



**1495 Heron Road
Transportation Impact
Assessment**

Strategy Report

July 23, 2024

Prepared for:

Canada Lands Company.

Prepared by:

Stantec Consulting Ltd.

Certification

1. I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines;
2. I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;
3. I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and
4. I am either a licensed¹ or registered¹ professional in good standing, whose field of expertise is either transportation engineering or transportation planning.

Signature of individual certifier that s/he meets the above four criteria.

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1.0 SCREENING

1.1 SUMMARY OF DEVELOPMENT

Municipal Address 1495 Heron Road	
Description of Location	North of the Heron Road and Baycrest Drive intersection at the existing Federal Study Centre
Land Use Classification	Residential, Commercial, Elementary School, Community Center
Development Size (units)	Proposed: 788 units (90 mixed use; retail + multifamily, 80 stacked houses, 618 multi-family housing) Existing: 60 multi-family units
Development Size (m²)	Strip retail Plaza: 139 m ² (1,496 ft ²) Community Center: 8,169 m ² (87,930 ft ²) Elementary School: approximately 600 students
Number of Accesses and Locations	Existing 1 full-movement access from the north leg of the intersection of Heron Road and Baycrest Drive, and a proposed right-in-right-out access at the eastern limit of the site
Phase of Development	4 phases (25% of development in each phase)
Buildout Year	Assumed build-out and occupancy by 2032

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

1.2 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	Triggered
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.



1.3 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?	✓	
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone? *		✗

*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.

1.4 SAFETY TRIGGERS

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

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

1.5 SUMMARY

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

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).



2.0 SCOPING

2.1 EXISTING AND PLANNED CONDITIONS

2.1.1 Proposed Development

Canada Lands Company (“CLC”) is preparing a development application for a Plan of Subdivision of a proposed development in the Playfair Park – Lynda Park – Guildwood Estates neighborhood of Ottawa, Ontario. The proposed development is located north of the Heron Road and Baycrest Drive intersection at the existing Federal Study Centre. The site is bound by Heron Road to the south, single-family homes to the east, an existing school to the west and parkland to the north.

Figure 1 illustrates the location of the subject development. The subject site is currently zoned as Minor Institutional Zone I1A [366] H (21) and I1A H (15); the purpose of the I1 Zone, according to the City of Ottawa Official Plan, is to:

- *permit a range of community uses, institutional accommodation and emergency service uses to locate in areas designated as General Urban Area or Central Area in the Official Plan; and*
- *minimize the impact of these minor institutional uses located in close proximity to residential uses by ensuring that such uses are of a scale and intensity that is compatible with neighbourhood character.*

The existing property is currently a heritage site whose buildings will be preserved and will be upgraded instead of demolished to meet the Ottawa building code. There is currently one existing access to the 1495 Heron property at the Heron Road and Baycrest Drive intersection.

It is proposed that the development will be constructed in 4 equal phases (25% of total development in each phase). Build-out and occupancy of the proposed site are anticipated to occur in 2032.

Table 1 outlines the proposed land uses assumed for the analysis which were obtained from the City's *TRANS Trip Generation Residential Trip Rates Study Report (October 2020)* and the *Institute of Transportation (“ITE”) Trip Generation Manual 11th Edition*. The existing 60 units account for dormitory space in the existing buildings.

illustrates the proposed concept plan.



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Figure 1 - Site Location



Table 1 – Proposed Land Uses / Land Use Codes

Land Use	Size	Land Use Code (LUC)
LUC 221 & LUC 222 & LUC 220 (City)	Proposed: 1099 units	Multi-family Housing (Mid-Rise Apartments and Stacked Townhouses)
LUC 822 (ITE)	18,000 ft ² GFA	Strip Retail Plaza
LUC 712 (ITE)	18,000 ft ² GFA	Office space
LUC 520 (ITE)	600 Students	Elementary School
LUC 495 (ITE)	37,000 ft ² GFA	Recreational Community Center

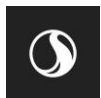
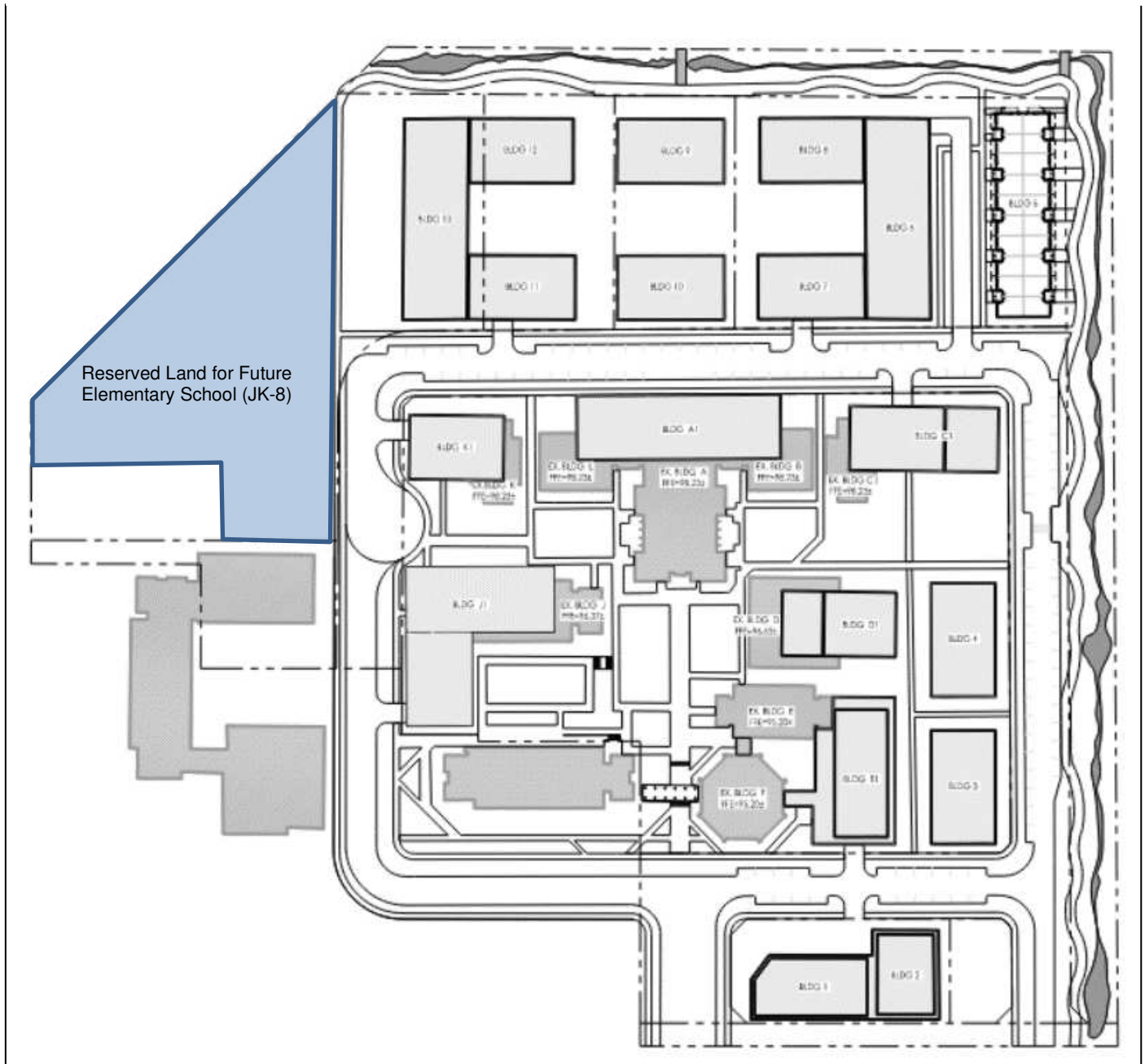


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Figure 2 - Proposed Concept Plan



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Figure 3 - Existing Land Use



2.1.2 Existing Conditions

2.1.2.1 Roads and Traffic Control

The roadways under consideration in the study area are described as follows:

Heron Road	Abutting the subject site, Heron Road is a municipal four-lane divided arterial roadway with ROW protection width of 44.5m. The posted speed limit along Heron Road across the frontage of the subject site is 50 km/h. Sidewalks are provided along both sides of the road and a one-way on-street bicycle lane on the south side of the road. The roadway is designated as a Spine route as per the City of Ottawa's Ultimate Cycling Plan and designated as a truck route. On-street parking on Heron Road in the vicinity of the subject site is always prohibited.
Bank Street	Within the vicinity of the subject site, Bank Street is a municipal four-lane divided arterial roadway with ROW protection width of 37.5m. The posted speed limit along Bank Street is 50 km/h. Sidewalks are provided along both sides of Bank Street and there are no cycling facilities 700m north and south of the intersection with Heron Road and Bank Street. The roadway is designated as a Spine route as per the City of Ottawa's Ultimate Cycling Plan. On-street parking on Bank Street in the vicinity of the subject site is always prohibited.
Alta Vista Drive	Within the vicinity of the subject site, Alta Vista Drive is a municipal two-lane major collector roadway. The default speed limit along Alta Vista Drive in the vicinity of the subject site is 50 km/h. Sidewalks are provided along both sides of Alta Vista Drive and bike lanes on both sides of the roadway. The roadway is designated as a Spine route as per the City of Ottawa's Ultimate Cycling Plan. On-street parking on Alta Vista Drive in the vicinity of the subject site is always prohibited.
Baycrest Drive	Within the vicinity of the subject site, Baycrest Drive is a municipal two-lane collector roadway. The default speed limit along Baycrest Drive in the vicinity of the subject site is 50 km/h. Sidewalks are provided along both sides of Baycrest Drive and there are no cycling facilities along the roadway. On-street parking on Baycrest Drive in the vicinity of the subject site is always prohibited on the eastern side of the roadway.
Sandalwood Drive	Within the vicinity of the subject site, Sandalwood Drive is a municipal two-lane local roadway. The default speed limit along Sandalwood Drive across the frontage of the subject site is 50 km/h. Sidewalks are provided along both sides of Sandalwood Drive and there are no cycling facilities along the roadway. On-street parking on Sandalwood Drive in the vicinity of the subject site is always prohibited on the eastern side of the roadway.

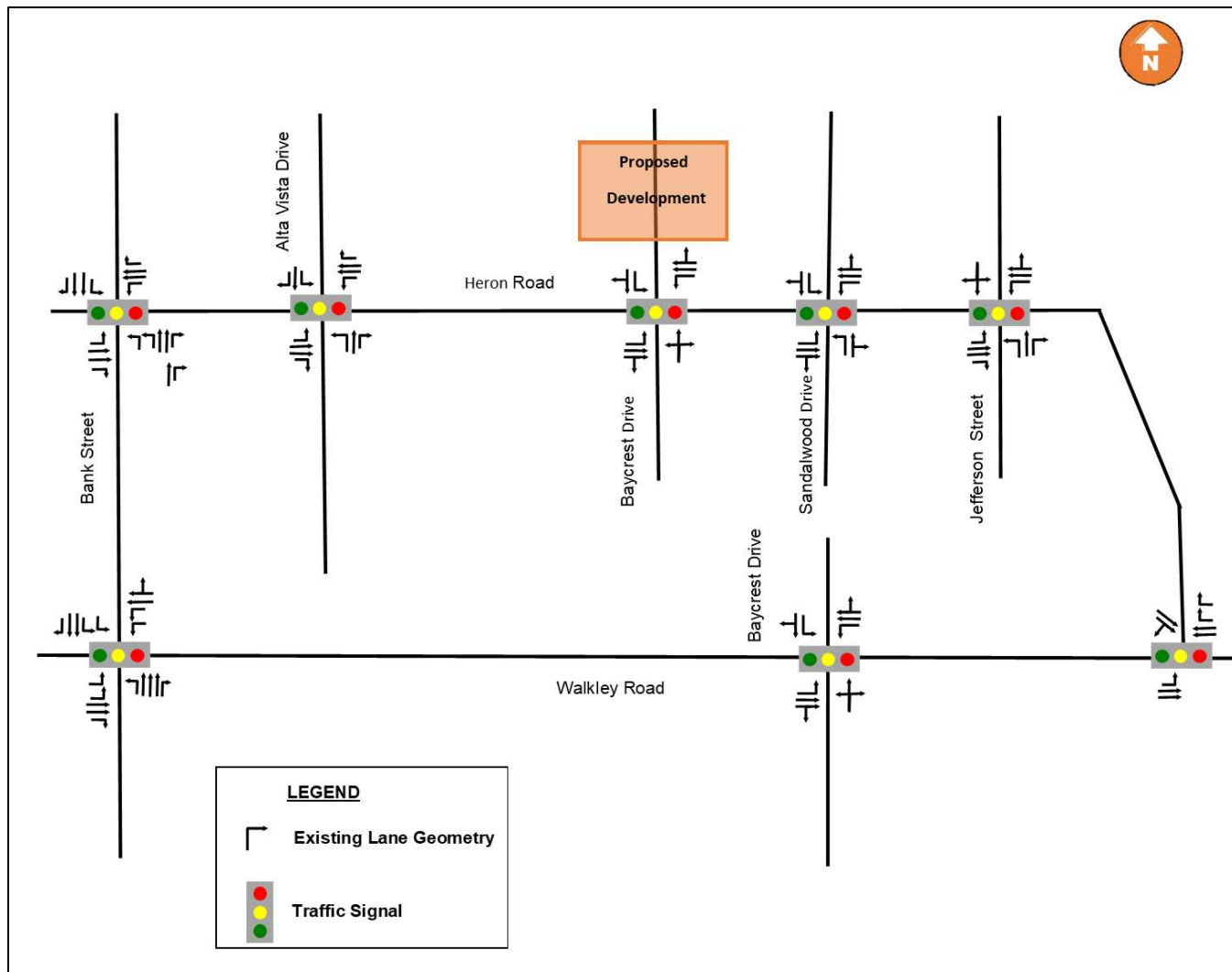


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Figure 4 - Existing Lane Configuration and Traffic Control



Existing Driveways

Within 200 metres of proposed site driveway, driveways to parking lots, commercial buildings, and residential houses are located on Heron Road and Baycrest Drive.

Figure 5 illustrates the existing driveways.



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Figure 5 - Existing Driveways within 200m of proposed site

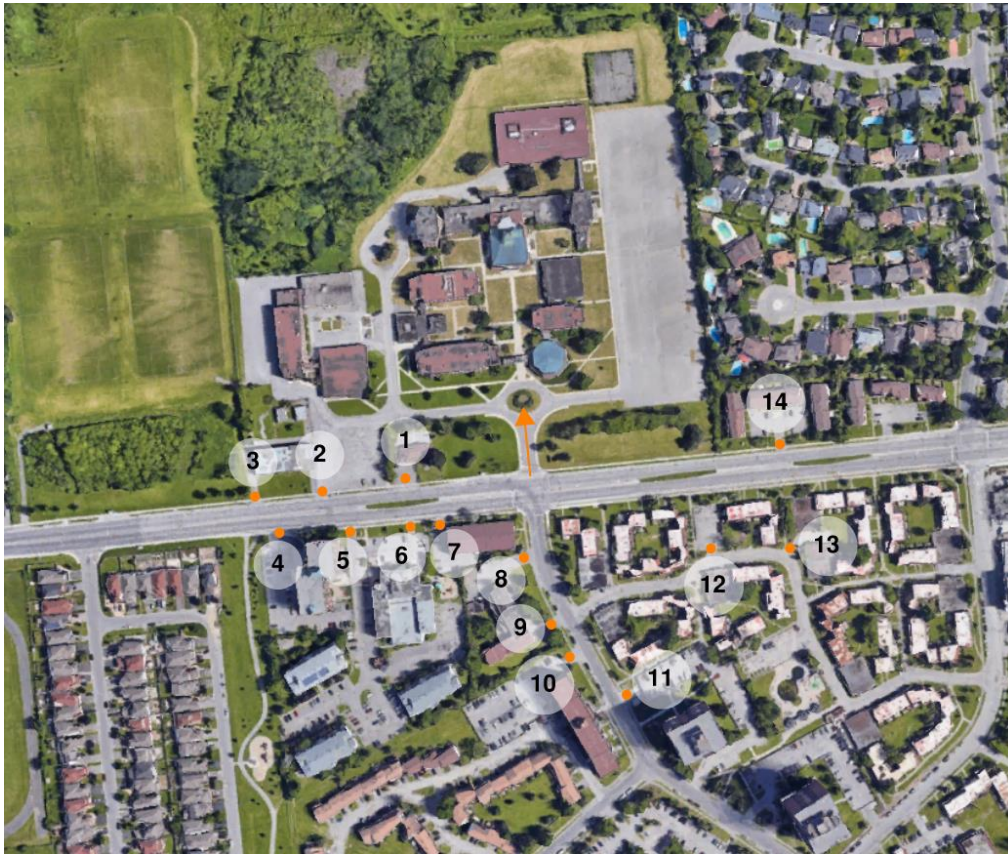


Table 2 – Existing Driveways within 200m of proposed site

Driveway	Distance from Proposed Driveway	Associated Land Use
1	86 m on Heron Road	A parking lot for a Buddhist Monastery
2	145 m on Heron Road	A parking lot for an Elementary School
3	195 m on Heron Road	An Alley into the back of a School
4	186 m on Heron Road	A parking lot for a Commercial Building
5	134 m on Heron Road	A parking lot for a Community Center



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6	94 m on Heron Road	A parking lot for a Community Center
7	75 m on Heron Road	A parking lot for a Commercial Building
8	65 m on Baycrest Drive	A parking lot for a Religious Community Building
9	107 m on Baycrest Drive	A parking lot for a Religious Community Building
10	146 m on Baycrest Drive	A parking lot for a Residential Apartment Building
11	174 m on Baycrest Drive	A parking lot for a Residential Apartment Building
12	142 m on Baycrest Drive	A parking lot for a Childcare Center
13	192 m on Baycrest Drive	An Alley for Residential Buildings
14	177 m on Heron Road	A parking lot for a Residential Building

2.1.2.2 Walking and Cycling

Within the vicinity of the subject site, sidewalks are provided on both sides of Heron Road and Baycrest Drive. Across the frontage of the subject site, there is a currently cycle track on south side of Heron Road and designated as a 'spine' cycling route in the City of Ottawa's Ultimate Cycling Network.

Figure 6 illustrates the existing and planned pedestrian and cycling facilities within the vicinity of the subject site.



Figure 6 - Existing and Planned Active Modes Facilities



Source: geoOttawa, accessed August 2022

2.1.2.3 Transit

Transit service is currently provided in the immediate vicinity of the proposed development via the following routes:

- Route 44 Route 44 is a Frequent Route that runs between Billings Bridge and Hurdman. Route 44 operates with 15-minute headways during the AM and PM peak periods, respectively.
- Route 46 Route 46 is a Local Route that runs between Hurdman and Billings Bridge Station. Route 46 operates with 15-minute headways during the AM and PM peak periods, respectively.
- Route 140 Route 140 is a Local Route that runs between Heron Park and Billings Bridge with limited service with a headway of 30 minutes during the day from 9 am to 3 pm
- Route 291 Route 291 is a Connection Route that runs between Hurdman and Herongate. It conveniently connects the O-Train during the AM and PM peak times. Route 291 operates with 25-minute headways during the AM peak hour and 30-minute headways during the PM peak periods, respectively.

There are transit stops located at the intersection of Heron Road and Baycrest Drive that are serviced by all four transit routes.

- West-Bound Heron/Baycrest West-Bound Heron/Baycrest services Route 44, Route 46, and Route 140. It is an open bus stop with no shelter located on the sidewalk directly adjacent to the proposed site.



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East-Bound Heron/Baycrest

East-Bound Heron/Baycrest services Route 140 and Route 291. It is an open bus stop with no shelter located on the sidewalk opposite side of the road from the proposed site.

Figure 7 and Figure 8 illustrate nearby transit routes and bus stop locations.

Figure 7 - Existing Study Area Transit Service



(Source: OC Transpo System Map, accessed August 28, 2023)



Figure 8 - Existing Study Area Transit Stops



(Source: OC Transpo System Map, accessed August 28, 2023)

2.1.2.4 Traffic Management Measures

No traffic management measures are currently provided near the subject site.

2.1.2.5 Traffic Volumes

Traffic volumes at the study area intersections were collected in 2022.

Based on the City's TMP, the subject development site is within the "Inner Suburbs" area, as shown in Figure 9.

The City of Ottawa's TMP provided **Figure 12** below, which outlines the projected Growth in Key Travel Markets during the morning peak period. As illustrated in **Figure 10**, the 20-year traffic growth rates for Inner Suburbs Area were calculated and presented in **Table 3**.

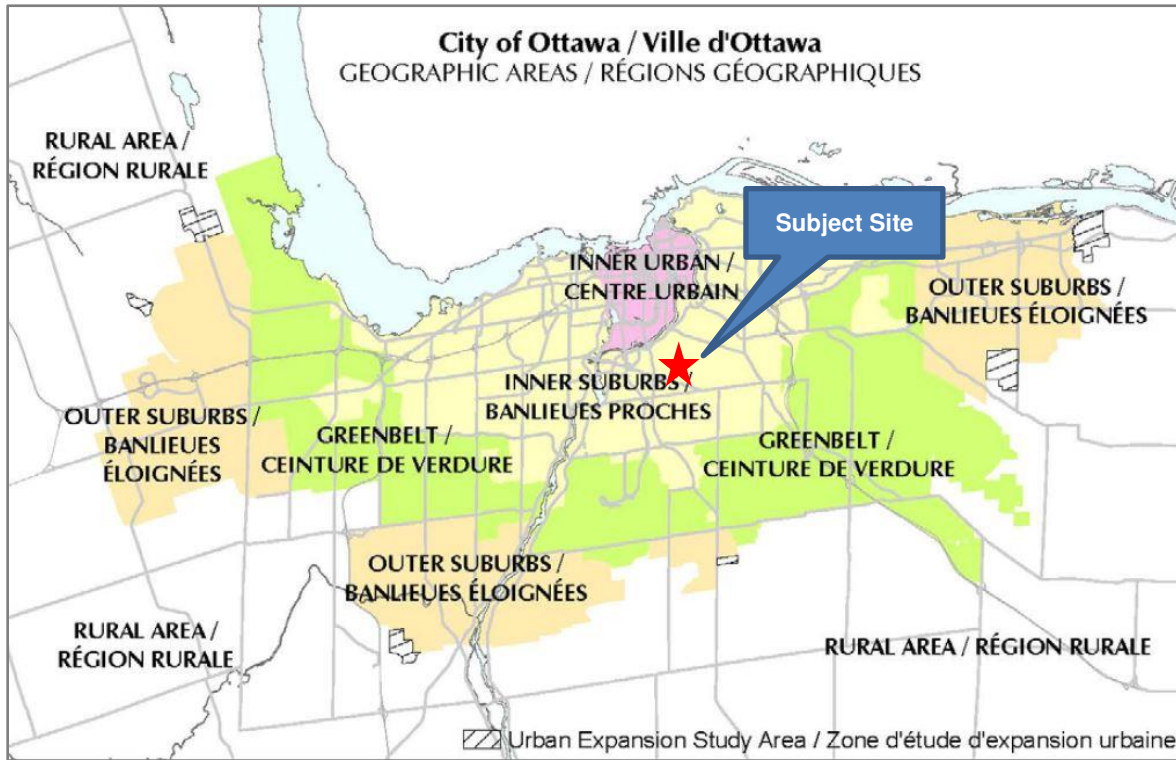


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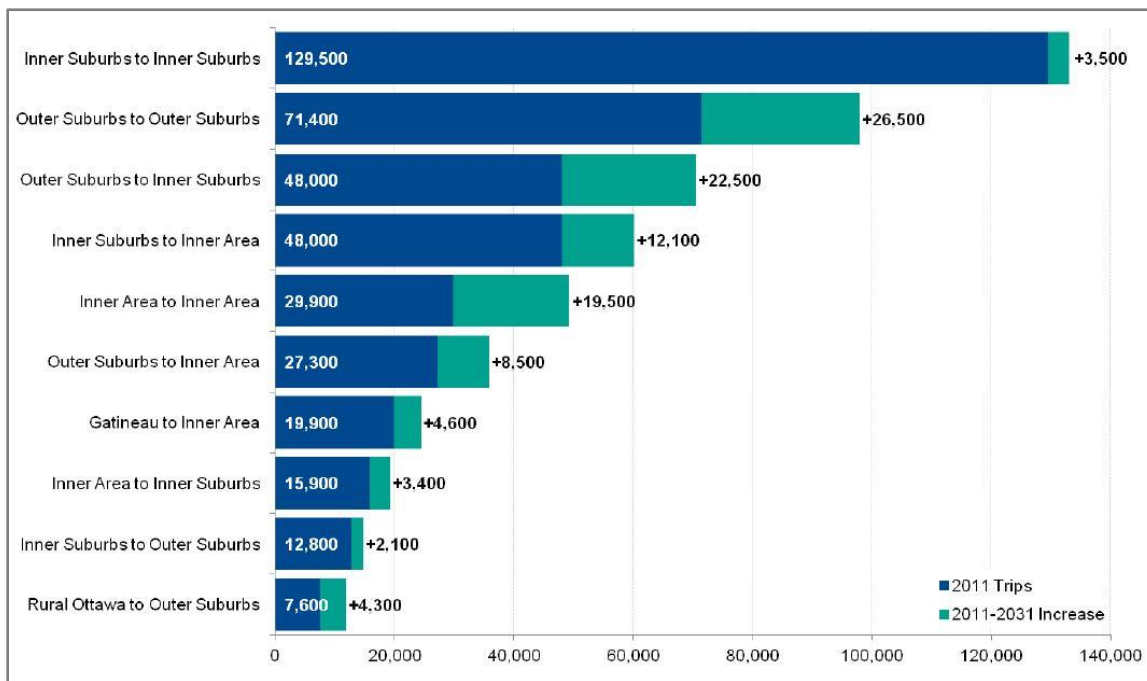
Figure 9 - Location of Inner Suburbs



Source: City of Ottawa 2013 Transportation Maser Plan



Figure 10 - Projected growth in Key Travel Markets (morning peak period)



Source: City of Ottawa 2013 Transportation Master Plan

Table 3 – 20 Year Growth Rate Calculation (Inner Suburbs)

Travel Markets	2011 Trips	Trip Increase	2031 Trips	20yr Growth Rate
Inner Suburbs to Inner Suburbs	129,500	3,500	133,000	3%
Outer Suburbs to Inner Suburbs	48,000	22,500	70,500	47%
Inner Suburbs to Inner Area	48,000	12,100	60,100	25%
Inner Area to Inner Suburbs	15,900	3,400	19,300	21%
Inner Suburbs to Outer Suburbs	12,800	2,100	14,900	16%

The following formula was used to calculate a weighted annual traffic growth rate for the roadway network of this study:

$$\text{Annual Traffic Growth Rate} = \frac{((3\% * 129,500 + 47\% * 48,000 + 25\% * 48,000 + 21\% * 15,900 + 16\% * 12,800))}{(129,000 + 48,000 + 48,000 + 15,900 + 12,800)} / 20 = 0.86\%$$

Figure 11 illustrates the existing traffic volumes at the study area intersections.

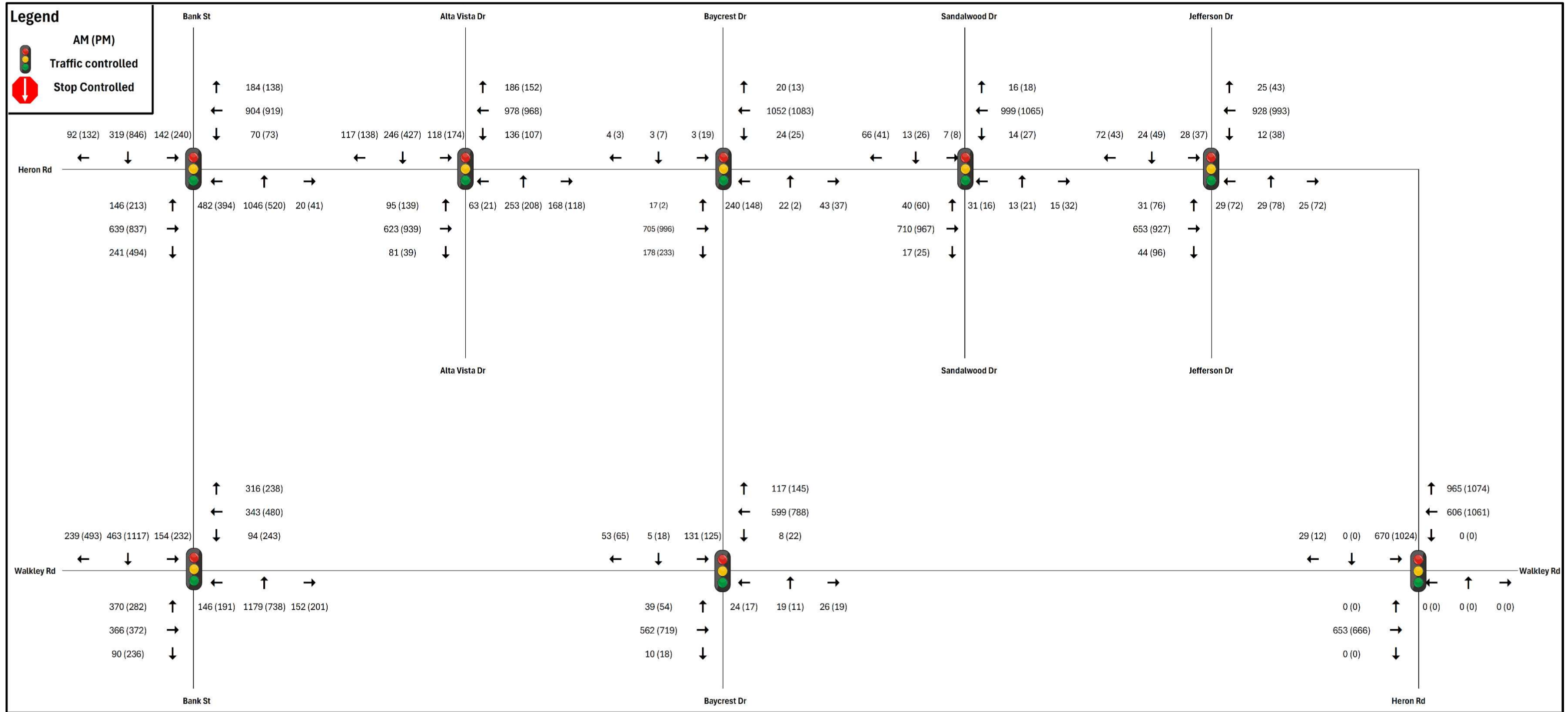
Appendix A contains the traffic data and is provided for reference.



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Figure 11 - 2022 Existing Traffic Volumes



2.1.2.6 Collision History

Collision data was provided by the City of Ottawa for the period 2016-2020 for the intersections and midblock locations in the vicinity of the subject site. The data was reviewed to determine if any intersections or road segments exhibited an identifiable collision pattern during the five (5) year period.

Overall, there were a total of 528 reported collisions between 2016 to 2020. It was found that 433 collisions (82%) resulted in property damage only, suggesting that they occurred at low speeds, thereby circumventing bodily harm. The analysis also found that 94 collisions (18%) resulted in non-fatal injuries, 0 collision (0%) resulted in a fatal injury, and 1 (0%) non-reportable collision. The collision statistics are shown in Table 4 below.

At the intersection of Heron Road and Bank Street, a total of 129 collisions were reported, which accounts for 24% of the total collisions in the identified intersections and segments. Of these 129 collisions, 109 of them (84%) resulted in property damage only and 20 of them (16%) resulted in non-fatal injuries. Of these 129 collisions, most of them were rear-end collisions 58 (45%). These rear-end collisions were analyzed further to determine if there are any significant patterns in the rear-end collisions at this intersection, which can be seen in **Table 7 – Rear End Collisions based Direction and Pavement Conditions** below. It was found that 33% of the rear-end collisions occurred between vehicles traveling in the eastbound direction, 31% in the northbound direction and 28% in the southbound direction.

Further analysis of the rear-end collision at this intersection under pavement conditions found that 37 collisions (64%) occurred on a dry surface and 10 collisions (17%) occurred on a wet surface.

The Walkley Road and Bank Street intersection indicated a total of 130 collisions were reported, which accounts for 25% of the total collisions in the identified intersections and segments. Of these 130 collisions, 109 of them (84%) resulted in property damage only and 21 of them (16%) resulted in non-fatal injuries. Of these 130 collisions, most of them were rear-end collisions 73 (56%). These rear-end collisions were analyzed further to determine if there are any significant patterns in the rear-end collisions at this intersection, which can be seen in **Table 4 - Table 8 Table 8 – Rear End Collisions-based Direction and Pavement Conditions** below. It was found that 33% of the rear-end collisions occurred between vehicles traveling in the northbound direction, 32% in the southbound direction and 21% in the westbound direction.

Further analysis of the rear-end collision at this intersection under pavement conditions found that 55 collisions (75%) occurred on a dry surface and 11 collisions (15%) occurred on a wet surface.

Appendix B contains the collision data and is provided for reference.



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Table 4 – Collision Summary - Intersections

		Heron Road @ Baycrest Drive	Heron Road @ Sandalwood Drive	Heron Road @ Jefferson Street	Heron Road @ Walkley	Heron Road @ Alta Vista Drive	Heron Road @ Bank Street	Walkley Road @ Baycrest Drive Street	Walkley Road @ Bank Street
Classification	Property Damage Only	19	9	12	18	35	109	23	109
	Non-Fatal Injury	2	5	1	6	10	20	7	21
	Fatal Injury	-	-	-	-	-	-	-	-
	Non-reportable	-	-	-	-	1	-	-	-
Collision Type	Sideswipe	3	1	2	7	6	28	6	23
	Approaching	-	1	-	1	-	-	-	-
	Angle / Turning	7	8	8	3	12	34	7	24
	Rear End	9	3	3	9	24	58	15	73
	Single Motor Vehicle	2	-	-	4	4	6	2	4
	Other	-	1	-	-	-	3	-	3
	SMV unattended vehicle	-	-	-	-	-	-	-	2
Environmental Condition	Clear	17	12	8	20	37	95	26	101
	Rain		1	1	1	4	19	2	10
	Snow	4	1	4	3	5	11	2	16
	Freezing Rain	-	-	-	-	-	3	-	3
	Fog, mist, smoke, dust	-	-	-	-	-	1	-	-



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Table 5 – Collision Summary - Roadway Segments (1)

		HERON RD btwn ALTA VISTA DR & FINN CRT	HERON RD btwn BANK ST & EDGE HILL PL	HERON RD btwn BAYCREST DR & SANDALWOOD DR	HERON RD btwn EVANS BLVD & ALTA VISTA DR	HERON RD btwn FINN CRT & BAYCREST DR	HERON RD btwn JEFFERSON ST & TURN LANE	HERON RD btwn SANDALWOOD DR & JEFFERSON ST
Classification	Property Damage Only	5	10	2	2	8	11	5
	Non-Fatal Injury	1	1	1	1	3	2	1
	Fatal Injury	-	-	-	-	-	-	-
	Non-reportable	-	-	-	-	-	-	-
Collision Type	Sideswipe	3	2	2	-	-	3	2
	Approaching	-	-	-	-	-	-	-
	Angle / Turning	2	2	1	1	5	5	-
	Rear End	1	5	-	1	5	3	2
	Single Motor Vehicle	-	2	-	1	-	1	1
	Other	-	-	-	-	-	-	1
	SMV unattended vehicle	-	-	-	-	-	-	-
Environmental Condition	Clear	5	9	2	3	9	12	4
	Rain	-	-	1	-	1	-	1
	Snow	1	2	-	-	1	1	1
	Freezing Rain	-	-	-	-	-	-	-



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Table 6 – Collision Summary - Roadway Segments (2)

		WALKLEY RD btwn 152 E OF HEATHERINGTON RD & HOLLY LANE	WALKLEY RD btwn AYERS AVE & HAMPSTEAD PL	WALKLEY RD btwn BANFF AVE & AYERS AVE	WALKLEY RD btwn BANK ST & BANFF AVE	WALKLEY RD btwn BAYCREST DR & HEATHERINGTON RD	WALKLEY RD btwn COLLISTON CRES & CEDARWOOD DR	WALKLEY RD btwn COLLISTON CRES & COLLISTON CRES	WALKLEY RD btwn HAMPSTEAD PL & JASPER AVE	WALKLEY RD btwn HEATHERINGTON RD & 152 E OF HEATHERINGTON RD	WALKLEY RD btwn HERON RD & HOLLY LANE	WALKLEY RD btwn HERON RD & TURN LANE	WALKLEY RD btwn JASPER AVE & COLLISTON CRES
Classification	Property Damage Only	8	2	6	11	9	4	1	1	3	7	2	2
	Non-Fatal Injury	1	-	-	1	2	4	-	-	-	4	-	-
	Fatal Injury	-	-	-	-	-	-	-	-	-	-	-	-
Collision Type	Sideswipe	-	-	2	2	-	2	-	1	1	3	2	-
	Angle / Turning	5	1	1	5	4	1	-	-	1	3	-	1
	Rear End	4	-	3	5	6	1	1	-	-	4	-	1
	Single Motor Vehicle	-	1	-	-	1	3	-	-	1	1	-	-
	Other	-	-	-	-	-	1	-	-	-	-	-	-
Environmental Condition	Clear	6	1	4	11	11	7	1	1	2	11	1	2
	Rain	3	1	1	-	-	1	-	-	-	-	-	-
	Snow	-	-	1	1	-	-	-	-	1	-	1	-
	Freezing Rain	-	-	-	-	-	-	-	-	-	-	-	-



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Table 7 – Rear End Collisions based Direction and Pavement Conditions

Heron Road @ Bank Street Rear End Collisions based on Direction and Pavement Conditions Collisions		
Vehicle 1 Direction	North	18
	South	16
	East	19
	West	5
Pavement Condition	Dry	37
	Wet	10
	Ice	2
	Slush	5
	Loose Snow	3
	Packed Snow	1

Table 8 – Rear End Collisions-based Direction and Pavement Conditions

Walkley Road @ Bank Street Rear End Collisions based on Direction and Pavement Conditions Collisions		
Vehicle 1 Direction	North	24
	South	23
	East	11
	West	15
Pavement Condition	Dry	55
	Wet	11
	Ice	2
	Slush	0
	Loose Snow	5
	Packed Snow	0

Based on the collision data summarized in Table 4 - Table 8 above, it was found that Heron Road at Bank Street intersection and Walkley Road at Bank Street intersection experienced the highest number of collisions. It is recommended that a review of signal timing parameters be conducted by the City of Ottawa to determine if any adjustments are necessary to minimize the occurrences of rear-end collisions.



2.1.3 Planned Conditions

2.1.3.1 Road Network Modifications

Several transit improvements were outlined in the City of Ottawa’s Transportation Master Plan (“TMP”) and are summarized in **Table 9** below. All of them are included in the TMP’s network concept plan and they may be scheduled to occur within the vicinity of the subject development.

Table 9 – City of Ottawa Transportation Master Plan Projects

Project	Description	TMP Phase
Baseline / Heron / Walkley / St. Laurent	At-grade Bus Rapid Transit connecting Baseline Station to Heron Station	Affordable Network (2031)
	At-grade Bus Rapid Transit connecting Bayshore Station to St. Laurent Station	Network Concept (i.e., beyond 2031)
Bank Street	Transit signal priority between Wellington Street and Highway 417. May also include parking lane conversion in the immediate vicinity of selected intersections	Affordable Network (2031)
	Transit signal priority between Highway 417 and Billings Bridge Station, including limited to installation of queue jump lanes at selected intersections (one lane only)	Affordable Network (2031)
	Transit signal priority and queue jump lanes between Billings Bridge Station and Hunt Club Road	Network Concept (i.e., beyond 2031)
Alta Vista Drive	Transit signal priority and queue jump lanes at selected intersections	Network Concept (i.e., beyond 2031)
Alta Vista Transportation Corridor	Bus/high occupancy vehicle lanes and transit signal priority between Riverside Drive and Ottawa Health Services Centre	Network Concept (i.e., beyond 2031)
	Transit signal priority and queue jump lanes between the Ottawa Health Sciences Centre and Walkley Road	Network Concept (i.e., beyond 2031)

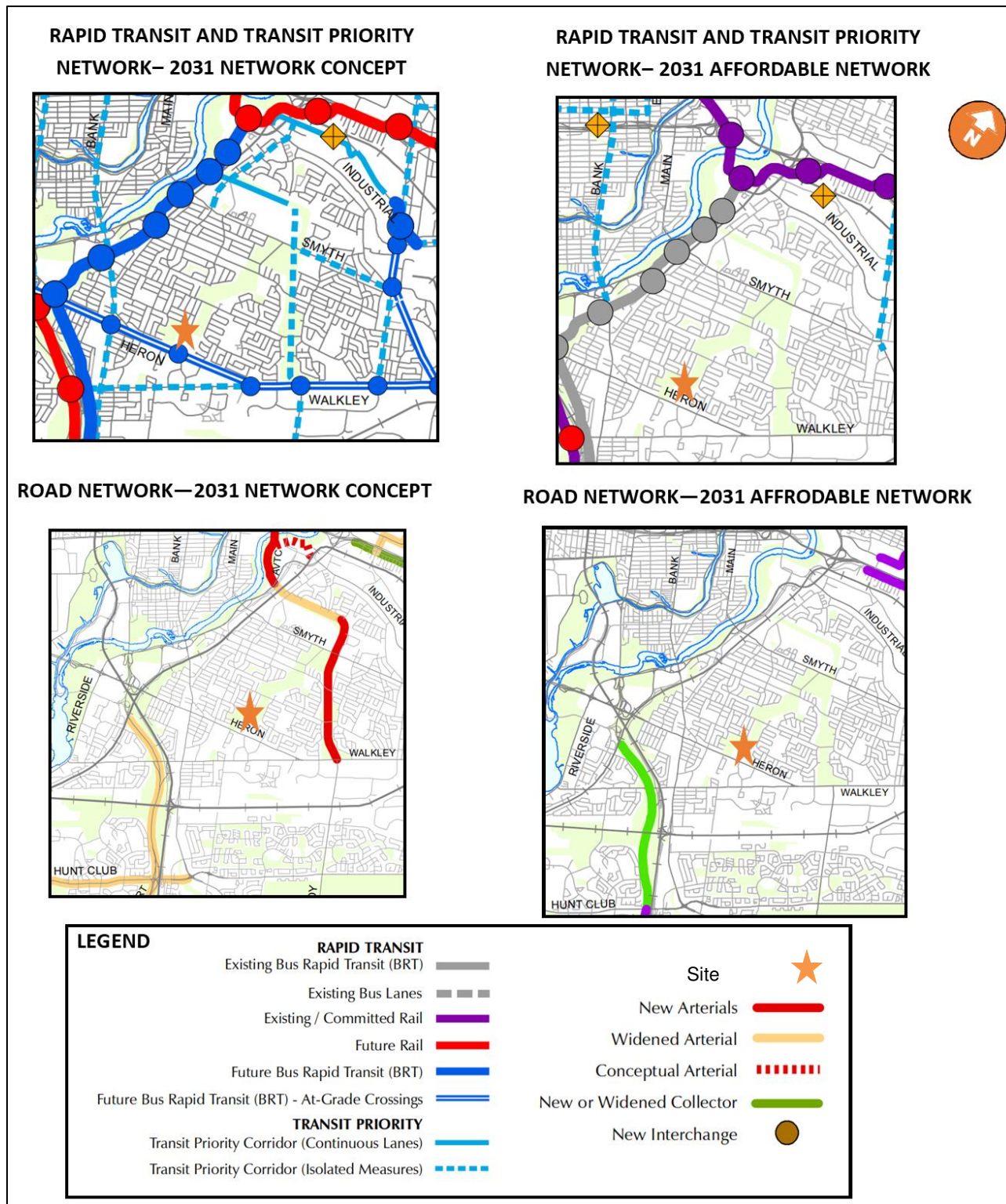


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Figure 12 - Transportation Master Plan for Roads and Transit



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2.1.3.2 Future Background Developments

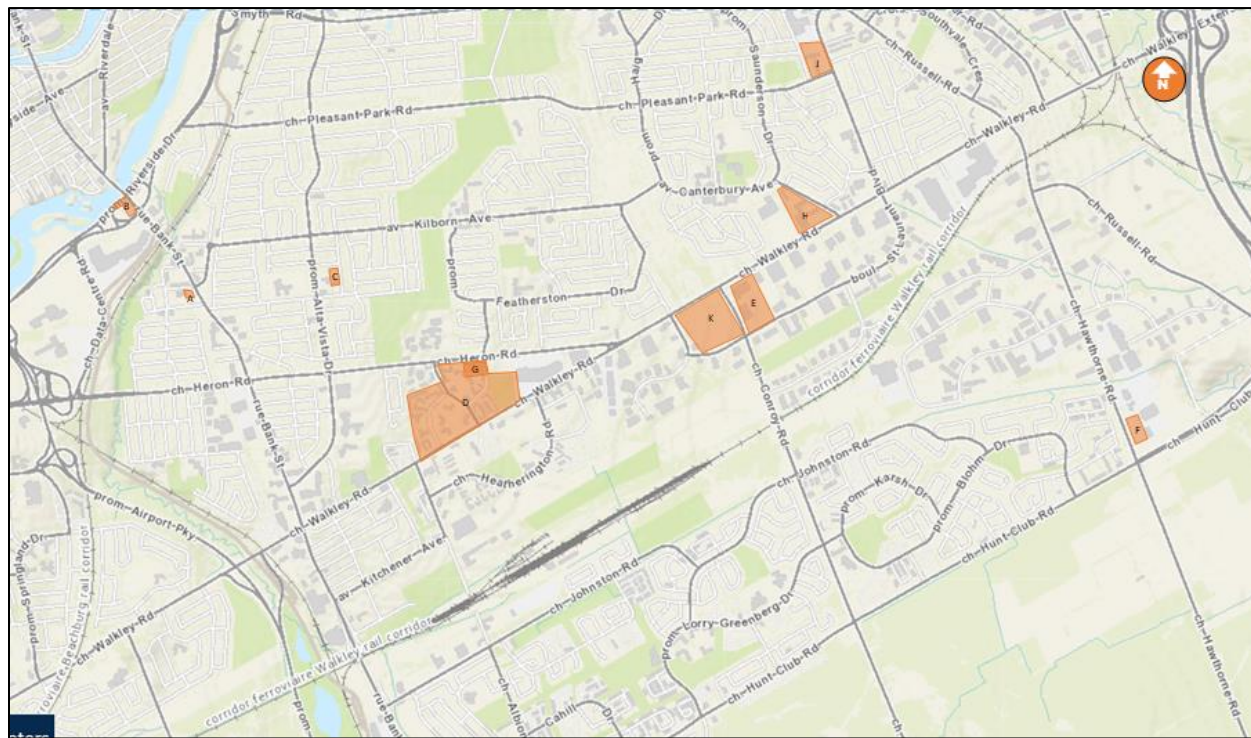
Several developments in the surrounding areas of the subject site were illustrated in Figure 13 and described in Table 10. Among those developments, there are two developments (i.e., Development D and Development G in Table 10) scheduled to occur within the vicinity of the subject site. Specifically, Development G, the 2851 Baycrest Drive Development, is a part of Development D, the Timbercreek Heron Development.

Table 10 – Background Developments

Key Plan Reference	Development	Location	Description	Build-Out Horizon
A	1400 Bank Street	Southwest quadrant of the intersection of Belanger Avenue and Bank Street	16-storey mixed-use building with 3,791 ft2 of commercial space and 5,365 ft2 of office space. A total of 160 apartment units and 66 underground parking	2026
B	1330,1340,1346 Bank Street and 2211 Riverside Drive	Southwest quadrant of the intersection with Riverside Dr WB and Bank Street, between Riverside Dr. EB and Riverside Dr. WB	27-storey building, 309 residential units and 3,603 ft2 commercial space	2023 Bank Street,
			29-storey building with 228 residential units	2026 Riverside
C	2262 Braeside Avenue	North of Randal Avenue between Alta Vista Drive and Braeside Avenue	38 new units and net increase of 30 parking spaces	2023
D	Timbercreek Heron	South of Heron Road, North of Walkley area surrounding Baycrest Drive	Seven separate blocks. 118 low-rise, 2,047 mid-rise and 2,874 high rise units. A total of 3,850 parking spaces.	2030 Interim and 2040 Full build out
E	2020 Walkley Road & 2935 Convoy Road	Northeast quadrant of the intersection with Conroy Road and St. Laurent Boulevard	3 single-story warehouses of 265,836 ft2	2023
F	3455 Hawthorne Road	Northeast quadrant of the intersection with Hunt Club Road and Hawthorne Road	13,217 m2. 22 parking spots	2023
G	2851 Baycrest Drive	Southwest quadrant of the intersection with Heron Road and Sandalwood Drive	One 6-storey building and two 7-storey buildings with 305 residential units, 298 residential parking spaces, 58 visitor parking spaces and 153 bicycle parking spots	2024
H	2190 Halifax Drive	Northwest quadrant of the intersection with Walkley Road and Halifax Drive	202 new apartment units and 177 net new parking spots	2021
J	2025 Othello Drive	Northeast quadrant of the intersection with Pleasant Park and Othello	27-storey and 18-storey high-rise residential towers consisting of 563 units and 695 surface and underground parking	2023
K	2510 St-Laurent Boulevard	Bound by Walkley Rd to the North, Conroy Rd to the East, St-Laurent Boulevard to the South, and Don Reid Drive to the West	192 back-to-back townhomes and 36 standard town homes, and a park block dedicated to the city of Ottawa	2022



Figure 13 - Background Developments



2.2 STUDY AREA AND TIME PERIODS

2.2.1 Study Area

The proposed study area is limited to the following intersections:

1. Heron Road at Bank Street
2. Heron Road at Alta Vista
3. Heron Road at Baycrest Drive
4. Heron Road at Sandalwood Drive
5. Heron Road at Jefferson Street
6. Heron Road at Walkley Road
7. Bank Street at Walkley Road
8. Walkley Road at Baycrest



2.2.2 Time Periods

The proposed scope of the transportation assessment includes the following analysis time periods:

- Weekday AM peak hour of roadway; and
- Weekday PM peak hour of roadway.

2.2.3 Horizon Years

The scope of the transportation assessment proposes the following horizon years:

- 2023 Existing conditions;
- 2032 future background conditions;
- 2032 future background conditions;
- 2032 total future conditions (site build-out); and
- 2037 total future conditions (5 years beyond build-out)

2.3 EXEMPTIONS REVIEW

Table 11 summarizes the Exemptions Review table from the City of Ottawa’s *2017 Transportation Impact Assessment Guidelines*.

Table 11 – Exemptions Review

Module	Element	Exemption Considerations	Exempted?
Design Review Component			
4.1 Development Design	4.1.2 Circulation and Access	Only required for site plans	Yes
	4.1.3 New Street Networks	Only required for plans of subdivision	No
4.2 Parking	4.2.1 Parking Supply	Only required for site plans	Yes
	4.2.2 Spillover Parking	Only required for site plans where parking supply is 15% below unconstrained demand	Yes
Network Impact Component			
4.5 Transportation Demand Management	All Elements	Not required for site plans expected to have fewer than 60 employees and/or students on location at any given time	No



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4.6 Neighbourhood Traffic Management	4.6.1 Adjacent Neighborhoods	Only required when the development relies on local or collector streets for access and total volumes exceed ATM capacity thresholds	Yes
4.8 Network Concept		Only required when proposed development generates more than 200 person-trips during the peak hour in excess of the equivalent volume permitted by established zoning	No
4.9 Intersection Design	All Elements	Not required if site generation trigger is not met.	No



3.0 FORECASTING

3.1 DEVELOPMENT GENERATED TRAVEL DEMAND

3.1.1 Trip Generation and Mode Shares

The *TRANS Trip Generation Manual (October 2020)* was used to forecast auto person trip generation for the multi-family mid-rise apartment and stacked townhouse land uses. The Institute of Transportation (ITE) Trip Generation Manual (11th Edition) was used to forecast auto trip generation for the proposed strip retail plaza, elementary school, and recreational community center land use. Land use codes 221 & 222 – Multi-Unit High-Rise Dwelling (TRANS), 220 – Stacked Townhouse (Multi-Unit Low-Rise Dwelling (TRANS), 822 – Strip Retail Plaza (ITE), 520 – Elementary School (ITE), and 495 – Recreational Community Centre (ITE) were thought to be the most representative of the proposed land uses.

Table 12 outlines the assumed land uses and the trip generation rates for each land use.

Table 12 – Land Uses and Trip Generation Rates

LUC	Land Use	Size	Weekday AM Peak Hour			Weekday PM Peak Hour		
			In	Out	Rate	In	Out	Rate
221 & 222	High-Rise Multi-Family Housing	1079 Units	31%	69%	0.80	58%	42%	0.90
220	Stacked Townhouse (Low-Rise Multifamily Housing)	20 Units	30%	70%	1.35	56%	44%	1.58
822	Strip Retail Plaza	18,000 ft ² GFA	60%	40%	2.36	50%	50%	6.59
520	Elementary School	600 Students	54%	46%	0.74	46%	54%	0.16
495	Recreational Community Centre	37,000 ft ² GFA	66%	34%	1.91	47%	53%	2.50
712	Office	18,000 ft ² GFA	82%	18%	1.67	34%	66%	2.16

The auto trip generation rates of strip retail plaza, office, elementary school, and recreational community center land uses were converted to person trips using a conversion factor of 1.28 as outlined in the *City of Ottawa’s 2017 TIA Guidelines*. The person trips from the residential land uses were standardized by a peak period conversion factor for AM and PM peak periods using *Table 4 TRANS Trip Generation 2020* to adjust the residential trip generation rates from peak period to peak hour. **Table 13** outlines development-generated person trips for each land use.



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Table 13 – Person Trips Generated by Land Use

LUC	Land Use	Trip Conversion	Weekday AM Peak Hour			Weekday PM Peak Hour		
			In	Out	Total	In	Out	Total
221 & 222	Multi-Family Housing High-Rise Apartment	Person Trips (Peak Period)	268	596	864	563	408	971
		Person Trips (Peak Hour 0.50 for AM 0.44 for PM)	134	298	432	248	180	428
224	Stacked Townhouse	Person Trips (Peak Period)	8	19	27	18	14	32
		Person Trips (Peak Hour 0.50 for AM 0.44 for PM)	4	10	14	8	6	14
822	Strip Retail Plaza	Auto Trips	25	17	42	59	60	119
		Person Trip Factor	1.28					
		Person Trips	32	22	54	76	77	153
520	Elementary School	Auto Trips	240	204	444	44	52	96
		Person Trip Factor	1.28					
		Person Trips	307	261	568	57	66	123
495	Recreational Community Center	Auto Trips	47	24	71	61	70	131
		Person Trip Factor	1.28					
		Person Trips	60	31	91	78	90	168
712	Office	Auto Trips	25	5	30	13	26	39
		Person Trip Factor	1.28					
		Person Trips	32	6	38	17	33	50
Total		Person Trips	569	628	1197	483	453	936

To reflect local travel characteristics, the person trips were assigned to the four primary modal shares (i.e., auto driver, auto passenger, transit, and active modes) according to the *TRANS Trip Generation 2020 for Alta Vista District*. **Table 14** outlines Alta Vista District's existing average mode shares in this district.

Based on City of Ottawa Transportation Master Plan (November 2013) Future Network Concept (i.e., Beyond 2031), the subject site is located within the future Heron Road / Walkley Road at-grade Bus Rapid Transit (BRT) Corridor, with a BRT station located south of the site on Heron Road. Based on the discussion with the City, it was assumed that BRT will not be constructed along Heron Road by the future horizon years of 2032 and 2037 in this study.



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As a result, the assumed modal shares did not take into account the proposed higher order transit facility on Heron Road. **Table 14** outlines the assumed modal shares during AM and PM peak period have been used to estimate site traffic and establish site trip distribution and assignments in the following sections. The mode shares split percentages used were obtained from the TRANS Trip Generation Report 2020 as outlined for the Alta Vista region.



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Table 14 – Trip Generated by Travel Mode – Existing Alta Vista Mode Shares

Land Use Code	Mode	AM Peak Hour				PM Peak Hour			
		Trip Conversion	Entry	Exit	Total	Trip Conversion	Entry	Exit	Total
221 & 222 - Multi-Unit (High Rise)	Auto Driver	38%	51	113	164	45%	112	81	193
	Auto Passenger	12%	16	36	52	16%	40	29	69
	Transit	42%	56	125	181	28%	69	50	119
	Cycling	2%	3	6	9	2%	5	4	9
	Walking	6%	8	18	26	9%	22	16	38
220 - Stacked Townhouse	Auto Driver	38%	2	4	6	38%	3	2	5
	Auto Passenger	15%	1	2	3	19%	2	1	3
	Transit	35%	1	4	5	31%	2	2	4
	Cycling	2%	0	0	0	2%	0	0	0
	Walking	10%	0	1	1	10%	1	1	1
822 - Strip Retail Plaza	Auto Driver	64%	20	14	35	60%	46	46	92
	Auto Passenger	9%	3	2	5	20%	15	15	31
	Transit	12%	4	3	6	9%	7	7	14
	Cycling	1%	0	0	1	0%	0	0	0
	Walking	14%	4	3	8	11%	8	8	17
520 - Elementary School	Auto Driver	22%	68	57	125	22%	12	15	27
	Transit	54%	166	141	307	54%	30	36	66
	Active modes/other	24%	74	63	136	24%	13	16	30
495 - Recreational Community Center	Auto Driver	64%	38	20	58	60%	47	54	101
	Auto Passenger	9%	5	3	8	20%	16	18	34
	Transit	12%	7	4	11	9%	7	8	15
	Cycling	1%	1	0	1	0%	0	0	0
	Walking	14%	8	4	13	11%	9	10	18
712- Small Office Building	Auto Driver	69%	22	4	26	69%	12	23	35
	Auto Passenger	7%	2	0	3	7%	1	2	4
	Transit	18%	6	1	7	18%	3	6	9
	Cycling	3%	1	0	1	3%	1	1	2
	Walking	3%	1	0	1	3%	1	1	2

3.1.2 Internal Capture and Pass-By

Internal Trips are trips between different land uses within a multi-use development that do not access the external roadway network and have both an origin and destination that is within the development. For this study, no internal



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trips were considered due to negligible volumes contributing to the internal trip capture based on ITE’s Trip Generation internal capture guidelines in addition to the walkable distances on site between any two different land uses.

In addition, a portion of the auto trips generated by the proposed retail land use will be ‘pass-by’ in nature. Pass-by trips are considered intermediate stops between an origin and a destination. They are site trips that are drawn from existing traffic volumes on the road network that are “passing-by” the site. While the total number of trips generated by a given development remains the same, the turning movements at study area intersections and site accesses require adjustments to reflect pass-by traffic. The rate of pass-by traffic is based on the specific land use which was obtained from the ITE Trip Generation Manual. A pass-by rate of 34% for the PM peak hour only was used for the retail land use.

Table 15 outlines the pass-by trips anticipated for the strip retail plaza in the proposed development.

Table 15 – Future Pass-by Trips

LUC	Land Use	Trip Conversion		Weekday AM Peak Hour	Weekday PM Peak Hour
822 – Strip Retail Plaza		Pass-By	34%	12	37

The pass-by trips generated by the retail component of the proposed development have been included as part of the analysis.

3.1.3 Trip Distribution

The distribution of traffic to / from the proposed development was determined through examination of the TRANS Committee’s 2011 Origin-Destination (O-D) Survey for the Alta Vista District.

Table 16 summarizes the estimated trip distribution for the proposed development.

Table 16 – Trip Distribution Assumptions

Direction		Via (to / from)					
		Bank Street (north)	Alta Vista Drive (north)	Heron Road (west)	Bank Street (south)	Baycrest Drive (south)	Walkley Road (east)
North	28%	10%	18%				
East	14%						14%
South	5%				5%		
West	20%			20%			
Internal (Alta Vista)	33%	8%	10%			5%	10%
Total	100%	18%	28%	20%	5%	5%	24%



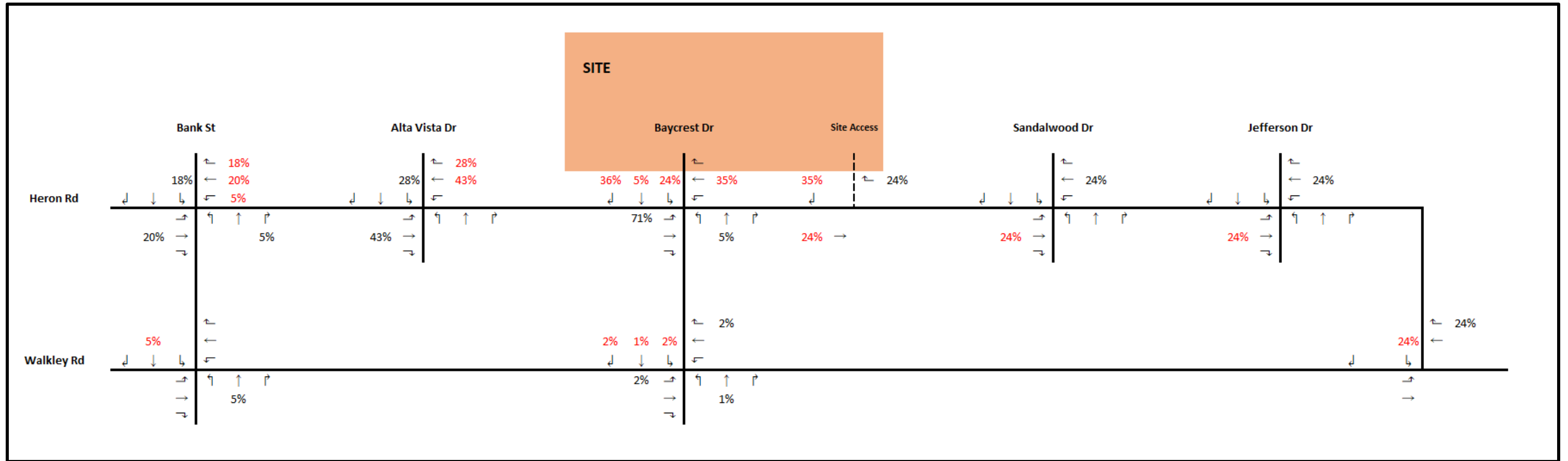
3.1.4 Trip Assignment

Site generated trips were assigned to the study area road network based on the trip distribution assumptions outlined above in **Table 16**. **Figure 14** outlines the site assignment assumptions. It should be noted that the red value represents the outbound trips, and the black values represent the inbound trips.

Figure 15 illustrates the site generated trips for the proposed development during the AM and PM peak hours.



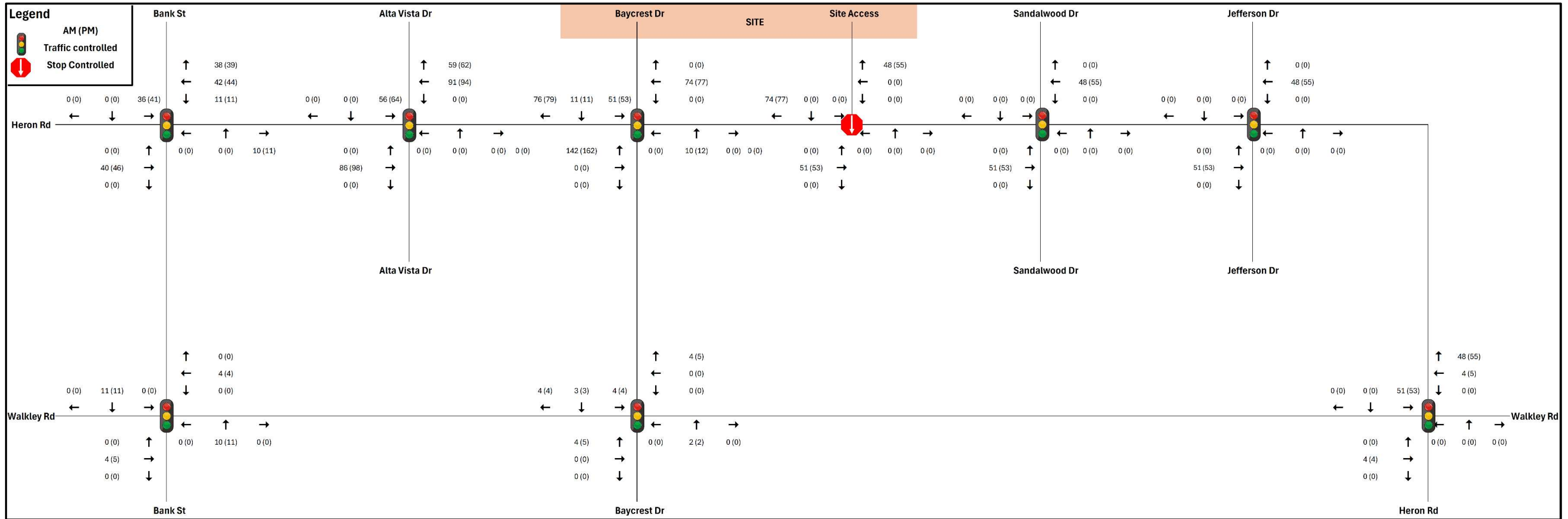
Figure 14 - Site Traffic Assignment Assumptions



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Figure 15 - Site Generated Traffic Volumes



3.2 BACKGROUND NETWORK TRAVEL DEMAND

3.2.1 Transportation Network Plans

As outlined in **Table 9** in **Section 2.1.3.1** of the screening and scoping report, the roadway infrastructure projects that is included in the City's Transportation Master Plan ("TMP") within the vicinity of the subject site are the future Heron Road / Walkley Road BRT and Transit Signal Priority for both Bank Street and Alta Vista Drive. As there are no confirmed construction timelines for the proposed BRT facility on Heron Road, or the implementation of Transit Signal Priority projects, these improvements were not considered to occur within the time horizon of this study.

In addition, the City's Bank Street Renewal is currently in the design process and its geometric design was considered in this study. The timing for the City's Alta Vista Drive renewal project was not confirmed and it was not included in this study for future conditions.

3.2.2 General Background Growth

Based on **Section 2.1.2.5** the calculated annual traffic growth rate of 0.86% was applied to the Existing traffic volumes to project future background traffic volumes for the 2032 and 2037 time horizons.

