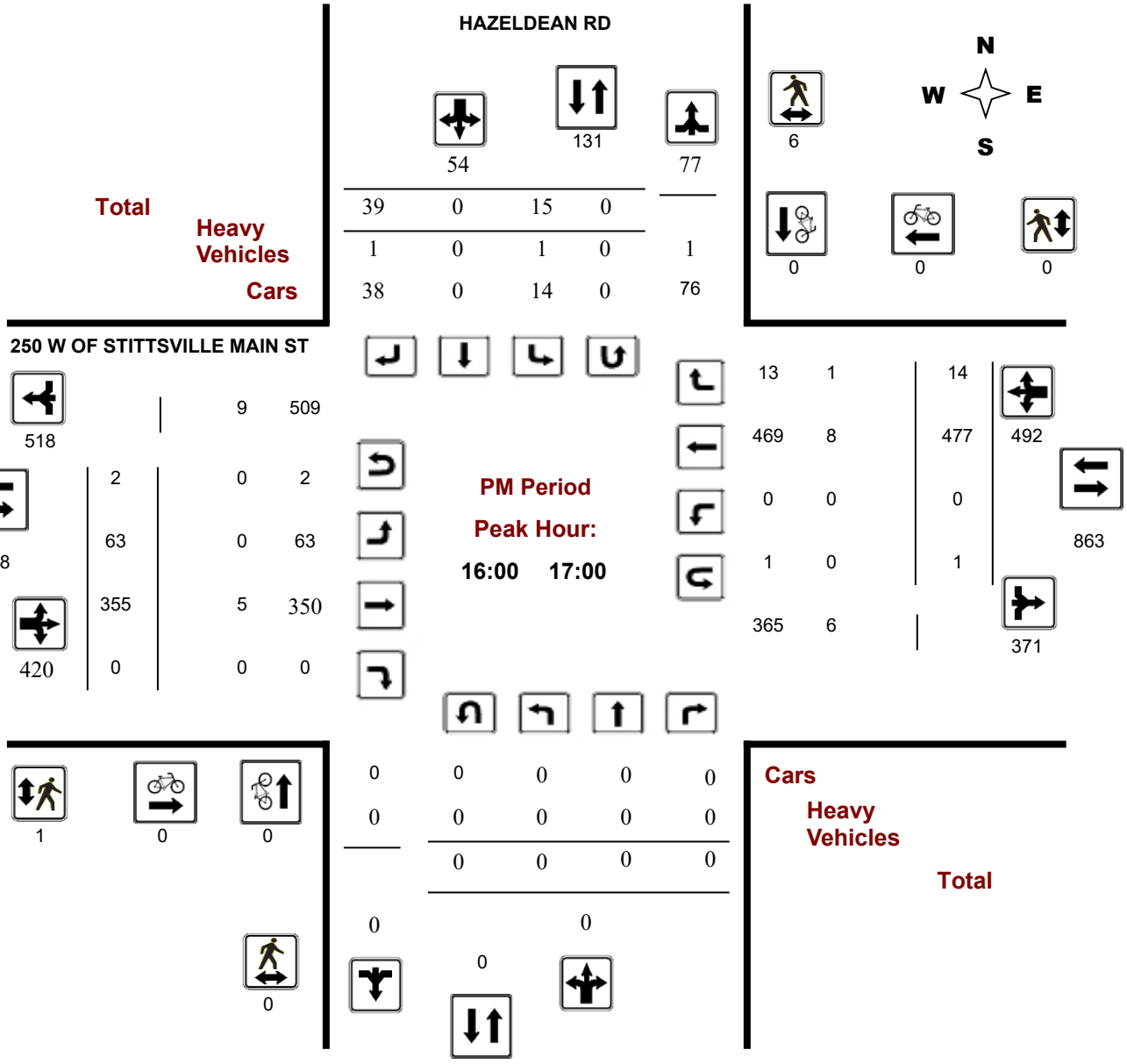
Transportation Services - Traffic Services

Turning Movement Count - Study Results

250 W OF STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, January 11, 2022
Start Time: 07:00
WO No: 40033
Device: Miovision

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

250 W OF STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, January 11, 2022 **WO No:** 40033

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

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, January 11, 2022

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 11 Westbound: 9

AADT Factor

1.10

	HAZELDEAN RD									250 W OF STITTSVILLE MAIN ST									
	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	0	0	**0**	1	0	3	**4**	**4**	9	191	0	**200**	0	176	1	**177**	**377**	**381**
08:00 09:00	0	0	0	**0**	3	0	4	**7**	**7**	19	218	0	**237**	0	239	5	**244**	**481**	**488**
09:00 10:00	0	0	0	**0**	2	0	10	**12**	**12**	25	216	0	**241**	0	249	0	**249**	**490**	**502**
11:30 12:30	0	0	0	**0**	13	0	20	**33**	**33**	41	279	0	**320**	0	314	10	**324**	**644**	**677**
12:30 13:30	0	0	0	**0**	15	0	20	**35**	**35**	47	250	0	**297**	0	314	13	**327**	**624**	**659**
15:00 16:00	0	0	0	**0**	20	0	29	**49**	**49**	39	280	0	**319**	0	427	12	**439**	**758**	**807**
16:00 17:00	0	0	0	**0**	15	0	39	**54**	**54**	63	355	0	**418**	0	477	14	**491**	**909**	**963**
17:00 18:00	0	0	0	**0**	12	0	29	**41**	**41**	42	275	0	**317**	0	378	10	**388**	**705**	**746**
Sub Total	0	0	0	**0**	81	0	154	**235**	**235**	285	2064	0	**2349**	0	2574	65	**2639**	**4988**	**5223**
U Turns				**0**				**0**	**0**				**11**				**9**	**20**	**20**
Total	0	0	0	**0**	81	0	154	**235**	**235**	285	2064	0	**2360**	0	2574	65	**2648**	**5008**	**5243**
EQ 12Hr	0	0	0	**0**	113	0	214	**327**	**327**	396	2869	0	**3280**	0	3578	90	**3681**	**6961**	**7288**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	0	0	0	**0**	124	0	308	**360**	**360**	436	3156	0	**3608**	0	3936	99	**4049**	**7657**	**8017**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**1.10**						
AVG 24Hr	0	0	0	**0**	162	0	403	**472**	**472**	571	4134	0	**4726**	0	5156	130	**5304**	**10031**	**10502**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													**1.31**						

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

250 W OF STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, January 11, 2022 **WO No:** 40033

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

Full Study 15 Minute Increments

		HAZELDEAN RD									250 W OF STITTSVILLE MAIN ST									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	0	0	0	0	0	0	0	0	1	39	0	41	0	35	0	35	76	76
07:15	07:30	0	0	0	0	1	0	1	2	2	4	39	0	43	0	42	0	42	85	87
07:30	07:45	0	0	0	0	0	0	2	2	2	2	53	0	55	0	38	0	38	93	95
07:45	08:00	0	0	0	0	0	0	0	0	0	2	60	0	63	0	61	1	62	125	125
09:15	09:30	0	0	0	0	0	0	3	3	3	11	47	0	58	0	61	0	61	119	122
09:30	09:45	0	0	0	0	0	0	4	4	4	4	48	0	52	0	63	0	63	115	119
08:00	08:15	0	0	0	0	2	0	0	2	2	2	54	0	56	0	56	0	56	112	114
08:15	08:30	0	0	0	0	0	0	1	1	1	4	58	0	62	0	56	0	57	119	120
08:30	08:45	0	0	0	0	0	0	2	2	2	10	58	0	68	0	64	2	66	134	136
08:45	09:00	0	0	0	0	1	0	1	2	2	3	48	0	51	0	63	3	66	117	119
09:00	09:15	0	0	0	0	0	0	0	0	0	3	65	0	68	0	58	0	58	126	126
09:45	10:00	0	0	0	0	2	0	3	5	5	7	56	0	63	0	67	0	67	130	135
11:30	11:45	0	0	0	0	2	0	4	6	6	9	75	0	84	0	70	3	73	157	163
11:45	12:00	0	0	0	0	2	0	3	5	5	9	57	0	67	0	82	2	84	151	156
12:00	12:15	0	0	0	0	5	0	9	14	14	15	72	0	87	0	85	3	88	175	189
12:15	12:30	0	0	0	0	4	0	4	8	8	8	75	0	83	0	77	2	80	163	171
17:45	18:00	0	0	0	0	4	0	5	9	9	4	48	0	52	0	66	3	69	121	130
17:30	17:45	0	0	0	0	1	0	4	5	5	12	75	0	87	0	94	3	98	185	190
17:15	17:30	0	0	0	0	3	0	9	12	12	16	80	0	96	0	106	2	108	204	216
12:30	12:45	0	0	0	0	6	0	6	12	12	11	62	0	75	0	81	5	87	162	174
12:45	13:00	0	0	0	0	2	0	6	8	8	15	66	0	81	0	78	1	79	160	168
13:00	13:15	0	0	0	0	2	0	4	6	6	14	70	0	84	0	78	6	84	168	174
13:15	13:30	0	0	0	0	5	0	4	9	9	7	52	0	61	0	77	1	79	140	149
15:00	15:15	0	0	0	0	4	0	6	10	10	12	58	0	70	0	101	3	104	174	184
15:15	15:30	0	0	0	0	5	0	7	12	12	8	56	0	64	0	113	5	119	183	195
15:30	15:45	0	0	0	0	7	0	9	16	16	12	95	0	108	0	109	1	110	218	234
15:45	16:00	0	0	0	0	4	0	7	11	11	7	71	0	79	0	104	3	109	188	199
16:00	16:15	0	0	0	0	4	0	7	11	11	18	95	0	113	0	143	3	146	259	270
16:15	16:30	0	0	0	0	5	0	9	14	14	18	76	0	95	0	105	1	106	201	215
16:30	16:45	0	0	0	0	2	0	15	17	17	14	98	0	113	0	128	7	135	248	265
16:45	17:00	0	0	0	0	4	0	8	12	12	13	86	0	99	0	101	3	105	204	216
17:00	17:15	0	0	0	0	4	0	11	15	15	10	72	0	82	0	112	2	114	196	211
Total:		0	0	0	0	81	0	154	235	235	285	2064	0	2360	0	2574	65	2648	5008	5,243

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

250 W OF STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, January 11, 2022 **WO No:** 40033

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

Full Study Cyclist Volume

Time Period		HAZELDEAN RD			250 W OF STITTSVILLE MAIN ST			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	0	0	0	0	0	0
07:15	07:30	0	0	0	0	0	0	0
07:30	07:45	0	0	0	0	0	0	0
07:45	08:00	0	0	0	0	0	0	0
09:15	09:30	0	0	0	1	0	1	1
09:30	09:45	0	0	0	0	0	0	0
08:00	08:15	0	0	0	0	0	0	0
08:15	08:30	0	0	0	0	0	0	0
08:30	08:45	0	0	0	0	0	0	0
08:45	09:00	0	0	0	0	0	0	0
09:00	09:15	0	0	0	0	0	0	0
09:45	10:00	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	1	1	1
12:30	12:45	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0
15:00	15:15	0	0	0	0	0	0	0
15:15	15:30	0	0	0	0	0	0	0
15:30	15:45	0	0	0	0	0	0	0
15:45	16:00	0	0	0	0	0	0	0
16:00	16:15	0	0	0	0	0	0	0
16:15	16:30	0	0	0	0	0	0	0
16:30	16:45	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0
Total		0	0	**0**	1	1	2	2

Transportation Services - Traffic Services

Turning Movement Count - Study Results

250 W OF STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, January 11, 2022 **WO No:** 40033

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

Full Study Pedestrian Volume

	HAZELDEAN RD			250 W OF STITTSVILLE MAIN ST			
Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	**Total**	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	**Total**	**Grand Total**
07:00 07:15	0	0	**0**	1	0	**1**	**1**
07:15 07:30	0	0	**0**	0	0	**0**	**0**
07:30 07:45	0	0	**0**	0	0	**0**	**0**
07:45 08:00	0	0	**0**	0	1	**1**	**1**
09:15 09:30	0	0	**0**	0	0	**0**	**0**
09:30 09:45	0	0	**0**	0	0	**0**	**0**
08:00 08:15	0	0	**0**	0	0	**0**	**0**
08:15 08:30	0	1	**1**	0	0	**0**	**1**
08:30 08:45	0	0	**0**	0	0	**0**	**0**
08:45 09:00	0	0	**0**	0	1	**1**	**1**
09:00 09:15	0	0	**0**	0	0	**0**	**0**
09:45 10:00	0	1	**1**	0	0	**0**	**1**
11:30 11:45	0	1	**1**	0	0	**0**	**1**
11:45 12:00	0	1	**1**	0	0	**0**	**1**
12:00 12:15	0	0	**0**	0	0	**0**	**0**
12:15 12:30	0	0	**0**	0	0	**0**	**0**
17:45 18:00	0	0	**0**	0	0	**0**	**0**
17:30 17:45	0	0	**0**	0	0	**0**	**0**
17:15 17:30	0	0	**0**	0	0	**0**	**0**
12:30 12:45	0	1	**1**	0	0	**0**	**1**
12:45 13:00	0	0	**0**	0	0	**0**	**0**
13:00 13:15	0	0	**0**	0	0	**0**	**0**
13:15 13:30	0	2	**2**	0	0	**0**	**2**
15:00 15:15	0	0	**0**	0	0	**0**	**0**
15:15 15:30	0	0	**0**	0	0	**0**	**0**
15:30 15:45	0	0	**0**	0	2	**2**	**2**
15:45 16:00	0	0	**0**	0	0	**0**	**0**
16:00 16:15	0	2	**2**	1	0	**1**	**3**
16:15 16:30	0	3	**3**	0	0	**0**	**3**
16:30 16:45	0	1	**1**	0	0	**0**	**1**
16:45 17:00	0	0	**0**	0	0	**0**	**0**
17:00 17:15	0	0	**0**	0	1	**1**	**1**
Total	0	13	**13**	2	5	**7**	**20**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

250 W OF STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, January 11, 2022 **WO No:** 40033

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

Full Study Heavy Vehicles

HAZELDEAN RD **250 W OF STITTSVILLE MAIN ST**

Time Period		Northbound				Southbound					Eastbound				Westbound					
		LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
07:00	07:15	0	0	0	**0**	0	0	0	**0**	**0**	1	2	0	**3**	0	2	0	**2**	**5**	**5**
07:15	07:30	0	0	0	**0**	1	0	1	**2**	**2**	1	5	0	**6**	0	2	0	**2**	**8**	**10**
07:30	07:45	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	5	0	**5**	**8**	**8**
07:45	08:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	7	0	**7**	**9**	**9**
09:15	09:30	0	0	0	**0**	0	0	1	**1**	**1**	1	2	0	**3**	0	8	0	**8**	**11**	**12**
09:30	09:45	0	0	0	**0**	0	0	0	**0**	**0**	1	2	0	**3**	0	4	0	**4**	**7**	**7**
08:00	08:15	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	3	0	**3**	**6**	**6**
08:15	08:30	0	0	0	**0**	0	0	0	**0**	**0**	0	4	0	**4**	0	2	0	**2**	**6**	**6**
08:30	08:45	0	0	0	**0**	0	0	0	**0**	**0**	1	2	0	**3**	0	7	0	**7**	**10**	**10**
08:45	09:00	0	0	0	**0**	0	0	0	**0**	**0**	1	3	0	**4**	0	5	0	**5**	**9**	**9**
09:00	09:15	0	0	0	**0**	0	0	0	**0**	**0**	0	6	0	**6**	0	5	0	**5**	**11**	**11**
09:45	10:00	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	9	0	**9**	**12**	**12**
11:30	11:45	0	0	0	**0**	0	0	0	**0**	**0**	0	5	0	**5**	0	1	0	**1**	**6**	**6**
11:45	12:00	0	0	0	**0**	1	0	0	**1**	**1**	2	2	0	**4**	0	7	0	**7**	**11**	**12**
12:00	12:15	0	0	0	**0**	1	0	1	**2**	**2**	0	3	0	**3**	0	2	0	**2**	**5**	**7**
12:15	12:30	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	3	0	**3**	**5**	**5**
17:45	18:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	1	0	**1**	**3**	**3**
17:30	17:45	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	4	0	**4**	**6**	**6**
17:15	17:30	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
12:30	12:45	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	3	0	**3**	**4**	**4**
12:45	13:00	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	2	0	**2**	**5**	**5**
13:00	13:15	0	0	0	**0**	0	0	1	**1**	**1**	0	7	0	**7**	0	5	0	**5**	**12**	**13**
13:15	13:30	0	0	0	**0**	1	0	1	**2**	**2**	0	1	0	**1**	0	5	0	**5**	**6**	**8**
15:00	15:15	0	0	0	**0**	1	0	0	**1**	**1**	0	5	0	**5**	0	2	0	**2**	**7**	**8**
15:15	15:30	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	1	0	**1**	**3**	**3**
15:30	15:45	0	0	0	**0**	0	0	0	**0**	**0**	0	7	0	**7**	0	5	0	**5**	**12**	**12**
15:45	16:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	3	1	**4**	**6**	**6**
16:00	16:15	0	0	0	**0**	0	0	1	**1**	**1**	0	1	0	**1**	0	3	0	**3**	**4**	**5**
16:15	16:30	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	2	0	**2**	**3**	**3**
16:30	16:45	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	2	1	**3**	**3**	**3**
16:45	17:00	0	0	0	**0**	1	0	0	**1**	**1**	0	3	0	**3**	0	1	0	**1**	**4**	**5**
17:00	17:15	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	1	0	**1**	**2**	**2**
Total:	None	0	0	0	**0**	6	0	6	**12**	**12**	8	87	0	**95**	0	112	2	**114**	**209**	**221**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

250 W OF STITTSVILLE MAIN ST @ HAZELDEAN RD

Survey Date: Tuesday, January 11, 2022 **WO No:** 40033

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

Full Study 15 Minute U-Turn Total

Time Period		HAZELDEAN RD		250 W OF STITTSVILLE MAIN ST		
		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	1	0	1
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	1	0	1
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	1	1
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	1	0	1
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	1	1
17:45	18:00	0	0	0	0	0
17:30	17:45	0	0	0	1	1
17:15	17:30	0	0	0	0	0
12:30	12:45	0	0	2	1	3
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	2	1	3
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	1	1
15:30	15:45	0	0	1	0	1
15:45	16:00	0	0	1	2	3
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	1	0	1
16:30	16:45	0	0	1	0	1
16:45	17:00	0	0	0	1	1
17:00	17:15	0	0	0	0	0
Total		0	0	11	9	20

6111 Hazeldean Access - TMC

Tue Jan 20, 2026
Full Length (7 AM-7 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1372651, Location: 45.270651, -75.933976

Provided by: Englobe Corp
565 Priestman Street, Suite 400,
Fredericton, NB, E3B 5X8, CA

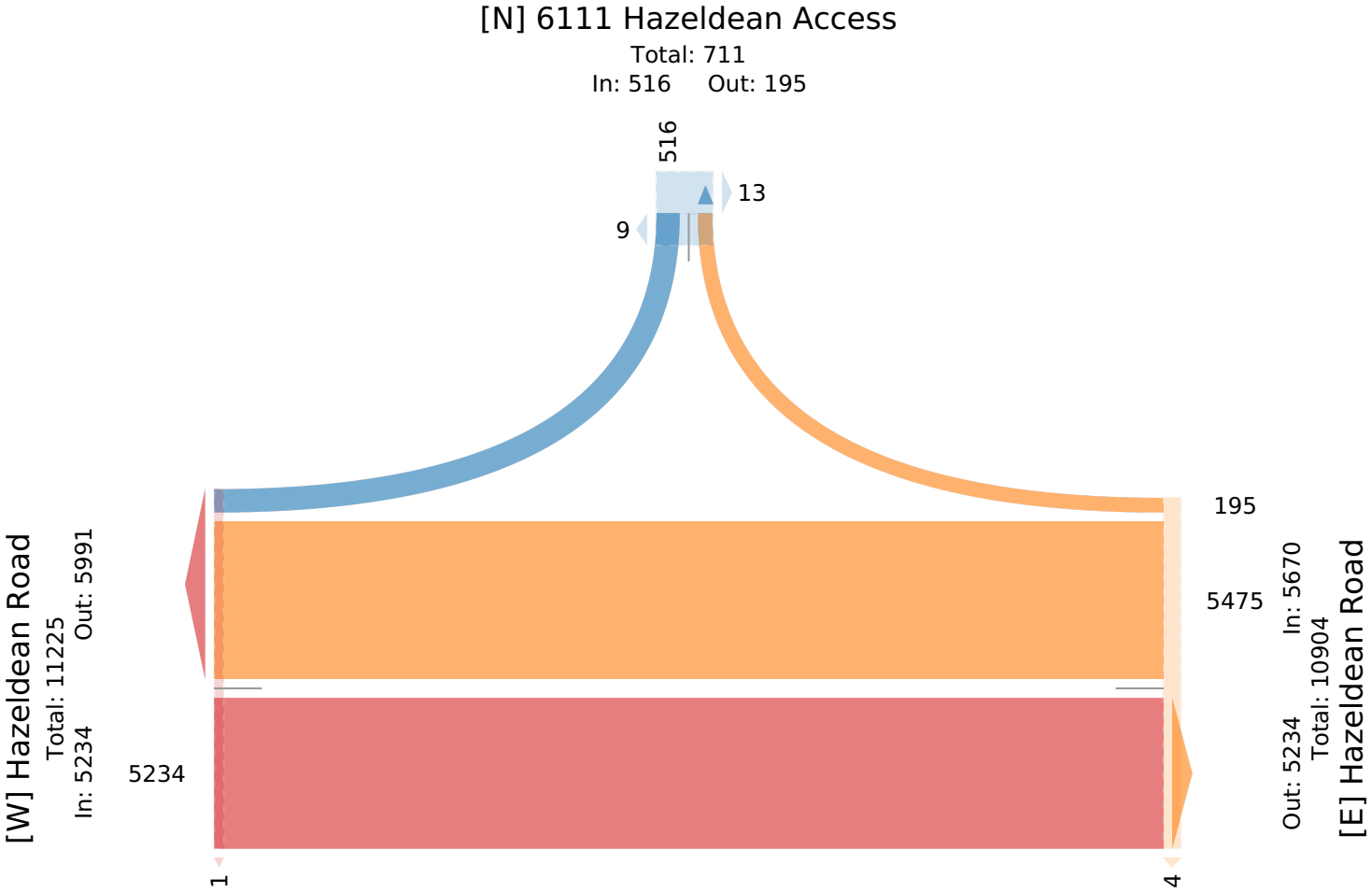
Leg	6111 Hazeldean Access					Hazeldean Road					Hazeldean Road					
Direction	Southbound					Westbound					Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
2026-01-20 7:00AM	18	0	0	**18**	1	10	70	0	**80**	0	91	0	0	**91**	0	**189**
7:15AM	14	0	0	**14**	0	2	86	0	**88**	0	138	0	0	**138**	0	**240**
7:30AM	12	0	0	**12**	0	5	103	0	**108**	0	122	0	0	**122**	0	**242**
7:45AM	18	0	0	**18**	0	8	79	0	**87**	0	101	0	0	**101**	0	**206**
Hourly Total	62	0	0	**62**	1	25	338	0	**363**	0	452	0	0	**452**	0	**877**
8:00AM	12	0	0	**12**	0	5	96	0	**101**	0	103	0	0	**103**	0	**216**
8:15AM	10	0	0	**10**	0	6	109	0	**115**	0	95	0	0	**95**	0	**220**
8:30AM	11	0	0	**11**	1	6	95	0	**101**	0	106	0	0	**106**	0	**218**
8:45AM	12	0	0	**12**	0	8	72	0	**80**	0	93	0	0	**93**	0	**185**
Hourly Total	45	0	0	**45**	1	25	372	0	**397**	0	397	0	0	**397**	0	**839**
9:00AM	8	0	0	**8**	0	6	95	0	**101**	0	93	0	0	**93**	0	**202**
9:15AM	11	0	0	**11**	0	7	84	0	**91**	0	89	0	0	**89**	0	**191**
9:30AM	12	0	0	**12**	1	5	91	0	**96**	0	102	0	0	**102**	0	**210**
9:45AM	13	0	0	**13**	1	4	100	0	**104**	0	113	0	0	**113**	0	**230**
Hourly Total	44	0	0	**44**	2	22	370	0	**392**	0	397	0	0	**397**	0	**833**
10:00AM	13	0	0	**13**	0	6	83	0	**89**	0	95	0	0	**95**	0	**197**
10:15AM	6	0	0	**6**	0	7	152	0	**159**	0	111	0	0	**111**	0	**276**
10:30AM	10	0	0	**10**	2	9	109	0	**118**	0	118	0	0	**118**	1	**246**
10:45AM	11	0	0	**11**	0	2	97	0	**99**	0	126	0	0	**126**	0	**236**
Hourly Total	40	0	0	**40**	2	24	441	0	**465**	0	450	0	0	**450**	1	**955**
11:00AM	8	0	0	**8**	0	4	109	0	**113**	0	94	0	0	**94**	0	**215**
11:15AM	10	0	0	**10**	2	4	117	0	**121**	0	111	0	0	**111**	0	**242**
11:30AM	11	0	0	**11**	0	1	114	0	**115**	0	101	0	0	**101**	0	**227**
11:45AM	10	0	0	**10**	0	7	128	0	**135**	0	95	0	0	**95**	0	**240**
Hourly Total	39	0	0	**39**	2	16	468	0	**484**	0	401	0	0	**401**	0	**924**
12:00PM	13	0	0	**13**	3	3	115	0	**118**	0	111	0	0	**111**	0	**242**
12:15PM	9	0	0	**9**	0	2	117	0	**119**	0	130	0	0	**130**	0	**258**
12:30PM	17	0	0	**17**	0	7	130	0	**137**	0	124	0	0	**124**	0	**278**
12:45PM	11	0	0	**11**	0	7	129	0	**136**	0	105	0	0	**105**	0	**252**
Hourly Total	50	0	0	**50**	3	19	491	0	**510**	0	470	0	0	**470**	0	**1030**
1:00PM	14	0	0	**14**	4	3	136	0	**139**	0	121	0	0	**121**	0	**274**
1:15PM	9	0	0	**9**	0	3	113	0	**116**	0	89	0	0	**89**	0	**214**
1:30PM	17	0	0	**17**	0	7	100	0	**107**	0	116	0	0	**116**	0	**240**
1:45PM	17	0	0	**17**	0	3	149	0	**152**	0	107	0	0	**107**	0	**276**
Hourly Total	57	0	0	**57**	4	16	498	0	**514**	0	433	0	0	**433**	0	**1004**
2:00PM	7	0	0	**7**	0	4	141	0	**145**	0	96	0	0	**96**	0	**248**
2:15PM	13	0	0	**13**	0	6	125	0	**131**	0	114	0	0	**114**	0	**258**
2:30PM	14	0	0	**14**	0	5	137	0	**142**	3	123	0	0	**123**	0	**279**
2:45PM	14	0	0	**14**	0	5	128	0	**133**	0	122	0	0	**122**	0	**269**
Hourly Total	48	0	0	**48**	0	20	531	0	**551**	3	455	0	0	**455**	0	**1054**
3:00PM	10	0	0	**10**	0	2	163	0	**165**	0	134	0	0	**134**	0	**309**
3:15PM	13	0	0	**13**	0	4	164	0	**168**	0	131	0	0	**131**	0	**312**
3:30PM	15	0	0	**15**	0	1	106	0	**107**	1	127	0	0	**127**	0	**249**
3:45PM	18	0	0	**18**	1	0	187	0	**187**	0	130	0	0	**130**	0	**335**
Hourly Total	56	0	0	**56**	1	7	620	0	**627**	1	522	0	0	**522**	0	**1205**
4:00PM	5	0	0	**5**	2	0	151	0	**151**	0	157	0	0	**157**	0	**313**
4:15PM	8	0	0	**8**	0	2	150	0	**152**	0	132	0	0	**132**	0	**292**
4:30PM	13	0	0	**13**	2	2	148	0	**150**	0	143	0	0	**143**	0	**306**
4:45PM	6	0	0	**6**	0	3	118	0	**121**	0	100	0	0	**100**	0	**227**
Hourly Total	32	0	0	**32**	4	7	567	0	**574**	0	532	0	0	**532**	0	**1138**
5:00PM	4	0	0	**4**	0	2	112	0	**114**	0	132	0	0	**132**	0	**250**
5:15PM	2	0	0	**2**	0	0	135	0	**135**	0	100	0	0	**100**	0	**237**
5:30PM	7	0	0	**7**	0	2	93	0	**95**	0	94	0	0	**94**	0	**196**