3.2.3 Other Area Development

In addition to the background growth outlined in **Section 3.2.2** above, traffic growth associated with the nearby Timbercreek Heron Development was considered (Refer to **Table 10** – Background Developments).

Based on the Timbercreek Heron Gate Official Plan Amendment Transportation Impact Assessment (February 2021), Phase 2, 3 and 4 of the proposed development are anticipated to be completed by 2030, with full built-out anticipated to occur by 2040.

The site trips of Timbercreek Heron Development were obtained from the Timbercreek Heron Gate Official Plan Amendment Transportation Impact Assessment and explicitly added to the transportation network as future background traffic.



3.3 DEMAND RATIONALIZATION

Based on the aforementioned sections, the forecasted volumes along Heron Road in the future horizon years are in the range of 900– 1,400 vehicles per hour per directions. No further volume reduction was considered to account for demand rationalization.

3.3.1 2032 Future Background Traffic Volumes

2032 future background traffic volumes were derived by forecasting the anticipated future background growth from existing conditions, derived through the application of a general growth rate and the traffic volumes generated by nearby Timbercreek Heron Development.

Figure 16 illustrates the 2032 future background traffic volumes at the study area intersections.

3.3.2 2032 Total Future Traffic Volumes

2032 total future traffic volumes represent the sum of site generated traffic volumes for the subject site, in addition to 2032 future background growth.

Figure 17 illustrates the 2032 total future traffic volumes at the study area intersections.

3.3.3 2037 Future Background Traffic Volumes

2037 future background traffic volumes were derived by forecasting the anticipated future background growth from existing conditions, derived through the application of a general growth rate and the traffic volumes generated by nearby Timbercreek Heron Development.

Figure 18 illustrates the 2037 future background traffic volumes at the study area intersections.

3.3.4 2037 Ultimate Traffic Volumes

2037 ultimate traffic volumes represent projected 2037 traffic volumes that include site generated traffic demands and future background growth derived by applying an annual traffic growth rate of 0.86%.

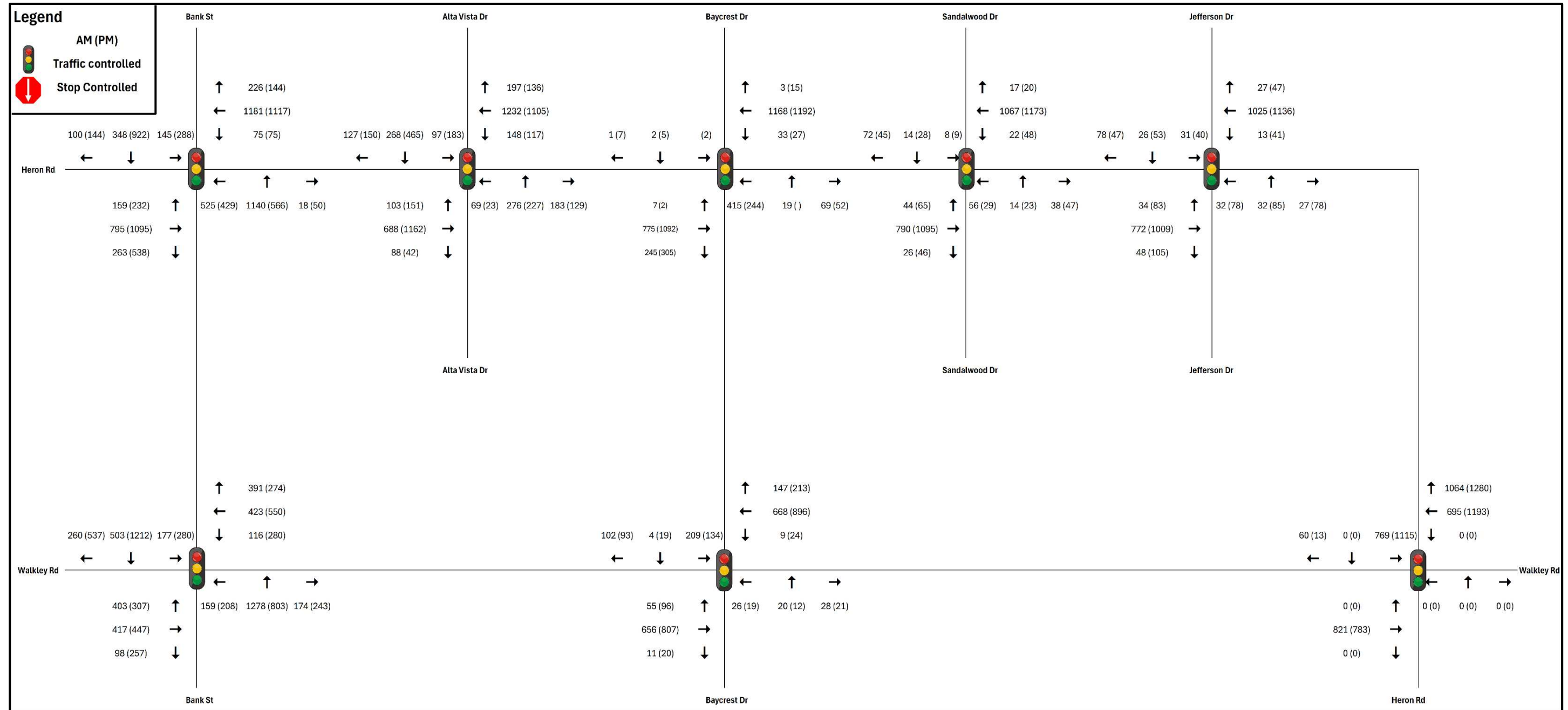
Figure 18 illustrates the 2037 ultimate traffic volumes at the study area intersections.



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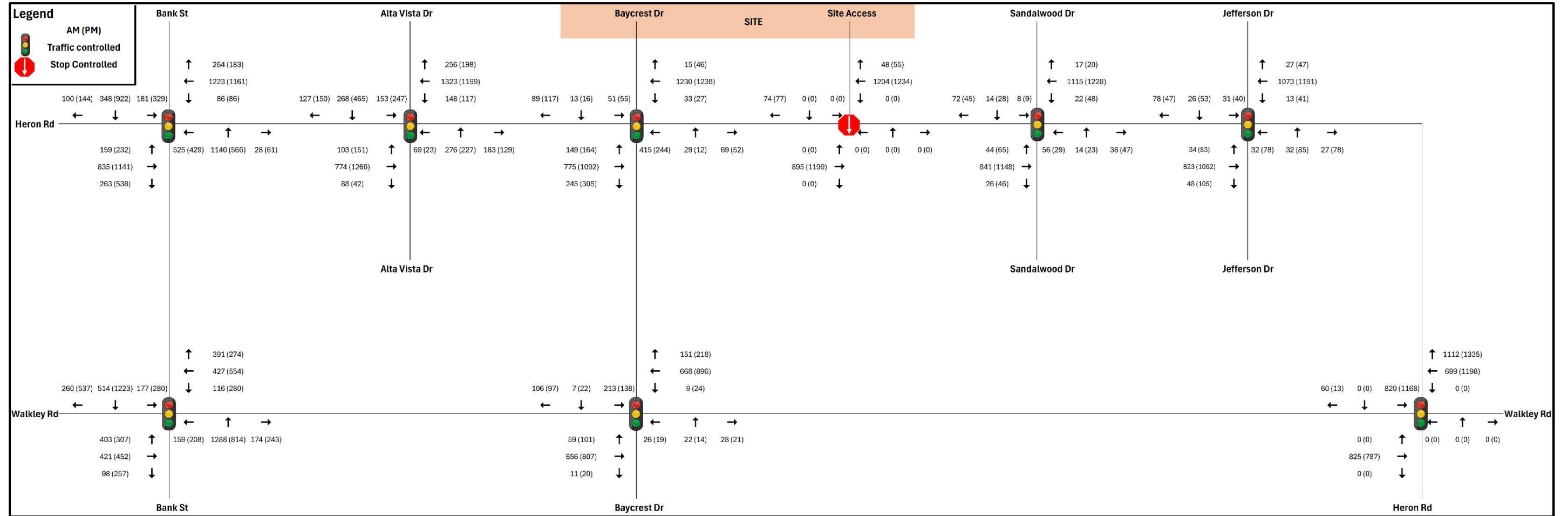
Figure 16 - 2032 Future Background Traffic Volumes



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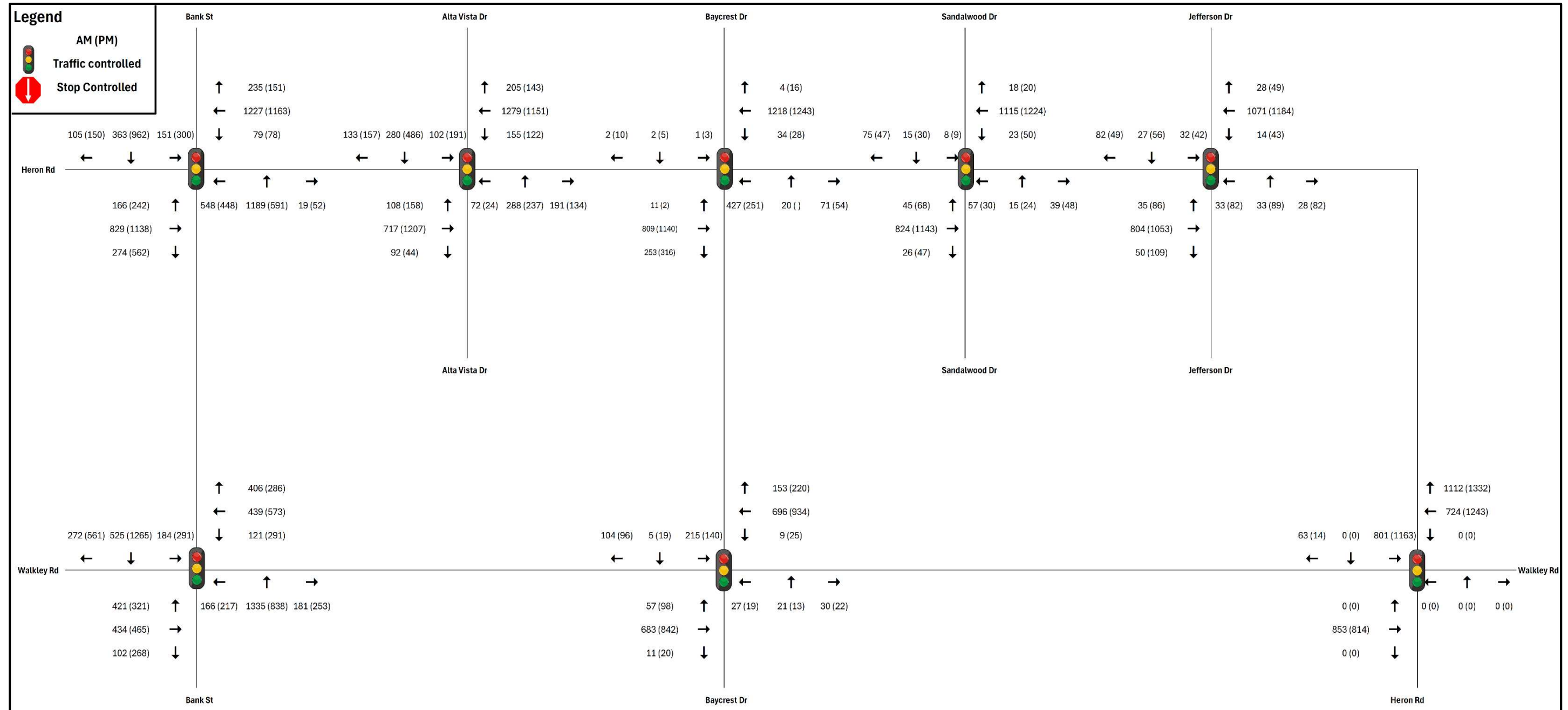
Figure 17 - 2032 Future Total Volumes



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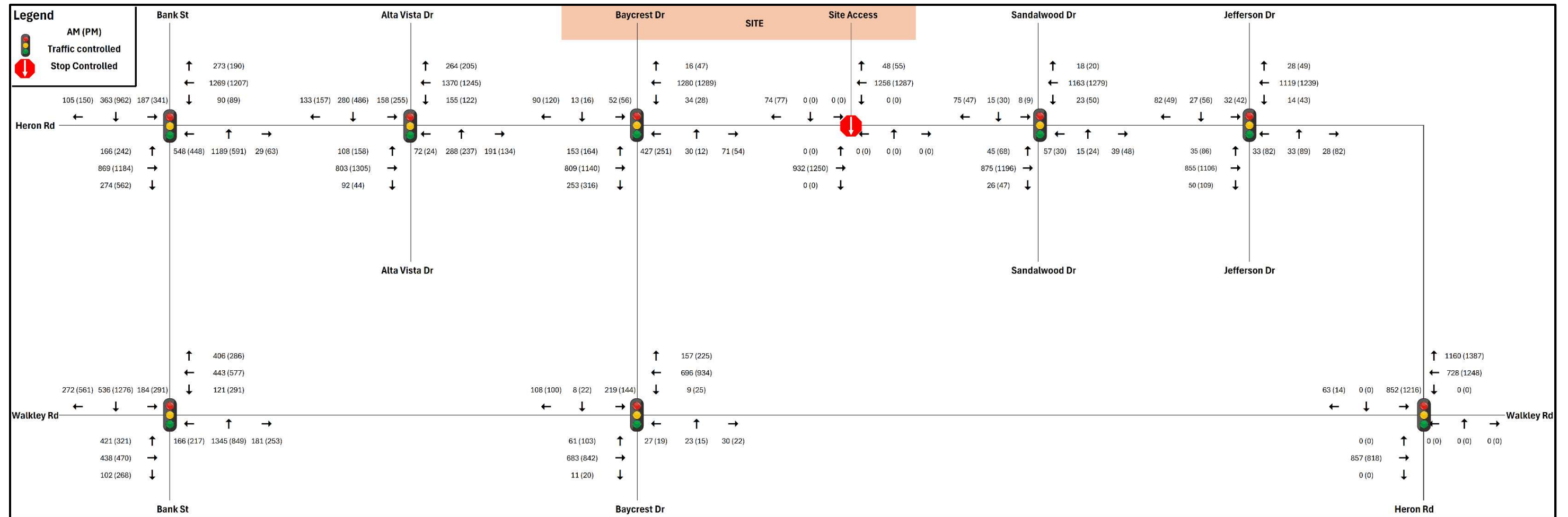
Figure 18 - 2037 Future Background Traffic Volumes



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Figure 19 - 2037 Ultimate Volumes



4.0 STRATEGY REPORT

4.1 DEVELOPMENT DESIGN

4.1.1 Design for Sustainable Modes

Pedestrian facilities: Currently, both Heron Road and Baycrest Drive include sidewalks along both sides of the roads. Based on the proposed site plan, sidewalks are provided along both sides of internal roadways on site. pedestrian connections are included to connect the proposed building to the existing sidewalks along Heron Road and Baycrest Drive.

Bicycle facilities: Currently, there is a one-way on-street bicycle lane on the south side of the Heron Road. As per Cycling Network – Primary Urban from the City of Ottawa’s 2013 Transportation Master Plan, Heron Road is designated as a spine route and a cross-town bikeway. Also, Walkley Road, Bank Street and Alta Vista Drive are all designated as spine routes. As the TIA is developed in support of a Plan of Subdivision, on-site bicycle parking facilities have not been identified. Based on the Bicycle Parking Space Rates and Provisions (Section 111) outlined in the City of Ottawa Zoning By-Law, a total of 438 bicycle parking spaces are estimated to be required. It is anticipated that parking facilities will be outlined in subsequent phases of development approvals.

Transit facilities: The subject site is presently well serviced by transit with four transit routes. There are several transit stops within 400m from all proposed buildings located at the intersection of Heron Road and Baycrest Drive that are serviced by all these four transit routes (mentioned in section 2.1.2.3). The existing sidewalks along both sides of Heron Road and Baycrest Drive, as well as four pedestrian crosswalks at the intersection of Heron Road and Baycrest Drive, provide the access to these transit stops. As per BRT 2031 network Concept from the City of Ottawa’s 2013 Transportation Master Plan, across the frontage of the subject development, Heron Road will be updated with at-grade Bus Rapid Transit. In addition, transit priority (isolated measures) will be implemented along Bank Street and Walkley Road.

Parking areas: As the TIA is developed in support of a Plan of Subdivision, parking facilities and loading zones have not been identified. It is anticipated that parking facilities will be outlined in subsequent phases of development approvals.

Blue-Green Corridor: Based on the proposed site plan, the blue-green corridor is provided along the eastern and northern edges of the site, allows for sustainable stormwater management and includes a multipurpose trail leading to Wren’s way. This linear park includes a dry creek that loads with water during heavy rains. This corridor creates a transition to the adjacent Guildwood Estate neighborhood and preserves the natural setting of Wren’s way, while creating new connections to the trail system. An additional underground stormwater management infrastructure is planned along Heron Road and allows for the development of the ground space into public space.

4.1.2 Circulation and Access

Based on **Table 11**, This section is exempted during screening and scoping.

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4.1.3 New Street Networks

Local Street: A new local street is built to serve the entire development site. This street provides two connections to Heron Road: a main access is planned in the center of the site and a right-in-right-out access is planned to the east of the site. Without restricting the fluidity of vehicular travel, the proposed street seeks to improve the pedestrian environment through greening measures that formally separate pedestrians from automobiles. The standard variable right-of-way is 18-20 meters two-way street with parking permitted both sides of the street to reduce vehicle speed. Sidewalks are 1.8 meters on each side of the street with medium sized tree planting.

Shared Street: A section of the local street is developed as a shared street. This is a portion of the public roadway where all transportation users (active, public, or vehicles) live together in a friendly and safe manner. This section of the street is continuation of the park to the heritage campus. It could be closed to traffic during community events. The shared street has a unique design, halfway between street and public space. It is a 20m right-of-way street which includes sidewalks, pavement, and planting/utility areas. It has a low vehicular traffic volume of 20km/h maximum.

4.2 PARKING

4.2.1 Parking Supply

Based on **Table 11**, This section is exempted during screening and scoping.

4.2.2 Spillover Parking

Based on **Table 11**, This section is exempted during screening and scoping.

4.3 BOUNDARY STREET DESIGN

4.3.1 Multi-Modal Level of Service

The multi-modal level of service (“MMLOS”) was evaluated for Heron Road from Alta Vista Drive to Sandalwood Drive to assist with developing a design concept that maximize the achievement of the MMLOS objectives.

The sections below outline the MMLOS summary for the roadway segments. **Appendix C** contains the detailed MMLOS analysis and is provided for reference.

Existing Conditions – Segments Intersections

Alta Vista Drive to Baycrest Drive (Heron Rd)

Heron Road, between Alta Vista Drive and Baycrest Drive, has a sidewalk width of 1.8 meters, and has a boulevard width greater than 2 meters, which indicates a good physical separation from passing traffic, therefore decreasing safety risks and increasing comfort for pedestrians. The AADT is greater than 3000, and speeds are moderately high as they range from over 50 km/h up to 60 km/h. With no on street parking, and this segment being part of a truck route, the comfort of pedestrians is moderate to low. These factors in

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combination give rise to PLOS D, which is below the target of PLOS A. This street is of moderate concern for pedestrians.

This segment is a mixed traffic roadway with 2-3 lanes total, with a posted high speed limit of greater than or equal to 50 km/h, going up to 60 km/h. There is no dedicated biking facility present. With these factors in combination, the result is BLOS E.

The V_t/V_p ratio greater than or equal to 0.80. This classifies the road segment as TLOS D.

The truck lane width of this area is less than or equal to 3.5 meters, and there is more than one travel lane in each direction. These two factors give a TkLOS of A.

Of all modes evaluated on the Heron Road segment (between Alta Vista Drive to Baycrest Drive), cyclists and pedestrians are facing the lowest level of service. To address this some tradeoffs between truck and transit level of service may have to be made to accommodate for a better experience for other modes and increase PLOS and BLOS to meet targets.

Baycrest Drive to Sandalwood Drive (Heron Rd)

Heron Road, between Baycrest Drive and Sandalwood Drive, has a sidewalk width of 1.8 meters, and has a boulevard width greater than 2 meters, which indicates good physical separation from passing traffic therefore decreasing safety risks and increasing comfort for pedestrians. The AADT is greater than 3000, and speeds are moderately high as they range from over 50 km/h up to 60 km/h. With no on street parking, and this segment being part of a truck route, comfort of pedestrians is moderate to low. These factors in combination give PLOS D.

The segment is a curbside bike lane with 2 lanes in each direction (median present), and a high posted speed limit greater than 50 km/h up to 70 km/h. The bike lane (and parking lane) width ranges from greater than or equal to 1.5 meters up to 1.8 meters. The presence of a bike facility allows for a safe place for cyclists to travel along a segment. Bike lane blockages are rare throughout this segment. All these factors in combination give BLOS C, which describes an experience appropriate for most experienced adult cyclists.

The V_t/V_p ratio greater than or equal to 0.80, that is, the ratio of average transit travel speed to posted speed limit. This classifies the road segment as TLOS D.

The truck lane width of this area is less than or equal to 3.5 meters, and there is more than one travel lane in each direction. These two factors give a TkLOS of A.

Of all modes evaluated on Heron Road (between Baycrest Drive and Sandalwood Drive), pedestrians are facing the lowest level of service. Some tradeoffs between bicycle, truck and transit levels of service may have to be made to accommodate for a better experience for other modes and increase PLOS to meet targets.

Ultimate Conditions 2037 - Segments

All findings remain the same in the ultimate conditions segment analysis.

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Figure 20 - Existing Conditions MMLOS Targets and Results

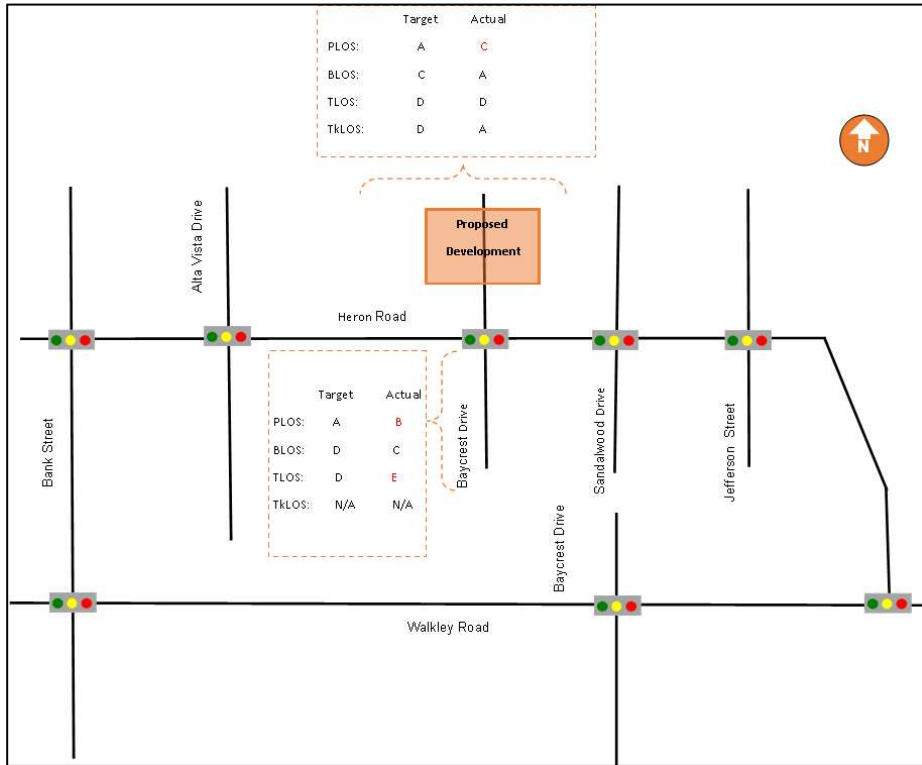


Table 17 – 2022 Existing Intersections Multimodal Level of Service (Segments)

Intersection		PLOS	BLOS	TLOS	TkLOS
Alta Vista to Baycrest (Heron Rd)	Model Output	D	E	D	A
	Target	C	C	D	D
Baycrest to Sandalwood (Heron Rd)	Model Output	D	C	D	A
	Target	C	C	D	D

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Table 18 – 2032 Full Background Intersection Multimodal Level of Service (Segments)

Intersection		PLOS	BLOS	TLOS	TkLOS
Alta Vista to Baycrest (Heron Rd)	Model Output	D	E	D	A
	Target	C	C	D	D
Baycrest to Sandeewood (Heron Rd)	Model Output	D	C	D	A
	Target	C	C	D	D

Table 19 – 2032 Total Future Intersection Multimodal Level of Service (Segments)

Intersection		PLOS	BLOS	TLOS	TkLOS
Alta Vista to Baycrest (Heron Rd)	Model Output	D	E	D	A
	Target	C	C	D	D
Baycrest to Sandeewood (Heron Rd)	Model Output	D	C	D	A
	Target	C	C	D	D

Table 20 – 2037 Ultimate Intersection Multimodal Level of Service (Segments)

Intersection		PLOS	BLOS	TLOS	TkLOS
Alta Vista to Baycrest (Heron Rd)	Model Output	D	E	D	A
	Target	C	C	D	D
Baycrest to Sandeewood (Heron Rd)	Model Output	D	C	D	A
	Target	C	C	D	D

4.4 ACCESS INTERSECTION DESIGN

4.4.1 Access Location and Design of Access

As mentioned in **Section 2.1.1**, the main site access is located at the intersection of Heron Road and Baycrest Drive. This access is from the north leg of this intersection, and it is a full access without any turning restrictions. The minor site access is a right-in-right-out access located on Heron Road, approximately 125m east of the main access intersection.

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4.4.2 Intersection Control

The existing intersection at Heron Road and Baycrest Drive, which will provide the main access to the site, is a four-way signalized intersection. This intersection contains four crosswalks with pedestrian signal heads and pedestrian push buttons for all directions.

The minor right-in-right-out site access is a low-volume driveway and is anticipated to be a One Way Stop Control (OWSC) access.

4.4.3 Intersection Design

Section 4.9.2 contains the detailed intersection and MMLoS analyses under all horizons.

4.5 TRANSPORTATION DEMAND MANAGEMENT

4.5.1 Context of TDM

The proposed development site is currently owned by Canada Lands Company. The proposed development consists of mid-rise apartment units, stacked townhouses, strip retail plaza, elementary school, and recreational community center, which are all expected to be built out by the year 2032. The tenants for the retail component are not known yet. As outlined in **Section 3.1.1**, based on the TRANS Committee's 2011 Origin-Destination (O-D) Survey for the Alta Vista District, the subject area has an auto mode share of 60% and a transit share of 20%. However, after the implementation of the BRT corridor improvements along Heron Road, the auto modal share is expected to decrease to 35%, while the transit modal share is expected to increase to 35%. The proposed transit modal share was discussed and confirmed with City of Ottawa staff during the preparation of the Step 3 – Forecasting Report assumes that the Heron Road BRT would not be in place by the 2032 horizon. It is anticipated that the Heron BRT project will be implemented shortly after the horizon year of this study and will provide high-frequency service with a 5-6 minute headway during the AM peak, and a 7-8 minute headway during the PM peak, which is supportive of an increased transit modal share in the future.

To support the future pedestrian and bicycle modal share, the development is planned to include ample sidewalk connections from the proposed buildings onsite to the existing and future pedestrian and cycling network along both Heron Road and Baycrest Drive. It is anticipated that the Heron Road BRT will feature improved pedestrian and cycling facilities.

4.5.2 Need and Opportunity

In order to support the transit and active modal share targets outlined in **Table 9**, walking, cycling and transit modes will need to be supported. This includes the provision of bicycle parking as well as ensuring convenient pedestrian connections are provided to sidewalk facilities leading to bus stop locations. These facilities are expected to be identified on a future site plan as part of subsequent phases of development approvals.

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4.5.3 TDM Program

The City of Ottawa's TDM Checklists is used to determine what TDM measures could be implemented based on the available information. As this TIA is developed in support of a Plan of Subdivision, a detailed site plan is currently not available. TDM measures will be identified and agreed upon with the developer(s) at subsequent phases of site design and development approvals.

4.6 NEIGHBOURHOOD TRAFFIC MANAGEMENT

Based on **Table 10**, This section is exempted during screening and scoping.

4.7 TRANSIT

4.7.1 Route Capacity

Assumed transit modal shares for the various land uses were adopted from the 2020 TRANS Trip Generation Manual based. Modal shares ranged from 33%-35% for residential land uses, 11% for commercial retail, and 54% for the proposed elementary school (i.e. school bus trips). The 2032 forecasted transit / school bus trips for the proposed development is 450 (predominately elementary school bus trips) and 215 total transit trips during the AM and PM peak hours, respectively.

There are four OC Transport transit routes provided in the immediate vicinity of the proposed site; routes 44, 46, 140 and 291. Route 44 is a frequent route that runs during peak periods between Billings Bridge and Hurdman with 15-minute headways. Route 46 is a local route that runs during peak periods with 15-minute headways between Hurdman and Billings Bridge Station. Route 140 is a local route that runs from 9am to 3pm with limited service between Heron Park and Billings Bridge. Route 291 is a frequent route that runs during peak periods with 25- to 30-minute headways between Hurdman and Herongate.

Standard and articulated buses have seated capacities of 40 and 70 people; respectively. Based on the current transit routes in the vicinity of the subject site, the hourly transit capacity is estimated between 400 and 700 people during the weekday AM and PM peak hours.

Once the BRT upgrades along Heron Road are implemented, the subject development's transit trips are expected to increase. Based on the Baseline Road Bus Rapid Transit Corridor Transit and Traffic Operations Assessment (2016) (which is Appendix B of the Baseline Road Bus Rapid Transit Planning and Environmental Assessment Study), the anticipated headways of the BRT corridor are approximately 5 minutes during the AM peak hour and approximately 7 minutes during PM peak hours. It has been assumed that once the BRT is operational, transit route 50 will continue to run with the same schedule as existing, whereas transit routes 81 and 88 will operate under the BRT headways, as previously described.

The anticipated capacity of the BRT corridor is 480 to 840 people during the weekday AM peak hour and 340 to 600 people during the weekday PM peak. The anticipated capacity of transit route 50 is expected to remain at 80 to 140 people during both the weekday AM and PM peak hours. The total transit capacity in the study area is therefore anticipated to be 560 to 920 people during the weekday AM peak hour and 480 to 745 people during the weekday PM peak hour. The proposed development is therefore anticipated to occupy between 8% to 13% of the transit capacity during the weekday AM peak hour and 12% to 18% during the weekday PM peak hour once the Baseline Road BRT is operational.

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4.7.2 Transit Priority

Prior to the implementation of the BRT corridor upgrades along Heron Road, the proposed development will utilize the existing transit stops abutting the subject site and is therefore not expected to significantly impact the transit travel times of the existing routes or trigger the need for transit priority measures. It is anticipated that the east-west transit service will run at a dedicated BRT Transitway on Heron Road with TSP measures implemented at intersections, these however are anticipated to occur beyond the study horizon year and therefore were not accounted for as part of this study.

4.8 REVIEW OF NETWORK CONCEPT

Based on **Table 10**, This section is exempted during screening and scoping.

4.9 INTERSECTION DESIGN

4.9.1 Intersection Control

The existing intersection control will be maintained as the default control for all study area intersections for existing and future horizon year assessments. It should be noted that the ultimate intersection design for intersections along the future Heron Road BRT corridor are not available, and as a result the existing intersection geometry was adopted as part of this study. Any intersection improvements triggered through the intersection level of service analysis will be highlighted and adopted accordingly.

4.9.2 Intersection Design

An assessment of the study area intersections was undertaken to determine the operational characteristics of the study area intersections under the horizons identified in the Screening and Scoping report. Intersection operational analysis was facilitated by Synchro 10.0™ software package and the MMLOS analysis was completed for the signalized intersection for all modes and compared against the City of Ottawa's MMLOS targets. The Highway Capacity Manual (HCM) 6th edition analysis method in Synchro was used to assess the study intersections. It should be noted that this method has some limitations which were addressed as follows:

- Unsignalized Movement Delays (Channelized Right turns with yield control): The HCM method does not report on unsignalized movements delays. Rather these movements were analyzed and reported on using Synchro's percentile method as a mean to approximate delays and queues experienced by right turning traffic.
- RTOR: HCM's implementation of right turns on red is conservative and assumes no vehicles performing RTOR. RTOR influence on signal operations was incorporated using the equations provided by Trafficware's white paper on HCM 6th edition implementation in Synchro.

4.9.2.1 Multi-Modal Level of Service

The multi-modal level of service ("MMLOS") was evaluated for intersections along Heron Road from Alta Vista Drive to Sandlewood Drive to assist with developing a design concept that maximize the achievement of the MMLOS objectives.

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The sections below outline the MMLOS summary for the roadway segments. **Appendix C** contains the detailed MMLOS analysis and is provided for reference.

Existing Conditions – Intersections

Intersection – Heron Road and Alta Vista Drive

North

This segment has the pedestrian travel across 5 lanes at intersections. Left turns are protected/permmissive which minimizes conflict. There is a conventional right turn channel without a receiving lane, and the corner radius is large at 15 to 25m. The crosswalk type has zebra stripe high visibility markings. These factors combine to give A PESTI score of 42, which corresponds to PLOS E. The cycle length at intersections is 130 seconds, with effective walk time of 11 seconds, meaning that pedestrian delay is 54 seconds, or PLOS E.

This intersection has a pocket bike lane, so is therefore separated from traffic which creates safer conditions. If the cyclists turn left, they have to traverse more than or equal to 2 lanes, giving BLOS F.

The average signal delay for transit is greater than 40 seconds, giving a TLOS F.

Trucks have an effective corner radius greater than 15 meters, and the number of receiving lanes on departure from intersection is greater than or equal to 2. This demonstrates TkLOS A.

Automobiles have a volume to capacity between the bounds of 0.91 and 1, resulting in VLOS F.

South

This segment has the pedestrian travel across 5 lanes at intersections. Left turns are permmissive which minimizes conflict. There is a conventional right turn channel without a receiving lane, and the corner radius is large at 15 to 25m. The crosswalk type has zebra stripe high visibility markings. These factors combine to give A PESTI score of 42, which corresponds to PLOS E. The cycle length at intersections is 130 seconds, with effective walk time of 11 seconds, meaning that pedestrian delay is 54 seconds, of PLOS E.

This intersection has a pocket bike lane, so is therefore separated from traffic. If the cyclists turn left, they have to traverse 1 lane, giving BLOS D.

The same analysis for moving north also applies for southward travel for the other modes.

East

This segment has the pedestrian travel across 7 lanes at intersections. Left turns are protected/permmissive which minimizes conflict, however right turns are permmissive or yield control. There is a conventional right turn channel with a receiving lane, and the corner radius is large at 15 to 25m. The crosswalk type has zebra stripe high visibility markings. These factors combine to give A PESTI score of 14, which corresponds to PLOS F. The cycle length at intersections is 130 seconds, with effective walk time of 11 seconds, meaning that pedestrian delay is 54 seconds, or PLOS E.

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This intersection is mixed traffic composition, therefore there is no dedicated bicycle facility. There is a dedicated right turning lane, where traffic moves at a speed of less than 50 km/h, and turns at a speed of less than 25 km/h. If the cyclists turn left, they have to traverse greater than 2 lanes, giving BLOS F.

The same analysis for moving north also applies for eastward travel for the other modes.

West

The same analysis for moving East also applies for westward travel for the other modes.

Intersection – Heron Road and Baycrest Drive

North

This segment has the pedestrian travel across 3 lanes at intersections. Left turns are permissive but not protected which increases conflict. There is no right turn channel, and the corner radius is large at 5 to 10m. The crosswalk type has the standard transverse markings. These factors combine to give a high PESTI score of 71, which corresponds to PLOS C. The cycle length at intersections is 90 seconds, with effective walk time of 19 seconds, meaning that pedestrian delay is 28 seconds, of PLOS C.

This intersection is mixed traffic composition, therefore there is no dedicated bicycle facility. If the cyclist turns left, they have to traverse 1 lane, and the posted speed limit ranges from 50 km/h to less than 60 km/h. This gives BLOS E.

The average signal delay for transit less than or equal to 30 seconds, giving a TLOS D.

Trucks have an effective corner radius less than 10 meters, and the number of receiving lanes on departure from intersection is greater than or equal to 2. This demonstrates TkLOS D.

Automobiles have a volume to capacity between the bounds of 0.61 and 0.70, resulting in VLOS F.

South

This road segment has the pedestrian travel across 0 – 2 lanes at intersections. Left turns are permissive which minimizes conflict. There is no right turn channel, and the corner radius is large at 5 to 10m. The crosswalk type has the standard transverse markings. These factors combine to give a high PESTI score of 86, which corresponds to PLOS B. The cycle length at intersections is 90 seconds, with effective walk time of 19 seconds, meaning that pedestrian delay is 28 seconds, or PLOS C.

This intersection is mixed traffic, so there is no dedicated bicycle facility. If the cyclists turns left, they don't have to traverse any lanes, giving BLOS C.

The same analysis for moving North also applies for southward travel for the other modes.

East

This segment has the pedestrian travel across 6 lanes at intersections. Left turns are permissive which minimizes conflict. There is no right turn channel, and the corner radius is large at 5 to 10m. The crosswalk type is standard transverse markings. These factors combine to give a PESTI score of 21, which

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corresponds to PLOS F. The cycle length at intersections is 90 seconds, with effective walk time of 14 seconds, meaning that pedestrian delay is 32 seconds, or PLOS D.

This intersection has a Curb Bike Lane, Cycletrack of MUP, so is therefore separated from traffic. If the cyclists turn left, they have to traverse more than or equal to 2 lanes, giving BLOS F.

The average signal delay for transit is less than or equal to 20 seconds, giving a TLOS C.\

Trucks have an effective corner radius less than 10 meters, and the number of receiving lanes on departure from intersection is 1 lane. This demonstrates TkLOS F.

The same analysis for moving north also applies for eastward travel for the other modes.

West

This segment has the pedestrian travel across 7 lanes at intersections. Left turns are permissive which minimizes. There is no right turn channel, and the corner radius is large at 5 to 10m. The crosswalk type is standard transverse markings. These factors combine to give a PESTI score of 5, which corresponds to PLOS F. The cycle length at intersections is 90 seconds, with effective walk time of 14 seconds, meaning that pedestrian delay is 32 seconds, or PLOS D.

The same analysis for moving east also applies for westward travel for the other modes.

Intersection – Heron Road and Sandalwood Drive

North

This segment has the pedestrian travel across 3 lanes at intersections. Left turns are permissive which minimizes conflict. There is no right turn channel, and the corner radius is large at 5 to 10m. The crosswalk type is standard transverse markings. These factors combine to give A PESTI score of 71, which corresponds to PLOS C The cycle length at intersections is 90 seconds, with effective walk time of 11 seconds, meaning that pedestrian delay is 35 seconds, or PLOS D.

This intersection is mixed traffic composition, therefore there is no dedicated bicycle facility. If the cyclists turn left, they don't have to traverse any lanes, giving BLOS C.

The average signal delay for transit is less than or equal to 20 seconds, giving a TLOS C.

Trucks have an effective corner radius less than 10 meters, and the number of receiving lanes on departure from intersection is greater than or equal to 2. This demonstrates TkLOS D.

Automobiles have a volume to capacity between the bounds of 0.0 and 0.60, resulting in VLOS A.

South

This segment has the pedestrian travel across 3 lanes at intersections. Left turns are permissive which minimizes conflict. There is no right turn channel, and the corner radius is large at 5 to 10m. The crosswalk type has the standard transverse markings. These factors combine to give A PESTI score of 71, which

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corresponds to PLOS C. The cycle length at intersections is 90 seconds, with effective walk time of 11 seconds, meaning that pedestrian delay is 35 seconds, of PLOS D

All conditions are the same for bicyclists as northward travel, except moving south cyclists have to traverse one lane, giving BLOS E.

The average signal delay for transit is less than or equal to 30 seconds, giving a TLOS D, below the targeted TLOS D.

Trucks have an effective corner radius of 10 to 15 meters. The other conditions remain the same for northward travel among other modes.

East

This segment has the pedestrian travel across 6 lanes at intersections, with no median present. Left turns are permissive which minimizes conflict. There is no right turn channel, and the corner radius is large at 5 to 10m. The crosswalk type has the standard transverse markings. These factors combine to give a PESTI score of 21, which corresponds to PLOS f. The cycle length at intersections is 90 seconds, with effective walk time of 12 seconds, meaning that pedestrian delay is 34 seconds, of PLOS D.

This intersection has a Curb Bike Lane, Cycletrack of MUP, so is therefore separated from traffic. If the cyclists turn left, they have to traverse more than or equal to 2 lanes, giving BLOS F.

The average signal delay for transit is less than or equal to 10 seconds, giving a TLOS D.

Trucks have an effective corner radius of 10 to 15 meters, and the number of receiving lanes on departure from intersection is 1. This demonstrates TkLOS E.

The same analysis for moving south also applies for eastward travel for the other modes.

West

This road segment has the pedestrian travel across 7 lanes at intersections. Left turns are permissive which minimizes conflict. There is no right turn channel, and the corner radius is large at 5 to 10m. The crosswalk type is standard transverse markings. These factors combine to give a PESTI score of 5, which corresponds to PLOS f. The cycle length at intersections is 90 seconds, with effective walk time of 12 seconds, meaning that pedestrian delay is 34 seconds, of PLOS D.

The same analysis for moving east also applies for westward travel for the other modes.

Ultimate Conditions 2037 – Intersections

All findings remain the same in the ultimate conditions segment analysis, with the exception of:

Heron Road and Alta Vista Drive

Automobiles have volume to capacity ratio greater than 1, resulting in VLOS F.

Heron road and Baycrest Drive

North

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The cycle length at intersections is 120 seconds, with effective walk time of 19 seconds, meaning that pedestrian delay is 43 seconds, or PLOS E.

South

The cycle length at intersections is 120 seconds, with effective walk time of 19 seconds, meaning that pedestrian delay is 43 seconds, or PLOS E.

East

The cycle length at intersections is 120 seconds, with effective walk time of 14 seconds, meaning that pedestrian delay is 47 seconds, or PLOS E.

West

The cycle length at intersections is 120 seconds, with effective walk time of 14 seconds, meaning that pedestrian delay is 47 seconds, or PLOS E.

Intersection MMLOS Analysis

Table 21 summarizes the results of the MMLOS analysis under Existing conditions. All intersections are currently operating with LOS F for pedestrians (PLOS) and bicycling (BLOS) during the AM and PM peak hour. All other modes including transit (TLOS), trucks (TkLOS), and vehicular traffic (VLOS) generally operate acceptably with a few exceptions. As part of the Heron Road BRT project, opportunities to improve intersection treatments for pedestrians and cyclists should be explored and prioritized in the future.

Table 21 – 2022 Existing Intersections Multimodal Level of Service (Signalized Intersections)

Intersection		PLOS	BLOS	TLOS	TkLOS	VLOS
Heron Road @ Alta Vista Drive	Model Output	F	F	F	C	E
	Target	C	C	D	D	D
Heron Road @ Baycrest Drive	Model Output	F	F	E	F	B
	Target	C	C	D	D	D
Heron Road @ Sandalwood Drive	Model Output	F	F	D	E	A
	Target	C	C	D	D	D

Table 22 – 2032 Full Background Intersection Multimodal Level of Service (Signalized Intersections)

Intersection		PLOS	BLOS	TLOS	TkLOS	VLOS
Heron Road @ Alta Vista Drive	Model Output	F	F	F	C	F

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	Target	C	C	D	D	D
Heron Road @ Baycrest Drive	Model Output	F	F	E	F	C
	Target	C	C	D	D	D
Heron Road @ Sandalwood Drive	Model Output	F	F	D	E	A
	Target	C	C	D	D	D

Table 23 – 2032 Total Future Intersection Multimodal Level of Service (Signalized Intersections)

Intersection		PLOS	BLOS	TLOS	TkLOS	VLOS
Heron Road @ Alta Vista Drive	Model Output	F	F	F	C	F
	Target	C	C	D	D	D
Heron Road @ Baycrest Drive	Model Output	F	F	E	F	C
	Target	C	C	D	D	D
Heron Road @ Sandalwood Drive	Model Output	F	F	D	E	A
	Target	C	C	D	D	D

Table 24 – 2037 Ultimate Intersection Multimodal Level of Service (Signalized Intersections)

Intersection		PLOS	BLOS	TLOS	TkLOS	VLOS
Heron Road @ Alta Vista Drive	Model Output	F	F	F	C	F
	Target	C	C	D	D	D
Heron Road @ Baycrest Drive	Model Output	F	F	F	F	D
	Target	C	C	D	D	D
Heron Road @ Sandalwood Drive	Model Output	F	F	D	E	A
	Target	C	C	D	D	D

4.9.2.2 Existing Conditions

Figure 11 illustrates Existing AM and PM Peak hour traffic volumes at the study area intersections.

Intersection Capacity Analysis

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Table 25 summarizes the results of the Synchro analysis under Existing conditions. The eastbound and southbound left turn movements at the Heron Road and Bank Street intersection experience delays exceeding two minutes during the PM peak hour. Although the overall intersection operates over capacity during both the AM and PM peak hours maintains an acceptable level of service.

While the overall performance of the intersection of Heron Road at Alta Vista is performing acceptably, several movements are currently operating at or slightly above capacity.

The intersection of Walkey Road at Bank Street is currently operating with an overall v/c ratio of approximately 1.23 during the AM peak hour and 1.21 during the PM peak hour, with significant delays of around three minutes observed for the eastbound left turn movement during the AM peak hour.

All other study area intersections are currently operating acceptably.

Table 25 – Existing Conditions Critical Intersection LOS

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		Delay (s)	LOS	V/C	95 th Percentile Queue (m)	Delay (s)	LOS	V/C	95 th Percentile Queue (m)
Heron Rd & Bank St	EBL	120.4	F	1.07	70.3	95.6	F	1.01	100.1
	WBT	62.8	E	0.97	165.7	120.5	F	1.13	183.7
	SBL	178.4	F	1.17	86.4	78.8	D	0.87	106.9
	SBTR	42.3	D	0.6	66	129.4	F	1.17	229.0
	Overall Intersection	48.5	F	1.17	-	76.4	F	1.17	-
Alta Vista Dr & Heron Rd	WBL	134	F	1.06	61.5	105.7	D	0.86	65.4
	WBT	54.3	D	1.04	142.5	59.6	E	0.95	185.1
	NBTR	81.6	F	1.03	141.4	46.7	B	0.70	114.2
	Overall Intersection	48.7	F	1.06	-	48.5	E	0.95	-
Bank St & Walkley Rd	EBL	171.9	F	1.23	92.9	67	C	0.75	56
	NBL	67.1	C	0.72	58.2	166.2	F	1.16	119.3
	SBT	51.1	A	0.53	81.7	142.1	F	1.21	248.4
	Overall Intersection	51.8	F	1.23	-	71.2	F	1.21	-

Appendix D contains detailed intersection performance worksheets.

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4.9.2.3 2032 Future Background Conditions

Figure 16 illustrates 2032 Future Background AM and PM Peak hour traffic volumes at the study area intersections.

Intersection capacity Analysis

Table 26 summarizes the results of the Synchro analysis under 2032 Future Background conditions.

The intersection of Heron Road at Bank Street is projected to operate at unacceptable LOS of F during AM and PM peak hours, with westbound left and through movement experiencing considerable delays of over three (3) minutes during the PM peak hour.

The intersection of Heron Road at Alta Vista is projected to continue to operate at or above capacity with several individual movements operating at LOS F during the AM and PM peak hour.

The northbound movement at the intersection of Baycrest Drive and Heron Road operates overcapacity with significant delays of more than three (3) minutes during the AM peak hour. Despite the overcapacity concerns, the intersection still operates acceptably during AM and PM peak hour.

The intersection at Walkley Road and Heron Road operate at capacity during the PM peak hour with acceptable LOS.

The intersection of Walkey Road at Bank Street is projected to continue to operate at or above capacity with several individual movements operating at LOS F during the AM and PM peak hour.

All other study area intersections are projected to operate acceptably.

Table 26 – 2032 Future Background Conditions Intersection Level of Service

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		Delay (s)	LOS	V/C	95 th Percentile Queue (m)	Delay (s)	LOS	V/C	95 th Percentile Queue (m)
Heron Rd & Bank St	EBL	151.7	F	1.16	79.2	120.7	F	1.1	113.1
	WBL	50.5	A	0.55	34.9	256.1	F	1.46	28.9
	WBT	164.3	F	1.27	246.7	213.6	F	1.37	209.3
	NBTR	68.7	E	1.08	197.5	54.2	D	0.81	109.5
	SBL	185.5	F	1.19	88.3	92.9	F	0.96	139.3
	SBTR	45.1	B	0.67	72.8	185.9	F	1.31	257.2
	Overall Intersection	80.5	F	1.27	-	113.0	F	1.46	-
Alta Vista Dr & Heron Rd	EBL	77.4	C	0.79	47.5	111.3	F	0.94	51.9
	EBTR	36.8	D	0.84	97.5	83.6	F	1.12	236.9
	WBL	142.7	F	1.15	49.3	121.6	F	0.94	72.9

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	WBT	164.8	F	1.31	172.2	96.2	F	1.09	228.3
	NBTR	80.1	F	1.03	158.9	50.9	C	0.77	129.7
	Overall Intersection	89.7	F	1.31	-	76.5	E	1.12	-
Baycrest Dr & Heron Rd	NBLTR	199.6	F	1.35	189.5	53.8	D	0.88	93.1
	Overall Intersection	49.5	D	1.35	-	26.9	D	0.88	-
Walkley Rd & Heron Rd	EBT	20.7	A	0.57	83	57.8	E	1.00	187.9
	Overall Intersection	16.8	C	0.71	-	29.8	E	1.00	-
Bank St & Walkley Rd	EBL	213.8	F	1.34	103.0	69.2	C	0.79	60.7
	NBL	69.3	C	0.75	63.2	261.8	F	1.42	131.7
	SBT	54.1	B	0.61	88.4	183.8	F	1.31	278.8
	Overall Intersection	60.3	F	1.34	-	88.3	F	1.42	-

Appendix D contains detailed intersection performance worksheets.

4.9.2.4 2032 Total Future Conditions

Figure 17 illustrates 2032 Total Future Conditions AM and PM Peak hour traffic volumes at the study area intersections.

Intersection Capacity Analysis

Table 27 summarizes the results of the Synchro analysis under 2032 Total Future conditions.

The intersection of Heron Road at Bank Street is projected to continue to operate at or above capacity with several individual movements operating at LOS F during the AM and PM peak hour. Specifically, the westbound left turn movement during the PM peak hour exhibits considerable delays of more than six (6) minutes. No improvements are recommended as implementing intersection treatments to address vehicular operations is expected to negatively impact the multi-modal traffic operations for other modes (transit, cycling, and pedestrian).

The intersection of Heron Road at Alta Vista is projected to continue to operate at or above capacity with several individual movements operating at LOS F during the AM and PM peak hour. No improvements are recommended as implementing intersection treatments to address vehicular operations is expected to negatively impact the multi-modal traffic operations for other modes (transit, cycling, and pedestrian).

The intersection of Walkley Road at Bank Street is projected to continue to operate at or above capacity with several individual movements operating at LOS F during the AM and PM peak hour. No improvements are recommended as implementing intersection treatments to address vehicular operations is expected to negatively impact the multi-modal traffic operations for other modes (transit, cycling, and pedestrian).

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The intersection of Baycrest Drive and Heron Road has several movements that experience LOS F during both AM and PM peak hour. The eastbound left movement at the intersection experiences significant delays which can be addressed by optimizing the Signal Timing Plan (STP) and changing eastbound left turn to protective-permissive. These improvements may negatively impact the multi-modal traffic operations for other modes (transit, cycling, and pedestrian) due to more green time being allocated to the movement.

The intersection of Walkley Road and Heron Road operates slightly overcapacity during the PM peak hour with acceptable LOS C.

The right-in-right-out site access is projected to operate at LOS A with a control delay of 11.4 seconds on southbound right turn during the AM peak hour and 10.9 seconds during PM peak hour.

All other study area intersections are projected to operate acceptably.

Table 27 – 2032 Total Future Conditions Intersection Level of Service

Intersec tion	Movement	AM Peak Hour				PM Peak Hour			
		Delay (s)	LOS	V/C	95 th Percenti le Queue (m)	Delay (s)	LOS	V/C	95 th Percenti le Queue (m)
Heron Rd and Bank St	EBL	151.7	F	1.16	79.2	120.7	F	1.1	113.1
	WBL	65.6	C	0.71	47.9	405.5	F	1.81	34.2
	WBT	183.1	F	1.31	259.1	236.3	F	1.43	199.9
	NBTR	73.4	F	1.1	200.9	55.2	D	0.83	111.6
	SBL	293.2	F	1.49	111.8	127.7	F	1.1	166.5
	SBTR	45.1	B	0.67	72.8	185.9	F	1.31	257.2
	Overall intersection	90.9	F	1.49	-	122.7	F	1.81	-
Alta Vista Dr & Heron Rd	EBTR	45.8	E	0.93	121.2	122.5	F	1.21	245.5
	WBL	139.5	F	1.15	46.1	121.6	F	0.94	72.9
	WBT	208.4	F	1.41	189.4	130.7	F	1.18	257.7
	NBTR	113.8	F	1.13	158.9	52.2	C	0.79	129.7
	Overall intersection	109.9	F	1.41	-	98.7	F	1.21	-
Baycrest Dr & Heron Rd	EBL	269.2	F	1.51	48.2	1155.3	F	3.43	88.6
	NBLTR	259.9	F	1.49	199.5	66.7	E	0.95	106.3
	Overall intersection	69.0	F	1.51	-	84.6	F	3.43	-
Walkley Rd &	EBT	20.7	A	0.57	83.6	70.5	F	1.04	202.5

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Heron Rd	Overall intersection	17.2	C	0.76	-	34.8	F	1.04	-
Bank St & Walkley Rd	EBL	213.8	F	1.34	103.0	69.2	C	0.79	60.7
	WBTR	51.9	E	0.94	130.2	74	E	1.00	169.1
	Overall intersection	60.5	E	1.34	-	89.8	F	1.42	-

Appendix D contains detailed intersection performance worksheets.

4.9.2.5 2037 Future Background Conditions

Figure 18 illustrates 2037 Ultimate Conditions AM and PM Peak hour traffic volumes at the study area intersections.

Intersection capacity Analysis

Table 28 summarizes the results of the Synchro analysis under 2037 Future Background conditions.

Several movements at the intersection of Heron Road and Bank Street operate overcapacity with significant delays during both AM and PM peak hours under the future 2037 background volumes. Specifically, the westbound left and southbound through / right movements experience significant delays of over five (5) minutes and three (3) minutes during the PM peak hour respectively.

The intersection of Heron Road at Alta Vista is projected to continue to operate at or above capacity with several individual movements operating at LOS F during the AM and PM peak hour. No improvements are recommended as implementing intersection treatments to address vehicular operations is expected to negatively impact the multi-modal traffic operations for other modes (transit, cycling, and pedestrian).

The intersection of Walkley Road at Bank Street is projected to continue to operate at or above capacity with several individual movements operating at LOS F during the AM and PM peak hour. No improvements are recommended as implementing intersection treatments to address vehicular operations is expected to negatively impact the multi-modal traffic operations for other modes (transit, cycling, and pedestrian).

The northbound movement at the intersection of Baycrest Drive and Heron Road operates overcapacity with significant delays of more than three (3) minutes during the AM peak hour. Despite the overcapacity concerns, the overall intersection is expected to operate acceptably during AM and PM peak hour.

The intersection at Walkley Road and Heron Road operate at capacity during the PM peak hour with acceptable LOS.

Table 28 – 2037 Future Background Conditions Intersection Level of Service

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		Delay (s)	LOS	V/C	95 th Percentile Queue (m)	Delay (s)	LOS	V/C	95 th Percentile Queue (m)
	EBL	167.7	F	1.21	83.2	136	F	1.14	120.1

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Heron Rd and Bank St	WBL	58.5	B	0.64	42.5	333.3	F	1.64	30.9
	WBT	184.7	F	1.32	260.1	237	F	1.43	210.2
	NBTR	85.4	F	1.13	198.5	56.6	D	0.85	116.5
	SBL	202.7	F	1.24	92.7	102.2	F	1	146.8
	SBTR	46.7	C	0.71	76.3	216.7	F	1.39	272.0
	Overall Intersection	80.5	F	1.27	-	127.0	F	1.64	-
Alta Vista Dr & Heron Rd	EBTR	39.5	D	0.87	109.1	101.3	F	1.16	237.4
	WBL	158.9	F	1.20	50.2	132.1	F	0.99	76.6
	WBT	187.1	F	1.36	180.7	112.6	F	1.14	242.8
	NBTR	92.9	F	1.07	167.8	53.9	D	0.81	143.4
	Overall Intersection	89.7	F	0.95	-	88.7	F	1.16	-
Baycrest Dr & Heron Rd	NBLTR	217	F	1.39	195.9	57	E	0.90	97.8
	Overall Intersection	49.5	F	1.35	-	28.4	E	0.90	-
Walkley Rd & Heron Rd	EBT	21.1	C	0.59	87.4	54.7	D	1.00	195.5
	Overall Intersection	16.8	B	0.71	-	31.7	C	1.00	-
Bank St & Walkley Rd	EBL	237.4	F	1.40	108.5	70.6	D	0.81	64.3
	WBTR	55.3	E	0.96	139.1	85.6	F	1.05	179.2
	NBL	70.5	C	0.77	65.5	285.6	F	1.48	138.1
	Overall Intersection	60.3	E	1.34	-	97.8	F	1.48	-

4.9.2.6 2037 Ultimate Conditions

Figure 19 illustrates 2037 Ultimate Conditions AM and PM Peak hour traffic volumes at the study area intersections.

Intersection capacity Analysis

Table 29 summarizes the results of the Synchro analysis under 2037 Ultimate Conditions.

The intersection of Heron Road at Bank Street is projected to continue to operate at or above capacity with several individual movements operating at LOS F during the AM and PM peak hour.

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The intersection of Heron Road at Alta Vista is projected to continue to operate at or above capacity with several individual movements operating at LOS F during the AM and PM peak hour.

The intersection of Walkey Road at Bank Street is projected to continue to operate at or above capacity with several individual movements operating at LOS F during the AM and PM peak hour.

The intersection of Baycrest Drive and Heron Road continues to experience with significant overcapacity at unacceptable LOS F during the PM peak hour. It is suggested that the northbound left turn movement at the primary site access intersection of Heron Road and Baycrest Drive be separated from the current share configuration. This in addition to carrying over the eastbound left turn improvements from the 2032 future total scenario is expected to significantly improve the overall performance at the intersection.

No other improvements are recommended as implementing intersection treatments to address vehicular operations is expected to negatively impact the multi-modal traffic operations for other modes (transit, cycling, and pedestrian).

The right-in-right-out site access is projected to operate at LOS A with a control delay of 10.6 seconds on southbound right turn during the AM peak hour and 10.8 seconds during PM peak hour.

All other study area intersections are projected to operate acceptably.

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Strategy Report

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Table 29 – 2037 Ultimate Conditions Intersection Level of Service

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		Delay (s)	LOS	V/C	95 th Percentile Queue (m)	Delay (s)	LOS	V/C	95 th Percentile Queue (m)
Heron Rd and Bank St	EBL	167.7	F	1.21	83.2	136	F	1.14	120.1
	WBL	80.6	C	0.80	53.2	429.7	F	1.87	34.0
	WBT	203.8	F	1.36	272.2	259.8	F	1.48	201.0
	NBTR	90.7	F	1.14	199.4	57.9	D	0.86	123.3
	SBL	313.7	F	1.54	115.8	140	F	1.14	173.9
	SBTR	46.7	C	0.71	76.3	216.7	F	1.39	272.0
	Overall Intersection	101.2	F	1.54	-	136.5	F	1.87	-
Alta Vista Dr & Heron Rd	EBTR	51.6	E	0.96	128.6	140.3	F	1.25	245.8
	WBL	155.6	F	1.20	47.1	132.1	F	0.99	76.6
	WBT	230.6	F	1.46	198.1	148.8	F	1.23	272.3
	NBTR	132.4	F	1.18	167.8	54.9	D	0.82	143.4
	Overall Intersection	122.2	F	1.46	-	111.6	F	1.25	-
Baycrest Dr & Heron Rd	EBL	374.1	F	1.75	50.5	1450.1	F	4.04	91.5
	NBLTR	277.7	F	1.53	206.3	69.9	E	0.96	110.5
	Overall Intersection	77.1	E	1.75	-	98.5	F	4.04	-
Walkley Rd & Heron Rd	EBT	21.1	C	0.59	87.8	80.1	F	1.08	215.0
	Overall Intersection	17.7	B	0.79	-	40.4	F	1.08	-
Bank St & Walkley Rd	EBL	237.4	F	1.4	108.5	70.6	D	0.81	64.3
	WBT	55.8	E	0.96	140.1	86.8	F	1.05	180.6
	NBL	70.5	C	0.77	65.5	285.6	F	1.48	138.1
	Overall Intersection	65.3	E	1.40	-	99.2	F	1.48	-

Appendix D contains detailed intersection performance worksheets.

1495 HERON ROAD TRANSPORTATION IMPACT ASSESSMENT

Summary and Conclusions

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5.0 SUMMARY AND CONCLUSIONS

This Transportation Impact Assessment (TIA) was prepared in support of a Plan of Subdivision for the proposed development at 1495 Heron Road in the Playfair Park – Lynda Park – Guildwood Estates neighborhood of Ottawa, Ontario. The proposed development is located north of the Heron Road and Baycrest Drive intersection at the existing Federal Study Centre. The site is bound by Heron Road to the south, single-family homes to the east, an existing school to the west and parkland to the north.

Primary access to the development is planned to be achieved via the existing signalized intersection of Heron Road and Baycrest Drive at the existing Federal Study Center. This primary access will be shared with the proposed Timbercreek redevelopment on the south side of Heron Road. A secondary right-in/right-out only access off of Heron Road is also provided. The development is planned to be built out by the year 2032.

The proposed development is anticipated to generate 394 and 337 net new auto trips (two-way) during the AM and PM peak hours, respectively. The trip generation accounted for transit modal shares were obtained from the TRANS 2020 Trip Generation Manual.

The City of Ottawa Transportation Master Plan identifies a number of transit improvements on key arterial and collector roadways within the vicinity of the study area:

- At-Grade Bus Rapid Transit (BRT) corridor on Heron Road, connecting Bayshore Station to St. Laurent Station (Network Concept, anticipated to occur beyond the 2031 horizon)
- Transit Signal Priority and queue jump lanes on Bank Street, between Billings Bridge Station and Hunt Club Road (Network Concept, anticipated to occur beyond the 2031 horizon)
- Transit Signal Priority and queue jump lanes between the Ottawa Health Sciences Centre and Walkley Road (Network Concept, anticipated to occur beyond the 2031 horizon)

As these improvements are identified within the TMP Network Concept, which is anticipated to occur beyond the 2031 horizon year, none of these improvements were accounted for within this TIA. However, it is anticipated that these improvements are likely be implemented at some point beyond the full-build out of the proposed development, thereby improving transit connectivity and increasing the transit modal share.

Intersection level of service analyses were completed as part of this study. The analysis of the study area intersections under Existing Conditions found that the following intersections are currently operating at or close to theoretical capacity:

- Heron Road at Bank Street (PM peak);
- Alta Vista Drive at Heron Road (AM peak); and
- Walkley Road at Bank Street (PM peak).

No improvements are recommended to address existing operating conditions as implementing intersection treatments to address vehicular operations is expected to negatively impact the multi-modal traffic operations for other modes (transit, cycling, and pedestrian).

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Summary and Conclusions

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Under 2032 Future Background conditions, all study area intersections are projected to operate with acceptable levels of service with the exception of the following intersections:

- Heron Road at Bank Street (AM and PM peaks);
- Heron Road at Alta Vista Drive (AM and PM peaks);
- Baycrest Drive at Heron Road (AM peak); and
- Walkley Road at Bank Street (PM peak).

Under 2032 Total Future conditions, all study area intersections are projected to operate with acceptable levels of service with the exception of the following intersections:

- Heron Road at Bank Street (AM and PM peaks);
- Heron Road at Alta Vista Drive (AM and PM peaks);
- Baycrest Drive at Heron Road (AM peak); and
- Walkley Road at Bank Street (PM peak).

Intersection operations under 2032 Total Future conditions are projected to be similar to Future Background conditions. The eastbound left turn movement at the primary site access intersection of Heron Road and Baycrest Drive is projected to operate overcapacity with unacceptable LOS F due to the significant westbound through volumes at the intersection. It is suggested that the eastbound left turn movement be changed to protective-permissive to allow more green time for vehicles turning left here in addition to optimizing the Signal Timing Plan (STP). This may negatively impact other multi-modal operations at the intersection.

Under 2037 Future Background conditions, all study area intersections are projected to operate with acceptable levels of service with the exception of the following intersections:

- Heron Road at Bank Street (AM and PM peaks);
- Heron Road at Alta Vista Drive (AM and PM peaks);
- Baycrest Drive at Heron Road (AM and peaks); and
- Walkley Road at Bank Street (PM peak).

Under the 2037 Ultimate traffic conditions, which represents five (5) years beyond the anticipated total build-out of the subject site, all study area intersections are projected to operate with acceptable levels of service with the exception of the following intersections:

- Heron Road at Bank Street (AM and PM peaks);
- Heron Road at Alta Vista Drive (AM and PM peaks);
- Heron Road at Baycrest Drive (AM peak); and
- Walkley Road at Bank Street (AM and PM peak).

Intersection operations under 2037 Total Future conditions are projected to be similar to 2037 Future Background conditions. It is recommended that the northbound left turn movement at the primary site access intersection of Heron Road and Baycrest Drive be separated from its current shared configuration. Additionally, carrying over the eastbound left turn improvements from the 2032 future total scenario will significantly enhance the overall performance of the intersection.

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It is recommended that intersection design improvements for the Heron Road and Baycrest intersection to address future 2037 conditions should be explored and coordinated with the planning and design efforts of the proposed Heron Road BRT corridor project.

Based on the findings of this study, the proposed Plan of Subdivision for the proposed development can be supported from a transportation perspective and should proceed.

Appendix A

Traffic Data



Transportation Services - Traffic Services

Work Order
36600

Turning Movement Count - 15 Min U-Turn Total Report

ALBION RD/COLLISTON CRES E @ WALKLEY RD

Survey Date: Wednesday, December 07, 2016

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



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

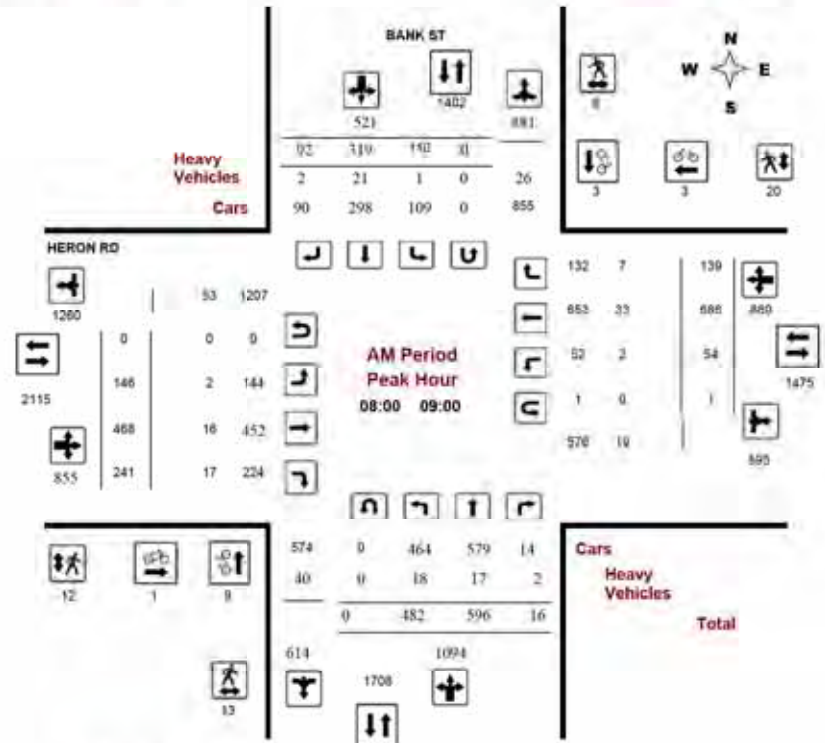
BANK ST @ HERON RD

Survey Date: Wednesday, August 03, 2016

Start Time: 07:00

WO No: 36117

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

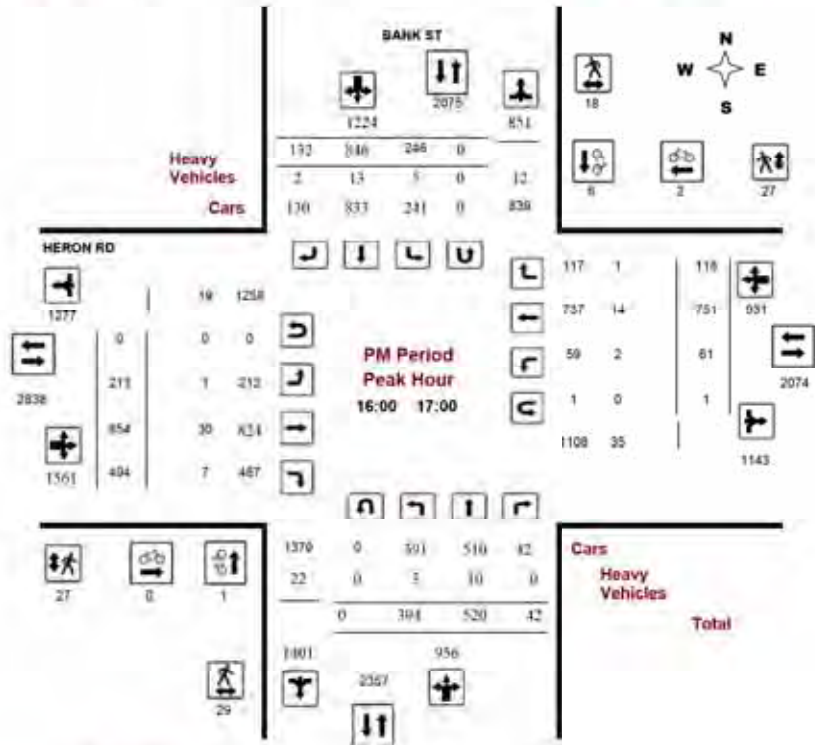
BANK ST @ HERON RD

Survey Date: Wednesday, August 03, 2016

Start Time: 07:00

WO No: 36117

Device: Miovision



Comments



Transportation Services - Traffic Services

Work Order

36117

Turning Movement Count - Full Study Summary Report

BANK ST @ HERON RD

Survey Date: Wednesday, August 03, 2016

Total Observed U-Turns

AADT Factor

Northbound: 1 Southbound: 2
 Eastbound: 3 Westbound: 0

(0)

Full Study

Period	BANK ST				HERON RD				WB TOT	STR TOT	Grand Total									
	Northbound		Southbound		Eastbound		Westbound													
	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	424	457	9	890	75	225	67	367	1257	134	496	204	834	34	635	113	782	1616	2673	
08:00 09:00	482	596	16	1094	110	319	92	521	1615	148	488	241	855	54	686	139	879	1734	3349	
09:00 10:00	318	523	21	862	114	413	115	642	1504	170	413	252	835	42	502	136	680	1515	3019	
11:30 12:30	364	624	51	1039	149	632	148	929	1968	200	451	337	994	59	407	138	604	1598	3566	
12:30 13:30	332	609	51	993	179	685	169	1029	2012	212	436	342	990	46	407	185	618	1686	3620	
15:00 16:00	366	537	45	948	203	745	171	1119	2097	200	635	422	1257	50	643	141	834	2091	4168	
16:00 17:00	384	520	43	947	246	846	132	1224	2180	213	854	494	1561	61	751	118	930	2491	4671	
17:00 18:00	381	502	40	923	202	768	155	1125	2053	206	642	448	1296	53	580	135	768	2064	4117	
Sub Total	3091	4359	280	7730	1274	4633	1049	6956	14686	1487	4395	2740	8622	399	4611	1085	6995	14717	29403	
U Turns	1		2		3		3		9		12		15							
Total	3091	4359	280	7731	1274	4633	1049	6958	14689	1487	4395	2740	8625	399	4611	1085	7104	14729	29418	
EQ 12hr	4296	6059	389	10744	1771	6440	1458	9672	20418	2067	6109	3809	11989	555	6408	1508	8485	20474	40892	
<i>Note: These values are calculated by multiplying the totals by the appropriate expansion factor.</i>																	1.39			
AVG 12hr	3667	5453	350	9671	1564	5796	1312	8704	18375	1860	5498	3428	10790	499	5768	1357	7636	18426	36801	
<i>Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.</i>																	.90			
AVG 24hr	3086	7144	459	12679	2088	7593	1719	11403	24073	2437	7203	4490	14135	654	7557	1778	10903	24138	48211	
<i>Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.</i>																	1.31			

Comments:

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



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BANK ST @ WALKLEY RD

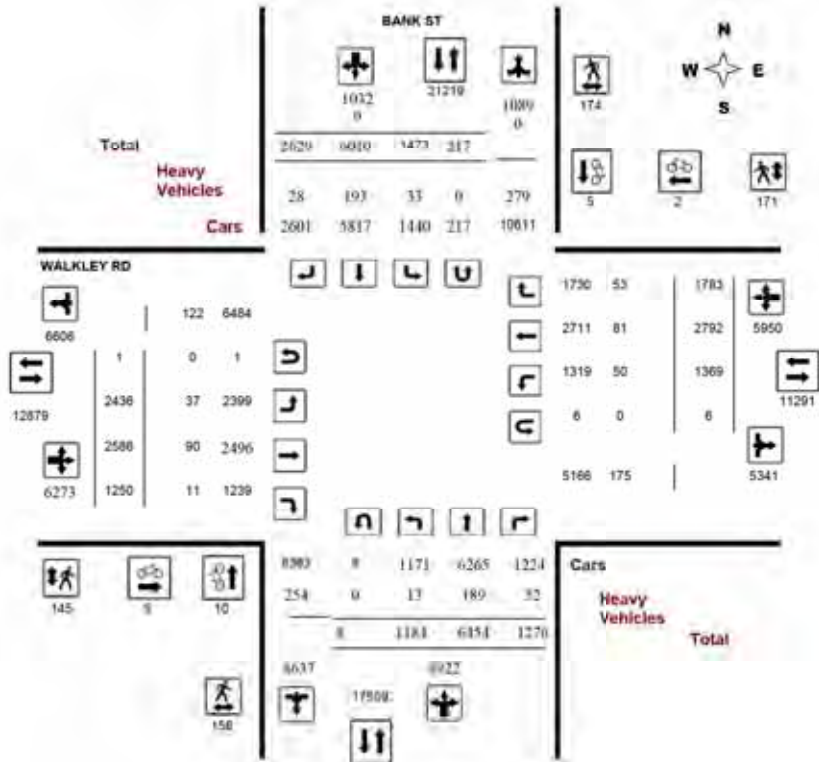
Survey Date: Thursday, February 22, 2018

WO No: 37563

Start Time: 07:00

Device: Miovision

Full Study Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BANK ST @ WALKLEY RD

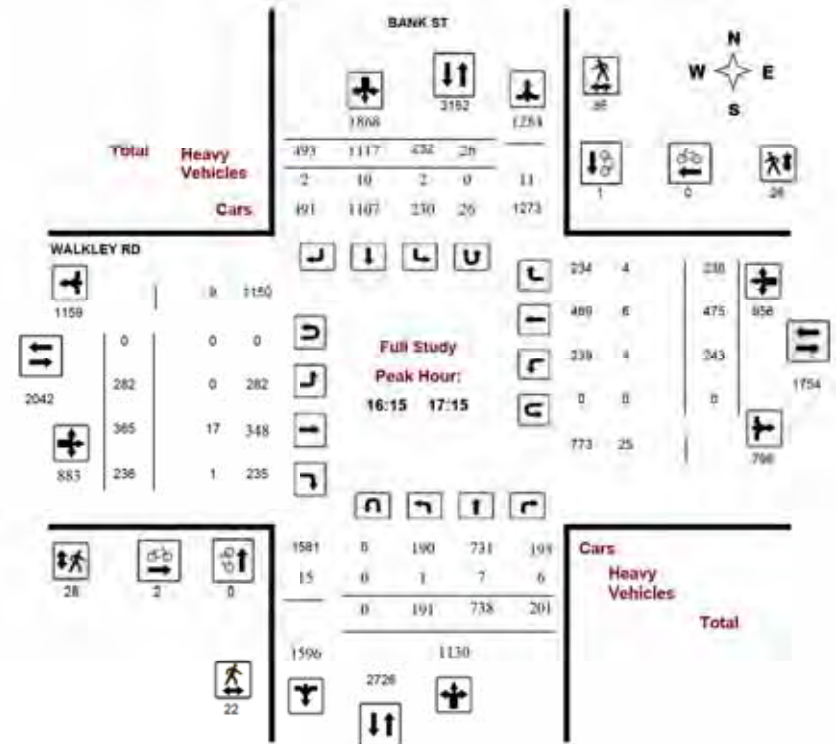
Survey Date: Thursday, February 22, 2018

WO No: 37563

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram





Transportation Services - Traffic Services

Turning Movement Count - Study Results

BANK ST @ WALKLEY RD

Survey Date: Thursday, February 22, 2018

WO No: 37563

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Thursday, February 22, 2018

Total Observed U-Turns AADT Factor
Northbound: 11, Southbound: 11, Eastbound: 1, Westbound: 1, 1.29

Table with columns for Time Period, Bank St (Northbound, Southbound, Eastbound, Westbound), Walkley Rd (Eastbound, Westbound), and Grand Total.

Summary table for U-Turns and Total counts.

EQ 12hr 1481 8074 1596 11161 1843 7519 3289 12922 24083 3047 3235 1564 7948 1713 3483 2231 7443 15291 39374

AVG 12hr 1481 8074 1596 11161 1843 7519 3289 12922 24083 3047 3235 1564 7948 1713 3483 2231 7443 15291 39374

AVG 24hr 1940 10577 2091 14621 2414 9848 4308 16927 31548 3992 4238 2049 10280 2244 4578 2922 9751 20031 51579

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

BANK ST @ WALKLEY RD

Survey Date: Thursday, February 22, 2018

WO No: 37563

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

Large table showing 15-minute increments for Bank St and Walkley Rd with columns for Northbound, Southbound, Eastbound, Westbound, and Grand Total.

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BANK ST @ WALKLEY RD

Survey Date: Thursday, February 22, 2018

WO No: 37563

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

Time Period	BANK ST			WALKLEY RD			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	
07:00 07:15	0	0	0	0	0	0	0
07:15 07:30	1	0	1	0	0	0	1
07:30 07:45	1	0	1	0	0	0	1
07:45 08:00	0	0	0	0	0	0	0
08:00 08:15	0	0	0	0	0	0	0
08:15 08:30	2	0	2	0	1	1	3
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
09:30 09:45	1	0	1	0	0	0	1
09:45 10:00	0	0	0	0	0	0	0
11:30 11:45	0	0	0	0	0	0	0
11:45 12:00	0	0	0	0	0	0	0
12:00 12:15	0	1	1	0	0	0	1
12:15 12:30	1	0	1	0	0	0	1
12:30 12:45	0	0	0	1	0	1	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	1	1	0	0	0	1
15:00 15:15	1	0	1	0	0	0	1
15:15 15:30	0	2	2	1	0	1	3
15:30 15:45	3	0	3	0	1	1	4
15:45 16:00	0	0	0	1	0	1	1
16:00 16:15	0	0	0	0	0	0	0
16:15 16:30	0	1	1	0	0	0	1
16:30 16:45	0	0	0	0	0	0	0
16:45 17:00	0	0	0	2	0	2	2
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
Total	10	5	15	5	2	7	22



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BANK ST @ WALKLEY RD

Survey Date: Thursday, February 22, 2018

WO No: 37563

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

Time Period	BANK ST			WALKLEY RD			Grand Total
	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	
07:00 07:15	0	4	4	0	3	3	7
07:15 07:30	2	3	5	0	3	3	8
07:30 07:45	2	5	7	1	2	3	10
07:45 08:00	3	4	7	2	2	4	11
08:00 08:15	5	4	9	2	5	7	16
08:15 08:30	3	5	8	2	1	3	11
08:30 08:45	1	12	13	4	4	8	21
08:45 09:00	2	5	7	0	7	7	14
09:00 09:15	5	8	13	2	3	5	18
09:15 09:30	7	3	10	1	2	3	13
09:30 09:45	3	2	5	2	4	6	11
09:45 10:00	3	4	7	1	3	4	11
11:30 11:45	6	3	9	3	10	13	22
11:45 12:00	4	3	7	7	3	10	17
12:00 12:15	4	2	6	5	4	9	15
12:15 12:30	4	1	5	1	6	7	12
12:30 12:45	3	0	3	3	8	11	14
12:45 13:00	2	5	7	4	1	5	12
13:00 13:15	6	3	9	6	7	13	22
13:15 13:30	5	4	9	11	3	14	23
15:00 15:15	9	6	15	9	10	19	34
15:15 15:30	7	6	13	12	7	19	32
15:30 15:45	8	8	16	9	6	15	31
15:45 16:00	12	7	19	10	11	21	40
16:00 16:15	7	9	16	3	13	16	32
16:15 16:30	10	11	21	5	7	12	33
16:30 16:45	5	14	19	7	6	13	32
16:45 17:00	6	2	8	6	6	12	20
17:00 17:15	1	9	10	10	7	17	27
17:15 17:30	10	8	18	7	4	11	29
17:30 17:45	4	7	11	5	3	8	19
17:45 18:00	9	1	10	5	10	15	31
Total	158	114	322	145	171	316	638



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BANK ST @ WALKLEY RD

Survey Date: Thursday, February 22, 2018

WO No: 37563

Start Time: 07:00

Device: Microvision

Full Study Heavy Vehicles

		BANK ST				WALKLEY 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	5	2	15	3	6	0	16	31	0	2	0	8	2	6	2	17	25	28	
07:15	07:30	0	8	0	20	0	9	0	22	42	1	1	0	5	3	3	4	11	16	29	
07:30	07:45	1	8	2	20	1	7	1	18	38	0	4	1	10	1	3	1	12	22	30	
07:45	08:00	0	11	4	23	0	5	1	21	44	3	5	0	11	3	2	1	15	26	35	
08:00	08:15	1	10	1	21	0	7	1	26	47	3	5	0	15	2	5	5	18	33	40	
08:15	08:30	0	10	4	23	2	3	1	20	43	1	2	1	9	5	4	3	20	29	36	
08:30	08:45	0	8	0	15	1	7	1	22	37	4	5	0	12	2	2	3	13	25	31	
08:45	09:00	2	12	3	25	1	5	1	24	49	2	1	2	11	1	3	3	12	23	36	
09:00	09:15	0	5	0	24	0	17	0	27	51	2	4	0	8	2	2	3	11	19	35	
09:15	09:30	1	7	0	15	0	5	2	17	32	2	4	0	11	2	2	1	9	20	28	
09:30	09:45	0	4	0	18	1	13	1	21	39	1	2	0	5	1	1	1	6	11	25	
09:45	10:00	0	6	1	13	2	5	2	18	31	3	2	1	11	0	3	0	8	19	25	
11:30	11:45	0	4	1	12	1	5	1	15	27	1	3	0	8	2	3	3	13	21	24	
11:45	12:00	0	7	5	24	3	8	0	20	44	0	1	1	5	3	3	2	17	22	33	
12:00	12:15	0	4	1	16	0	10	1	19	35	1	1	0	6	1	3	3	9	15	25	
12:15	12:30	1	8	2	17	3	2	0	14	31	0	2	1	5	3	1	1	12	17	24	
12:30	12:45	0	8	2	20	2	8	0	20	40	0	4	0	6	2	2	2	14	20	30	
12:45	13:00	0	8	1	17	0	7	2	20	37	1	2	0	7	1	2	2	8	15	26	
13:00	13:15	0	7	2	19	2	7	0	17	36	1	1	2	7	1	3	0	9	16	26	
13:15	13:30	0	5	3	19	0	7	2	17	36	1	3	1	11	3	4	2	15	26	31	
15:00	15:15	0	10	3	20	2	7	0	26	46	5	3	0	9	0	1	2	11	20	33	
15:15	15:30	2	6	2	16	3	6	5	21	37	1	3	0	11	0	0	0	8	19	29	
15:30	15:45	3	6	0	16	1	6	1	15	31	1	3	0	12	1	4	0	9	21	28	
15:45	16:00	0	3	3	16	3	7	1	17	33	2	6	0	12	3	3	1	19	31	32	
16:00	16:15	0	8	2	14	0	4	2	16	30	1	1	0	9	0	5	1	9	18	24	
16:15	16:30	1	3	2	11	2	4	1	10	21	0	4	1	7	0	0	0	8	15	18	
16:30	16:45	0	1	1	5	0	3	1	6	11	0	5	0	9	0	3	1	10	19	15	
16:45	17:00	0	2	0	3	0	0	0	4	7	0	5	0	6	1	1	2	9	15	11	
17:00	17:15	0	1	3	10	0	3	0	5	15	0	3	0	5	3	2	1	12	17	16	
17:15	17:30	0	3	1	6	0	2	0	6	12	0	0	0	1	0	1	1	3	4	8	
17:30	17:45	1	1	1	8	0	4	0	7	15	0	2	0	6	1	3	2	9	15	15	
17:45	18:00	0	2	0	7	0	4	0	6	13	0	1	0	2	1	1	0	3	5	9	
Total:	None	13	189	52	508	33	193	28	533	1041	37	90	11	260	50	81	53	359	619	830	



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BANK ST @ WALKLEY RD

Survey Date: Thursday, February 22, 2018

WO No: 37563

Start Time: 07:00

Device: Microvision

Full Study 15 Minute U-Turn Total

		BANK ST		WALKLEY RD							
		Northbound		Southbound		Eastbound		Westbound			
Time Period		U-Turn Total	U-Turn Total	U-Turn Total	U-Turn Total	U-Turn Total	U-Turn Total	U-Turn Total	U-Turn Total	Total	
07:00	07:15	0	0	0	0	0	0	0	0	0	
07:15	07:30	0	2	0	0	0	0	0	1	3	
07:30	07:45	0	1	0	0	0	0	0	0	1	
07:45	08:00	0	3	0	0	0	0	0	0	3	
08:00	08:15	0	4	0	0	0	0	0	0	4	
08:15	08:30	1	1	0	0	0	0	0	0	2	
08:30	08:45	0	6	0	0	0	0	0	0	6	
08:45	09:00	0	6	0	0	0	0	0	0	6	
09:00	09:15	0	8	0	0	0	0	0	0	8	
09:15	09:30	0	7	0	0	0	0	0	0	7	
09:30	09:45	0	6	0	0	0	0	0	0	6	
09:45	10:00	0	4	0	0	0	0	0	0	4	
11:30	11:45	1	6	0	0	0	0	0	1	8	
11:45	12:00	1	5	0	0	0	0	0	2	8	
12:00	12:15	0	16	0	0	0	0	0	0	16	
12:15	12:30	1	12	0	0	0	0	0	0	13	
12:30	12:45	0	9	0	0	0	0	0	0	9	
12:45	13:00	1	11	0	0	0	0	0	0	12	
13:00	13:15	1	10	0	0	0	0	0	0	11	
13:15	13:30	0	5	0	0	0	0	0	0	5	
15:00	15:15	0	7	0	0	0	0	0	2	9	
15:15	15:30	0	7	0	0	0	0	0	2	9	
15:30	15:45	0	10	0	0	0	0	0	0	10	
15:45	16:00	1	9	0	0	0	0	0	0	10	
16:00	16:15	0	9	0	0	0	0	0	0	9	
16:15	16:30	0	7	0	0	0	0	0	0	7	
16:30	16:45	0	6	0	0	0	0	0	0	6	
16:45	17:00	0	3	0	0	0	0	0	0	3	
17:00	17:15	0	6	0	0	0	0	0	0	6	
17:00	17:15	0	11	0	0	0	0	0	0	11	
17:15	17:30	0	8	0	0	0	0	0	0	8	
17:30	17:45	0	11	0	0	0	0	0	0	11	
17:45	18:00	1	8	0	0	0	0	0	0	9	
Total		8	217	1	0	0	0	0	4	232	



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

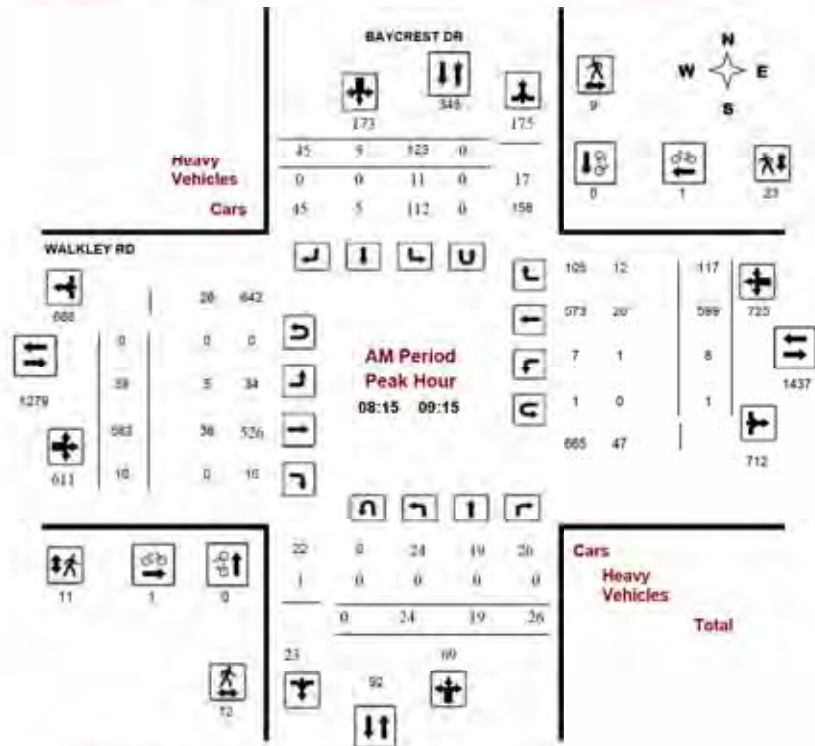
BAYCREST DR @ WALKLEY RD

Survey Date: Wednesday, November 16, 2016

Start Time: 07:00

WO No: 36488

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

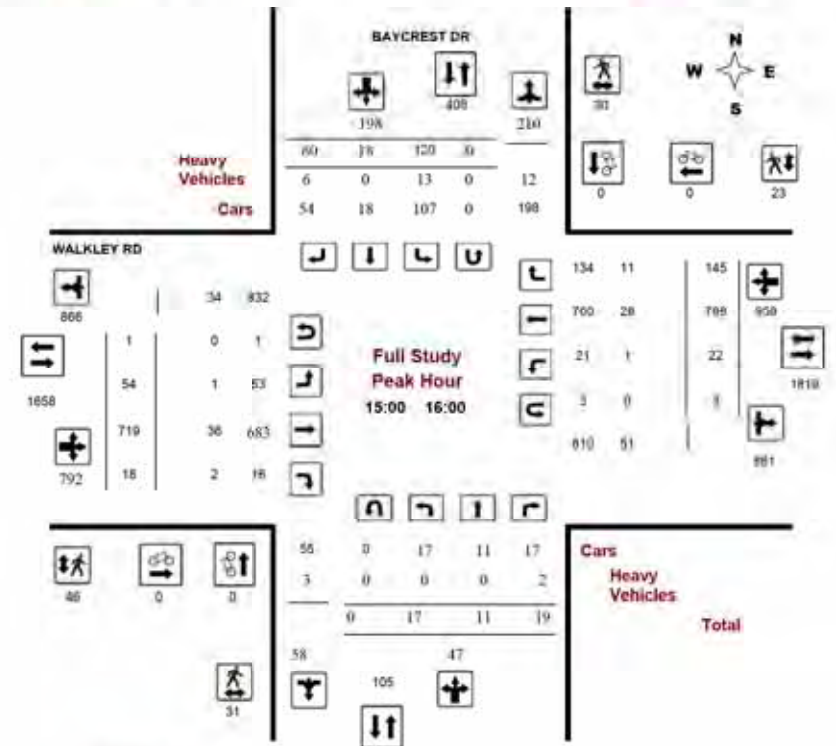
BAYCREST DR @ WALKLEY RD

Survey Date: Wednesday, November 16, 2016

Start Time: 07:00

WO No: 36488

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

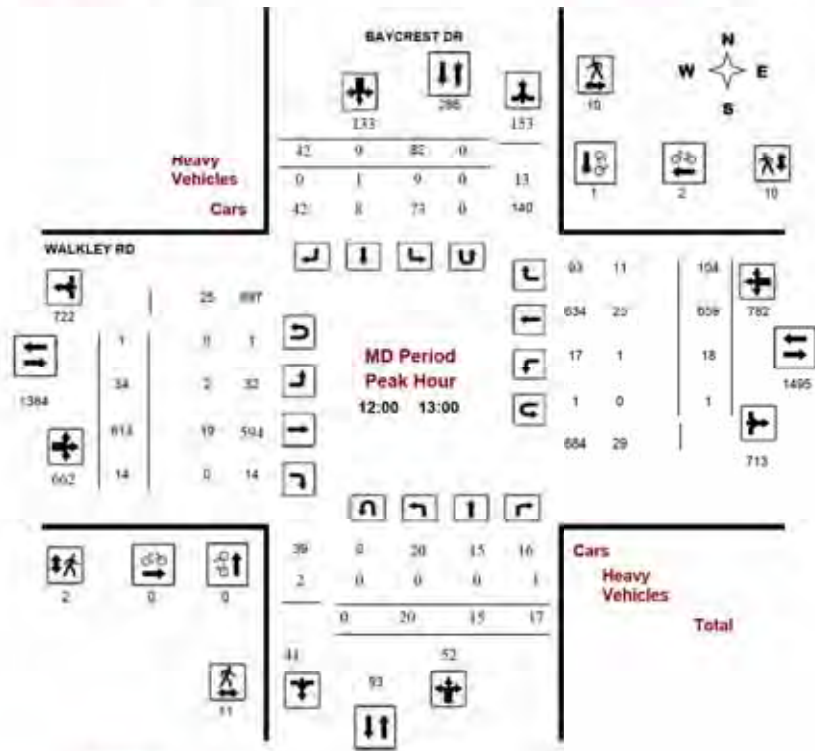
BAYCREST DR @ WALKLEY RD

Survey Date: Wednesday, November 16, 2016

Start Time: 07:00

WO No: 36488

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

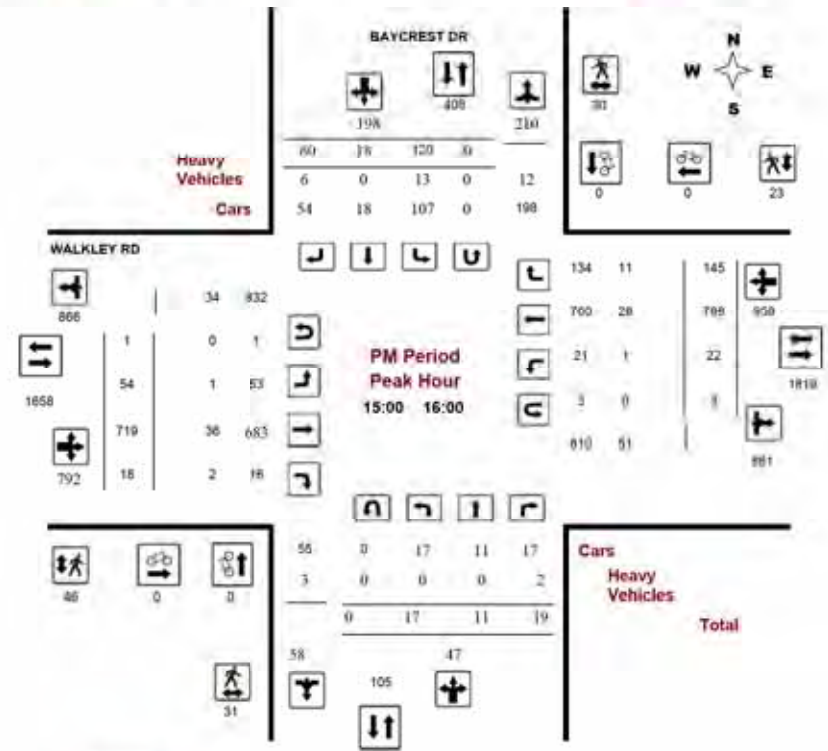
BAYCREST DR @ WALKLEY RD

Survey Date: Wednesday, November 16, 2016

Start Time: 07:00

WO No: 36488

Device: Miovision



Comments

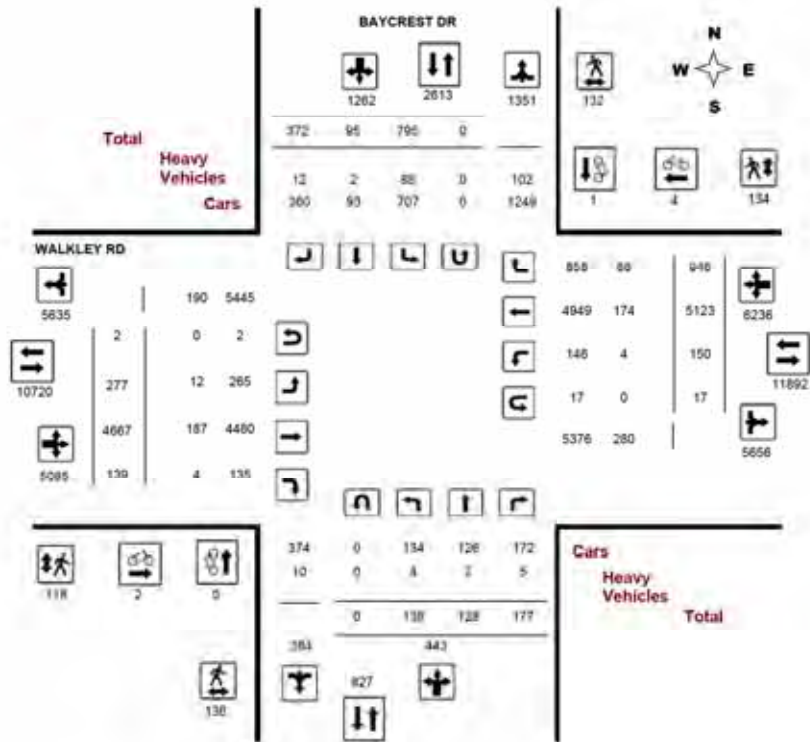


Transportation Services - Traffic Services
Turning Movement Count - Full Study Diagram

BAYCREST DR @ WALKLEY RD

Survey Date: Wednesday, November 16, 2016

WO#: 36488
 Device: Movision



Comments:



Transportation Services - Traffic Services

Work Order
36488

Turning Movement Count - Full Study Summary Report

BAYCREST DR @ WALKLEY RD

Survey Date: Wednesday, November 15, 2016

Total Observed U-Turns:

AADT Factor:

Northbound: 0 Southbound: 0
 Eastbound: 2 Westbound: 12

Full Study

Period	BAYCREST DR					WALKLEY RD					Grand Total								
	Northbound		Southbound		NB TOT	Eastbound		Westbound		WB TOT		STR TOT							
	LT	ST	RT	RT		LT	ST	RT	LT		ST		RT	WB TOT	STR TOT				
07:00-08:00	19	24	31	74	93	5	38	136	219	14	454	5	473	9	513	107	629	1982	1312
08:00-09:00	26	22	29	72	116	8	51	167	239	34	578	9	619	7	587	119	713	1332	1571
09:00-10:00	13	17	20	50	82	2	38	120	179	28	518	11	555	11	529	129	669	1224	1284
11:00-12:00	10	11	16	37	61	4	48	133	179	32	594	11	637	22	645	119	786	1423	1593
12:30-13:30	16	14	14	44	100	13	40	153	197	34	587	15	616	14	604	92	710	1326	1523
15:00-16:00	17	11	19	47	120	18	60	198	245	54	719	18	791	22	788	145	955	1746	1991
16:00-17:00	22	10	26	58	103	22	55	180	238	34	642	31	787	35	795	115	945	1652	1890
17:00-18:00	16	18	26	61	106	25	44	175	236	49	597	30	685	30	662	120	812	1497	1733
Sub Total	138	128	177	443	795	95	372	1262	1785	277	4667	139	5085	150	5123	946	6219	11302	13007
U-Turns	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	17	19	19
Total	138	128	177	443	795	95	372	1262	1785	277	4667	139	5085	150	5123	946	6236	11321	13026
EQ 12hr	192	178	246	616	1105	132	517	1754	2379	385	6487	193	7068	208	7121	1315	8668	15736	18106
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													1.39						
AVG 12hr	173	160	221	554	995	119	485	1579	2133	347	5838	174	6361	188	6409	1183	7801	14562	16295
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													.90						
AVG 24hr	220	210	290	726	1303	156	610	2068	2794	454	7948	228	8333	246	8298	1560	10220	18553	21347
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													1.31						

Comments:

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



Turning Movement Count - 15 Minute Summary Report

BAYCREST DR @ WALKLEY RD

Survey Date: Wednesday, November 16, 2016

Total Observed U-Turns

Northbound: 0 Southbound: 0
Eastbound: 2 Westbound: 17

Time Period	BAYCREST DR										WALKLEY RD										Grand Total
	Northbound					Southbound					Eastbound					Westbound					
	LT	ST	RT	N TOT	U-TURN	LT	ST	RT	S TOT	U-TURN	LT	ST	RT	E TOT	U-TURN	LT	ST	RT	W TOT	U-TURN	
07:00 07:15	2	3	4	9	0	20	2	8	30	39	0	84	2	86	2	96	20	118	204	243	
07:15 07:30	5	9	6	20	0	26	1	5	32	52	5	116	0	121	0	130	27	157	278	330	
07:30 07:45	5	7	10	22	0	24	0	15	39	61	2	110	3	115	5	132	27	164	279	340	
07:45 08:00	7	5	11	23	0	23	2	10	35	58	7	144	0	151	2	155	33	190	341	399	
08:00 08:15	4	5	8	17	0	23	1	17	41	58	5	141	4	150	1	133	37	172	322	380	
08:15 08:30	9	5	8	20	0	24	3	16	43	63	5	130	2	137	2	139	26	167	304	367	
08:30 08:45	6	8	3	17	0	29	1	8	38	55	15	127	2	144	1	170	27	198	342	397	
08:45 09:00	6	4	8	18	0	34	1	10	45	63	9	178	1	188	5	145	29	178	366	429	
09:00 09:15	3	2	9	14	0	36	0	11	47	61	10	127	5	142	2	145	55	162	324	385	
09:15 09:30	3	5	2	10	0	22	0	11	33	43	2	150	3	155	5	113	33	149	304	347	
09:30 09:45	1	8	5	14	0	6	1	7	14	28	6	118	2	126	5	144	34	184	310	338	
09:45 10:00	6	2	4	12	0	18	1	7	26	38	8	123	1	132	1	127	27	157	289	327	
11:30 11:45	1	1	5	7	0	24	1	16	41	48	9	135	2	146	3	149	30	184	330	378	
11:45 12:00	0	4	3	7	0	20	3	0	31	38	7	146	2	157	5	146	32	185	342	380	
12:00 12:15	4	2	4	10	0	22	0	14	36	46	10	134	4	148	7	175	24	206	354	400	
12:15 12:30	5	4	4	13	0	15	0	10	25	38	6	177	3	186	7	175	33	216	402	440	
12:30 12:45	4	8	4	16	0	25	5	7	37	53	9	143	4	157	2	155	24	181	338	391	
12:45 13:00	7	1	5	13	0	20	4	11	35	48	9	159	3	171	2	154	23	179	350	398	
13:00 13:15	0	3	2	5	0	23	1	11	35	40	7	126	7	142	5	142	19	166	308	348	
13:15 13:30	5	2	3	10	0	32	3	11	46	56	9	137	1	147	5	153	26	184	331	387	
15:00 15:15	2	2	4	8	0	29	5	12	46	54	14	175	3	192	5	190	39	244	436	490	
15:15 15:30	2	3	7	12	0	31	4	20	55	67	11	187	2	200	4	185	34	225	425	492	
15:30 15:45	6	1	4	11	0	34	4	10	48	59	11	175	6	193	4	207	33	244	437	496	
15:45 16:00	7	5	4	16	0	26	5	18	49	65	18	162	7	207	9	197	39	245	452	517	
16:00 16:15	5	2	6	13	0	25	5	14	44	57	7	168	3	178	5	201	40	246	424	481	
16:15 16:30	8	4	8	20	0	25	5	13	43	63	4	154	12	170	11	203	27	241	411	474	
16:30 16:45	2	3	8	13	0	20	4	15	39	52	11	167	7	185	11	208	20	239	424	476	
16:45 17:00	7	1	4	12	0	33	8	13	54	66	12	153	9	174	8	183	28	221	395	461	
17:00 17:15	4	5	6	15	0	34	10	15	59	74	10	167	7	184	10	191	26	228	412	486	
17:15 17:30	7	3	3	13	0	23	6	8	37	50	7	138	10	155	5	192	42	239	394	444	
17:30 17:45	4	6	5	15	0	28	5	14	47	62	11	147	15	173	8	170	26	204	377	439	
17:45 18:00	1	5	12	18	0	21	4	7	32	50	21	145	7	173	7	109	26	143	316	366	
TOTAL	138	128	177	443	0	796	85	372	1262	1705	277	4987	139	5085	150	5123	946	6236	11321	13026	

Note: U-Turns are included in Totals.

Comment:



BAYCREST DR @ WALKLEY RD

Count Date: Wednesday, November 16, 2016

Start Time: 07:00

Time Period	BAYCREST DR			WALKLEY RD			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	
07:00 08:00	0	0	0	0	0	0	0
08:00 09:00	0	0	0	1	1	2	2
09:00 10:00	0	0	0	0	0	0	0
11:30 12:30	0	0	0	0	2	2	2
12:30 13:30	0	1	1	0	1	1	2
15:00 16:00	0	0	0	0	0	0	0
16:00 17:00	0	0	0	0	0	0	0
17:00 18:00	0	0	0	1	0	1	1
Total	0	1	1	2	4	6	7

Comment:

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



Transportation Services - Traffic Services

W.O.
36488

Turning Movement Count - Heavy Vehicle Report

BAYCREST DR @ WALKLEY RD

Survey Date: Wednesday, November 16, 2016

BAYCREST DR										WALKLEY RD										Grand Total
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		
07:00 08:00	0	0	0	0	13	0	1	14	14	0	31	0	31	0	36	12	48	79	93	
08:00 09:00	0	0	0	0	13	0	1	14	14	6	30	0	36	1	30	11	42	78	82	
09:00 10:00	1	0	0	1	9	1	0	10	11	3	33	0	36	0	18	11	29	65	76	
11:30 12:30	0	0	0	0	9	0	1	10	10	1	19	0	20	0	20	8	35	55	65	
12:30 13:30	1	1	1	3	9	1	1	11	14	1	16	0	17	2	25	10	37	54	68	
15:00 16:00	0	0	2	2	13	0	6	19	21	1	36	2	39	1	28	11	40	79	100	
16:00 17:00	2	0	2	4	11	0	2	13	17	0	15	2	17	0	7	12	19	36	53	
17:00 18:00	0	1	0	1	11	0	0	11	12	0	7	0	7	0	4	12	16	23	35	
Sub Total	4	2	5	11	88	2	12	102	113	12	187	4	203	4	174	88	266	469	582	
U-Turns (Heavy Vehicles)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	4	2	5	11	88	2	12	102	113	12	187	4	203	4	174	88	266	469	582	

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



Transportation Services - Traffic Services

Work Order
36488

Turning Movement Count - Pedestrian Volume Report

BAYCREST DR @ WALKLEY RD

Count Date: Wednesday, November 16, 2016

Start Time: 07:00

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	1	2	3	1	2	3	6
07:15 07:30	2	0	2	0	2	2	4
07:30 07:45	0	3	3	1	6	9	12
07:45 08:00	1	8	9	20	0	20	29
07:00 08:00	4	13	17	22	12	34	51
08:00 08:15	10	10	20	10	9	19	39
08:15 08:30	2	4	6	1	5	6	12
08:30 08:45	5	1	6	5	5	11	17
08:45 09:00	0	3	3	4	6	10	13
08:00 09:00	17	18	35	20	26	46	81
09:00 09:15	5	1	6	1	6	7	13
09:15 09:30	3	3	6	0	3	3	9
09:30 09:45	4	2	6	4	2	6	12
09:45 10:00	4	0	4	2	1	3	7
09:00 10:00	18	8	22	7	12	19	41
11:30 11:45	4	3	7	1	1	2	9
11:45 12:00	4	2	6	1	7	8	14
12:00 12:15	1	5	6	0	4	4	10
12:15 12:30	3	1	4	0	0	0	4
11:30 12:30	12	11	23	2	12	14	37
12:30 12:45	2	2	4	1	4	5	9
12:45 13:00	5	2	7	1	2	3	10
13:00 13:15	4	2	6	0	2	2	8
13:15 13:30	6	2	8	2	3	5	13
12:30 13:30	17	8	25	4	11	15	40
13:00 13:15	6	15	21	30	4	34	55
13:15 13:30	8	1	9	7	7	14	23
13:30 13:45	8	5	13	9	3	12	25
13:45 16:00	9	9	18	0	9	9	27
15:00 16:00	31	30	61	46	23	69	130
16:00 16:15	5	9	14	4	9	13	27
16:15 16:30	6	6	12	0	3	3	15
16:30 16:45	2	3	5	2	5	7	12
16:45 17:00	8	5	13	6	4	10	23
16:00 17:00	21	23	44	12	21	33	77
17:00 17:15	3	5	8	3	6	8	16
17:15 17:30	7	11	18	1	3	4	22
17:30 17:45	3	3	6	1	3	4	10
17:45 18:00	5	4	9	1	5	6	15
17:00 18:00	18	23	41	5	17	22	63
Total	136	132	268	118	134	252	520

Comment:



Transportation Services - Traffic Services

Work Order
36488

Turning Movement Count - 15 Min U-Turn Total Report

BAYCREST DR @ WALKLEY RD

Survey Date: Wednesday, November 16, 2016

Time Period	Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00 - 07:15	0	0	0	0	0
07:15 - 07:30	0	0	0	0	0
07:30 - 07:45	0	0	0	0	0
07:45 - 08:00	0	0	0	0	0
08:00 - 08:15	0	0	0	1	1
08:15 - 08:30	0	0	0	0	0
08:30 - 08:45	0	0	0	0	0
08:45 - 09:00	0	0	0	1	1
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	1	1
09:45 - 10:00	0	0	0	2	2
11:30 - 11:45	0	0	0	2	2
11:45 - 12:00	0	0	0	2	2
12:00 - 12:15	0	0	0	0	0
12:15 - 12:30	0	0	0	1	1
12:30 - 12:45	0	0	1	0	1
12:45 - 13:00	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0
15:00 - 15:15	0	0	0	1	1
15:15 - 15:30	0	0	0	2	2
15:30 - 15:45	0	0	1	0	1
15:45 - 16:00	0	0	0	0	0
16:00 - 16:15	0	0	0	0	0
16:15 - 16:30	0	0	0	0	0
16:30 - 16:45	0	0	0	0	0
16:45 - 17:00	0	0	0	2	2
17:00 - 17:15	0	0	0	1	1
17:15 - 17:30	0	0	0	0	0
17:30 - 17:45	0	0	0	0	0
17:45 - 18:00	0	0	0	1	1
Total	0	0	2	17	19



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

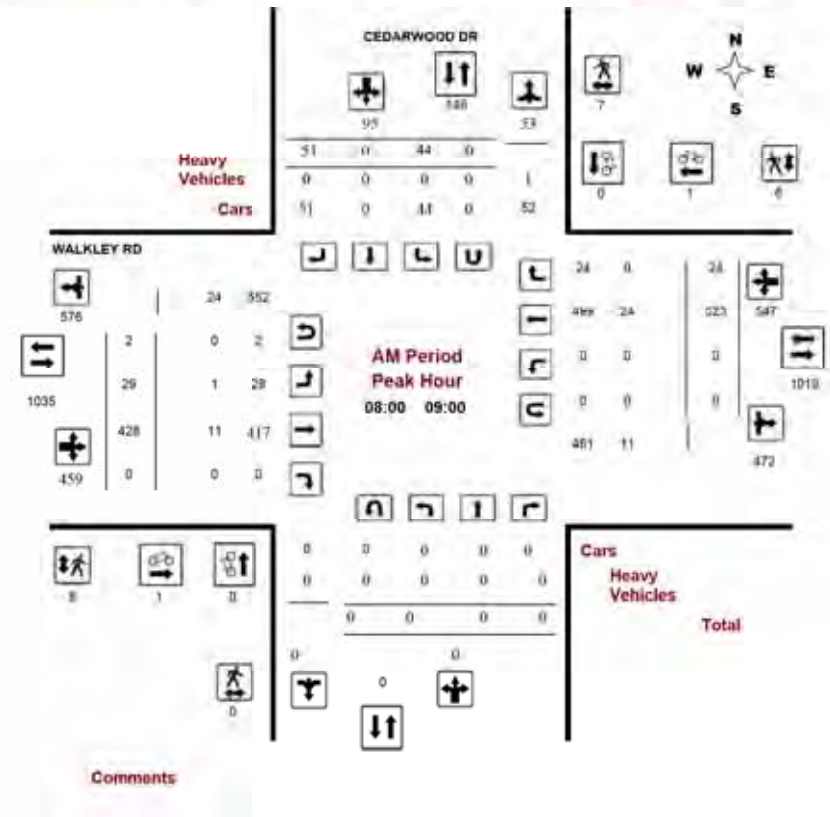
CEDARWOOD DR @ WALKLEY RD

Survey Date: Wednesday, August 03, 2016

Start Time: 07:00

WO No: 36123

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

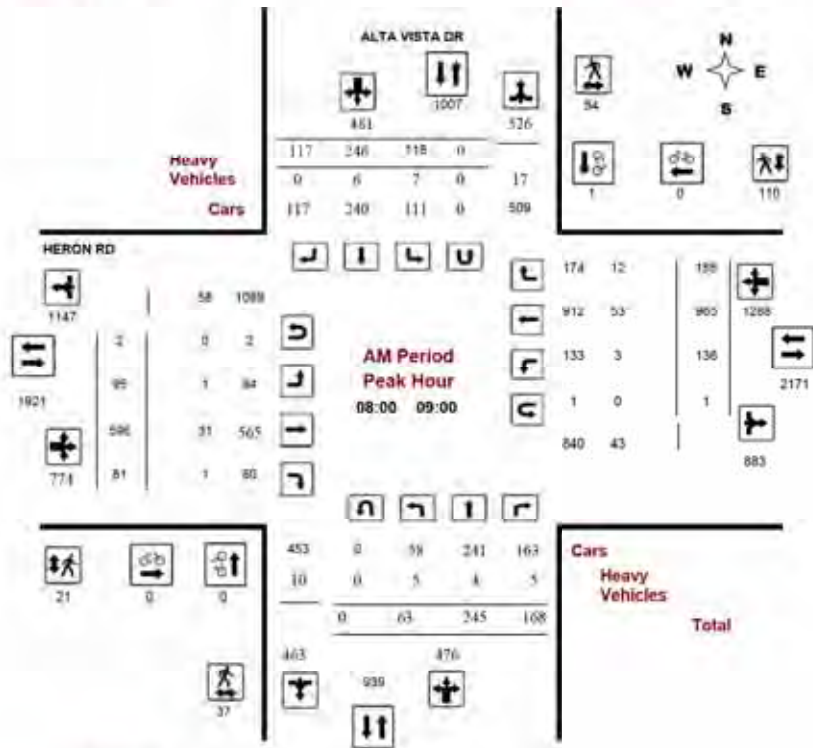
HERON RD @ ALTA VISTA DR

Survey Date: Tuesday, December 04, 2018

Start Time: 07:00

WO No: 38190

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

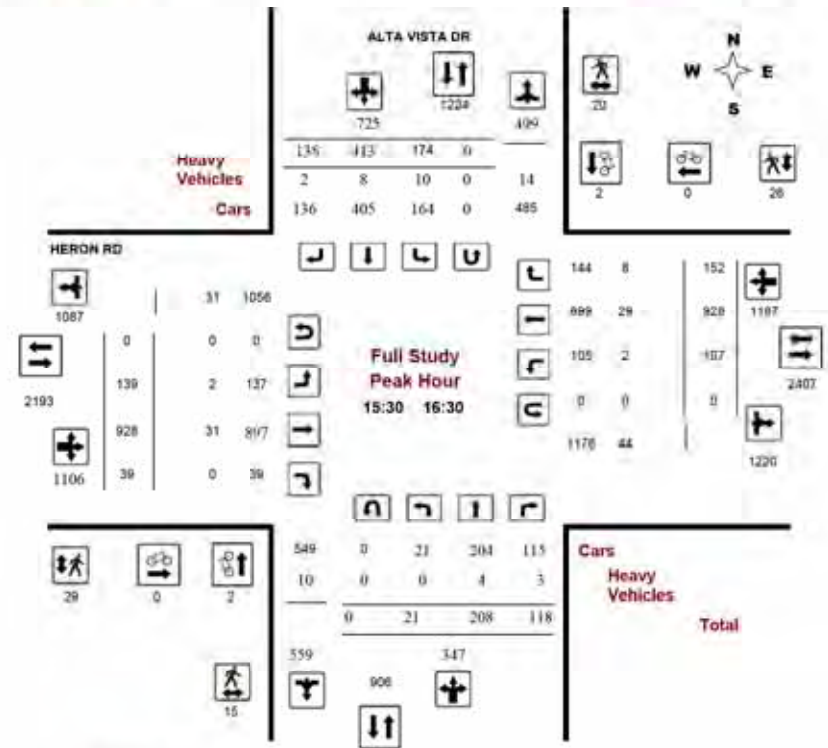
HERON RD @ ALTA VISTA DR

Survey Date: Tuesday, December 04, 2018

Start Time: 07:00

WO No: 38190

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

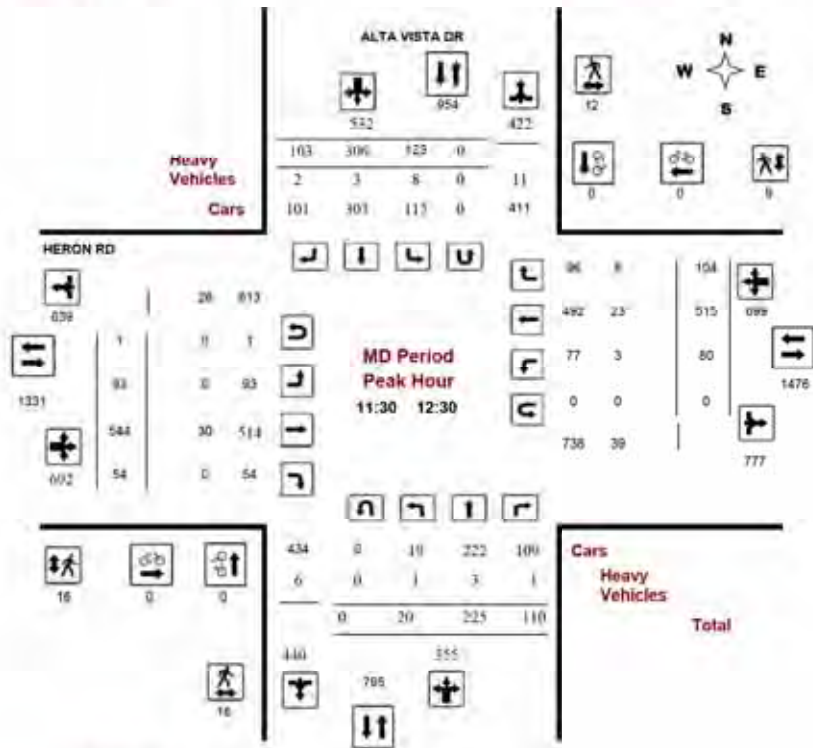
HERON RD @ ALTA VISTA DR

Survey Date: Tuesday, December 04, 2018

Start Time: 07:00

WO No: 38190

Device: Miovision



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

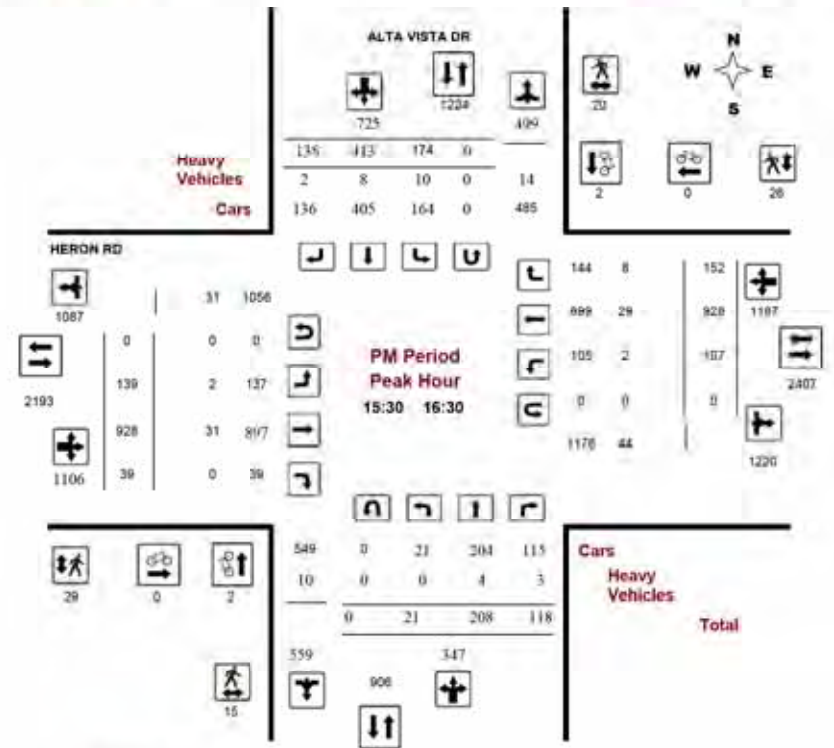
HERON RD @ ALTA VISTA DR

Survey Date: Tuesday, December 04, 2018

Start Time: 07:00

WO No: 38190

Device: Miovision



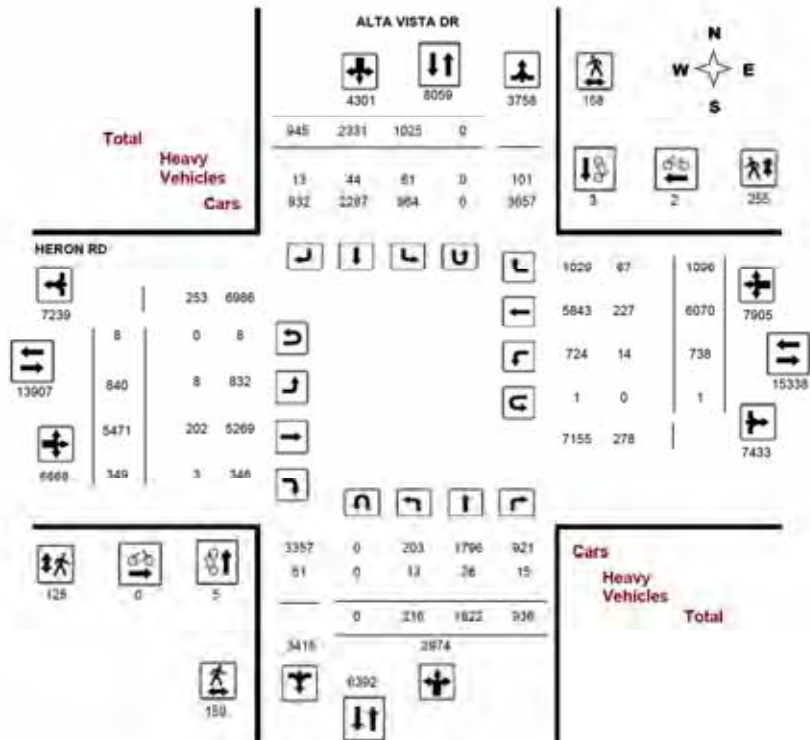


Transportation Services - Traffic Services
Turning Movement Count - Full Study Diagram

HERON RD @ ALTA VISTA DR

Survey Date: Tuesday, December 04, 2018

WO#: 38190
 Device: Movision



Comments:



Transportation Services - Traffic Services

Work Order
38190

Turning Movement Count - Full Study Summary Report

HERON RD @ ALTA VISTA DR

Survey Date: Tuesday, December 04, 2018

Total Observed U-Turns:

Northbound: 0 Southbound: 0
 Eastbound: 8 Westbound: 1

AAAD Factor

1.30

Period	ALTA VISTA DR								HERON RD								WB TOT	STR TOT	Grand Total
	Northbound				Southbound				Eastbound				Westbound						
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT			
07:00-08:00	15	245	40	306	89	128	116	333	643	107	545	36	688	58	934	151	1143	1831	2474
08:00-09:00	83	245	186	475	118	246	117	481	957	95	596	81	772	136	965	186	1287	2059	3016
09:00-10:00	11	183	77	271	111	229	138	476	747	101	496	32	629	84	668	128	880	1509	2256
11:30-12:30	20	225	110	356	123	306	103	532	887	83	544	54	691	80	515	104	699	1390	2277
12:30-13:30	19	194	120	333	111	263	89	463	796	107	532	25	664	71	517	121	709	1373	2169
15:00-16:00	48	270	157	475	185	408	138	711	1186	141	789	35	965	107	853	161	1121	2086	3272
16:00-17:00	21	230	154	385	157	413	139	709	1094	108	976	47	1131	104	860	135	1069	2230	3324
17:00-18:00	16	230	124	371	147	338	107	592	965	88	993	39	1120	98	758	110	966	2086	3051
Sub Total	216	1822	936	2974	1025	2331	945	4301	7275	840	5471	349	6660	738	6070	1096	7905	14573	21848
U Turns	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	9
Total	216	1822	936	2974	1025	2331	945	4301	7275	840	5471	349	6668	738	6070	1096	7905	14573	21848
EQ 12hr	300	2533	1301	4134	1425	3240	1314	5978	10112	1168	7805	485	9269	1026	8437	1523	10988	20257	30369
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													1.30						
AVG 12hr	390	3292	1691	5374	1852	4212	1708	7772	13146	1518	9886	631	12049	1334	10968	1980	14284	26333	39479
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													1.30						
AVG 24hr	511	4313	2216	7040	2426	5518	2237	10181	17221	1988	12951	828	15784	1747	14369	2594	18712	34496	51717
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													1.31						

Comments:

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



Turning Movement Count - 15 Minute Summary Report

HERON RD @ ALTA VISTA DR

Survey Date: Tuesday, December 04, 2018

Total Observed U-Turns

Northbound: 0 Southbound: 0
Eastbound: 8 Westbound: 1

ALTA VISTA DR

HERON RD

Time Period	Northbound			Southbound			Eastbound			Westbound			Grand Total						
	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT		E TOT	LT	ST	RT	W TOT	STR TOT
07:00 07:15	1	46	12	59	27	22	23	72	131	26	120	2	148	8	168	23	199	347	478
07:15 07:30	3	64	5	72	24	25	31	80	152	25	129	8	162	15	234	36	285	447	599
07:30 07:45	5	53	12	70	20	35	30	85	155	27	139	7	174	9	282	42	333	507	662
07:45 08:00	6	82	17	105	22	46	32	100	205	29	157	19	205	26	250	50	326	531	736
08:00 08:15	16	60	32	108	20	52	35	113	221	18	136	26	178	30	242	47	319	497	718
08:15 08:30	17	63	49	129	33	60	36	119	248	24	150	22	196	40	268	54	393	589	837
08:30 08:45	23	52	40	115	22	62	26	110	225	27	145	19	192	35	210	40	285	477	702
08:45 09:00	7	70	47	124	37	72	30	139	263	28	165	14	208	31	215	45	291	499	762
09:00 09:15	3	53	25	81	34	60	35	129	210	23	137	8	160	19	152	30	201	369	579
09:15 09:30	2	37	22	61	36	46	34	116	177	26	113	3	142	22	167	33	222	364	541
09:30 09:45	2	45	17	64	23	57	38	118	182	26	132	10	168	23	159	36	218	386	568
09:45 10:00	4	48	13	65	18	66	29	113	178	26	114	11	151	20	190	29	239	390	568
11:30 11:45	5	56	29	90	27	79	28	134	224	24	143	12	179	15	139	23	177	356	580
11:45 12:00	9	55	24	88	37	69	23	129	217	25	125	13	163	25	126	25	176	339	556
12:00 12:15	3	57	27	87	24	77	29	130	217	20	136	14	171	18	126	30	174	345	562
12:15 12:30	3	57	30	90	35	81	23	139	229	24	140	15	179	22	124	26	172	351	580
12:30 12:45	5	55	34	94	30	73	28	131	225	27	123	4	156	22	120	37	179	335	560
12:45 13:00	5	52	27	84	26	68	21	115	199	29	139	7	175	14	149	34	197	372	571
13:00 13:15	8	35	30	73	22	62	20	104	177	27	127	10	164	19	138	21	178	342	519
13:15 13:30	1	52	29	82	33	60	20	113	195	24	143	4	171	16	110	29	155	326	521
15:00 15:15	16	99	49	164	34	92	46	172	336	24	168	10	200	29	190	37	265	465	801
15:15 15:30	21	67	57	145	37	102	38	177	322	39	181	8	228	31	178	48	257	485	807
15:30 15:45	5	55	23	83	41	92	32	165	248	37	219	9	265	25	252	32	309	574	822
15:45 16:00	6	49	28	83	53	122	22	197	280	41	223	8	272	22	224	44	290	562	842
16:00 16:15	5	49	29	83	37	106	41	184	267	28	229	15	272	39	233	38	310	582	849
16:15 16:30	5	55	38	98	43	93	43	179	277	33	257	7	297	21	219	38	278	575	852
16:30 16:45	6	67	34	97	34	117	25	176	273	17	246	11	276	17	209	24	250	526	799
16:45 17:00	5	59	43	107	43	97	30	170	277	30	244	14	288	27	199	35	261	549	826
17:00 17:15	7	60	33	100	46	83	17	146	246	32	262	11	325	26	192	28	246	571	817
17:15 17:30	6	58	40	104	29	97	33	159	263	24	267	11	302	25	222	27	274	576	839
17:30 17:45	4	51	22	77	38	77	29	144	221	16	253	10	279	28	188	23	239	518	739
17:45 18:00	2	61	25	82	34	81	28	143	235	16	161	7	214	19	156	32	207	421	656
TOTAL	218	1622	936	2974	1025	2331	945	4301	7275	840	5471	348	6668	738	6070	1096	7905	14573	21848

Note: U-Turns are included in Totals.