Leg	6111 Hazeldean Access					Hazeldean Road					Hazeldean Road					
Direction	Southbound					Westbound					Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
5:45PM	8	0	0	**8**	0	3	110	0	**113**	0	99	0	0	**99**	0	**220**
Hourly Total	21	0	0	**21**	0	7	450	0	**457**	0	425	0	0	**425**	0	**903**
6:00PM	5	0	0	**5**	0	3	101	0	**104**	0	72	0	0	**72**	0	**181**
6:15PM	8	0	0	**8**	1	2	79	0	**81**	0	93	0	0	**93**	0	**182**
6:30PM	2	0	0	**2**	0	0	90	0	**90**	0	82	0	0	**82**	0	**174**
6:45PM	7	0	0	**7**	1	2	59	0	**61**	0	53	0	0	**53**	0	**121**
Hourly Total	22	0	0	**22**	2	7	329	0	**336**	0	300	0	0	**300**	0	**658**
Total	516	0	0	**516**	22	195	5475	0	**5670**	4	5234	0	0	**5234**	1	**11420**
% Approach	100%	0%	0%	**-**	-	3.4%	96.6%	0%	**-**	-	100%	0%	0%	**-**	-	**-**
% Total	4.5%	0%	0%	**4.5%**	-	1.7%	47.9%	0%	**49.6%**	-	45.8%	0%	0%	**45.8%**	-	**-**
Lights and Motorcycles	500	0	0	**500**	-	193	5031	0	**5224**	-	4906	0	0	**4906**	-	10630
% Lights and Motorcycles	96.9%	0%	0%	**96.9%**	-	99.0%	91.9%	0%	**92.1%**	-	93.7%	0%	0%	**93.7%**	-	93.1%
Heavy	16	0	0	**16**	-	2	444	0	**446**	-	328	0	0	**328**	-	790
% Heavy	3.1%	0%	0%	**3.1%**	-	1.0%	8.1%	0%	**7.9%**	-	6.3%	0%	0%	**6.3%**	-	6.9%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	22	-	-	-	-	4	-	-	-	-	1	
% Pedestrians	-	-	-	-	100%	-	-	-	-	100%	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-

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

6111 Hazeldean Access - TMC
Tue Jan 20, 2026
Full Length (7 AM-7 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1372651, Location: 45.270651, -75.933976

Provided by: Englobe Corp
565 Priestman Street, Suite 400,
Fredericton, NB, E3B 5X8, CA



6111 Hazeldean Access - TMC

Tue Jan 20, 2026
AM Peak (10 AM - 11 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1372651, Location: 45.270651, -75.933976

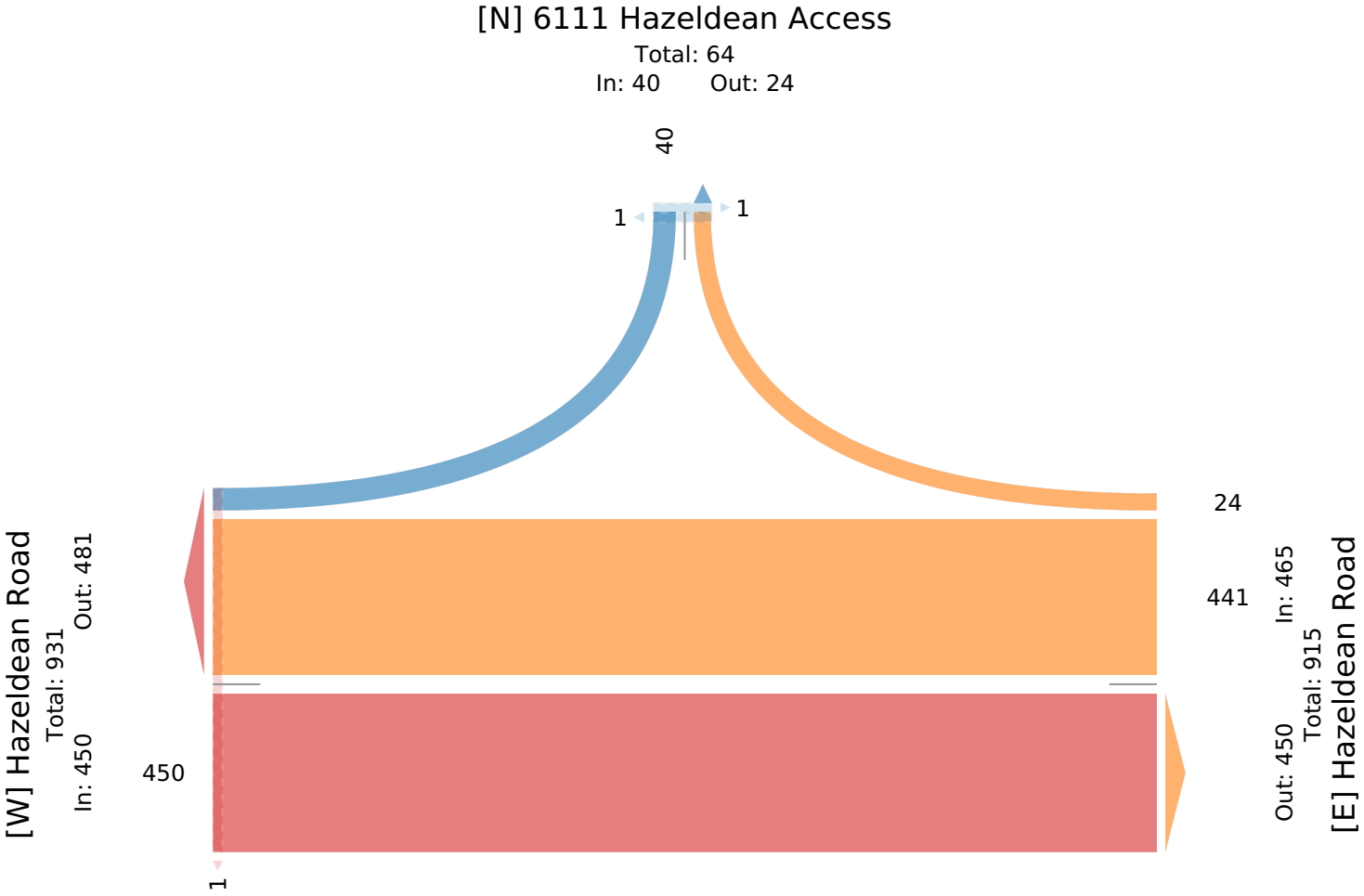
Provided by: Englobe Corp
565 Priestman Street, Suite 400,
Fredericton, NB, E3B 5X8, CA

Leg Direction	6111 Hazeldean Access Southbound					Hazeldean Road Westbound					Hazeldean Road Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
2026-01-20 10:00AM	13	0	0	**13**	0	6	83	0	**89**	0	95	0	0	**95**	0	**197**
10:15AM	6	0	0	**6**	0	7	152	0	**159**	0	111	0	0	**111**	0	**276**
10:30AM	10	0	0	**10**	2	9	109	0	**118**	0	118	0	0	**118**	1	**246**
10:45AM	11	0	0	**11**	0	2	97	0	**99**	0	126	0	0	**126**	0	**236**
Total	40	0	0	**40**	2	24	441	0	**465**	0	450	0	0	**450**	1	**955**
% Approach	100%	0%	0%	**-**	-	5.2%	94.8%	0%	**-**	-	100%	0%	0%	**-**	-	**-**
% Total	4.2%	0%	0%	**4.2%**	-	2.5%	46.2%	0%	**48.7%**	-	47.1%	0%	0%	**47.1%**	-	**-**
PHF	0.769	-	-	**0.769**	-	0.667	0.725	-	**0.731**	-	0.893	-	-	**0.893**	-	0.865
Lights and Motorcycles	40	0	0	**40**	-	24	388	0	**412**	-	404	0	0	**404**	-	856
% Lights and Motorcycles	100%	0%	0%	**100%**	-	100%	88.0%	0%	**88.6%**	-	89.8%	0%	0%	**89.8%**	-	89.6%
Heavy	0	0	0	**0**	-	0	53	0	**53**	-	46	0	0	**46**	-	99
% Heavy	0%	0%	0%	**0%**	-	0%	12.0%	0%	**11.4%**	-	10.2%	0%	0%	**10.2%**	-	10.4%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	2	-	-	-	-	0	-	-	-	-	1	
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	0%	-

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

6111 Hazeldean Access - TMC
Tue Jan 20, 2026
AM Peak (10 AM - 11 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1372651, Location: 45.270651, -75.933976

Provided by: Englobe Corp
565 Priestman Street, Suite 400,
Fredericton, NB, E3B 5X8, CA



6111 Hazeldean Access - TMC

Tue Jan 20, 2026
Midday Peak (12:15 PM - 1:15 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1372651, Location: 45.270651, -75.933976

Provided by: Englobe Corp
565 Priestman Street, Suite 400,
Fredericton, NB, E3B 5X8, CA

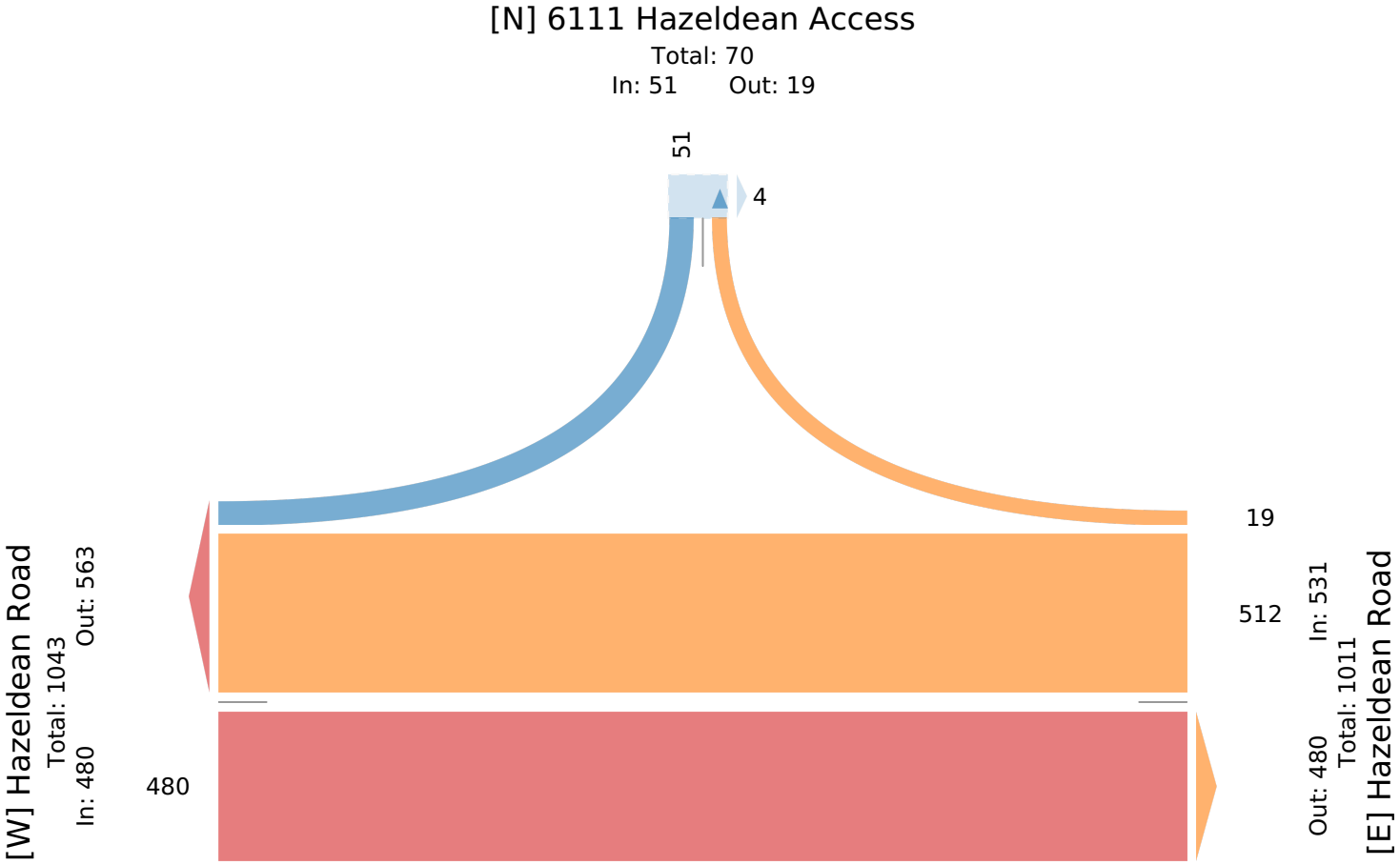
Leg Direction	6111 Hazeldean Access Southbound					Hazeldean Road Westbound					Hazeldean Road Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
2026-01-20 12:15PM	9	0	0	**9**	0	2	117	0	**119**	0	130	0	0	**130**	0	**258**
12:30PM	17	0	0	**17**	0	7	130	0	**137**	0	124	0	0	**124**	0	**278**
12:45PM	11	0	0	**11**	0	7	129	0	**136**	0	105	0	0	**105**	0	**252**
1:00PM	14	0	0	**14**	4	3	136	0	**139**	0	121	0	0	**121**	0	**274**
Total	51	0	0	**51**	4	19	512	0	**531**	0	480	0	0	**480**	0	**1062**
% Approach	100%	0%	0%	**-**	-	3.6%	96.4%	0%	**-**	-	100%	0%	0%	**-**	-	**-**
% Total	4.8%	0%	0%	**4.8%**	-	1.8%	48.2%	0%	**50.0%**	-	45.2%	0%	0%	**45.2%**	-	**-**
PHF	0.750	-	-	**0.750**	-	0.679	0.941	-	**0.955**	-	0.923	-	-	**0.923**	-	0.955
Lights and Motorcycles	50	0	0	**50**	-	17	472	0	**489**	-	450	0	0	**450**	-	989
% Lights and Motorcycles	98.0%	0%	0%	**98.0%**	-	89.5%	92.2%	0%	**92.1%**	-	93.8%	0%	0%	**93.8%**	-	93.1%
Heavy	1	0	0	**1**	-	2	40	0	**42**	-	30	0	0	**30**	-	73
% Heavy	2.0%	0%	0%	**2.0%**	-	10.5%	7.8%	0%	**7.9%**	-	6.3%	0%	0%	**6.3%**	-	6.9%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	4	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-

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

6111 Hazeldean Access - TMC

Tue Jan 20, 2026
Midday Peak (12:15 PM - 1:15 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1372651, Location: 45.270651, -75.933976

Provided by: Englobe Corp
565 Priestman Street, Suite 400,
Fredericton, NB, E3B 5X8, CA



6111 Hazeldean Access - TMC

Tue Jan 20, 2026
PM Peak (3:45 PM - 4:45 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1372651, Location: 45.270651, -75.933976

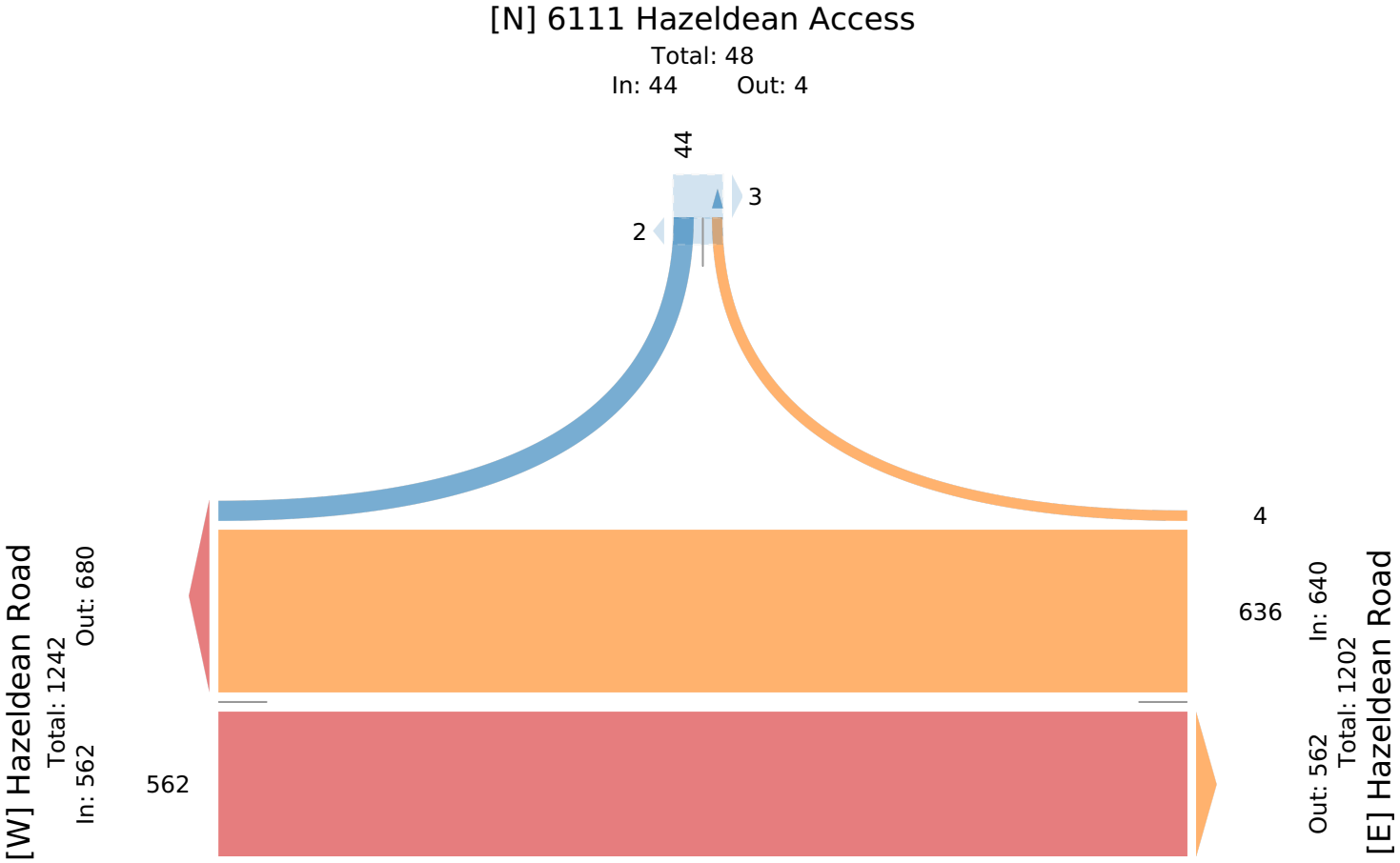
Provided by: Englobe Corp
565 Priestman Street, Suite 400,
Fredericton, NB, E3B 5X8, CA

Leg Direction	6111 Hazeldean Access Southbound					Hazeldean Road Westbound					Hazeldean Road Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
2026-01-20 3:45PM	18	0	0	**18**	1	0	187	0	**187**	0	130	0	0	**130**	0	**335**
4:00PM	5	0	0	**5**	2	0	151	0	**151**	0	157	0	0	**157**	0	**313**
4:15PM	8	0	0	**8**	0	2	150	0	**152**	0	132	0	0	**132**	0	**292**
4:30PM	13	0	0	**13**	2	2	148	0	**150**	0	143	0	0	**143**	0	**306**
Total	44	0	0	**44**	5	4	636	0	**640**	0	562	0	0	**562**	0	**1246**
% Approach	100%	0%	0%	**-**	-	0.6%	99.4%	0%	**-**	-	100%	0%	0%	**-**	-	-
% Total	3.5%	0%	0%	**3.5%**	-	0.3%	51.0%	0%	**51.4%**	-	45.1%	0%	0%	**45.1%**	-	-
PHF	0.611	-	-	**0.611**	-	0.500	0.850	-	**0.856**	-	0.895	-	-	**0.895**	-	0.930
Lights and Motorcycles	31	0	0	**31**	-	4	590	0	**594**	-	526	0	0	**526**	-	1151
% Lights and Motorcycles	70.5%	0%	0%	**70.5%**	-	100%	92.8%	0%	**92.8%**	-	93.6%	0%	0%	**93.6%**	-	92.4%
Heavy	13	0	0	**13**	-	0	46	0	**46**	-	36	0	0	**36**	-	95
% Heavy	29.5%	0%	0%	**29.5%**	-	0%	7.2%	0%	**7.2%**	-	6.4%	0%	0%	**6.4%**	-	7.6%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	5	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-

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

6111 Hazeldean Access - TMC
Tue Jan 20, 2026
PM Peak (3:45 PM - 4:45 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1372651, Location: 45.270651, -75.933976

Provided by: Englobe Corp
565 Priestman Street, Suite 400,
Fredericton, NB, E3B 5X8, CA



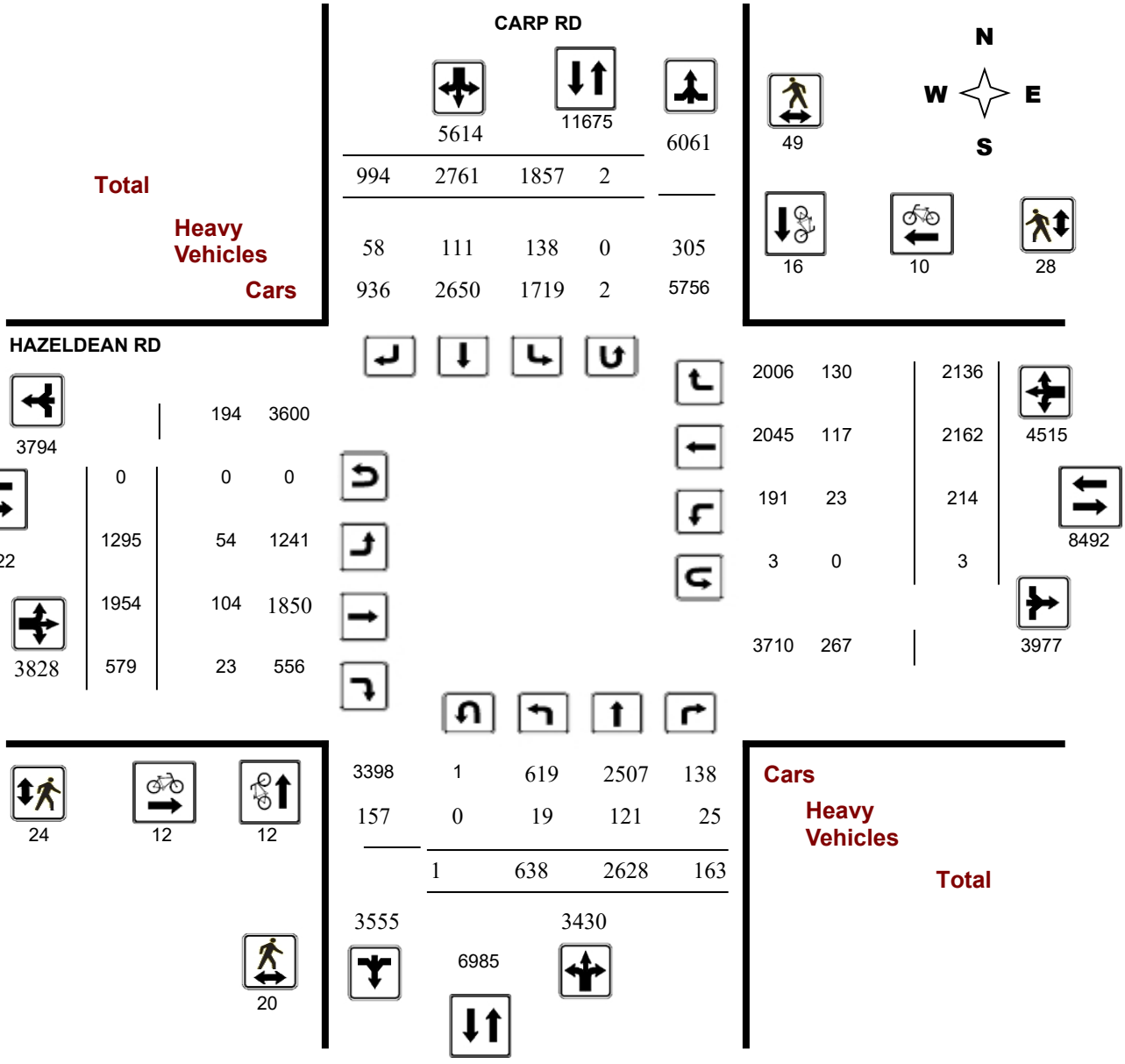
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ HAZELDEAN RD

Survey Date: Thursday, September 19, 2024
Start Time: 07:00
WO No: 42078
Device: Miovision