Comment:



HERON RD @ ALTA VISTA DR

Count Date: Tuesday, December 04, 2018

Start Time: 07:00

Time Period	ALTA VISTA DR			HERON RD			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	
07:00 08:00	1	0	1	0	2	2	3
08:00 09:00	0	1	1	0	0	0	1
09:00 10:00	0	0	0	0	0	0	0
11:30 12:30	0	0	0	0	0	0	0
12:30 13:30	0	0	0	0	0	0	0
15:00 16:00	3	0	3	0	0	0	3
16:00 17:00	1	2	3	0	0	0	3
17:00 18:00	0	0	0	0	0	0	0
Total	5	3	8	0	2	2	10

Comment:

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



Transportation Services - Traffic Services

W.O.
38190

Turning Movement Count - Heavy Vehicle Report

HERON RD @ ALTA VISTA DR

Survey Date: Tuesday, December 04, 2018

Time Period	ALTA VISTA DR								HERON RD								Grand Total		
	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
07:00 08:00	0	1	2	3	4	1	0	5	8	1	14	0	15	2	35	16	53	68	76
08:00 09:00	5	4	5	14	7	6	0	13	27	1	31	1	33	3	53	12	66	101	128
09:00 10:00	1	4	0	5	6	12	3	21	26	2	22	0	24	1	34	6	41	65	81
11:30 12:30	1	3	1	5	8	3	2	13	18	0	30	0	30	3	23	8	34	64	82
12:30 13:30	1	3	1	5	4	7	3	14	19	0	22	0	22	2	23	5	30	52	71
15:00 16:00	4	7	3	14	11	7	0	18	32	3	29	0	32	2	27	11	40	72	104
16:00 17:00	1	2	2	5	9	6	2	17	22	1	36	1	38	1	21	4	26	64	86
17:00 18:00	0	2	1	3	12	2	3	17	20	0	18	1	19	0	11	5	16	35	55
Sub Total	13	26	15	54	61	44	13	118	172	5	202	3	213	14	227	67	308	521	693
U-Turns (Heavy Vehicles)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	13	26	15	54	61	44	13	118	172	5	202	3	213	14	227	67	308	521	693

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



Transportation Services - Traffic Services

Work Order
38190

Turning Movement Count - Pedestrian Volume Report

HERON RD @ ALTA VISTA DR

Count Date: Tuesday, December 04, 2018

Start Time: 07:00

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	0	2	2	1	0	1	3
07:15 07:30	2	4	11	2	3	5	16
07:30 07:45	4	7	11	1	4	5	16
07:45 08:00	18	7	25	3	16	19	44
07:00 08:00	24	20	49	7	23	30	79
08:00 08:15	6	22	28	4	36	42	70
08:15 08:30	20	14	34	4	24	28	62
08:30 08:45	8	12	20	9	16	25	45
08:45 09:00	2	6	8	4	32	36	45
08:00 09:00	37	54	91	21	110	131	222
09:00 09:15	0	2	2	3	7	10	12
09:15 09:30	3	1	4	6	3	9	13
09:30 09:45	3	1	4	0	0	0	4
09:45 10:00	4	1	5	7	3	10	15
09:00 10:00	10	5	15	16	13	29	44
11:30 11:45	4	4	8	7	3	10	18
11:45 12:00	4	1	5	3	1	4	9
12:00 12:15	2	5	7	0	1	1	8
12:15 12:30	8	2	8	6	4	10	18
11:30 12:30	16	12	28	16	6	25	53
12:30 12:45	2	1	3	0	0	0	3
12:45 13:00	5	0	5	0	0	0	5
13:00 13:15	7	4	11	3	3	6	17
13:15 13:30	3	1	4	3	4	7	11
12:30 13:30	17	6	23	6	7	13	36
13:00 13:15	7	12	20	4	16	20	40
13:15 13:30	10	8	18	15	24	39	55
13:30 13:45	4	3	7	11	5	16	23
13:45 14:00	5	8	13	8	13	21	34
13:00 14:00	29	30	56	36	38	66	122
14:00 14:15	2	4	6	4	5	9	15
14:15 14:30	4	5	9	6	3	9	18
14:30 14:45	5	0	13	1	7	8	21
14:45 15:00	1	4	5	2	4	6	11
14:00 15:00	12	21	33	13	19	32	65
15:00 15:15	7	3	10	3	7	10	20
15:15 15:30	1	4	5	1	3	4	9
15:30 15:45	3	2	5	3	4	7	12
15:45 16:00	1	1	2	1	2	3	5
15:00 16:00	12	10	22	8	16	24	46
Total	159	158	317	125	255	380	697

Comment:



Transportation Services - Traffic Services

Work Order
38190

Turning Movement Count - 15 Min U-Turn Total Report

HERON RD @ ALTA VISTA DR

Survey Date: Tuesday, December 04, 2018

Time Period	Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00 - 07:15	0	0	0	0	0
07:15 - 07:30	0	0	0	0	0
07:30 - 07:45	0	0	1	0	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	1	1
08:30 - 08:45	0	0	1	0	1
08:45 - 09:00	0	0	1	0	1
09:00 - 09:15	0	0	0	0	0
09:15 - 09:30	0	0	0	0	0
09:30 - 09:45	0	0	0	0	0
09:45 - 10:00	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0
12:00 - 12:15	0	0	1	0	1
12:15 - 12:30	0	0	0	0	0
12:30 - 12:45	0	0	2	0	2
12:45 - 13:00	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0
16:00 - 16:15	0	0	0	0	0
16:15 - 16:30	0	0	0	0	0
16:30 - 16:45	0	0	2	0	2
16:45 - 17:00	0	0	0	0	0
17:00 - 17:15	0	0	0	0	0
17:15 - 17:30	0	0	0	0	0
17:30 - 17:45	0	0	0	0	0
17:45 - 18:00	0	0	0	0	0
Total	0	0	8	1	9



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

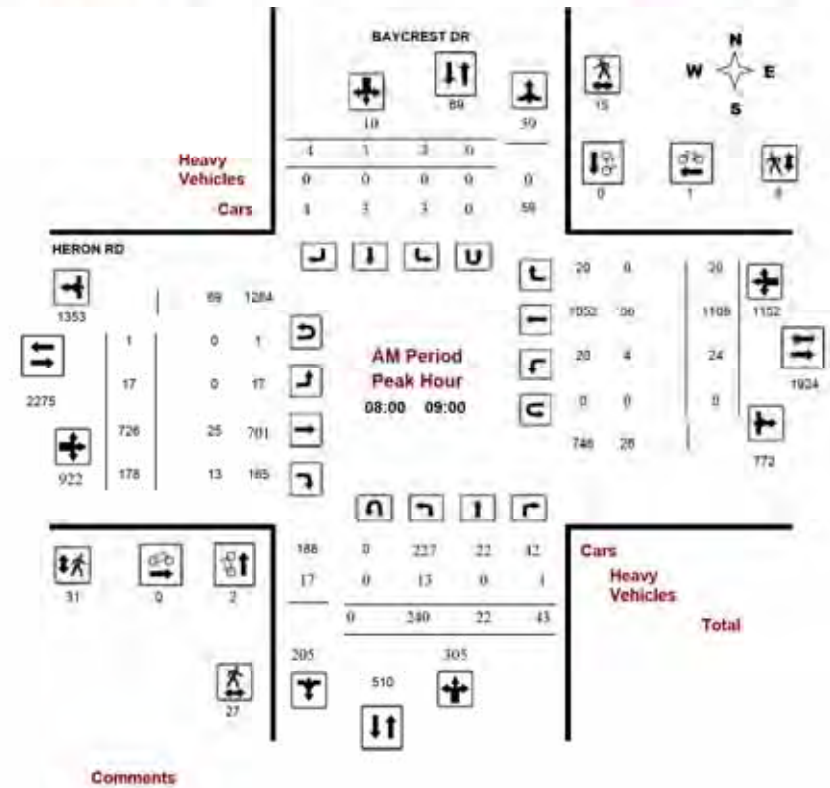
HERON RD @ BAYCREST DR

Survey Date: Wednesday, November 16, 2016

Start Time: 07:00

WO No: 36544

Devices: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

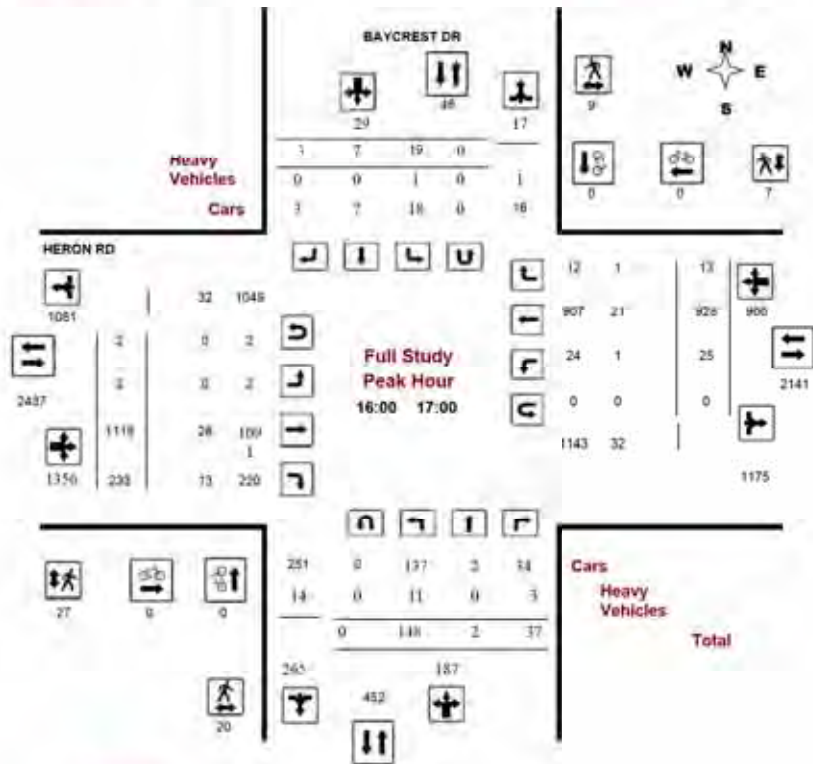
HERON RD @ BAYCREST DR

Survey Date: Wednesday, November 16, 2016

Start Time: 07:00

WO No: 36544

Device: Miovision



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

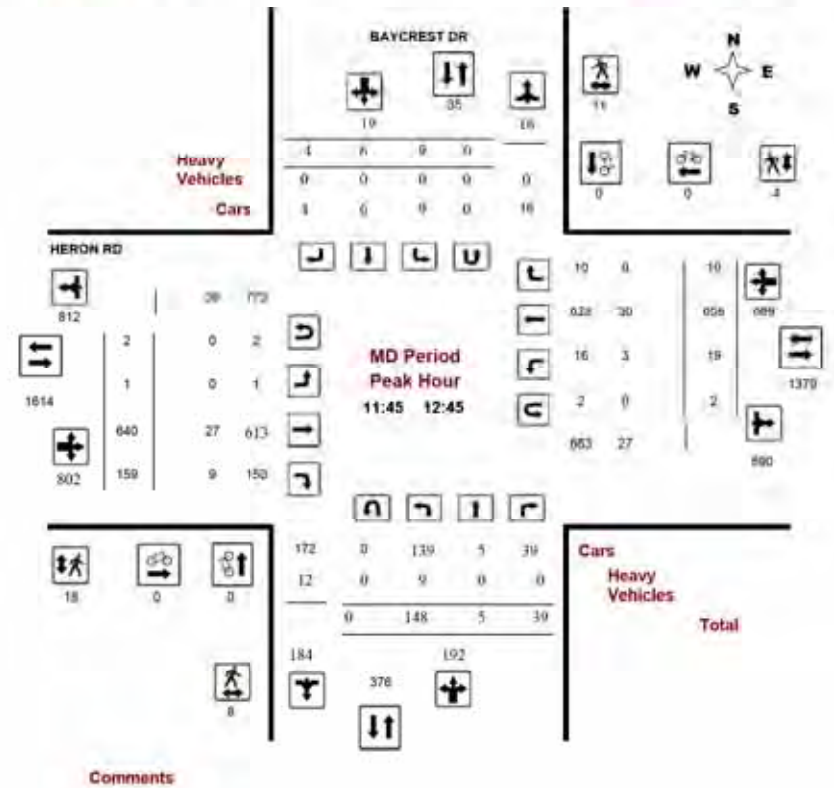
HERON RD @ BAYCREST DR

Survey Date: Wednesday, November 16, 2016

Start Time: 07:00

WO No: 36544

Device: Miovision

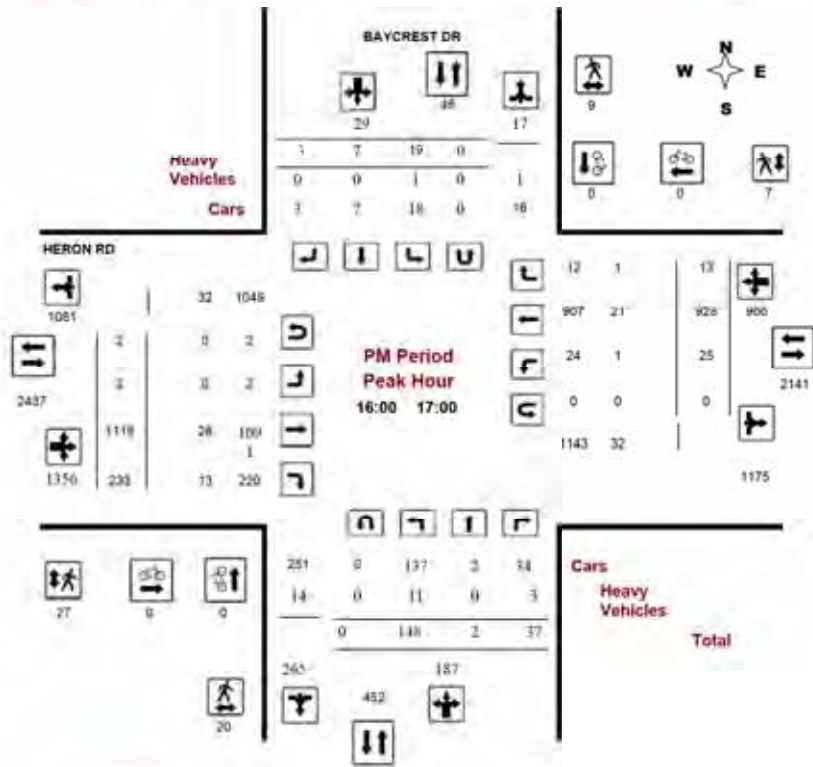




Transportation Services - Traffic Services
Turning Movement Count - Peak Hour Diagram
HERON RD @ BAYCREST DR

Survey Date: Wednesday, November 16, 2016
 Start Time: 07:00

WO No: 36544
 Device: Miovision



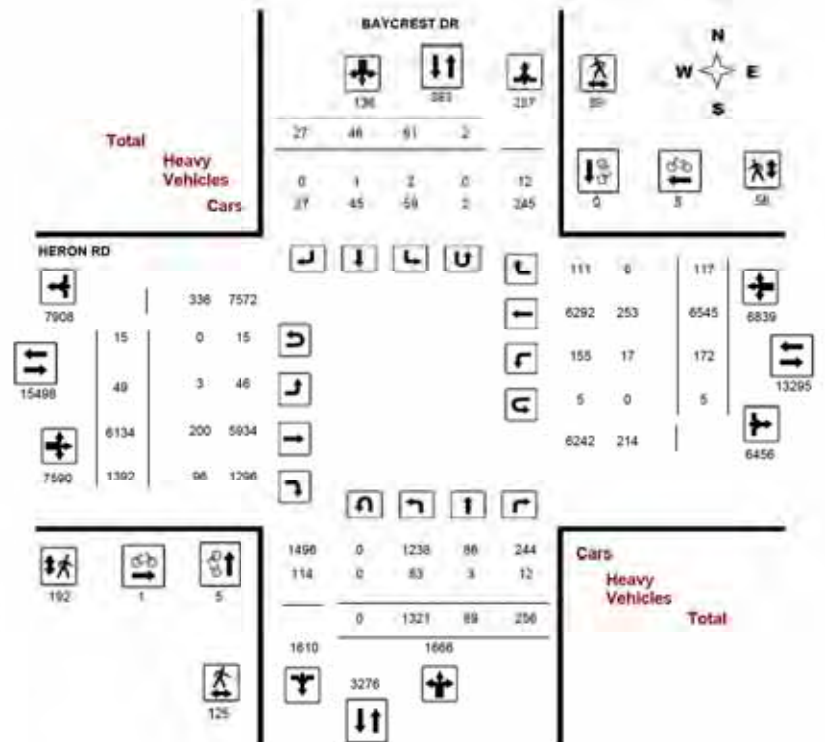
Comments



Transportation Services - Traffic Services
Turning Movement Count - Full Study Diagram
HERON RD @ BAYCREST DR

Survey Date: Wednesday, November 16, 2016

WO#: 36544
 Device: Miovision



Comments



Transportation Services - Traffic Services

Work Order
36544

Turning Movement Count - Full Study Summary Report

HERON RD @ BAYCREST DR

Survey Date: Wednesday, November 16, 2016

Total Observed U-Turns

AADT Factor

Northbound: 0 Southbound: 1
Eastbound: 15 Westbound: 3 (9)

Full Study

Period	BAYCREST DR								HERON RD								Grand Total		
	Northbound				Southbound				Eastbound				Westbound						
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT		WB TOT	STR TOT
07:00-08:00	178	24	14	216	13	12	6	31	247	5	597	95	697	16	984	31	1031	1728	1975
08:00-09:00	240	22	43	305	3	3	4	10	315	17	728	178	921	24	1108	20	1152	2073	2388
09:00-10:00	189	27	28	244	2	8	6	16	233	9	931	128	666	19	949	27	692	1308	1581
11:30-12:30	130	4	39	173	10	13	6	29	202	2	640	150	792	18	669	9	696	1488	1690
12:30-13:30	138	2	12	152	2	2	1	5	157	0	568	159	727	18	608	9	635	1362	1519
15:00-16:00	151	7	40	198	11	4	0	15	213	10	986	241	1237	36	837	7	880	2117	2330
16:00-17:00	148	2	37	187	19	7	3	29	216	2	1119	233	1354	25	928	13	966	2320	2536
17:00-18:00	187	1	48	236	1	0	2	3	217	4	967	210	1181	19	782	1	782	1963	2180
Sub Total	1321	89	256	1666	61	46	27	134	1800	49	6134	1392	7575	172	6545	117	6834	14409	16209
U-Turns				0				2	2				15				5	20	22
Total	1321	89	256	1666	61	46	27	136	1802	49	6134	1392	7590	172	6545	117	6839	14429	16231

EQ 12hr 1838 124 356 2316 85 64 38 189 2505 66 8526 1935 16550 239 9098 163 9506 20056 22561
Note: These values are calculated by multiplying the totals by the appropriate expansion factor. 1.39

AVG 12hr 1653 111 320 2084 76 58 34 179 2254 61 7674 1741 9495 215 8188 146 8556 18051 20305
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor. .90

AVG 24hr 2185 148 420 2739 100 75 44 223 2953 80 10952 2281 12439 282 10728 192 11208 23647 26680
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 1.2 to 24 expansion factor. 1.31

Comments:

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



Transportation Services - Traffic Services

W.O. 36544

Turning Movement Count - 15 Minute Summary Report

HERON RD @ BAYCREST DR

Survey Date: Wednesday, November 16, 2016

Total Observed U-Turns

Northbound: 0 Southbound: 2
Eastbound: 15 Westbound: 5

Time Period	BAYCREST DR								HERON RD								Grand Total		
	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
07:00-07:15	34	3	4	41	2	1	0	3	44	0	91	23	114	6	196	2	204	318	362
07:15-07:30	48	4	4	56	0	1	1	2	58	0	141	25	166	4	219	5	228	394	452
07:30-07:45	58	10	3	71	1	5	2	8	79	2	174	23	199	3	270	11	284	483	562
07:45-08:00	38	7	3	48	10	5	3	18	66	3	191	24	218	3	299	13	315	533	599
08:00-08:15	63	1	12	76	0	0	1	1	77	0	171	31	202	5	288	1	294	496	573
08:15-08:30	75	1	5	81	1	0	0	1	82	5	174	52	232	3	260	2	265	527	609
08:30-08:45	59	9	15	83	1	1	2	4	87	3	170	41	214	8	252	5	265	479	566
08:45-09:00	43	11	11	65	1	2	1	4	69	9	211	54	274	8	278	12	298	572	641
09:00-09:15	45	15	5	65	1	3	2	6	71	7	165	35	207	9	194	15	218	425	496
09:15-09:30	36	10	8	54	1	1	3	5	59	0	138	37	175	3	155	4	162	337	396
09:30-09:45	47	2	7	56	0	1	0	1	57	1	120	25	147	1	167	2	170	317	374
09:45-10:00	41	0	5	46	0	0	0	0	46	1	108	29	138	3	133	6	143	281	327
11:30-11:45	28	1	9	38	2	8	2	12	50	1	156	28	186	5	162	2	169	355	405
11:45-12:00	37	2	10	49	7	4	2	13	62	0	153	44	198	6	150	1	157	355	417
12:00-12:15	24	1	8	33	0	1	2	3	36	0	160	39	199	4	175	2	181	380	416
12:15-12:30	41	0	12	53	1	0	0	1	54	1	171	39	212	3	182	4	190	402	456
12:30-12:45	46	2	9	57	1	1	0	2	59	0	156	37	193	6	151	3	161	354	413
12:45-13:00	30	0	2	32	1	0	0	1	33	0	148	35	184	6	160	3	169	353	386
13:00-13:15	30	0	0	30	0	1	1	2	32	0	134	36	170	2	179	1	182	352	384
13:15-13:30	32	0	1	33	0	0	0	0	33	0	130	51	184	4	118	2	124	308	341
15:00-15:15	42	1	5	48	1	0	0	1	49	2	224	50	276	9	204	2	215	491	540
15:15-15:30	30	2	13	45	3	1	0	4	49	3	250	69	322	4	184	0	188	510	559
15:30-15:45	35	2	8	45	2	1	0	3	48	4	236	63	304	12	233	3	248	562	606
15:45-16:00	44	2	14	60	5	2	0	7	67	1	276	59	336	11	216	2	230	566	633
16:00-16:15	45	1	5	51	5	4	0	9	60	0	288	59	347	9	257	6	272	619	679
16:15-16:30	46	0	9	55	4	0	0	4	59	1	276	55	332	5	200	3	208	540	599
16:30-16:45	24	1	11	36	0	0	0	0	36	1	282	54	339	5	229	0	234	573	609
16:45-17:00	33	0	12	45	10	3	3	16	61	0	273	65	338	6	242	4	252	590	651
17:00-17:15	30	0	10	40	1	0	0	2	42	1	257	55	314	4	231	0	235	548	591
17:15-17:30	50	0	14	64	0	0	1	2	66	0	261	53	314	5	204	1	210	524	590
17:30-17:45	55	0	13	68	0	0	0	0	68	1	234	60	296	6	177	0	184	480	548
17:45-18:00	32	1	9	42	0	0	1	1	43	2	215	42	260	4	150	0	154	414	457
TOTAL:	1321	89	256	1666	61	46	27	136	1802	49	6134	1392	7590	172	6545	117	6839	14429	16231

Note: U-Turns are included in Totals.

Comment:



Transportation Services - Traffic Services
Turning Movement Count - Cyclist Volume Report

Work Order
36544

HERON RD @ BAYCREST DR

Count Date: Wednesday, November 16, 2016

Start Time: 07:00

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

Comment:



Transportation Services - Traffic Services
Turning Movement Count - Heavy Vehicle Report

W.O.
36544

HERON RD @ BAYCREST DR

Survey Date: Wednesday, November 16, 2016

Time Period	BAYCREST DR							HERON RD							W TOT	STR TOT	Grand Total			
	Northbound			N TOT	Southbound			S TOT	Eastbound			E TOT	Westbound							
	LT	ST	RT		LT	ST	RT		LT	ST	RT		LT	ST				RT		
07:00 08:00	8	3	0	11	1	1	0	2	13	1	8	11	20	5	51	4	60	80	93	
08:00 09:00	13	0	1	14	0	0	0	0	14	0	25	13	38	4	56	0	60	98	112	
09:00 10:00	13	0	1	14	0	0	0	0	14	1	25	11	37	1	32	1	34	71	85	
11:30 12:30	5	0	0	5	0	0	0	0	5	0	25	7	32	2	28	0	30	62	67	
12:30 13:30	14	0	0	14	0	0	0	0	14	0	30	14	44	1	24	0	25	69	83	
15:00 16:00	9	0	4	13	0	0	0	0	13	1	30	15	46	3	30	0	33	79	92	
16:00 17:00	11	0	3	14	1	0	0	1	15	0	28	13	41	1	21	1	23	64	79	
17:00 18:00	10	0	3	13	0	0	0	0	13	0	29	12	41	0	11	0	11	52	65	
Sub Total	83	3	12	98	2	1	0	3	101	3	200	96	299	17	253	6	276	575	676	
U-Turns (Heavy Vehicles)				0				0				0				0				0
Total	83	3	12	98	2	1	0	3	101	3	200	96	299	17	253	6	276	575	676	

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

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



Transportation Services - Traffic Services

Work Order
36544

Turning Movement Count - Pedestrian Volume Report

HERON RD @ BAYCREST DR

Count Date: Wednesday, November 16, 2016

Start Time: 07:00

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	2	0	2	1	0	1	3
07:15 07:30	2	2	4	3	2	5	9
07:30 07:45	2	4	6	6	3	9	15
07:45 08:00	3	0	3	15	1	16	19
07:00 08:00	9	6	15	25	6	31	46
08:00 08:15	2	3	5	2	0	2	7
08:15 08:30	7	3	10	3	0	3	13
08:30 08:45	4	4	8	14	4	18	26
08:45 09:00	14	5	19	12	4	16	35
08:00 09:00	27	15	42	31	8	39	81
09:00 09:15	14	3	17	15	0	15	32
09:15 09:30	3	3	6	4	3	7	13
09:30 09:45	1	2	3	4	2	6	9
09:45 10:00	0	3	3	2	1	3	6
09:00 10:00	18	11	29	25	6	31	60
11:30 11:45	2	5	7	19	3	22	29
11:45 12:00	1	3	4	9	1	10	14
12:00 12:15	1	3	4	1	1	2	6
12:15 12:30	3	3	6	5	0	5	11
11:30 12:30	7	14	21	34	5	39	60
12:30 12:45	3	2	5	3	2	5	10
12:45 13:00	7	2	9	2	2	4	13
13:00 13:15	1	2	3	5	1	6	9
13:15 13:30	1	2	3	2	2	4	7
12:30 13:30	12	6	18	12	7	19	37
13:30 13:45	0	3	3	9	5	14	17
13:45 14:00	4	7	11	6	2	8	19
14:00 14:15	1	7	8	9	4	13	21
14:15 14:30	2	4	6	9	0	9	15
14:30 14:45	7	21	28	33	11	44	72
14:45 15:00	3	1	4	13	0	13	17
15:00 15:15	9	2	11	2	4	6	17
15:15 15:30	3	1	4	1	1	2	7
15:30 15:45	3	5	8	10	2	12	20
15:45 16:00	30	9	39	27	7	34	73
16:00 16:15	6	3	9	4	1	5	14
16:15 16:30	6	2	8	1	3	4	12
16:30 16:45	6	0	6	0	1	1	7
16:45 17:00	5	0	5	0	1	1	6
17:00 17:15	25	5	30	5	6	11	41
17:15 17:30	6	3	9	4	1	5	14
17:30 17:45	6	0	6	0	1	1	7
17:45 18:00	5	0	5	0	1	1	6
17:00 18:00	25	5	30	5	6	11	41
Total	125	88	214	182	56	248	462

Comment:



Transportation Services - Traffic Services

Work Order
36544

Turning Movement Count - 15 Min U-Turn Total Report

HERON RD @ BAYCREST DR

Survey Date: Wednesday, November 16, 2016

Time Period	Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00 07:15	0	0	0	0	0
07:15 07:30	0	0	0	0	0
07:30 07:45	0	0	0	0	0
07:45 08:00	0	0	0	0	0
08:00 08:15	0	0	0	0	0
08:15 08:30	0	0	1	0	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
09:15 09:30	0	0	0	0	0
09:30 09:45	0	0	1	0	1
09:45 10:00	0	0	0	1	1
11:30 11:45	0	0	1	0	1
11:45 12:00	0	0	1	0	1
12:00 12:15	0	0	0	0	0
12:15 12:30	0	0	1	1	2
12:30 12:45	0	0	0	1	1
12:45 13:00	0	0	1	0	1
13:00 13:15	0	0	0	0	0
13:15 13:30	0	0	3	0	3
15:00 15:15	0	0	0	0	0
15:15 15:30	0	0	0	0	0
15:30 15:45	0	0	1	0	1
15:45 16:00	0	0	0	1	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	2	0	2
16:45 17:00	0	0	0	0	0
17:00 17:15	0	1	1	0	2
17:15 17:30	0	1	0	0	1
17:30 17:45	0	0	1	1	2
17:45 18:00	0	0	1	0	1
Total	0	2	15	5	22



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

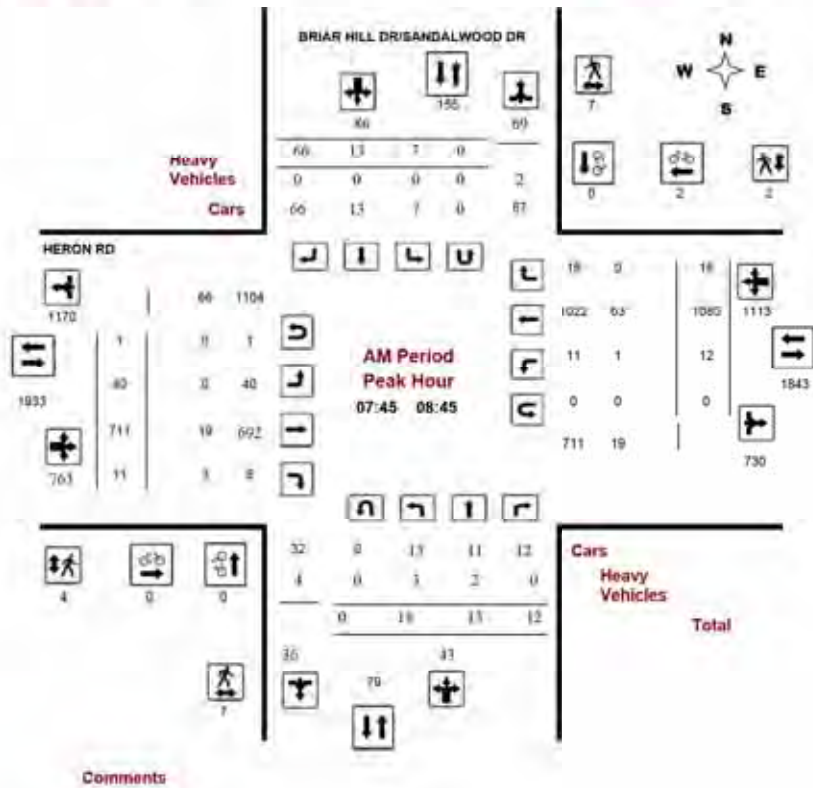
HERON RD @ BRIAR HILL DR/SANDALWOOD DR

Survey Date: Wednesday, November 16, 2016

Start Time: 07:00

WO No: 36492

Device: Miovision



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

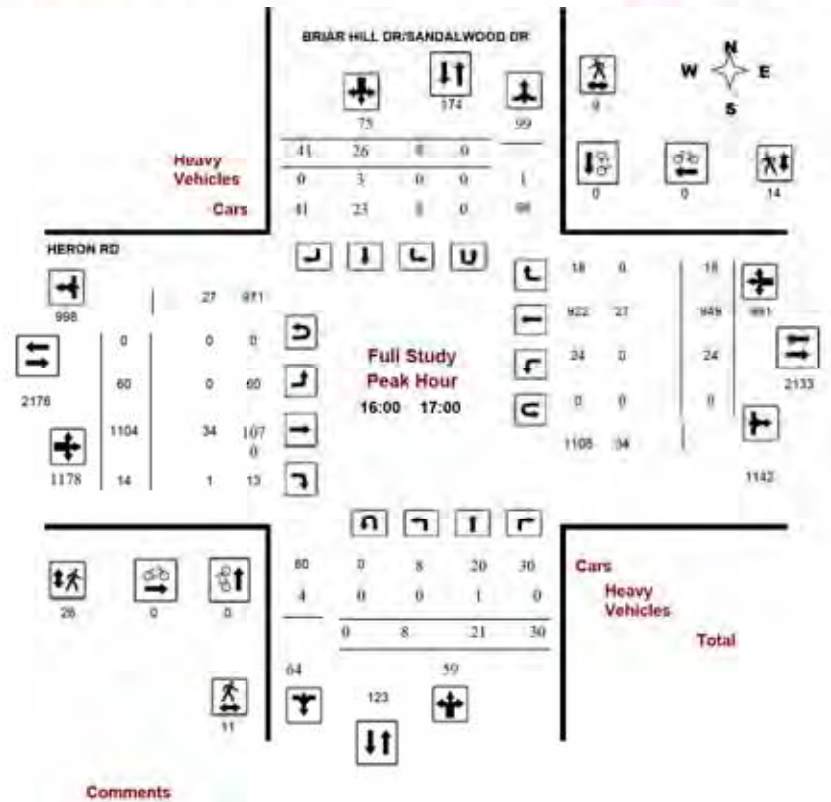
HERON RD @ BRIAR HILL DR/SANDALWOOD DR

Survey Date: Wednesday, November 16, 2016

Start Time: 07:00

WO No: 36492

Device: Miovision



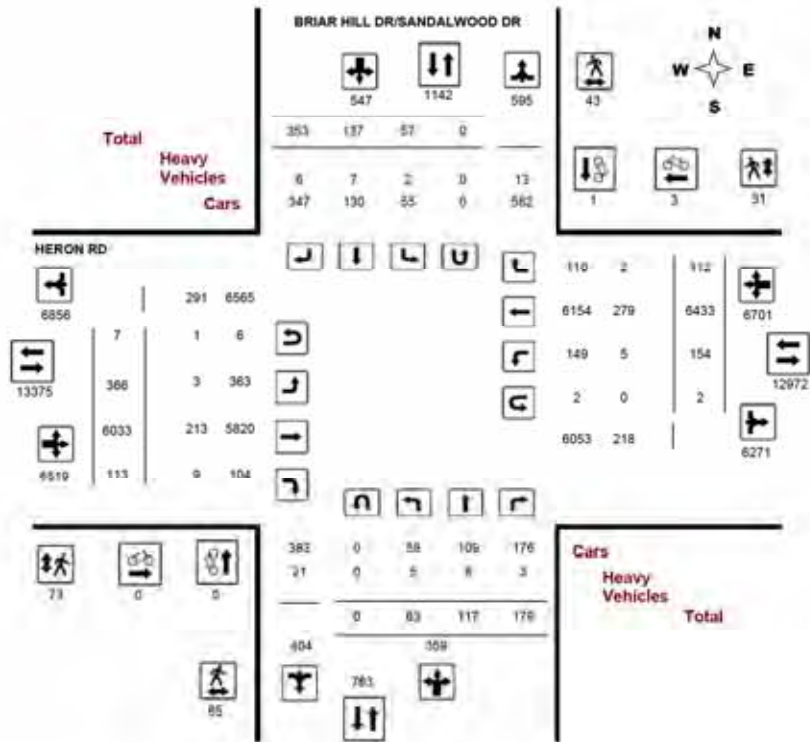


Transportation Services - Traffic Services
Turning Movement Count - Full Study Diagram

HERON RD @ BRIAR HILL DR/SANDALWOOD DR

Survey Date: Wednesday, November 16, 2016

WO#: 36492
 Device: Movision



Comments:



Transportation Services - Traffic Services

Work Order
36492

Turning Movement Count - Full Study Summary Report

HERON RD @ BRIAR HILL DR/SANDALWOOD DR

Survey Date: Wednesday, November 15, 2016

Total Observed U-Turns:

AADT Factor:

Northbound: (0) Southbound: (1) (0)
 Eastbound: (7) Westbound: (2)

Full Study

Period	BRIAR HILL DR/SANDALWOOD DR					HERON RD					Grand Total								
	LT	ST	RT	NB TOT	STR TOT	LT	ST	RT	SB TOT	STR TOT		LT	ST	RT	WB TOT	STR TOT			
07:00-08:00	8	1	13	25	8	5	51	64	93	19	592	7	618	8	946	9	963	1581	1674
08:00-09:00	15	19	18	52	8	17	63	86	136	43	891	12	746	18	1069	13	1088	1844	1980
09:00-10:00	9	14	26	48	8	21	47	76	121	39	613	12	594	18	888	9	713	1307	1428
11:00-12:00	9	12	18	39	8	15	27	48	87	38	841	15	692	14	850	12	676	1368	1455
12:30-13:30	9	12	21	42	8	11	40	57	99	42	562	12	616	20	548	13	579	1195	1294
15:00-16:00	4	17	34	55	8	25	50	83	138	50	925	24	999	23	806	19	848	1847	1985
16:00-17:00	8	21	30	59	8	26	41	75	134	60	1104	14	1178	24	949	18	991	2169	2303
17:00-18:00	4	15	21	40	2	17	34	58	98	77	975	17	1069	31	781	19	831	1900	1990
Sub Total	63	117	179	359	57	137	353	547	996	366	6033	113	6512	154	8433	112	6689	13211	14117
U-Turns	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	2	9	9	9
Total	63	117	179	359	57	137	353	547	996	366	6033	113	6519	154	8433	112	6791	13220	14126
EQ 12hr	88	163	249	499	79	190	491	760	1259	509	8388	157	9061	214	8942	156	9314	18375	19634
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													1.39						
AVG 12hr	79	148	224	449	71	171	442	684	1133	458	7547	141	8155	193	8048	140	8383	16338	17671
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													.90						
AVG 24hr	103	192	293	589	93	225	578	896	1484	600	8887	185	10683	252	10542	184	10962	21665	23149
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													1.31						

Comments:

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



Transportation Services - Traffic Services W.O. 36492

Turning Movement Count - 15 Minute Summary Report

HERON RD @ BRIAR HILL DR/SANDALWOOD DR

Survey Date: Wednesday, November 16, 2016

Total Observed U-Turns

Northbound: 0 Southbound: 0
Eastbound: 7 Westbound: 1

BRIAR HILL DR/SANDALWOOD DR

HERON RD

Time Period	Northbound			Southbound			Eastbound			Westbound			Grand Total						
	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT		E TOT	LT	ST	RT	W TOT	STR TOT
07:00 07:15	1	0	4	5	0	0	7	7	12	2	108	1	111	3	191	1	195	306	318
07:15 07:30	1	0	3	4	4	0	10	14	18	2	130	2	134	1	216	3	220	354	372
07:30 07:45	2	2	4	8	1	1	13	15	23	6	163	1	170	3	275	0	278	448	471
07:45 08:00	5	5	2	12	3	4	21	28	40	9	191	3	203	1	264	5	270	473	513
08:00 08:15	3	3	5	11	0	4	24	28	39	4	177	5	186	3	281	4	288	474	513
08:15 08:30	5	1	3	9	2	1	11	14	23	10	162	1	174	5	284	4	293	467	490
08:30 08:45	5	4	2	11	2	4	10	16	27	17	181	2	200	3	256	3	262	462	489
08:45 09:00	2	11	6	19	2	8	18	28	47	12	171	4	188	5	248	2	255	443	490
09:00 09:15	1	8	15	24	0	10	16	26	50	15	181	4	200	5	220	4	229	429	479
09:15 09:30	0	3	5	8	4	7	14	25	33	15	130	5	151	7	160	0	167	318	351
09:30 09:45	2	1	5	8	1	2	11	14	22	4	129	1	135	2	188	3	193	308	330
09:45 10:00	3	2	0	5	3	2	8	11	16	5	103	2	110	4	138	2	144	254	270
11:30 11:45	2	1	3	6	1	0	7	8	14	10	158	3	173	5	156	1	162	335	349
11:45 12:00	2	2	6	10	3	6	4	13	23	8	154	4	166	1	154	4	159	325	348
12:00 12:15	4	6	5	15	1	5	7	13	28	9	159	6	174	4	176	5	186	360	388
12:15 12:30	0	3	5	8	1	4	9	14	22	9	170	2	181	4	164	2	170	351	373
12:30 12:45	0	2	9	11	1	1	14	16	27	11	183	6	180	4	147	2	153	333	360
12:45 13:00	2	1	3	6	1	3	10	14	20	10	142	4	157	6	148	5	159	316	336
13:00 13:15	4	7	4	15	0	4	5	9	24	13	114	0	127	5	133	2	140	267	291
13:15 13:30	3	2	5	10	4	3	11	18	28	8	143	2	153	5	118	4	127	280	308
15:00 15:15	0	7	9	16	2	0	7	9	25	8	218	4	228	2	191	7	200	428	453
15:15 15:30	1	4	6	11	1	3	10	14	25	10	236	8	254	4	187	2	193	447	472
15:30 15:45	1	3	9	13	1	5	15	21	34	17	212	5	234	11	203	8	222	456	490
15:45 16:00	2	3	10	15	4	17	18	39	54	15	261	7	283	6	225	2	233	516	570
16:00 16:15	0	6	7	13	2	11	16	29	42	9	286	4	299	7	264	0	271	570	612
16:15 16:30	2	5	6	13	1	5	10	16	29	14	266	1	281	6	213	6	225	506	535
16:30 16:45	4	2	7	13	4	3	6	13	26	9	281	6	296	6	223	7	236	532	558
16:45 17:00	2	8	10	20	1	7	9	17	37	28	271	3	302	5	249	5	259	561	598
17:00 17:15	1	6	5	12	2	5	5	12	24	22	274	6	302	10	245	5	260	562	586
17:15 17:30	2	1	3	6	0	3	9	12	18	20	264	6	290	11	202	4	217	507	525
17:30 17:45	1	3	6	10	4	8	12	24	34	21	220	3	244	6	172	7	186	430	464
17:45 18:00	0	5	7	12	1	1	8	10	22	14	217	2	233	4	162	3	169	402	424
TOTAL	63	117	178	358	57	137	350	547	896	866	8033	113	8519	154	6433	112	6701	13220	14126

Note: U-Turns are included in Totals.

Comment:



Transportation Services - Traffic Services
Turning Movement Count - Cyclist Volume Report

Work Order
36492

HERON RD @ BRIAR HILL DR/SANDALWOOD DR

Count Date: Wednesday, November 16, 2016

Start Time: 07:00

Time Period	BRIAR HILL DR/SANDALWOOD DR			HERON RD			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	
07:00 08:00	0	0	0	0	1	1	1
08:00 09:00	0	0	0	0	2	2	2
09:00 10:00	0	0	0	0	0	0	0
11:30 12:30	0	1	1	0	0	0	1
12:30 13:30	0	0	0	0	0	0	0
15:00 16:00	0	0	0	0	0	0	0
16:00 17:00	0	0	0	0	0	0	0
17:00 18:00	0	0	0	0	0	0	0
Total	0	1	1	0	3	3	4

Comment:

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



Transportation Services - Traffic Services

W.O.
36492

Turning Movement Count - Heavy Vehicle Report

HERON RD @ BRIAR HILL DR/SANDALWOOD DR

Survey Date: Wednesday, November 16, 2016

BRIAR HILL DR/SANDALWOOD DR										HERON RD										Grand Total
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		
07:00-08:00	0	0	0	0	0	0	0	1	1	1	0	9	1	10	1	64	0	65	75	76
08:00-09:00	3	5	1	9	0	0	1	1	10	0	19	3	22	1	55	1	60	62	82	
09:00-10:00	0	1	0	1	0	0	0	0	1	0	28	1	29	0	33	0	33	62	63	
11:30-12:30	0	0	1	1	0	0	1	1	2	0	26	1	28	0	26	0	28	58	58	
12:30-13:30	1	0	0	1	1	0	1	2	3	0	33	0	33	1	29	1	31	64	67	
15:00-16:00	1	1	0	2	1	4	2	7	9	3	35	2	40	2	28	0	30	70	79	
16:00-17:00	0	1	0	1	0	3	0	3	4	0	34	1	35	0	27	0	27	62	66	
17:00-18:00	0	0	1	1	0	0	0	0	1	0	29	0	29	0	12	0	12	41	42	
Sub Total	5	8	3	16	2	7	6	15	31	3	213	0	226	5	279	2	286	512	543	
U-Turns (Heavy Vehicles)	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	
Total	5	8	3	16	2	7	6	15	31	3	213	0	227	5	279	2	286	513	544	

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



Transportation Services - Traffic Services

Work Order
36492

Turning Movement Count - Pedestrian Volume Report

HERON RD @ BRIAR HILL DR/SANDALWOOD DR

Count Date: Wednesday, November 16, 2016

Start Time: 07:00

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00-07:15	0	2	2	0	0	0	2
07:15-07:30	0	2	2	0	0	0	2
07:30-07:45	0	2	2	1	0	1	3
07:45-08:00	2	1	3	0	0	0	3
07:00-08:00	2	7	9	1	0	1	10
08:00-08:15	1	1	2	0	1	1	3
08:15-08:30	0	3	3	1	0	1	4
08:30-08:45	4	2	6	3	1	4	10
08:45-09:00	1	0	1	10	3	13	14
08:00-09:00	5	5	12	14	5	19	31
09:00-09:15	0	1	1	3	3	6	13
09:15-09:30	1	5	6	1	0	1	7
09:30-09:45	1	1	2	0	0	0	2
09:45-10:00	5	0	5	4	0	4	9
09:00-10:00	13	7	20	8	3	11	31
11:30-11:45	6	0	6	0	0	0	6
11:45-12:00	1	0	1	3	1	4	5
12:00-12:15	0	1	1	1	1	2	3
12:15-12:30	2	0	2	0	0	0	2
11:30-12:30	9	1	10	4	2	6	16
12:30-12:45	1	0	1	0	0	0	1
12:45-13:00	3	2	5	0	1	1	6
13:00-13:15	0	0	0	1	0	1	1
13:15-13:30	0	1	1	0	0	0	1
12:30-13:30	4	3	7	1	1	2	9
13:00-13:15	0	3	3	0	2	2	5
13:15-13:30	3	2	5	1	0	1	6
13:30-13:45	2	2	4	1	2	3	7
13:45-14:00	1	2	3	0	0	0	3
13:00-14:00	5	9	15	10	4	14	29
14:00-14:15	5	2	7	21	12	33	40
14:15-14:30	4	2	6	5	2	7	13
14:30-14:45	0	1	1	0	0	0	1
14:45-15:00	2	4	6	0	0	0	6
14:00-15:00	11	9	20	26	14	40	60
15:00-15:15	3	1	4	3	1	4	8
15:15-15:30	3	0	3	1	0	1	4
15:30-15:45	7	0	7	4	1	5	12
15:45-16:00	1	0	1	1	0	1	2
15:00-16:00	14	1	15	8	2	11	26
Total	65	43	108	73	31	104	212

Comment:



Transportation Services - Traffic Services

Work Order
36492

Turning Movement Count - 15 Min U-Turn Total Report

HERON RD @ BRIAR HILL DR/SANDALWOOD DR

Survey Date: Wednesday, November 16, 2016

Time Period	Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00 - 07:15	0	0	0	0	0
07:15 - 07:30	0	0	0	0	0
07:30 - 07:45	0	0	0	0	0
07:45 - 08:00	0	0	0	0	0
08:00 - 08:15	0	0	0	0	0
08:15 - 08:30	0	0	1	0	1
08:30 - 08:45	0	0	0	0	0
08:45 - 09:00	0	0	1	0	1
09:00 - 09:15	0	0	0	0	0
09:15 - 09:30	0	0	1	0	1
09:30 - 09:45	0	0	1	0	1
09:45 - 10:00	0	0	0	0	0
11:30 - 11:45	0	0	2	0	2
11:45 - 12:00	0	0	0	0	0
12:00 - 12:15	0	0	0	1	1
12:15 - 12:30	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0
12:45 - 13:00	0	0	1	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	0	0	0	0
15:30 - 15:45	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0
16:00 - 16:15	0	0	0	0	0
16:15 - 16:30	0	0	0	0	0
16:30 - 16:45	0	0	0	0	0
16:45 - 17:00	0	0	0	0	0
17:00 - 17:15	0	0	0	0	0
17:15 - 17:30	0	0	0	0	0
17:30 - 17:45	0	0	0	1	1
17:45 - 18:00	0	0	0	0	0
Total	0	0	7	2	9



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

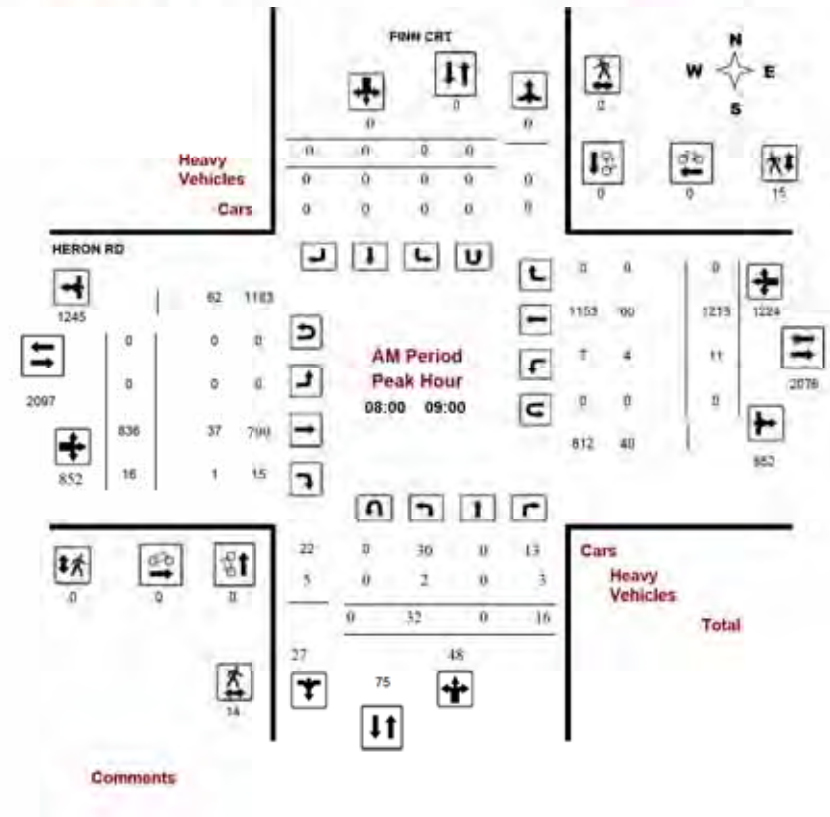
HERON RD @ FINN CRT

Survey Date: Thursday, February 07, 2019

Start Time: 07:00

WO No: 38309

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

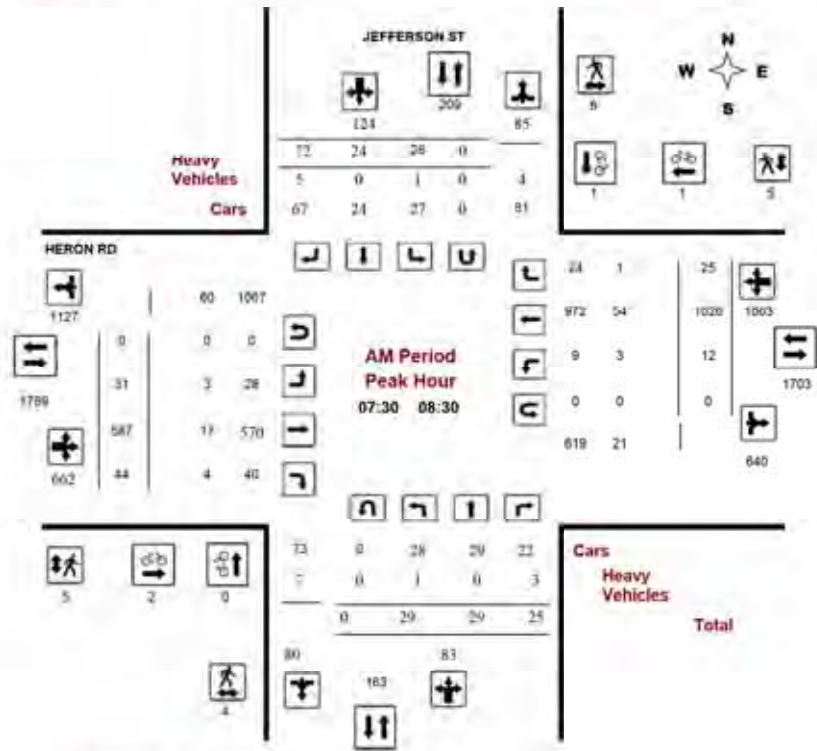
HERON RD @ JEFFERSON ST

Survey Date: Thursday, November 17, 2016

Start Time: 07:00

WO No: 36494

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

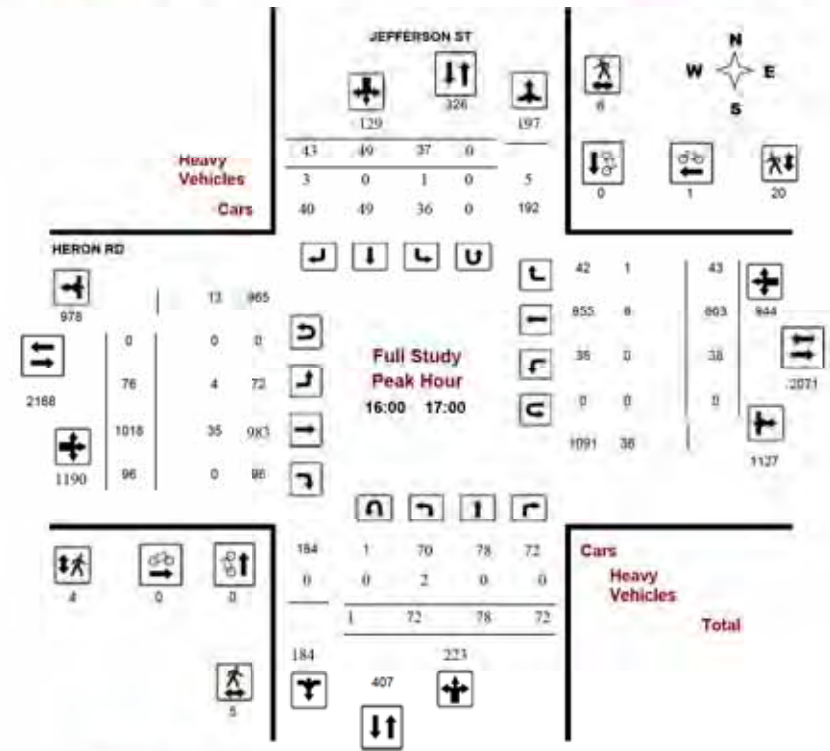
HERON RD @ JEFFERSON ST

Survey Date: Thursday, November 17, 2016

Start Time: 07:00

WO No: 36494

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

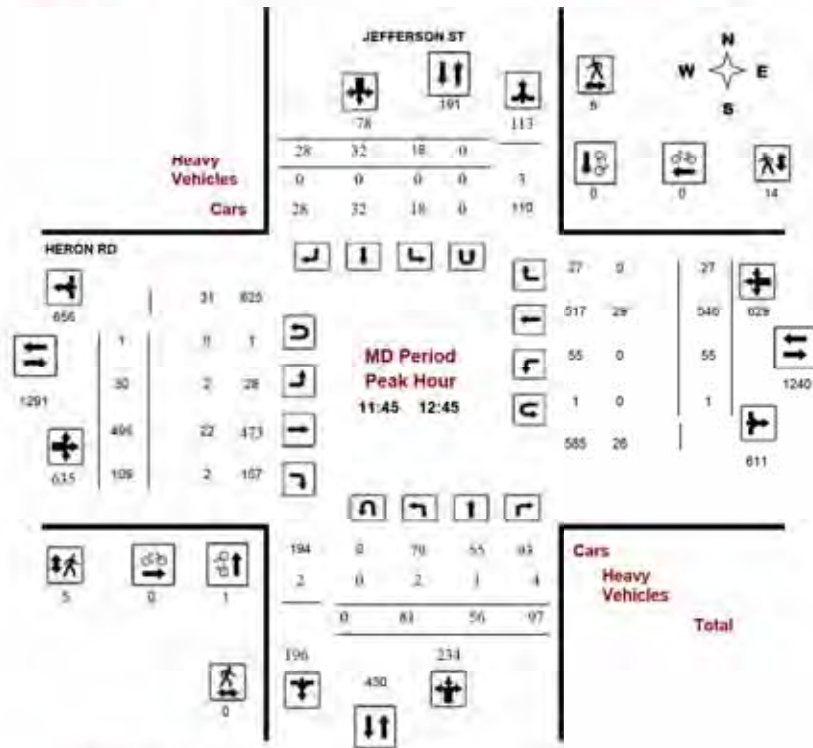
HERON RD @ JEFFERSON ST

Survey Date: Thursday, November 17, 2016

Start Time: 07:00

WO No: 36494

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

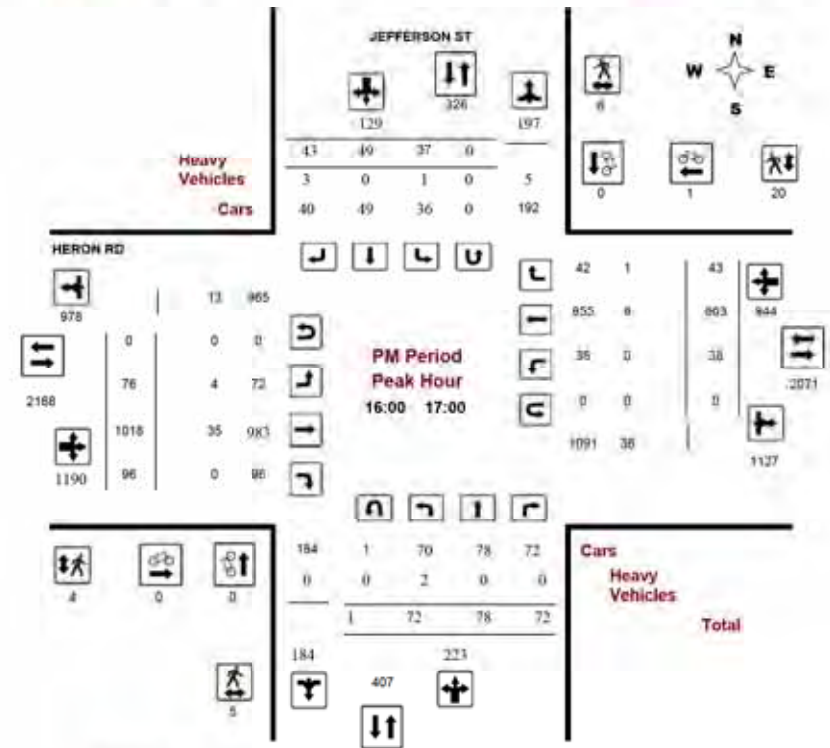
HERON RD @ JEFFERSON ST

Survey Date: Thursday, November 17, 2016

Start Time: 07:00

WO No: 36494

Device: Miovision



Comments

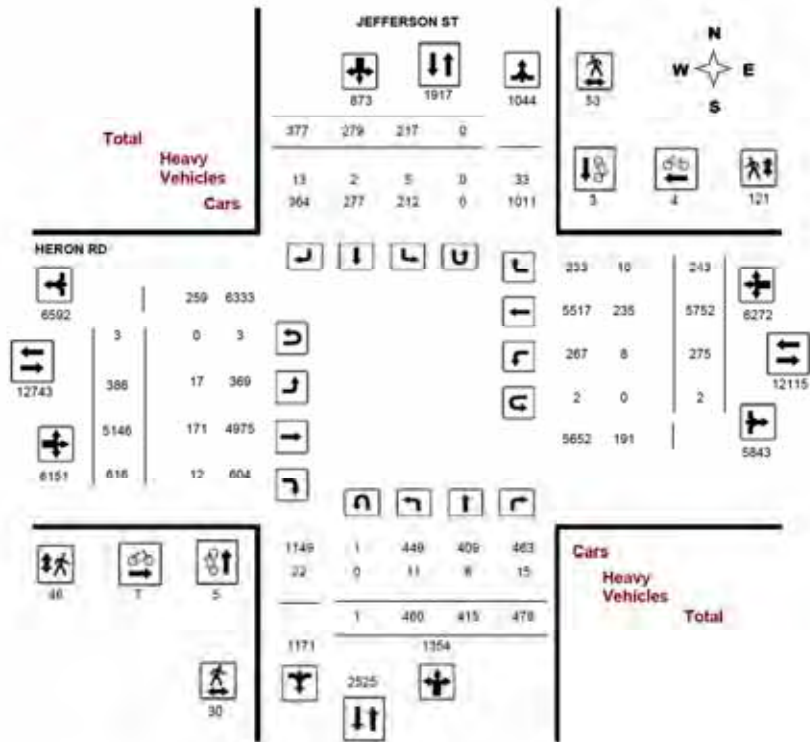


Transportation Services - Traffic Services
Turning Movement Count - Full Study Diagram

HERON RD @ JEFFERSON ST

Survey Date: Thursday, November 17, 2016

WO#: 36494
 Device: Miovision



Comments:



Transportation Services - Traffic Services

Work Order
36494

Turning Movement Count - Full Study Summary Report

HERON RD @ JEFFERSON ST

Survey Date: Thursday, November 17, 2016

Total Observed U-Turns

AADT Factor

Northbound: 1 Southbound: 0
 Eastbound: 3 Westbound: 2
 00

Full Study

Period	JEFFERSON ST Northbound				JEFFERSON ST Southbound				HERON RD Eastbound				HERON RD Westbound				WB TOT	STR TOT	Grand Total
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT			
01:00-03:00	15	25	15	55	20	17	58	95	158	17	560	24	601	16	938	26	980	1581	1731
03:00-05:00	38	41	26	105	16	26	64	106	232	39	610	53	702	19	935	34	988	1698	1922
05:00-07:00	45	48	43	136	25	38	57	121	255	36	479	70	585	34	538	32	685	1190	1445
07:00-09:00	78	45	46	219	18	31	35	79	289	28	502	116	646	49	547	23	619	1265	1554
09:00-11:00	82	54	81	217	34	40	33	107	324	39	393	63	495	45	477	27	549	1044	1368
11:00-13:00	75	88	74	235	31	44	37	112	347	77	785	95	957	50	755	28	833	1790	2137
13:00-15:00	72	78	72	222	37	48	43	129	351	76	1018	96	1190	38	863	43	944	2134	2485
15:00-17:00	58	40	78	176	21	33	50	104	278	74	799	99	972	24	688	30	752	1724	2002
Sub Total	480	415	478	1354	217	279	377	873	2227	388	5146	618	6148	275	5752	243	6272	12423	14644
U Turns	1	0	1	2	0	1	3	4	1	3	3	3	3	2	5	6	2	5	6
Total	480	415	478	1354	217	279	377	873	2227	388	5146	618	6151	275	5752	243	6272	12423	14650
EQ 12hr	639	577	664	1882	302	388	524	1213	3095	537	7153	856	8550	382	7995	338	8718	17268	20383
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													1.39						
AVG 12hr	575	519	588	1694	271	349	472	1092	2786	483	6438	771	7895	344	7198	304	7846	15541	18327
Note: These values are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													.90						
AVG 24hr	754	680	783	2219	358	457	618	1431	3650	633	8433	1010	10080	451	9428	398	10279	20359	24009
Note: These values are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													1.31						

Comments:

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



Turning Movement Count - 15 Minute Summary Report

HERON RD @ JEFFERSON ST

Survey Date: Thursday, November 17, 2016

Total Observed U-Turns

Northbound: 1 Southbound: 0
Eastbound: 3 Westbound: 1

Time Period	JEFFERSON ST										HERON RD										Grand Total
	Northbound					Southbound					Eastbound					Westbound					
	LT	ST	RT	N TOT	U-TURN	LT	ST	RT	S TOT	U-TURN	LT	ST	RT	E TOT	U-TURN	LT	ST	RT	W TOT	U-TURN	
07:00 07:15	1	4	1	6		4	1	11	16	22	1	118	1	120	6	188	3	195	315	337	
07:15 07:30	4	6	4	14		3	5	14	22	36	2	149	8	159	7	230	10	247	406	442	
07:30 07:45	7	6	6	19		8	2	14	24	43	5	154	4	163	3	263	7	273	436	479	
07:45 08:00	3	9	4	16		5	9	19	33	49	9	139	11	159	0	259	6	265	424	473	
08:00 08:15	10	6	4	20		8	6	22	36	56	8	155	16	179	3	240	7	250	429	485	
08:15 08:30	9	8	11	28		7	7	17	31	59	9	139	13	161	6	264	5	275	436	495	
08:30 08:45	9	13	5	27		8	4	13	25	52	10	157	10	177	4	231	13	248	425	477	
08:45 09:00	11	14	6	31		13	9	12	34	65	12	159	14	185	8	200	9	215	400	465	
09:00 09:15	12	16	9	37		8	12	20	40	77	14	131	14	159	9	150	10	169	328	405	
09:15 09:30	10	11	9	30		9	13	11	33	63	11	111	13	135	10	141	7	158	293	356	
09:30 09:45	12	9	8	29		2	4	14	20	49	6	114	16	130	10	129	10	150	288	335	
09:45 10:00	11	10	17	38		8	10	12	28	66	5	123	27	155	5	119	5	129	284	350	
11:30 11:45	18	8	17	43		3	10	12	25	68	4	110	30	144	11	125	5	141	285	353	
11:45 12:00	19	15	21	55		3	4	5	12	67	7	131	26	164	14	136	4	155	319	386	
12:00 12:15	17	8	21	46		2	6	6	14	60	6	135	34	175	15	134	5	154	329	389	
12:15 12:30	22	14	30	66		5	11	12	28	94	11	126	26	164	9	152	9	170	334	426	
12:30 12:45	23	19	25	67		8	11	5	24	91	8	103	23	132	17	124	9	150	282	373	
12:45 13:00	20	13	21	54		10	7	6	23	77	12	123	23	158	7	109	3	119	277	354	
13:00 13:15	15	13	23	51		10	13	14	37	88	6	106	14	126	6	143	5	154	280	368	
13:15 13:30	24	9	12	45		6	9	8	23	68	15	81	3	79	15	101	10	126	205	273	
15:00 15:15	17	13	20	50		8	11	8	27	77	16	162	22	200	14	176	8	198	398	475	
15:15 15:30	21	26	20	67		3	10	3	16	83	19	212	20	251	17	200	4	221	472	555	
15:30 15:45	18	28	11	57		11	8	11	30	87	22	196	26	246	9	209	8	226	472	559	
15:45 16:00	19	19	23	61		9	15	15	39	100	20	215	27	262	10	170	8	188	450	550	
16:00 16:15	13	26	15	54		10	12	13	35	89	20	271	26	317	11	247	12	270	587	676	
16:15 16:30	20	20	28	68		10	14	14	38	106	19	237	25	281	14	184	9	207	488	594	
16:30 16:45	20	23	13	57		5	9	10	24	81	18	255	26	297	8	234	10	252	549	630	
16:45 17:00	19	9	16	44		12	14	6	32	76	21	255	19	295	5	198	12	215	510	586	
17:00 17:15	13	13	16	42		6	6	11	23	65	24	237	22	283	6	227	16	249	532	597	
17:15 17:30	13	14	20	47		3	8	17	28	75	17	208	36	261	10	187	6	203	464	539	
17:30 17:45	14	8	25	47		5	10	10	25	72	15	207	25	241	5	152	7	164	405	477	
17:45 18:00	16	5	17	38		7	9	12	28	66	18	153	16	187	3	132	1	136	323	389	
TOTAL	460	415	478	1354		217	279	377	873	2227	386	5146	816	8151	275	5752	243	6272	12423	14650	

Note: U-Turns are included in Totals.