Full Study Diagram



Transportation Services - Traffic Services

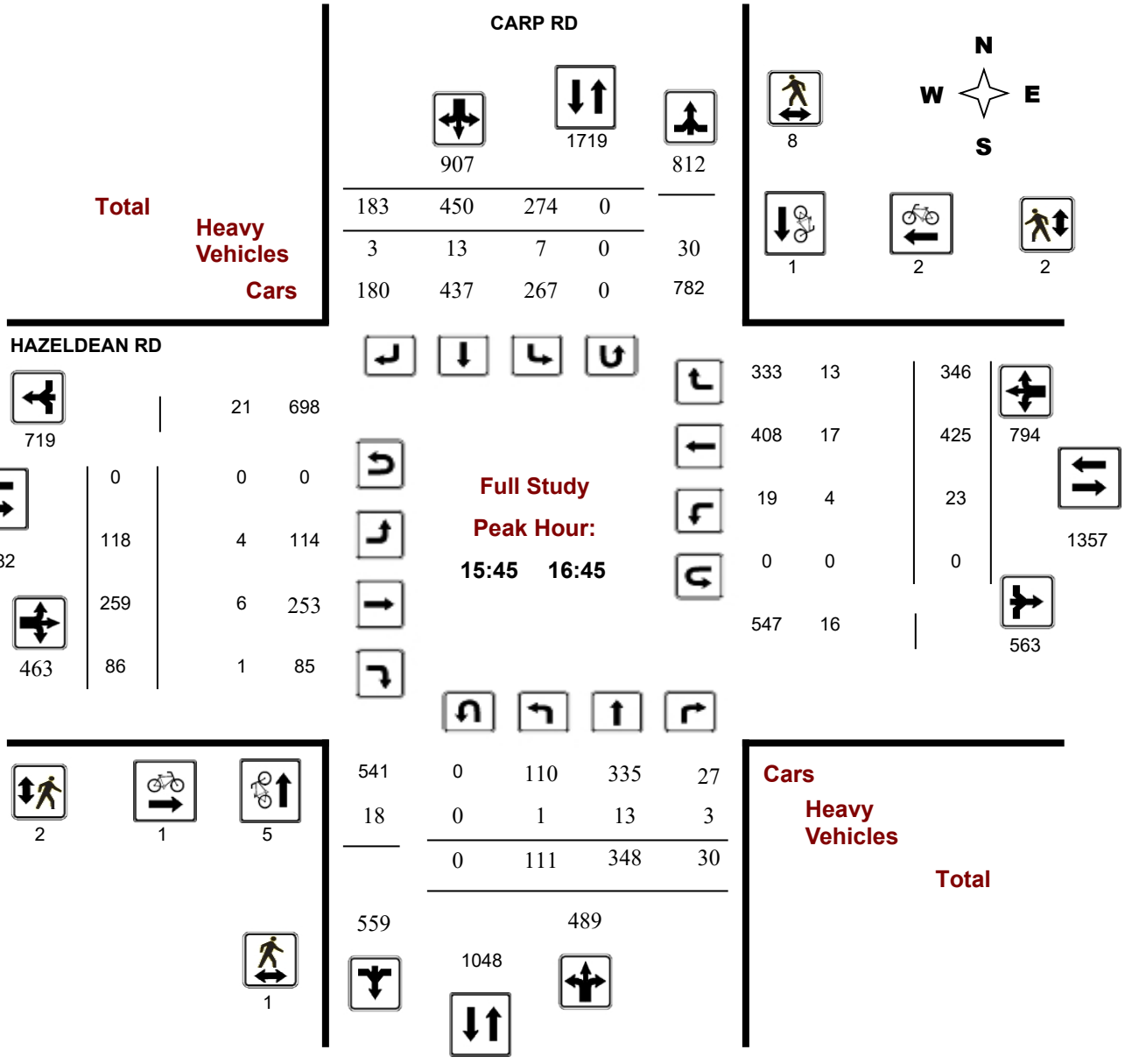
Turning Movement Count - Study Results

CARP RD @ HAZELDEAN RD

Survey Date: Thursday, September 19, 2024 **WO No:** 42078

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

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

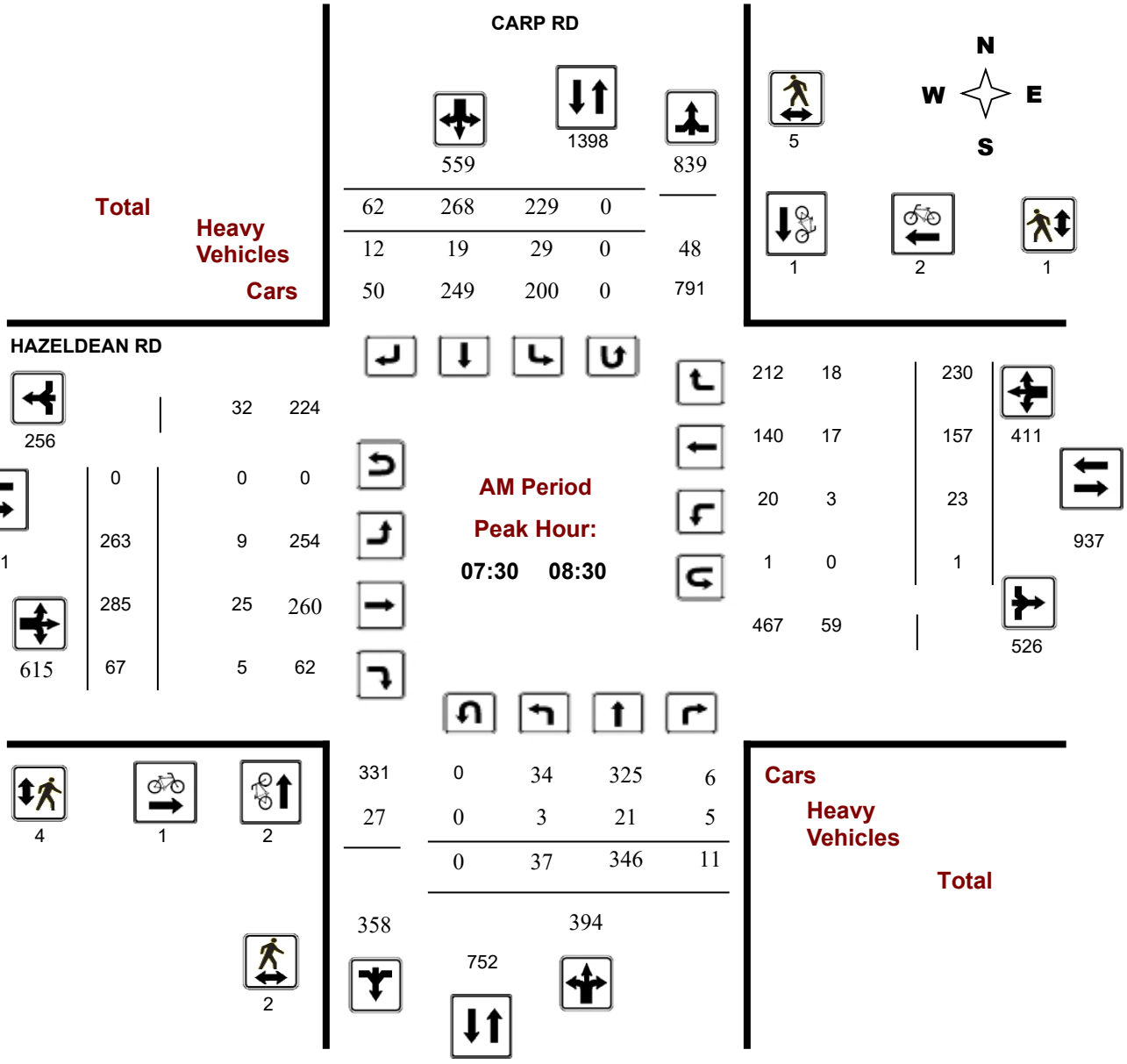
Turning Movement Count - Study Results

CARP RD @ HAZELDEAN RD

Survey Date: Thursday, September 19, 2024 **WO No:** 42078

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

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

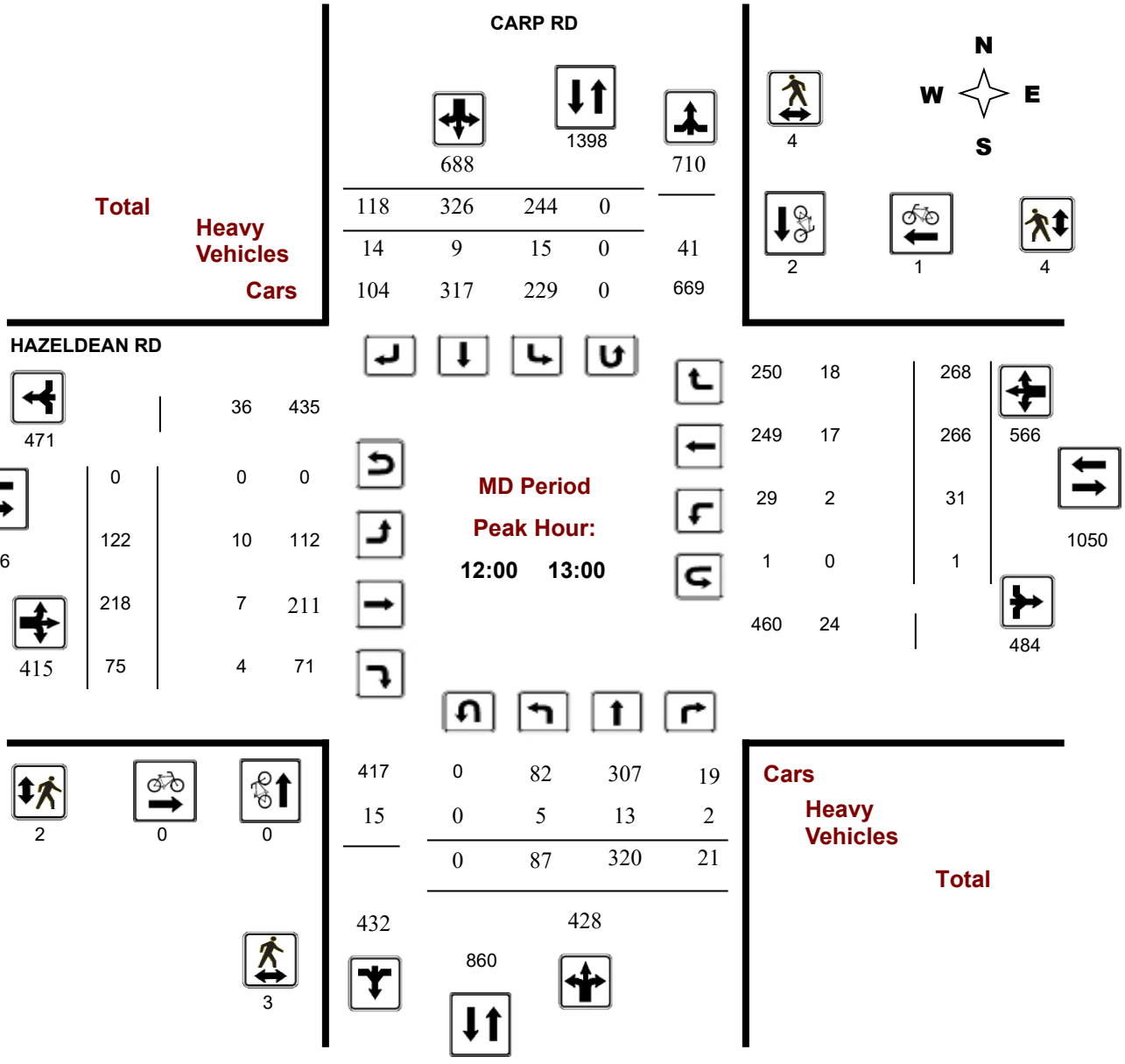
Turning Movement Count - Study Results

CARP RD @ HAZELDEAN RD

Survey Date: Thursday, September 19, 2024 **WO No:** 42078

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

MD Period Peak Hour Diagram



Transportation Services - Traffic Services

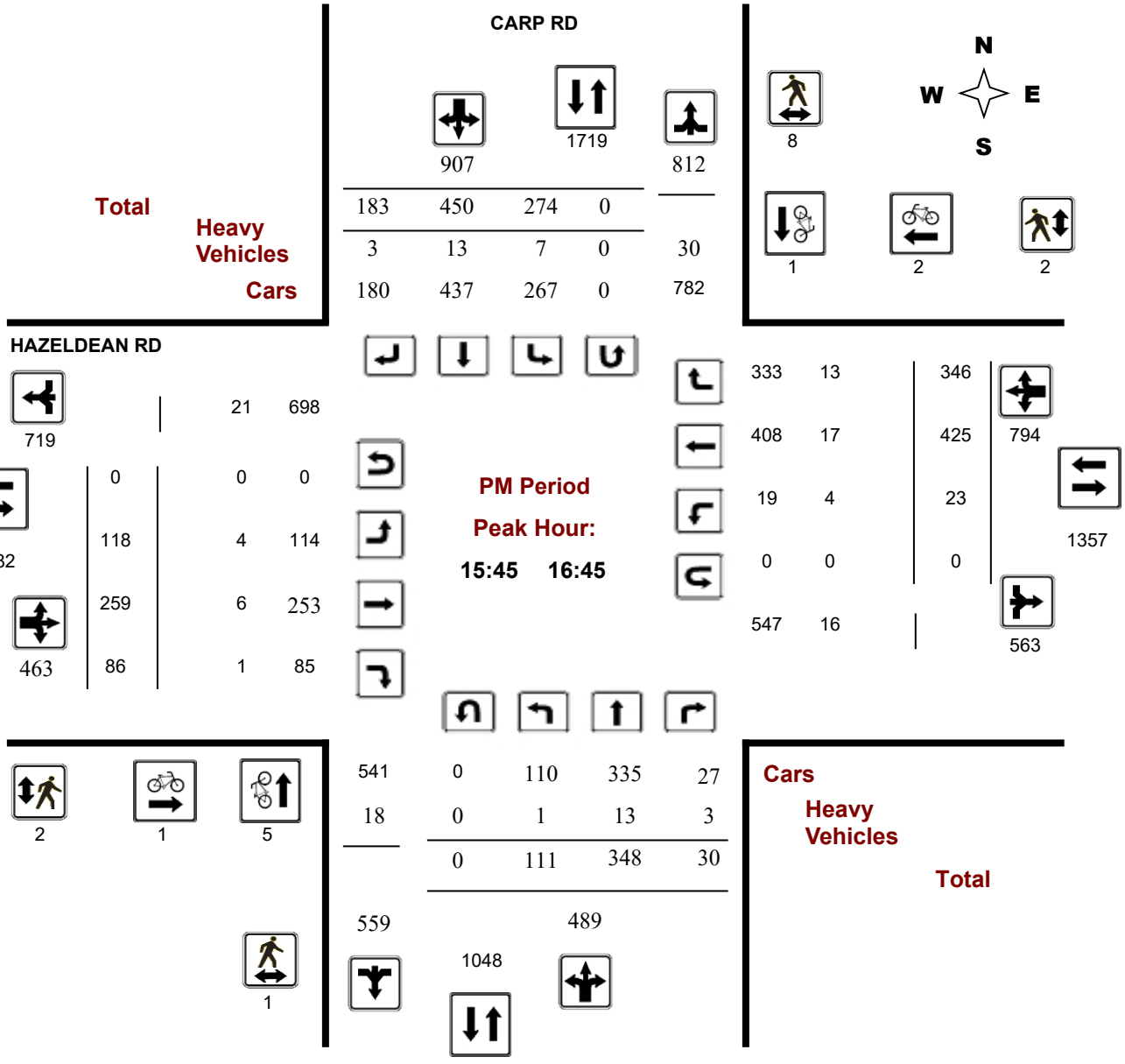
Turning Movement Count - Study Results

CARP RD @ HAZELDEAN RD

Survey Date: Thursday, September 19, 2024 **WO No:** 42078

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ HAZELDEAN RD

Survey Date: Thursday, September 19, 2024 **WO No:** 42078

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

Full Study Summary (8 HR Standard)

Survey Date: Thursday, September 19, 2024

Total Observed U-Turns

Northbound: 1 Southbound: 2

Eastbound: 0 Westbound: 3

AADT Factor

1.00

	CARP RD								HAZELDEAN 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	29	354	13	**396**	217	231	66	**514**	**910**	292	259	38	**589**	17	119	218	**354**	**943**	**1853**
08:00 09:00	43	353	8	**404**	179	274	65	**518**	**922**	208	246	77	**531**	17	176	232	**425**	**956**	**1878**
09:00 10:00	52	327	28	**407**	191	286	69	**546**	**953**	167	206	69	**442**	30	183	232	**445**	**887**	**1840**
11:30 12:30	86	315	15	**416**	240	331	101	**672**	**1088**	138	230	64	**432**	30	261	238	**529**	**961**	**2049**
12:30 13:30	87	321	22	**430**	232	321	115	**668**	**1098**	107	190	82	**379**	31	264	290	**585**	**964**	**2062**
15:00 16:00	114	316	34	**464**	258	420	179	**857**	**1321**	124	279	83	**486**	28	392	322	**742**	**1228**	**2549**
16:00 17:00	108	341	23	**472**	280	443	204	**927**	**1399**	138	257	74	**469**	24	408	333	**765**	**1234**	**2633**
17:00 18:00	119	301	20	**440**	260	455	195	**910**	**1350**	121	287	92	**500**	37	359	271	**667**	**1167**	**2517**
Sub Total	638	2628	163	**3429**	1857	2761	994	**5612**	**9041**	1295	1954	579	**3828**	214	2162	2136	**4512**	**8340**	**17381**
U Turns				**1**				**2**	**3**				**0**				**3**	**3**	**6**
Total	638	2628	163	**3430**	1857	2761	994	**5614**	**9044**	1295	1954	579	**3828**	214	2162	2136	**4515**	**8343**	**17387**
EQ 12Hr	887	3653	227	**4768**	2581	3838	1382	**7803**	**12571**	1800	2716	805	**5321**	297	3005	2969	**6276**	**11597**	**24168**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	887	3653	227	**4768**	2581	5028	1810	**7803**	**12571**	1800	2716	805	**5321**	297	3005	2969	**6276**	**11597**	**24168**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.00**					
AVG 24Hr	1162	4785	297	**6246**	3381	6587	2371	**10222**	**16468**	2358	3558	1055	**6971**	389	3937	3889	**8222**	**15192**	**31660**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ HAZELDEAN RD

Survey Date: Thursday, September 19, 2024 **WO No:** 42078

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

Full Study 15 Minute Increments

		CARP RD									HAZELDEAN RD									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	5	83	4	92	41	42	20	103	195	67	46	8	121	2	20	52	74	195	390
07:15	07:30	5	119	3	127	45	58	14	117	244	73	54	6	133	2	30	48	80	213	457
07:30	07:45	9	76	5	90	60	67	18	145	235	75	94	15	184	6	24	62	93	277	512
07:45	08:00	10	76	1	87	71	64	14	149	236	77	65	9	151	7	45	56	108	259	495
08:00	08:15	10	96	4	110	52	73	14	139	249	57	67	25	149	2	42	57	101	250	499
08:15	08:30	8	98	1	107	46	64	16	126	233	54	59	18	131	8	46	55	109	240	473
08:30	08:45	12	84	3	99	41	60	18	119	218	45	67	17	129	2	42	60	104	233	451
08:45	09:00	13	75	0	88	40	77	17	134	222	52	53	17	122	5	46	60	111	233	455
09:00	09:15	13	88	6	107	53	62	19	134	241	45	59	23	127	6	52	56	114	241	482
09:15	09:30	18	86	7	111	62	84	19	165	276	48	55	16	119	8	35	63	106	225	501
09:30	09:45	13	99	9	121	36	66	14	116	237	40	37	9	86	7	49	57	113	199	436
09:45	10:00	8	54	6	68	40	74	17	131	199	34	55	21	110	9	47	56	112	222	421
11:30	11:45	24	74	4	102	52	87	15	154	256	31	61	19	111	9	67	57	133	244	500
12:15	12:30	24	75	4	103	55	81	31	167	270	41	63	15	119	6	58	59	123	242	512
12:30	12:45	22	103	8	133	54	85	24	163	296	26	58	19	103	7	66	65	138	241	537
13:15	13:30	25	77	4	106	55	78	28	161	267	27	45	14	86	9	82	75	166	252	519
16:00	16:15	34	99	11	144	59	100	41	200	344	29	58	23	110	5	107	97	209	319	663
17:00	17:15	27	79	8	114	66	115	54	235	349	29	68	20	117	11	86	55	152	269	618
17:15	17:30	36	78	3	117	65	118	45	228	345	38	89	26	153	10	93	75	178	331	676
17:45	18:00	32	61	6	99	65	94	49	209	308	30	57	22	109	6	93	78	177	286	594
16:30	16:45	25	74	2	101	71	115	46	232	333	30	71	20	121	8	90	80	178	299	632
11:45	12:00	18	87	2	107	65	85	22	172	279	35	55	16	106	5	60	57	122	228	507
12:00	12:15	20	79	5	104	68	78	33	179	283	31	51	14	96	10	76	65	151	247	530
12:45	13:00	21	63	4	88	67	82	30	179	267	24	46	27	97	8	66	79	154	251	518
13:00	13:15	19	78	6	103	56	76	33	166	269	30	41	22	93	7	50	71	128	221	490
15:00	15:15	22	77	9	109	61	102	44	207	316	38	76	22	136	7	82	62	152	288	604
15:15	15:30	23	68	6	97	61	97	47	205	302	30	75	20	125	12	91	103	206	331	633
15:30	15:45	33	85	8	126	68	107	50	225	351	26	59	14	99	6	105	68	179	278	629
15:45	16:00	36	86	11	133	68	114	38	220	353	30	69	27	126	3	114	89	206	332	685
16:15	16:30	16	89	6	111	76	121	58	255	366	29	61	16	106	7	114	80	201	307	673
16:45	17:00	33	79	4	116	74	107	59	240	356	50	67	15	132	4	97	76	177	309	665
17:30	17:45	24	83	3	110	64	128	47	239	349	24	73	24	121	10	87	63	160	281	630
Total:		638	2628	163	3430	1857	2761	994	5614	9044	1295	1954	579	3828	214	2162	2136	4515	8343	17,387

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ HAZELDEAN RD

Survey Date: Thursday, September 19, 2024 **WO No:** 42078

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

Full Study Cyclist Volume

Time Period		CARP RD			HAZELDEAN RD			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	1	1	0	0	0	1
07:15	07:30	0	1	1	0	0	0	1
07:30	07:45	2	0	2	0	0	0	2
07:45	08:00	0	1	1	1	1	2	3
08:00	08:15	0	0	0	0	1	1	1
08:15	08:30	0	0	0	0	0	0	0
08:30	08:45	0	1	1	1	0	1	2
08:45	09:00	0	1	1	0	0	0	1
09:00	09:15	0	0	0	0	0	0	0
09:15	09:30	0	0	0	0	0	0	0
09:30	09:45	0	0	0	0	0	0	0
09:45	10:00	0	0	0	0	0	0	0
11:30	11:45	1	0	1	0	1	1	2
12:15	12:30	0	0	0	0	1	1	1
12:30	12:45	0	1	1	0	0	0	1
13:15	13:30	0	0	0	0	0	0	0
16:00	16:15	0	0	0	0	0	0	0
17:00	17:15	0	2	2	1	1	2	4
17:15	17:30	1	2	3	0	0	0	3
17:45	18:00	0	2	2	1	0	1	3
16:30	16:45	0	0	0	0	1	1	1
11:45	12:00	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0
12:45	13:00	0	1	1	0	0	0	1
13:00	13:15	0	1	1	2	0	2	3
15:00	15:15	2	0	2	0	0	0	2
15:15	15:30	0	0	0	1	0	1	1
15:30	15:45	0	0	0	0	0	0	0
15:45	16:00	5	0	5	0	1	1	6
16:15	16:30	0	1	1	1	0	1	2
16:45	17:00	1	1	2	2	1	3	5
17:30	17:45	0	0	0	2	2	4	4
Total		12	16	**28**	12	10	22	50

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ HAZELDEAN RD

Survey Date: Thursday, September 19, 2024 **WO No:** 42078

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

Full Study Pedestrian Volume

	CARP RD			HAZELDEAN RD			
Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	**Total**	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	**Total**	**Grand Total**
07:00 07:15	0	1	**1**	0	0	**0**	**1**
07:15 07:30	0	1	**1**	0	1	**1**	**2**
07:30 07:45	0	2	**2**	0	0	**0**	**2**
07:45 08:00	1	2	**3**	1	0	**1**	**4**
08:00 08:15	1	0	**1**	2	0	**2**	**3**
08:15 08:30	0	1	**1**	1	1	**2**	**3**
08:30 08:45	0	0	**0**	0	0	**0**	**0**
08:45 09:00	1	1	**2**	1	0	**1**	**3**
09:00 09:15	1	2	**3**	0	1	**1**	**4**
09:15 09:30	0	0	**0**	0	0	**0**	**0**
09:30 09:45	3	3	**6**	5	1	**6**	**12**
09:45 10:00	0	0	**0**	0	0	**0**	**0**
11:30 11:45	1	0	**1**	1	0	**1**	**2**
12:15 12:30	1	0	**1**	1	1	**2**	**3**
12:30 12:45	0	1	**1**	0	1	**1**	**2**
13:15 13:30	0	1	**1**	1	1	**2**	**3**
16:00 16:15	1	0	**1**	1	0	**1**	**2**
17:00 17:15	2	12	**14**	2	3	**5**	**19**
17:15 17:30	0	0	**0**	2	2	**4**	**4**
17:45 18:00	1	1	**2**	0	0	**0**	**2**
16:30 16:45	0	3	**3**	1	0	**1**	**4**
11:45 12:00	1	0	**1**	3	3	**6**	**7**
12:00 12:15	0	3	**3**	0	2	**2**	**5**
12:45 13:00	2	0	**2**	1	0	**1**	**3**
13:00 13:15	0	1	**1**	0	0	**0**	**1**
15:00 15:15	1	5	**6**	0	0	**0**	**6**
15:15 15:30	1	1	**2**	0	1	**1**	**3**
15:30 15:45	0	0	**0**	0	3	**3**	**3**
15:45 16:00	0	3	**3**	0	1	**1**	**4**
16:15 16:30	0	2	**2**	0	1	**1**	**3**
16:45 17:00	1	2	**3**	1	4	**5**	**8**
17:30 17:45	1	1	**2**	0	1	**1**	**3**
Total	20	49	**69**	24	28	**52**	**121**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ HAZELDEAN RD

Survey Date: Thursday, September 19, 2024 **WO No:** 42078

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

Full Study Heavy Vehicles

		CARP RD									HAZELDEAN RD									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
07:00	07:15	0	3	1	**4**	11	4	3	**18**	**22**	2	5	1	**8**	1	3	3	**7**	**15**	**37**
07:15	07:30	1	4	2	**7**	11	9	0	**20**	**27**	1	4	0	**5**	0	10	1	**11**	**16**	**43**
07:30	07:45	0	5	3	**8**	7	5	4	**16**	**24**	1	12	1	**14**	1	2	3	**6**	**20**	**44**
07:45	08:00	1	7	1	**9**	9	2	3	**14**	**23**	2	2	2	**6**	0	7	4	**11**	**17**	**40**
08:00	08:15	2	5	1	**8**	6	8	2	**16**	**24**	3	5	2	**10**	1	6	5	**12**	**22**	**46**
08:15	08:30	0	4	0	**4**	7	4	3	**14**	**18**	3	6	0	**9**	1	2	6	**9**	**18**	**36**
08:30	08:45	0	5	2	**7**	4	5	0	**9**	**16**	2	5	2	**9**	0	4	7	**11**	**20**	**36**
08:45	09:00	0	5	0	**5**	5	1	3	**9**	**14**	1	7	2	**10**	2	3	4	**9**	**19**	**33**
09:00	09:15	1	4	1	**6**	4	2	1	**7**	**13**	2	2	2	**6**	1	5	4	**10**	**16**	**29**
09:15	09:30	2	9	1	**12**	1	5	2	**8**	**20**	2	4	1	**7**	0	4	8	**12**	**19**	**39**
09:30	09:45	1	4	2	**7**	3	2	3	**8**	**15**	1	4	2	**7**	1	6	4	**11**	**18**	**33**
09:45	10:00	1	5	0	**6**	3	2	1	**6**	**12**	2	5	0	**7**	0	6	4	**10**	**17**	**29**
11:30	11:45	0	5	1	**6**	5	8	1	**14**	**20**	6	1	0	**7**	0	3	5	**8**	**15**	**35**
12:15	12:30	1	1	0	**2**	2	1	3	**6**	**8**	4	2	0	**6**	0	3	4	**7**	**13**	**21**
12:30	12:45	2	6	1	**9**	2	1	1	**4**	**13**	5	2	0	**7**	1	2	6	**9**	**16**	**29**
13:15	13:30	0	4	0	**4**	5	9	2	**16**	**20**	1	4	0	**5**	0	1	9	**10**	**15**	**35**
16:00	16:15	0	5	2	**7**	0	2	0	**2**	**9**	2	0	0	**2**	0	6	1	**7**	**9**	**18**
17:00	17:15	0	3	1	**4**	2	3	1	**6**	**10**	0	2	1	**3**	1	1	3	**5**	**8**	**18**
17:15	17:30	0	3	0	**3**	2	1	0	**3**	**6**	1	1	0	**2**	0	0	2	**2**	**4**	**10**
17:45	18:00	1	2	1	**4**	1	0	0	**1**	**5**	0	0	0	**0**	1	0	1	**2**	**2**	**7**
16:30	16:45	0	5	0	**5**	2	2	1	**5**	**10**	0	2	0	**2**	1	3	4	**8**	**10**	**20**
11:45	12:00	2	4	0	**6**	6	3	2	**11**	**17**	0	2	0	**2**	1	3	5	**9**	**11**	**28**
12:00	12:15	1	5	1	**7**	7	4	5	**16**	**23**	1	0	0	**1**	1	7	5	**13**	**14**	**37**
12:45	13:00	1	1	0	**2**	4	3	5	**12**	**14**	0	3	4	**7**	0	5	3	**8**	**15**	**29**
13:00	13:15	0	5	1	**6**	9	0	1	**10**	**16**	2	3	0	**5**	2	4	2	**8**	**13**	**29**
15:00	15:15	0	1	0	**1**	8	1	4	**13**	**14**	2	4	1	**7**	1	3	3	**7**	**14**	**28**
15:15	15:30	0	0	0	**0**	3	6	1	**10**	**10**	3	5	0	**8**	0	4	6	**10**	**18**	**28**
15:30	15:45	0	4	1	**5**	2	4	3	**9**	**14**	0	5	1	**6**	0	4	5	**9**	**15**	**29**
15:45	16:00	1	2	1	**4**	4	4	1	**9**	**13**	0	3	1	**4**	0	5	3	**8**	**12**	**25**
16:15	16:30	0	1	0	**1**	1	5	1	**7**	**8**	2	1	0	**3**	3	3	5	**11**	**14**	**22**
16:45	17:00	1	2	1	**4**	2	3	0	**5**	**9**	1	2	0	**3**	1	1	4	**6**	**9**	**18**
17:30	17:45	0	2	0	**2**	0	2	1	**3**	**5**	2	1	0	**3**	2	1	1	**4**	**7**	**12**
Total:	None	19	121	25	**165**	138	111	58	**307**	**472**	54	104	23	**181**	23	117	130	**270**	**451**	**923**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ HAZELDEAN RD