Comment:



HERON RD @ JEFFERSON ST

Count Date: Thursday, November 17, 2016

Start Time: 07:00

Time Period	JEFFERSON ST			HERON RD			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	
07:00 08:00	0	1	1	1	1	2	3
08:00 09:00	0	1	1	1	0	1	2
09:00 10:00	0	1	1	0	0	0	1
11:30 12:30	1	0	1	0	0	0	1
12:30 13:30	2	0	2	4	1	5	7
15:00 16:00	2	0	2	1	1	2	4
16:00 17:00	0	0	0	0	1	1	1
17:00 18:00	0	0	0	0	0	0	0
Total	5	3	8	7	4	11	19

Comment:

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



Transportation Services - Traffic Services

W.O. 36494

Turning Movement Count - Heavy Vehicle Report

HERON RD @ JEFFERSON ST

Survey Date: Thursday, November 17, 2016

Table with columns for Time Period, JEFFERSON ST (Northbound, Southbound), HERON RD (Eastbound, Westbound), and Grand Total. Includes sub-totals for U-Turns and Heavy Vehicles.

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



Transportation Services - Traffic Services

Work Order 36494

Turning Movement Count - Pedestrian Volume Report

HERON RD @ JEFFERSON ST

Count Date: Thursday, November 17, 2016

Start Time: 07:00

Table with columns for Time Period, NB Approach, SB Approach, Total, EB Approach, WB Approach, Total, and Grand Total. Shows pedestrian volume data for various time intervals.

Comment:



Transportation Services - Traffic Services

Work Order
36494

Turning Movement Count - 15 Min U-Turn Total Report

HERON RD @ JEFFERSON ST

Survey Date: Thursday, November 17, 2016

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

Commercial Development
1850 Walkley Road, Ottawa
Transportation Impact Assessment

EXHIBIT 2 2018 PEAK AM HOUR TRAFFIC COUNTS – Heron/Walkley



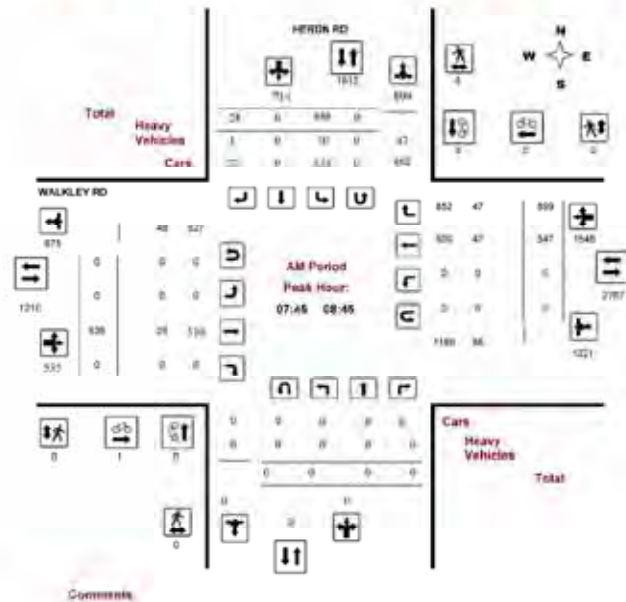
Transportation Services - Traffic Services

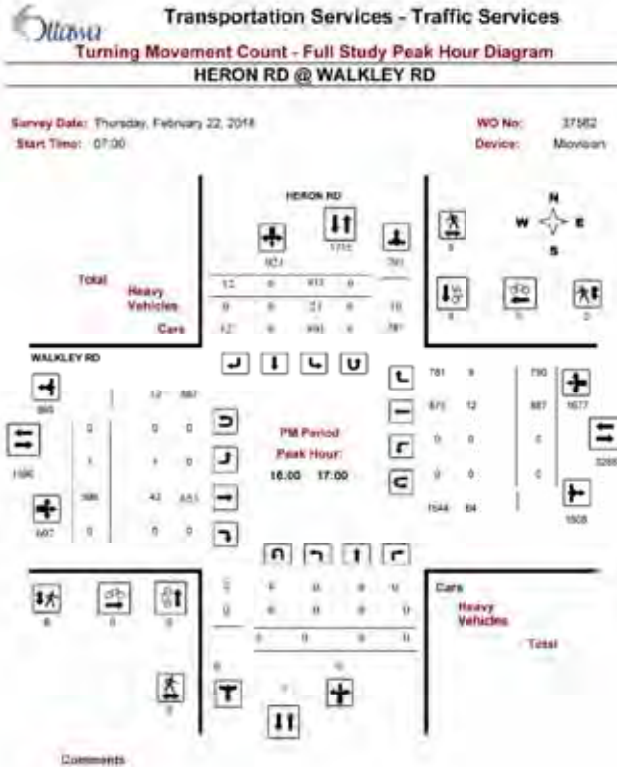
Turning Movement Count - Full Study Peak Hour Diagram

HERON RD @ WALKLEY RD

Survey Date: Thursday, February 22, 2018
Start Time: 07:30

WO No: 37562
Device: Motion





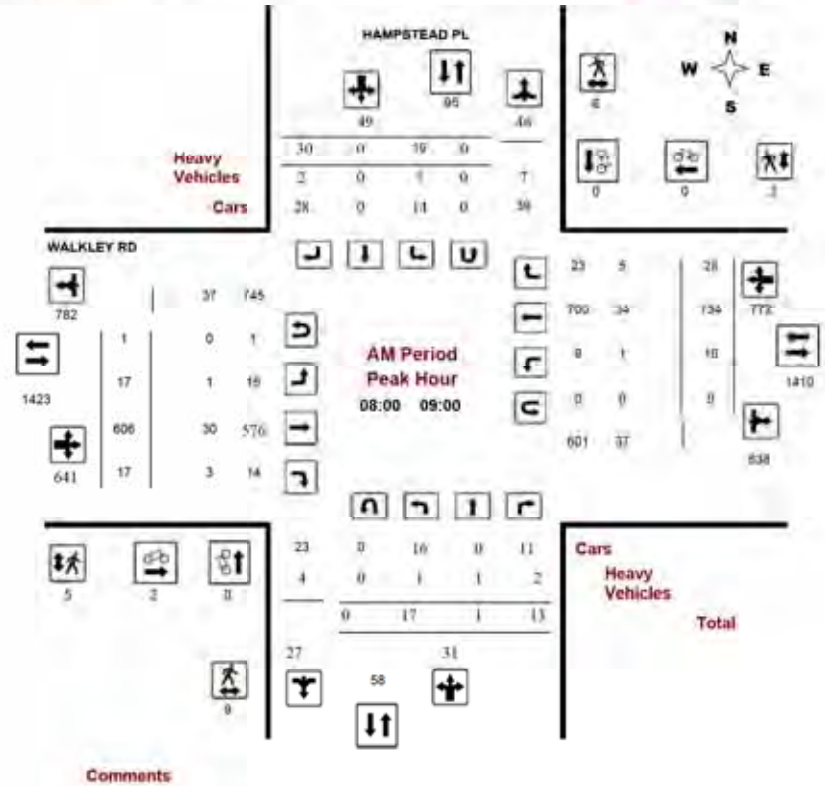
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

HAMPSTEAD PL @ WALKLEY RD

Survey Date: Wednesday, November 16, 2016
 Start Time: 07:00

WO No: 36485
 Device: Miovision



Appendix B

Collision Data



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: BANK ST @ HERON RD

Traffic Control: Traffic signal

Total Collisions: 129

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Jan-08, Fri,13:37	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2016-Feb-17, Wed,11:40	Clear	Turning movement	P.D. only	Wet	South	Turning right	Passenger van	Other motor vehicle	0
					South	Going ahead	Municipal transit bus	Other motor vehicle	
2016-Feb-25, Thu,07:35	Freezing Rain	Rear end	P.D. only	Ice	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Feb-25, Thu,17:44	Rain	Rear end	P.D. only	Slush	West	Slowing or stopping	Pick-up truck	Skidding/sliding	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Mar-05, Sat,11:49	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Apr-04, Mon,08:52	Clear	Rear end	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Apr-23, Sat,14:38	Clear	Turning movement	P.D. only	Dry	West	Turning left	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-May-03, Tue,07:57	Fog, mist, smoke, Rear end dust	Rear end	P.D. only	Dry	North	Slowing or stopping	Passenger van	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2016-May-04, Wed,11:03	Clear	Rear end	P.D. only	Dry	North	Turning left	Truck - closed	Other motor vehicle	0
					North	Turning left	Passenger van	Other motor vehicle	
2016-May-05, Thu,12:10	Clear	Turning movement	P.D. only	Dry	West	Turning left	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-May-30, Mon,09:07	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Municipal transit bus	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ HERON RD

Traffic Control: Traffic signal

Total Collisions: 129

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-May-30, Mon,11:23	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Jun-22, Wed,12:30	Clear	Sideswipe	P.D. only	Dry	North	Turning left	Pick-up truck	Other motor vehicle	0
					North	Turning left	Pick-up truck	Other motor vehicle	
2016-Jul-09, Sat,21:11	Rain	Rear end	Non-fatal injury	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	
2016-Aug-06, Sat,14:49	Clear	Rear end	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle	0
					East	Turning right	Pick-up truck	Other motor vehicle	
2016-Aug-19, Fri,15:40	Clear	Turning movement	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Pick-up truck	Other motor vehicle	
2016-Aug-22, Mon,14:59	Clear	Rear end	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Aug-23, Tue,14:47	Clear	Rear end	P.D. only	Dry	North	Turning left	Pick-up truck	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2016-Aug-28, Sun,16:59	Rain	Rear end	P.D. only	Wet	South	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Sep-13, Tue,12:46	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Passenger van	Other motor vehicle	
2016-Nov-20, Sun,21:31	Snow	SMV other	P.D. only	Slush	South	Going ahead	Automobile, station wagon	Ran off road	0
2016-Dec-01, Thu,13:11	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2016-Dec-06, Tue,14:54	Clear	Rear end	P.D. only	Wet	North	Slowing or stopping	Truck - tractor	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ HERON RD

Traffic Control: Traffic signal

Total Collisions: 129

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Dec-22, Thu,14:26	Snow	Rear end	P.D. only	Loose snow	South	Stopped	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Dec-23, Fri,19:46	Clear	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Passenger van	Other motor vehicle	
2017-Jan-27, Fri,17:05	Clear	Turning movement	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Feb-02, Thu,16:57	Clear	Rear end	P.D. only	Wet	East	Unknown	Automobile, station wagon	Other motor vehicle	0
					East	Unknown	Pick-up truck	Other motor vehicle	
2017-Feb-09, Thu,16:55	Clear	Turning movement	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Pick-up truck	Other motor vehicle	
2017-Feb-22, Wed,03:05	Clear	SMV other	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Pole (sign, parking meter)	0
2017-Apr-07, Fri,23:13	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-May-02, Tue,23:17	Clear	Angle	Non-fatal injury	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-May-05, Fri,12:31	Rain	Sideswipe	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Truck and trailer	Other motor vehicle	
2017-May-12, Fri,07:58	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2017-May-20, Sat,16:10	Clear	Rear end	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Pick-up truck	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ HERON RD

Traffic Control: Traffic signal

Total Collisions: 129

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2017-May-31, Wed,17:19	Clear	Sideswipe	P.D. only	Dry	South	Going ahead	Unknown	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Jul-04, Tue,12:34	Clear	Angle	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Jul-23, Sun,19:05	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Tow truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Sep-07, Thu,20:34	Rain	Angle	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Police vehicle	Other motor vehicle	
2017-Oct-13, Fri,14:35	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Nov-17, Fri,21:45	Clear	Rear end	Non-fatal injury	Dry	East	Turning right	Pick-up truck	Other motor vehicle	0
					East	Turning right	Passenger van	Other motor vehicle	
2017-Dec-01, Fri,18:33	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Dec-11, Mon,09:25	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2017-Dec-11, Mon,11:50	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2017-Dec-15, Fri,08:18	Clear	Angle	P.D. only	Wet	North	Turning right	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2017-Dec-26, Tue,13:15	Clear	Sideswipe	P.D. only	Wet	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ HERON RD

Traffic Control: Traffic signal

Total Collisions: 129

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Jan-12, Fri,17:13	Freezing Rain	Other	P.D. only	Slush	North	Turning left	Automobile, station wagon	Skidding/sliding	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Jan-16, Tue,00:47	Snow	Rear end	P.D. only	Loose snow	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Feb-07, Wed,14:58	Snow	Turning movement	P.D. only	Packed snow	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Feb-21, Wed,22:41	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Feb-24, Sat,10:35	Clear	Rear end	Non-fatal injury	Dry	South	Turning right	Pick-up truck	Other motor vehicle	0
					South	Turning right	Automobile, station wagon	Other motor vehicle	
2018-Mar-03, Sat,10:44	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Unknown	Other motor vehicle	
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Mar-05, Mon,01:05	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Mar-10, Sat,12:45	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Mar-12, Mon,06:07	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Apr-14, Sat,16:45	Clear	Rear end	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ HERON RD

Traffic Control: Traffic signal

Total Collisions: 129

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Apr-24, Tue,15:07	Clear	Rear end	P.D. only	Dry	East	Turning right	Delivery van	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2018-May-11, Fri,22:28	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-May-17, Thu,18:46	Clear	Turning movement	P.D. only	Dry	West	Turning left	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-May-24, Thu,14:27	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Jun-01, Fri,14:27	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jul-05, Thu,12:49	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2018-Jul-12, Thu,16:33	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Aug-02, Thu,09:16	Clear	Angle	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Passenger van	Other motor vehicle	
2018-Aug-04, Sat,13:13	Clear	Rear end	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Slowing or stopping	Passenger van	Other motor vehicle	
2018-Aug-05, Sun,09:30	Clear	Sideswipe	P.D. only	Dry	North	Going ahead	Unknown	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Aug-20, Mon,14:40	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Bicycle	Other motor vehicle	0
					North	Turning left	Pick-up truck	Cyclist	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ HERON RD

Traffic Control: Traffic signal

Total Collisions: 129

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Aug-20, Mon,14:53	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Sep-13, Thu,21:38	Clear	Turning movement	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Sep-19, Wed,07:40	Clear	SMV other	Non-fatal injury	Dry	South	Turning right	Automobile, station wagon	Pedestrian	1
2018-Sep-30, Sun,19:30	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2018-Oct-05, Fri,18:14	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Oct-13, Sat,18:30	Clear	Other	P.D. only	Dry	North	Reversing	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Oct-15, Mon,09:45	Rain	Rear end	P.D. only	Wet	North	Going ahead	Unknown	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Oct-15, Mon,16:01	Rain	Turning movement	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Delivery van	Other motor vehicle	
2018-Oct-18, Thu,16:42	Clear	Sideswipe	P.D. only	Dry	North	Turning left	Construction equipment	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Oct-31, Wed,13:15	Clear	Rear end	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Nov-12, Mon,07:05	Snow	SMV other	P.D. only	Loose snow	West	Going ahead	Automobile, station wagon	Pole (utility, power)	0
2018-Nov-19, Mon,15:49	Snow	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	



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From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ HERON RD

Traffic Control: Traffic signal

Total Collisions: 129

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Nov-26, Mon,18:39	Clear	Sideswipe	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Dec-02, Sun,13:40	Rain	Sideswipe	P.D. only	Wet	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Jan-08, Tue,09:38	Clear	Angle	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Passenger van	Other motor vehicle	
2019-Jan-18, Fri,06:20	Snow	Rear end	P.D. only	Slush	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jan-24, Thu,06:44	Freezing Rain	Rear end	P.D. only	Packed snow	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jan-27, Sun,17:19	Clear	Turning movement	P.D. only	Slush	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Feb-15, Fri,13:08	Clear	Rear end	P.D. only	Slush	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Unknown	Other motor vehicle	
2019-Mar-04, Mon,14:00	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Changing lanes	Automobile, station wagon	Other motor vehicle	
2019-Mar-19, Tue,13:40	Clear	Rear end	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Mar-20, Wed,18:43	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Mar-31, Sun,14:12	Rain	Rear end	Non-fatal injury	Ice	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	



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From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ HERON RD

Traffic Control: Traffic signal

Total Collisions: 129

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Apr-09, Tue,10:30	Snow	Angle	P.D. only	Wet	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Apr-14, Sun,21:03	Rain	Turning movement	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-May-08, Wed,13:30	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Jun-17, Mon,11:38	Clear	Rear end	Non-fatal injury	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jun-26, Wed,14:42	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Passenger van	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jul-12, Fri,08:54	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Aug-08, Thu,16:27	Rain	Rear end	Non-fatal injury	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Aug-14, Wed,12:00	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Aug-22, Thu,15:20	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Sep-09, Mon,15:30	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2019-Sep-19, Thu,17:30	Clear	Rear end	P.D. only	Dry	North	Going ahead	Delivery van	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	



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From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ HERON RD

Traffic Control: Traffic signal

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Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2019-Sep-22, Sun,11:35	Clear	Turning movement	P.D. only	Dry	West	Turning left	Passenger van	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Sep-24, Tue,16:40	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Unknown	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Oct-10, Thu,16:27	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Oct-16, Wed,19:58	Rain	SMV other	Non-fatal injury	Wet	East	Going ahead	Automobile, station wagon	Pedestrian	1
2019-Nov-02, Sat,08:52	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Nov-02, Sat,19:45	Rain	Sideswipe	P.D. only	Wet	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Unknown	Other motor vehicle	
2019-Nov-02, Sat,19:45	Rain	Sideswipe	P.D. only	Wet	North	Changing lanes	Automobile, station wagon	Skidding/sliding	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Nov-03, Sun,17:40	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Nov-24, Sun,21:12	Clear	Turning movement	Non-fatal injury	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-06, Fri,17:30	Clear	Turning movement	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-14, Tue,11:35	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Jan-19, Sun,02:39	Snow	Other	P.D. only	Loose snow	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Reversing	Truck - open	Other motor vehicle	



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Location: BANK ST @ HERON RD

Traffic Control: Traffic signal

Total Collisions: 129

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2020-Jan-22, Wed,07:43	Clear	Turning movement	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Municipal transit bus	Other motor vehicle	
2020-Jan-23, Thu,22:00	Clear	Turning movement	P.D. only	Wet	West	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Feb-07, Fri,14:47	Snow	Rear end	P.D. only	Loose snow	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Mar-08, Sun,00:04	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2020-May-14, Thu,14:25	Rain	Turning movement	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jun-17, Wed,15:42	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Jul-31, Fri,11:16	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2020-Aug-02, Sun,02:30	Rain	Angle	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2020-Aug-13, Thu,07:20	Clear	Rear end	P.D. only	Dry	North	Changing lanes	Passenger van	Other motor vehicle	0
					North	Turning left	Delivery van	Other motor vehicle	
2020-Sep-23, Wed,19:40	Clear	Rear end	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Turning right	Unknown	Other motor vehicle	
2020-Sep-23, Wed,20:40	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	



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Location: BANK ST @ HERON RD

Traffic Control: Traffic signal

Total Collisions: 129

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2020-Oct-02, Fri,17:52	Clear	SMV other	Non-fatal injury	Wet	West	Turning right	Automobile, station wagon	Pedestrian	1
2020-Oct-10, Sat,18:03	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Oct-21, Wed,14:45	Rain	Sideswipe	P.D. only	Wet	North	Changing lanes	Passenger van	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Oct-29, Thu,11:06	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Dec-04, Fri,13:55	Rain	Turning movement	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Dec-23, Wed,10:51	Snow	Sideswipe	P.D. only	Loose snow	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Passenger van	Other motor vehicle	
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	

Location: BANK ST @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 130

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jan-20, Wed,10:54	Clear	Rear end	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	0
					North	Slowing or stopping	Passenger van	Other motor vehicle	
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Jan-29, Fri,17:18	Clear	Rear end	P.D. only	Wet	North	Turning right	Passenger van	Other motor vehicle	0
					North	Turning right	Passenger van	Other motor vehicle	
2016-Feb-16, Tue,16:28	Snow	Sideswipe	P.D. only	Loose snow	North	Changing lanes	Unknown	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	



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Location: BANK ST @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 130

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Feb-22, Mon,17:05	Clear	Rear end	Non-fatal injury	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Pick-up truck	Other motor vehicle	
2016-Mar-25, Fri,18:28	Clear	Angle	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Apr-16, Sat,10:20	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Apr-16, Sat,19:10	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2016-Apr-19, Tue,15:00	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Passenger van	Other motor vehicle	
2016-Jun-14, Tue,13:48	Clear	Angle	Non-fatal injury	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jun-19, Sun,23:23	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jul-16, Sat,08:54	Clear	Sideswipe	Non-fatal injury	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2016-Sep-13, Tue,08:24	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Sep-19, Mon,13:23	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2016-Sep-26, Mon,16:03	Clear	Rear end	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	



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From: January 1, 2016 **To:** December 31, 2020

Location: BANK ST @ WALKLEY RD

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Total Collisions: 130

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Sep-27, Tue,08:59	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Passenger van	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					North	Slowing or stopping	Other school vehicle/bus	Other motor vehicle	
2016-Oct-06, Thu,21:34	Clear	Angle	Non-fatal injury	Dry	East	Turning right	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Oct-12, Wed,16:22	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Nov-02, Wed,08:01	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Nov-02, Wed,18:40	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Nov-04, Fri,22:41	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Nov-18, Fri,18:00	Clear	Rear end	P.D. only	Dry	West	Turning left	Pick-up truck	Other motor vehicle	0
					West	Turning left	Pick-up truck	Other motor vehicle	
2016-Nov-28, Mon,10:52	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Dec-08, Thu,20:22	Snow	Rear end	P.D. only	Ice	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Turning right	Automobile, station wagon	Other motor vehicle	
2016-Dec-08, Thu,21:13	Snow	Angle	Non-fatal injury	Ice	West	Slowing or stopping	Truck - closed	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
2017-Jan-02, Mon,16:50	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Passenger van	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	



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Total Collisions: 130

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2017-Jan-04, Wed,10:48	Snow	Rear end	P.D. only	Loose snow	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Jan-05, Thu,16:50	Clear	Angle	P.D. only	Ice	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2017-Jan-14, Sat,14:17	Clear	Rear end	Non-fatal injury	Dry	North	Turning right	Passenger van	Other motor vehicle	0
					North	Turning right	Pick-up truck	Other motor vehicle	
2017-Jan-15, Sun,14:30	Clear	Rear end	P.D. only	Dry	West	Going ahead	Unknown	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Jan-17, Tue,16:15	Clear	Rear end	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Mar-03, Fri,19:14	Clear	Rear end	P.D. only	Dry	North	Turning right	Pick-up truck	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2017-Mar-21, Tue,15:22	Clear	Rear end	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2017-Mar-24, Fri,14:55	Rain	Angle	P.D. only	Wet	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Apr-01, Sat,00:18	Snow	Angle	P.D. only	Loose snow	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Apr-07, Fri,01:46	Rain	SMV other	Non-fatal injury	Wet	West	Turning left	Automobile, station wagon	Pole (utility, power)	0
2017-Apr-07, Fri,13:35	Rain	Rear end	Non-fatal injury	Wet	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-May-24, Wed,13:21	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Passenger van	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	



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Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2017-May-25, Thu,13:29	Clear	Rear end	P.D. only	Dry	South	Going ahead	Passenger van	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	
					South	Stopped	Pick-up truck	Other motor vehicle	
2017-Jun-08, Thu,15:22	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Aug-28, Mon,21:40	Clear	Rear end	P.D. only	Dry	East	Going ahead	Unknown	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Aug-30, Wed,12:28	Clear	Rear end	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Aug-31, Thu,21:03	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Sep-05, Tue,21:43	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2017-Sep-14, Thu,17:30	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Sep-26, Tue,08:20	Clear	Angle	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Oct-21, Sat,19:39	Clear	Other	Non-fatal injury	Dry	West	Reversing	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Motorcycle	Other motor vehicle	
2017-Oct-24, Tue,08:23	Rain	Sideswipe	P.D. only	Wet	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Nov-17, Fri,14:12	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Unknown	Other motor vehicle	0
					North	Going ahead	Truck - dump	Other motor vehicle	



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Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2017-Dec-04, Mon,16:47	Clear	SMV other	Non-fatal injury	Dry	South	Turning right	Automobile, station wagon	Pedestrian	1
2017-Dec-10, Sun,12:21	Clear	Angle	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Dec-24, Sun,11:11	Clear	Rear end	P.D. only	Dry	West	Turning right	Unknown	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2017-Dec-30, Sat,17:03	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jan-10, Wed,13:28	Clear	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Feb-03, Sat,18:44	Snow	Rear end	Non-fatal injury	Wet	North	Merging	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Feb-22, Thu,08:49	Clear	Rear end	P.D. only	Dry	South	Going ahead	Unknown	Other motor vehicle	0
					South	Stopped	Truck - closed	Other motor vehicle	
2018-Jun-06, Wed,21:49	Clear	Rear end	P.D. only	Dry	East	Merging	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jun-16, Sat,12:06	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jun-20, Wed,20:23	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Unknown	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jul-18, Wed,16:29	Clear	Rear end	Non-fatal injury	Dry	West	Merging	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 130

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Jul-25, Wed,14:40	Rain	Sideswipe	P.D. only	Wet	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jul-30, Mon,15:40	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jul-31, Tue,13:19	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Aug-04, Sat,13:47	Clear	Angle	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Aug-08, Wed,11:19	Clear	SMV unattended vehicle	P.D. only	Dry	West	Stopped	Automobile, station wagon	Unattended vehicle	0
2018-Aug-26, Sun,22:37	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Sep-13, Thu,19:08	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Oct-14, Sun,13:38	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2018-Oct-17, Wed,17:05	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Oct-31, Wed,17:06	Rain	Rear end	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Nov-16, Fri,15:13	Snow	Rear end	Non-fatal injury	Loose snow	South	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 130

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Nov-20, Tue,13:45	Snow	Rear end	P.D. only	Loose snow	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Nov-21, Wed,13:45	Snow	Angle	P.D. only	Wet	East	Unknown	Unknown	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Dec-05, Wed,13:01	Snow	Turning movement	Non-fatal injury	Wet	North	Going ahead	Truck - closed	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Pick-up truck	Other motor vehicle	
2018-Dec-05, Wed,17:30	Snow	Rear end	P.D. only	Loose snow	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2018-Dec-20, Thu,16:29	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2018-Dec-27, Thu,15:15	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Delivery van	Other motor vehicle	
2018-Dec-29, Sat,10:59	Clear	Rear end	P.D. only	Wet	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Jan-02, Wed,08:30	Clear	Approaching	P.D. only	Ice	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jan-03, Thu,20:00	Rain	Rear end	P.D. only	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Jan-06, Sun,02:52	Clear	SMV other	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Pole (utility, power)	0
2019-Jan-19, Sat,17:30	Snow	Sideswipe	P.D. only	Loose snow	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 130

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2019-Jan-24, Thu,17:30	Clear	Sideswipe	P.D. only	Slush	East	Unknown	Unknown	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jan-28, Mon,15:25	Clear	Rear end	P.D. only	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Feb-05, Tue,15:30	Clear	Rear end	P.D. only	Dry	West	Unknown	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Feb-14, Thu,16:00	Clear	Rear end	P.D. only	Wet	South	Turning left	Passenger van	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Feb-22, Fri,10:36	Snow	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Apr-02, Tue,08:45	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Apr-08, Mon,16:20	Clear	Rear end	P.D. only	Dry	South	Turning right	Unknown	Other motor vehicle	0
					South	Turning right	Pick-up truck	Other motor vehicle	
2019-May-06, Mon,21:59	Clear	Other	P.D. only	Dry	West	Reversing	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jun-06, Thu,11:35	Clear	Sideswipe	P.D. only	Dry	North	Turning left	Unknown	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Jun-20, Thu,18:10	Clear	Rear end	P.D. only	Dry	South	Turning right	Passenger van	Other motor vehicle	0
					South	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Jun-23, Sun,21:06	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jun-30, Sun,23:20	Clear	Rear end	P.D. only	Dry	North	Unknown	Unknown	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 130

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2019-Jul-22, Mon,16:10	Clear	Rear end	P.D. only	Dry	South	Changing lanes	Passenger van	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Jul-25, Thu,20:05	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Unknown	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Aug-08, Thu,13:59	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Pick-up truck	Other motor vehicle	
2019-Sep-21, Sat,17:16	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Sep-25, Wed,15:00	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Sep-29, Sun,12:13	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Nov-28, Thu,11:28	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Nov-30, Sat,20:30	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-12, Thu,17:52	Clear	Turning movement	P.D. only	Dry	South	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-13, Fri,21:30	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-27, Fri,10:05	Freezing Rain	Rear end	P.D. only	Ice	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Slowing or stopping	Passenger van	Other motor vehicle	



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Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: BANK ST @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 130

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2019-Dec-27, Fri,10:54	Freezing Rain	Rear end	P.D. only	Ice	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Dec-29, Sun,19:30	Freezing Rain	Sideswipe	P.D. only	Ice	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-16, Thu,11:22	Clear	Sideswipe	P.D. only	Wet	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-27, Mon,11:20	Clear	SMV unattended vehicle	P.D. only	Wet	West	Turning left	Automobile, station wagon	Unattended vehicle	0
2020-Feb-24, Mon,20:00	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Feb-27, Thu,13:15	Snow	SMV other	P.D. only	Packed snow	South	Turning right	Automobile, station wagon	Pole (sign, parking meter)	0
2020-Feb-27, Thu,15:10	Snow	Rear end	P.D. only	Loose snow	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2020-Feb-29, Sat,22:12	Clear	Angle	P.D. only	Loose snow	East	Turning right	Unknown	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Mar-11, Wed,08:30	Clear	Angle	P.D. only	Dry	South	Turning right	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-May-25, Mon,17:40	Clear	Angle	Non-fatal injury	Dry	South	Going ahead	Bicycle	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Cyclist	
2020-Jul-02, Thu,17:03	Rain	Sideswipe	P.D. only	Wet	South	Changing lanes	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jul-13, Mon,10:54	Clear	Rear end	P.D. only	Dry	North	Unknown	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 130

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2020-Jul-17, Fri,19:40	Clear	Angle	Non-fatal injury	Dry	East	Going ahead	Bicycle	Other motor vehicle	0
					South	Turning right	Automobile, station wagon	Cyclist	
2020-Aug-05, Wed,16:50	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Pick-up truck	Other motor vehicle	
2020-Aug-08, Sat,11:30	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Aug-20, Thu,19:22	Clear	Turning movement	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Oct-15, Thu,17:08	Rain	Rear end	P.D. only	Wet	North	Turning left	Truck - closed	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Oct-23, Fri,11:38	Clear	Rear end	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Turning right	Pick-up truck	Other motor vehicle	
2020-Oct-29, Thu,12:29	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Oct-31, Sat,12:17	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	
2020-Nov-06, Fri,08:43	Clear	Other	P.D. only	Dry	South	Stopped	Pick-up truck	Debris falling off vehicle	0
					South	Stopped	Pick-up truck	Debris falling off vehicle	
					West	Going ahead	Truck and trailer	Other	
2020-Nov-28, Sat,05:25	Rain	Sideswipe	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Nov-29, Sun,00:18	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	



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Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: BANK ST @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 130

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2020-Dec-07, Mon,09:40	Clear	Rear end	Non-fatal injury	Dry	East	Unknown	Pick-up truck	Other motor vehicle	0
					East	Unknown	Automobile, station wagon	Other motor vehicle	
2020-Dec-09, Wed,07:45	Snow	Sideswipe	P.D. only	Loose snow	South	Changing lanes	Truck - closed	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Dec-22, Tue,17:30	Clear	Rear end	P.D. only	Dry	North	Turning right	Unknown	Other motor vehicle	0
					North	Turning right	Pick-up truck	Other motor vehicle	

Location: BAYCREST DR @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 30

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Mar-22, Tue,08:49	Clear	Rear end	P.D. only	Dry	North	Turning left	Pick-up truck	Other motor vehicle	0
					North	Turning left	Pick-up truck	Other motor vehicle	
2016-May-13, Fri,20:24	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2016-May-17, Tue,11:19	Clear	Angle	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2016-Jun-09, Thu,13:07	Clear	Turning movement	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Cyclist	0
					West	Going ahead	Bicycle	Other motor vehicle	
2016-Jun-15, Wed,07:30	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Sep-01, Thu,21:27	Clear	Sideswipe	P.D. only	Dry	East	Going ahead	Unknown	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2016-Sep-23, Fri,16:46	Clear	Angle	P.D. only	Dry	East	Going ahead	Passenger van	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	



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Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: BAYCREST DR @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 30

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Oct-27, Thu,10:40	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2016-Nov-04, Fri,12:42	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Truck - tractor	Other motor vehicle	
2017-Mar-19, Sun,17:41	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Jul-01, Sat,23:17	Rain	Rear end	Non-fatal injury	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2017-Jul-05, Wed,07:39	Clear	Rear end	Non-fatal injury	Dry	West	Going ahead	Truck - dump	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Dec-13, Wed,07:30	Snow	Rear end	P.D. only	Ice	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Dec-27, Wed,14:25	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Dec-28, Thu,18:57	Clear	Rear end	P.D. only	Packed snow	East	Going ahead	Automobile, station wagon	Skidding/sliding	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jan-26, Fri,08:51	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Feb-09, Fri,14:46	Clear	Sideswipe	P.D. only	Packed snow	East	Overtaking	Unknown	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Feb-12, Mon,15:55	Clear	Turning movement	P.D. only	Slush	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	



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Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: BAYCREST DR @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 30

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Apr-07, Sat,16:20	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Sep-07, Fri,08:03	Clear	Rear end	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jan-27, Sun,01:15	Snow	SMV other	P.D. only	Loose snow	South	Turning left	Automobile, station wagon	Pole (utility, power)	0
2019-Apr-03, Wed,17:55	Clear	Sideswipe	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Jul-18, Thu,08:53	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Oct-08, Tue,15:24	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Oct-08, Tue,17:24	Clear	Sideswipe	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Oct-10, Thu,14:20	Clear	Rear end	Non-fatal injury	Dry	East	Slowing or stopping	Delivery van	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Nov-14, Thu,08:10	Rain	Rear end	P.D. only	Loose snow	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Nov-17, Sun,20:12	Clear	Sideswipe	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Municipal transit bus	Other motor vehicle	
2019-Nov-23, Sat,17:23	Clear	Turning movement	Non-fatal injury	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2020-Aug-08, Sat,14:32	Clear	SMV other	P.D. only	Dry	South	Turning right	Automobile, station wagon	Building or wall	0



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD @ ALTA VISTA DR

Traffic Control: Traffic signal

Total Collisions: 46

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Jan-15, Fri,14:49	Clear	Sideswipe	P.D. only	Packed snow	North	Overtaking	Pick-up truck	Other motor vehicle	0
					North	Stopped	Municipal transit bus	Other motor vehicle	
2016-Feb-02, Tue,15:15	Clear	Rear end	P.D. only	Dry	East	Turning right	Passenger van	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2016-Feb-28, Sun,12:08	Snow	Angle	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
2016-May-03, Tue,23:14	Clear	Angle	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-May-31, Tue,12:38	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2016-Jul-02, Sat,16:37	Clear	Angle	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Aug-24, Wed,18:21	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Passenger van	Other motor vehicle	
2016-Sep-01, Thu,13:56	Clear	Rear end	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Passenger van	Other motor vehicle	
2016-Sep-24, Sat,23:09	Clear	Rear end	P.D. only	Dry	South	Unknown	Unknown	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Dec-05, Mon,14:00	Clear	Turning movement	P.D. only	Packed snow	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Passenger van	Other motor vehicle	
2017-Jan-05, Thu,17:23	Snow	Rear end	P.D. only	Ice	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Pick-up truck	Other motor vehicle	
2017-Mar-08, Wed,04:00	Rain	SMV other	Non-fatal injury	Wet	West	Going ahead	Automobile, station wagon	Pole (sign, parking meter) 0	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD @ ALTA VISTA DR

Traffic Control: Traffic signal

Total Collisions: 46

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2017-May-11, Thu,09:50	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2017-May-21, Sun,15:46	Clear	SMV other	P.D. only	Dry	West	Slowing or stopping	Passenger van	Ran off road	0
2017-Jun-24, Sat,12:08	Clear	Rear end	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle	0
					East	Turning left	Passenger van	Other motor vehicle	
2017-Jul-01, Sat,21:34	Clear	Turning movement	Non-fatal injury	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Aug-15, Tue,06:43	Rain	Rear end	P.D. only	Wet	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Aug-30, Wed,09:43	Clear	Sideswipe	Non-fatal injury	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Oct-04, Wed,16:16	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2017-Dec-16, Sat,16:46	Clear	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Dec-21, Thu,15:27	Clear	Rear end	P.D. only	Ice	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jan-19, Fri,17:21	Clear	Turning movement	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Feb-02, Fri,14:42	Clear	Sideswipe	Non-reportable	Dry	North	Overtaking	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Intercity bus	Other motor vehicle	
2018-Mar-14, Wed,09:44	Snow	Rear end	P.D. only	Loose snow	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD @ ALTA VISTA DR

Traffic Control: Traffic signal

Total Collisions: 46

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Apr-22, Sun,15:47	Clear	Angle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Apr-25, Wed,12:45	Rain	Turning movement	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2018-May-14, Mon,00:30	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jul-31, Tue,17:31	Clear	Sideswipe	Non-fatal injury	Dry	West	Going ahead	Unknown	Cyclist	0
					West	Going ahead	Bicycle	Other motor vehicle	
2018-Oct-09, Tue,11:45	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jan-22, Tue,07:00	Clear	Sideswipe	P.D. only	Packed snow	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jan-26, Sat,09:50	Clear	SMV other	P.D. only	Dry	West	Turning left	Automobile, station wagon	Pole (utility, power)	0
2019-Feb-14, Thu,08:20	Clear	Rear end	P.D. only	Loose snow	East	Unknown	Unknown	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Mar-20, Wed,09:26	Clear	Rear end	P.D. only	Dry	North	Going ahead	School bus	Other motor vehicle	0
					North	Stopped	Passenger van	Other motor vehicle	
2019-Mar-25, Mon,15:15	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jul-16, Tue,16:50	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Aug-05, Mon,14:30	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD @ ALTA VISTA DR

Traffic Control: Traffic signal

Total Collisions: 46

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Oct-16, Wed,23:04	Rain	Turning movement	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-04, Wed,09:03	Snow	Rear end	P.D. only	Wet	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Municipal transit bus	Other motor vehicle	
2019-Dec-08, Sun,17:50	Clear	Rear end	P.D. only	Dry	North	Stopped	Passenger van	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Dec-21, Sat,18:55	Clear	Turning movement	P.D. only	Dry	South	Turning left	Passenger van	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-25, Sat,18:51	Clear	Rear end	P.D. only	Loose snow	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Feb-18, Tue,15:59	Snow	Rear end	P.D. only	Loose snow	East	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Apr-17, Fri,19:28	Clear	SMV other	P.D. only	Dry	North	Turning left	Automobile, station wagon	Curb	0
2020-Jun-19, Fri,02:00	Clear	Rear end	Non-fatal injury	Dry	West	Unknown	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2020-Sep-03, Thu,12:34	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Truck - closed	Other motor vehicle	0
					West	Slowing or stopping	Pick-up truck	Other motor vehicle	
					West	Slowing or stopping	Pick-up truck	Other motor vehicle	
2020-Sep-30, Wed,19:10	Clear	Turning movement	P.D. only	Dry	South	Turning left	Unknown	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: HERON RD @ BAYCREST DR

Traffic Control: Traffic signal

Total Collisions: 21

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
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Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD @ BAYCREST DR

Traffic Control: Traffic signal

Total Collisions: 21

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Jan-06, Wed,13:34	Clear	Rear end	P.D. only	Wet	East	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Feb-01, Mon,10:40	Clear	Angle	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2016-Mar-16, Wed,12:08	Clear	Rear end	P.D. only	Dry	North	Going ahead	Passenger van	Other motor vehicle	0
					North	Stopped	Intercity bus	Other motor vehicle	
2016-Apr-25, Mon,15:14	Clear	Angle	P.D. only	Dry	East	Slowing or stopping	Construction equipment	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2016-May-31, Tue,16:28	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Nov-16, Wed,10:49	Clear	Rear end	P.D. only	Wet	East	Turning left	Truck - dump	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2016-Nov-25, Fri,09:07	Snow	SMV other	Non-fatal injury	Slush	North	Turning right	School bus	Pedestrian	1
2017-Jan-05, Thu,19:10	Clear	Rear end	P.D. only	Ice	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Feb-13, Mon,15:36	Snow	Rear end	P.D. only	Ice	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Aug-21, Mon,16:00	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Oct-03, Tue,08:25	Clear	Turning movement	Non-fatal injury	Dry	East	Turning right	Automobile, station wagon	Cyclist	0
					East	Going ahead	Bicycle	Other motor vehicle	
2017-Nov-08, Wed,16:49	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD @ BAYCREST DR

Traffic Control: Traffic signal

Total Collisions: 21

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Jan-13, Sat,10:32	Clear	Rear end	P.D. only	Loose snow	West	Unknown	Unknown	Other motor vehicle	0
					West	Stopped	Intercity bus	Other motor vehicle	
2018-Jan-15, Mon,09:03	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Nov-04, Sun,17:30	Clear	Turning movement	P.D. only	Dry	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jun-06, Thu,12:47	Clear	Sideswipe	P.D. only	Dry	West	Unknown	Automobile, station wagon	Other motor vehicle	0
					West	Unknown	Automobile, station wagon	Other motor vehicle	
2019-Jun-23, Sun,18:28	Clear	Angle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Dec-11, Wed,18:30	Snow	Rear end	P.D. only	Ice	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Jan-23, Thu,20:53	Clear	Sideswipe	P.D. only	Loose snow	East	Overtaking	Ambulance	Other motor vehicle	0
					East	Going ahead	Truck and trailer	Other motor vehicle	
2020-Feb-02, Sun,11:35	Snow	Angle	P.D. only	Loose snow	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Pick-up truck	Other motor vehicle	
2020-Nov-20, Fri,11:58	Clear	SMV other	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Ran off road	0

Location: HERON RD @ BRIAR HILL DR/SANDALWOOD DR

Traffic Control: Traffic signal

Total Collisions: 14

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Jan-06, Wed,14:48	Clear	Turning movement	P.D. only	Wet	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD @ BRIAR HILL DR/SANDALWOOD DR

Traffic Control: Traffic signal

Total Collisions: 14

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Feb-18, Thu,12:57	Clear	Angle	P.D. only	Wet	North	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Feb-15, Wed,18:05	Snow	Rear end	P.D. only	Slush	East	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Stopped	Tow truck	Other motor vehicle	
2017-Dec-31, Sun,18:33	Clear	Rear end	P.D. only	Wet	East	Slowing or stopping	Passenger van	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Feb-13, Tue,21:18	Clear	Turning movement	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Mar-17, Sat,18:40	Clear	Angle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Apr-14, Sat,08:30	Clear	Angle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Aug-11, Sat,17:14	Clear	Turning movement	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Oct-11, Thu,15:29	Clear	Turning movement	Non-fatal injury	Wet	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Apr-29, Mon,14:52	Clear	Angle	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Aug-30, Fri,08:42	Clear	Rear end	Non-fatal injury	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Oct-25, Fri,09:00	Clear	Other	P.D. only	Dry	West	Reversing	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD @ BRIAR HILL DR/SANDALWOOD DR

Traffic Control: Traffic signal

Total Collisions: 14

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2020-Mar-28, Sat,20:49	Clear	Approaching	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jul-22, Wed,15:30	Rain	Sideswipe	P.D. only	Wet	South	Unknown	Unknown	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	

Location: HERON RD @ JEFFERSON ST

Traffic Control: Traffic signal

Total Collisions: 13

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Jan-28, Thu,14:55	Clear	Rear end	P.D. only	Dry	West	Going ahead	Delivery van	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2016-Mar-01, Tue,12:04	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jun-18, Sat,20:20	Clear	Angle	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jul-03, Sun,18:41	Clear	Angle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Sep-01, Thu,19:09	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jan-08, Mon,17:22	Snow	Sideswipe	P.D. only	Loose snow	West	Going ahead	Automobile, station wagon	Curb	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Fire vehicle	Other motor vehicle	
2018-May-10, Thu,17:03	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Unknown	Unknown	Other	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD @ JEFFERSON ST

Traffic Control: Traffic signal

Total Collisions: 13

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Jan-03, Thu,07:56	Snow	Rear end	P.D. only	Loose snow	West	Slowing or stopping	Truck - closed	Other motor vehicle	0
					West	Turning right	Passenger van	Other motor vehicle	
2019-Jan-11, Fri,13:13	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Apr-18, Thu,12:56	Rain	Angle	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Jul-18, Thu,16:09	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Dec-15, Sun,11:08	Snow	Angle	P.D. only	Slush	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Feb-28, Fri,10:00	Snow	Angle	P.D. only	Slush	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	

Location: HERON RD @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 24

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jan-11, Mon,15:36	Clear	Rear end	P.D. only	Dry	North	Going ahead	Passenger van	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Apr-02, Sat,18:27	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Jul-04, Mon,09:34	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Passenger van	Other motor vehicle	
2016-Sep-28, Wed,18:47	Clear	Sideswipe	P.D. only	Dry	South	Unknown	Unknown	Other motor vehicle	0
					South	Stopped	Delivery van	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 24

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Nov-05, Sat,17:07	Clear	Angle	Non-fatal injury	Dry	West	Turning left	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2016-Nov-11, Fri,12:41	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Unknown	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2016-Dec-16, Fri,10:26	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Dec-31, Sat,14:09	Snow	Approaching	P.D. only	Loose snow	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Jan-05, Thu,09:15	Clear	Rear end	Non-fatal injury	Ice	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Apr-15, Sat,04:47	Clear	SMV other	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Curb	0
2017-Jun-25, Sun,02:48	Clear	SMV other	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Curb	0
2017-Oct-08, Sun,12:33	Clear	Angle	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Mar-01, Thu,14:53	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Apr-11, Wed,08:41	Clear	Rear end	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Apr-16, Mon,13:43	Rain	Rear end	P.D. only	Wet	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jun-19, Tue,23:00	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Unknown	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Unknown	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD @ WALKLEY RD

Traffic Control: Traffic signal

Total Collisions: 24

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Sep-11, Tue,15:20	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jan-12, Sat,01:43	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jan-21, Mon,09:10	Snow	Rear end	Non-fatal injury	Ice	East	Slowing or stopping	School bus	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Feb-03, Sun,20:00	Clear	Angle	P.D. only	Packed snow	South	Stopped	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Nov-07, Thu,11:12	Snow	SMV other	P.D. only	Loose snow	South	Turning left	Truck - closed	Skidding/sliding	0
2019-Dec-04, Wed,12:50	Clear	Sideswipe	P.D. only	Ice	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-06, Mon,16:30	Clear	Rear end	P.D. only	Wet	South	Slowing or stopping	Snow plow	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2020-May-22, Fri,00:27	Clear	SMV other	P.D. only	Dry	West	Turning right	Passenger van	Pole (utility, power)	0

Location: HERON RD btwn ALTA VISTA DR & FINN CRT

Traffic Control: No control

Total Collisions: 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-May-03, Tue,07:28	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jun-21, Tue,06:57	Clear	Angle	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Aug-04, Thu,13:17	Clear	Turning movement	P.D. only	Dry	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD btwn ALTA VISTA DR & FINN CRT

Traffic Control: No control

Total Collisions: 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Dec-17, Sat,17:27	Snow	Sideswipe	P.D. only	Slush	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jun-27, Thu,17:39	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Jul-18, Thu,11:40	Clear	Sideswipe	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: HERON RD btwn BANK ST & EDGE HILL PL

Traffic Control: No control

Total Collisions: 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2017-Jan-24, Tue,08:56	Snow	SMV other	P.D. only	Ice	West	Turning right	Automobile, station wagon	Pole (utility, power)	0
2017-Aug-24, Thu,22:12	Clear	Rear end	Non-fatal injury	Dry	East	Slowing or stopping	Delivery van	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Apr-17, Tue,22:06	Clear	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Oct-12, Fri,16:47	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Nov-11, Sun,01:48	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Nov-16, Fri,17:08	Snow	SMV other	P.D. only	Slush	West	Going ahead	Automobile, station wagon	Skidding/sliding	0



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD btwn BANK ST & EDGE HILL PL

Traffic Control: No control

Total Collisions: 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Nov-30, Fri,17:30	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Unknown	Other motor vehicle	
2019-Jan-19, Sat,21:29	Clear	Rear end	P.D. only	Loose snow	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Feb-04, Mon,10:26	Clear	Rear end	P.D. only	Wet	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Delivery van	Other motor vehicle	
2019-Jun-11, Tue,11:00	Clear	Turning movement	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Oct-07, Mon,13:56	Clear	Angle	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	School bus	Other motor vehicle	

Location: HERON RD btwn BAYCREST DR & SANDALWOOD DR

Traffic Control: No control

Total Collisions: 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Sep-14, Wed,21:37	Clear	Sideswipe	Non-fatal injury	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Nov-01, Wed,09:02	Rain	Turning movement	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jul-10, Wed,12:25	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: HERON RD btwn EVANS BLVD & ALTA VISTA DR

Traffic Control: No control

Total Collisions: 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
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Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD btwn EVANS BLVD & ALTA VISTA DR

Traffic Control: No control

Total Collisions: 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Sep-29, Fri,08:47	Clear	SMV other	Non-fatal injury	Dry	West	Merging	Pick-up truck	Pedestrian	1
2019-Feb-04, Mon,10:02	Clear	Rear end	P.D. only	Loose snow	East	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Feb-05, Wed,00:50	Clear	Turning movement	P.D. only	Dry	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: HERON RD btwn FINN CRT & BAYCREST DR

Traffic Control: No control

Total Collisions: 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Feb-27, Sat,10:11	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Mar-30, Wed,11:33	Clear	Rear end	P.D. only	Dry	West	Changing lanes	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2016-Apr-04, Mon,18:17	Clear	Angle	P.D. only	Dry	North	Turning left	Passenger van	Other motor vehicle	0
					East	Going ahead	Ambulance	Other motor vehicle	
2016-Apr-06, Wed,17:57	Snow	Angle	P.D. only	Loose snow	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Municipal transit bus	Other motor vehicle	
2017-May-02, Tue,18:02	Rain	Turning movement	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Nov-20, Tue,11:10	Clear	Approaching	Non-fatal injury	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Jul-28, Sun,06:05	Clear	Rear end	Non-fatal injury	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	



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Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD btwn FINN CRT & BAYCREST DR

Traffic Control: No control

Total Collisions: 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2019-Oct-21, Mon,11:52	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-31, Tue,08:43	Clear	Rear end	P.D. only	Loose snow	East	Going ahead	Municipal transit bus	Other motor vehicle	0
					East	Turning right	Snow plow	Other motor vehicle	
2020-Aug-14, Fri,11:30	Clear	Rear end	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Sep-29, Tue,18:09	Clear	Rear end	Non-fatal injury	Dry	West	Going ahead	Passenger van	Other motor vehicle	0
					West	Going ahead	Passenger van	Other motor vehicle	

Location: HERON RD btwn JEFFERSON ST & TURN LANE

Traffic Control: No control

Total Collisions: 13

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Mar-26, Sat,12:11	Clear	Approaching	P.D. only	Dry	West	Pulling away from shoulder or curb	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Oct-07, Fri,08:04	Clear	Angle	P.D. only	Dry	North	Turning left	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Oct-23, Sun,22:55	Clear	Sideswipe	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Nov-04, Fri,07:45	Clear	Sideswipe	Non-fatal injury	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2018-Jan-08, Mon,17:41	Snow	Rear end	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jan-10, Wed,18:46	Clear	Angle	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	



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Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD btwn JEFFERSON ST & TURN LANE

Traffic Control: No control

Total Collisions: 13

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Sep-18, Tue,11:07	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Oct-30, Tue,10:45	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Nov-16, Fri,10:47	Clear	Rear end	P.D. only	Dry	West	Unknown	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-May-28, Tue,17:46	Clear	Angle	P.D. only	Dry	South	Reversing	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-May-21, Thu,05:46	Clear	Angle	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Truck - closed	Other motor vehicle	
2020-Jul-28, Tue,12:57	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Passenger van	Other motor vehicle	
					East	Slowing or stopping	Pick-up truck	Other motor vehicle	
2020-Nov-26, Thu,22:25	Clear	SMV other	Non-fatal injury	Dry	West	Going ahead	Tow truck	Pole (utility, power)	1

Location: HERON RD btwn SANDALWOOD DR & JEFFERSON ST

Traffic Control: No control

Total Collisions: 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Dec-09, Sat,23:22	Snow	SMV other	P.D. only	Loose snow	East	Going ahead	Automobile, station wagon	Curb	0
2018-May-29, Tue,09:07	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	



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Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: HERON RD btwn SANDALWOOD DR & JEFFERSON ST

Traffic Control: No control

Total Collisions: 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Jul-24, Tue,15:16	Rain	Rear end	Non-fatal injury	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Passenger van	Other motor vehicle	
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Mar-11, Mon,14:05	Clear	Sideswipe	P.D. only	Wet	West	Changing lanes	Passenger van	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-17, Fri,16:30	Clear	Other	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other	
2020-Jul-30, Thu,14:57	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Pick-up truck	Other motor vehicle	

Location: WALKLEY RD btwn 152 E OF HEATHERINGTON RD & HOLLY LANE

Traffic Control: No control

Total Collisions: 9

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jan-09, Sat,17:48	Rain	Rear end	P.D. only	Ice	West	Slowing or stopping	Delivery van	Other motor vehicle	0
					West	Slowing or stopping	Pick-up truck	Other motor vehicle	
					West	Going ahead	Delivery van	Other motor vehicle	
2016-Jan-21, Thu,11:50	Clear	Rear end	Non-fatal injury	Loose snow	West	Going ahead	Passenger van	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Jun-21, Tue,20:09	Clear	Angle	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Aug-18, Thu,11:35	Clear	Angle	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Passenger van	Other motor vehicle	



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Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: WALKLEY RD btwn 152 E OF HEATHERINGTON RD & HOLLY LANE

Traffic Control: No control

Total Collisions: 9

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Oct-04, Thu,17:55	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jan-14, Mon,15:10	Clear	Angle	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Feb-11, Mon,10:00	Clear	Rear end	P.D. only	Dry	East	Overtaking	Unknown	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jun-15, Sat,15:10	Rain	Angle	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Oct-12, Sat,14:57	Rain	Angle	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: WALKLEY RD btwn AYERS AVE & HAMPSTEAD PL

Traffic Control: No control

Total Collisions: 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Jan-31, Wed,19:16	Rain	SMV other	P.D. only	Loose snow	East	Pulling onto shoulder or toward curb	Automobile, station wagon	Ran off road	0
2019-Jun-11, Tue,21:48	Clear	Angle	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: WALKLEY RD btwn BANFF AVE & AYERS AVE

Traffic Control: No control

Total Collisions: 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Mar-01, Tue,12:09	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Snow plow	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	



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Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: WALKLEY RD btwn BANFF AVE & AYERS AVE

Traffic Control: No control

Total Collisions: 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Dec-11, Tue,09:14	Snow	Rear end	P.D. only	Loose snow	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Jan-29, Tue,15:45	Clear	Rear end	P.D. only	Loose snow	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jun-20, Thu,10:13	Rain	Rear end	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Oct-12, Sat,11:37	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-May-31, Sun,17:00	Clear	Turning movement	P.D. only	Dry	East	Turning left	Unknown	Other motor vehicle	0
					East	Going ahead	Passenger van	Other motor vehicle	

Location: WALKLEY RD btwn BANK ST & BANFF AVE

Traffic Control: No control

Total Collisions: 12

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Feb-09, Tue,10:19	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Passenger van	Other motor vehicle	0
					East	Turning right	Pick-up truck	Other motor vehicle	
2016-Nov-14, Mon,16:56	Clear	Turning movement	P.D. only	Dry	East	Going ahead	Unknown	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2017-Oct-08, Sun,14:20	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Passenger van	Other motor vehicle	
					West	Stopped	Unknown	Other motor vehicle	
2018-Dec-15, Sat,15:41	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	



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Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: WALKLEY RD btwn BANK ST & BANFF AVE

Traffic Control: No control

Total Collisions: 12

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2019-Mar-06, Wed,07:59	Clear	Rear end	P.D. only	Wet	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Mar-22, Fri,18:45	Clear	Rear end	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Aug-08, Thu,17:00	Clear	Turning movement	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Making "U" turn	Automobile, station wagon	Other motor vehicle	
2019-Sep-09, Mon,15:00	Clear	Rear end	P.D. only	Dry	West	Going ahead	Unknown	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Unknown	Other motor vehicle	
2020-Feb-18, Tue,10:55	Snow	Angle	Non-fatal injury	Loose snow	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Mar-09, Mon,14:15	Clear	Angle	P.D. only	Dry	South	Turning right	Unknown	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Mar-11, Wed,08:20	Clear	Turning movement	P.D. only	Dry	East	Making "U" turn	Pick-up truck	Other motor vehicle	0
					East	Making "U" turn	Automobile, station wagon	Other motor vehicle	
2020-Aug-08, Sat,11:05	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Unknown	Other motor vehicle	

Location: WALKLEY RD btwn BAYCREST DR & HEATHERINGTON RD

Traffic Control: No control

Total Collisions: 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Feb-12, Fri,12:27	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: WALKLEY RD btwn BAYCREST DR & HEATHERINGTON RD

Traffic Control: No control

Total Collisions: 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jul-12, Tue,15:17	Clear	Angle	Non-fatal injury	Dry	South	Going ahead	Motorcycle	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2017-Jan-05, Thu,15:17	Clear	Angle	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2017-Jul-31, Mon,09:52	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2017-Oct-02, Mon,02:26	Clear	SMV other	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Pole (utility, power)	0
2017-Oct-18, Wed,17:31	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Passenger van	Other motor vehicle	
2018-Jul-20, Fri,14:20	Clear	Angle	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Motorcycle	Other motor vehicle	
2018-Sep-04, Tue,13:07	Clear	Rear end	Non-fatal injury	Dry	East	Slowing or stopping	Passenger van	Other motor vehicle	0
					East	Going ahead	Passenger van	Other motor vehicle	
2018-Oct-15, Mon,07:09	Clear	Angle	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Nov-30, Fri,17:24	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Dec-01, Sat,11:12	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: WALKLEY RD btwn COLLISTON CRES & CEDARWOOD DR

Traffic Control: No control

Total Collisions: 8

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
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Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: WALKLEY RD btwn COLLISTON CRES & CEDARWOOD DR

Traffic Control: No control

Total Collisions: 8

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-May-07, Sat,00:05	Clear	SMV other	P.D. only	Dry	North	Turning left	Automobile, station wagon	Curb	0
2016-Jul-23, Sat,20:30	Clear	Sideswipe	Non-fatal injury	Dry	East	Going ahead	Pick-up truck	Cyclist	0
					East	Going ahead	Bicycle	Other motor vehicle	
2016-Nov-18, Fri,14:15	Clear	Other	Non-fatal injury	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Mar-20, Mon,12:15	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Pick-up truck	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jun-08, Fri,08:36	Clear	Angle	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Dec-03, Mon,10:28	Rain	SMV other	Non-fatal injury	Wet	East	Going ahead	Automobile, station wagon	Curb	0
2019-Jun-03, Mon,23:08	Clear	SMV other	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Debris on road	0
2019-Jun-25, Tue,15:53	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Bicycle	Other motor vehicle	0
					East	Going ahead	Passenger van	Cyclist	

Location: WALKLEY RD btwn COLLISTON CRES & COLLISTON CRES

Traffic Control: No control

Total Collisions: 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Oct-24, Tue,19:23	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	

Location: WALKLEY RD btwn HAMPSTEAD PL & JASPER AVE

Traffic Control: No control

Total Collisions: 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
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Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: WALKLEY RD btwn HAMPSTEAD PL & JASPER AVE

Traffic Control: No control

Total Collisions: 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-May-19, Thu,11:41	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: WALKLEY RD btwn HEATHERINGTON RD & 152 E OF HEATHERINGTON RD

Traffic Control: No control

Total Collisions: 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2017-Jul-05, Wed,18:37	Clear	Angle	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jan-13, Sat,13:45	Clear	Sideswipe	P.D. only	Ice	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-04, Sat,20:46	Snow	SMV other	P.D. only	Ice	East	Going ahead	Automobile, station wagon	Pole (utility, power)	0

Location: WALKLEY RD btwn HERON RD & HOLLY LANE

Traffic Control: No control

Total Collisions: 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2016-Jan-12, Tue,16:22	Clear	SMV other	Non-fatal injury	Loose snow	West	Turning right	Pick-up truck	Skidding/sliding	0
2016-Jun-07, Tue,17:23	Clear	Angle	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Oct-06, Thu,17:24	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Feb-28, Tue,15:30	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Feb-28, Tue,18:15	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Delivery van	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: WALKLEY RD btwn HERON RD & HOLLY LANE

Traffic Control: No control

Total Collisions: 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Apr-28, Fri,15:25	Clear	Angle	Non-fatal injury	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Motorcycle	Other motor vehicle	
2017-Jul-14, Fri,16:39	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Oct-21, Sat,13:53	Clear	Sideswipe	Non-fatal injury	Dry	East	Going ahead	Bicycle	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Cyclist	
2019-Nov-04, Mon,15:03	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Nov-18, Mon,17:02	Clear	Rear end	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Dec-08, Tue,09:12	Clear	Rear end	P.D. only	Dry	West	Going ahead	Truck - closed	Other motor vehicle	0
					West	Stopped	Truck - closed	Other motor vehicle	

Location: WALKLEY RD btwn HERON RD & TURN LANE

Traffic Control: No control

Total Collisions: 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jul-26, Tue,14:00	Clear	Sideswipe	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Apr-17, Tue,12:15	Snow	Sideswipe	P.D. only	Wet	East	Changing lanes	Pick-up truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	

Location: WALKLEY RD btwn JASPER AVE & COLLISTON CRES

Traffic Control: No control

Total Collisions: 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
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Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 To: December 31, 2020

Location: WALKLEY RD btwn JASPER AVE & COLLISTON CRES

Traffic Control: No control

Total Collisions: 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Apr-17, Mon,01:07	Clear	Turning movement	P.D. only	Dry	West	Making "U" turn	Passenger van	Other motor vehicle	0
					West	Going ahead	Passenger van	Other motor vehicle	
2020-Sep-28, Mon,17:38	Clear	Rear end	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	

Appendix C
MMLOS Summary

Multi-Modal Level of Service - Intersections Form

Consultant
Scenario
Comments

STANTEC
Existing

Project
Date

1495 Heron Road
1-Feb-2023

INTERSECTIONS														
Crossing Side		Heron Rd and Bank St				Heron Rd and Alta Vista Dr				Heron Rd and BaycrestDr				
		NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	
Pedestrian	Lanes	7	8	7	7	5	5	7	7	3	0 - 2	6	7	
	Median	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	
	Conflicting Left Turns	Protected	Protected	Permissive	Protected/ Permissive	Protected/ Permissive	Permissive	Protected	Protected	Permissive	Permissive	Permissive	Permissive	
	Conflicting Right Turns	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	
	Right Turns on Red (RTOR) ?	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	
	Ped Signal Leading Interval?	No	No	No	No	No	No	No	No	No	No	No	No	
	Right Turn Channel	No Channel	Conventional with Receiving Lane	Conventional with Receiving Lane	Conv'tl without Receiving Lane	Conv'tl without Receiving Lane	Conv'tl without Receiving Lane	Conv'tl without Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	No Channel	No Channel	No Channel	No Channel
	Corner Radius	10-15m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	5-10m	5-10m	5-10m	5-10m
	Crosswalk Type	Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings
	PETSI Score	12	-5	3	6	42	42	14	14	71	86	21	5	
	Ped. Exposure to Traffic LoS	F	F	F	F	E	E	F	F	C	B	F	F	
	Cycle Length	130	130	130	130	130	130	130	130	90	90	90	90	
	Effective Walk Time	11	11	11	11	11	11	11	11	19	19	14	14	
	Average Pedestrian Delay	54	54	54	54	54	54	54	54	28	28	32	32	
Pedestrian Delay LoS	E	E	E	E	E	E	E	E	C	C	D	D		
Level of Service	F	F	F	F	E	E	F	F	C	C	F	F		
Approach From		NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	
Bicycle	Bicycle Lane Arrangement on Approach	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Pocket Bike Lane	Pocket Bike Lane	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	
	IF Dedicated Right Turn Lane, THEN Right Turn Configuration, ELSE <blank>			> 50 m	> 50 m									
	Dedicated Right Turning Speed			>25 km/h	>25 km/h									
	Cyclist Through Movement			F	F							Not Applicable	Not Applicable	
	Separated or Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Separated	Separated	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Separated	Separated	
	Left Turn Approach	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	1 lane crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	One lane crossed	No lane crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	
	Operating Speed	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	
Left Turning Cyclist	F	F	F	F	F	D	F	F	E	C	F	F		
Level of Service	F	F	F	F	F	D	F	F	E	C	F	F		
Level of Service		F				F				F				
Transit	Average Signal Delay	> 40 sec	> 40 sec	> 40 sec	≤ 40 sec	> 40 sec	> 40 sec	> 40 sec	> 40 sec	≤ 30 sec	≤ 40 sec	≤ 20 sec	≤ 20 sec	
	Level of Service	F	F	F	E	F	F	F	F	D	E	C	C	
Level of Service		F				F				E				
Truck	Effective Corner Radius	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	< 10 m	< 10 m	< 10 m	< 10 m	
	Number of Receiving Lanes on Departure from Intersection	≥ 2	≥ 2	≥ 2	≥ 2	≥ 2	≥ 2	1	1	≥ 2	≥ 2	1	1	
Level of Service	A	A	A	A	A	A	C	C	D	D	F	F		
Level of Service		A				C				F				
Auto	Volume to Capacity Ratio	> 1.00				0.91 - 1.00				0.61 - 0.70				
	Level of Service	F				E				B				