Survey Date: Thursday, September 19, 2024 **WO No:** 42078

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

Full Study 15 Minute U-Turn Total

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

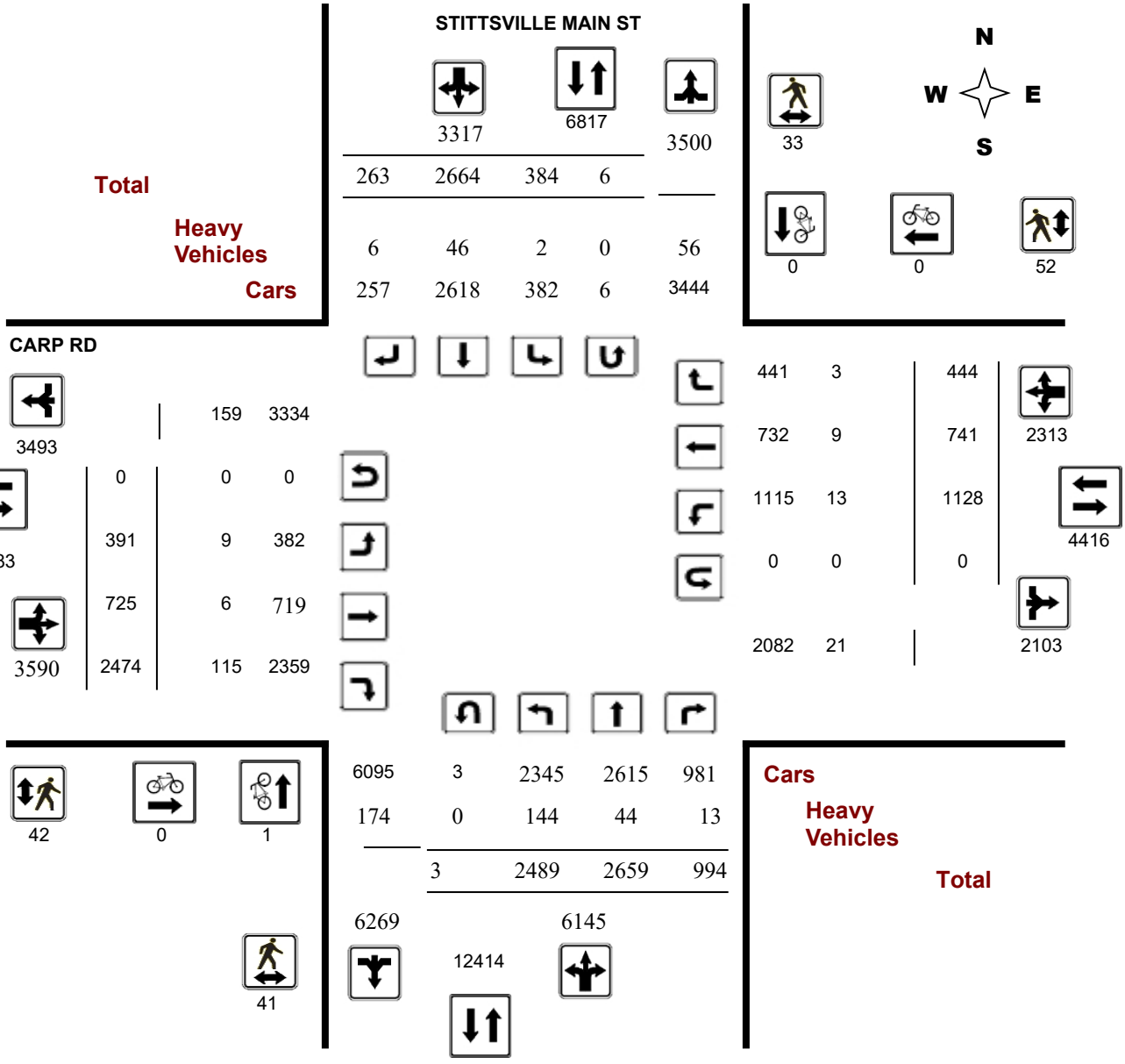
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ STITTSVILLE MAIN ST

Survey Date: Wednesday, December 20, 2023
Start Time: 07:00
WO No: 41411
Device: Miovision

Full Study Diagram



Transportation Services - Traffic Services

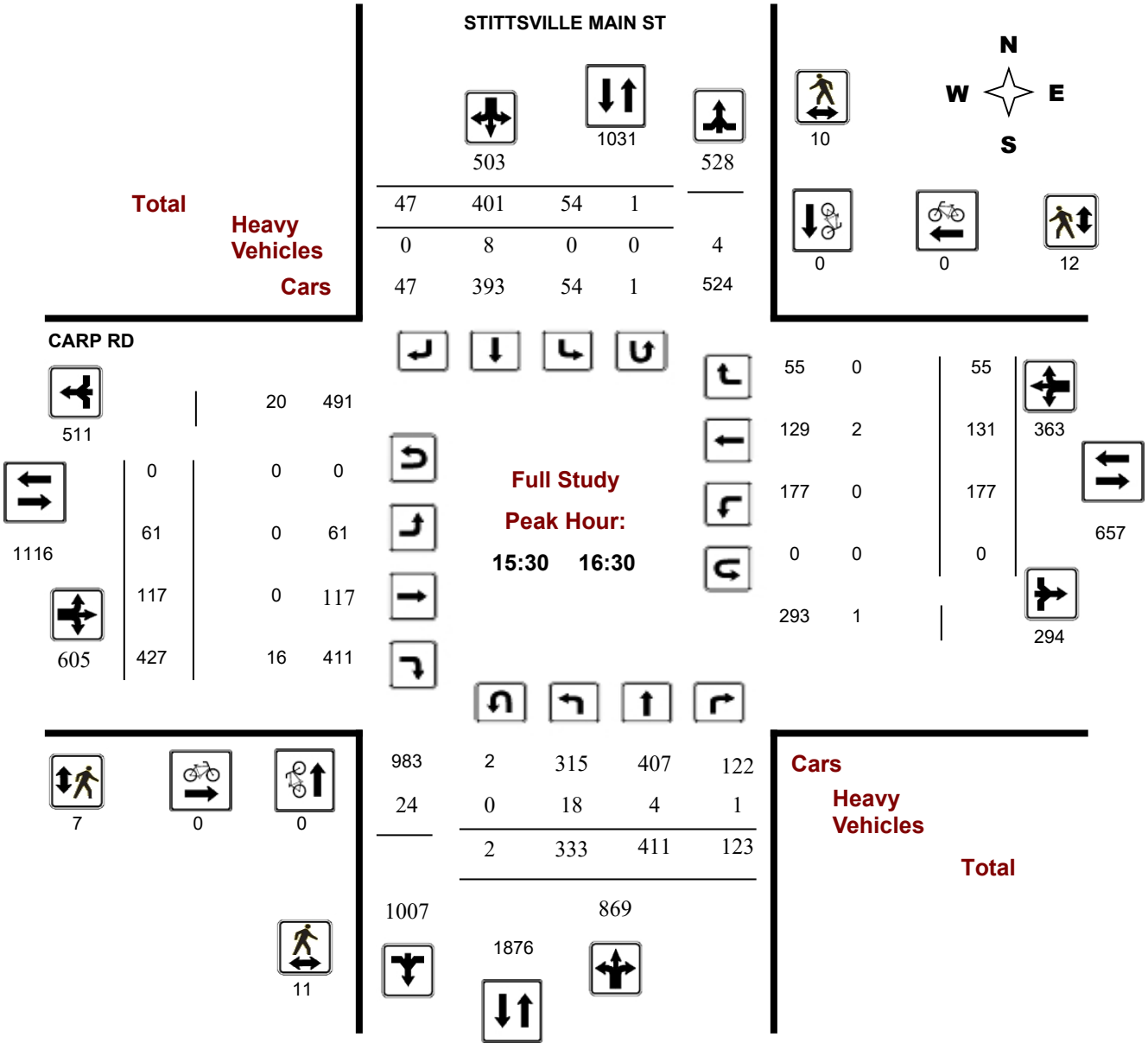
Turning Movement Count - Study Results

CARP RD @ STITTSVILLE MAIN ST

Survey Date: Wednesday, December 20, 2023 **WO No:** 41411

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

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

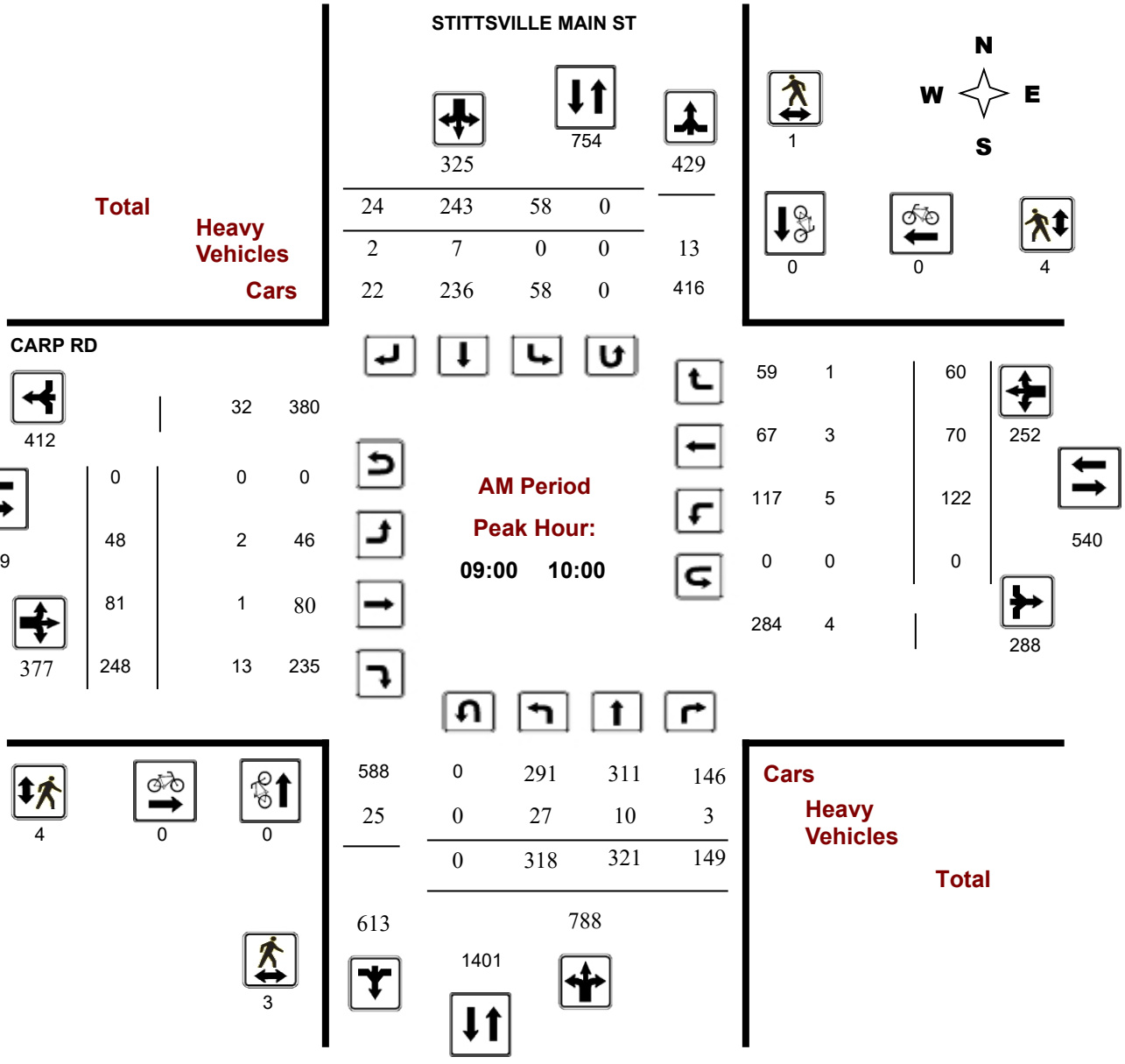
Turning Movement Count - Study Results

CARP RD @ STITTSVILLE MAIN ST

Survey Date: Wednesday, December 20, 2023 **WO No:** 41411

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

AM Period Peak Hour Diagram



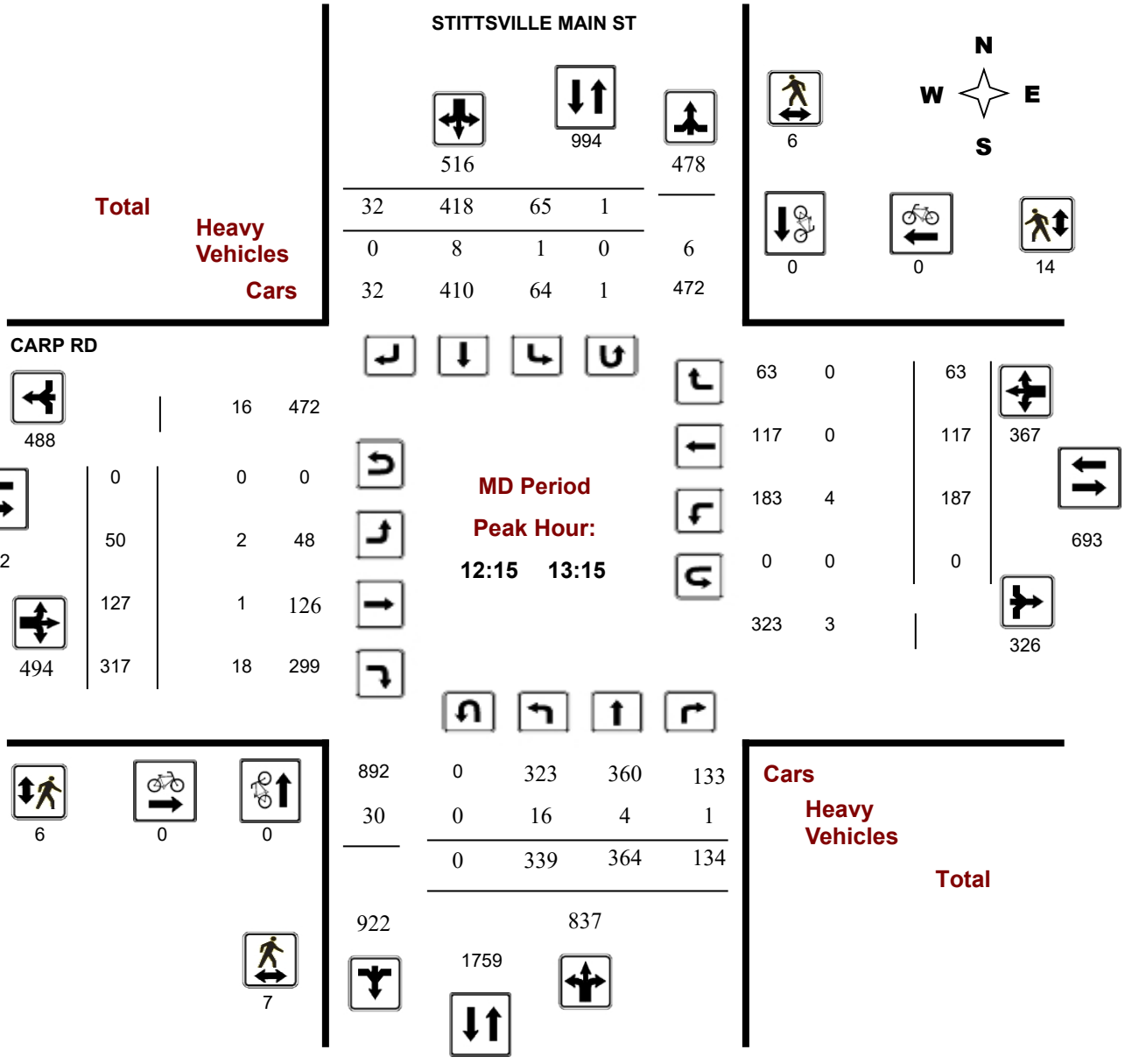
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ STITTSVILLE MAIN ST

Survey Date: Wednesday, December 20, 2023
Start Time: 07:00
WO No: 41411
Device: Miovision

MD Period Peak Hour Diagram



Transportation Services - Traffic Services

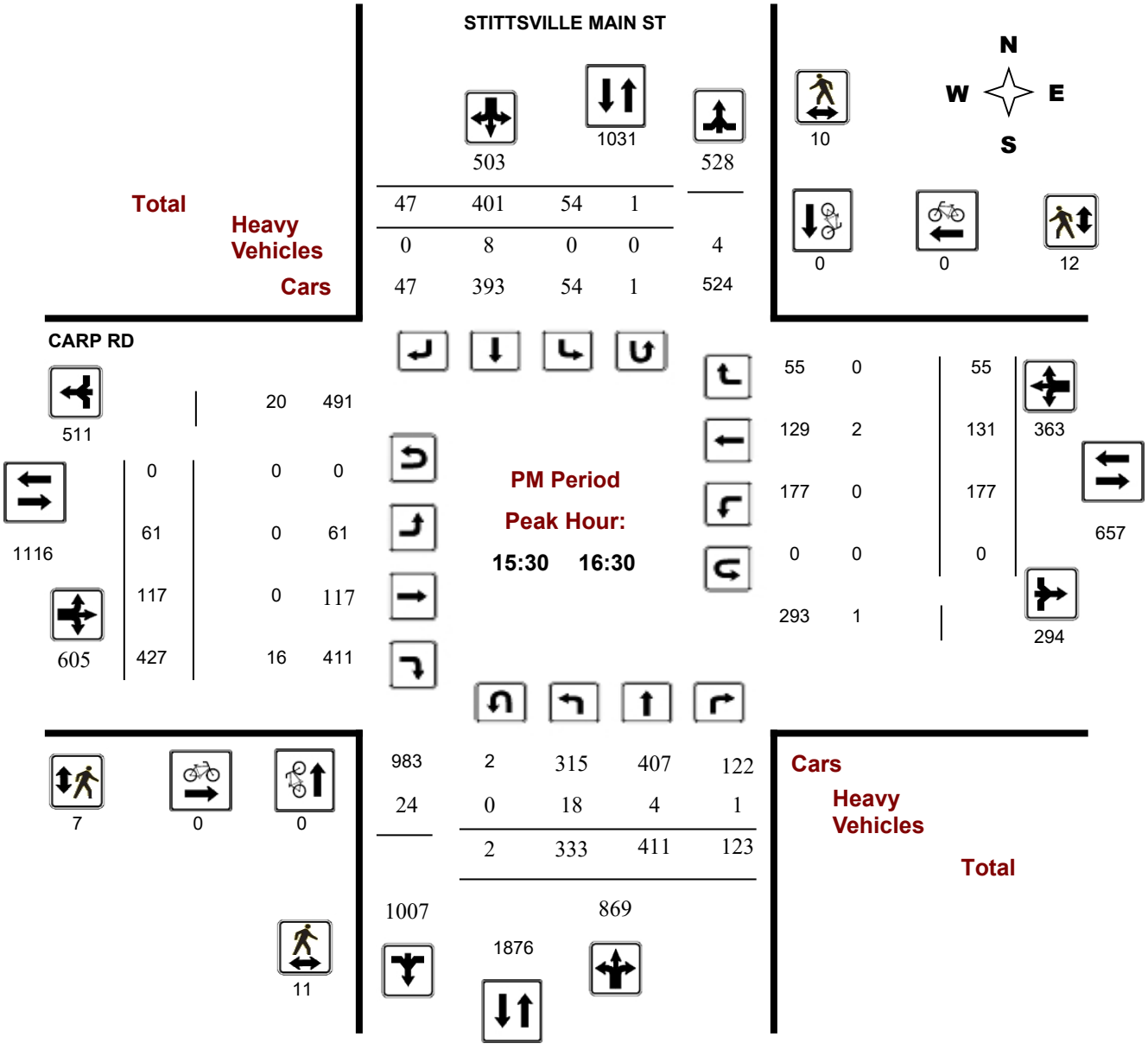
Turning Movement Count - Study Results

CARP RD @ STITTSVILLE MAIN ST

Survey Date: Wednesday, December 20, 2023 **WO No:** 41411

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ STITTSVILLE MAIN ST

Survey Date: Wednesday, December 20, 2023 **WO No:** 41411

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

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, December 20, 2023

Total Observed U-Turns

Northbound: 3 Southbound: 6

Eastbound: 0 Westbound: 0

AADT Factor

1.00

	STITTSVILLE MAIN ST								CARP 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	248	218	100	**566**	22	150	16	**188**	**754**	25	44	186	**255**	43	44	29	**116**	**371**	**1125**
08:00 09:00	310	294	128	**732**	33	210	15	**258**	**990**	31	74	248	**353**	95	63	44	**202**	**555**	**1545**
09:00 10:00	318	321	149	**788**	58	243	24	**325**	**1113**	48	81	248	**377**	122	70	60	**252**	**629**	**1742**
11:30 12:30	295	380	129	**804**	63	388	28	**479**	**1283**	67	107	315	**489**	168	124	79	**371**	**860**	**2143**
12:30 13:30	335	376	135	**846**	61	414	34	**509**	**1355**	57	117	313	**487**	166	102	64	**332**	**819**	**2174**
15:00 16:00	305	367	117	**789**	51	387	59	**497**	**1286**	60	103	415	**578**	178	121	58	**357**	**935**	**2221**
16:00 17:00	340	353	122	**815**	56	424	40	**520**	**1335**	49	114	393	**556**	176	119	57	**352**	**908**	**2243**
17:00 18:00	338	350	114	**802**	40	448	47	**535**	**1337**	54	85	356	**495**	180	98	53	**331**	**826**	**2163**
Sub Total	2489	2659	994	**6142**	384	2664	263	**3311**	**9453**	391	725	2474	**3590**	1128	741	444	**2313**	**5903**	**15356**
U Turns				**3**				**6**	**9**				**0**				**0**	**0**	**9**
Total	2489	2659	994	**6145**	384	2664	263	**3317**	**9462**	391	725	2474	**3590**	1128	741	444	**2313**	**5903**	**15365**
EQ 12Hr	3460	3696	1382	**8542**	534	3703	366	**4611**	**13152**	543	1008	3439	**4990**	1568	1030	617	**3215**	**8205**	**21357**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	3460	3696	1382	**8542**	534	4851	479	**4611**	**13152**	543	1008	3439	**4990**	1568	1030	617	**3215**	**8205**	**21357**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.00**					
AVG 24Hr	4533	4842	1810	**11190**	700	6355	627	**6040**	**17229**	711	1320	4505	**6537**	2054	1349	808	**4212**	**10749**	**27978**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ STITTSVILLE MAIN ST

Survey Date: Wednesday, December 20, 2023 **WO No:** 41411

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

Full Study 15 Minute Increments

		STITTSVILLE MAIN ST									CARP RD									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
09:30	09:45	77	87	35	199	14	54	7	75	274	7	18	61	86	28	23	18	69	155	429
09:45	10:00	84	99	37	220	19	69	9	97	317	13	22	57	92	28	21	19	68	160	477
11:30	11:45	76	89	32	198	14	95	8	117	315	23	23	86	132	46	21	19	86	218	533
11:45	12:00	73	106	27	206	14	96	8	118	324	18	27	88	133	37	30	24	91	224	548
12:00	12:15	63	101	44	208	19	88	6	113	321	18	26	62	106	33	34	18	85	191	512
12:15	12:30	83	84	26	193	16	109	6	131	324	8	31	79	118	52	39	18	109	227	551
12:30	12:45	80	78	38	196	16	104	10	130	326	14	31	90	135	49	29	19	97	232	558
12:45	13:00	89	111	30	230	14	92	6	113	343	12	29	82	123	45	24	13	82	205	548
13:00	13:15	87	91	40	218	19	113	10	142	360	16	36	66	118	41	25	13	79	197	557
13:15	13:30	79	96	27	202	12	105	8	125	327	15	21	75	111	31	24	19	74	185	512
15:00	15:15	68	91	32	191	16	98	13	127	318	8	26	99	133	38	31	18	87	220	538
15:15	15:30	75	81	22	178	18	105	17	141	319	17	20	104	141	51	23	10	84	225	544
15:30	15:45	88	84	31	205	14	87	17	118	323	13	28	106	147	50	32	14	96	243	566
15:45	16:00	74	111	32	217	3	97	12	113	330	22	29	106	157	39	35	16	90	247	577
16:00	16:15	97	117	27	241	20	107	9	136	377	14	34	116	164	33	37	13	83	247	624
16:15	16:30	74	99	33	206	17	110	9	136	342	12	26	99	137	55	27	12	94	231	573
16:30	16:45	90	72	32	194	11	109	10	130	324	14	34	84	132	39	27	15	81	213	537
16:45	17:00	79	65	30	174	8	98	12	118	292	9	20	94	123	49	28	17	94	217	509
17:00	17:15	91	81	35	207	10	111	12	134	341	16	23	96	135	46	27	20	93	228	569
17:15	17:30	70	92	32	194	13	116	11	140	334	11	22	86	119	52	33	15	100	219	553
17:30	17:45	100	80	22	202	6	109	13	129	331	9	22	87	118	38	24	11	73	191	522
17:45	18:00	77	97	25	199	11	112	11	134	333	18	18	87	123	44	14	7	65	188	521
07:00	07:15	48	36	23	107	5	18	6	29	136	6	5	29	40	8	10	11	29	69	205
07:15	07:30	48	35	23	106	8	36	3	47	153	5	13	42	60	13	11	7	31	91	244
07:30	07:45	68	64	26	158	3	48	3	54	212	6	7	53	66	13	14	4	31	97	309
07:45	08:00	84	83	28	195	6	48	4	59	254	8	19	62	89	9	9	7	25	114	368
08:00	08:15	70	78	36	184	4	38	5	47	231	6	14	50	70	21	17	14	52	122	353
08:15	08:30	78	78	23	179	6	57	2	65	244	9	12	76	97	24	17	11	52	149	393
08:30	08:45	75	71	33	179	15	53	3	71	250	7	22	54	83	20	10	9	39	122	372
08:45	09:00	87	67	36	190	8	62	5	75	265	9	26	68	103	30	19	10	59	162	427
09:00	09:15	76	53	36	165	13	52	3	68	233	17	17	72	106	28	11	12	51	157	390
09:15	09:30	81	82	41	204	12	68	5	85	289	11	24	58	93	38	15	11	64	157	446
Total:		2489	2659	994	6145	384	2664	263	3317	9462	391	725	2474	3590	1128	741	444	2313	5903	15,365

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ STITTSVILLE MAIN ST

Survey Date: Wednesday, December 20, 2023 **WO No:** 41411

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

Full Study Cyclist Volume

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ STITTSVILLE MAIN ST

Survey Date: Wednesday, December 20, 2023 **WO No:** 41411

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

Full Study Pedestrian Volume

STITTSVILLE MAIN ST **CARP RD**

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
09:30 09:45	1	0	**1**	2	0	**2**	**3**
09:45 10:00	2	1	**3**	2	3	**5**	**8**
11:30 11:45	3	2	**5**	3	2	**5**	**10**
11:45 12:00	0	1	**1**	3	2	**5**	**6**
12:00 12:15	3	3	**6**	1	5	**6**	**12**
12:15 12:30	3	1	**4**	0	3	**3**	**7**
12:30 12:45	0	0	**0**	0	6	**6**	**6**
12:45 13:00	4	4	**8**	0	4	**4**	**12**
13:00 13:15	0	1	**1**	6	1	**7**	**8**
13:15 13:30	0	0	**0**	0	0	**0**	**0**
15:00 15:15	2	1	**3**	1	1	**2**	**5**
15:15 15:30	3	1	**4**	0	0	**0**	**4**
15:30 15:45	0	2	**2**	2	4	**6**	**8**
15:45 16:00	3	3	**6**	3	2	**5**	**11**
16:00 16:15	4	3	**7**	1	4	**5**	**12**
16:15 16:30	4	2	**6**	1	2	**3**	**9**
16:30 16:45	0	0	**0**	1	0	**1**	**1**
16:45 17:00	3	1	**4**	0	1	**1**	**5**
17:00 17:15	2	1	**3**	2	2	**4**	**7**
17:15 17:30	0	0	**0**	0	0	**0**	**0**
17:30 17:45	2	1	**3**	1	1	**2**	**5**
17:45 18:00	0	1	**1**	4	0	**4**	**5**
07:00 07:15	0	0	**0**	3	0	**3**	**3**
07:15 07:30	1	1	**2**	2	0	**2**	**4**
07:30 07:45	1	0	**1**	1	2	**3**	**4**
07:45 08:00	0	0	**0**	0	2	**2**	**2**
08:00 08:15	0	1	**1**	0	1	**1**	**2**
08:15 08:30	0	0	**0**	1	1	**2**	**2**
08:30 08:45	0	0	**0**	1	0	**1**	**1**
08:45 09:00	0	2	**2**	1	2	**3**	**5**
09:00 09:15	0	0	**0**	0	0	**0**	**0**
09:15 09:30	0	0	**0**	0	1	**1**	**1**
Total	41	33	**74**	42	52	**94**	**168**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ STITTSVILLE MAIN ST

Survey Date: Wednesday, December 20, 2023 **WO No:** 41411

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

Full Study Heavy Vehicles

		STITTSVILLE MAIN ST									CARP RD									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
09:30	09:45	6	5	0	**11**	0	1	1	**2**	**13**	0	0	4	**4**	2	1	1	**4**	**8**	**21**
09:45	10:00	5	0	0	**5**	0	1	1	**2**	**7**	0	1	5	**6**	1	1	0	**2**	**8**	**15**
11:30	11:45	8	0	0	**8**	0	2	1	**3**	**11**	1	1	4	**6**	1	1	0	**2**	**8**	**19**
11:45	12:00	4	1	1	**6**	0	0	0	**0**	**6**	0	0	5	**5**	1	0	0	**1**	**6**	**12**
12:00	12:15	3	1	0	**4**	0	1	0	**1**	**5**	1	0	3	**4**	0	0	0	**0**	**4**	**9**
12:15	12:30	7	0	1	**8**	1	1	0	**2**	**10**	0	1	4	**5**	0	0	0	**0**	**5**	**15**
12:30	12:45	3	1	0	**4**	0	0	0	**0**	**4**	0	0	10	**10**	3	0	0	**3**	**13**	**17**
12:45	13:00	2	2	0	**4**	0	1	0	**1**	**5**	1	0	3	**4**	1	0	0	**1**	**5**	**10**
13:00	13:15	4	1	0	**5**	0	6	0	**6**	**11**	1	0	1	**2**	0	0	0	**0**	**2**	**13**
13:15	13:30	5	2	2	**9**	0	0	0	**0**	**9**	1	0	5	**6**	0	0	0	**0**	**6**	**15**
15:00	15:15	8	3	0	**11**	0	1	0	**1**	**12**	0	1	3	**4**	0	0	0	**0**	**4**	**16**
15:15	15:30	3	1	1	**5**	1	0	1	**2**	**7**	0	0	2	**2**	0	0	1	**1**	**3**	**10**
15:30	15:45	9	0	0	**9**	0	3	0	**3**	**12**	0	0	5	**5**	0	1	0	**1**	**6**	**18**
15:45	16:00	2	1	0	**3**	0	5	0	**5**	**8**	0	0	2	**2**	0	1	0	**1**	**3**	**11**
16:00	16:15	3	1	0	**4**	0	0	0	**0**	**4**	0	0	4	**4**	0	0	0	**0**	**4**	**8**
16:15	16:30	4	2	1	**7**	0	0	0	**0**	**7**	0	0	5	**5**	0	0	0	**0**	**5**	**12**
16:30	16:45	7	2	0	**9**	0	0	0	**0**	**9**	0	0	0	**0**	0	0	0	**0**	**0**	**9**
16:45	17:00	0	1	0	**1**	0	0	0	**0**	**1**	0	0	3	**3**	0	0	0	**0**	**3**	**4**
17:00	17:15	2	1	0	**3**	0	0	0	**0**	**3**	0	0	1	**1**	0	0	0	**0**	**1**	**4**
17:15	17:30	2	0	0	**2**	0	0	0	**0**	**2**	0	0	0	**0**	0	0	0	**0**	**0**	**2**
17:30	17:45	1	0	0	**1**	0	0	0	**0**	**1**	0	0	5	**5**	0	0	0	**0**	**5**	**6**
17:45	18:00	0	0	0	**0**	0	1	0	**1**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
07:00	07:15	3	3	0	**6**	0	2	1	**3**	**9**	1	1	7	**9**	1	0	0	**1**	**10**	**19**
07:15	07:30	5	4	0	**9**	0	3	0	**3**	**12**	1	0	6	**7**	1	1	0	**2**	**9**	**21**
07:30	07:45	1	0	1	**2**	0	6	0	**6**	**8**	0	0	7	**7**	0	0	0	**0**	**7**	**15**
07:45	08:00	10	1	1	**12**	0	0	0	**0**	**12**	0	0	7	**7**	0	0	0	**0**	**7**	**19**
08:00	08:15	7	4	1	**12**	0	0	0	**0**	**12**	0	0	2	**2**	0	1	0	**1**	**3**	**15**
08:15	08:30	6	2	1	**9**	0	1	1	**2**	**11**	0	0	5	**5**	0	1	0	**1**	**6**	**17**
08:30	08:45	5	0	0	**5**	0	5	0	**5**	**10**	0	0	2	**2**	0	0	1	**1**	**3**	**13**
08:45	09:00	3	0	0	**3**	0	1	0	**1**	**4**	0	1	1	**2**	0	0	0	**0**	**2**	**6**
09:00	09:15	3	2	1	**6**	0	2	0	**2**	**8**	1	0	2	**3**	2	0	0	**2**	**5**	**13**
09:15	09:30	13	3	2	**18**	0	3	0	**3**	**21**	1	0	2	**3**	0	1	0	**1**	**4**	**25**
Total:	None	144	44	13	**201**	2	46	6	**54**	**255**	9	6	115	**130**	13	9	3	**25**	**155**	**410**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARP RD @ STITTSVILLE MAIN ST

Survey Date: Wednesday, December 20, 2023 **WO No:** 41411

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

Full Study 15 Minute U-Turn Total

		STITTSVILLE MAIN ST		CARP RD		
Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	1	0	0	0	1
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	1	0	0	1
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	1	0	0	1
15:30	15:45	2	0	0	0	2
15:45	16:00	0	1	0	0	1
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:00	17:15	0	1	0	0	1
17:15	17:30	0	0	0	0	0
17:30	17:45	0	1	0	0	1
17:45	18:00	0	0	0	0	0
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	1	0	0	1
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
Total		3	6	0	0	9

Appendix D
Transit Routes

ENGLOBE

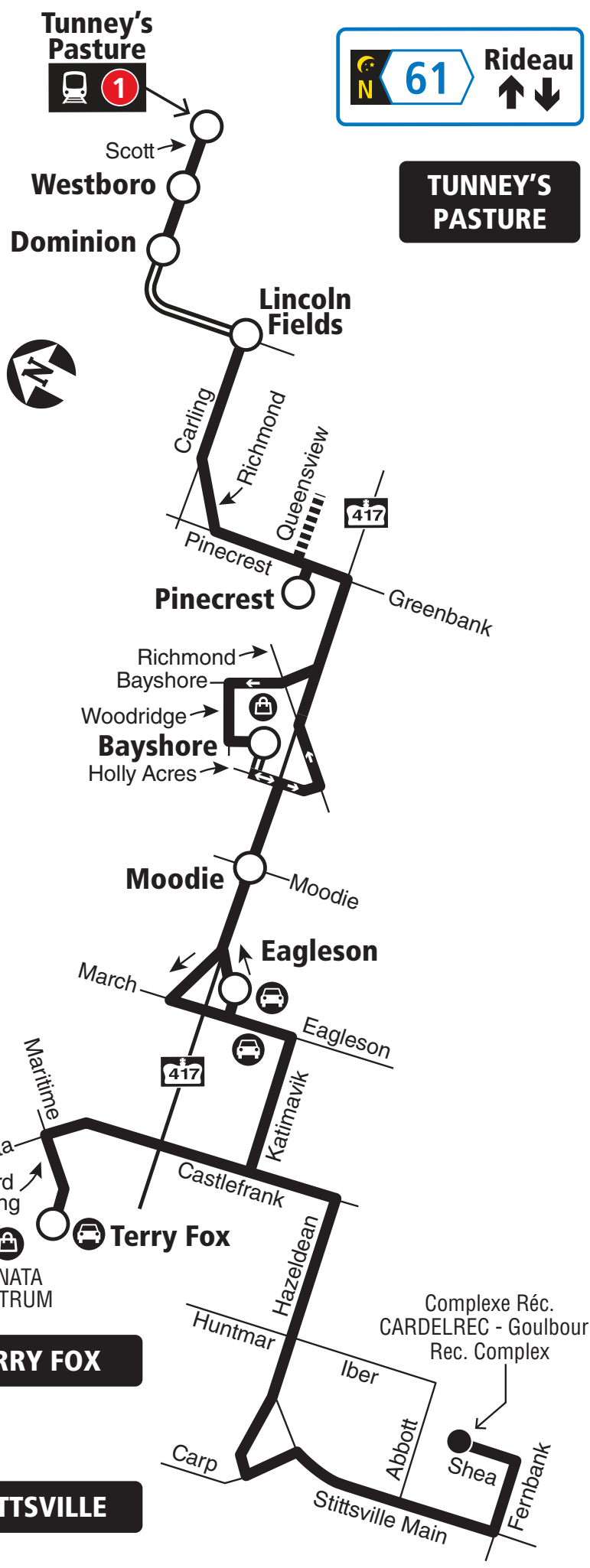
61

Fréquent

STITTSVILLE TERRY FOX
TUNNEY'S PASTURE

7 days a week / 7 jours par semaine

All day and limited overnight service
Service toute la journée et limité la nuit



05/2025

- Transitway & Station
- Selected time periods / Périodes sélectionnées
- Park & Ride / Parc relais
- Shopping Centre / Centre commercial

N 61 When O-Train Line 1 is not running overnight, Route 61 will be extended downtown to Rideau Station. / Lorsque la Ligne 1 de l'O-Train ne circule pas la nuit, le circuit 61 sera prolongée au centre-ville jusqu'à la station Rideau.

2025.04

This route starts on April 27, 2025 when the New Ways to Bus network comes into effect.

Ce circuit sera mis en service le 27 avril 2025, lorsque le réseau L'autobus réinventé entrera en vigueur.

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

Security / Sécurité **613-741-2478**

OC Transpo **octranspo.com**

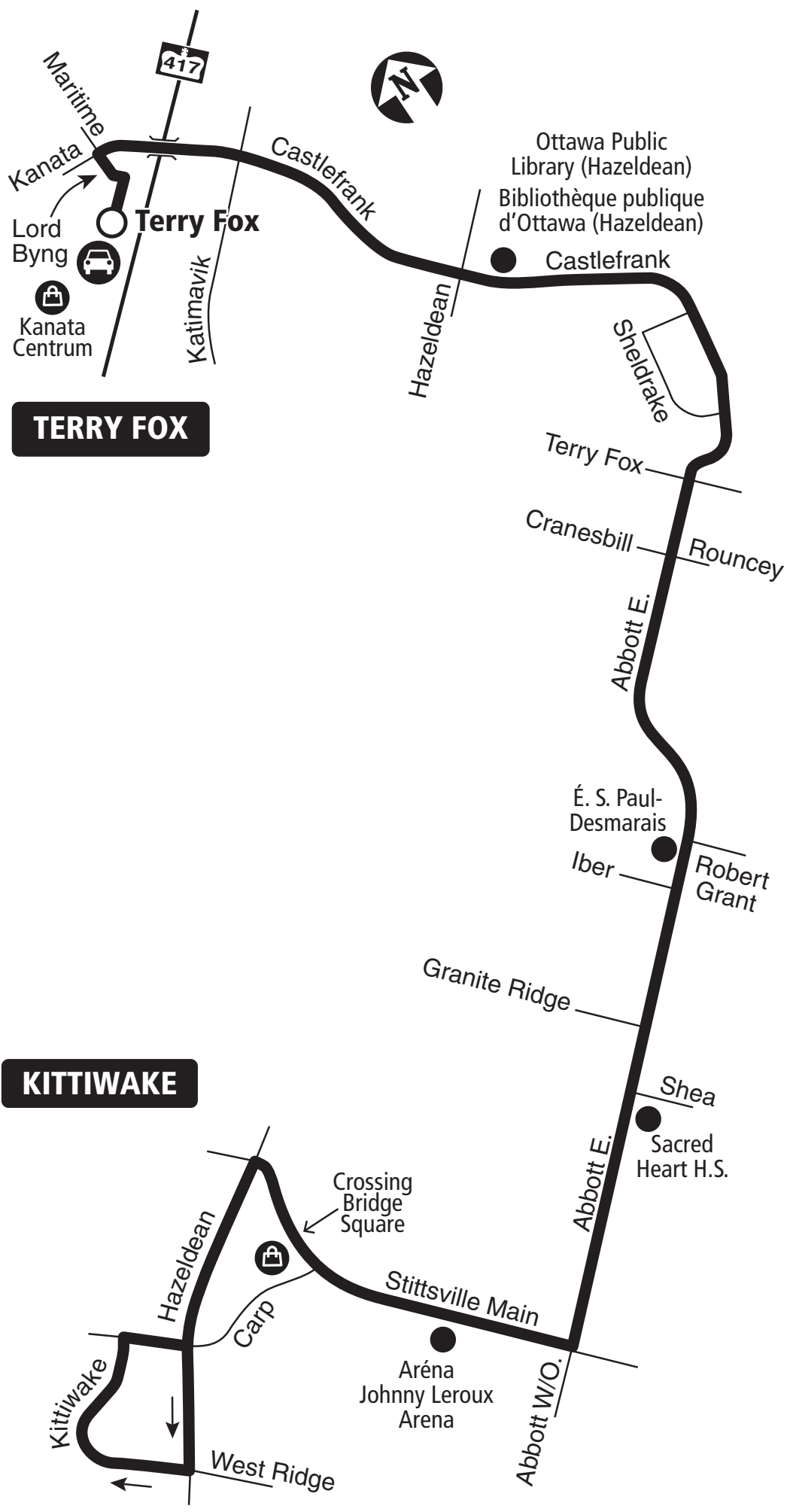
163

KITTIWAKE
TERRY FOX

Local

7 days a week / 7 jours par semaine

All day service
Service toute la journée



04.2025

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

2025.12

Schedule / Horaire 613-560-1000
Text / Texto* 560560

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

*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Special Constable Unit /
Unité des constables spéciaux.....**613-741-2478**

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

Lost & Found.....**octranspo.com/lostandfound**
Objets perdus.....**octranspo.com/objetsperdus**

OC Transpo
octranspo.com

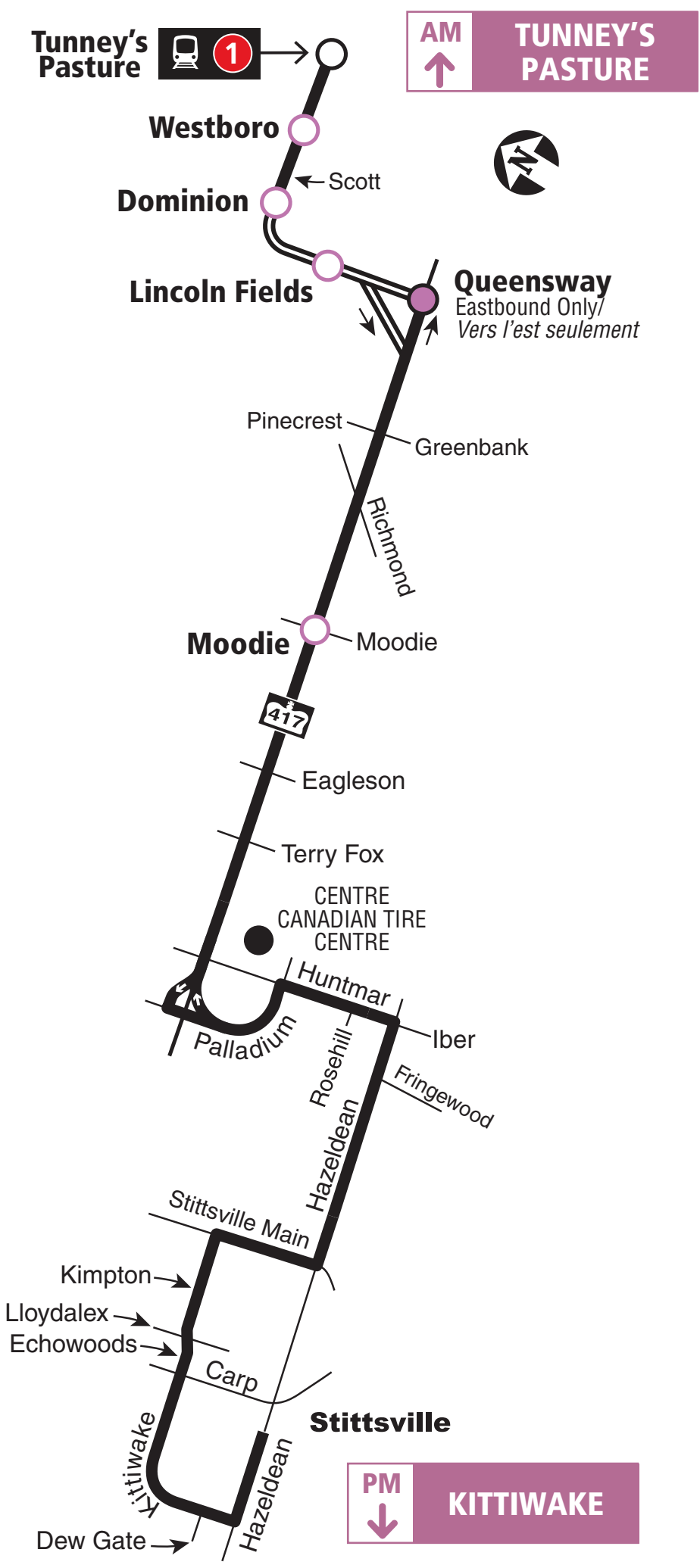
Effective Dec. 21, 2025
En vigueur 21 déc. 2025

261 Connexion

KITTIWAKE
TUNNEY'S PASTURE

Monday to Friday / Lundi au vendredi

Peak periods only
Périodes de pointe seulement



12.2025

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

2025.12

Schedule / Horaire 613-560-1000
Text / Texto* 560560

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

*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Special Constable Unit /
Unité des constables spéciaux.....**613-741-2478**

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

Lost & Found.....**octranspo.com/lostandfound**
Objets perdus.....**octranspo.com/objetsperdus**

OC Transpo
octranspo.com

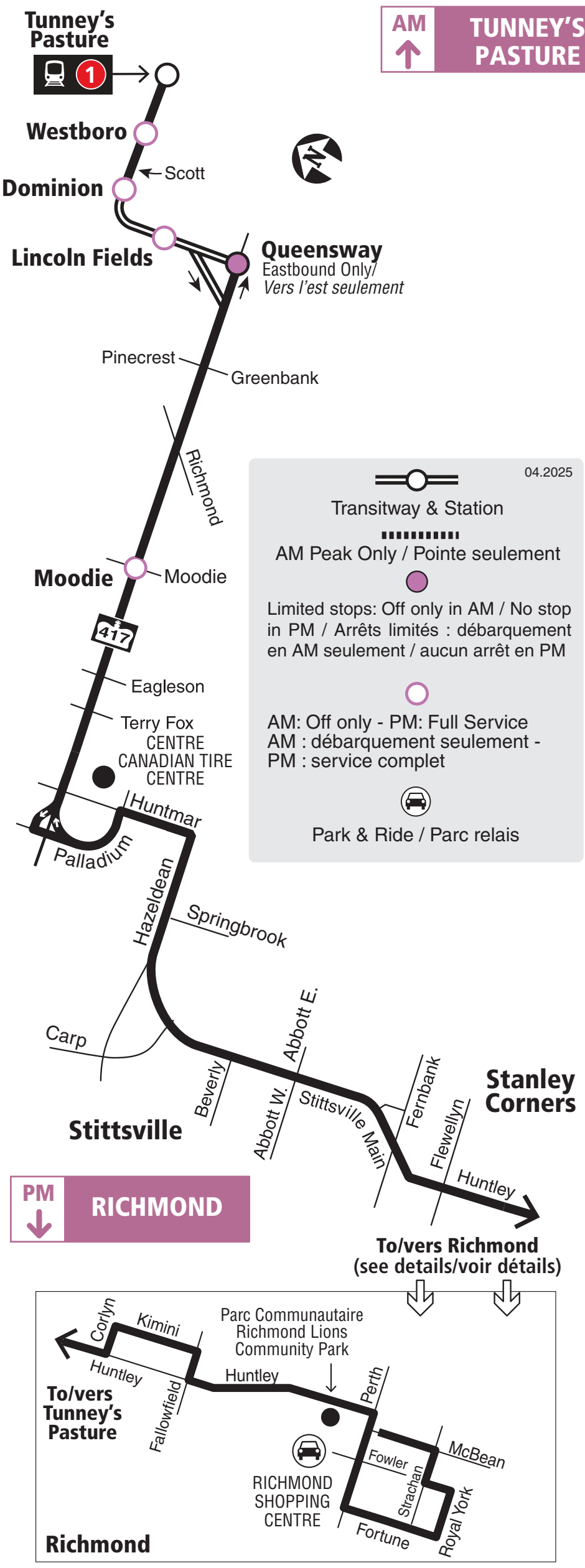
Effective Dec. 21, 2025
En vigueur 21 déc. 2025

263 Connexion

TUNNEY'S PASTURE
RICHMOND

Monday to Friday / Lundi au vendredi

Peak periods only
Périodes de pointe seulement



04.2025

Transitway & Station

AM Peak Only / Pointe seulement

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 seulement -
PM : service complet

Park & Ride / Parc relais

2025.04

This route starts on April 27, 2025 when the New Ways to Bus network comes into effect.

Ce circuit sera mis en service le 27 avril 2025, lorsque le réseau L'autobus réinventé entrera en vigueur.

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

Security / Sécurité **613-741-2478**

OC Transpo **octranspo.com**

301 CARLINGWOOD
RICHMOND
STITTSVILLE

Local

Monday only / Lundi seulement

Peak periods only

Périodes de pointe seulement

2022.04

Transitway & Station

Park & Ride / Parc relais

Shopping Centre / Centre commercial

2022.04

Schedule / Horaire 613-560-1000

Text / Texto* 560560

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

*Standard message rates may apply / Les tarifs régaliers de messagerie texte peuvent s'appliquer

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

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

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

Effective April 24, 2022

En vigueur 24 avril 2022

OC Transpo

INFO 613-560-5000
octranspo.com

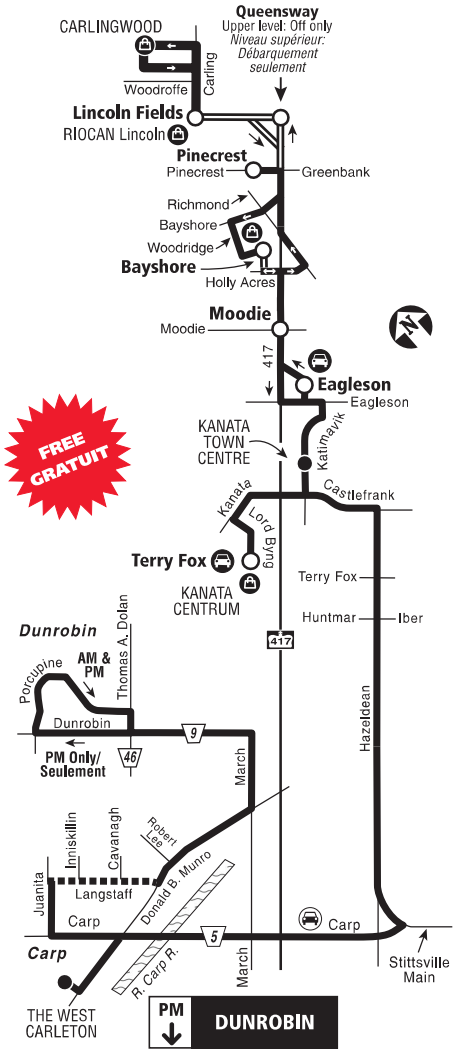
303 CARLINGWOOD / DUNROBIN, CARP

Local

Wednesday only / Mercredi seulement

Selected time periods
Périodes sélectionnées

AM ↑ CARLINGWOOD



2022.04

- Transitway & Station
- Request stop zone / Zone d'arrêt sur demande
- Park & Ride / Parc relais
- Shopping Centre / Centre commercial

2022.04

Schedule / Horaire 613-560-1000
Text / Texto* 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres
*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle 613-560-5000
Lost and Found / Objets perdus.....613-563-4011
Security / Sécurité 613-741-2478

Effective April 24, 2022
En vigueur 24 avril 2022

OC Transpo
INFO 613-560-5000
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Appendix E
Multi-Modal LOS Segments Forms

ENGLOBE

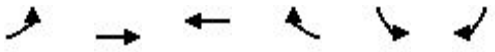
Multi-Modal Level of Service - Segments Form

Project: Hazeldean Road Traffic Study
Consultant: Englobe Corp
Date: Feb 18, 2026
Scenario: Existing MMLOS

	Segment Name	**Hazeldean Road**			
	OP Transect / Policy Area	**Between Carp Road and Stittsvile Main Street**			
	Segment Component	**Majority (>50%)**		**Critical**	
	Side of Street	**W or N**	**E or S**	**W or N**	**E or S**
Pedestrian	**PLOS Inputs**				
	Posted Speed (km/h)	60 km/h		60 km/h	
	Two-Way ADT	20,000		20,000	
	Pedestrian Facility	Sidewalk	Sidewalk	Sidewalk	Sidewalk
	Does the facility meet the TMP Sidewalk or MUP Policy? If not, for MUPs, does the location have a low volume of peak daily users AND are pedestrian volumes likely less than 20% of total users?	Yes	Yes	Yes	Yes
	Facility Width (m)	3.00m	2.00m	3.00m	3.00m
	Offset from Motor Vehicle Travel Lanes (m)	1.5-2.99m	≥ 3.0m	1.5-2.99m	1.5-2.99m
	Presence of Adjacent Parking?	-	No	-	-
	General Purpose Curb Lane ADT	> 3000	-	> 3000	> 3000
	Max. Distance between Controlled Crossings (m)	> 400m	> 400m	> 400m	> 400m
	Score	**3.00**	**3.75**	**3.00**	**3.00**
	PLOS	**C**	**B**	**C**	**C**
	Target PLOS	-			
Bicycle	**BLOS Inputs**				
	Cycling Route Classification	**Select Cycling Route Classification**			
	Cycling Facility	Painted or Physically Separated Bike Lanes	Painted or Physically Separated Bike Lanes	Painted or Physically Separated Bike Lanes	Painted or Physically Separated Bike Lanes
	Is the minimum level of separation provided according to OTM Book 18 Pre-Selection Nomograph - Rural Context (Figure 5.6)? (for paved shoulders)	-	-	-	-
	Facility Operation	Unidirectional	Unidirectional	Unidirectional	Unidirectional
	Pedestrian/Cyclist Volume	-	-	-	-
	Facility Width	1.5-1.79m or 1.8m contraflow bike lane	1.5-1.79m or 1.8m contraflow bike lane	1.5-1.79m or 1.8m contraflow bike lane	1.5-1.79m or 1.8m contraflow bike lane
	Boulevard/Buffer Width (excluding curb)	< 1.0m and no vertical measure or < 0.6m with adjacent parking	< 1.0m and no vertical measure or < 0.6m with adjacent parking	< 1.0m and no vertical measure or < 0.6m with adjacent parking	≥ 1.0m and no vertical measure
	Unsignalized Roadway Crossing Type (where cyclists are required to yield)	None	None	None	None
	Number of Travel Lanes at Crossing	-	-	-	-
	Crossing includes Median Refuge (≥ 2.7m)	-	-	-	-
	Cross-street Posted Speed (km/h)	-	-	-	-
	Cycling Path Blockages (e.g. bus stops and/or loading zones)	Rare	Rare	Rare	Rare
	Score	**2.03**	**2.03**	**2.03**	**2.45**
	BLOS	**D**	**D**	**D**	**D**
	Target BLOS	-			
Transit	**TLOS Inputs**				
	Transit Facility	**Select Transit Designation**			
	Facility Type	Mixed Traffic	Mixed Traffic		
	Expected Transit Running Time	Moderately Impeded	Moderately Impeded		
	Transit Travel Speed (if available)	Enter Speed (if available)	Enter Speed (if available)		
	TLOS	**D**	**D**		
	Target TLOS	-			
Public Realm	**PRLOS Inputs**				
	Context	Mainstreet or active frontage street within a Hub, Special District, or Village	Mainstreet or active frontage street within a Hub, Special District, or Village		
	Inner Boulevard Width	≤ 0.6m	≤ 0.6m		
	Middle Boulevard Width	≤ 0.5m	≤ 0.5m		
	Outer Boulevard (Frontage) Width	-	-		
	Transit Route on Segment?	Yes	Yes		
	Bus Stop Elements	Curbside landing zone with no shelter	Curbside platform with no shelter		
	Number of Midblock Traffic Lanes (both travel directions)	4			
	Score	**14.70**	**13.80**		
	PRLOS	**D**	**D**		
		D			

Appendix F
Synchro Report Forms

ENGLOBE



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	450	441	24	0	40
Future Volume (Veh/h)	0	450	441	24	0	40
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	500	490	27	0	44
Pedestrians		2	2		2	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			139			
pX, platoon unblocked						
vC, conflicting volume	519				758	262
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	519				758	262
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	94
cM capacity (veh/h)	1056				344	737

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	250	250	327	190	44
Volume Left	0	0	0	0	0
Volume Right	0	0	0	27	44
cSH	1700	1700	1700	1700	737
Volume to Capacity	0.15	0.15	0.19	0.11	0.06
Queue Length 95th (m)	0.0	0.0	0.0	0.0	1.5
Control Delay (s)	0.0	0.0	0.0	0.0	10.2
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.2
Approach LOS					B

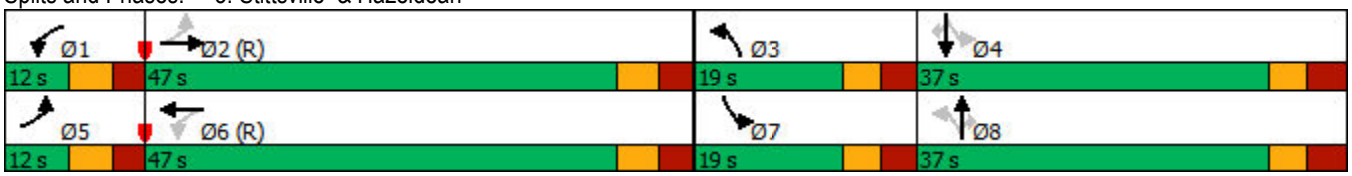
Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	24.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	30	416	210	367	47	38	294	271	54	36
Future Volume (vph)	30	416	210	367	47	38	294	271	54	36
Lane Group Flow (vph)	33	484	233	582	52	42	327	301	60	40
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6	3	8		7	4	
Permitted Phases	2		6		8		8	4		4
Detector Phase	5	2	1	6	3	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.5	36.7	11.5	36.7	11.3	36.9	36.9	11.3	36.9	36.9
Total Split (s)	12.0	47.0	12.0	47.0	19.0	37.0	37.0	19.0	37.0	37.0
Total Split (%)	10.4%	40.9%	10.4%	40.9%	16.5%	32.2%	32.2%	16.5%	32.2%	32.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	3.0	2.8	3.0	3.0	3.6	3.6	3.0	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.7	6.5	6.7	6.3	6.9	6.9	6.3	6.9	6.9
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	45.7	39.3	56.7	49.9	22.9	14.6	14.6	44.2	32.0	32.0
Actuated g/C Ratio	0.40	0.34	0.49	0.43	0.20	0.13	0.13	0.38	0.28	0.28
v/c Ratio	0.10	0.44	0.57	0.43	0.18	0.19	0.75	0.60	0.13	0.08
Control Delay	21.3	34.0	28.2	24.1	23.3	43.7	19.3	30.7	30.9	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	34.0	28.2	24.1	23.3	43.7	19.3	30.7	30.9	0.3
LOS	C	C	C	C	C	D	B	C	C	A
Approach Delay		33.2		25.3		22.2			27.7	
Approach LOS		C		C		C			C	
Queue Length 50th (m)	3.7	46.1	29.4	46.1	8.0	9.5	9.3	54.5	11.3	0.0
Queue Length 95th (m)	12.9	74.5	#82.5	76.4	13.1	17.1	34.3	64.1	19.3	0.0
Internal Link Dist (m)		229.2		339.6		541.7			73.1	
Turn Bay Length (m)	80.0		280.0		76.0		50.0			70.0
Base Capacity (vph)	346	1213	409	1392	355	457	594	502	479	539
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	0.40	0.57	0.42	0.15	0.09	0.55	0.60	0.13	0.07

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 115	
Offset: 85 (74%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 79.0%	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.

Splits and Phases: 3: Stittsville & Hazeldean

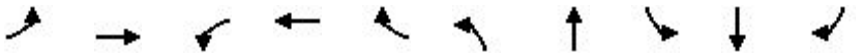


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	51	86	263	129	74	64	337	341	62	258	25
Future Volume (vph)	51	86	263	129	74	64	337	341	62	258	25
Lane Group Flow (vph)	57	96	292	0	225	71	374	555	69	287	28
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	28.1	28.1	28.1	28.1	28.1	28.1	10.7	29.5	10.7	29.5	29.5
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	15.0	35.0	15.0	35.0	35.0
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	18.8%	43.8%	18.8%	43.8%	43.8%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.8	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)	5.1	5.1	5.1		5.1	5.1	5.5	5.5	5.5	5.5	5.5
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	18.7	18.7	18.7		18.7	18.7	49.6	40.5	40.3	33.4	33.4
Actuated g/C Ratio	0.23	0.23	0.23		0.23	0.23	0.62	0.51	0.50	0.42	0.42
v/c Ratio	0.28	0.23	0.53		0.75	0.17	0.64	0.65	0.17	0.39	0.04
Control Delay	26.9	24.3	6.6		43.1	2.7	16.1	21.7	8.7	19.8	0.1
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	24.3	6.6		43.1	2.7	16.1	21.7	8.7	19.8	0.1
LOS	C	C	A		D	A	B	C	A	B	A
Approach Delay		13.1			33.4			19.5		16.4	
Approach LOS		B			C			B		B	
Queue Length 50th (m)	7.5	12.4	0.0		33.3	0.0	25.8	62.0	3.8	34.0	0.0
Queue Length 95th (m)	16.1	22.4	17.1		52.8	4.4	#64.5	#135.8	10.4	55.9	0.0
Internal Link Dist (m)		141.8			31.2			69.3		541.7	
Turn Bay Length (m)	40.0		60.0			25.0			60.0		60.0
Base Capacity (vph)	267	554	643		402	531	587	854	473	730	637
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	0.21	0.17	0.45		0.56	0.13	0.64	0.65	0.15	0.39	0.04

Intersection Summary		
Cycle Length: 80		
Actuated Cycle Length: 80		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 75		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.75		
Intersection Signal Delay: 19.5	Intersection LOS: B	
Intersection Capacity Utilization 71.5%	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: 8: Stittsville & Carp Road/Access

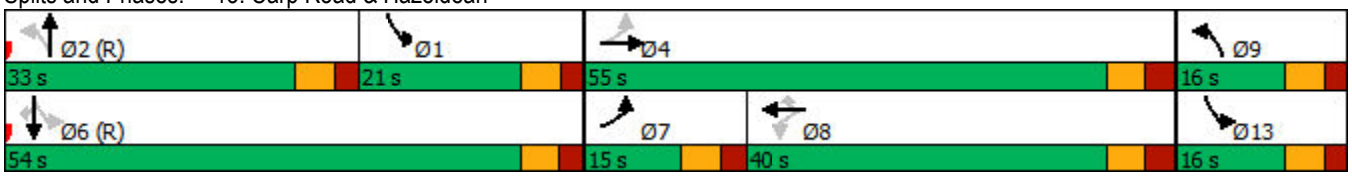


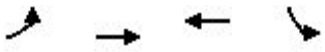
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	Ø1	Ø13
Lane Configurations												
Traffic Volume (vph)	274	296	24	163	239	38	360	238	279	64		
Future Volume (vph)	274	296	24	163	239	38	360	238	279	64		
Lane Group Flow (vph)	304	407	27	181	266	42	412	264	310	71		
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm		
Protected Phases	7	4		8		9	2	1 13	6		1	13
Permitted Phases	4		8		8	2		6		6		
Detector Phase	7	4	8	8	8	9	2	1 13	6	6		
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0		10.0	10.0	5.0	5.0
Minimum Split (s)	11.2	39.6	39.6	39.6	39.6	11.0	32.1		32.1	32.1	11.0	11.0
Total Split (s)	15.0	55.0	40.0	40.0	40.0	16.0	33.0		54.0	54.0	21.0	16.0
Total Split (%)	12.0%	44.0%	32.0%	32.0%	32.0%	12.8%	26.4%		43.2%	43.2%	17%	13%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7	3.7
All-Red Time (s)	2.5	2.9	2.9	2.9	2.9	2.3	2.4		2.4	2.4	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)	6.2	6.6	6.6	6.6	6.6	6.0	6.1		6.1	6.1		
Lead/Lag	Lead		Lag	Lag	Lag		Lead				Lag	
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	C-Min		C-Min	C-Min	None	None
Act Effct Green (s)	48.8	48.4	20.6	20.6	20.6	44.2	29.7	58.0	42.4	42.4		
Actuated g/C Ratio	0.39	0.39	0.16	0.16	0.16	0.35	0.24	0.46	0.34	0.34		
v/c Ratio	0.71	0.34	0.20	0.68	0.59	0.13	0.54	0.58	0.54	0.14		
Control Delay	39.4	25.4	45.1	60.6	10.3	26.3	46.4	27.0	39.2	0.6		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	39.4	25.4	45.1	60.6	10.3	26.3	46.4	27.0	39.2	0.6		
LOS	D	C	D	E	B	C	D	C	D	A		
Approach Delay		31.4		31.5			44.5		30.0			
Approach LOS		C		C			D		C			
Queue Length 50th (m)	55.2	34.2	6.2	45.2	0.0	6.7	52.4	41.6	70.7	0.0		
Queue Length 95th (m)	#94.1	47.2	13.7	61.9	22.0	15.9	68.7	62.8	93.0	0.0		
Internal Link Dist (m)		137.8		494.3			112.9		126.9			
Turn Bay Length (m)	110.0		50.0			70.0		90.0				
Base Capacity (vph)	427	1242	217	433	566	335	796	556	668	578		
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	0.71	0.33	0.12	0.42	0.47	0.13	0.52	0.47	0.46	0.12		

Intersection Summary	
Cycle Length: 125	
Actuated Cycle Length: 125	
Offset: 114 (91%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 33.6	Intersection LOS: C
Intersection Capacity Utilization 84.2%	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: 13: Carp Road & Hazeldean

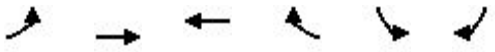




Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	29	236	266	1	
Future Volume (vph)	29	236	266	1	
Lane Group Flow (vph)	32	262	302	8	
Turn Type	Perm	NA	NA	Prot	
Protected Phases		1	1	3	2
Permitted Phases	1		1		
Detector Phase	1	1	1	3	
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	10.0	1.0
Minimum Split (s)	33.4	33.4	33.4	34.0	5.0
Total Split (s)	76.0	76.0	76.0	34.0	5.0
Total Split (%)	66.1%	66.1%	66.1%	29.6%	4%
Yellow Time (s)	3.7	3.7	3.7	3.3	2.0
All-Red Time (s)	2.7	2.7	2.7	3.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.4	6.4	6.4	6.3	
Lead/Lag	Lead	Lead	Lead		Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	110.5	110.5	110.5	10.0	
Actuated g/C Ratio	0.96	0.96	0.96	0.09	
v/c Ratio	0.04	0.08	0.10	0.06	
Control Delay	1.1	0.8	0.9	29.6	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay	1.1	0.8	0.9	29.6	
LOS	A	A	A	C	
Approach Delay		0.8	0.9	29.6	
Approach LOS		A	A	C	
Queue Length 50th (m)	0.0	0.0	0.0	0.2	
Queue Length 95th (m)	3.1	8.1	12.0	5.4	
Internal Link Dist (m)		114.6	229.2	44.4	
Turn Bay Length (m)	60.0				
Base Capacity (vph)	892	3099	2982	381	
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.04	0.08	0.10	0.02	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 115	
Offset: 75 (65%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.10	
Intersection Signal Delay: 1.2	Intersection LOS: A
Intersection Capacity Utilization 44.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 16: Hazeldean Road & Jackson Centre



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	562	636	4	0	44
Future Volume (Veh/h)	0	562	636	4	0	44
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	624	707	4	0	49
Pedestrians		2	2		2	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			139			
pX, platoon unblocked	0.96				0.96	0.96
vC, conflicting volume	713				1025	360
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	622				946	254
tC, single (s)	4.1				6.8	7.5
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.6
p0 queue free %	100				100	92
cM capacity (veh/h)	930				251	639

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	312	312	471	240	49
Volume Left	0	0	0	0	0
Volume Right	0	0	0	4	49
cSH	1700	1700	1700	1700	639
Volume to Capacity	0.18	0.18	0.28	0.14	0.08
Queue Length 95th (m)	0.0	0.0	0.0	0.0	2.0
Control Delay (s)	0.0	0.0	0.0	0.0	11.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.1
Approach LOS					B

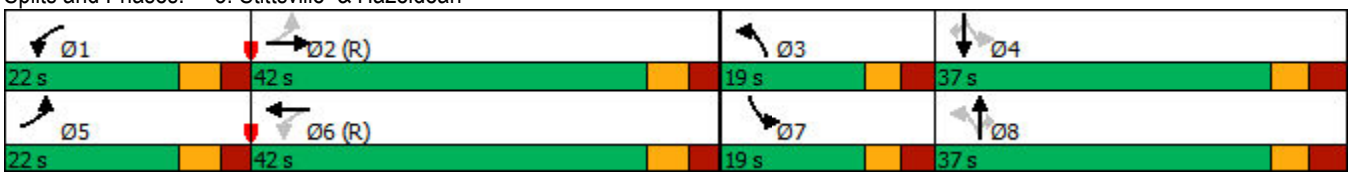
Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	29.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	33	454	415	716	113	71	369	211	98	37
Future Volume (vph)	33	454	415	716	113	71	369	211	98	37
Lane Group Flow (vph)	37	546	461	1004	126	79	410	234	109	41
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6	3	8		7	4	
Permitted Phases	2		6		8		8	4		4
Detector Phase	5	2	1	6	3	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.5	36.7	11.5	36.7	11.3	36.9	36.9	11.3	36.9	36.9
Total Split (s)	22.0	42.0	22.0	42.0	19.0	37.0	37.0	19.0	37.0	37.0
Total Split (%)	18.3%	35.0%	18.3%	35.0%	15.8%	30.8%	30.8%	15.8%	30.8%	30.8%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	3.0	2.8	3.0	3.0	3.6	3.6	3.0	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.7	6.5	6.7	6.3	6.9	6.9	6.3	6.9	6.9
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	42.2	35.3	72.1	63.6	27.5	15.5	15.5	30.1	16.8	16.8
Actuated g/C Ratio	0.35	0.29	0.60	0.53	0.23	0.13	0.13	0.25	0.14	0.14
v/c Ratio	0.15	0.58	0.77	0.60	0.39	0.36	0.76	0.69	0.44	0.12
Control Delay	18.1	45.4	27.7	23.5	34.8	49.8	14.4	46.3	51.7	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.1	45.4	27.7	23.5	34.8	49.8	14.4	46.3	51.7	0.8
LOS	B	D	C	C	C	D	B	D	D	A
Approach Delay		43.6		24.9		23.2			42.9	
Approach LOS		D		C		C			D	
Queue Length 50th (m)	4.6	71.3	55.3	87.4	24.7	18.6	2.3	49.4	26.1	0.0
Queue Length 95th (m)	12.4	84.7	#185.9	#158.5	33.3	29.1	30.5	60.1	38.1	0.0
Internal Link Dist (m)		229.2		339.6		541.7			73.1	
Turn Bay Length (m)	80.0		280.0		76.0		50.0			70.0
Base Capacity (vph)	368	934	596	1687	339	429	672	339	442	478
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	0.58	0.77	0.60	0.37	0.18	0.61	0.69	0.25	0.09

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 113 (94%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 110		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.77		
Intersection Signal Delay: 30.4	Intersection LOS: C	
Intersection Capacity Utilization 85.6%	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: 3: Stittsville & Hazeldean

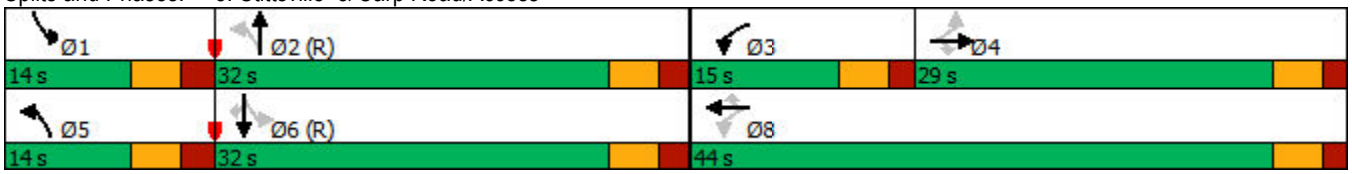


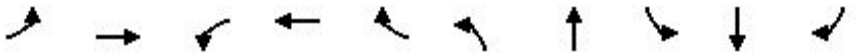
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	65	124	453	188	139	58	337	436	57	425	50
Future Volume (vph)	65	124	453	188	139	58	337	436	57	425	50
Lane Group Flow (vph)	72	138	503	0	363	64	374	630	63	472	56
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	28.1	28.1	28.1	10.3	28.1	28.1	10.7	29.5	10.7	29.5	29.5
Total Split (s)	29.0	29.0	29.0	15.0	44.0	44.0	14.0	32.0	14.0	32.0	32.0
Total Split (%)	32.2%	32.2%	32.2%	16.7%	48.9%	48.9%	15.6%	35.6%	15.6%	35.6%	35.6%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.8	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)	5.1	5.1	5.1		5.1	5.1	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?				Yes			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	33.8	33.8	33.8		33.8	33.8	43.2	35.1	33.7	26.5	26.5
Actuated g/C Ratio	0.38	0.38	0.38		0.38	0.38	0.48	0.39	0.37	0.29	0.29
v/c Ratio	0.27	0.21	0.65		0.74	0.11	1.14	0.93	0.29	0.91	0.10
Control Delay	20.6	18.4	9.0		33.3	1.8	121.2	52.8	17.6	54.7	0.4
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	18.4	9.0		33.3	1.8	121.2	52.8	17.6	54.7	0.4
LOS	C	B	A		C	A	F	D	B	D	A
Approach Delay		12.0			28.6			78.3		45.6	
Approach LOS		B			C			E		D	
Queue Length 50th (m)	8.5	15.9	12.8		53.4	0.0	~72.4	~126.9	6.0	82.4	0.0
Queue Length 95th (m)	18.2	27.0	41.3		82.3	3.6	#142.8	#208.7	13.7	#140.8	0.0
Internal Link Dist (m)		141.8			31.2			69.3		541.7	
Turn Bay Length (m)	40.0		60.0			25.0			60.0		60.0
Base Capacity (vph)	263	670	775		567	684	327	675	239	519	540
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	0.27	0.21	0.65		0.64	0.09	1.14	0.93	0.26	0.91	0.10

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 2 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 46.2	Intersection LOS: D
Intersection Capacity Utilization 91.5%	ICU Level of Service F
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Stittsville & Carp Road/Access



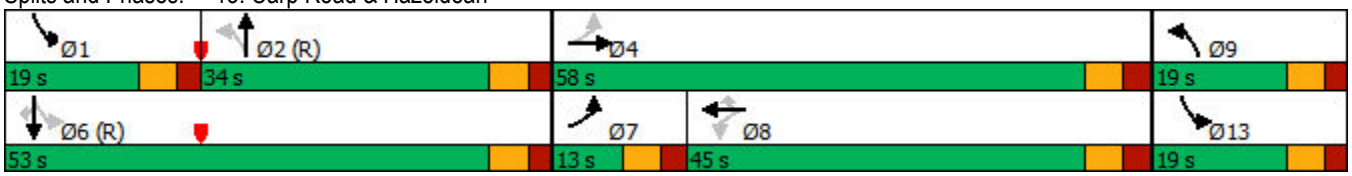


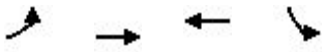
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	Ø1	Ø13
Lane Configurations												
Traffic Volume (vph)	123	269	24	442	360	115	362	285	468	190		
Future Volume (vph)	123	269	24	442	360	115	362	285	468	190		
Lane Group Flow (vph)	137	398	27	491	400	128	436	317	520	211		
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm		
Protected Phases	7	4		8		9	2	1 13	6		1	13
Permitted Phases	4		8		8	2		6		6		
Detector Phase	7	4	8	8	8	9	2	1 13	6	6		
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0		10.0	10.0	5.0	5.0
Minimum Split (s)	11.2	39.6	39.6	39.6	39.6	11.0	32.1		32.1	32.1	11.0	11.0
Total Split (s)	13.0	58.0	45.0	45.0	45.0	19.0	34.0		53.0	53.0	19.0	19.0
Total Split (%)	10.0%	44.6%	34.6%	34.6%	34.6%	14.6%	26.2%		40.8%	40.8%	15%	15%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7	3.7
All-Red Time (s)	2.5	2.9	2.9	2.9	2.9	2.3	2.4		2.4	2.4	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)	6.2	6.6	6.6	6.6	6.6	6.0	6.1		6.1	6.1		
Lead/Lag	Lead		Lag	Lag	Lag		Lag				Lead	
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	C-Min		C-Min	C-Min	None	None
Act Effct Green (s)	54.1	53.7	38.0	38.0	38.0	42.0	28.6	63.7	44.3	44.3		
Actuated g/C Ratio	0.42	0.41	0.29	0.29	0.29	0.32	0.22	0.49	0.34	0.34		
v/c Ratio	0.73	0.29	0.12	0.97	0.60	0.47	0.61	0.63	0.87	0.34		
Control Delay	51.3	23.7	35.2	79.2	10.1	27.0	49.3	26.9	56.9	6.7		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	51.3	23.7	35.2	79.2	10.1	27.0	49.3	26.9	56.9	6.7		
LOS	D	C	D	E	B	C	D	C	E	A		
Approach Delay		30.8		47.8			44.2		37.7			
Approach LOS		C		D			D		D			
Queue Length 50th (m)	23.4	33.4	5.3	130.4	9.5	18.4	54.7	52.1	129.8	3.2		
Queue Length 95th (m)	#57.9	47.4	13.5	#201.3	41.4	29.8	74.4	73.4	#184.7	20.6		
Internal Link Dist (m)		137.8		494.3			112.9		126.9			
Turn Bay Length (m)	110.0		50.0			70.0		90.0				
Base Capacity (vph)	188	1354	234	511	672	273	721	533	630	650		
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	0.73	0.29	0.12	0.96	0.60	0.47	0.60	0.59	0.83	0.32		

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 129 (99%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 40.7	Intersection LOS: D
Intersection Capacity Utilization 91.5%	ICU Level of Service F
Analysis Period (min) 15	

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

Splits and Phases: 13: Carp Road & Hazeldean

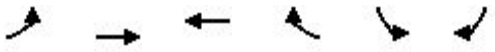




Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	68	384	516	16	
Future Volume (vph)	68	384	516	16	
Lane Group Flow (vph)	76	427	590	65	
Turn Type	Perm	NA	NA	Prot	
Protected Phases		1	1	3	2
Permitted Phases	1		1		
Detector Phase	1	1	1	3	
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	10.0	1.0
Minimum Split (s)	33.4	33.4	33.4	34.0	5.0
Total Split (s)	81.0	81.0	81.0	34.0	5.0
Total Split (%)	67.5%	67.5%	67.5%	28.3%	4%
Yellow Time (s)	3.7	3.7	3.7	3.3	2.0
All-Red Time (s)	2.7	2.7	2.7	3.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.4	6.4	6.4	6.3	
Lead/Lag	Lead	Lead	Lead		Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	96.9	96.9	96.9	13.4	
Actuated g/C Ratio	0.81	0.81	0.81	0.11	
v/c Ratio	0.12	0.16	0.22	0.31	
Control Delay	5.9	4.6	11.6	21.8	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay	5.9	4.6	11.6	21.8	
LOS	A	A	B	C	
Approach Delay		4.8	11.6	21.8	
Approach LOS		A	B	C	
Queue Length 50th (m)	3.1	9.5	35.6	4.2	
Queue Length 95th (m)	15.7	31.8	85.2	15.7	
Internal Link Dist (m)		114.6	229.2	44.4	
Turn Bay Length (m)	60.0				
Base Capacity (vph)	616	2718	2700	390	
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.12	0.16	0.22	0.17	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 99 (83%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.31	
Intersection Signal Delay: 9.2	Intersection LOS: A
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Hazeldean Road & Jackson Centre



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	515	495	26	0	44
Future Volume (Veh/h)	0	515	495	26	0	44
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	515	495	26	0	44
Pedestrians		2	2		2	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			139			
pX, platoon unblocked						
vC, conflicting volume	523				770	264
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	523				770	264
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	94
cM capacity (veh/h)	1052				338	734

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	258	258	330	191	44
Volume Left	0	0	0	0	0
Volume Right	0	0	0	26	44
cSH	1700	1700	1700	1700	734
Volume to Capacity	0.15	0.15	0.19	0.11	0.06
Queue Length 95th (m)	0.0	0.0	0.0	0.0	1.5
Control Delay (s)	0.0	0.0	0.0	0.0	10.2
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.2
Approach LOS					B

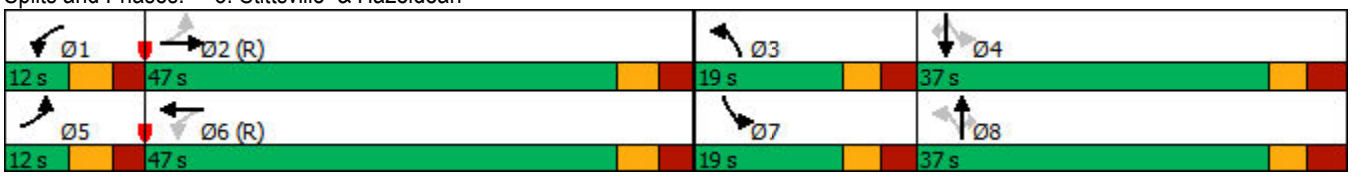
Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	33	478	232	414	52	43	325	300	60	40
Future Volume (vph)	33	478	232	414	52	43	325	300	60	40
Lane Group Flow (vph)	33	500	232	587	52	43	325	300	60	40
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6	3	8		7	4	
Permitted Phases	2		6		8		8	4		4
Detector Phase	5	2	1	6	3	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.5	36.7	11.5	36.7	11.3	36.9	36.9	11.3	36.9	36.9
Total Split (s)	12.0	47.0	12.0	47.0	19.0	37.0	37.0	19.0	37.0	37.0
Total Split (%)	10.4%	40.9%	10.4%	40.9%	16.5%	32.2%	32.2%	16.5%	32.2%	32.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	3.0	2.8	3.0	3.0	3.6	3.6	3.0	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.7	6.5	6.7	6.3	6.9	6.9	6.3	6.9	6.9
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	45.7	39.3	56.7	50.0	23.0	14.7	14.7	44.2	32.0	32.0
Actuated g/C Ratio	0.40	0.34	0.49	0.43	0.20	0.13	0.13	0.38	0.28	0.28
v/c Ratio	0.10	0.46	0.58	0.44	0.18	0.19	0.76	0.60	0.13	0.08
Control Delay	21.4	34.5	28.6	24.3	23.3	43.6	20.2	30.7	30.9	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	34.5	28.6	24.3	23.3	43.6	20.2	30.7	30.9	0.3
LOS	C	C	C	C	C	D	C	C	C	A
Approach Delay		33.7		25.5		23.0			27.7	
Approach LOS		C		C		C			C	
Queue Length 50th (m)	3.7	48.1	29.2	46.8	8.0	9.7	10.7	54.4	11.3	0.0
Queue Length 95th (m)	12.9	77.5	#83.0	77.2	13.2	17.2	36.0	64.0	19.4	0.0
Internal Link Dist (m)		229.2		339.6		541.7			73.1	
Turn Bay Length (m)	80.0		280.0		76.0		50.0			70.0
Base Capacity (vph)	344	1212	402	1393	356	457	588	501	479	539
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	0.41	0.58	0.42	0.15	0.09	0.55	0.60	0.13	0.07

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 115	
Offset: 85 (74%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 27.4	Intersection LOS: C
Intersection Capacity Utilization 82.2%	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: 3: Stittsville & Hazeldean



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	56	95	293	143	82	70	374	376	68	285	28
Future Volume (vph)	56	95	293	143	82	70	374	376	68	285	28
Lane Group Flow (vph)	56	95	293	0	225	70	374	551	68	285	28
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	28.1	28.1	28.1	28.1	28.1	28.1	10.7	29.5	10.7	29.5	29.5
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	15.0	35.0	15.0	35.0	35.0
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	18.8%	43.8%	18.8%	43.8%	43.8%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.8	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)	5.1	5.1	5.1		5.1	5.1	5.5	5.5	5.5	5.5	5.5
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	18.7	18.7	18.7		18.7	18.7	49.7	40.6	40.3	33.5	33.5
Actuated g/C Ratio	0.23	0.23	0.23		0.23	0.23	0.62	0.51	0.50	0.42	0.42
v/c Ratio	0.28	0.23	0.53		0.75	0.16	0.63	0.64	0.16	0.39	0.04
Control Delay	26.8	24.3	6.6		43.0	2.7	16.0	21.5	8.7	19.7	0.1
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	24.3	6.6		43.0	2.7	16.0	21.5	8.7	19.7	0.1
LOS	C	C	A		D	A	B	C	A	B	A
Approach Delay		13.0			33.5			19.3		16.3	
Approach LOS		B			C			B		B	
Queue Length 50th (m)	7.3	12.3	0.0		33.2	0.0	25.8	61.3	3.8	33.7	0.0
Queue Length 95th (m)	16.0	22.3	17.1		52.8	4.1	#64.1	#133.7	10.3	55.4	0.0
Internal Link Dist (m)		141.8			31.2			69.3		541.7	
Turn Bay Length (m)	40.0		60.0			25.0			60.0		60.0
Base Capacity (vph)	267	554	644		403	531	589	855	476	731	637
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	0.21	0.17	0.45		0.56	0.13	0.63	0.64	0.14	0.39	0.04

Intersection Summary		
Cycle Length: 80		
Actuated Cycle Length: 80		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 75		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.75		
Intersection Signal Delay: 19.4	Intersection LOS: B	
Intersection Capacity Utilization 74.9%	ICU Level of Service D	
Analysis Period (min) 15		

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

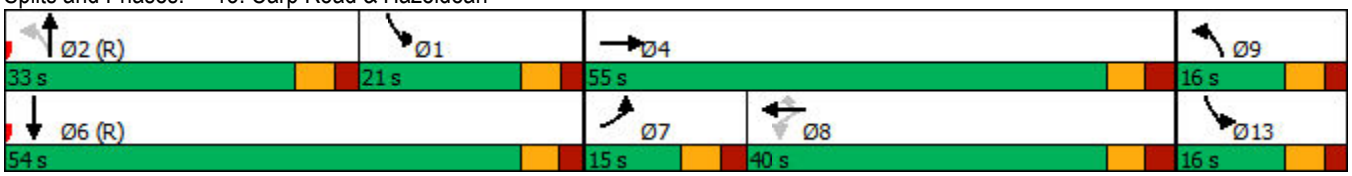
Splits and Phases: 8: Stittsville & Carp Road/Access

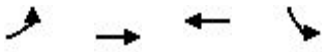
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	Ø1	Ø13
Lane Configurations											
Traffic Volume (vph)	336	342	26	187	265	44	398	266	308		
Future Volume (vph)	336	342	26	187	265	44	398	266	308		
Lane Group Flow (vph)	336	421	26	187	265	44	411	266	394		
Turn Type	Prot	NA	Perm	NA	Perm	pm+pt	NA	Prot	NA		
Protected Phases	7	4		8		9	2	1 13	6	1	13
Permitted Phases			8		8	2					
Detector Phase	7	4	8	8	8	9	2	1 13	6		
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0		10.0	5.0	5.0
Minimum Split (s)	11.2	39.6	39.6	39.6	39.6	11.0	32.1		32.1	11.0	11.0
Total Split (s)	15.0	55.0	40.0	40.0	40.0	16.0	33.0		54.0	21.0	16.0
Total Split (%)	12.0%	44.0%	32.0%	32.0%	32.0%	12.8%	26.4%		43.2%	17%	13%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.5	2.9	2.9	2.9	2.9	2.3	2.4		2.4	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		
Total Lost Time (s)	6.2	6.6	6.6	6.6	6.6	6.0	6.1		6.1		
Lead/Lag	Lead		Lag	Lag	Lag		Lead			Lag	
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Min		C-Min	None	None
Act Effct Green (s)	21.3	48.4	21.0	21.0	21.0	41.4	31.2	20.6	47.2		
Actuated g/C Ratio	0.17	0.39	0.17	0.17	0.17	0.33	0.25	0.16	0.38		
v/c Ratio	0.61	0.35	0.19	0.69	0.58	0.14	0.52	0.55	0.34		
Control Delay	54.7	26.1	44.6	61.0	10.1	26.9	43.7	29.2	26.7		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	54.7	26.1	44.6	61.0	10.1	26.9	43.7	29.2	26.7		
LOS	D	C	D	E	B	C	D	C	C		
Approach Delay		38.8		31.9			42.1		27.7		
Approach LOS		D		C			D		C		
Queue Length 50th (m)	41.8	38.1	5.9	46.6	0.0	7.1	48.2	18.1	34.5		
Queue Length 95th (m)	#78.1	48.8	13.3	63.9	22.0	16.7	68.6	28.4	50.5		
Internal Link Dist (m)		137.8		494.3			112.9		126.9		
Turn Bay Length (m)	110.0		50.0			70.0		90.0			
Base Capacity (vph)	547	1215	215	433	565	326	795	609	1180		
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	0.35	0.12	0.43	0.47	0.13	0.52	0.44	0.33		

Intersection Summary		
Cycle Length: 125		
Actuated Cycle Length: 125		
Offset: 114 (91%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.69		
Intersection Signal Delay: 34.9	Intersection LOS: C	
Intersection Capacity Utilization 73.6%	ICU Level of Service D	
Analysis Period (min) 15		

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

Splits and Phases: 13: Carp Road & Hazeldean

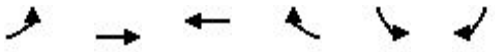




Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	32	279	302	1	
Future Volume (vph)	32	279	302	1	
Lane Group Flow (vph)	32	279	308	8	
Turn Type	Perm	NA	NA	Prot	
Protected Phases		1	1	3	2
Permitted Phases	1		1		
Detector Phase	1	1	1	3	
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	10.0	1.0
Minimum Split (s)	33.4	33.4	33.4	34.0	5.0
Total Split (s)	76.0	76.0	76.0	34.0	5.0
Total Split (%)	66.1%	66.1%	66.1%	29.6%	4%
Yellow Time (s)	3.7	3.7	3.7	3.3	2.0
All-Red Time (s)	2.7	2.7	2.7	3.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.4	6.4	6.4	6.3	
Lead/Lag	Lead	Lead	Lead		Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	110.5	110.5	110.5	10.0	
Actuated g/C Ratio	0.96	0.96	0.96	0.09	
v/c Ratio	0.04	0.09	0.10	0.06	
Control Delay	1.1	0.8	0.9	29.6	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay	1.1	0.8	0.9	29.6	
LOS	A	A	A	C	
Approach Delay		0.8	0.9	29.6	
Approach LOS		A	A	C	
Queue Length 50th (m)	0.0	0.0	0.0	0.2	
Queue Length 95th (m)	3.1	8.6	12.1	5.4	
Internal Link Dist (m)		114.6	229.2	44.4	
Turn Bay Length (m)	60.0				
Base Capacity (vph)	886	3099	2982	381	
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.04	0.09	0.10	0.02	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 115	
Offset: 75 (65%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.10	
Intersection Signal Delay: 1.2	Intersection LOS: A
Intersection Capacity Utilization 44.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 16: Hazeldean Road & Jackson Centre



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	635	722	4	0	49
Future Volume (Veh/h)	0	635	722	4	0	49
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	635	722	4	0	49
Pedestrians		2	2		2	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			139			
pX, platoon unblocked	0.96				0.96	0.96
vC, conflicting volume	728				1046	367
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	632				963	256
tC, single (s)	4.1				6.8	7.5
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.6
p0 queue free %	100				100	92
cM capacity (veh/h)	920				244	636

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	318	318	481	245	49
Volume Left	0	0	0	0	0
Volume Right	0	0	0	4	49
cSH	1700	1700	1700	1700	636
Volume to Capacity	0.19	0.19	0.28	0.14	0.08
Queue Length 95th (m)	0.0	0.0	0.0	0.0	2.0
Control Delay (s)	0.0	0.0	0.0	0.0	11.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.1
Approach LOS					B

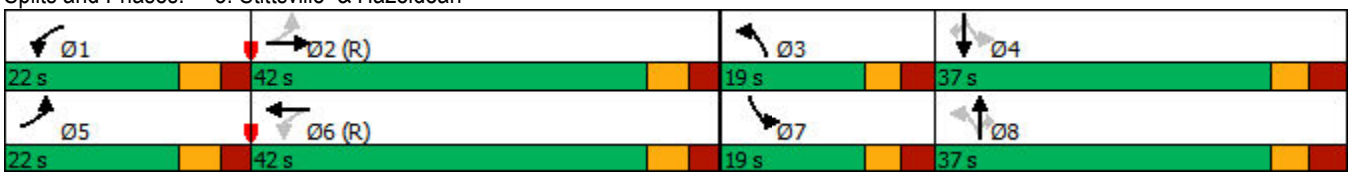
Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	31.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	37	517	458	811	125	78	408	233	108	41
Future Volume (vph)	37	517	458	811	125	78	408	233	108	41
Lane Group Flow (vph)	37	560	458	1018	125	78	408	233	108	41
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6	3	8		7	4	
Permitted Phases	2		6		8		8	4		4
Detector Phase	5	2	1	6	3	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.5	36.7	11.5	36.7	11.3	36.9	36.9	11.3	36.9	36.9
Total Split (s)	22.0	42.0	22.0	42.0	19.0	37.0	37.0	19.0	37.0	37.0
Total Split (%)	18.3%	35.0%	18.3%	35.0%	15.8%	30.8%	30.8%	15.8%	30.8%	30.8%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	3.0	2.8	3.0	3.0	3.6	3.6	3.0	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.7	6.5	6.7	6.3	6.9	6.9	6.3	6.9	6.9
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	42.2	35.3	72.1	63.6	27.5	15.5	15.5	30.1	16.8	16.8
Actuated g/C Ratio	0.35	0.29	0.60	0.53	0.23	0.13	0.13	0.25	0.14	0.14
v/c Ratio	0.15	0.60	0.77	0.60	0.39	0.35	0.76	0.69	0.44	0.12
Control Delay	18.0	45.6	28.0	23.7	34.8	49.8	14.6	46.0	51.6	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	45.6	28.0	23.7	34.8	49.8	14.6	46.0	51.6	0.8
LOS	B	D	C	C	C	D	B	D	D	A
Approach Delay		43.9		25.0		23.2			42.7	
Approach LOS		D		C		C			D	
Queue Length 50th (m)	4.6	73.5	54.6	89.2	24.5	18.4	2.5	49.2	25.9	0.0
Queue Length 95th (m)	12.2	87.1	#185.6	#162.8	33.1	28.9	30.8	59.9	37.9	0.0
Internal Link Dist (m)		229.2		339.6		541.7			73.1	
Turn Bay Length (m)	80.0		280.0		76.0		50.0			70.0
Base Capacity (vph)	367	934	592	1687	339	429	669	340	442	478
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	0.60	0.77	0.60	0.37	0.18	0.61	0.69	0.24	0.09

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 113 (94%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 30.6	Intersection LOS: C
Intersection Capacity Utilization 89.3%	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: 3: Stittsville & Hazeldean

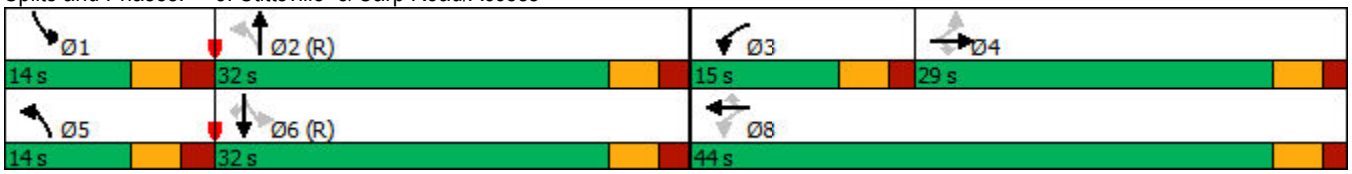


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	71	137	501	207	154	64	375	482	63	470	55
Future Volume (vph)	71	137	501	207	154	64	375	482	63	470	55
Lane Group Flow (vph)	71	137	501	0	361	64	375	626	63	470	55
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	28.1	28.1	28.1	10.3	28.1	28.1	10.7	29.5	10.7	29.5	29.5
Total Split (s)	29.0	29.0	29.0	15.0	44.0	44.0	14.0	32.0	14.0	32.0	32.0
Total Split (%)	32.2%	32.2%	32.2%	16.7%	48.9%	48.9%	15.6%	35.6%	15.6%	35.6%	35.6%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.8	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)	5.1	5.1	5.1		5.1	5.1	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?				Yes			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	33.6	33.6	33.6		33.6	33.6	43.4	35.3	33.7	26.5	26.5
Actuated g/C Ratio	0.37	0.37	0.37		0.37	0.37	0.48	0.39	0.37	0.29	0.29
v/c Ratio	0.27	0.21	0.65		0.74	0.11	1.13	0.92	0.29	0.91	0.10
Control Delay	20.6	18.5	8.8		33.3	1.8	116.5	51.0	17.4	54.1	0.4
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	18.5	8.8		33.3	1.8	116.5	51.0	17.4	54.1	0.4
LOS	C	B	A		C	A	F	D	B	D	A
Approach Delay		11.9			28.5			75.6		45.2	
Approach LOS		B			C			E		D	
Queue Length 50th (m)	8.4	15.9	12.4		53.2	0.0	~70.7	~123.9	5.9	81.9	0.0
Queue Length 95th (m)	18.0	26.9	40.5		81.7	3.6	#142.3	#206.7	13.7	#140.0	0.0
Internal Link Dist (m)		141.8			31.2			69.3		541.7	
Turn Bay Length (m)	40.0		60.0			25.0			60.0		60.0
Base Capacity (vph)	263	668	775		567	684	332	678	243	519	540
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	0.27	0.21	0.65		0.64	0.09	1.13	0.92	0.26	0.91	0.10

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 2 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 45.1	Intersection LOS: D
Intersection Capacity Utilization 98.0%	ICU Level of Service F
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Stittsville & Carp Road/Access

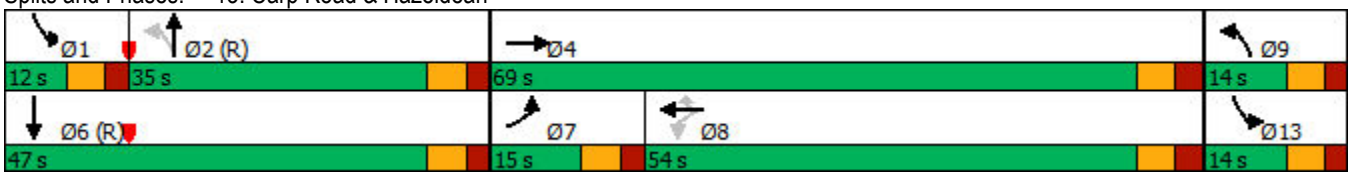


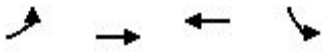
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	Ø1	Ø13
Lane Configurations											
Traffic Volume (vph)	165	311	26	504	402	130	400	317	517		
Future Volume (vph)	165	311	26	504	402	130	400	317	517		
Lane Group Flow (vph)	165	411	26	504	402	130	434	317	763		
Turn Type	Prot	NA	Perm	NA	Perm	pm+pt	NA	Prot	NA		
Protected Phases	7	4		8		9	2	1 13	6	1	13
Permitted Phases			8		8	2					
Detector Phase	7	4	8	8	8	9	2	1 13	6		
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0		10.0	5.0	5.0
Minimum Split (s)	11.2	39.6	39.6	39.6	39.6	11.0	32.1		32.1	11.0	11.0
Total Split (s)	15.0	69.0	54.0	54.0	54.0	14.0	35.0		47.0	12.0	14.0
Total Split (%)	11.5%	53.1%	41.5%	41.5%	41.5%	10.8%	26.9%		36.2%	9%	11%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.5	2.9	2.9	2.9	2.9	2.3	2.4		2.4	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		
Total Lost Time (s)	6.2	6.6	6.6	6.6	6.6	6.0	6.1		6.1		
Lead/Lag	Lead		Lag	Lag	Lag		Lag			Lead	
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Min		C-Min	None	None
Act Effct Green (s)	10.4	59.0	42.4	42.4	42.4	40.4	29.1	23.1	41.1		
Actuated g/C Ratio	0.08	0.45	0.33	0.33	0.33	0.31	0.22	0.18	0.32		
v/c Ratio	0.64	0.28	0.10	0.89	0.57	0.51	0.60	0.55	0.74		
Control Delay	69.7	19.4	29.4	60.5	8.2	33.9	49.2	53.5	41.8		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	69.7	19.4	29.4	60.5	8.2	33.9	49.2	53.5	41.8		
LOS	E	B	C	E	A	C	D	D	D		
Approach Delay		33.8		37.1			45.7		45.2		
Approach LOS		C		D			D		D		
Queue Length 50th (m)	22.2	29.5	4.8	126.0	8.3	21.7	58.2	39.8	95.2		
Queue Length 95th (m)	#40.1	41.0	11.7	167.8	35.5	36.0	73.3	58.1	113.6		
Internal Link Dist (m)		137.8		494.3			112.9		126.9		
Turn Bay Length (m)	110.0		50.0			70.0		90.0			
Base Capacity (vph)	258	1587	286	631	751	253	774	574	1081		
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		
Reduced v/c Ratio	0.64	0.26	0.09	0.80	0.54	0.51	0.56	0.55	0.71		

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 129 (99%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 40.8	Intersection LOS: D
Intersection Capacity Utilization 84.9%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 13: Carp Road & Hazeldean

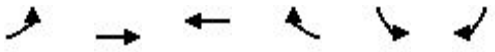




Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	75	439	590	18	
Future Volume (vph)	75	439	590	18	
Lane Group Flow (vph)	75	439	607	65	
Turn Type	Perm	NA	NA	Prot	
Protected Phases		1	1	3	2
Permitted Phases	1		1		
Detector Phase	1	1	1	3	
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	10.0	1.0
Minimum Split (s)	33.4	33.4	33.4	34.0	5.0
Total Split (s)	81.0	81.0	81.0	34.0	5.0
Total Split (%)	67.5%	67.5%	67.5%	28.3%	4%
Yellow Time (s)	3.7	3.7	3.7	3.3	2.0
All-Red Time (s)	2.7	2.7	2.7	3.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.4	6.4	6.4	6.3	
Lead/Lag	Lead	Lead	Lead		Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	96.9	96.9	96.9	13.4	
Actuated g/C Ratio	0.81	0.81	0.81	0.11	
v/c Ratio	0.12	0.16	0.23	0.31	
Control Delay	6.0	4.6	11.7	21.8	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay	6.0	4.6	11.7	21.8	
LOS	A	A	B	C	
Approach Delay		4.8	11.7	21.8	
Approach LOS		A	B	C	
Queue Length 50th (m)	3.1	9.8	36.8	4.2	
Queue Length 95th (m)	15.5	32.7	87.8	15.7	
Internal Link Dist (m)		114.6	229.2	44.4	
Turn Bay Length (m)	60.0				
Base Capacity (vph)	606	2718	2700	390	
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.12	0.16	0.22	0.17	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 99 (83%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.31	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Hazeldean Road & Jackson Centre



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	562	507	65	0	68
Future Volume (Veh/h)	0	562	507	65	0	68
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	562	507	65	0	68
Pedestrians		2	2		2	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			139			
pX, platoon unblocked						
vC, conflicting volume	574				824	290
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	574				824	290
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	90
cM capacity (veh/h)	1007				312	707

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	281	281	338	234	68
Volume Left	0	0	0	0	0
Volume Right	0	0	0	65	68
cSH	1700	1700	1700	1700	707
Volume to Capacity	0.17	0.17	0.20	0.14	0.10
Queue Length 95th (m)	0.0	0.0	0.0	0.0	2.5
Control Delay (s)	0.0	0.0	0.0	0.0	10.6
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.6
Approach LOS					B

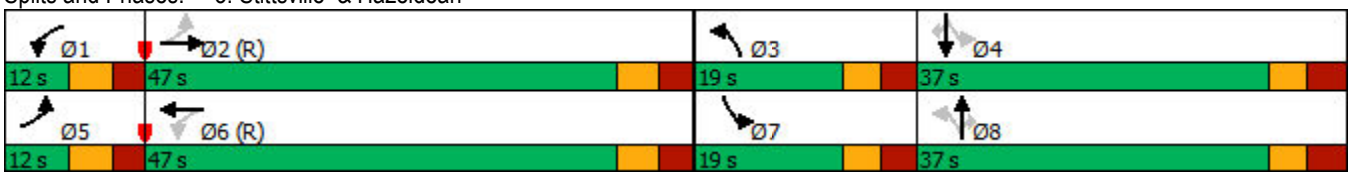
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	39	487	229	423	98	42	321	296	59	49
Future Volume (vph)	39	487	229	423	98	42	321	296	59	49
Lane Group Flow (vph)	39	545	229	594	98	42	321	296	59	49
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6	3	8		7	4	
Permitted Phases	2		6		8		8	4		4
Detector Phase	5	2	1	6	3	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.5	36.7	11.5	36.7	11.3	36.9	36.9	11.3	36.9	36.9
Total Split (s)	12.0	47.0	12.0	47.0	19.0	37.0	37.0	19.0	37.0	37.0
Total Split (%)	10.4%	40.9%	10.4%	40.9%	16.5%	32.2%	32.2%	16.5%	32.2%	32.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	3.0	2.8	3.0	3.0	3.6	3.6	3.0	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.7	6.5	6.7	6.3	6.9	6.9	6.3	6.9	6.9
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	46.3	39.8	57.3	50.5	25.2	14.7	14.7	43.6	29.4	29.4
Actuated g/C Ratio	0.40	0.35	0.50	0.44	0.22	0.13	0.13	0.38	0.26	0.26
v/c Ratio	0.11	0.49	0.59	0.44	0.31	0.19	0.75	0.60	0.14	0.10
Control Delay	21.3	35.1	28.8	24.2	25.8	43.6	20.1	31.2	33.4	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	35.1	28.8	24.2	25.8	43.6	20.1	31.2	33.4	0.4
LOS	C	D	C	C	C	D	C	C	C	A
Approach Delay		34.2		25.5		23.4			27.8	
Approach LOS		C		C		C			C	
Queue Length 50th (m)	4.8	54.5	28.3	47.4	15.7	9.5	10.5	54.2	11.6	0.0
Queue Length 95th (m)	13.1	75.1	#83.9	78.3	22.2	17.1	35.3	63.5	20.1	0.0
Internal Link Dist (m)		229.2		339.6		541.7			73.1	
Turn Bay Length (m)	80.0		280.0		76.0		50.0			70.0
Base Capacity (vph)	347	1209	389	1400	356	457	586	491	460	523
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	0.45	0.59	0.42	0.28	0.09	0.55	0.60	0.13	0.09

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 115	
Offset: 85 (74%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 27.7	Intersection LOS: C
Intersection Capacity Utilization 81.8%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 3: Stittsville & Hazeldean



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	56	95	288	143	82	70	382	418	68	318	28
Future Volume (vph)	56	95	288	143	82	70	382	418	68	318	28
Lane Group Flow (vph)	56	95	288	0	225	70	382	593	68	318	28
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4			8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	28.1	28.1	28.1	28.1	28.1	28.1	10.7	29.5	10.7	29.5	29.5
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	15.0	35.0	15.0	35.0	35.0
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%	37.5%	18.8%	43.8%	18.8%	43.8%	43.8%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.8	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)	5.1	5.1	5.1		5.1	5.1	5.5	5.5	5.5	5.5	5.5
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	18.7	18.7	18.7		18.7	18.7	49.7	40.6	40.1	33.2	33.2
Actuated g/C Ratio	0.23	0.23	0.23		0.23	0.23	0.62	0.51	0.50	0.42	0.42
v/c Ratio	0.28	0.23	0.52		0.75	0.16	0.67	0.69	0.17	0.44	0.04
Control Delay	26.8	24.3	6.6		43.0	2.7	17.8	23.2	8.9	20.6	0.1
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	24.3	6.6		43.0	2.7	17.8	23.2	8.9	20.6	0.1
LOS	C	C	A		D	A	B	C	A	C	A
Approach Delay		13.0			33.5			21.1		17.3	
Approach LOS		B			C			C		B	
Queue Length 50th (m)	7.3	12.3	0.0		33.2	0.0	26.5	69.2	3.8	38.5	0.0
Queue Length 95th (m)	16.0	22.3	17.0		52.8	4.1	#72.6	#150.2	10.3	62.5	0.0
Internal Link Dist (m)		141.8			31.2			69.3		541.7	
Turn Bay Length (m)	40.0		60.0			25.0			60.0		60.0
Base Capacity (vph)	267	554	640		403	531	566	857	445	725	633
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	0.21	0.17	0.45		0.56	0.13	0.67	0.69	0.15	0.44	0.04

Intersection Summary		
Cycle Length: 80		
Actuated Cycle Length: 80		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 75		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.75		
Intersection Signal Delay: 20.4	Intersection LOS: C	
Intersection Capacity Utilization 75.3%	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.

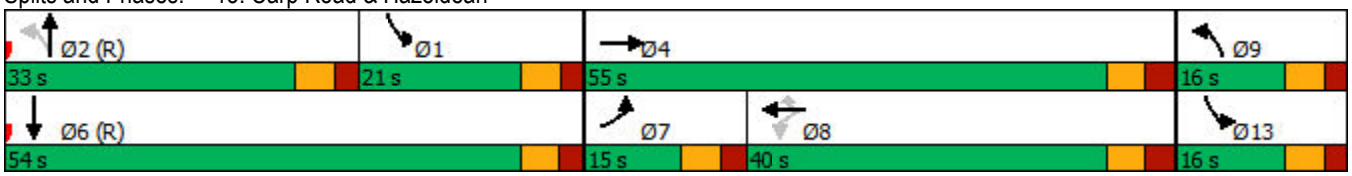
Splits and Phases: 8: Stittsville & Carp Road/Access

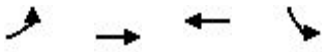
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	Ø1	Ø13
Lane Configurations											
Traffic Volume (vph)	333	368	37	205	275	43	393	275	304		
Future Volume (vph)	333	368	37	205	275	43	393	275	304		
Lane Group Flow (vph)	333	446	37	205	275	43	419	275	389		
Turn Type	Prot	NA	Perm	NA	Perm	pm+pt	NA	Prot	NA		
Protected Phases	7	4		8		9	2	1 13	6	1	13
Permitted Phases			8		8	2					
Detector Phase	7	4	8	8	8	9	2	1 13	6		
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0		10.0	5.0	5.0
Minimum Split (s)	11.2	39.6	39.6	39.6	39.6	11.0	32.1		32.1	11.0	11.0
Total Split (s)	15.0	55.0	40.0	40.0	40.0	16.0	33.0		54.0	21.0	16.0
Total Split (%)	12.0%	44.0%	32.0%	32.0%	32.0%	12.8%	26.4%		43.2%	17%	13%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.5	2.9	2.9	2.9	2.9	2.3	2.4		2.4	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		
Total Lost Time (s)	6.2	6.6	6.6	6.6	6.6	6.0	6.1		6.1		
Lead/Lag	Lead		Lag	Lag	Lag		Lead			Lag	
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Min		C-Min	None	None
Act Effct Green (s)	20.7	48.8	22.0	22.0	22.0	40.8	30.5	21.0	46.5		
Actuated g/C Ratio	0.17	0.39	0.18	0.18	0.18	0.33	0.24	0.17	0.37		
v/c Ratio	0.63	0.37	0.27	0.72	0.58	0.14	0.55	0.56	0.34		
Control Delay	55.6	26.5	46.5	61.9	9.8	27.1	44.5	29.3	27.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	55.6	26.5	46.5	61.9	9.8	27.1	44.5	29.3	27.0		
LOS	E	C	D	E	A	C	D	C	C		
Approach Delay		38.9		33.1			42.9		28.0		
Approach LOS		D		C			D		C		
Queue Length 50th (m)	41.7	40.8	8.4	51.1	0.0	7.0	49.6	19.0	34.4		
Queue Length 95th (m)	#79.1	52.6	17.5	69.8	22.3	16.2	69.6	29.0	49.5		
Internal Link Dist (m)		137.8		494.3			112.9		126.9		
Turn Bay Length (m)	110.0		50.0			70.0		90.0			
Base Capacity (vph)	532	1213	210	433	572	325	765	613	1174		
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	0.37	0.18	0.47	0.48	0.13	0.55	0.45	0.33		

Intersection Summary		
Cycle Length: 125		
Actuated Cycle Length: 125		
Offset: 114 (91%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.72		
Intersection Signal Delay: 35.4	Intersection LOS: D	
Intersection Capacity Utilization 74.6%	ICU Level of Service D	
Analysis Period (min) 15		

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

Splits and Phases: 13: Carp Road & Hazeldean

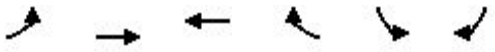




Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	94	264	327	62	
Future Volume (vph)	94	264	327	62	
Lane Group Flow (vph)	94	264	372	93	
Turn Type	Perm	NA	NA	Prot	
Protected Phases		1	1	3	2
Permitted Phases	1		1		
Detector Phase	1	1	1	3	
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	10.0	1.0
Minimum Split (s)	33.4	33.4	33.4	34.0	5.0
Total Split (s)	76.0	76.0	76.0	34.0	5.0
Total Split (%)	66.1%	66.1%	66.1%	29.6%	4%
Yellow Time (s)	3.7	3.7	3.7	3.3	2.0
All-Red Time (s)	2.7	2.7	2.7	3.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.4	6.4	6.4	6.3	
Lead/Lag	Lead	Lead	Lead		Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	90.7	90.7	90.7	11.6	
Actuated g/C Ratio	0.79	0.79	0.79	0.10	
v/c Ratio	0.14	0.10	0.15	0.50	
Control Delay	3.7	3.1	5.5	46.9	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay	3.7	3.1	5.5	46.9	
LOS	A	A	A	D	
Approach Delay		3.2	5.5	46.9	
Approach LOS		A	A	D	
Queue Length 50th (m)	4.0	5.7	6.2	16.5	
Queue Length 95th (m)	10.0	10.8	37.4	32.8	
Internal Link Dist (m)		114.6	229.2	44.4	
Turn Bay Length (m)	60.0				
Base Capacity (vph)	685	2543	2436	412	
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.14	0.10	0.15	0.23	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 115	
Offset: 75 (65%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 9.2	Intersection LOS: A
Intersection Capacity Utilization 45.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 16: Hazeldean Road & Jackson Centre



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	670	734	34	0	71
Future Volume (Veh/h)	0	670	734	34	0	71
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	670	734	34	0	71
Pedestrians		2	2		2	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			139			
pX, platoon unblocked	0.95				0.95	0.95
vC, conflicting volume	770				1090	388
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	645				983	241
tC, single (s)	4.1				6.8	7.5
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.6
p0 queue free %	100				100	89
cM capacity (veh/h)	898				234	643

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	335	335	489	279	71
Volume Left	0	0	0	0	0
Volume Right	0	0	0	34	71
cSH	1700	1700	1700	1700	643
Volume to Capacity	0.20	0.20	0.29	0.16	0.11
Queue Length 95th (m)	0.0	0.0	0.0	0.0	3.0
Control Delay (s)	0.0	0.0	0.0	0.0	11.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.3
Approach LOS					B

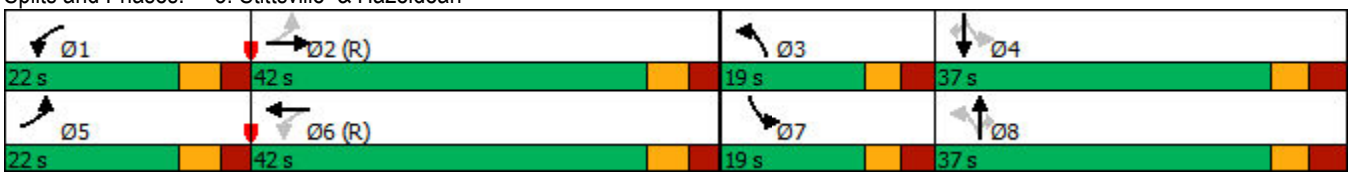
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	42	525	455	818	159	78	405	232	107	47
Future Volume (vph)	42	525	455	818	159	78	405	232	107	47
Lane Group Flow (vph)	42	602	455	1023	159	78	405	232	107	47
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6	3	8		7	4	
Permitted Phases	2		6		8		8	4		4
Detector Phase	5	2	1	6	3	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.5	36.7	11.5	36.7	11.3	36.9	36.9	11.3	36.9	36.9
Total Split (s)	22.0	42.0	22.0	42.0	19.0	37.0	37.0	19.0	37.0	37.0
Total Split (%)	18.3%	35.0%	18.3%	35.0%	15.8%	30.8%	30.8%	15.8%	30.8%	30.8%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	3.0	2.8	3.0	3.0	3.6	3.6	3.0	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.7	6.5	6.7	6.3	6.9	6.9	6.3	6.9	6.9
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	42.3	35.3	72.1	60.9	28.2	15.5	15.5	29.5	16.2	16.2
Actuated g/C Ratio	0.35	0.29	0.60	0.51	0.24	0.13	0.13	0.25	0.14	0.14
v/c Ratio	0.17	0.65	0.79	0.63	0.48	0.35	0.75	0.68	0.45	0.14
Control Delay	17.0	44.4	30.1	25.5	37.1	49.7	14.1	45.9	52.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.0	44.4	30.1	25.5	37.1	49.7	14.1	45.9	52.4	0.9
LOS	B	D	C	C	D	D	B	D	D	A
Approach Delay		42.6		26.9		24.1			42.2	
Approach LOS		D		C		C			D	
Queue Length 50th (m)	4.6	70.3	56.9	89.9	32.0	18.4	1.8	49.1	25.7	0.0
Queue Length 95th (m)	13.6	91.7	#166.0	#165.6	41.3	28.9	29.5	59.4	37.4	0.0
Internal Link Dist (m)		229.2		339.6		541.7			73.1	
Turn Bay Length (m)	80.0		280.0		76.0		50.0			70.0
Base Capacity (vph)	366	932	575	1618	339	429	669	339	442	478
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	0.65	0.79	0.63	0.47	0.18	0.61	0.68	0.24	0.10

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 113 (94%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 31.4	Intersection LOS: C
Intersection Capacity Utilization 89.0%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 3: Stittsville & Hazeldean

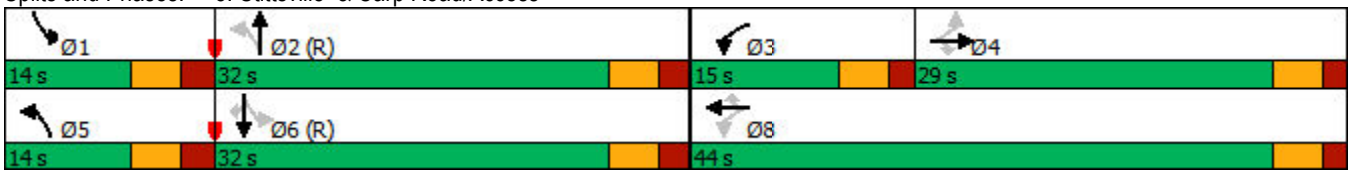


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	71	137	508	207	154	64	381	513	63	501	55
Future Volume (vph)	71	137	508	207	154	64	381	513	63	501	55
Lane Group Flow (vph)	71	137	508	0	361	64	381	657	63	501	55
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2	1	6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	4	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	28.1	28.1	28.1	10.3	28.1	28.1	10.7	29.5	10.7	29.5	29.5
Total Split (s)	29.0	29.0	29.0	15.0	44.0	44.0	14.0	32.0	14.0	32.0	32.0
Total Split (%)	32.2%	32.2%	32.2%	16.7%	48.9%	48.9%	15.6%	35.6%	15.6%	35.6%	35.6%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.8	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)	5.1	5.1	5.1		5.1	5.1	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?				Yes			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	33.6	33.6	33.6		33.6	33.6	43.4	35.3	33.7	26.5	26.5
Actuated g/C Ratio	0.37	0.37	0.37		0.37	0.37	0.48	0.39	0.37	0.29	0.29
v/c Ratio	0.27	0.21	0.66		0.74	0.11	1.19	0.97	0.30	0.97	0.10
Control Delay	20.6	18.5	9.7		33.3	1.8	141.5	59.1	17.6	65.0	0.4
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	18.5	9.7		33.3	1.8	141.5	59.1	17.6	65.0	0.4
LOS	C	B	A		C	A	F	E	B	E	A
Approach Delay		12.4			28.5			89.4		54.4	
Approach LOS		B			C			F		D	
Queue Length 50th (m)	8.4	15.9	14.5		53.2	0.0	~78.3	~136.0	5.9	89.5	0.0
Queue Length 95th (m)	18.0	26.9	44.5		81.7	3.6	#149.9	#220.5	13.7	#153.4	0.0
Internal Link Dist (m)		141.8			31.2			69.3		541.7	
Turn Bay Length (m)	40.0		60.0			25.0			60.0		60.0
Base Capacity (vph)	263	668	768		567	684	319	679	239	519	540
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	0.27	0.21	0.66		0.64	0.09	1.19	0.97	0.26	0.97	0.10

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 2 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay: 52.7	Intersection LOS: D
Intersection Capacity Utilization 100.1%	ICU Level of Service G
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Stittsville & Carp Road/Access

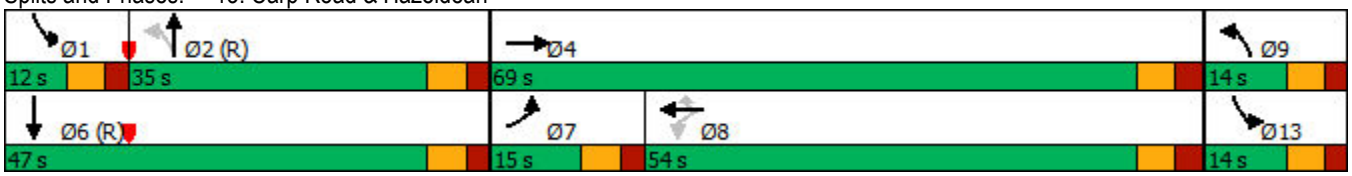


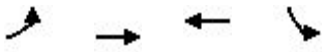
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	Ø1	Ø13
Lane Configurations											
Traffic Volume (vph)	164	328	37	522	408	129	397	325	513		
Future Volume (vph)	164	328	37	522	408	129	397	325	513		
Lane Group Flow (vph)	164	427	37	522	408	129	441	325	758		
Turn Type	Prot	NA	Perm	NA	Perm	pm+pt	NA	Prot	NA		
Protected Phases	7	4		8		9	2	1 13	6	1	13
Permitted Phases			8		8	2					
Detector Phase	7	4	8	8	8	9	2	1 13	6		
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0		10.0	5.0	5.0
Minimum Split (s)	11.2	39.6	39.6	39.6	39.6	11.0	32.1		32.1	11.0	11.0
Total Split (s)	15.0	69.0	54.0	54.0	54.0	14.0	35.0		47.0	12.0	14.0
Total Split (%)	11.5%	53.1%	41.5%	41.5%	41.5%	10.8%	26.9%		36.2%	9%	11%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.5	2.9	2.9	2.9	2.9	2.3	2.4		2.4	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		
Total Lost Time (s)	6.2	6.6	6.6	6.6	6.6	6.0	6.1		6.1		
Lead/Lag	Lead		Lag	Lag	Lag		Lag			Lead	
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Min		C-Min	None	None
Act Effct Green (s)	10.4	60.0	43.4	43.4	43.4	39.4	28.4	22.9	40.3		
Actuated g/C Ratio	0.08	0.46	0.33	0.33	0.33	0.30	0.22	0.18	0.31		
v/c Ratio	0.64	0.28	0.14	0.90	0.57	0.52	0.62	0.57	0.74		
Control Delay	69.5	19.4	30.1	61.2	8.3	34.7	50.2	54.2	42.4		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	69.5	19.4	30.1	61.2	8.3	34.7	50.2	54.2	42.4		
LOS	E	B	C	E	A	C	D	D	D		
Approach Delay		33.3		37.7			46.7		46.0		
Approach LOS		C		D			D		D		
Queue Length 50th (m)	22.1	30.4	6.7	129.1	9.0	22.1	59.1	41.6	94.3		
Queue Length 95th (m)	#40.1	43.2	15.4	#186.2	37.4	35.6	74.4	59.5	112.5		
Internal Link Dist (m)		137.8		494.3			112.9		126.9		
Turn Bay Length (m)	110.0		50.0			70.0		90.0			
Base Capacity (vph)	258	1597	281	631	751	247	763	568	1074		
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	0.64	0.27	0.13	0.83	0.54	0.52	0.58	0.57	0.71		

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 129 (99%), Referenced to phase 2:NBTL and 6:SBT, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.90		
Intersection Signal Delay: 41.3	Intersection LOS: D	
Intersection Capacity Utilization 86.1%	ICU Level of Service E	
Analysis Period (min) 15		

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

Splits and Phases: 13: Carp Road & Hazeldean





Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	120	430	609	76	
Future Volume (vph)	120	430	609	76	
Lane Group Flow (vph)	120	430	655	145	
Turn Type	Perm	NA	NA	Prot	
Protected Phases		1	1	3	2
Permitted Phases	1		1		
Detector Phase	1	1	1	3	
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	10.0	1.0
Minimum Split (s)	33.4	33.4	33.4	34.0	5.0
Total Split (s)	81.0	81.0	81.0	34.0	5.0
Total Split (%)	67.5%	67.5%	67.5%	28.3%	4%
Yellow Time (s)	3.7	3.7	3.7	3.3	2.0
All-Red Time (s)	2.7	2.7	2.7	3.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.4	6.4	6.4	6.3	
Lead/Lag	Lead	Lead	Lead		Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	90.0	90.0	90.0	15.8	
Actuated g/C Ratio	0.75	0.75	0.75	0.13	
v/c Ratio	0.23	0.17	0.27	0.62	
Control Delay	7.7	5.6	12.9	47.2	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay	7.7	5.6	12.9	47.2	
LOS	A	A	B	D	
Approach Delay		6.0	12.9	47.2	
Approach LOS		A	B	D	
Queue Length 50th (m)	6.7	11.9	38.2	26.5	
Queue Length 95th (m)	25.0	32.0	86.3	43.2	
Internal Link Dist (m)		114.6	229.2	44.4	
Turn Bay Length (m)	60.0				
Base Capacity (vph)	531	2524	2480	386	
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.23	0.17	0.26	0.38	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 99 (83%), Referenced to phase 1:EBWB, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Hazeldean Road & Jackson Centre

Appendix G
Multi-Modal LOS Intersections Forms

ENGLOBE

Multi-Modal Level of Service - Intersections Form

Project: Hazeldean Road Traffic Study
Consultant: Englobe Corp
Date: Feb 18, 2026
Scenario: PM MMLOS (Worst Conditions)

	Intersection Name	**Hazeldean Road at Carp Road**			
	OP Transect / Policy Area	**Select Designation**			
Pedestrian	**PLOS Inputs**				
	Pedestrians Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**
	Number of Travel Lanes Crossed	6	4	5	5
	Median Refuge (≥2.7m)	No	No	No	No
	Crosswalk Treatment	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings
	Signal Cycle Length (sec)	130.0			
	Effective Walk Time (sec)	14.4	22.4	7.9	27.9
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	**WBR**	**EBR**	**NBR**	**SBR**
	Right-Turn Geometry	Conventional Right-Turn Channel	Right-Turn With No Channel	Right-Turn With No Channel	Conventional Right-Turn Channel
	Right-Turn Signal Phasing	-	Permissive	Permissive	-
	Right-Turn Volume	> 150 to 300 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h
	Right-Turn Effective Corner Radius	-	≤ 8m	≤ 8m	-
	Cross-street Posted Speed (km/h)	60 km/h		60 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	**EBL**	**WBL**	**SBL**	**NBL**
	Left-Turn Signal Phasing	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm
	Left-Turn Volume	> 100 veh/h	≤ 50 veh/h	> 100 veh/h	≤ 50 veh/h
	Left-Turn Opposing Lanes	-	-	-	-
	Score	**1.70**	**3.55**	**2.75**	**2.50**
	PLOS	**D**	**B**	**C**	**C**
		C			
	Target PLOS	**-**			
Bicycle	**BLOS Inputs**				
	Cycling Route Classification	**Select Cycling Route Classification**			
	Cyclists Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Two-Way ADT (in Cyclist Travel Direction)	20,000		25,000	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	No	No	No	No
	Crossride Operation	-	-	-	-
	Target Crossride Setback Met?	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-
	Cyclist Left-Turn Operation	**WBL**	**EBL**	**NBL**	**SBL**
	Cyclist Left-Turn Treatment Type	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane
	Vehicle Lanes Crossed by Cyclists	Two or More Lanes Crossed	One Lane Crossed	One Lane Crossed	Two or More Lanes Crossed
	Score	**-30**	**50**	**10**	**10**
	BLOS	**F**	**D**	**F**	**F**
		F			
	Target BLOS	**-**			
Transit	**TLOS Inputs**				
	Transit Facility	**Select Transit Designation**			
	Vehicles Travelling	**Southbound**	**Northbound**	**Westbound**	**Eastbound**
	Average Transit Delay (if available)	Unavailable	Unavailable	Unavailable	Unavailable
	Example Transit Priority Treatment	No transit priority measures and long cycle length	No transit priority measures and long cycle length	No transit priority measures and long cycle length	No transit priority measures and long cycle length
	TLOS	**E**	**E**	**E**	**E**
		E			
	Target TLOS	**-**			
Auto	**AutoLOS Inputs**				
	Overall Intersection Volume to Capacity Ratio	0.71 to 0.80			
	Individual Movements V/C Ratios and Queue Lengths	See Separate Traffic Operations Table			
	AutoLOS	**C**			
	Target AutoLOS	**-**			

Multi-Modal Level of Service - Intersections Form

Project: Hazeldean Road Traffic Study
Consultant: Englobe Corp
Date: Feb 18, 2026
Scenario: PM MMLOS (Worst Conditions)

	Intersection Name	**Hazeldean Road at Jackson Centre**			
	OP Transect / Policy Area	**Select Designation**			
Pedestrian	**PLOS Inputs**				
	Pedestrians Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**
	Number of Travel Lanes Crossed	1-3	No Crosswalk	4	4
	Median Refuge (≥2.7m)	No	-	No	No
	Crosswalk Treatment	Std Transverse Markings	-	Std Transverse Markings	Std Transverse Markings
	Signal Cycle Length (sec)	120.0			
	Effective Walk Time (sec)	67.4	-	19.3	19.3
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	**WBR**	**EBR**	**NBR**	**SBR**
	Right-Turn Geometry	Right-Turn With No Channel	No Right-Turn / Prohib.	No Right-Turn / Prohib.	Right-Turn With No Channel
	Right-Turn Signal Phasing	Permissive	-	-	Protected-Permissive
	Right-Turn Volume	≤ 150 veh/h	-	-	≤ 150 veh/h
	Right-Turn Effective Corner Radius	≤ 8m	-	-	≤ 8m
	Cross-street Posted Speed (km/h)	60 km/h		30 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	**EBL**	**WBL**	**SBL**	**NBL**
	Left-Turn Signal Phasing	Perm or Prot+Perm	No Left-Turn / Prohib.	Fully Protected	No Left-Turn / Prohib.
	Left-Turn Volume	> 50 to 100 veh/h	-	-	-
	Left-Turn Opposing Lanes	≥ 2	-	-	-
	Score	**4.40**	**-**	**3.70**	**3.70**
	PLOS	**B**	**-**	**B**	**B**
		B			
	Target PLOS	**-**			
Bicycle	**BLOS Inputs**				
	Cycling Route Classification	**Select Cycling Route Classification**			
	Cyclists Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Two-Way ADT (in Cyclist Travel Direction)	20,000		20,000	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	No	No	No	No
	Crossride Operation	-	-	-	-
	Target Crossride Setback Met?	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-
	Cyclist Left-Turn Operation	**WBL**	**EBL**	**NBL**	**SBL**
	Cyclist Left-Turn Treatment Type	No Left-Turn	General Purpose Through-Left or Single Left-Turn Lane	No Left-Turn	General Purpose Through-Left or Single Left-Turn Lane
	Vehicle Lanes Crossed by Cyclists	-	Two or More Lanes Crossed	-	No Lane Crossed
	Score	**50**	**50**	**80**	**90**
	BLOS	**D**	**D**	**C**	**C**
		C			
	Target BLOS	**-**			
Transit	**TLOS Inputs**				
	Transit Facility	**Select Transit Designation**			
	Vehicles Travelling	**Southbound**	**Northbound**	**Westbound**	**Eastbound**
	Average Transit Delay (if available)	Unavailable	Unavailable	Unavailable	Unavailable
	Example Transit Priority Treatment	No transit priority measures and long cycle length	No transit priority measures and long cycle length	No transit priority measures and long cycle length	No transit priority measures and long cycle length
	TLOS	**E**	**E**	**E**	**E**
		E			
	Target TLOS	**-**			
Auto	**AutoLOS Inputs**				
	Overall Intersection Volume to Capacity Ratio	0 to 0.60			
	Individual Movements V/C Ratios and Queue Lengths	See Separate Traffic Operations Table			
	AutoLOS	**A**			
	Target AutoLOS	**-**			

Multi-Modal Level of Service - Intersections Form

Project: Hazeldean Road Traffic Study
Consultant: Englobe Corp
Date: Feb 18, 2026
Scenario: PM MMLOS (Worst Conditions)

	Intersection Name	**Hazeldean Road at Stittsville Main Street**			
	OP Transect / Policy Area	**Select Designation**			
Pedestrian	**PLOS Inputs**				
	Pedestrians Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**
	Number of Travel Lanes Crossed	4	4	6	5
	Median Refuge (≥2.7m)	Yes	No	No	Yes
	Crosswalk Treatment	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings
	Signal Cycle Length (sec)	120.0			
	Effective Walk Time (sec)	17.3	17.3	7.1	7.1
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	**WBR**	**EBR**	**NBR**	**SBR**
	Right-Turn Geometry	Right-Turn With No Channel	Conventional Right-Turn Channel	Right-Turn With No Channel	Right-Turn With No Channel
	Right-Turn Signal Phasing	Permissive	-	Permissive	Permissive
	Right-Turn Volume	> 150 to 300 veh/h	≤ 150 veh/h	> 300 veh/h	> 150 to 300 veh/h
	Right-Turn Effective Corner Radius	≤ 8m	-	≤ 8m	≤ 8m
	Cross-street Posted Speed (km/h)	60 km/h		60 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	**EBL**	**WBL**	**SBL**	**NBL**
	Left-Turn Signal Phasing	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm
	Left-Turn Volume	≤ 50 veh/h	> 100 veh/h	> 100 veh/h	> 100 veh/h
	Left-Turn Opposing Lanes	-	-	-	-
	Score	**4.00**	**2.90**	**1.55**	**3.20**
	PLOS	**B**	**C**	**D**	**C**
		C			
	Target PLOS	**-**			
Bicycle	**BLOS Inputs**				
	Cycling Route Classification	**Select Cycling Route Classification**			
	Cyclists Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Two-Way ADT (in Cyclist Travel Direction)	12,200		20,000	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	No	No	No	No
	Crossride Operation	-	-	-	-
	Target Crossride Setback Met?	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-
	Cyclist Left-Turn Operation	**WBL**	**EBL**	**NBL**	**SBL**
	Cyclist Left-Turn Treatment Type	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane
	Vehicle Lanes Crossed by Cyclists	Two or More Lanes Crossed	Two or More Lanes Crossed	Two or More Lanes Crossed	Two or More Lanes Crossed
	Score	**30**	**-30**	**-40**	**-10**
	BLOS	**E**	**F**	**F**	**F**
		-			
	Target BLOS	**-**			
Transit	**TLOS Inputs**				
	Transit Facility	**Select Transit Designation**			
	Vehicles Travelling	**Southbound**	**Northbound**	**Westbound**	**Eastbound**
	Average Transit Delay (if available)	Unavailable	Unavailable	Unavailable	Unavailable
	Example Transit Priority Treatment	No transit priority measures and long cycle length	No transit priority measures and long cycle length	No transit priority measures and long cycle length	No transit priority measures and long cycle length
	TLOS	**E**	**E**	**E**	**E**
		E			
	Target TLOS	**-**			
Auto	**AutoLOS Inputs**				
	Overall Intersection Volume to Capacity Ratio	0 to 0.60			
	Individual Movements V/C Ratios and Queue Lengths	See Separate Traffic Operations Table			
	AutoLOS	**A**			
	Target AutoLOS	**-**			

Multi-Modal Level of Service - Intersections Form

Project: Hazeldean Road Traffic Study
Consultant: Englobe Corp
Date: Feb 18, 2026
Scenario: PM MMLOS (Worst Conditions)

	Intersection Name	**Stittsville Main Street at Carp Road**			
	OP Transect / Policy Area	**Select Designation**			
Pedestrian	**PLOS Inputs**				
	Pedestrians Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**
	Number of Travel Lanes Crossed	4	4	5	1-3
	Median Refuge (≥2.7m)	No	No	No	No
	Crosswalk Treatment	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings
	Signal Cycle Length (sec)	90.0			
	Effective Walk Time (sec)	20.9	7.9	10.5	10.5
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	**WBR**	**EBR**	**NBR**	**SBR**
	Right-Turn Geometry	Right-Turn With No Channel	Conventional Right-Turn Channel	Right-Turn With No Channel	Conventional Right-Turn Channel
	Right-Turn Signal Phasing	Permissive	-	Protected-Permissive	-
	Right-Turn Volume	≤ 150 veh/h	> 300 veh/h	≤ 150 veh/h	≤ 150 veh/h
	Right-Turn Effective Corner Radius	> 8m	-	> 8m	-
	Cross-street Posted Speed (km/h)	60 km/h		60 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	**EBL**	**WBL**	**SBL**	**NBL**
	Left-Turn Signal Phasing	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm
	Left-Turn Volume	> 50 to 100 veh/h	> 100 veh/h	> 50 to 100 veh/h	> 100 veh/h
	Left-Turn Opposing Lanes	≥ 2	-	≥ 2	-
	Score	**3.50**	**2.90**	**2.90**	**3.65**
	PLOS	**B**	**C**	**C**	**B**
		C			
	Target PLOS	**-**			
Bicycle	**BLOS Inputs**				
	Cycling Route Classification	**Select Cycling Route Classification**			
	Cyclists Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Two-Way ADT (in Cyclist Travel Direction)	12,200		10,000	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	No	No	No	No
	Crossride Operation	-	-	-	-
	Target Crossride Setback Met?	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-
	Cyclist Left-Turn Operation	**WBL**	**EBL**	**NBL**	**SBL**
	Cyclist Left-Turn Treatment Type	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane
	Vehicle Lanes Crossed by Cyclists	Two or More Lanes Crossed	Two or More Lanes Crossed	Two or More Lanes Crossed	Two or More Lanes Crossed
	Score	**-10**	**-40**	**0**	**-30**
	BLOS	**F**	**F**	**F**	**F**
		-			
	Target BLOS	**-**			
Transit	**TLOS Inputs**				
	Transit Facility	**Select Transit Designation**			
	Vehicles Travelling	**Southbound**	**Northbound**	**Westbound**	**Eastbound**
	Average Transit Delay (if available)	Unavailable	Unavailable	Unavailable	Unavailable
	Example Transit Priority Treatment	No transit priority measures and long cycle length	No transit priority measures and long cycle length	No transit priority measures and long cycle length	No transit priority measures and long cycle length
	TLOS	**E**	**E**	**E**	**E**
		E			
	Target TLOS	**-**			
Auto	**AutoLOS Inputs**				
	Overall Intersection Volume to Capacity Ratio	0.81 to 0.90			
	Individual Movements V/C Ratios and Queue Lengths	See Separate Traffic Operations Table			
	AutoLOS	**D**			
	Target AutoLOS	**-**			