Multi-Modal Level of Service - Segments Form

Consultant	STANTEC
Scenario	Existing
Comments	

Project	1495 Heron Road
Date	1-Feb-23

SEGMENTS	LOS	Heron Road	Heron Road	Heron Road	Heron Road	Heron Road	Bank St	Baycrest Dr	
		Bank St - Alta Vista Dr	Alta Vista Dr-Baycrest Dr	Baycrest Dr-Sandalwood Dr	Sandalwood Dr-Jefferson St	Jefferson St-Walkley Rd	Heron Rd-Walkley Rd	Heron Rd-Walkley Rd	
Pedestrian	Sidewalk Width	1.8 m	1.8 m	1.8 m	1.8 m	1.8 m	1.5 m	1.8 m	
	Boulevard Width	< 0.5 m	> 2 m	> 2 m	> 2 m	> 2 m	< 0.5 m	0.5 - 2 m	
	Avg Daily Curb Lane Traffic Volume	> 3000	> 3000	> 3000	> 3000	> 3000	> 3000	≤ 3000	
	Operating Speed	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 30 to 50 km/h	
	On-Street Parking	no	no	no	no	no	no	yes	
	Exposure to Traffic PLoS	F	D	D	D	D	F	B	
	Level of Service	F	D	D	D	D	F	B	
Bicycle	Type of Cycling Facility	Mixed Traffic	Mixed Traffic	Curbside Bike Lane	Curbside Bike Lane	Mixed Traffic	Mixed Traffic	Mixed Traffic	
	Number of Travel Lanes	2-3 lanes total	2-3 lanes total	2 ea. dir. (w median)	2 ea. dir. (w median)	2-3 lanes total	4-5 lanes total	2-3 lanes total	
	Operating Speed	≥ 50 to 60 km/h	≥ 50 to 60 km/h	>50 to 70 km/h	>50 to 70 km/h	≥ 50 to 60 km/h	≥ 50 to 60 km/h	>40 to <50 km/h	
		# of Lanes & Operating Speed LoS	E	E	C	C	E	E	D
	Bike Lane (+ Parking Lane) Width			≥1.5 to <1.8 m	≥1.5 to <1.8 m				
		Bike Lane Width LoS	-	-	B	B	-	-	-
	Bike Lane Blockages			Rare	Frequent				
	Blockage LoS	-	-	A	C	-	-	-	
	Level of Service	E	E	C	C	E	E	D	
Transit	Facility Type	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	
	Friction or Ratio Transit:Posted Speed	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≤ 0.4	
		Level of Service	D	D	D	D	D	F	
Truck	Truck Lane Width	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.3 m	≤ 3.2 m	
	Travel Lanes per Direction	> 1	> 1	> 1	> 1	> 1	> 1	1	
		Level of Service	A	A	A	A	A	C	E

Multi-Modal Level of Service - Intersections Form

Consultant
Scenario
Comments

STANTEC
2032 Full Background

Project
Date

1495 Heron Road
1-Feb-2023

INTERSECTIONS														
Crossing Side		Heron Rd and Bank St				Heron Rd and Alta Vista Dr				Heron Rd and BaycrestDr				
		NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	
Pedestrian	Lanes	7	8	7	7	5	5	7	7	3	0 - 2	6	7	
	Median	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	
	Conflicting Left Turns	Protected	Protected	Protected/ Permissive	Protected/ Permissive	Protected/ Permissive	Permissive	Protected	Protected	Permissive	Permissive	Permissive	Permissive	
	Conflicting Right Turns	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	
	Right Turns on Red (RTOR) ?	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	
	Ped Signal Leading Interval?	No	No	No	No	No	No	No	No	No	No	No	No	
	Right Turn Channel	No Channel	Conventional with Receiving Lane	Conventional with Receiving Lane	Conv'tl without Receiving Lane	Conv'tl without Receiving Lane	Conv'tl without Receiving Lane	Conv'tl without Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	No Channel	No Channel	No Channel	No Channel
	Corner Radius	10-15m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	5-10m	5-10m	5-10m	5-10m
	Crosswalk Type	Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings
	PETSI Score	12	-5	3	6	42	42	14	14	71	86	21	5	
	Ped. Exposure to Traffic LoS	F	F	F	F	E	E	F	F	C	B	F	F	
	Cycle Length	130	130	130	130	130	130	130	130	90	90	90	90	
	Effective Walk Time	11	11	11	11	11	11	11	11	19	19	14	14	
	Average Pedestrian Delay	54	54	54	54	54	54	54	54	28	28	32	32	
Pedestrian Delay LoS	E	E	E	E	E	E	E	E	C	C	D	D		
Level of Service	F	F	F	F	E	E	F	F	C	C	F	F		
Approach From		NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	
Bicycle	Bicycle Lane Arrangement on Approach	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Pocket Bike Lane	Pocket Bike Lane	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	
	IF Dedicated Right Turn Lane, THEN Right Turn Configuration, ELSE <blank>			> 50 m	> 50 m									
	Dedicated Right Turning Speed			>25 km/h	>25 km/h									
	Cyclist Through Movement			F	F							Not Applicable	Not Applicable	
	Separated or Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Separated	Separated	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Separated	Separated	
	Left Turn Approach	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	1 lane crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	One lane crossed	No lane crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	
	Operating Speed	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	
Left Turning Cyclist	F	F	F	F	F	D	F	F	E	C	F	F		
Level of Service	F	F	F	F	F	D	F	F	E	C	F	F		
Level of Service		F				F				F				
Transit	Average Signal Delay	> 40 sec	> 40 sec	> 40 sec	> 40 sec	> 40 sec	> 40 sec	> 40 sec	> 40 sec	≤ 30 sec	≤ 40 sec	≤ 20 sec	≤ 20 sec	
	Level of Service	F	F	F	F	F	F	F	F	D	E	C	C	
Level of Service		F				F				E				
Truck	Effective Corner Radius	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	< 10 m	< 10 m	< 10 m	< 10 m	
	Number of Receiving Lanes on Departure from Intersection	≥ 2	≥ 2	≥ 2	≥ 2	≥ 2	≥ 2	1	1	≥ 2	≥ 2	1	1	
Level of Service	A	A	A	A	A	A	C	C	D	D	F	F		
Level of Service		A				C				F				
Auto	Volume to Capacity Ratio	> 1.00				> 1.00				0.71 - 0.80				
	Level of Service	F				F				C				

Multi-Modal Level of Service - Segments Form

Consultant	STANTEC
Scenario	2032 Full Background
Comments	

Project	1495 Heron Road
Date	1-Feb-2023

SEGMENTS	LOS	Heron Road	Heron Road	Heron Road	Heron Road	Heron Road	Bank St	Baycrest Dr	
		Bank St - Alta Vista Dr	Alta Vista Dr-Baycrest Dr	Baycrest Dr-Sandalwood Dr	Sandalwood Dr-Jefferson St	Jefferson St-Walkley Rd	Heron Rd-Walkley Rd	Heron Rd-Walkley Rd	
Pedestrian	Sidewalk Width	1.8 m	1.8 m	1.8 m	1.8 m	1.8 m	1.5 m	1.8 m	
	Boulevard Width	< 0.5 m	> 2 m	> 2 m	> 2 m	> 2 m	< 0.5 m	0.5 - 2 m	
	Avg Daily Curb Lane Traffic Volume	> 3000	> 3000	> 3000	> 3000	> 3000	> 3000	≤ 3000	
	Operating Speed	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 30 to 50 km/h	
	On-Street Parking	no	no	no	no	no	no	yes	
	Exposure to Traffic PLoS	F	D	D	D	D	F	B	
	Level of Service	F	D	D	D	D	F	B	
Bicycle	Type of Cycling Facility	Mixed Traffic	Mixed Traffic	Curbside Bike Lane	Curbside Bike Lane	Mixed Traffic	Mixed Traffic	Mixed Traffic	
	Number of Travel Lanes	2-3 lanes total	2-3 lanes total	2 ea. dir. (w median)	2 ea. dir. (w median)	2-3 lanes total	4-5 lanes total	2-3 lanes total	
	Operating Speed	≥ 50 to 60 km/h	≥ 50 to 60 km/h	>50 to 70 km/h	>50 to 70 km/h	≥ 50 to 60 km/h	≥ 50 to 60 km/h	>40 to <50 km/h	
		# of Lanes & Operating Speed LoS	E	E	C	C	E	E	D
	Bike Lane (+ Parking Lane) Width			≥1.5 to <1.8 m	≥1.5 to <1.8 m				
		Bike Lane Width LoS	-	-	B	B	-	-	-
	Bike Lane Blockages			Rare	Frequent				
	Blockage LoS	-	-	A	C	-	-	-	
	Level of Service	E	E	C	C	E	E	D	
Transit	Facility Type	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	
	Friction or Ratio Transit:Posted Speed	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	
		Level of Service	D	D	D	D	D	D	
Truck	Truck Lane Width	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.3 m	≤ 3.2 m	
	Travel Lanes per Direction	> 1	> 1	> 1	> 1	> 1	> 1	1	
		Level of Service	A	A	A	A	A	C	E

Multi-Modal Level of Service - Intersections Form

Consultant
Scenario
Comments

STANTEC
2032 Total Future

Project
Date

1495 Heron Road
1-Feb-2023

INTERSECTIONS													
Crossing Side	Heron Rd and Bank St				Heron Rd and Alta Vista Dr				Heron Rd and BaycrestDr				
	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	
Pedestrian	Lanes	7	8	7	7	5	5	7	7	3	0 - 2	6	7
	Median	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m
	Conflicting Left Turns	Protected	Protected	Protected/ Permissive	Protected/ Permissive	Protected/ Permissive	Permissive	Protected	Protected	Permissive	Permissive	Permissive	Permissive
	Conflicting Right Turns	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control
	Right Turns on Red (RTOR) ?	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed
	Ped Signal Leading Interval?	No	No	No	No	No	No	No	No	No	No	No	No
	Right Turn Channel	No Channel	Conventional with Receiving Lane	Conventional with Receiving Lane	Conv'tl without Receiving Lane	Conv'tl without Receiving Lane	Conv'tl without Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	No Channel	No Channel	No Channel	No Channel
	Corner Radius	10-15m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	5-10m	5-10m	5-10m	5-10m
	Crosswalk Type	Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings
	PETSI Score	12	-5	3	6	42	42	14	14	71	86	21	5
	Ped. Exposure to Traffic LoS	F	F	F	F	E	E	F	F	C	B	F	F
	Cycle Length	130	130	130	130	130	130	130	130	120	120	120	120
	Effective Walk Time	11	11	11	11	11	11	11	11	19	19	14	14
	Average Pedestrian Delay	54	54	54	54	54	54	54	54	43	43	47	47
Pedestrian Delay LoS	E	E	E	E	E	E	E	E	E	E	E	E	
Level of Service	F	F	F	F	E	E	F	F	E	E	F	F	
Approach From	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	
Bicycle	Bicycle Lane Arrangement on Approach	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Pocket Bike Lane	Pocket Bike Lane	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP
	IF Dedicated Right Turn Lane, THEN Right Turn Configuration, ELSE <blank>			> 50 m	> 50 m								
	Dedicated Right Turning Speed			>25 km/h	>25 km/h								
	Cyclist Through Movement			F	F							Not Applicable	Not Applicable
	Separated or Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Separated	Separated	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Separated	Separated
	Left Turn Approach	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	1 lane crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	One lane crossed	No lane crossed	≥ 2 lanes crossed	≥ 2 lanes crossed
	Operating Speed	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h
Left Turning Cyclist	F	F	F	F	F	D	F	F	E	C	F	F	
Level of Service	F	F	F	F	F	D	F	F	E	C	F	F	
Level of Service	F				F				F				
Transit	Average Signal Delay	> 40 sec	> 40 sec	> 40 sec	> 40 sec	> 40 sec	> 40 sec	> 40 sec	> 40 sec	≤ 30 sec	> 40 sec	≤ 20 sec	≤ 20 sec
	Level of Service	F	F	F	F	F	F	F	F	D	F	C	C
Level of Service	F				F				F				
Truck	Effective Corner Radius	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	< 10 m	< 10 m	< 10 m	< 10 m
	Number of Receiving Lanes on Departure from Intersection	≥ 2	≥ 2	≥ 2	≥ 2	≥ 2	≥ 2	1	1	≥ 2	≥ 2	1	1
Level of Service	A	A	A	A	A	A	C	C	D	D	F	F	
Level of Service	A				C				F				
Auto	Volume to Capacity Ratio	> 1.00				> 1.00				0.71 - 0.80			
	Level of Service	F				F				C			

Multi-Modal Level of Service - Segments Form

Consultant	STANTEC
Scenario	2032 Total Future
Comments	

Project	1495 Heron Road
Date	1-Feb-2023

SEGMENTS	LOS	Heron Road	Heron Road	Heron Road	Heron Road	Heron Road	Bank St	Baycrest Dr	
		Bank St - Alta Vista Dr	Alta Vista Dr-Baycrest Dr	Baycrest Dr-Sandalwood Dr	Sandalwood Dr-Jefferson St	Jefferson St-Walkley Rd	Heron Rd-Walkley Rd	Heron Rd-Walkley Rd	
Pedestrian	Sidewalk Width	1.8 m	1.8 m	1.8 m	1.8 m	1.8 m	1.5 m	1.8 m	
	Boulevard Width	< 0.5 m	> 2 m	> 2 m	> 2 m	> 2 m	< 0.5 m	0.5 - 2 m	
	Avg Daily Curb Lane Traffic Volume	> 3000	> 3000	> 3000	> 3000	> 3000	> 3000	≤ 3000	
	Operating Speed	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 30 to 50 km/h	
	On-Street Parking	no	no	no	no	no	no	yes	
	Exposure to Traffic PLoS	F	D	D	D	D	F	B	
	Level of Service	F	D	D	D	D	F	B	
Bicycle	Type of Cycling Facility	Mixed Traffic	Mixed Traffic	Curbside Bike Lane	Curbside Bike Lane	Mixed Traffic	Mixed Traffic	Mixed Traffic	
	Number of Travel Lanes	2-3 lanes total	2-3 lanes total	2 ea. dir. (w median)	2 ea. dir. (w median)	2-3 lanes total	4-5 lanes total	2-3 lanes total	
	Operating Speed	≥ 50 to 60 km/h	≥ 50 to 60 km/h	>50 to 70 km/h	>50 to 70 km/h	≥ 50 to 60 km/h	≥ 50 to 60 km/h	>40 to <50 km/h	
		# of Lanes & Operating Speed LoS	E	E	C	C	E	E	D
	Bike Lane (+ Parking Lane) Width			≥1.5 to <1.8 m	≥1.5 to <1.8 m				
		Bike Lane Width LoS	-	-	B	B	-	-	-
	Bike Lane Blockages			Rare	Frequent				
	Blockage LoS	-	-	A	C	-	-	-	
	Level of Service	E	E	C	C	E	E	D	
Transit	Facility Type	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	
	Friction or Ratio Transit:Posted Speed	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	
		Level of Service	D	D	D	D	D	D	
Truck	Truck Lane Width	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.3 m	≤ 3.2 m	
	Travel Lanes per Direction	> 1	> 1	> 1	> 1	> 1	> 1	1	
		Level of Service	A	A	A	A	A	C	E

Multi-Modal Level of Service - Intersections Form

Consultant
Scenario
Comments

STANTEC
2037 Ultimate

Project
Date

1495 Heron Road
1-Feb-2023

INTERSECTIONS														
Crossing Side		Heron Rd and Bank St				Heron Rd and Alta Vista Dr				Heron Rd and BaycrestDr				
		NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	
Pedestrian	Lanes	7	8	7	7	5	5	7	7	3	0 - 2	6	7	
	Median	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	
	Conflicting Left Turns	Protected	Protected	Protected/ Permissive	Protected/ Permissive	Protected/ Permissive	Permissive	Protected	Protected	Permissive	Permissive	Permissive	Permissive	
	Conflicting Right Turns	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	
	Right Turns on Red (RTOR) ?	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	
	Ped Signal Leading Interval?	No	No	No	No	No	No	No	No	No	No	No	No	
	Right Turn Channel	No Channel	Conventional with Receiving Lane	Conventional with Receiving Lane	Conv'tl without Receiving Lane	Conv'tl without Receiving Lane	Conv'tl without Receiving Lane	Conv'tl without Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	No Channel	No Channel	No Channel	No Channel
	Corner Radius	10-15m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	5-10m	5-10m	5-10m	5-10m
	Crosswalk Type	Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings
	PETSI Score	12	-5	3	6	42	42	14	14	71	86	21	5	
	Ped. Exposure to Traffic LoS	F	F	F	F	E	E	F	F	C	B	F	F	
	Cycle Length	130	130	130	130	130	130	130	130	120	120	120	120	
	Effective Walk Time	11	11	11	11	11	11	11	11	19	19	14	14	
	Average Pedestrian Delay	54	54	54	54	54	54	54	54	43	43	47	47	
Pedestrian Delay LoS	E	E	E	E	E	E	E	E	E	E	E	E		
Level of Service	F	F	F	F	E	E	F	F	E	E	F	F		
Approach From		NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	
Bicycle	Bicycle Lane Arrangement on Approach	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Pocket Bike Lane	Pocket Bike Lane	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	
	IF Dedicated Right Turn Lane, THEN Right Turn Configuration, ELSE <blank>			> 50 m	> 50 m									
	Dedicated Right Turning Speed			>25 km/h	>25 km/h									
	Cyclist Through Movement			F	F							Not Applicable	Not Applicable	
	Separated or Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Separated	Separated	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Separated	Separated	
	Left Turn Approach	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	1 lane crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	One lane crossed	No lane crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	
	Operating Speed	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	
Left Turning Cyclist	F	F	F	F	F	D	F	F	E	C	F	F		
Level of Service	F	F	F	F	F	D	F	F	E	C	F	F		
Level of Service		F				F				F				
Transit	Average Signal Delay	> 40 sec	> 40 sec	> 40 sec	> 40 sec	> 40 sec	> 40 sec	> 40 sec	> 40 sec	≤ 30 sec	> 40 sec	≤ 30 sec	≤ 20 sec	
	Level of Service	F	F	F	F	F	F	F	F	D	F	D	C	
Level of Service		F				F				F				
Truck	Effective Corner Radius	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	< 10 m	< 10 m	< 10 m	< 10 m	
	Number of Receiving Lanes on Departure from Intersection	≥ 2	≥ 2	≥ 2	≥ 2	≥ 2	≥ 2	1	1	≥ 2	≥ 2	1	1	
Level of Service	A	A	A	A	A	A	C	C	D	D	F	F		
Level of Service		A				C				F				
Auto	Volume to Capacity Ratio	> 1.00				> 1.00				0.81 - 0.90				
	Level of Service	F				F				D				

Multi-Modal Level of Service - Segments Form

Consultant	STANTEC
Scenario	2032 Total Future
Comments	

Project	1495 Heron Road
Date	1-Feb-2023

























SEGMENTS	LOS	Heron Road	Heron Road	Heron Road	Heron Road	Heron Road	Bank St	Baycrest Dr	
		Bank St - Alta Vista Dr	Alta Vista Dr-Baycrest Dr	Baycrest Dr-Sandalwood Dr	Sandalwood Dr-Jefferson St	Jefferson St-Walkley Rd	Heron Rd-Walkley Rd	Heron Rd-Walkley Rd	
Pedestrian	F	Sidewalk Width	1.8 m	1.8 m	1.8 m	1.8 m	1.8 m	1.5 m	1.8 m
		Boulevard Width	< 0.5 m	> 2 m	> 2 m	> 2 m	> 2 m	< 0.5 m	0.5 - 2 m
		Avg Daily Curb Lane Traffic Volume	> 3000	> 3000	> 3000	> 3000	> 3000	> 3000	≤ 3000
		Operating Speed	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 50 to 60 km/h	> 30 to 50 km/h
		On-Street Parking	no	no	no	no	no	no	yes
		F	D	D	D	D	F	B	
		Exposure to Traffic PLoS							
		Level of Service							
		F	D	D	D	D	F	B	
Bicycle	E	Type of Cycling Facility	Mixed Traffic	Mixed Traffic	Curbside Bike Lane	Curbside Bike Lane	Mixed Traffic	Mixed Traffic	Mixed Traffic
		Number of Travel Lanes	2-3 lanes total	2-3 lanes total	2 ea. dir. (w median)	2 ea. dir. (w median)	2-3 lanes total	4-5 lanes total	2-3 lanes total
		Operating Speed	≥ 50 to 60 km/h	≥ 50 to 60 km/h	>50 to 70 km/h	>50 to 70 km/h	≥ 50 to 60 km/h	≥ 50 to 60 km/h	>40 to <50 km/h
			E	E	C	C	E	E	D
			# of Lanes & Operating Speed LoS						
			Bike Lane (+ Parking Lane) Width						
			Bike Lane Width LoS						
			Bike Lane Blockages						
	Blockage LoS								
		-	-	B	B	-	-	-	
		-	-	Rare	Frequent	-	-	-	
		-	-	A	C	-	-	-	
		Level of Service							
		E	E	C	C	E	E	D	
Transit	D	Facility Type	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
		Friction or Ratio Transit:Posted Speed	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8
			Level of Service						
		D	D	D	D	D	D	D	
Truck	E	Truck Lane Width	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.5 m	≤ 3.3 m	≤ 3.2 m
		Travel Lanes per Direction	> 1	> 1	> 1	> 1	> 1	> 1	1
			Level of Service						
		A	A	A	A	A	C	E	

Appendix D
Synchro LOS Summary

Lanes, Volumes, Timings

1: Bank St & Heron Rd

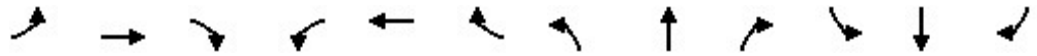
07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	146	639	241	70	904	184	482	1046	20	142	319	92
Future Volume (vph)	146	639	241	70	904	184	482	1046	20	142	319	92
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	73.0		85.0	50.0		70.0	110.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	20.0			30.0			0.0			0.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.97	0.99		0.98	0.99	1.00		0.99	0.99	
Frt			0.850			0.850		0.997			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3357	1446	1662	3293	1473	3225	3339	0	1712	3129	0
Flt Permitted	0.095			0.382			0.950			0.950		
Satd. Flow (perm)	171	3357	1404	664	3293	1438	3178	3339	0	1703	3129	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			268			208		2			28	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		381.8			492.5			121.2			274.8	
Travel Time (s)		27.5			35.5			8.7			19.8	
Confl. Peds. (#/hr)	8		13	13		8	12		20	20		12
Confl. Bikes (#/hr)			1			3			3			9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	3%	7%	4%	5%	5%	4%	3%	13%	1%	7%	2%
Adj. Flow (vph)	162	710	268	78	1004	204	536	1162	22	158	354	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	162	710	268	78	1004	204	536	1184	0	158	456	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0	10.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	13.5	34.4	34.4	32.5	32.5	32.5	13.5	32.4		13.5	32.4	
Total Split (s)	13.0	55.0	55.0	42.0	42.0	42.0	32.0	49.0		16.0	33.0	
Total Split (%)	10.8%	45.8%	45.8%	35.0%	35.0%	35.0%	26.7%	40.8%		13.3%	27.5%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.1	3.1	1.0	1.0	1.0	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	4.3	4.3	4.3	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	48.5	48.6	48.6	37.7	37.7	37.7	23.6	42.6		9.5	28.5	
Actuated g/C Ratio	0.40	0.40	0.40	0.31	0.31	0.31	0.20	0.36		0.08	0.24	
v/c Ratio	1.07	0.52	0.37	0.38	0.97	0.34	0.85	1.00		1.17	0.60	
Control Delay	120.4	28.7	4.2	38.5	62.8	5.5	43.9	43.6		178.4	42.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	120.4	28.7	4.2	38.5	62.8	5.5	43.9	43.6		178.4	42.3	
LOS	F	C	A	D	E	A	D	D		F	D	

Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024

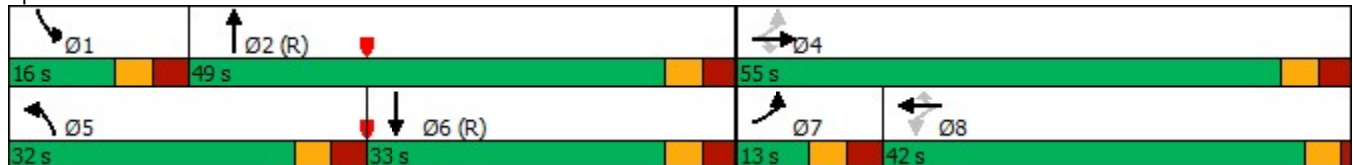


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		36.0			52.2			43.7			77.3	
Approach LOS		D			D			D			E	
Queue Length 50th (m)	~26.8	65.4	0.0	14.2	122.4	0.0	44.2	129.2		~44.2	48.2	
Queue Length 95th (m)	#70.3	83.3	15.9	29.1	#165.7	15.9	m63.1	m#177.3		#86.4	66.0	
Internal Link Dist (m)		357.8			468.5			97.2			250.8	
Turn Bay Length (m)	73.0		85.0	50.0		70.0	110.0			70.0		
Base Capacity (vph)	152	1359	728	208	1034	594	685	1186		135	764	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.07	0.52	0.37	0.38	0.97	0.34	0.78	1.00		1.17	0.60	

Intersection Summary






















Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	52 (43%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	135
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.17
Intersection Signal Delay:	48.5
Intersection LOS:	D
Intersection Capacity Utilization:	94.2%
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.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Bank St & Heron Rd



Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	623	81	136	978	186	63	253	168	118	246	117
Future Volume (vph)	95	623	81	136	978	186	63	253	168	118	246	117
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		0.0	57.0		85.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (m)	30.0			24.0			2.5			48.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.97	0.99		0.96		0.83	0.99	0.95		0.96	0.99	
Frt		0.983				0.850		0.940			0.952	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3206	0	1695	3293	1459	1601	1582	0	1631	1690	0
Flt Permitted	0.950			0.950			0.525			0.139		
Satd. Flow (perm)	1654	3206	0	1636	3293	1213	873	1582	0	230	1690	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				207		36			32	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		492.5			657.5			201.9			270.3	
Travel Time (s)		35.5			47.3			14.5			19.5	
Confl. Peds. (#/hr)	54		37	37		54	21		110	110		21
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	5%	1%	2%	5%	6%	8%	2%	3%	6%	2%	0%
Adj. Flow (vph)	106	692	90	151	1087	207	70	281	187	131	273	130
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	782	0	151	1087	207	70	468	0	131	403	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0	10.0	10.0	10.0		7.0	10.0	
Minimum Split (s)	12.4	23.4		12.4	23.4	23.4	29.9	29.9		11.5	29.9	
Total Split (s)	13.0	34.0		13.0	34.0	34.0	30.0	30.0		13.0	43.0	
Total Split (%)	14.4%	37.8%		14.4%	37.8%	37.8%	33.3%	33.3%		14.4%	47.8%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.1	2.1	2.1	2.6	2.6		1.0	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4	5.4	5.9	5.9		4.3	5.9	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	7.5	28.6		7.6	28.7	28.7	24.5	24.5		38.7	37.1	
Actuated g/C Ratio	0.08	0.32		0.08	0.32	0.32	0.27	0.27		0.43	0.41	
v/c Ratio	0.74	0.76		1.06	1.04	0.39	0.30	1.03		0.57	0.56	
Control Delay	71.2	32.7		134.0	54.3	2.5	30.5	81.6		26.3	22.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	71.2	32.7		134.0	54.3	2.5	30.5	81.6		26.3	22.2	
LOS	E	C		F	D	A	C	F		C	C	
Approach Delay		37.3			55.2			74.9			23.3	

Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

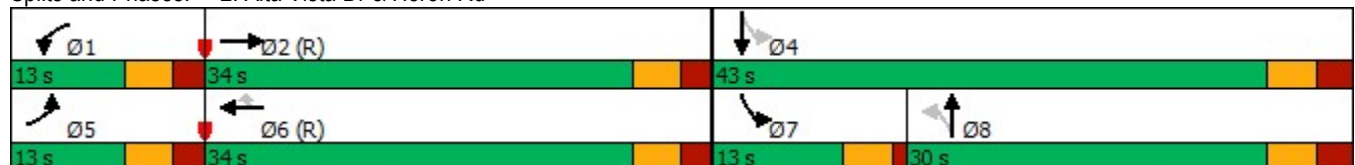


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			E			E			C		
Queue Length 50th (m)	18.2	62.3		~30.1	~74.6	0.0	9.6	~83.4		13.6	47.7	
Queue Length 95th (m)	#43.5	83.5		m#61.5	#142.5	m3.9	21.3	#141.4		25.0	75.7	
Internal Link Dist (m)	468.5			633.5			177.9			246.3		
Turn Bay Length (m)	65.0			57.0		85.0				30.0		
Base Capacity (vph)	144	1029		143	1048	527	237	455		234	715	
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	0.74	0.76		1.06	1.04	0.39	0.30	1.03		0.56	0.56	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 10 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 48.7
 Intersection LOS: D
 Intersection Capacity Utilization 86.1%
 ICU Level of Service E
 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Alta Vista Dr & Heron Rd



Lanes, Volumes, Timings
3: Baycrest Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕		↖	↗	
Traffic Volume (vph)	17	705	178	24	1052	20	240	22	43	3	3	4
Future Volume (vph)	17	705	178	24	1052	20	240	22	43	3	3	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	43.0		0.0	55.0		0.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	70.0			25.0			2.5			0.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		0.99	1.00			0.97		1.00	0.98	
Frt		0.970			0.997			0.981			0.914	
Flt Protected	0.950			0.950				0.962		0.950		
Satd. Flow (prot)	1729	3187	0	1478	3283	0	0	1644	0	1729	1624	0
Flt Permitted	0.169			0.235				0.767		0.656		
Satd. Flow (perm)	307	3187	0	362	3283	0	0	1281	0	1189	1624	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		56			3			10				4
Link Speed (k/h)		50			50			50				50
Link Distance (m)		657.5			165.6			489.7				60.0
Travel Time (s)		47.3			11.9			35.3				4.3
Confl. Peds. (#/hr)	15		27	27		15	31		8	8		31
Confl. Bikes (#/hr)						1						2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	7%	17%	5%	0%	5%	0%	2%	0%	0%	0%
Adj. Flow (vph)	19	783	198	27	1169	22	267	24	48	3	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	981	0	27	1191	0	0	339	0	3	7	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	29.7	29.7		29.7	29.7		35.0	35.0		35.0	35.0	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.4	1.4		1.4	1.4		2.7	2.7		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	4.7	4.7		4.7	4.7			6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	52.8	52.8		52.8	52.8			26.5		26.5	26.5	
Actuated g/C Ratio	0.59	0.59		0.59	0.59			0.29		0.29	0.29	
v/c Ratio	0.11	0.52		0.13	0.62			0.89		0.01	0.01	
Control Delay	6.6	6.0		17.7	20.5			54.6		21.0	16.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	6.6	6.0		17.7	20.5			54.6		21.0	16.0	
LOS	A	A		B	C			D		C	B	

Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	710	17	14	999	16	31	13	15	7	13	66
Future Volume (vph)	40	710	17	14	999	16	31	13	15	7	13	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	55.0		0.0	32.0		0.0	37.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	25.0			25.0			12.0			37.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00		0.99	0.99		0.99	0.98	
Frt		0.996			0.998			0.918			0.874	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3323	0	1601	3257	0	1478	1548	0	1729	1565	0
Flt Permitted	0.226			0.334			0.701			0.737		
Satd. Flow (perm)	410	3323	0	560	3257	0	1083	1548	0	1332	1565	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			3			17			72	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		148.8			354.9			199.1			258.5	
Travel Time (s)		10.7			25.6			14.3			18.6	
Confl. Peds. (#/hr)	7		7	7		7	5		5	5		5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	27%	8%	6%	0%	17%	15%	0%	0%	0%	0%
Adj. Flow (vph)	44	789	19	16	1110	18	34	14	17	8	14	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	808	0	16	1128	0	34	31	0	8	87	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	24.3	24.3		24.3	24.3		24.1	24.1		24.1	24.1	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3		5.3	5.3		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	67.7	67.7		67.7	67.7		16.4	16.4		16.4	16.4	
Actuated g/C Ratio	0.75	0.75		0.75	0.75		0.18	0.18		0.18	0.18	
v/c Ratio	0.14	0.32		0.04	0.46		0.17	0.10		0.03	0.25	
Control Delay	2.7	2.4		8.2	8.8		33.3	19.6		30.3	12.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	2.7	2.4		8.2	8.8		33.3	19.6		30.3	12.6	
LOS	A	A		A	A		C	B		C	B	
Approach Delay		2.4			8.8			26.7			14.0	

Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024

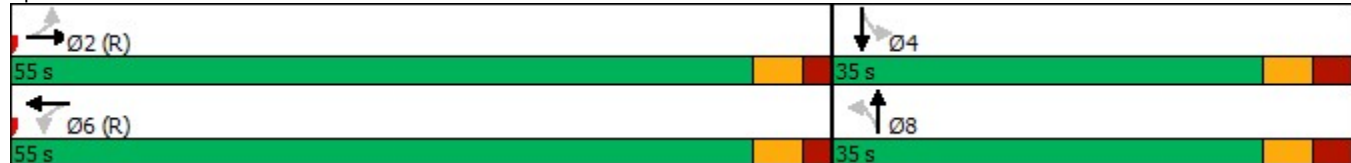


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			C			B		
Queue Length 50th (m)	0.4	3.7		0.9	46.3		5.1	2.0		1.2	2.2	
Queue Length 95th (m)	m1.2	13.3		m2.5	76.6		13.0	9.2		4.7	13.9	
Internal Link Dist (m)	124.8			330.9			175.1			234.5		
Turn Bay Length (m)	55.0			55.0			32.0			37.0		
Base Capacity (vph)	308	2499		421	2450		347	508		427	551	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.14	0.32		0.04	0.46		0.10	0.06		0.02	0.16	

Intersection Summary

























Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.46
 Intersection Signal Delay: 7.0
 Intersection LOS: A
 Intersection Capacity Utilization 58.2%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Sandalwood Dr & Heron Rd



Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	653	44	12	928	25	29	29	25	28	24	72
Future Volume (vph)	31	653	44	12	928	25	29	29	25	28	24	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	58.0		62.0	55.0		0.0	18.0		15.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	27.0			17.0			10.0			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.97	1.00	1.00		1.00		0.98		0.99	
Frt			0.850		0.996				0.850		0.922	
Flt Protected	0.950			0.950			0.950				0.989	
Satd. Flow (prot)	1572	3357	1419	1383	3278	0	1679	1820	1381	0	1566	0
Flt Permitted	0.207			0.340			0.684				0.935	
Satd. Flow (perm)	342	3357	1379	494	3278	0	1204	1820	1357	0	1479	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			49		5				32			80
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		354.9			465.1			176.5			237.6	
Travel Time (s)		25.6			33.5			12.7			17.1	
Confl. Peds. (#/hr)	6		4	4		6	5		5	5		5
Confl. Bikes (#/hr)			2						1			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	3%	9%	25%	5%	4%	3%	0%	12%	4%	0%	7%
Adj. Flow (vph)	34	726	49	13	1031	28	32	32	28	31	27	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	34	726	49	13	1059	0	32	32	28	0	138	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		27.0	27.0	27.0	27.0	27.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		34.2	34.2	34.2	34.2	34.2	
Total Split (s)	55.0	55.0	55.0	55.0	55.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%	61.1%	61.1%	61.1%		38.9%	38.9%	38.9%	38.9%	38.9%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.2	6.2	6.2		6.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	51.0	51.0	51.0	51.0	51.0		27.2	27.2	27.2		27.2	
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57		0.30	0.30	0.30		0.30	
v/c Ratio	0.18	0.38	0.06	0.05	0.57		0.09	0.06	0.06		0.27	
Control Delay	3.3	2.4	0.1	9.5	14.0		23.3	22.6	7.8		12.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	3.3	2.4	0.1	9.5	14.0		23.3	22.6	7.8		12.5	
LOS	A	A	A	A	B		C	C	A		B	

Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

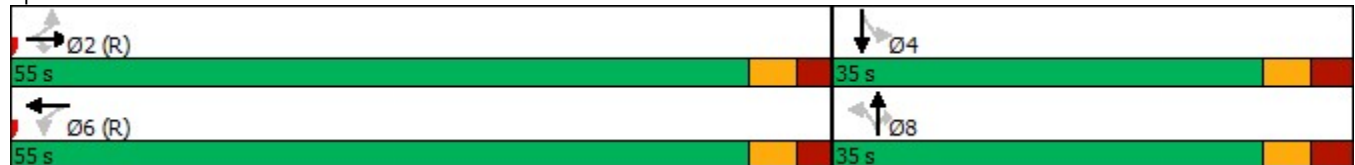


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		2.3			13.9			18.4			12.5	
Approach LOS		A			B			B			B	
Queue Length 50th (m)	0.0	4.1	0.0	0.9	56.7		4.0	3.9	0.0		7.3	
Queue Length 95th (m)	0.9	4.8	0.0	3.6	76.3		10.4	10.2	5.3		20.4	
Internal Link Dist (m)		330.9			441.1			152.5			213.6	
Turn Bay Length (m)	58.0		62.0	55.0			18.0		15.0			
Base Capacity (vph)	193	1902	802	280	1859		385	582	456		527	
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	0.18	0.38	0.06	0.05	0.57		0.08	0.05	0.06		0.26	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	10 (11%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.57
Intersection Signal Delay:	9.6
Intersection LOS:	A
Intersection Capacity Utilization:	81.1%
ICU Level of Service:	D
Analysis Period (min):	15

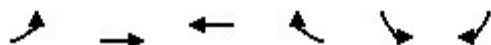
Splits and Phases: 5: Heron Rd & Jefferson St



Lanes, Volumes, Timings

6: Walkley Rd & Heron Rd

07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑↑	↑↑	
Traffic Volume (vph)	0	653	606	965	670	29
Future Volume (vph)	0	653	606	965	670	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0			65.0	0.0	0.0
Storage Lanes	0			1	2	0
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	0.95	0.95	0.88	0.97	0.95
Frt				0.850	0.994	
Flt Protected					0.954	
Satd. Flow (prot)	0	3390	3390	2669	3283	0
Flt Permitted					0.954	
Satd. Flow (perm)	0	3390	3390	2669	3283	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1072	5	
Link Speed (k/h)		50	50		50	
Link Distance (m)		393.2	359.1		465.1	
Travel Time (s)		28.3	25.9		33.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	726	673	1072	744	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	726	673	1072	776	0
Turn Type		NA	NA	Perm	Prot	
Protected Phases		2	6		4	
Permitted Phases				6		
Detector Phase		2	6	6	4	
Switch Phase						
Minimum Initial (s)		10.0	10.0	10.0	10.0	
Minimum Split (s)		16.6	16.6	16.6	33.7	
Total Split (s)		54.0	54.0	54.0	46.0	
Total Split (%)		54.0%	54.0%	54.0%	46.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	
All-Red Time (s)		3.3	3.3	3.3	3.4	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode		C-Max	C-Max	C-Max	Max	
Act Effct Green (s)		47.4	47.4	47.4	39.3	
Actuated g/C Ratio		0.47	0.47	0.47	0.39	
v/c Ratio		0.45	0.42	0.59	0.60	
Control Delay		18.7	18.3	2.4	26.3	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		18.7	18.3	2.4	26.3	
LOS		B	B	A	C	
Approach Delay		18.7	8.5		26.3	
Approach LOS		B	A		C	
Queue Length 50th (m)		47.8	43.4	0.0	60.1	
Queue Length 95th (m)		62.8	57.5	11.0	78.7	

Lanes, Volumes, Timings
6: Walkley Rd & Heron Rd

07/23/2024

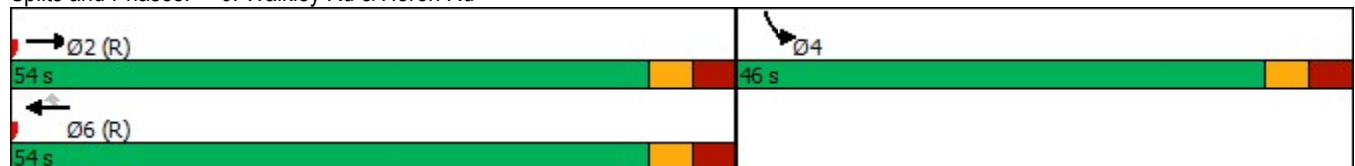


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Internal Link Dist (m)		369.2	335.1		441.1	
Turn Bay Length (m)				65.0		
Base Capacity (vph)		1606	1606	1828	1293	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.45	0.42	0.59	0.60	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	23 (23%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	15.1
Intersection LOS:	B
Intersection Capacity Utilization	51.3%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 6: Walkley Rd & Heron Rd



Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	562	10	8	599	117	24	19	26	131	5	53
Future Volume (vph)	39	562	10	8	599	117	24	19	26	131	5	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	33.0		0.0	0.0		0.0	20.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	22.0			27.0			2.5			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.99	0.99			0.99		0.98	0.98	
Frt		0.997			0.976			0.949			0.864	
Flt Protected	0.950			0.950				0.983		0.950		
Satd. Flow (prot)	1530	3253	0	1530	3196	0	0	1678	0	1586	1542	0
Flt Permitted	0.336			0.411				0.873		0.707		
Satd. Flow (perm)	539	3253	0	657	3196	0	0	1486	0	1160	1542	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			43			29			59	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		360.2			595.8			74.0			489.7	
Travel Time (s)		25.9			42.9			5.3			35.3	
Confl. Peds. (#/hr)	9		12	12		9	11		23	23		11
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	13%	6%	0%	13%	4%	10%	0%	0%	0%	9%	0%	0%
Adj. Flow (vph)	43	624	11	9	666	130	27	21	29	146	6	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	635	0	9	796	0	0	77	0	146	65	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1	31.1	
Total Split (s)	38.0	38.0		38.0	38.0		32.0	32.0		32.0	32.0	
Total Split (%)	54.3%	54.3%		54.3%	54.3%		45.7%	45.7%		45.7%	45.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	46.9	46.9		46.9	46.9			15.5		15.5	15.5	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.22		0.22	0.22	
v/c Ratio	0.12	0.29		0.02	0.37			0.22		0.57	0.17	
Control Delay	9.3	7.7		8.4	7.9			14.9		31.8	7.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	9.3	7.7		8.4	7.9			14.9		31.8	7.2	
LOS	A	A		A	A			B		C	A	
Approach Delay		7.8			7.9			14.9			24.3	

Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

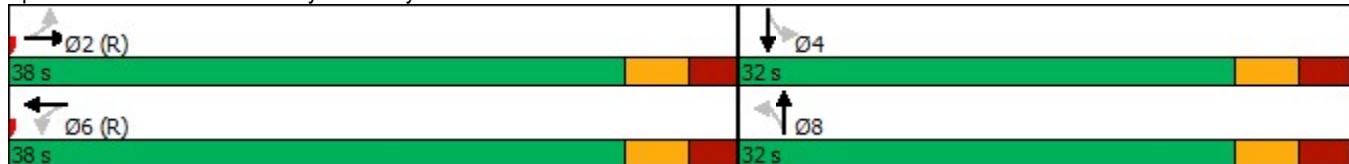


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			B			C		
Queue Length 50th (m)	2.0	17.5		0.4	22.0			5.3		17.6	0.7	
Queue Length 95th (m)	8.8	38.7		2.8	48.7			12.1		27.7	7.4	
Internal Link Dist (m)	336.2			571.8			50.0			465.7		
Turn Bay Length (m)	50.0			33.0						20.0		
Base Capacity (vph)	361	2181		440	2156			568		429	607	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.12	0.29		0.02	0.37			0.14		0.34	0.11	

Intersection Summary
































Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	17 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.57
Intersection Signal Delay:	10.1
Intersection LOS:	B
Intersection Capacity Utilization:	60.8%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 7: Walkley Rd & Baycrest Dr



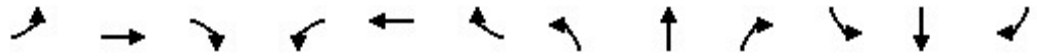
Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			  		 	 	
Traffic Volume (vph)	370	366	90	94	343	316	146	1179	152	154	463	239
Future Volume (vph)	370	366	90	94	343	316	146	1179	152	154	463	239
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		50.0	78.0		0.0	208.0		70.0	156.0		0.0
Storage Lanes	2		1	2		0	1		1	2		1
Taper Length (m)	27.0			24.0			0.0			24.0		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.95	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor	0.98		0.97	0.99	0.98		0.99		0.96	0.99		0.97
Fr _t			0.850		0.928				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3288	3390	1517	3288	3084	0	1695	4871	1517	3288	3390	1517
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3232	3390	1475	3251	3084	0	1686	4871	1460	3268	3390	1469
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			209		177				161			266
Link Speed (k/h)		50			50			50				50
Link Distance (m)		154.1			895.6			245.1				260.6
Travel Time (s)		11.1			64.5			17.6				18.8
Confl. Peds. (#/hr)	26		11	11		26	8		17	17		8
Confl. Bikes (#/hr)			5			2			5			10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	411	407	100	104	381	351	162	1310	169	171	514	266
Shared Lane Traffic (%)												
Lane Group Flow (vph)	411	407	100	104	732	0	162	1310	169	171	514	266
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	29.0	29.0	7.0	29.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	13.8	39.7	39.7	13.8	39.7		13.4	33.4	33.4	13.4	33.4	33.4
Total Split (s)	19.0	40.0	40.0	19.0	40.0		26.0	46.0	46.0	15.0	35.0	35.0
Total Split (%)	15.8%	33.3%	33.3%	15.8%	33.3%		21.7%	38.3%	38.3%	12.5%	29.2%	29.2%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	12.2	33.8	33.8	9.2	30.8		16.0	41.1	41.1	9.6	34.7	34.7
Actuated g/C Ratio	0.10	0.28	0.28	0.08	0.26		0.13	0.34	0.34	0.08	0.29	0.29
v/c Ratio	1.23	0.43	0.18	0.41	0.79		0.72	0.79	0.28	0.65	0.53	0.43
Control Delay	171.9	36.9	0.7	57.3	38.1		67.1	39.9	6.3	59.9	51.1	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	171.9	36.9	0.7	57.3	38.1		67.1	39.9	6.3	59.9	51.1	18.7
LOS	F	D	A	E	D		E	D	A	E	D	B
Approach Delay		93.4			40.5			39.1				43.6

Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	F			D			D			D		
Queue Length 50th (m)	~61.5	41.8	0.0	12.2	66.8		36.8	102.2	1.3	19.7	60.3	17.1
Queue Length 95th (m)	#92.9	56.0	0.0	20.7	86.3		58.2	121.3	16.2	#36.0	81.7	37.9
Internal Link Dist (m)		130.1			871.6			221.1			236.6	
Turn Bay Length (m)	60.0		50.0	78.0			208.0		70.0	156.0		
Base Capacity (vph)	334	959	567	334	983		276	1668	605	262	979	613
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.23	0.42	0.18	0.31	0.74		0.59	0.79	0.28	0.65	0.53	0.43

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 79 (66%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 105
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.23
 Intersection Signal Delay: 51.8
 Intersection LOS: D
 Intersection Capacity Utilization 90.2%
 ICU Level of Service E
 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: Bank St & Walkley Rd



Lanes, Volumes, Timings

1: Bank St & Heron Rd

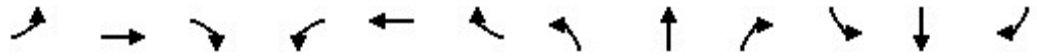
07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	213	837	494	73	919	138	394	520	41	240	846	132
Future Volume (vph)	213	837	494	73	919	138	394	520	41	240	846	132
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	73.0		85.0	50.0		70.0	110.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	20.0			30.0			0.0			0.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.95	0.99		0.96	0.99	1.00		0.98	0.99	
Frt			0.850			0.850		0.989			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3325	1532	1679	3390	1532	3321	3345	0	1695	3299	0
Flt Permitted	0.102			0.285			0.950			0.950		
Satd. Flow (perm)	186	3325	1453	498	3390	1476	3272	3345	0	1666	3299	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			481			138		6			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		381.8			492.5			121.2			274.8	
Travel Time (s)		27.5			35.5			8.7			19.8	
Confl. Peds. (#/hr)	18		29	29		18	27		27	27		27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	1%	3%	2%	1%	1%	2%	0%	2%	2%	2%
Adj. Flow (vph)	237	930	549	81	1021	153	438	578	46	267	940	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	237	930	549	81	1021	153	438	624	0	267	1087	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0	10.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	13.5	34.4	34.4	32.5	32.5	32.5	13.5	32.4		13.5	32.4	
Total Split (s)	20.0	59.0	59.0	39.0	39.0	39.0	32.0	39.0		32.0	39.0	
Total Split (%)	15.4%	45.4%	45.4%	30.0%	30.0%	30.0%	24.6%	30.0%		24.6%	30.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.1	3.1	1.0	1.0	1.0	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	4.3	4.3	4.3	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	52.5	52.6	52.6	34.7	34.7	34.7	21.9	34.6		23.5	36.2	
Actuated g/C Ratio	0.40	0.40	0.40	0.27	0.27	0.27	0.17	0.27		0.18	0.28	
v/c Ratio	1.01	0.69	0.63	0.61	1.13	0.31	0.78	0.70		0.87	1.17	
Control Delay	95.6	35.3	7.8	67.3	120.5	30.7	62.2	48.0		78.8	129.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	95.6	35.3	7.8	67.3	120.5	30.7	62.2	48.0		78.8	129.4	
LOS	F	D	A	E	F	C	E	D		E	F	
Approach Delay		34.8			106.1			53.8			119.4	

Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024

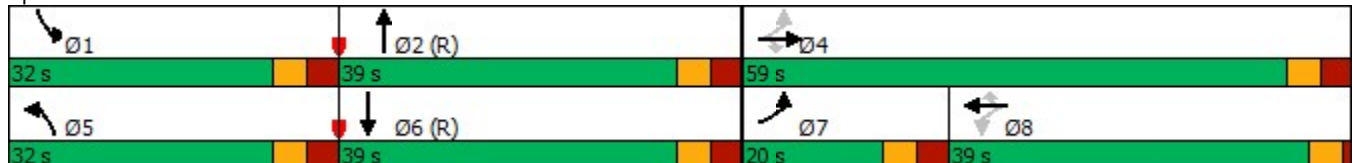


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	C			F			D			F		
Queue Length 50th (m)	~46.9	102.4	10.8	21.8	~164.3	23.8	55.8	77.1		65.9	~175.3	
Queue Length 95th (m)	#100.1	126.1	44.0	m23.3	m#183.7	m26.2	71.7	98.4		#106.9	#229.0	
Internal Link Dist (m)		357.8			468.5			97.2			250.8	
Turn Bay Length (m)	73.0		85.0	50.0		70.0	110.0			70.0		
Base Capacity (vph)	235	1345	874	132	904	495	651	893		332	929	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.01	0.69	0.63	0.61	1.13	0.31	0.67	0.70		0.80	1.17	

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 57 (44%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 135
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.17
 Intersection Signal Delay: 76.4 Intersection LOS: E
 Intersection Capacity Utilization 100.3% ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Bank St & Heron Rd



Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	939	39	107	968	152	21	208	118	174	427	138
Future Volume (vph)	139	939	39	107	968	152	21	208	118	174	427	138
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		0.0	57.0		85.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (m)	30.0			24.0			2.5			48.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99		0.93	0.99	0.99		1.00	0.99	
Frt		0.994				0.850		0.946			0.963	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3330	0	1695	3357	1473	1729	1666	0	1631	1705	0
Flt Permitted	0.950			0.950			0.246			0.277		
Satd. Flow (perm)	1693	3330	0	1671	3357	1373	444	1666	0	473	1705	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				152		22			16	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		492.5			657.5			201.9			270.3	
Travel Time (s)		35.5			47.3			14.5			19.5	
Confl. Peds. (#/hr)	12		16	16		12	19		9	9		19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	3%	0%	2%	3%	5%	0%	2%	3%	6%	2%	1%
Adj. Flow (vph)	154	1043	43	119	1076	169	23	231	131	193	474	153
Shared Lane Traffic (%)												
Lane Group Flow (vph)	154	1086	0	119	1076	169	23	362	0	193	627	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0	10.0	10.0	10.0		7.0	10.0	
Minimum Split (s)	12.4	23.4		12.4	23.4	23.4	29.9	29.9		11.5	29.9	
Total Split (s)	19.0	52.0		16.0	49.0	49.0	44.0	44.0		18.0	62.0	
Total Split (%)	14.6%	40.0%		12.3%	37.7%	37.7%	33.8%	33.8%		13.8%	47.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.1	2.1	2.1	2.6	2.6		1.0	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4	5.4	5.9	5.9		4.3	5.9	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	13.4	46.6		10.6	43.8	43.8	39.0	39.0		57.7	56.1	
Actuated g/C Ratio	0.10	0.36		0.08	0.34	0.34	0.30	0.30		0.44	0.43	
v/c Ratio	0.88	0.91		0.86	0.95	0.30	0.17	0.70		0.60	0.84	
Control Delay	116.6	34.2		105.7	59.6	7.7	38.5	46.7		31.2	44.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	116.6	34.2		105.7	59.6	7.7	38.5	46.7		31.2	44.1	
LOS	F	C		F	E	A	D	D		C	D	
Approach Delay		44.5			57.2			46.2			41.1	

Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

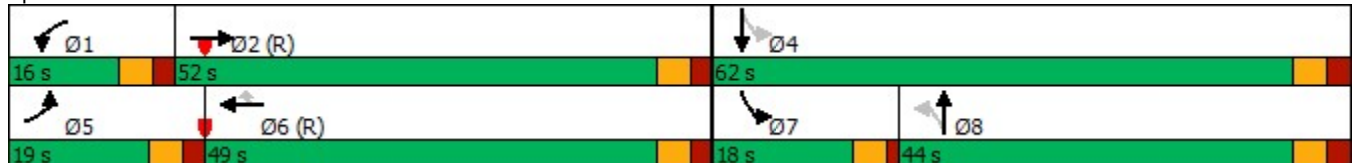


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			E			D			D		
Queue Length 50th (m)	42.3	43.2		30.7	141.4	2.9	4.4	78.5		30.7	138.2	
Queue Length 95th (m)	m#69.6	#94.5		#65.4	#185.1	18.9	12.3	114.2		47.8	#203.9	
Internal Link Dist (m)	468.5			633.5			177.9			246.3		
Turn Bay Length (m)	65.0			57.0			85.0			30.0		
Base Capacity (vph)	179	1196		138	1131	563	133	514		331	744	
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	0.86	0.91		0.86	0.95	0.30	0.17	0.70		0.58	0.84	

Intersection Summary

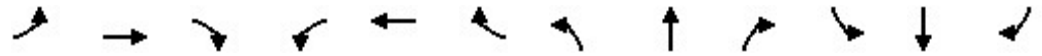
Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 6 (5%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 48.5
 Intersection LOS: D
 Intersection Capacity Utilization 96.6%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Alta Vista Dr & Heron Rd



Lanes, Volumes, Timings
3: Baycrest Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	996	233	25	1083	13	148	2	37	19	7	3
Future Volume (vph)	2	996	233	25	1083	13	148	2	37	19	7	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	43.0		0.0	55.0		0.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	70.0			25.0			2.5			0.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		1.00	1.00			0.98		1.00	0.99	
Fr _t		0.972			0.998			0.973			0.959	
Fl _t Protected	0.950			0.950				0.962		0.950		
Satd. Flow (prot)	864	3211	0	1662	3380	0	0	1584	0	1647	1728	0
Fl _t Permitted	0.176			0.138				0.763		0.679		
Satd. Flow (perm)	160	3211	0	241	3380	0	0	1232	0	1172	1728	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		51			2			15			3	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		657.5			314.4			216.5			60.0	
Travel Time (s)		47.3			22.6			15.6			4.3	
Confl. Peds. (#/hr)	9		20	20		9	27		7	7		27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	100%	3%	6%	4%	2%	8%	7%	0%	8%	5%	0%	0%
Adj. Flow (vph)	2	1107	259	28	1203	14	164	2	41	21	8	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	1366	0	28	1217	0	0	207	0	21	11	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	29.7	29.7		29.7	29.7		35.0	35.0		35.0	35.0	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.4	1.4		1.4	1.4		2.7	2.7		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	4.7	4.7		4.7	4.7			6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	56.9	56.9		56.9	56.9			22.4		22.4	22.4	
Actuated g/C Ratio	0.63	0.63		0.63	0.63			0.25		0.25	0.25	
v/c Ratio	0.02	0.67		0.18	0.57			0.65		0.07	0.03	
Control Delay	8.5	12.7		21.3	23.9			37.8		24.7	20.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	8.5	12.7		21.3	23.9			37.8		24.7	20.3	
LOS	A	B		C	C			D		C	C	
Approach Delay		12.7			23.8			37.8			23.2	

Lanes, Volumes, Timings
 3: Baycrest Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	B			C			D			C		
Queue Length 50th (m)	0.1	62.2		4.1	115.2			31.0		2.9	1.1	
Queue Length 95th (m)	1.2	111.6		m10.5	136.0			47.8		7.6	4.5	
Internal Link Dist (m)		633.5			290.4			192.5			36.0	
Turn Bay Length (m)	43.0			55.0						30.0		
Base Capacity (vph)	101	2049		152	2137			407		377	558	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.02	0.67		0.18	0.57			0.51		0.06	0.02	

Intersection Summary





















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 14 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 19.5
 Intersection LOS: B
 Intersection Capacity Utilization 67.3%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Baycrest Dr & Heron Rd



Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	967	25	27	1065	18	16	21	32	8	26	41
Future Volume (vph)	60	967	25	27	1065	18	16	21	32	8	26	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	55.0		0.0	32.0		0.0	37.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	25.0			25.0			12.0			37.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00		0.96	0.98		0.98	0.97	
Frt		0.996			0.998			0.908			0.908	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3337	0	1729	3350	0	1729	1589	0	1729	1531	0
Flt Permitted	0.205			0.234			0.708			0.719		
Satd. Flow (perm)	372	3337	0	424	3350	0	1243	1589	0	1283	1531	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			3			36			46	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		314.4			354.9			199.1			258.5	
Travel Time (s)		22.6			25.6			14.3			18.6	
Confl. Peds. (#/hr)	9		11	11		9	26		14	14		26
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	7%	0%	3%	0%	0%	5%	0%	0%	12%	0%
Adj. Flow (vph)	67	1074	28	30	1183	20	18	23	36	9	29	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	1102	0	30	1203	0	18	59	0	9	75	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	24.3	24.3		24.3	24.3		24.1	24.1		24.1	24.1	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3		5.3	5.3		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	67.7	67.7		67.7	67.7		16.4	16.4		16.4	16.4	
Actuated g/C Ratio	0.75	0.75		0.75	0.75		0.18	0.18		0.18	0.18	
v/c Ratio	0.24	0.44		0.09	0.48		0.08	0.18		0.04	0.24	
Control Delay	7.8	8.2		4.4	8.8		31.2	17.5		30.5	17.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.8	8.2		4.4	8.8		31.2	17.5		30.5	17.2	
LOS	A	A		A	A		C	B		C	B	
Approach Delay		8.1			8.7			20.7			18.6	

Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024

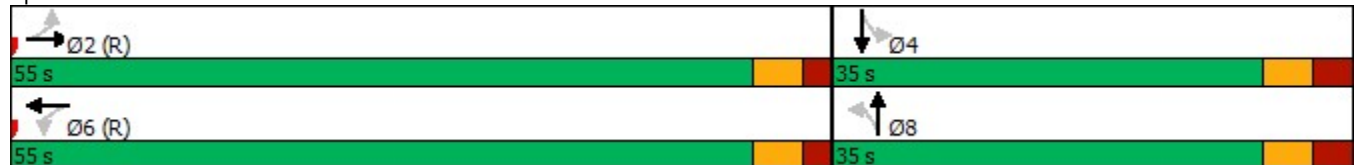


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			C			B		
Queue Length 50th (m)	7.0	73.3		1.6	83.2		2.6	3.4		1.3	4.3	
Queue Length 95th (m)	m5.7	66.4		m2.9	110.5		8.2	13.2		5.2	15.4	
Internal Link Dist (m)	290.4			330.9			175.1			234.5		
Turn Bay Length (m)	55.0			55.0			32.0			37.0		
Base Capacity (vph)	279	2510		318	2520		399	534		411	522	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.24	0.44		0.09	0.48		0.05	0.11		0.02	0.14	

Intersection Summary























Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 60 (67%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.48
 Intersection Signal Delay: 9.1
 Intersection LOS: A
 Intersection Capacity Utilization 68.2%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Sandalwood Dr & Heron Rd



Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	927	96	38	993	43	72	78	72	37	49	43
Future Volume (vph)	76	927	96	38	993	43	72	78	72	37	49	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	58.0		62.0	55.0		0.0	18.0		15.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	27.0			17.0			10.0			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.97	1.00	1.00		1.00		0.97		0.99	
Frt			0.850		0.994				0.850		0.955	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1647	3357	1547	1729	3397	0	1679	1820	1547	0	1652	0
Flt Permitted	0.178			0.217			0.677				0.897	
Satd. Flow (perm)	308	3357	1502	394	3397	0	1193	1820	1499	0	1495	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			107		8				80		30	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		354.9			465.1			176.5			237.6	
Travel Time (s)		25.6			33.5			12.7			17.1	
Confl. Peds. (#/hr)	6		5	5		6	4		20	20		4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	0%	0%	1%	2%	3%	0%	0%	3%	0%	7%
Adj. Flow (vph)	84	1030	107	42	1103	48	80	87	80	41	54	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	1030	107	42	1151	0	80	87	80	0	143	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		27.0	27.0	27.0	27.0	27.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		34.2	34.2	34.2	34.2	34.2	
Total Split (s)	55.0	55.0	55.0	55.0	55.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%	61.1%	61.1%	61.1%		38.9%	38.9%	38.9%	38.9%	38.9%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.2	6.2	6.2		6.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	51.0	51.0	51.0	51.0	51.0		27.2	27.2	27.2		27.2	
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57		0.30	0.30	0.30		0.30	
v/c Ratio	0.48	0.54	0.12	0.19	0.60		0.22	0.16	0.16		0.30	
Control Delay	31.2	21.4	7.0	12.3	14.3		25.4	23.9	6.5		20.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	31.2	21.4	7.0	12.3	14.3		25.4	23.9	6.5		20.9	
LOS	C	C	A	B	B		C	C	A		C	
Approach Delay		20.8			14.3			18.8			20.9	

Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

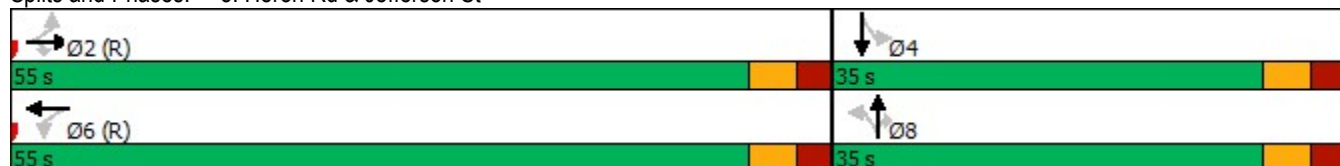


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	C			B			B			C		
Queue Length 50th (m)	14.4	92.7	7.6	3.3	62.8		10.3	11.0	0.0		14.7	
Queue Length 95th (m)	24.1	114.5	16.6	9.3	84.1		21.2	21.6	9.5		29.1	
Internal Link Dist (m)		330.9			441.1			152.5			213.6	
Turn Bay Length (m)	58.0		62.0	55.0			18.0		15.0			
Base Capacity (vph)	174	1902	897	223	1928		381	582	534		498	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.48	0.54	0.12	0.19	0.60		0.21	0.15	0.15		0.29	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	10 (11%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	75
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	17.8
Intersection LOS:	B
Intersection Capacity Utilization	87.6%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 5: Heron Rd & Jefferson St



Lanes, Volumes, Timings
6: Heron Rd & Walkley Rd




















07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕	↗↗	↖↖	
Traffic Volume (vph)	12	1024	1074	1061	666	0
Future Volume (vph)	12	1024	1074	1061	666	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0			65.0	0.0	0.0
Storage Lanes	0			1	2	0
Taper Length (m)	2.5				2.5	
Lane Util. Factor	0.95	0.95	0.95	0.88	0.97	1.00
Frt				0.850		
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	3387	3390	2669	3288	0
Flt Permitted		0.931			0.950	
Satd. Flow (perm)	0	3156	3390	2669	3288	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1179		
Link Speed (k/h)		50	50		50	
Link Distance (m)		465.1	359.8		393.2	
Travel Time (s)		33.5	25.9		28.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	1138	1193	1179	740	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1151	1193	1179	740	0
Turn Type	Perm	NA	NA	custom	Prot	
Protected Phases		4		6	2!	
Permitted Phases	4		6!			
Detector Phase	4	4	6	6	2	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	33.7	33.7	16.6	16.6	16.6	
Total Split (s)	51.0	51.0	59.0	59.0	59.0	
Total Split (%)	46.4%	46.4%	53.6%	53.6%	53.6%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.4	3.4	3.3	3.3	3.3	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.7	6.6	6.6	6.6	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	C-Max	C-Max	C-Max	
Act Effct Green (s)		44.3	52.4	52.4	52.4	
Actuated g/C Ratio		0.40	0.48	0.48	0.48	
v/c Ratio		0.91	0.74	0.62	0.47	
Control Delay		42.3	26.7	2.6	20.7	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		42.3	26.7	2.6	20.7	
LOS		D	C	A	C	
Approach Delay		42.3	14.8		20.7	
Approach LOS		D	B		C	
Queue Length 50th (m)		120.2	105.5	0.0	53.6	
Queue Length 95th (m)		#162.0	131.2	11.4	69.1	

Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	719	18	22	788	145	17	11	19	125	18	65
Future Volume (vph)	54	719	18	22	788	145	17	11	19	125	18	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	33.0		0.0	0.0		0.0	20.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	22.0			27.0			2.5			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.98	0.99			0.99		0.98		
Fr _t		0.996			0.977			0.945			0.883	
Fl _t Protected	0.950			0.950				0.982		0.950		
Satd. Flow (prot)	1695	3269	0	1729	3242	0	0	1595	0	1558	1490	0
Fl _t Permitted	0.243			0.324				0.877		0.723		
Satd. Flow (perm)	429	3269	0	580	3242	0	0	1425	0	1161	1490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			40			21			72	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		360.2			304.5			74.0			276.3	
Travel Time (s)		25.9			21.9			5.3			19.9	
Confl. Peds. (#/hr)	30		31	31		30			23	23		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	5%	11%	0%	0%	19%	0%	0%	11%	11%	0%	10%
Adj. Flow (vph)	60	799	20	24	876	161	19	12	21	139	20	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	819	0	24	1037	0	0	52	0	139	92	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1	31.1	
Total Split (s)	48.0	48.0		48.0	48.0		32.0	32.0		32.0	32.0	
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%	40.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	52.1	52.1		52.1	52.1			15.9		15.9	15.9	
Actuated g/C Ratio	0.65	0.65		0.65	0.65			0.20		0.20	0.20	
v/c Ratio	0.22	0.38		0.06	0.49			0.17		0.60	0.26	
Control Delay	10.2	8.0		7.7	8.8			17.2		38.9	10.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	10.2	8.0		7.7	8.8			17.2		38.9	10.4	
LOS	B	A		A	A			B		D	B	
Approach Delay		8.2			8.7			17.2			27.6	

Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			B			C		
Queue Length 50th (m)	3.1	25.2		1.1	33.6			4.0		19.7	2.5	
Queue Length 95th (m)	12.3	50.9		5.2	67.6			10.9		31.6	11.8	
Internal Link Dist (m)		336.2			280.5			50.0			252.3	
Turn Bay Length (m)	50.0			33.0						20.0		
Base Capacity (vph)	279	2129		377	2123			475		375	531	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.22	0.38		0.06	0.49			0.11		0.37	0.17	

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	10.7
Intersection LOS:	B
Intersection Capacity Utilization	67.5%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 7: Walkley Rd & Baycrest Dr



Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗↗	↑↑	↖	↗↗	↑↑		↖	↑↑↑	↖	↗↗	↑↑	↖
Traffic Volume (vph)	282	372	236	243	480	238	191	738	201	232	1117	493
Future Volume (vph)	282	372	236	243	480	238	191	738	201	232	1117	493
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		50.0	78.0		0.0	208.0		70.0	156.0		0.0
Storage Lanes	2		1	2		0	1		1	2		1
Taper Length (m)	27.0			24.0			0.0			24.0		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.95	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor	0.98		0.96	0.98	0.98		0.99		0.95	0.98		0.95
Fr _t			0.850		0.950				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3354	3293	1547	3288	3184	0	1712	4919	1502	3321	3424	1547
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3275	3293	1489	3207	3184	0	1699	4919	1428	3254	3424	1466
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			239		63				223			340
Link Speed (k/h)		50			50			50				50
Link Distance (m)		154.1			895.6			245.1				260.6
Travel Time (s)		11.1			64.5			17.6				18.8
Confl. Peds. (#/hr)	36		22	22		36	28		26	26		28
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	5%	0%	2%	1%	2%	1%	1%	3%	1%	1%	0%
Adj. Flow (vph)	313	413	262	270	533	264	212	820	223	258	1241	548
Shared Lane Traffic (%)												
Lane Group Flow (vph)	313	413	262	270	797	0	212	820	223	258	1241	548
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	35.0	35.0	7.0	35.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	13.8	41.7	41.7	13.8	41.7		13.4	33.4	33.4	13.4	33.4	33.4
Total Split (s)	25.0	41.7	41.7	25.0	41.7		19.0	38.0	38.0	27.0	46.0	46.0
Total Split (%)	19.0%	31.7%	31.7%	19.0%	31.7%		14.4%	28.9%	28.9%	20.5%	34.9%	34.9%
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)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	16.5	36.1	36.1	15.6	35.2		14.1	38.2	38.2	15.5	39.6	39.6
Actuated g/C Ratio	0.13	0.27	0.27	0.12	0.27		0.11	0.29	0.29	0.12	0.30	0.30
v/c Ratio	0.75	0.46	0.45	0.69	0.89		1.16	0.57	0.39	0.66	1.21	0.81
Control Delay	67.0	41.8	9.0	65.3	55.7		166.2	42.6	7.0	63.7	142.1	26.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.0	41.8	9.0	65.3	55.7		166.2	42.6	7.0	63.7	142.1	26.1
LOS	E	D	A	E	E		F	D	A	E	F	C
Approach Delay		41.1			58.1			57.1			101.2	

Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024

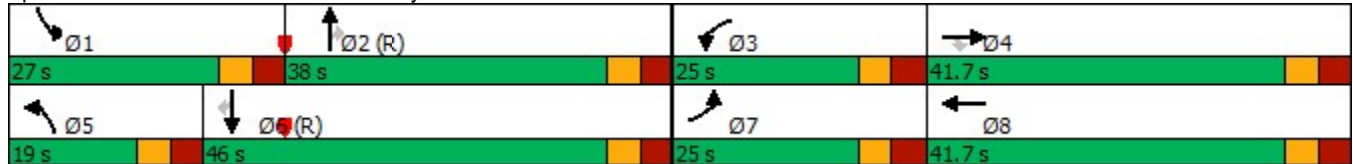


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			E			E			F		
Queue Length 50th (m)	40.6	46.4	4.4	35.1	97.3		~70.2	67.7	0.0	33.5	~206.1	53.6
Queue Length 95th (m)	56.0	63.5	26.9	48.7	#132.4		#119.3	85.9	19.9	46.0	#248.4	104.6
Internal Link Dist (m)	130.1			871.6			221.1			236.6		
Turn Bay Length (m)	60.0		50.0	78.0			208.0		70.0	156.0		
Base Capacity (vph)	463	901	581	454	896		183	1428	572	519	1029	678
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.46	0.45	0.59	0.89		1.16	0.57	0.39	0.50	1.21	0.81

Intersection Summary

Area Type: Other
 Cycle Length: 131.7
 Actuated Cycle Length: 131.7
 Offset: 114 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.21
 Intersection Signal Delay: 71.2 Intersection LOS: E
 Intersection Capacity Utilization 103.3% ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

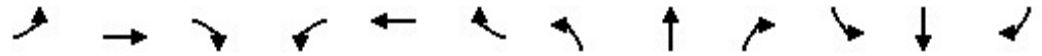
Splits and Phases: 8: Bank St & Walkley Rd



Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024

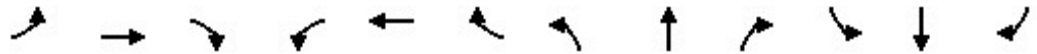


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	795	263	75	1181	226	525	1140	18	145	348	100
Future Volume (vph)	159	795	263	75	1181	226	525	1140	18	145	348	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	73.0		85.0	50.0		70.0	110.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	20.0			30.0			0.0			0.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.97	1.00		0.98	0.99	1.00		1.00	0.99	
Frt			0.850			0.850		0.998			0.967	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3357	1446	1662	3293	1473	3225	3343	0	1712	3132	0
Flt Permitted	0.095			0.275			0.950			0.950		
Satd. Flow (perm)	171	3357	1404	479	3293	1438	3181	3343	0	1704	3132	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			292			208		1			28	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		381.8			492.5			121.2			274.8	
Travel Time (s)		27.5			35.5			8.7			19.8	
Confl. Peds. (#/hr)	8		13	13		8	12		20	20		12
Confl. Bikes (#/hr)			1			3			3			9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	3%	7%	4%	5%	5%	4%	3%	13%	1%	7%	2%
Adj. Flow (vph)	177	883	292	83	1312	251	583	1267	20	161	387	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	177	883	292	83	1312	251	583	1287	0	161	498	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0	10.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	13.5	34.4	34.4	32.5	32.5	32.5	13.5	32.4		13.5	32.4	
Total Split (s)	13.0	55.0	55.0	42.0	42.0	42.0	32.0	49.0		16.0	33.0	
Total Split (%)	10.8%	45.8%	45.8%	35.0%	35.0%	35.0%	26.7%	40.8%		13.3%	27.5%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.1	3.1	1.0	1.0	1.0	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	4.3	4.3	4.3	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	48.5	48.6	48.6	37.7	37.7	37.7	24.5	42.6		9.5	27.6	
Actuated g/C Ratio	0.40	0.40	0.40	0.31	0.31	0.31	0.20	0.36		0.08	0.23	
v/c Ratio	1.16	0.65	0.39	0.55	1.27	0.42	0.89	1.08		1.19	0.67	
Control Delay	151.7	31.6	4.3	50.5	164.3	9.3	45.2	68.7		185.5	45.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	151.7	31.6	4.3	50.5	164.3	9.3	45.2	68.7		185.5	45.1	
LOS	F	C	A	D	F	A	D	E		F	D	

Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024

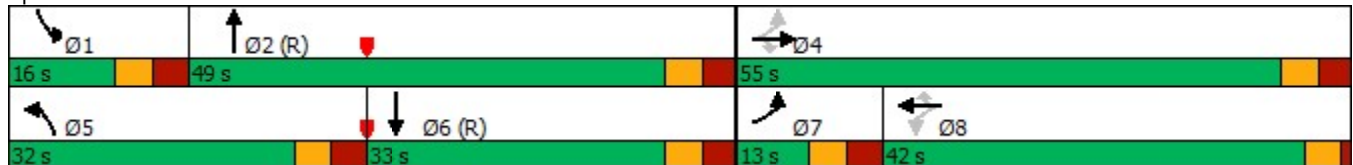


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		41.4			134.9			61.4			79.4	
Approach LOS		D			F			E			E	
Queue Length 50th (m)	~34.4	87.1	0.0	16.2	~204.9	7.1	54.1	~182.1		~45.7	54.0	
Queue Length 95th (m)	#79.2	108.9	16.3	34.9	#246.7	28.0	m63.3 m#197.5			#88.3	72.8	
Internal Link Dist (m)		357.8			468.5			97.2			250.8	
Turn Bay Length (m)	73.0		85.0	50.0		70.0	110.0			70.0		
Base Capacity (vph)	152	1359	742	150	1034	594	685	1187		135	742	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.16	0.65	0.39	0.55	1.27	0.42	0.85	1.08		1.19	0.67	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	52 (43%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	145
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.27
Intersection Signal Delay:	80.5
Intersection LOS:	F
Intersection Capacity Utilization:	105.9%
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.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Bank St & Heron Rd



Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	688	88	148	1232	197	69	276	183	97	268	127
Future Volume (vph)	103	688	88	148	1232	197	69	276	183	97	268	127
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		0.0	57.0		85.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (m)	30.0			24.0			2.5			48.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	0.99		0.97		0.83	0.99	0.95			0.99	
Frt		0.983				0.850		0.940			0.952	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3206	0	1695	3293	1459	1601	1582	0	1631	1690	0
Flt Permitted	0.950			0.950			0.508			0.128		
Satd. Flow (perm)	1673	3206	0	1642	3293	1213	845	1582	0	220	1690	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				217		36			32	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		492.5			657.5			201.9			270.3	
Travel Time (s)		35.5			47.3			14.5			19.5	
Confl. Peds. (#/hr)	54		37	37		54	21		110	110		21
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	5%	1%	2%	5%	6%	8%	2%	3%	6%	2%	0%
Adj. Flow (vph)	114	764	98	164	1369	219	77	307	203	108	298	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	862	0	164	1369	219	77	510	0	108	439	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0	10.0	10.0	10.0		7.0	10.0	
Minimum Split (s)	12.4	23.4		12.4	23.4	23.4	29.9	29.9		11.5	29.9	
Total Split (s)	13.0	34.0		13.0	34.0	34.0	30.0	30.0		13.0	43.0	
Total Split (%)	14.4%	37.8%		14.4%	37.8%	37.8%	33.3%	33.3%		14.4%	47.8%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.1	2.1	2.1	2.6	2.6		1.0	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4	5.4	5.9	5.9		4.3	5.9	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	7.6	28.6		7.6	28.6	28.6	26.9	26.9		38.7	37.1	
Actuated g/C Ratio	0.08	0.32		0.08	0.32	0.32	0.30	0.30		0.43	0.41	
v/c Ratio	0.79	0.84		1.15	1.31	0.41	0.31	1.03		0.49	0.61	
Control Delay	77.4	36.8		142.7	164.8	2.7	30.6	80.1		23.4	23.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	77.4	36.8		142.7	164.8	2.7	30.6	80.1		23.4	23.7	
LOS	E	D		F	F	A	C	F		C	C	
Approach Delay		41.6			142.4			73.6			23.6	

Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

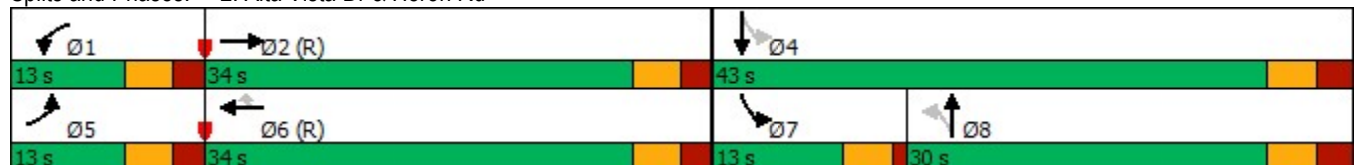


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			F			E			C		
Queue Length 50th (m)	19.7	71.1		~34.6	~158.1	0.0	10.7	~99.1		11.1	53.9	
Queue Length 95th (m)	#47.5	#97.5		m#49.3	m#172.2	m3.5	23.3	#158.9		21.1	84.6	
Internal Link Dist (m)		468.5			633.5			177.9			246.3	
Turn Bay Length (m)	65.0			57.0		85.0				30.0		
Base Capacity (vph)	144	1029		143	1046	533	252	497		230	715	
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	0.79	0.84		1.15	1.31	0.41	0.31	1.03		0.47	0.61	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 10 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.31
 Intersection Signal Delay: 89.7
 Intersection LOS: F
 Intersection Capacity Utilization 94.9%
 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Alta Vista Dr & Heron Rd



Lanes, Volumes, Timings
3: Baycrest Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	775	245	33	1168	3	415	19	69	0	2	1
Future Volume (vph)	7	775	245	33	1168	3	415	19	69	0	2	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	43.0		0.0	55.0		0.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	70.0			25.0			2.5			0.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98		0.99	1.00			0.97			0.99	
Frt		0.964						0.981			0.950	
Flt Protected	0.950			0.950				0.960				
Satd. Flow (prot)	1729	3154	0	1478	3293	0	0	1637	0	1820	1705	0
Flt Permitted	0.129			0.176				0.762				
Satd. Flow (perm)	234	3154	0	272	3293	0	0	1269	0	1820	1705	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76						9			1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		657.5			165.6			489.7			60.0	
Travel Time (s)		47.3			11.9			35.3			4.3	
Confl. Peds. (#/hr)	15		27	27		15	31		8	8		31
Confl. Bikes (#/hr)						1						2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	7%	17%	5%	0%	5%	0%	2%	0%	0%	0%
Adj. Flow (vph)	8	861	272	37	1298	3	461	21	77	0	2	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	1133	0	37	1301	0	0	559	0	0	3	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	29.7	29.7		29.7	29.7		35.0	35.0		35.0	35.0	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.4	1.4		1.4	1.4		2.7	2.7		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	4.7	4.7		4.7	4.7			6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	50.3	50.3		50.3	50.3			29.0			29.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56			0.32			0.32	
v/c Ratio	0.06	0.63		0.24	0.71			1.35			0.01	
Control Delay	6.6	6.7		22.5	23.4			199.6			18.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	6.6	6.7		22.5	23.4			199.6			18.7	
LOS	A	A		C	C			F			B	

Lanes, Volumes, Timings
3: Baycrest Dr & Heron Rd

07/23/2024

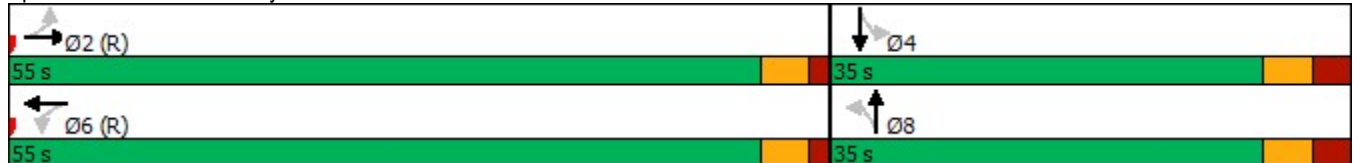


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		6.7			23.4			199.6			18.7	
Approach LOS		A			C			F			B	
Queue Length 50th (m)	0.3	22.9		3.2	114.0			~127.8			0.3	
Queue Length 95th (m)	m0.5	m26.6		m10.7	147.5			#189.5			2.1	
Internal Link Dist (m)		633.5			141.6			465.7			36.0	
Turn Bay Length (m)	43.0			55.0								
Base Capacity (vph)	130	1796		152	1840			415			550	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.06	0.63		0.24	0.71			1.35			0.01	

Intersection Summary





















Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	51 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.35
Intersection Signal Delay:	49.5
Intersection LOS:	D
Intersection Capacity Utilization	79.6%
ICU Level of Service	D
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.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Baycrest Dr & Heron Rd



Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	790	26	22	1067	17	56	14	38	8	14	72
Future Volume (vph)	44	790	26	22	1067	17	56	14	38	8	14	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	55.0		0.0	32.0		0.0	37.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	25.0			25.0			12.0			37.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00		0.99	0.99		0.99	0.98	
Frt		0.995			0.998			0.891				0.875
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3312	0	1601	3257	0	1478	1535	0	1729	1567	0
Flt Permitted	0.205			0.297			0.695			0.719		
Satd. Flow (perm)	372	3312	0	499	3257	0	1074	1535	0	1300	1567	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			3			42				60
Link Speed (k/h)		50			50			50				50
Link Distance (m)		148.8			354.9			199.1				258.5
Travel Time (s)		10.7			25.6			14.3				18.6
Confl. Peds. (#/hr)	7		7	7		7	5		5	5		5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	27%	8%	6%	0%	17%	15%	0%	0%	0%	0%
Adj. Flow (vph)	49	878	29	24	1186	19	62	16	42	9	16	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	907	0	24	1205	0	62	58	0	9	96	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	24.3	24.3		24.3	24.3		24.1	24.1		24.1	24.1	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3		5.3	5.3		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	67.7	67.7		67.7	67.7		16.4	16.4		16.4	16.4	
Actuated g/C Ratio	0.75	0.75		0.75	0.75		0.18	0.18		0.18	0.18	
v/c Ratio	0.18	0.36		0.06	0.49		0.32	0.18		0.04	0.29	
Control Delay	3.1	2.7		9.2	10.3		36.8	15.4		30.4	16.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	3.1	2.7		9.2	10.3		36.8	15.4		30.4	16.7	
LOS	A	A		A	B		D	B		C	B	
Approach Delay		2.7			10.3			26.5			17.9	

Lanes, Volumes, Timings
 4: Sandalwood Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			B			C			B		
Queue Length 50th (m)	0.6	6.1		1.6	56.1		9.5	2.3		1.3	5.3	
Queue Length 95th (m)	m1.3	m17.2		m3.8	87.9		20.6	11.9		5.2	17.8	
Internal Link Dist (m)		124.8			330.9			175.1			234.5	
Turn Bay Length (m)	55.0			55.0			32.0			37.0		
Base Capacity (vph)	279	2492		375	2450		344	521		417	543	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.18	0.36		0.06	0.49		0.18	0.11		0.02	0.18	

Intersection Summary

























Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.49
 Intersection Signal Delay: 8.4
 Intersection LOS: A
 Intersection Capacity Utilization 61.7%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Sandalwood Dr & Heron Rd



Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	772	48	13	1025	27	32	32	27	31	26	78
Future Volume (vph)	34	772	48	13	1025	27	32	32	27	31	26	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	58.0		62.0	55.0		0.0	18.0		15.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	27.0			17.0			10.0			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.97	1.00	1.00		1.00		0.98		0.99	
Frt			0.850		0.996				0.850		0.922	
Flt Protected	0.950			0.950			0.950				0.989	
Satd. Flow (prot)	1572	3357	1419	1383	3278	0	1679	1820	1381	0	1566	0
Flt Permitted	0.173			0.282			0.666				0.932	
Satd. Flow (perm)	286	3357	1379	410	3278	0	1172	1820	1357	0	1474	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			53		5				32			66
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		354.9			465.1			176.5			237.6	
Travel Time (s)		25.6			33.5			12.7			17.1	
Confl. Peds. (#/hr)	6		4	4		6	5		5	5		5
Confl. Bikes (#/hr)			2						1			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	3%	9%	25%	5%	4%	3%	0%	12%	4%	0%	7%
Adj. Flow (vph)	38	858	53	14	1139	30	36	36	30	34	29	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	858	53	14	1169	0	36	36	30	0	150	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	6	6		8	8	8	4		4
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		27.0	27.0	27.0	27.0	27.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		34.2	34.2	34.2	34.2	34.2	
Total Split (s)	55.0	55.0	55.0	55.0	55.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%	61.1%	61.1%	61.1%		38.9%	38.9%	38.9%	38.9%	38.9%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.2	6.2	6.2	6.2	6.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	51.0	51.0	51.0	51.0	51.0		27.2	27.2	27.2	27.2	27.2	
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57		0.30	0.30	0.30	0.30	0.30	
v/c Ratio	0.24	0.45	0.07	0.06	0.63		0.10	0.07	0.07	0.07	0.31	
Control Delay	5.4	3.0	0.2	9.8	15.0		23.5	22.7	8.1	15.5		
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total Delay	5.4	3.0	0.2	9.8	15.0		23.5	22.7	8.1	15.5		
LOS	A	A	A	A	B		C	C	A		B	

Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

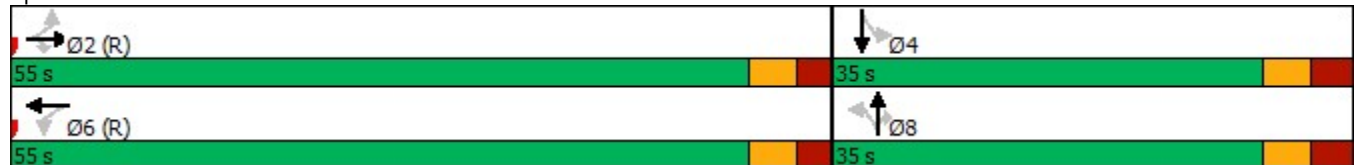


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		2.9			15.0			18.7			15.5	
Approach LOS		A			B			B			B	
Queue Length 50th (m)	0.0	6.7	0.0	1.0	65.9		4.5	4.4	0.0		10.7	
Queue Length 95th (m)	1.5	9.1	0.2	3.9	88.3		11.3	11.0	5.6		25.1	
Internal Link Dist (m)		330.9			441.1			152.5			213.6	
Turn Bay Length (m)	58.0		62.0	55.0			18.0		15.0			
Base Capacity (vph)	161	1902	804	232	1859		375	582	456		516	
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	0.24	0.45	0.07	0.06	0.63		0.10	0.06	0.07		0.29	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	10 (11%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	10.4
Intersection LOS:	B
Intersection Capacity Utilization	82.8%
ICU Level of Service	E
Analysis Period (min)	15

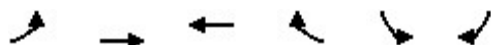
Splits and Phases: 5: Heron Rd & Jefferson St



Lanes, Volumes, Timings

6: Walkley Rd & Heron Rd

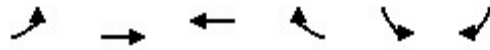
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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑↑	↑↑	
Traffic Volume (vph)	0	821	695	1064	769	60
Future Volume (vph)	0	821	695	1064	769	60
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0			65.0	0.0	0.0
Storage Lanes	0			1	2	0
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	0.95	0.95	0.88	0.97	0.95
Frt				0.850	0.989	
Flt Protected					0.956	
Satd. Flow (prot)	0	3390	3390	2669	3273	0
Flt Permitted					0.956	
Satd. Flow (perm)	0	3390	3390	2669	3273	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1182	10	
Link Speed (k/h)		50	50		50	
Link Distance (m)		393.2	359.1		465.1	
Travel Time (s)		28.3	25.9		33.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	912	772	1182	854	67
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	912	772	1182	921	0
Turn Type		NA	NA	Perm	Prot	
Protected Phases		2	6		4	
Permitted Phases				6		
Detector Phase		2	6	6	4	
Switch Phase						
Minimum Initial (s)		10.0	10.0	10.0	10.0	
Minimum Split (s)		16.6	16.6	16.6	33.7	
Total Split (s)		54.0	54.0	54.0	46.0	
Total Split (%)		54.0%	54.0%	54.0%	46.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	
All-Red Time (s)		3.3	3.3	3.3	3.4	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode		C-Max	C-Max	C-Max	Max	
Act Effct Green (s)		47.4	47.4	47.4	39.3	
Actuated g/C Ratio		0.47	0.47	0.47	0.39	
v/c Ratio		0.57	0.48	0.63	0.71	
Control Delay		20.7	19.2	2.6	29.1	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		20.7	19.2	2.6	29.1	
LOS		C	B	A	C	
Approach Delay		20.7	9.2		29.1	
Approach LOS		C	A		C	
Queue Length 50th (m)		64.5	51.7	0.0	75.4	
Queue Length 95th (m)		83.0	67.4	11.2	97.5	

Lanes, Volumes, Timings
6: Walkley Rd & Heron Rd

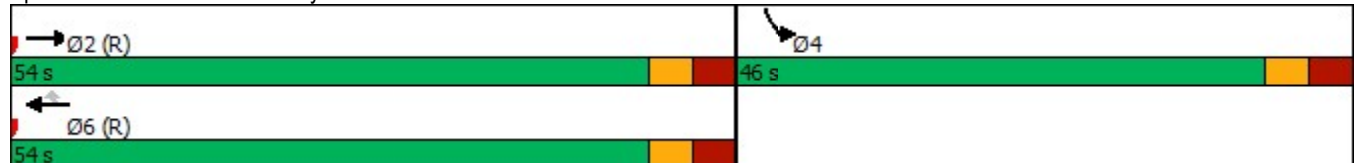
07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Internal Link Dist (m)		369.2	335.1		441.1	
Turn Bay Length (m)				65.0		
Base Capacity (vph)		1606	1606	1886	1292	
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		0.57	0.48	0.63	0.71	




















Intersection Summary	
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	23 (23%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	16.8
Intersection LOS:	B
Intersection Capacity Utilization	60.2%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 6: Walkley Rd & Heron Rd



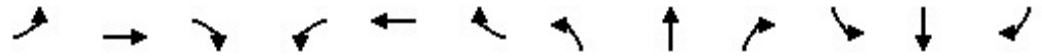
Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	656	11	9	668	147	26	20	28	209	4	102
Future Volume (vph)	55	656	11	9	668	147	26	20	28	209	4	102
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	33.0		0.0	0.0		0.0	20.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	22.0			27.0			2.5			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.99	0.99			0.99		0.98	0.98	
Fr _t		0.998			0.973			0.949			0.855	
Fl _t Protected	0.950			0.950				0.983		0.950		
Satd. Flow (prot)	1530	3257	0	1530	3182	0	0	1678	0	1586	1524	0
Fl _t Permitted	0.273			0.345				0.873		0.704		
Satd. Flow (perm)	438	3257	0	552	3182	0	0	1486	0	1155	1524	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			49			31			113	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		360.2			595.8			74.0			489.7	
Travel Time (s)		25.9			42.9			5.3			35.3	
Confl. Peds. (#/hr)	9		12	12		9	11		23	23		11
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	13%	6%	0%	13%	4%	10%	0%	0%	0%	9%	0%	0%
Adj. Flow (vph)	61	729	12	10	742	163	29	22	31	232	4	113
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	741	0	10	905	0	0	82	0	232	117	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1	31.1	
Total Split (s)	38.0	38.0		38.0	38.0		32.0	32.0		32.0	32.0	
Total Split (%)	54.3%	54.3%		54.3%	54.3%		45.7%	45.7%		45.7%	45.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	39.1	39.1		39.1	39.1			18.9		18.9	18.9	
Actuated g/C Ratio	0.56	0.56		0.56	0.56			0.27		0.27	0.27	
v/c Ratio	0.25	0.41		0.03	0.50			0.19		0.74	0.24	
Control Delay	13.9	10.8		10.0	11.3			12.8		37.3	5.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	13.9	10.8		10.0	11.3			12.8		37.3	5.2	
LOS	B	B		A	B			B		D	A	
Approach Delay		11.0			11.3			12.8			26.5	

Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

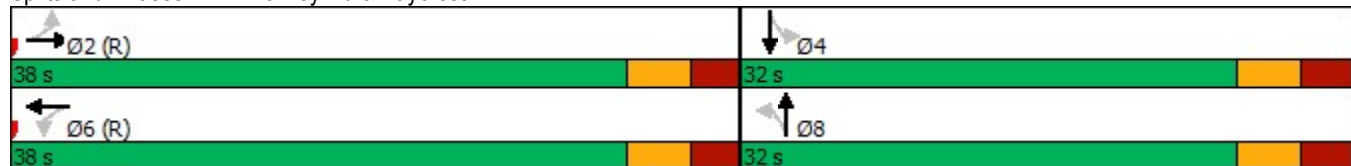


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			B			B			C	
Queue Length 50th (m)	3.8	26.8		0.5	33.2			5.0		27.4	0.4	
Queue Length 95th (m)	13.6	47.8		3.1	59.2			12.4		44.0	9.4	
Internal Link Dist (m)		336.2			571.8			50.0			465.7	
Turn Bay Length (m)	50.0			33.0						20.0		
Base Capacity (vph)	244	1819		308	1798			569		427	635	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.25	0.41		0.03	0.50			0.14		0.54	0.18	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	17 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	13.7
Intersection LOS:	B
Intersection Capacity Utilization:	67.3%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 7: Walkley Rd & Baycrest Dr



Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	403	417	98	116	423	391	159	1278	174	177	503	260
Future Volume (vph)	403	417	98	116	423	391	159	1278	174	177	503	260
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		50.0	78.0		0.0	208.0		70.0	156.0		0.0
Storage Lanes	2		1	2		0	1		1	2		1
Taper Length (m)	27.0			24.0			0.0			24.0		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.95	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor	0.99		0.97	0.99	0.98		1.00		0.96	0.99		0.97
Fr _t			0.850		0.928				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3288	3390	1517	3288	3084	0	1695	4871	1517	3288	3390	1517
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3244	3390	1475	3254	3084	0	1687	4871	1460	3271	3390	1469
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			209		176				170			289
Link Speed (k/h)		50			50			50				50
Link Distance (m)		154.1			895.6			245.1				260.6
Travel Time (s)		11.1			64.5			17.6				18.8
Confl. Peds. (#/hr)	26		11	11		26	8		17	17		8
Confl. Bikes (#/hr)			5			2			5			10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	448	463	109	129	470	434	177	1420	193	197	559	289
Shared Lane Traffic (%)												
Lane Group Flow (vph)	448	463	109	129	904	0	177	1420	193	197	559	289
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	29.0	29.0	7.0	29.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	13.8	39.7	39.7	13.8	39.7		13.4	33.4	33.4	13.4	33.4	33.4
Total Split (s)	19.0	40.0	40.0	19.0	40.0		26.0	46.0	46.0	15.0	35.0	35.0
Total Split (%)	15.8%	33.3%	33.3%	15.8%	33.3%		21.7%	38.3%	38.3%	12.5%	29.2%	29.2%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	12.2	34.9	34.9	9.9	32.6		16.7	40.0	40.0	8.8	32.2	32.2
Actuated g/C Ratio	0.10	0.29	0.29	0.08	0.27		0.14	0.33	0.33	0.07	0.27	0.27
v/c Ratio	1.34	0.47	0.19	0.48	0.94		0.75	0.87	0.32	0.82	0.61	0.48
Control Delay	213.8	37.0	0.7	58.1	51.5		69.3	44.9	7.6	74.8	54.1	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	213.8	37.0	0.7	58.1	51.5		69.3	44.9	7.6	74.8	54.1	18.8
LOS	F	D	A	E	D		E	D	A	E	D	B
Approach Delay		110.8			52.3			43.3			48.2	

Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	F			D			D			D		
Queue Length 50th (m)	~70.9	46.7	0.0	15.2	90.6		40.2	115.3	3.7	23.9	68.0	19.3
Queue Length 95th (m)	#103.0	64.2	0.0	24.5	#129.4		63.2	135.0	20.0	#44.4	88.4	39.0
Internal Link Dist (m)		130.1			871.6			221.1			236.6	
Turn Bay Length (m)	60.0		50.0	78.0			208.0		70.0	156.0		
Base Capacity (vph)	334	986	577	334	982		276	1625	600	241	909	605
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.34	0.47	0.19	0.39	0.92		0.64	0.87	0.32	0.82	0.61	0.48

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 79 (66%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 115
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.34
 Intersection Signal Delay: 60.3
 Intersection Capacity Utilization 93.1%
 Analysis Period (min) 15
 Intersection LOS: E
 ICU Level of Service F

~ 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: Bank St & Walkley Rd



Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	232	1095	538	75	1117	144	429	566	50	288	922	144
Future Volume (vph)	232	1095	538	75	1117	144	429	566	50	288	922	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	73.0		85.0	50.0		70.0	110.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	20.0			30.0			0.0			0.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.95	0.99		0.96	0.99	1.00		0.98	0.99	
Fr _t			0.850			0.850		0.988			0.980	
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3325	1532	1679	3390	1532	3321	3341	0	1695	3299	0
Fl _t Permitted	0.102			0.122			0.950			0.950		
Satd. Flow (perm)	186	3325	1453	214	3390	1476	3278	3341	0	1669	3299	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			480			138		7			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		381.8			492.5			121.2			274.8	
Travel Time (s)		27.5			35.5			8.7			19.8	
Confl. Peds. (#/hr)	18		29	29		18	27		27	27		27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	1%	3%	2%	1%	1%	2%	0%	2%	2%	2%
Adj. Flow (vph)	258	1217	598	83	1241	160	477	629	56	320	1024	160
Shared Lane Traffic (%)												
Lane Group Flow (vph)	258	1217	598	83	1241	160	477	685	0	320	1184	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0	10.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	13.5	34.4	34.4	32.5	32.5	32.5	13.5	32.4		13.5	32.4	
Total Split (s)	20.0	59.0	59.0	39.0	39.0	39.0	32.0	39.0		32.0	39.0	
Total Split (%)	15.4%	45.4%	45.4%	30.0%	30.0%	30.0%	24.6%	30.0%		24.6%	30.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.1	3.1	1.0	1.0	1.0	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	4.3	4.3	4.3	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	52.5	52.6	52.6	34.7	34.7	34.7	22.9	32.6		25.5	35.2	
Actuated g/C Ratio	0.40	0.40	0.40	0.27	0.27	0.27	0.18	0.25		0.20	0.27	
v/c Ratio	1.10	0.90	0.68	1.46	1.37	0.32	0.82	0.81		0.96	1.31	
Control Delay	120.7	47.0	10.6	256.1	213.6	29.6	63.4	54.2		92.9	185.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	120.7	47.0	10.6	256.1	213.6	29.6	63.4	54.2		92.9	185.9	
LOS	F	D	B	F	F	C	E	D		F	F	
Approach Delay		45.7			196.2			57.9			166.1	

Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			F			E			F		
Queue Length 50th (m)	~59.6	152.3	20.0	~30.1	~228.1	24.3	60.8	86.5		82.1	~208.0	
Queue Length 95th (m)	#113.1	#194.4	63.2	m#28.9	m#209.3	m23.2	78.2	109.5		#139.3	#257.2	
Internal Link Dist (m)	357.8			468.5			97.2		250.8			
Turn Bay Length (m)	73.0		85.0	50.0		70.0	110.0			70.0		
Base Capacity (vph)	235	1345	873	57	904	495	651	843		332	903	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.10	0.90	0.68	1.46	1.37	0.32	0.73	0.81		0.96	1.31	

Intersection Summary

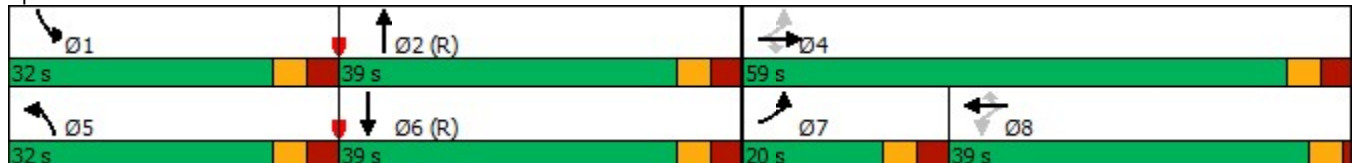
Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 57 (44%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.46
 Intersection Signal Delay: 113.0
 Intersection LOS: F
 Intersection Capacity Utilization 110.9%
 ICU Level of Service H
 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.

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

Splits and Phases: 1: Bank St & Heron Rd



Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	1162	42	117	1105	136	23	227	129	183	465	150
Future Volume (vph)	151	1162	42	117	1105	136	23	227	129	183	465	150
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		0.0	57.0		85.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (m)	30.0			24.0			2.5			48.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99		0.93	0.99	0.99			0.99	
Frt		0.995				0.850		0.946			0.963	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3334	0	1695	3357	1473	1729	1666	0	1631	1705	0
Flt Permitted	0.950			0.950			0.174			0.234		
Satd. Flow (perm)	1697	3334	0	1678	3357	1373	315	1666	0	402	1705	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				119		22			16	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		492.5			657.5			201.9			270.3	
Travel Time (s)		35.5			47.3			14.5			19.5	
Confl. Peds. (#/hr)	12		16	16		12	19		9	9		19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	3%	0%	2%	3%	5%	0%	2%	3%	6%	2%	1%
Adj. Flow (vph)	168	1291	47	130	1228	151	26	252	143	203	517	167
Shared Lane Traffic (%)												
Lane Group Flow (vph)	168	1338	0	130	1228	151	26	395	0	203	684	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0	10.0	10.0	10.0		7.0	10.0	
Minimum Split (s)	12.4	23.4		12.4	23.4	23.4	29.9	29.9		11.5	29.9	
Total Split (s)	19.0	52.0		16.0	49.0	49.0	44.0	44.0		18.0	62.0	
Total Split (%)	14.6%	40.0%		12.3%	37.7%	37.7%	33.8%	33.8%		13.8%	47.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.1	2.1	2.1	2.6	2.6		1.0	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4	5.4	5.9	5.9		4.3	5.9	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	13.6	46.6		10.6	43.6	43.6	38.8	38.8		57.7	56.1	
Actuated g/C Ratio	0.10	0.36		0.08	0.34	0.34	0.30	0.30		0.44	0.43	
v/c Ratio	0.94	1.12		0.94	1.09	0.28	0.28	0.77		0.67	0.92	
Control Delay	111.3	83.6		121.6	96.2	10.0	45.0	50.9		35.2	53.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	111.3	83.6		121.6	96.2	10.0	45.0	50.9		35.2	53.0	
LOS	F	F		F	F	B	D	D		D	D	
Approach Delay		86.7			89.8			50.6			48.9	

Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

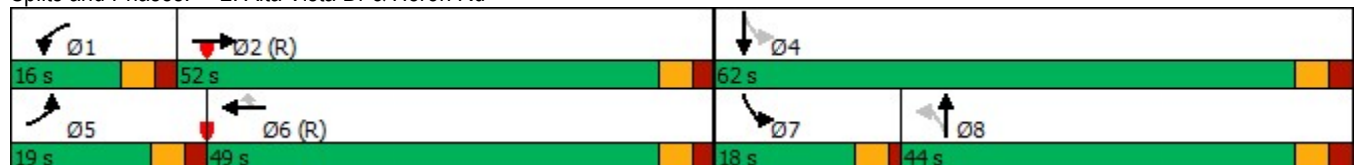


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		F			F			D			D	
Queue Length 50th (m)	46.1	~208.2		33.7	~186.3		5.6	5.2	88.3	32.5	159.6	
Queue Length 95th (m)	m#51.9 m#236.9			#72.9	#228.3		21.0	14.3	#129.7	50.0	#235.8	
Internal Link Dist (m)		468.5			633.5			177.9			246.3	
Turn Bay Length (m)	65.0			57.0		85.0			30.0			
Base Capacity (vph)	179	1197		138	1125		539	94	512	307	744	
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	0.94	1.12		0.94	1.09		0.28	0.28	0.77	0.66	0.92	

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 6 (5%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.12
 Intersection Signal Delay: 76.5 Intersection LOS: E
 Intersection Capacity Utilization 105.3% ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Alta Vista Dr & Heron Rd



Lanes, Volumes, Timings
3: Baycrest Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1092	305	27	1192	15	244	0	52	2	5	7
Future Volume (vph)	2	1092	305	27	1192	15	244	0	52	2	5	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	43.0		0.0	55.0		0.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	70.0			25.0			2.5			0.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99			1.00			0.98		1.00	0.98	
Fr _t		0.967			0.998			0.976			0.914	
Fl _t Protected	0.950			0.950				0.960		0.950		
Satd. Flow (prot)	864	3187	0	1662	3379	0	0	1586	0	1647	1629	0
Fl _t Permitted	0.130			0.083				0.754		0.671		
Satd. Flow (perm)	118	3187	0	145	3379	0	0	1220	0	1159	1629	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64			2			21			8	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		657.5			314.4			216.5			60.0	
Travel Time (s)		47.3			22.6			15.6			4.3	
Confl. Peds. (#/hr)	9		20	20		9	27		7	7		27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	100%	3%	6%	4%	2%	8%	7%	0%	8%	5%	0%	0%
Adj. Flow (vph)	2	1213	339	30	1324	17	271	0	58	2	6	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	1552	0	30	1341	0	0	329	0	2	14	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	29.7	29.7		29.7	29.7		35.0	35.0		35.0	35.0	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.4	1.4		1.4	1.4		2.7	2.7		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	4.7	4.7		4.7	4.7			6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	52.9	52.9		52.9	52.9			26.4		26.4	26.4	
Actuated g/C Ratio	0.59	0.59		0.59	0.59			0.29		0.29	0.29	
v/c Ratio	0.03	0.82		0.35	0.68			0.88		0.01	0.03	
Control Delay	10.5	19.4		37.0	28.8			53.8		21.0	14.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	10.5	19.4		37.0	28.8			53.8		21.0	14.8	
LOS	B	B		D	C			D		C	B	
Approach Delay		19.4			28.9			53.8			15.5	

Lanes, Volumes, Timings
3: Baycrest Dr & Heron Rd

07/23/2024

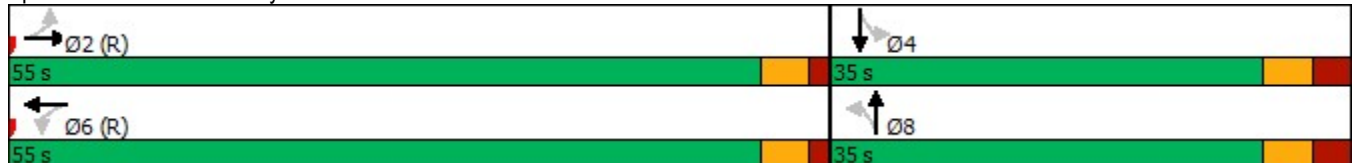


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	B			C			D			B		
Queue Length 50th (m)	0.1	108.0		5.1	128.0			48.6		0.2	0.7	
Queue Length 95th (m)	1.2	142.3		m10.7	147.1			#93.1		1.8	4.8	
Internal Link Dist (m)		633.5			290.4			192.5			36.0	
Turn Bay Length (m)	43.0			55.0						30.0		
Base Capacity (vph)	69	1898		85	1986			407		373	530	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.03	0.82		0.35	0.68			0.81		0.01	0.03	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 14 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 26.9 Intersection LOS: C
 Intersection Capacity Utilization 75.9% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Baycrest Dr & Heron Rd



Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	1095	46	48	1173	20	29	23	47	9	28	45
Future Volume (vph)	65	1095	46	48	1173	20	29	23	47	9	28	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	55.0		0.0	32.0		0.0	37.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	25.0			25.0			12.0			37.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00	1.00		0.97	0.98		0.98	0.97	
Frt		0.994			0.998			0.900				0.907
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3326	0	1729	3350	0	1729	1576	0	1729	1529	0
Flt Permitted	0.175			0.188			0.704			0.706		
Satd. Flow (perm)	318	3326	0	341	3350	0	1237	1576	0	1261	1529	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			3			52			44	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		314.4			354.9			199.1			258.5	
Travel Time (s)		22.6			25.6			14.3			18.6	
Confl. Peds. (#/hr)	9		11	11		9	26		14	14		26
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	7%	0%	3%	0%	0%	5%	0%	0%	12%	0%
Adj. Flow (vph)	72	1217	51	53	1303	22	32	26	52	10	31	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	72	1268	0	53	1325	0	32	78	0	10	81	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	24.3	24.3		24.3	24.3		24.1	24.1		24.1	24.1	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3		5.3	5.3		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	67.7	67.7		67.7	67.7		16.4	16.4		16.4	16.4	
Actuated g/C Ratio	0.75	0.75		0.75	0.75		0.18	0.18		0.18	0.18	
v/c Ratio	0.30	0.51		0.21	0.53		0.14	0.24		0.04	0.26	
Control Delay	6.8	6.2		6.4	9.0		32.4	15.9		30.6	19.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.8	6.2		6.4	9.0		32.4	15.9		30.6	19.1	
LOS	A	A		A	A		C	B		C	B	
Approach Delay		6.2			8.9			20.7			20.3	

Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024

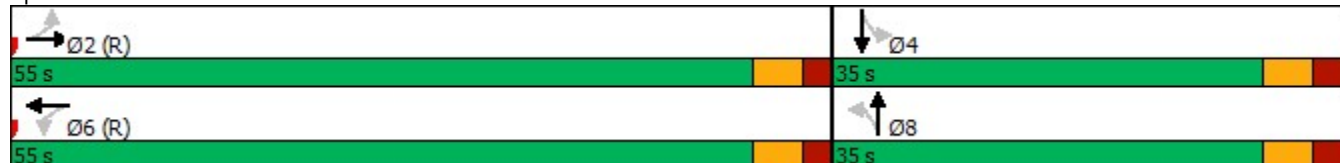


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			C			C		
Queue Length 50th (m)	3.0	56.5		3.1	97.1		4.7	3.8		1.5	5.5	
Queue Length 95th (m)	m5.0	82.1		m5.2	128.3		12.2	15.1		5.6	17.2	
Internal Link Dist (m)	290.4			330.9			175.1			234.5		
Turn Bay Length (m)	55.0			55.0			32.0			37.0		
Base Capacity (vph)	239	2502		256	2520		397	541		404	520	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.30	0.51		0.21	0.53		0.08	0.14		0.02	0.16	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 60 (67%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 8.5
 Intersection LOS: A
 Intersection Capacity Utilization 71.5%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Sandalwood Dr & Heron Rd



Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	1009	105	41	1136	47	78	85	78	40	53	47
Future Volume (vph)	83	1009	105	41	1136	47	78	85	78	40	53	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	58.0		62.0	55.0		0.0	18.0		15.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	27.0			17.0			10.0			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.97	1.00	1.00		1.00		0.97		0.99	
Frt			0.850		0.994				0.850		0.955	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1647	3357	1547	1729	3398	0	1679	1820	1547	0	1652	0
Flt Permitted	0.132			0.187			0.661				0.894	
Satd. Flow (perm)	229	3357	1502	340	3398	0	1165	1820	1499	0	1491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117		7				70			30
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		354.9			465.1			176.5			237.6	
Travel Time (s)		25.6			33.5			12.7			17.1	
Confl. Peds. (#/hr)	6		5	5		6	4		20	20		4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	0%	0%	1%	2%	3%	0%	0%	3%	0%	7%
Adj. Flow (vph)	92	1121	117	46	1262	52	87	94	87	44	59	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	92	1121	117	46	1314	0	87	94	87	0	155	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		27.0	27.0	27.0	27.0	27.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		34.2	34.2	34.2	34.2	34.2	
Total Split (s)	55.0	55.0	55.0	55.0	55.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%	61.1%	61.1%	61.1%		38.9%	38.9%	38.9%	38.9%	38.9%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.2	6.2	6.2		6.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	51.0	51.0	51.0	51.0	51.0		27.2	27.2	27.2		27.2	
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57		0.30	0.30	0.30		0.30	
v/c Ratio	0.71	0.59	0.13	0.24	0.68		0.25	0.17	0.17		0.33	
Control Delay	54.0	21.7	6.0	14.0	16.0		25.9	24.1	9.0		21.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	54.0	21.7	6.0	14.0	16.0		25.9	24.1	9.0		21.7	
LOS	D	C	A	B	B		C	C	A		C	
Approach Delay		22.5			16.0			19.8			21.7	

Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

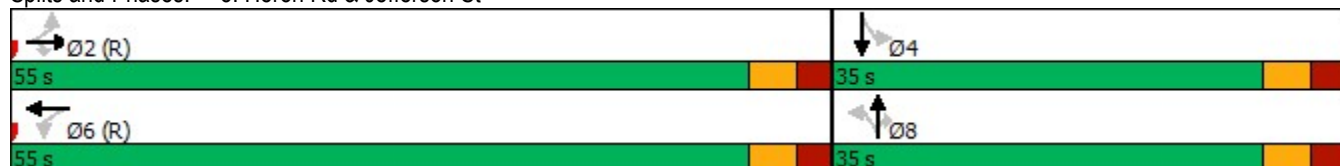


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	C			B			B			C		
Queue Length 50th (m)	16.4	103.7	8.0	3.7	77.5		11.3	12.0	2.1		16.4	
Queue Length 95th (m)	#33.8	124.7	14.6	10.9	103.1		22.9	23.1	12.1		32.0	
Internal Link Dist (m)		330.9			441.1			152.5			213.6	
Turn Bay Length (m)	58.0		62.0	55.0			18.0		15.0			
Base Capacity (vph)	129	1902	901	192	1928		372	582	527		497	
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	0.71	0.59	0.13	0.24	0.68		0.23	0.16	0.17		0.31	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 10 (11%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 19.4
 Intersection LOS: B
 Intersection Capacity Utilization 90.0%
 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: 5: Heron Rd & Jefferson St



Lanes, Volumes, Timings
6: Heron Rd & Walkley Rd

07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕	↗↗	↖↖	
Traffic Volume (vph)	13	1115	1280	1193	783	0
Future Volume (vph)	13	1115	1280	1193	783	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0			65.0	0.0	0.0
Storage Lanes	0			1	2	0
Taper Length (m)	2.5				2.5	
Lane Util. Factor	0.95	0.95	0.95	0.88	0.97	1.00
Frt				0.850		
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	3387	3390	2669	3288	0
Flt Permitted		0.922			0.950	
Satd. Flow (perm)	0	3126	3390	2669	3288	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1219		
Link Speed (k/h)		50	50		50	
Link Distance (m)		465.1	359.8		393.2	
Travel Time (s)		33.5	25.9		28.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	1239	1422	1326	870	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1253	1422	1326	870	0
Turn Type	Perm	NA	NA	custom	Prot	
Protected Phases		4		6	2!	
Permitted Phases	4		6!			
Detector Phase	4	4	6	6	2	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	33.7	33.7	16.6	16.6	16.6	
Total Split (s)	51.0	51.0	59.0	59.0	59.0	
Total Split (%)	46.4%	46.4%	53.6%	53.6%	53.6%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.4	3.4	3.3	3.3	3.3	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.7	6.6	6.6	6.6	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	C-Max	C-Max	C-Max	
Act Effct Green (s)		44.3	52.4	52.4	52.4	
Actuated g/C Ratio		0.40	0.48	0.48	0.48	
v/c Ratio		1.00	0.88	0.69	0.56	
Control Delay		57.8	33.8	4.1	22.2	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		57.8	33.8	4.1	22.2	
LOS		E	C	A	C	
Approach Delay		57.8	19.5		22.2	
Approach LOS		E	B		C	
Queue Length 50th (m)		138.7	140.5	6.9	66.4	
Queue Length 95th (m)		#187.9	173.6	20.1	84.5	

Lanes, Volumes, Timings

6: Heron Rd & Walkley Rd

07/23/2024

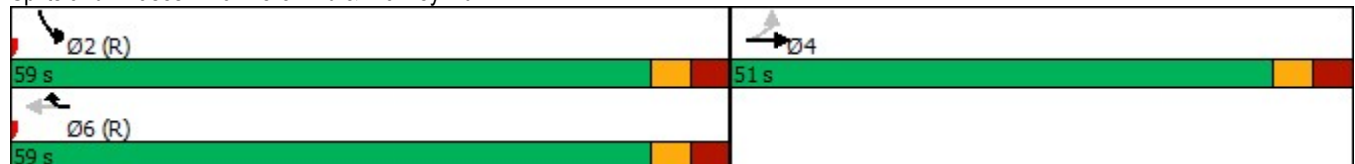


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Internal Link Dist (m)		441.1	335.8		369.2	
Turn Bay Length (m)				65.0		
Base Capacity (vph)		1258	1614	1909	1566	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		1.00	0.88	0.69	0.56	

Intersection Summary

Area Type:	Other
Cycle Length:	110
Actuated Cycle Length:	110
Offset:	53 (48%), Referenced to phase 2:SBL and 6:WBT, Start of Green
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.00
Intersection Signal Delay:	29.8
Intersection LOS:	C
Intersection Capacity Utilization	88.1%
ICU Level of Service	E
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	
! Phase conflict between lane groups.	

Splits and Phases: 6: Heron Rd & Walkley Rd



Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	807	20	24	896	213	19	12	21	134	19	93
Future Volume (vph)	96	807	20	24	896	213	19	12	21	134	19	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	33.0		0.0	0.0		0.0	20.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	22.0			27.0			2.5			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99	0.98			0.99		0.98		
Fr _t		0.996			0.971			0.946				0.875
Fl _t Protected	0.950			0.950				0.982		0.950		
Satd. Flow (prot)	1695	3269	0	1729	3190	0	0	1597	0	1558	1470	0
Fl _t Permitted	0.183			0.283				0.864		0.720		
Satd. Flow (perm)	324	3269	0	508	3190	0	0	1405	0	1156	1470	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			55			23				75
Link Speed (k/h)		50			50			50				50
Link Distance (m)		360.2			304.5			74.0				276.3
Travel Time (s)		25.9			21.9			5.3				19.9
Confl. Peds. (#/hr)	30		31	31		30			23	23		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	5%	11%	0%	0%	19%	0%	0%	11%	11%	0%	10%
Adj. Flow (vph)	107	897	22	27	996	237	21	13	23	149	21	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	919	0	27	1233	0	0	57	0	149	124	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4		4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0		10.0
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1		31.1
Total Split (s)	48.0	48.0		48.0	48.0		32.0	32.0		32.0		32.0
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%		40.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3		3.3
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8		2.8
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0		0.0
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.1		6.1		6.1
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None		None
Act Effct Green (s)	51.6	51.6		51.6	51.6			16.4		16.4		16.4
Actuated g/C Ratio	0.64	0.64		0.64	0.64			0.20		0.20		0.20
v/c Ratio	0.51	0.44		0.08	0.59			0.19		0.63		0.34
Control Delay	22.2	8.7		8.2	10.3			17.1		40.0		13.7
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0		0.0
Total Delay	22.2	8.7		8.2	10.3			17.1		40.0		13.7
LOS	C	A		A	B			B		D		B
Approach Delay		10.1			10.2			17.1				28.0

Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

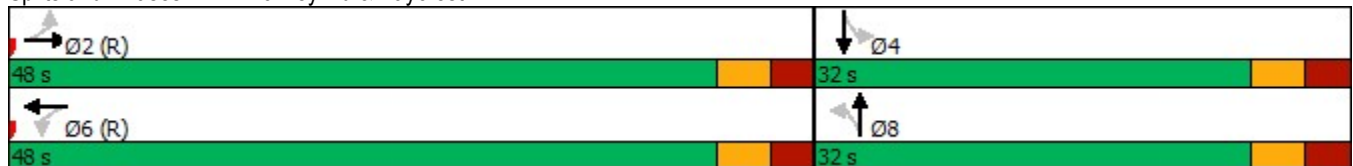


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	B				B			B			C	
Queue Length 50th (m)	7.3	30.5		1.3	45.5			4.3		21.1	6.3	
Queue Length 95th (m)	#35.9	59.2		5.9	88.3			11.5		34.0	16.9	
Internal Link Dist (m)		336.2			280.5			50.0			252.3	
Turn Bay Length (m)	50.0			33.0						20.0		
Base Capacity (vph)	209	2111		327	2078			470		374	526	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.51	0.44		0.08	0.59			0.12		0.40	0.24	

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	12.2
Intersection LOS:	B
Intersection Capacity Utilization:	73.2%
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: 7: Walkley Rd & Baycrest Dr



Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↖	↑↑	↗	↖↖	↑↑		↖	↑↑↑	↗	↖↖	↑↑	↗
Traffic Volume (vph)	307	447	257	280	550	274	208	803	243	280	1212	537
Future Volume (vph)	307	447	257	280	550	274	208	803	243	280	1212	537
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		50.0	78.0		0.0	208.0		70.0	156.0		0.0
Storage Lanes	2		1	2		0	1		1	2		1
Taper Length (m)	27.0			24.0			0.0			24.0		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.95	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor	0.98		0.96	0.98	0.98		0.99		0.95	0.98		0.95
Fr _t			0.850		0.950				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3354	3293	1547	3288	3183	0	1712	4919	1502	3321	3424	1547
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3287	3293	1489	3216	3183	0	1701	4919	1428	3260	3424	1466
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			231		64				270			328
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		154.1			895.6			245.1			260.6	
Travel Time (s)		11.1			64.5			17.6			18.8	
Confl. Peds. (#/hr)	36		22	22		36	28		26	26		28
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	5%	0%	2%	1%	2%	1%	1%	3%	1%	1%	0%
Adj. Flow (vph)	341	497	286	311	611	304	231	892	270	311	1347	597
Shared Lane Traffic (%)												
Lane Group Flow (vph)	341	497	286	311	915	0	231	892	270	311	1347	597
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	35.0	35.0	7.0	35.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	13.8	41.7	41.7	13.8	41.7		13.4	33.4	33.4	13.4	33.4	33.4
Total Split (s)	25.0	41.7	41.7	25.0	41.7		19.0	38.0	38.0	27.0	46.0	46.0
Total Split (%)	19.0%	31.7%	31.7%	19.0%	31.7%		14.4%	28.9%	28.9%	20.5%	34.9%	34.9%
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)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	17.0	36.6	36.6	16.6	36.2		12.6	35.0	35.0	17.2	39.6	39.6
Actuated g/C Ratio	0.13	0.28	0.28	0.13	0.27		0.10	0.27	0.27	0.13	0.30	0.30
v/c Ratio	0.79	0.54	0.49	0.75	0.99		1.42	0.68	0.47	0.72	1.31	0.89
Control Delay	69.2	43.4	12.1	67.5	72.5		261.8	47.0	7.4	64.3	183.8	36.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.2	43.4	12.1	67.5	72.5		261.8	47.0	7.4	64.3	183.8	36.4
LOS	E	D	B	E	E		F	D	A	E	F	D
Approach Delay		43.3			71.3			75.0			128.3	

Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024

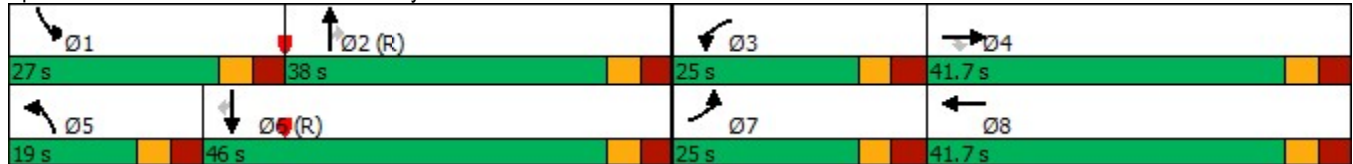


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			E			E			F		
Queue Length 50th (m)	44.3	58.5	10.9	40.4	~126.2		~80.4	76.6	0.0	40.4	~236.2	75.6
Queue Length 95th (m)	60.7	77.0	36.7	55.8	#167.4		#131.7	95.2	22.2	54.5	#278.8	#147.6
Internal Link Dist (m)	130.1			871.6			221.1			236.6		
Turn Bay Length (m)	60.0		50.0	78.0			208.0		70.0	156.0		
Base Capacity (vph)	463	916	581	454	921		163	1306	577	519	1029	670
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.54	0.49	0.69	0.99		1.42	0.68	0.47	0.60	1.31	0.89

Intersection Summary

Area Type: Other
 Cycle Length: 131.7
 Actuated Cycle Length: 131.7
 Offset: 114 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.42
 Intersection Signal Delay: 88.3 Intersection LOS: F
 Intersection Capacity Utilization 107.9% 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: Bank St & Walkley Rd



Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	829	274	79	1227	235	548	1189	19	151	363	105
Future Volume (vph)	166	829	274	79	1227	235	548	1189	19	151	363	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	73.0		85.0	50.0		70.0	110.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	20.0			30.0			0.0			0.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.97	1.00		0.98	0.99	1.00		1.00	0.99	
Frt			0.850			0.850		0.998			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3357	1446	1662	3293	1473	3225	3343	0	1712	3129	0
Flt Permitted	0.095			0.253			0.950			0.950		
Satd. Flow (perm)	171	3357	1404	441	3293	1438	3182	3343	0	1705	3129	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			304			208		1			29	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		381.8			492.5			121.2			274.8	
Travel Time (s)		27.5			35.5			8.7			19.8	
Confl. Peds. (#/hr)	8		13	13		8	12		20	20		12
Confl. Bikes (#/hr)			1			3			3			9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	3%	7%	4%	5%	5%	4%	3%	13%	1%	7%	2%
Adj. Flow (vph)	184	921	304	88	1363	261	609	1321	21	168	403	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	184	921	304	88	1363	261	609	1342	0	168	520	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0	10.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	13.5	34.4	34.4	32.5	32.5	32.5	13.5	32.4		13.5	32.4	
Total Split (s)	13.0	55.0	55.0	42.0	42.0	42.0	32.0	49.0		16.0	33.0	
Total Split (%)	10.8%	45.8%	45.8%	35.0%	35.0%	35.0%	26.7%	40.8%		13.3%	27.5%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.1	3.1	1.0	1.0	1.0	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	4.3	4.3	4.3	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	48.5	48.6	48.6	37.7	37.7	37.7	24.9	42.6		9.5	27.2	
Actuated g/C Ratio	0.40	0.40	0.40	0.31	0.31	0.31	0.21	0.36		0.08	0.23	
v/c Ratio	1.21	0.68	0.41	0.64	1.32	0.44	0.91	1.13		1.24	0.71	
Control Delay	167.7	32.4	4.3	58.5	184.7	10.2	43.7	85.4		202.7	46.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	167.7	32.4	4.3	58.5	184.7	10.2	43.7	85.4		202.7	46.7	
LOS	F	C	A	E	F	B	D	F		F	D	

Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024

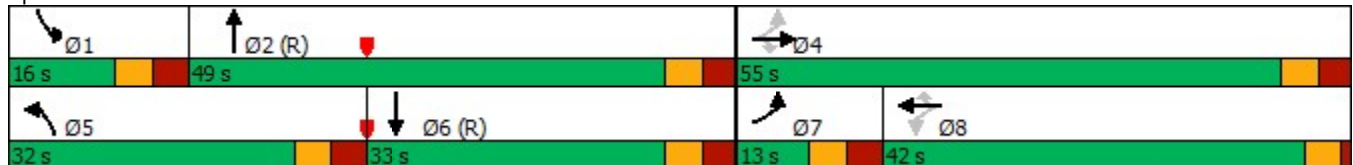


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		44.0			151.6			72.4			84.8	
Approach LOS		D			F			E			F	
Queue Length 50th (m)	~37.9	92.2	0.0	17.7	~218.1	8.9	59.7	~196.7		~49.1	56.9	
Queue Length 95th (m)	#83.2	114.9	16.7	#42.5	#260.1	30.7	m62.8 m#198.5			#92.7	76.3	
Internal Link Dist (m)		357.8			468.5			97.2			250.8	
Turn Bay Length (m)	73.0		85.0	50.0		70.0	110.0			70.0		
Base Capacity (vph)	152	1359	749	138	1034	594	685	1187		135	731	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.21	0.68	0.41	0.64	1.32	0.44	0.89	1.13		1.24	0.71	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	52 (43%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	145
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.32
Intersection Signal Delay:	90.5
Intersection LOS:	F
Intersection Capacity Utilization:	109.5%
ICU Level of Service:	H
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.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Bank St & Heron Rd



Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	717	92	155	1279	205	72	288	191	102	280	133
Future Volume (vph)	108	717	92	155	1279	205	72	288	191	102	280	133
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		0.0	57.0		85.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (m)	30.0			24.0			2.5			48.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	0.99		0.97		0.83	0.99	0.95			0.99	
Frt		0.983				0.850		0.940			0.952	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3206	0	1695	3293	1459	1601	1582	0	1631	1690	0
Flt Permitted	0.950			0.950			0.483			0.129		
Satd. Flow (perm)	1676	3206	0	1644	3293	1213	804	1582	0	221	1690	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				218		36			32	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		492.5			657.5			201.9			270.3	
Travel Time (s)		35.5			47.3			14.5			19.5	
Confl. Peds. (#/hr)	54		37	37		54	21		110	110		21
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	5%	1%	2%	5%	6%	8%	2%	3%	6%	2%	0%
Adj. Flow (vph)	120	797	102	172	1421	228	80	320	212	113	311	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	899	0	172	1421	228	80	532	0	113	459	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0	10.0	10.0	10.0		7.0	10.0	
Minimum Split (s)	12.4	23.4		12.4	23.4	23.4	29.9	29.9		11.5	29.9	
Total Split (s)	13.0	34.0		13.0	34.0	34.0	30.0	30.0		13.0	43.0	
Total Split (%)	14.4%	37.8%		14.4%	37.8%	37.8%	33.3%	33.3%		14.4%	47.8%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.1	2.1	2.1	2.6	2.6		1.0	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4	5.4	5.9	5.9		4.3	5.9	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	7.6	28.6		7.6	28.6	28.6	26.8	26.8		38.7	37.1	
Actuated g/C Ratio	0.08	0.32		0.08	0.32	0.32	0.30	0.30		0.43	0.41	
v/c Ratio	0.83	0.87		1.20	1.36	0.43	0.33	1.07		0.51	0.64	
Control Delay	83.7	39.5		158.9	187.1	3.2	31.6	92.9		24.0	24.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	83.7	39.5		158.9	187.1	3.2	31.6	92.9		24.0	24.6	
LOS	F	D		F	F	A	C	F		C	C	
Approach Delay		44.7			161.4			84.9			24.5	

Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

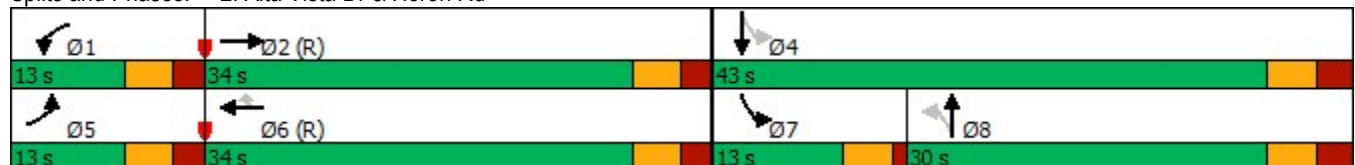


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			F			F			C		
Queue Length 50th (m)	20.8	75.4		~37.7	~168.6	0.0	11.2	~107.2		11.6	57.5	
Queue Length 95th (m)	#50.4	#109.1		m#50.2	m#180.7	m4.1	24.5	#167.8		22.1	89.9	
Internal Link Dist (m)	468.5			633.5			177.9			246.3		
Turn Bay Length (m)	65.0			57.0			85.0			30.0		
Base Capacity (vph)	144	1029		143	1046	534	239	496		231	715	
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	0.83	0.87		1.20	1.36	0.43	0.33	1.07		0.49	0.64	

Intersection Summary




















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 10 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.36
 Intersection Signal Delay: 100.8 Intersection LOS: F
 Intersection Capacity Utilization 97.9% 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Alta Vista Dr & Heron Rd



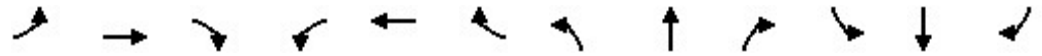
Lanes, Volumes, Timings
3: Baycrest Dr & Heron Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	809	253	34	1218	4	427	20	71	1	2	2
Future Volume (vph)	11	809	253	34	1218	4	427	20	71	1	2	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	43.0		0.0	55.0		0.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	70.0			25.0			2.5			0.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98		0.99	1.00			0.97		1.00	0.98	
Frt		0.964						0.981			0.925	
Flt Protected	0.950			0.950				0.960		0.950		
Satd. Flow (prot)	1729	3155	0	1478	3293	0	0	1637	0	1729	1648	0
Flt Permitted	0.115			0.162				0.761		0.694		
Satd. Flow (perm)	209	3155	0	250	3293	0	0	1267	0	1260	1648	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		75			1			9			2	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		657.5			165.6			489.7			60.0	
Travel Time (s)		47.3			11.9			35.3			4.3	
Confl. Peds. (#/hr)	15		27	27		15	31		8	8		31
Confl. Bikes (#/hr)						1						2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	7%	17%	5%	0%	5%	0%	2%	0%	0%	0%
Adj. Flow (vph)	12	899	281	38	1353	4	474	22	79	1	2	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	1180	0	38	1357	0	0	575	0	1	4	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	29.7	29.7		29.7	29.7		35.0	35.0		35.0	35.0	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.4	1.4		1.4	1.4		2.7	2.7		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	4.7	4.7		4.7	4.7			6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	50.3	50.3		50.3	50.3			29.0		29.0	29.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56			0.32		0.32	0.32	
v/c Ratio	0.10	0.66		0.27	0.74			1.39		0.00	0.01	
Control Delay	6.8	7.0		24.3	24.6			217.0		21.0	17.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	6.8	7.0		24.3	24.6			217.0		21.0	17.2	
LOS	A	A		C	C			F		C	B	

Lanes, Volumes, Timings
3: Baycrest Dr & Heron Rd

07/23/2024

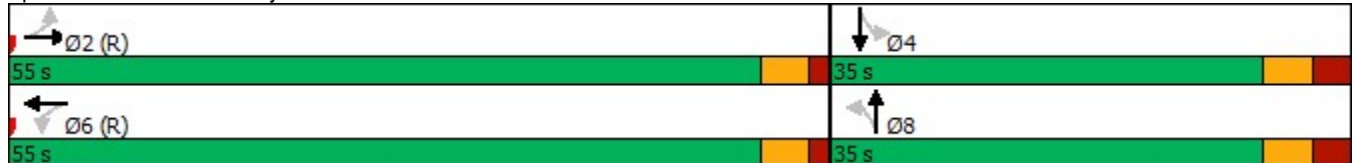


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		7.0			24.6			217.0				18.0
Approach LOS		A			C			F				B
Queue Length 50th (m)	0.6	24.1		3.4	118.6			~133.8		0.1		0.3
Queue Length 95th (m)	m0.7	m27.2		m0.0	154.7			#195.9		1.2		2.5
Internal Link Dist (m)		633.5			141.6			465.7				36.0
Turn Bay Length (m)	43.0			55.0						30.0		
Base Capacity (vph)	116	1796		139	1840			414		406		532
Starvation Cap Reductn	0	0		0	0			0		0		0
Spillback Cap Reductn	0	0		0	0			0		0		0
Storage Cap Reductn	0	0		0	0			0		0		0
Reduced v/c Ratio	0.10	0.66		0.27	0.74			1.39		0.00		0.01

Intersection Summary





















Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	51 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	75
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.39
Intersection Signal Delay:	52.9
Intersection LOS:	D
Intersection Capacity Utilization:	82.0%
ICU Level of Service:	E
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.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Baycrest Dr & Heron Rd



Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	824	26	23	1115	18	57	15	39	8	15	75
Future Volume (vph)	45	824	26	23	1115	18	57	15	39	8	15	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	55.0		0.0	32.0		0.0	37.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	25.0			25.0			12.0			37.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00		0.99	0.99		0.99	0.98	
Frt		0.995			0.998			0.892				0.875
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3313	0	1601	3257	0	1478	1536	0	1729	1567	0
Flt Permitted	0.191			0.284			0.692			0.718		
Satd. Flow (perm)	347	3313	0	477	3257	0	1069	1536	0	1298	1567	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			3			43				52
Link Speed (k/h)		50			50			50				50
Link Distance (m)		148.8			354.9			199.1				258.5
Travel Time (s)		10.7			25.6			14.3				18.6
Confl. Peds. (#/hr)	7		7	7		7	5		5	5		5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	27%	8%	6%	0%	17%	15%	0%	0%	0%	0%
Adj. Flow (vph)	50	916	29	26	1239	20	63	17	43	9	17	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	50	945	0	26	1259	0	63	60	0	9	100	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	24.3	24.3		24.3	24.3		24.1	24.1		24.1	24.1	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3		5.3	5.3		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	67.7	67.7		67.7	67.7		16.4	16.4		16.4	16.4	
Actuated g/C Ratio	0.75	0.75		0.75	0.75		0.18	0.18		0.18	0.18	
v/c Ratio	0.19	0.38		0.07	0.51		0.32	0.19		0.04	0.30	
Control Delay	3.3	2.6		9.5	11.1		37.0	15.5		30.4	19.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	3.3	2.6		9.5	11.1		37.0	15.5		30.4	19.7	
LOS	A	A		A	B		D	B		C	B	
Approach Delay		2.7			11.0			26.5			20.5	

Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			B			C			C		
Queue Length 50th (m)	0.6	6.2		1.8	60.8		9.6	2.5		1.3	7.1	
Queue Length 95th (m)	m1.3	m17.2		m4.2	94.1		20.8	12.4		5.2	20.1	
Internal Link Dist (m)		124.8			330.9			175.1			234.5	
Turn Bay Length (m)	55.0			55.0			32.0			37.0		
Base Capacity (vph)	261	2493		358	2450		343	522		416	538	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.19	0.38		0.07	0.51		0.18	0.11		0.02	0.19	

Intersection Summary

























Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.51
 Intersection Signal Delay: 8.9
 Intersection LOS: A
 Intersection Capacity Utilization 62.6%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Sandalwood Dr & Heron Rd



Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	804	50	14	1071	28	33	33	28	32	27	82
Future Volume (vph)	35	804	50	14	1071	28	33	33	28	32	27	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	58.0		62.0	55.0		0.0	18.0		15.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	27.0			17.0			10.0			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.97	1.00	1.00		1.00		0.98		0.99	
Frt			0.850		0.996				0.850		0.922	
Flt Protected	0.950			0.950			0.950				0.989	
Satd. Flow (prot)	1572	3357	1419	1383	3278	0	1679	1820	1381	0	1566	0
Flt Permitted	0.157			0.268			0.656				0.930	
Satd. Flow (perm)	259	3357	1379	390	3278	0	1155	1820	1357	0	1471	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			56		4				32			58
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		354.9			465.1			176.5			237.6	
Travel Time (s)		25.6			33.5			12.7			17.1	
Confl. Peds. (#/hr)	6		4	4		6	5		5	5		5
Confl. Bikes (#/hr)			2						1			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	3%	9%	25%	5%	4%	3%	0%	12%	4%	0%	7%
Adj. Flow (vph)	39	893	56	16	1190	31	37	37	31	36	30	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	893	56	16	1221	0	37	37	31	0	157	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		27.0	27.0	27.0	27.0	27.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		34.2	34.2	34.2	34.2	34.2	
Total Split (s)	55.0	55.0	55.0	55.0	55.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%	61.1%	61.1%	61.1%		38.9%	38.9%	38.9%	38.9%	38.9%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.2	6.2	6.2		6.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	51.0	51.0	51.0	51.0	51.0		27.2	27.2	27.2		27.2	
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57		0.30	0.30	0.30		0.30	
v/c Ratio	0.27	0.47	0.07	0.07	0.66		0.11	0.07	0.07		0.32	
Control Delay	6.2	3.0	0.2	10.1	15.6		23.6	22.7	8.3		17.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	6.2	3.0	0.2	10.1	15.6		23.6	22.7	8.3		17.2	
LOS	A	A	A	B	B		C	C	A		B	

Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		2.9			15.5			18.8				17.2
Approach LOS		A			B			B				B
Queue Length 50th (m)	0.0	6.8	0.0	1.2	70.7		4.6	4.6	0.0			12.8
Queue Length 95th (m)	1.5	9.2	0.1	4.3	94.5		11.5	11.2	5.9			27.8
Internal Link Dist (m)		330.9			441.1			152.5				213.6
Turn Bay Length (m)	58.0		62.0	55.0			18.0		15.0			
Base Capacity (vph)	146	1902	805	220	1859		369	582	456			510
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	0.27	0.47	0.07	0.07	0.66		0.10	0.06	0.07			0.31

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	10 (11%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	10.8
Intersection LOS:	B
Intersection Capacity Utilization:	83.7%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 5: Heron Rd & Jefferson St



Lanes, Volumes, Timings
6: Walkley Rd & Heron Rd

07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑↑	↑↑	↑↑
Traffic Volume (vph)	0	853	724	1112	801	63
Future Volume (vph)	0	853	724	1112	801	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0			65.0	0.0	0.0
Storage Lanes	0			1	2	0
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	0.95	0.95	0.88	0.97	0.95
Frt				0.850	0.989	
Flt Protected					0.956	
Satd. Flow (prot)	0	3390	3390	2669	3273	0
Flt Permitted					0.956	
Satd. Flow (perm)	0	3390	3390	2669	3273	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1236	10	
Link Speed (k/h)		50	50		50	
Link Distance (m)		393.2	359.1		465.1	
Travel Time (s)		28.3	25.9		33.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	948	804	1236	890	70
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	948	804	1236	960	0
Turn Type		NA	NA	Perm	Prot	
Protected Phases		2	6		4	
Permitted Phases				6		
Detector Phase		2	6	6	4	
Switch Phase						
Minimum Initial (s)		10.0	10.0	10.0	10.0	
Minimum Split (s)		16.6	16.6	16.6	33.7	
Total Split (s)		54.0	54.0	54.0	46.0	
Total Split (%)		54.0%	54.0%	54.0%	46.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	
All-Red Time (s)		3.3	3.3	3.3	3.4	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode		C-Max	C-Max	C-Max	Max	
Act Effct Green (s)		47.4	47.4	47.4	39.3	
Actuated g/C Ratio		0.47	0.47	0.47	0.39	
v/c Ratio		0.59	0.50	0.65	0.74	
Control Delay		21.1	19.5	2.7	30.0	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		21.1	19.5	2.7	30.0	
LOS		C	B	A	C	
Approach Delay		21.1	9.3		30.0	
Approach LOS		C	A		C	
Queue Length 50th (m)		68.2	54.6	0.0	79.9	
Queue Length 95th (m)		87.4	71.0	11.3	103.0	

Lanes, Volumes, Timings
6: Walkley Rd & Heron Rd

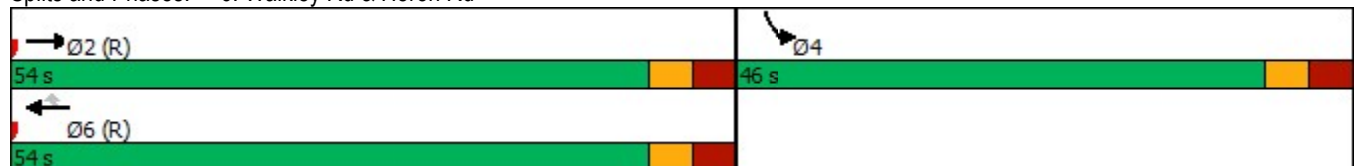
07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Internal Link Dist (m)		369.2	335.1		441.1	
Turn Bay Length (m)				65.0		
Base Capacity (vph)		1606	1606	1915	1292	
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		0.59	0.50	0.65	0.74	




















Intersection Summary	
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	23 (23%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	17.2
Intersection LOS:	B
Intersection Capacity Utilization	62.2%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 6: Walkley Rd & Heron Rd



Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	683	11	9	696	153	27	21	30	215	5	104
Future Volume (vph)	57	683	11	9	696	153	27	21	30	215	5	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	33.0		0.0	0.0		0.0	20.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	22.0			27.0			2.5			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.99	0.99			0.99		0.98	0.98	
Fr _t		0.998			0.973			0.948			0.857	
Fl _t Protected	0.950			0.950				0.983		0.950		
Satd. Flow (prot)	1530	3257	0	1530	3181	0	0	1676	0	1586	1529	0
Fl _t Permitted	0.256			0.330				0.872		0.701		
Satd. Flow (perm)	411	3257	0	528	3181	0	0	1483	0	1150	1529	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			50			33			111	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		360.2			595.8			74.0			489.7	
Travel Time (s)		25.9			42.9			5.3			35.3	
Confl. Peds. (#/hr)	9		12	12		9	11		23	23		11
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	13%	6%	0%	13%	4%	10%	0%	0%	0%	9%	0%	0%
Adj. Flow (vph)	63	759	12	10	773	170	30	23	33	239	6	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	771	0	10	943	0	0	86	0	239	122	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1	31.1	
Total Split (s)	38.0	38.0		38.0	38.0		32.0	32.0		32.0	32.0	
Total Split (%)	54.3%	54.3%		54.3%	54.3%		45.7%	45.7%		45.7%	45.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	38.7	38.7		38.7	38.7			19.3		19.3	19.3	
Actuated g/C Ratio	0.55	0.55		0.55	0.55			0.28		0.28	0.28	
v/c Ratio	0.28	0.43		0.03	0.53			0.20		0.76	0.24	
Control Delay	15.0	11.2		10.2	11.8			12.6		37.8	5.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	15.0	11.2		10.2	11.8			12.6		37.8	5.7	
LOS	B	B		B	B			B		D	A	
Approach Delay		11.4			11.8			12.6			26.9	

Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	B			B			B			C		
Queue Length 50th (m)	4.1	28.8		0.6	35.8			5.1		28.1	1.1	
Queue Length 95th (m)	14.5	50.1		3.1	62.7			12.8		45.5	10.1	
Internal Link Dist (m)		336.2			571.8			50.0			465.7	
Turn Bay Length (m)	50.0			33.0						20.0		
Base Capacity (vph)	227	1803		292	1782			569		425	635	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.28	0.43		0.03	0.53			0.15		0.56	0.19	

Intersection Summary

































Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	17 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	14.1
Intersection LOS:	B
Intersection Capacity Utilization:	68.6%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 7: Walkley Rd & Baycrest Dr



Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			  		 	 	 
Traffic Volume (vph)	421	434	102	121	439	406	166	1335	181	184	525	272
Future Volume (vph)	421	434	102	121	439	406	166	1335	181	184	525	272
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		50.0	78.0		0.0	208.0		70.0	156.0		0.0
Storage Lanes	2		1	2		0	1		1	2		1
Taper Length (m)	27.0			24.0			0.0			24.0		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.95	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor	0.99		0.97	0.99	0.98		1.00		0.96	1.00		0.97
Fr _t			0.850		0.928				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3288	3390	1517	3288	3084	0	1695	4871	1517	3288	3390	1517
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3246	3390	1475	3255	3084	0	1687	4871	1460	3273	3390	1469
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			209		175				169			302
Link Speed (k/h)		50			50			50				50
Link Distance (m)		154.1			895.6			245.1				260.6
Travel Time (s)		11.1			64.5			17.6				18.8
Confl. Peds. (#/hr)	26		11	11		26	8		17	17		8
Confl. Bikes (#/hr)			5			2			5			10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	468	482	113	134	488	451	184	1483	201	204	583	302
Shared Lane Traffic (%)												
Lane Group Flow (vph)	468	482	113	134	939	0	184	1483	201	204	583	302
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	29.0	29.0	7.0	29.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	13.8	39.7	39.7	13.8	39.7		13.4	33.4	33.4	13.4	33.4	33.4
Total Split (s)	19.0	40.0	40.0	19.0	40.0		26.0	46.0	46.0	15.0	35.0	35.0
Total Split (%)	15.8%	33.3%	33.3%	15.8%	33.3%		21.7%	38.3%	38.3%	12.5%	29.2%	29.2%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	12.2	35.4	35.4	10.0	33.2		16.9	39.6	39.6	8.7	31.4	31.4
Actuated g/C Ratio	0.10	0.30	0.30	0.08	0.28		0.14	0.33	0.33	0.07	0.26	0.26
v/c Ratio	1.40	0.48	0.19	0.49	0.96		0.77	0.92	0.34	0.86	0.66	0.50
Control Delay	237.4	37.1	0.7	58.3	55.3		70.5	49.4	8.4	80.0	55.4	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	237.4	37.1	0.7	58.3	55.3		70.5	49.4	8.4	80.0	55.4	18.7
LOS	F	D	A	E	E		E	D	A	F	E	B
Approach Delay		121.4			55.7			47.0			49.9	

Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024

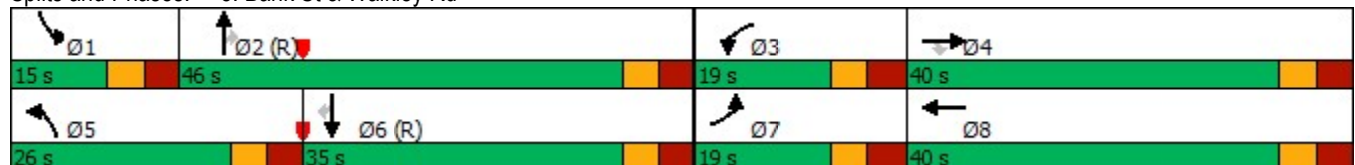


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	F			E			D			D		
Queue Length 50th (m)	~75.9	49.1	0.0	15.7	96.8		41.7	122.6	5.1	25.0	71.5	20.2
Queue Length 95th (m)	#108.5	67.0	0.0	25.3	#139.1		65.5	#151.3	22.3	m#45.5	92.3	40.5
Internal Link Dist (m)		130.1			871.6			221.1			236.6	
Turn Bay Length (m)	60.0		50.0	78.0			208.0		70.0	156.0		
Base Capacity (vph)	334	999	582	334	982		276	1607	595	238	885	607
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.40	0.48	0.19	0.40	0.96		0.67	0.92	0.34	0.86	0.66	0.50

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 79 (66%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 125
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.40
 Intersection Signal Delay: 65.0 Intersection LOS: E
 Intersection Capacity Utilization 95.4% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bank St & Walkley Rd



Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	1138	562	78	1163	151	448	591	52	300	962	150
Future Volume (vph)	242	1138	562	78	1163	151	448	591	52	300	962	150
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	73.0		85.0	50.0		70.0	110.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	20.0			30.0			0.0			0.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.95	1.00		0.96	0.99	1.00		0.98	0.99	
Fr _t			0.850			0.850		0.988			0.980	
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3325	1532	1679	3390	1532	3321	3341	0	1695	3299	0
Fl _t Permitted	0.102			0.115			0.950			0.950		
Satd. Flow (perm)	186	3325	1453	202	3390	1476	3281	3341	0	1670	3299	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			480			138		7			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		381.8			492.5			121.2			274.8	
Travel Time (s)		27.5			35.5			8.7			19.8	
Confl. Peds. (#/hr)	18		29	29		18	27		27	27		27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	1%	3%	2%	1%	1%	2%	0%	2%	2%	2%
Adj. Flow (vph)	269	1264	624	87	1292	168	498	657	58	333	1069	167
Shared Lane Traffic (%)												
Lane Group Flow (vph)	269	1264	624	87	1292	168	498	715	0	333	1236	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0	10.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	13.5	34.4	34.4	32.5	32.5	32.5	13.5	32.4		13.5	32.4	
Total Split (s)	20.0	59.0	59.0	39.0	39.0	39.0	32.0	39.0		32.0	39.0	
Total Split (%)	15.4%	45.4%	45.4%	30.0%	30.0%	30.0%	24.6%	30.0%		24.6%	30.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.1	3.1	1.0	1.0	1.0	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	4.3	4.3	4.3	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	52.5	52.6	52.6	34.7	34.7	34.7	23.3	32.6		25.5	34.8	
Actuated g/C Ratio	0.40	0.40	0.40	0.27	0.27	0.27	0.18	0.25		0.20	0.27	
v/c Ratio	1.14	0.94	0.71	1.64	1.43	0.34	0.84	0.85		1.00	1.39	
Control Delay	136.0	51.3	12.2	333.3	237.0	30.5	64.6	56.6		102.2	216.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	136.0	51.3	12.2	333.3	237.0	30.5	64.6	56.6		102.2	216.7	
LOS	F	D	B	F	F	C	E	E		F	F	
Approach Delay		50.6			220.0			59.9			192.4	

Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			F			E			F		
Queue Length 50th (m)	~65.5	161.8	27.4	~33.1	~242.8	26.1	63.4	91.4		~86.4	~225.6	
Queue Length 95th (m)	#120.1	#207.9	74.1	m#30.9	m#210.2	m23.6	82.0	#116.5		#146.8	#272.0	
Internal Link Dist (m)	357.8			468.5			97.2		250.8			
Turn Bay Length (m)	73.0		85.0	50.0		70.0	110.0			70.0		
Base Capacity (vph)	235	1345	873	53	904	495	651	843		332	892	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.14	0.94	0.71	1.64	1.43	0.34	0.76	0.85		1.00	1.39	

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 57 (44%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.64
 Intersection Signal Delay: 127.0
 Intersection Capacity Utilization 114.8%
 Analysis Period (min) 15

Intersection LOS: F

ICU Level of Service H

~ Volume exceeds capacity, queue is theoretically infinite.

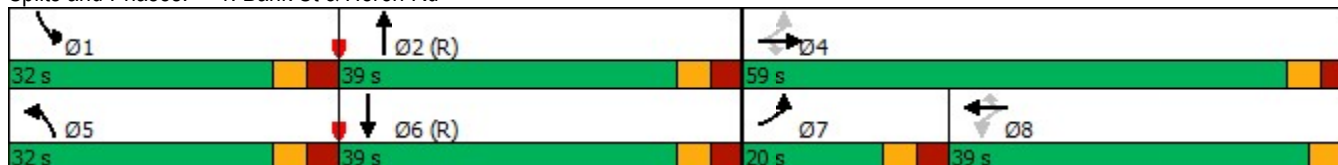
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 1: Bank St & Heron Rd



Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	1207	44	122	1151	143	24	237	134	191	486	157
Future Volume (vph)	158	1207	44	122	1151	143	24	237	134	191	486	157
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		0.0	57.0		85.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (m)	30.0			24.0			2.5			48.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99		0.93		0.99			0.99	
Frt		0.995				0.850		0.946			0.963	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3334	0	1695	3357	1473	1729	1666	0	1631	1705	0
Flt Permitted	0.950			0.950			0.137			0.211		
Satd. Flow (perm)	1698	3334	0	1679	3357	1373	249	1666	0	362	1705	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				120		22			16	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		492.5			657.5			201.9			270.3	
Travel Time (s)		35.5			47.3			14.5			19.5	
Confl. Peds. (#/hr)	12		16	16		12	19		9	9		19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	3%	0%	2%	3%	5%	0%	2%	3%	6%	2%	1%
Adj. Flow (vph)	176	1341	49	136	1279	159	27	263	149	212	540	174
Shared Lane Traffic (%)												
Lane Group Flow (vph)	176	1390	0	136	1279	159	27	412	0	212	714	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0	10.0	10.0	10.0		7.0	10.0	
Minimum Split (s)	12.4	23.4		12.4	23.4	23.4	29.9	29.9		11.5	29.9	
Total Split (s)	19.0	52.0		16.0	49.0	49.0	44.0	44.0		18.0	62.0	
Total Split (%)	14.6%	40.0%		12.3%	37.7%	37.7%	33.8%	33.8%		13.8%	47.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.1	2.1	2.1	2.6	2.6		1.0	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4	5.4	5.9	5.9		4.3	5.9	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	13.6	46.6		10.6	43.6	43.6	38.6	38.6		57.7	56.1	
Actuated g/C Ratio	0.10	0.36		0.08	0.34	0.34	0.30	0.30		0.44	0.43	
v/c Ratio	0.98	1.16		0.99	1.14	0.29	0.37	0.81		0.73	0.96	
Control Delay	116.0	101.3		132.1	112.6	10.8	53.7	53.9		39.6	60.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	116.0	101.3		132.1	112.6	10.8	53.7	53.9		39.6	60.0	
LOS	F	F		F	F	B	D	D		D	E	
Approach Delay		103.0			104.0			53.8			55.3	

Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

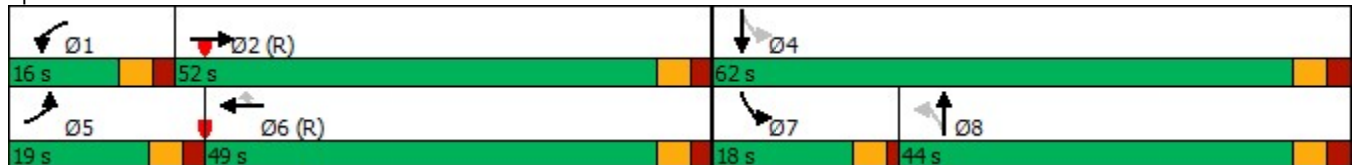


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	F			F			D			E		
Queue Length 50th (m)	48.3	~217.6		35.4	~200.5		6.8	5.5	93.6	34.1	172.0	
Queue Length 95th (m)	m#52.6 m#237.4			#76.6	#242.8		23.1	16.0	#143.4	#55.3	#253.1	
Internal Link Dist (m)	468.5			633.5			177.9			246.3		
Turn Bay Length (m)	65.0			57.0			85.0			30.0		
Base Capacity (vph)	179	1197		138	1125		540	73	509	294	744	
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	0.98	1.16		0.99	1.14		0.29	0.37	0.81	0.72	0.96	

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 6 (5%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.16
 Intersection Signal Delay: 88.7 Intersection LOS: F
 Intersection Capacity Utilization 108.6% 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Alta Vista Dr & Heron Rd



Lanes, Volumes, Timings
3: Baycrest Dr & Heron Rd






















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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1140	316	28	1243	16	251	0	54	3	5	10
Future Volume (vph)	2	1140	316	28	1243	16	251	0	54	3	5	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	43.0		0.0	55.0		0.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	70.0			25.0			2.5			0.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99			1.00			0.98		1.00	0.98	
Fr _t		0.967			0.998			0.976			0.903	
Fl _t Protected	0.950			0.950				0.960		0.950		
Satd. Flow (prot)	864	3187	0	1662	3379	0	0	1586	0	1647	1605	0
Fl _t Permitted	0.115			0.076				0.752		0.670		
Satd. Flow (perm)	105	3187	0	133	3379	0	0	1217	0	1157	1605	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64			2			21			11	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		657.5			314.4			216.5			60.0	
Travel Time (s)		47.3			22.6			15.6			4.3	
Confl. Peds. (#/hr)	9		20	20		9	27		7	7		27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	100%	3%	6%	4%	2%	8%	7%	0%	8%	5%	0%	0%
Adj. Flow (vph)	2	1267	351	31	1381	18	279	0	60	3	6	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	1618	0	31	1399	0	0	339	0	3	17	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	29.7	29.7		29.7	29.7		35.0	35.0		35.0	35.0	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.4	1.4		1.4	1.4		2.7	2.7		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	4.7	4.7		4.7	4.7			6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	52.6	52.6		52.6	52.6			26.7		26.7	26.7	
Actuated g/C Ratio	0.58	0.58		0.58	0.58			0.30		0.30	0.30	
v/c Ratio	0.03	0.86		0.40	0.71			0.90		0.01	0.04	
Control Delay	10.5	21.6		41.3	29.4			57.0		21.0	13.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	10.5	21.6		41.3	29.4			57.0		21.0	13.7	
LOS	B	C		D	C			E		C	B	
Approach Delay		21.6			29.7			57.0			14.8	

Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	1143	47	50	1224	20	30	24	48	9	30	47
Future Volume (vph)	68	1143	47	50	1224	20	30	24	48	9	30	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	55.0		0.0	32.0		0.0	37.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	25.0			25.0			12.0			37.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00		0.97	0.98		0.98	0.97	
Frt		0.994			0.998			0.901				0.908
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3326	0	1729	3350	0	1729	1578	0	1729	1530	0
Flt Permitted	0.161			0.175			0.702			0.705		
Satd. Flow (perm)	293	3326	0	318	3350	0	1233	1578	0	1259	1530	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			3			47				38
Link Speed (k/h)		50			50			50				50
Link Distance (m)		314.4			354.9			199.1				258.5
Travel Time (s)		22.6			25.6			14.3				18.6
Confl. Peds. (#/hr)	9		11	11		9	26		14	14		26
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	7%	0%	3%	0%	0%	5%	0%	0%	12%	0%
Adj. Flow (vph)	76	1270	52	56	1360	22	33	27	53	10	33	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	1322	0	56	1382	0	33	80	0	10	85	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	24.3	24.3		24.3	24.3		24.1	24.1		24.1	24.1	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3		5.3	5.3		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	67.7	67.7		67.7	67.7		16.4	16.4		16.4	16.4	
Actuated g/C Ratio	0.75	0.75		0.75	0.75		0.18	0.18		0.18	0.18	
v/c Ratio	0.35	0.53		0.23	0.55		0.15	0.25		0.04	0.27	
Control Delay	8.2	6.2		7.0	9.2		32.5	17.8		30.6	21.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.2	6.2		7.0	9.2		32.5	17.8		30.6	21.7	
LOS	A	A		A	A		C	B		C	C	
Approach Delay		6.3			9.1			22.1			22.6	

Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024

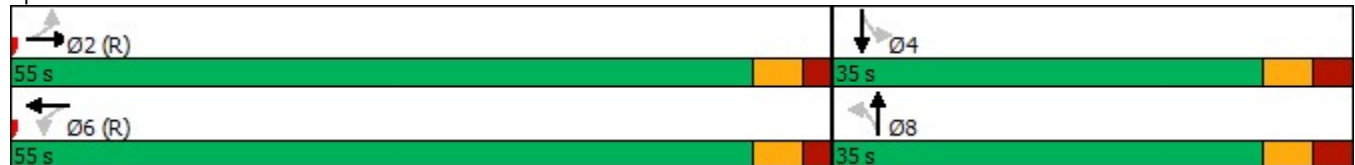


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			C			C		
Queue Length 50th (m)	3.3	58.0		3.4	103.7		4.9	4.9		1.5	7.0	
Queue Length 95th (m)	m5.7	95.1		m5.4	137.2		12.6	16.3		5.6	19.0	
Internal Link Dist (m)	290.4			330.9			175.1			234.5		
Turn Bay Length (m)	55.0			55.0			32.0			37.0		
Base Capacity (vph)	220	2502		239	2520		395	538		404	517	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.35	0.53		0.23	0.55		0.08	0.15		0.02	0.16	

Intersection Summary























Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 60 (67%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 8.7
 Intersection LOS: A
 Intersection Capacity Utilization 73.0%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Sandalwood Dr & Heron Rd



Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	1053	109	43	1184	49	82	89	82	42	56	49
Future Volume (vph)	86	1053	109	43	1184	49	82	89	82	42	56	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	58.0		62.0	55.0		0.0	18.0		15.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	27.0			17.0			10.0			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.97	1.00	1.00		1.00		0.97		0.99	
Frt			0.850		0.994				0.850		0.955	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1647	3357	1547	1729	3398	0	1679	1820	1547	0	1652	0
Flt Permitted	0.118			0.172			0.650				0.889	
Satd. Flow (perm)	204	3357	1502	313	3398	0	1145	1820	1499	0	1482	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121		7				62			29
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		354.9			465.1			176.5			237.6	
Travel Time (s)		25.6			33.5			12.7			17.1	
Confl. Peds. (#/hr)	6		5	5		6	4		20	20		4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	0%	0%	1%	2%	3%	0%	0%	3%	0%	7%
Adj. Flow (vph)	96	1170	121	48	1316	54	91	99	91	47	62	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	1170	121	48	1370	0	91	99	91	0	163	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		27.0	27.0	27.0	27.0	27.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		34.2	34.2	34.2	34.2	34.2	
Total Split (s)	55.0	55.0	55.0	55.0	55.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%	61.1%	61.1%	61.1%		38.9%	38.9%	38.9%	38.9%	38.9%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.2	6.2	6.2		6.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	51.0	51.0	51.0	51.0	51.0		27.2	27.2	27.2		27.2	
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57		0.30	0.30	0.30		0.30	
v/c Ratio	0.83	0.62	0.13	0.27	0.71		0.26	0.18	0.18		0.35	
Control Delay	74.5	22.0	5.6	15.2	16.7		26.2	24.2	10.7		22.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	74.5	22.0	5.6	15.2	16.7		26.2	24.2	10.7		22.4	
LOS	E	C	A	B	B		C	C	B		C	
Approach Delay		24.2			16.7			20.5			22.4	

Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

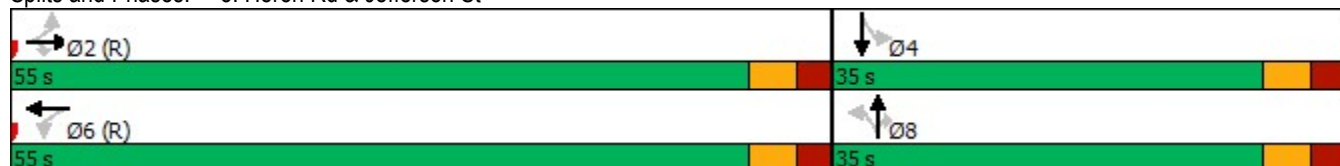


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	C			B			C			C		
Queue Length 50th (m)	15.5	108.7	7.7	3.9	83.2		11.9	12.6	3.6		17.8	
Queue Length 95th (m)	#38.2	129.8	14.2	11.8	110.3		23.8	24.1	13.9		33.7	
Internal Link Dist (m)		330.9			441.1			152.5			213.6	
Turn Bay Length (m)	58.0		62.0	55.0			18.0		15.0			
Base Capacity (vph)	115	1902	903	177	1928		366	582	521		493	
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	0.83	0.62	0.13	0.27	0.71		0.25	0.17	0.17		0.33	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	10 (11%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	20.5
Intersection LOS:	C
Intersection Capacity Utilization:	91.2%
ICU Level of Service:	F
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 5: Heron Rd & Jefferson St



Lanes, Volumes, Timings
6: Walkley Rd & Heron Rd

07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑↑	↑↑	
Traffic Volume (vph)	14	1163	1332	1243	814	0
Future Volume (vph)	14	1163	1332	1243	814	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0			65.0	0.0	0.0
Storage Lanes	0			1	2	0
Taper Length (m)	2.5				2.5	
Lane Util. Factor	0.95	0.95	0.95	0.88	0.97	0.95
Frt				0.850		
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	3387	3390	2669	3288	0
Flt Permitted		0.809			0.950	
Satd. Flow (perm)	0	2743	3390	2669	3288	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1219		
Link Speed (k/h)		50	50		50	
Link Distance (m)		393.2	359.8		465.1	
Travel Time (s)		28.3	25.9		33.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	1292	1480	1381	904	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1308	1480	1381	904	0
Turn Type	Perm	NA	NA	Perm	Prot	
Protected Phases		2	6		4	
Permitted Phases	2			6		
Detector Phase	2	2	6	6	4	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	16.6	16.6	16.6	16.6	33.7	
Total Split (s)	59.0	59.0	59.0	59.0	51.0	
Total Split (%)	53.6%	53.6%	53.6%	53.6%	46.4%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.3	3.3	3.3	3.3	3.4	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	Max	
Act Effct Green (s)		52.4	52.4	52.4	44.3	
Actuated g/C Ratio		0.48	0.48	0.48	0.40	
v/c Ratio		1.00	0.92	0.72	0.68	
Control Delay		54.7	37.2	5.0	30.3	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		54.7	37.2	5.0	30.3	
LOS		D	D	A	C	
Approach Delay		54.7	21.6		30.3	
Approach LOS		D	C		C	
Queue Length 50th (m)		~143.8	150.7	10.6	81.1	
Queue Length 95th (m)		#195.5	#200.4	29.4	102.7	

Lanes, Volumes, Timings
6: Walkley Rd & Heron Rd

07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Internal Link Dist (m)		369.2	335.8		441.1	
Turn Bay Length (m)				65.0		
Base Capacity (vph)		1306	1614	1909	1324	
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		1.00	0.92	0.72	0.68	

Intersection Summary

Area Type:	Other
Cycle Length:	110
Actuated Cycle Length:	110
Offset:	53 (48%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.00
Intersection Signal Delay:	31.7
Intersection LOS:	C
Intersection Capacity Utilization	91.3%
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: 6: Walkley Rd & Heron Rd



Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	842	20	25	934	220	19	13	22	140	19	96
Future Volume (vph)	98	842	20	25	934	220	19	13	22	140	19	96
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	33.0		0.0	0.0		0.0	20.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	22.0			27.0			2.5			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99	0.99			0.99		0.98		
Frt		0.997			0.971			0.945				0.875
Flt Protected	0.950			0.950				0.983		0.950		
Satd. Flow (prot)	1695	3273	0	1729	3192	0	0	1596	0	1558	1470	0
Flt Permitted	0.168			0.268				0.868		0.719		
Satd. Flow (perm)	298	3273	0	482	3192	0	0	1409	0	1155	1470	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			54			24				67
Link Speed (k/h)		50			50			50				50
Link Distance (m)		360.2			304.5			74.0				276.3
Travel Time (s)		25.9			21.9			5.3				19.9
Confl. Peds. (#/hr)	30		31	31		30			23	23		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	5%	11%	0%	0%	19%	0%	0%	11%	11%	0%	10%
Adj. Flow (vph)	109	936	22	28	1038	244	21	14	24	156	21	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	958	0	28	1282	0	0	59	0	156	128	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4		4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0		10.0
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1		31.1
Total Split (s)	48.0	48.0		48.0	48.0		32.0	32.0		32.0		32.0
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%		40.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3		3.3
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8		2.8
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0		0.0
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.1		6.1		6.1
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None		None
Act Effct Green (s)	51.3	51.3		51.3	51.3			16.7		16.7		16.7
Actuated g/C Ratio	0.64	0.64		0.64	0.64			0.21		0.21		0.21
v/c Ratio	0.57	0.46		0.09	0.62			0.19		0.65		0.36
Control Delay	27.0	9.0		8.5	10.9			16.9		40.7		15.4
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0		0.0
Total Delay	27.0	9.0		8.5	10.9			16.9		40.7		15.4
LOS	C	A		A	B			B		D		B
Approach Delay		10.9			10.8			16.9				29.3

Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	B			B			B			C		
Queue Length 50th (m)	8.1	33.1		1.4	49.7			4.4		22.1	7.8	
Queue Length 95th (m)	#39.2	62.5		6.0	94.4			11.9		35.6	18.7	
Internal Link Dist (m)		336.2			280.5			50.0			252.3	
Turn Bay Length (m)	50.0			33.0						20.0		
Base Capacity (vph)	191	2102		309	2067			472		373	521	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.57	0.46		0.09	0.62			0.13		0.42	0.25	

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 12.9 Intersection LOS: B
 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: 7: Walkley Rd & Baycrest Dr



Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑	↖	↖↗	↑↑		↖	↑↑↑	↖	↖↗	↑↑	↖
Traffic Volume (vph)	321	465	268	291	573	286	217	838	253	291	1265	561
Future Volume (vph)	321	465	268	291	573	286	217	838	253	291	1265	561
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		50.0	78.0		0.0	208.0		70.0	156.0		0.0
Storage Lanes	2		1	2		0	1		1	2		1
Taper Length (m)	27.0			24.0			0.0			24.0		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.95	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor	0.98		0.96	0.98	0.98		0.99		0.95	0.98		0.95
Fr _t			0.850		0.950				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3354	3293	1547	3288	3183	0	1712	4919	1502	3321	3424	1547
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3290	3293	1489	3218	3183	0	1702	4919	1428	3263	3424	1466
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			229		64				281			324
Link Speed (k/h)		50		50			50		50		50	
Link Distance (m)		154.1		895.6			245.1		260.6			
Travel Time (s)		11.1		64.5			17.6		18.8			
Confl. Peds. (#/hr)	36		22	22		36	28		26	26		28
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	5%	0%	2%	1%	2%	1%	1%	3%	1%	1%	0%
Adj. Flow (vph)	357	517	298	323	637	318	241	931	281	323	1406	623
Shared Lane Traffic (%)												
Lane Group Flow (vph)	357	517	298	323	955	0	241	931	281	323	1406	623
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	35.0	35.0	7.0	35.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	13.8	41.7	41.7	13.8	41.7		13.4	33.4	33.4	13.4	33.4	33.4
Total Split (s)	25.0	41.7	41.7	25.0	41.7		19.0	38.0	38.0	27.0	46.0	46.0
Total Split (%)	19.0%	31.7%	31.7%	19.0%	31.7%		14.4%	28.9%	28.9%	20.5%	34.9%	34.9%
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)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	17.3	36.4	36.4	16.8	35.9		12.6	34.6	34.6	17.6	39.6	39.6
Actuated g/C Ratio	0.13	0.28	0.28	0.13	0.27		0.10	0.26	0.26	0.13	0.30	0.30
v/c Ratio	0.81	0.57	0.52	0.77	1.05		1.48	0.72	0.48	0.73	1.37	0.93
Control Delay	70.6	44.2	13.8	68.3	85.6		285.6	48.4	7.5	64.6	207.6	43.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.6	44.2	13.8	68.3	85.6		285.6	48.4	7.5	64.6	207.6	43.7
LOS	E	D	B	E	F		F	D	A	E	F	D
Approach Delay		44.5			81.2			79.8			144.5	

Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024

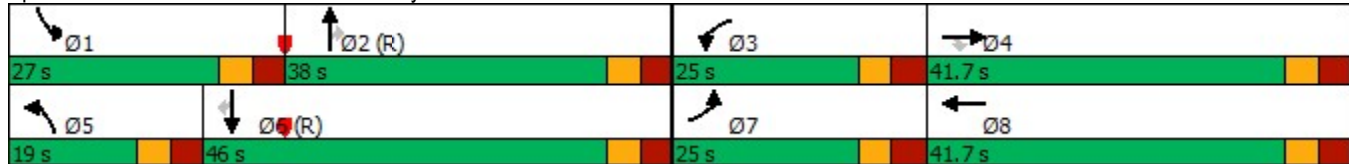


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			F			E			F		
Queue Length 50th (m)	46.7	61.7	13.8	41.9	~137.7		~85.8	81.2	0.0	41.9	~253.0	87.4
Queue Length 95th (m)	#64.3	80.4	41.1	57.8	#179.2		#138.1	99.9	22.8	56.4	#295.3	#164.5
Internal Link Dist (m)	130.1			871.6			221.1			236.6		
Turn Bay Length (m)	60.0		50.0	78.0			208.0		70.0	156.0		
Base Capacity (vph)	463	909	576	454	913		163	1292	582	519	1029	667
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.57	0.52	0.71	1.05		1.48	0.72	0.48	0.62	1.37	0.93

Intersection Summary

Area Type: Other
 Cycle Length: 131.7
 Actuated Cycle Length: 131.7
 Offset: 114 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.48
 Intersection Signal Delay: 97.8
 Intersection LOS: F
 Intersection Capacity Utilization 110.4%
 ICU Level of Service H
 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: Bank St & Walkley Rd



Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	835	263	86	1223	264	525	1140	28	181	348	100
Future Volume (vph)	159	835	263	86	1223	264	525	1140	28	181	348	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	73.0		85.0	50.0		70.0	110.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	20.0			30.0			0.0			0.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.97	1.00		0.98	0.99	1.00		1.00	0.99	
Frt			0.850			0.850		0.996			0.967	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3357	1446	1662	3293	1473	3225	3333	0	1712	3132	0
Flt Permitted	0.095			0.249			0.950			0.950		
Satd. Flow (perm)	171	3357	1404	434	3293	1438	3181	3333	0	1704	3132	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			292			208		2			28	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		381.8			492.5			121.2			274.8	
Travel Time (s)		27.5			35.5			8.7			19.8	
Confl. Peds. (#/hr)	8		13	13		8	12		20	20		12
Confl. Bikes (#/hr)			1			3			3			9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	3%	7%	4%	5%	5%	4%	3%	13%	1%	7%	2%
Adj. Flow (vph)	177	928	292	96	1359	293	583	1267	31	201	387	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	177	928	292	96	1359	293	583	1298	0	201	498	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0	10.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	13.5	34.4	34.4	32.5	32.5	32.5	13.5	32.4		13.5	32.4	
Total Split (s)	13.0	55.0	55.0	42.0	42.0	42.0	32.0	49.0		16.0	33.0	
Total Split (%)	10.8%	45.8%	45.8%	35.0%	35.0%	35.0%	26.7%	40.8%		13.3%	27.5%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.1	3.1	1.0	1.0	1.0	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	4.3	4.3	4.3	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	48.5	48.6	48.6	37.7	37.7	37.7	24.5	42.6		9.5	27.6	
Actuated g/C Ratio	0.40	0.40	0.40	0.31	0.31	0.31	0.20	0.36		0.08	0.23	
v/c Ratio	1.16	0.68	0.39	0.71	1.31	0.49	0.89	1.10		1.49	0.67	
Control Delay	151.7	32.5	4.3	65.6	183.1	13.0	45.2	73.4		293.2	45.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	151.7	32.5	4.3	65.6	183.1	13.0	45.2	73.4		293.2	45.1	
LOS	F	C	A	E	F	B	D	E		F	D	

Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		41.7			148.1			64.6			116.4	
Approach LOS		D			F			E			F	
Queue Length 50th (m)	~34.4	93.1	0.0	19.9	~217.1	14.6	54.4	~185.4		~65.3	54.0	
Queue Length 95th (m)	#79.2	116.1	16.3	#47.9	#259.1	39.8	m62.5 m#200.9			#111.8	72.8	
Internal Link Dist (m)		357.8			468.5			97.2			250.8	
Turn Bay Length (m)	73.0		85.0	50.0		70.0	110.0			70.0		
Base Capacity (vph)	152	1359	742	136	1034	594	685	1184		135	742	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.16	0.68	0.39	0.71	1.31	0.49	0.85	1.10		1.49	0.67	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	52 (43%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	145
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.49
Intersection Signal Delay:	90.9
Intersection LOS:	F
Intersection Capacity Utilization:	109.6%
ICU Level of Service:	H
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.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Bank St & Heron Rd



Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	774	88	148	1323	256	69	276	183	153	268	127
Future Volume (vph)	103	774	88	148	1323	256	69	276	183	153	268	127
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		0.0	57.0		85.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (m)	30.0			24.0			2.5			48.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	0.99		0.97		0.83	0.99	0.95			0.99	
Frt		0.985				0.850		0.940			0.952	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3216	0	1695	3293	1459	1601	1582	0	1631	1690	0
Flt Permitted	0.950			0.950			0.508			0.140		
Satd. Flow (perm)	1678	3216	0	1648	3293	1213	845	1582	0	240	1690	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14				262		36			32	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		492.5			657.5			201.9			270.3	
Travel Time (s)		35.5			47.3			14.5			19.5	
Confl. Peds. (#/hr)	54		37	37		54	21		110	110		21
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	5%	1%	2%	5%	6%	8%	2%	3%	6%	2%	0%
Adj. Flow (vph)	114	860	98	164	1470	284	77	307	203	170	298	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	958	0	164	1470	284	77	510	0	170	439	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0	10.0	10.0	10.0		7.0	10.0	
Minimum Split (s)	12.4	23.4		12.4	23.4	23.4	29.9	29.9		11.5	29.9	
Total Split (s)	13.0	34.0		13.0	34.0	34.0	30.0	30.0		13.0	43.0	
Total Split (%)	14.4%	37.8%		14.4%	37.8%	37.8%	33.3%	33.3%		14.4%	47.8%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.1	2.1	2.1	2.6	2.6		1.0	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4	5.4	5.9	5.9		4.3	5.9	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	7.6	28.6		7.6	28.6	28.6	24.2	24.2		38.7	37.1	
Actuated g/C Ratio	0.08	0.32		0.08	0.32	0.32	0.27	0.27		0.43	0.41	
v/c Ratio	0.79	0.93		1.15	1.41	0.50	0.34	1.13		0.72	0.61	
Control Delay	77.4	45.8		139.5	208.4	3.9	31.7	113.8		36.0	23.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	77.4	45.8		139.5	208.4	3.9	31.7	113.8		36.0	23.7	
LOS	E	D		F	F	A	C	F		D	C	
Approach Delay		49.1			172.2			103.1			27.1	

Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

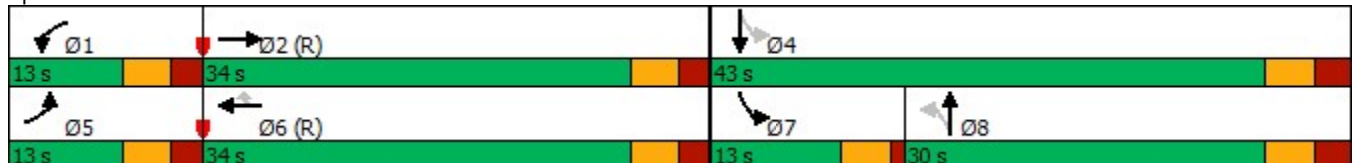


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			F			F			C		
Queue Length 50th (m)	19.7	82.6		~34.8	~178.4	0.0	10.7	~99.1		18.1	53.9	
Queue Length 95th (m)	#47.5	#121.2		m#46.1	m#189.4	m5.2	23.3	#158.9		#41.9	84.6	
Internal Link Dist (m)		468.5			633.5			177.9			246.3	
Turn Bay Length (m)	65.0			57.0		85.0				30.0		
Base Capacity (vph)	144	1031		143	1046	564	227	451		237	715	
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	0.79	0.93		1.15	1.41	0.50	0.34	1.13		0.72	0.61	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 10 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.41
 Intersection Signal Delay: 109.9 Intersection LOS: F
 Intersection Capacity Utilization 100.7% 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Alta Vista Dr & Heron Rd



Lanes, Volumes, Timings
3: Baycrest Dr & Heron Rd

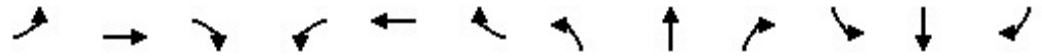
07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	775	245	33	1242	3	415	29	69	51	13	77
Future Volume (vph)	149	775	245	33	1242	3	415	29	69	51	13	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	43.0		0.0	55.0		0.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	70.0			25.0			2.5			0.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98		0.99	1.00			0.98		1.00	0.96	
Frt		0.964						0.982			0.871	
Flt Protected	0.950			0.950				0.961		0.950		
Satd. Flow (prot)	1729	3154	0	1478	3293	0	0	1642	0	1729	1529	0
Flt Permitted	0.109			0.176				0.700		0.682		
Satd. Flow (perm)	198	3154	0	272	3293	0	0	1172	0	1238	1529	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76						9				36
Link Speed (k/h)		50			50			50				50
Link Distance (m)		657.5			134.3			489.7				60.0
Travel Time (s)		47.3			9.7			35.3				4.3
Confl. Peds. (#/hr)	15		27	27		15	31		8	8		31
Confl. Bikes (#/hr)						1						2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	7%	17%	5%	0%	5%	0%	2%	0%	0%	0%
Adj. Flow (vph)	166	861	272	37	1380	3	461	32	77	57	14	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	166	1133	0	37	1383	0	0	570	0	57	100	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4		4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	29.7	29.7		29.7	29.7		35.0	35.0		35.0	35.0	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.4	1.4		1.4	1.4		2.7	2.7		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	4.7	4.7		4.7	4.7			6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	50.3	50.3		50.3	50.3			29.0		29.0	29.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56			0.32		0.32	0.32	
v/c Ratio	1.51	0.63		0.24	0.75			1.49		0.14	0.19	
Control Delay	269.2	6.3		22.1	24.8			259.9		23.0	15.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	269.2	6.3		22.1	24.8			259.9		23.0	15.8	
LOS	F	A		C	C			F		C	B	

Lanes, Volumes, Timings
 3: Baycrest Dr & Heron Rd

07/23/2024

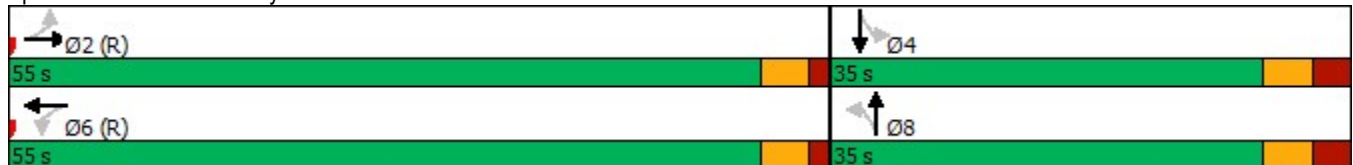


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		39.9			24.7			259.9				18.4
Approach LOS		D			C			F				B
Queue Length 50th (m)	~41.8	21.4		3.3	122.8			~137.8		6.9		7.8
Queue Length 95th (m)	m#48.2	m23.0		m10.0	156.3			#199.5		15.7		19.1
Internal Link Dist (m)		633.5			110.3			465.7				36.0
Turn Bay Length (m)	43.0			55.0						30.0		
Base Capacity (vph)	110	1796		152	1840			383		398		517
Starvation Cap Reductn	0	0		0	0			0		0		0
Spillback Cap Reductn	0	0		0	0			0		0		0
Storage Cap Reductn	0	0		0	0			0		0		0
Reduced v/c Ratio	1.51	0.63		0.24	0.75			1.49		0.14		0.19

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	51 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.51
Intersection Signal Delay:	69.0
Intersection LOS:	E
Intersection Capacity Utilization:	95.0%
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.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Baycrest Dr & Heron Rd



Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	841	26	22	1115	17	56	14	38	8	14	72
Future Volume (vph)	44	841	26	22	1115	17	56	14	38	8	14	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	55.0		0.0	32.0		0.0	37.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	25.0			25.0			12.0			37.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00		0.99	0.99		0.99	0.98	
Frt		0.995			0.998			0.891				0.875
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3314	0	1601	3257	0	1478	1535	0	1729	1567	0
Flt Permitted	0.191			0.278			0.695			0.719		
Satd. Flow (perm)	347	3314	0	467	3257	0	1074	1535	0	1300	1567	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			3			42				52
Link Speed (k/h)		50			50			50				50
Link Distance (m)		148.8			354.9			199.1				258.5
Travel Time (s)		10.7			25.6			14.3				18.6
Confl. Peds. (#/hr)	7		7	7		7	5		5	5		5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	27%	8%	6%	0%	17%	15%	0%	0%	0%	0%
Adj. Flow (vph)	49	934	29	24	1239	19	62	16	42	9	16	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	963	0	24	1258	0	62	58	0	9	96	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	24.3	24.3		24.3	24.3		24.1	24.1		24.1	24.1	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3		5.3	5.3		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	67.7	67.7		67.7	67.7		16.4	16.4		16.4	16.4	
Actuated g/C Ratio	0.75	0.75		0.75	0.75		0.18	0.18		0.18	0.18	
v/c Ratio	0.19	0.39		0.07	0.51		0.32	0.18		0.04	0.29	
Control Delay	3.6	2.8		9.5	11.1		36.8	15.4		30.4	19.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	3.6	2.8		9.5	11.1		36.8	15.4		30.4	19.0	
LOS	A	A		A	B		D	B		C	B	
Approach Delay		2.8			11.1			26.5			20.0	

Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024

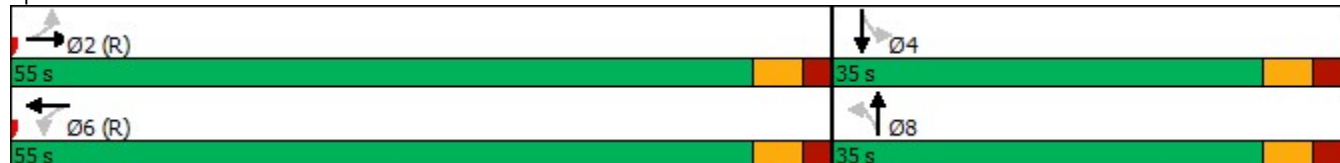


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			B			C			B		
Queue Length 50th (m)	0.7	7.3		1.7	61.0		9.5	2.3		1.3	6.5	
Queue Length 95th (m)	m1.6	m19.8		m3.8	94.2		20.6	11.9		5.2	19.1	
Internal Link Dist (m)		124.8			330.9			175.1			234.5	
Turn Bay Length (m)	55.0			55.0			32.0			37.0		
Base Capacity (vph)	261	2493		351	2450		344	521		417	538	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.19	0.39		0.07	0.51		0.18	0.11		0.02	0.18	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.51
 Intersection Signal Delay: 8.9
 Intersection LOS: A
 Intersection Capacity Utilization 61.7%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Sandalwood Dr & Heron Rd



Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

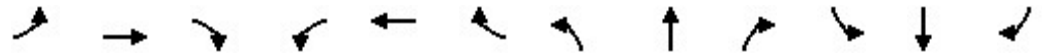
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	823	48	13	1073	27	32	32	27	31	26	78
Future Volume (vph)	34	823	48	13	1073	27	32	32	27	31	26	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	58.0		62.0	55.0		0.0	18.0		15.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	27.0			17.0			10.0			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.97	1.00	1.00		1.00		0.98		0.99	
Frt			0.850		0.996				0.850		0.922	
Flt Protected	0.950			0.950			0.950				0.989	
Satd. Flow (prot)	1572	3357	1419	1383	3278	0	1679	1820	1381	0	1566	0
Flt Permitted	0.157			0.259			0.666				0.932	
Satd. Flow (perm)	259	3357	1379	376	3278	0	1172	1820	1357	0	1474	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			53		4				32			58
Link Speed (k/h)		50			50			50				50
Link Distance (m)		354.9			465.1			176.5				237.6
Travel Time (s)		25.6			33.5			12.7				17.1
Confl. Peds. (#/hr)	6		4	4		6	5		5	5		5
Confl. Bikes (#/hr)			2						1			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	3%	9%	25%	5%	4%	3%	0%	12%	4%	0%	7%
Adj. Flow (vph)	38	914	53	14	1192	30	36	36	30	34	29	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	914	53	14	1222	0	36	36	30	0	150	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	6	6		8	8	8	4		4
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		27.0	27.0	27.0	27.0	27.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		34.2	34.2	34.2	34.2	34.2	
Total Split (s)	55.0	55.0	55.0	55.0	55.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%	61.1%	61.1%	61.1%		38.9%	38.9%	38.9%	38.9%	38.9%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.2	6.2	6.2		6.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	51.0	51.0	51.0	51.0	51.0		27.2	27.2	27.2		27.2	
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57		0.30	0.30	0.30		0.30	
v/c Ratio	0.26	0.48	0.07	0.07	0.66		0.10	0.07	0.07		0.31	
Control Delay	7.4	4.2	0.3	10.0	15.6		23.5	22.7	8.1		16.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	7.4	4.2	0.3	10.0	15.6		23.5	22.7	8.1		16.7	
LOS	A	A	A	A	B		C	C	A		B	

Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		4.2			15.6			18.7				16.7
Approach LOS		A			B			B				B
Queue Length 50th (m)	0.8	10.6	0.2	1.0	70.7		4.5	4.4	0.0			11.8
Queue Length 95th (m)	2.2	13.8	0.1	3.9	94.5		11.3	11.0	5.6			26.3
Internal Link Dist (m)		330.9			441.1			152.5				213.6
Turn Bay Length (m)	58.0		62.0	55.0			18.0		15.0			
Base Capacity (vph)	146	1902	804	212	1859		375	582	456			511
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	0.26	0.48	0.07	0.07	0.66		0.10	0.06	0.07			0.29

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	10 (11%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	11.2
Intersection LOS:	B
Intersection Capacity Utilization:	84.3%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 5: Heron Rd & Jefferson St



Lanes, Volumes, Timings
6: Walkley Rd & Heron Rd

07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑↑	↑↑	
Traffic Volume (vph)	0	825	699	1112	820	60
Future Volume (vph)	0	825	699	1112	820	60
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0			65.0	0.0	0.0
Storage Lanes	0			1	2	0
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	0.95	0.95	0.88	0.97	0.95
Frt				0.850	0.990	
Flt Protected					0.955	
Satd. Flow (prot)	0	3390	3390	2669	3273	0
Flt Permitted					0.955	
Satd. Flow (perm)	0	3390	3390	2669	3273	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1236	9	
Link Speed (k/h)		50	50		50	
Link Distance (m)		393.2	359.1		465.1	
Travel Time (s)		28.3	25.9		33.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	917	777	1236	911	67
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	917	777	1236	978	0
Turn Type		NA	NA	Perm	Prot	
Protected Phases		2	6		4	
Permitted Phases				6		
Detector Phase		2	6	6	4	
Switch Phase						
Minimum Initial (s)		10.0	10.0	10.0	10.0	
Minimum Split (s)		16.6	16.6	16.6	33.7	
Total Split (s)		54.0	54.0	54.0	46.0	
Total Split (%)		54.0%	54.0%	54.0%	46.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	
All-Red Time (s)		3.3	3.3	3.3	3.4	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode		C-Max	C-Max	C-Max	Max	
Act Effct Green (s)		47.4	47.4	47.4	39.3	
Actuated g/C Ratio		0.47	0.47	0.47	0.39	
v/c Ratio		0.57	0.48	0.65	0.76	
Control Delay		20.7	19.2	2.7	30.6	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		20.7	19.2	2.7	30.6	
LOS		C	B	A	C	
Approach Delay		20.7	9.1		30.6	
Approach LOS		C	A		C	
Queue Length 50th (m)		65.1	52.2	0.0	82.2	
Queue Length 95th (m)		83.6	68.0	11.3	105.8	

Lanes, Volumes, Timings
6: Walkley Rd & Heron Rd

07/23/2024

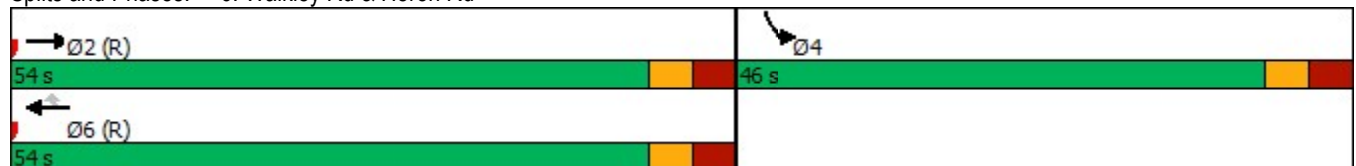


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Internal Link Dist (m)		369.2	335.1		441.1	
Turn Bay Length (m)				65.0		
Base Capacity (vph)		1606	1606	1915	1291	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.57	0.48	0.65	0.76	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	23 (23%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	17.2
Intersection LOS:	B
Intersection Capacity Utilization	61.8%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 6: Walkley Rd & Heron Rd



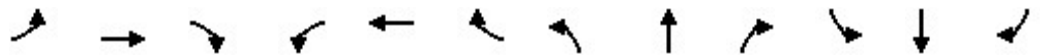
Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	656	11	9	668	151	26	22	28	213	7	106
Future Volume (vph)	59	656	11	9	668	151	26	22	28	213	7	106
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	33.0		0.0	0.0		0.0	20.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	22.0			27.0			2.5			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.99	0.99			0.99		0.98	0.98	
Fr _t		0.998			0.972			0.950			0.860	
Fl _t Protected	0.950			0.950				0.983		0.950		
Satd. Flow (prot)	1530	3257	0	1530	3177	0	0	1680	0	1586	1534	0
Fl _t Permitted	0.270			0.344				0.873		0.702		
Satd. Flow (perm)	433	3257	0	550	3177	0	0	1488	0	1152	1534	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			51			31			118	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		360.2			595.8			74.0			489.7	
Travel Time (s)		25.9			42.9			5.3			35.3	
Confl. Peds. (#/hr)	9		12	12		9	11		23	23		11
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	13%	6%	0%	13%	4%	10%	0%	0%	0%	9%	0%	0%
Adj. Flow (vph)	66	729	12	10	742	168	29	24	31	237	8	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	741	0	10	910	0	0	84	0	237	126	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1	31.1	
Total Split (s)	38.0	38.0		38.0	38.0		32.0	32.0		32.0	32.0	
Total Split (%)	54.3%	54.3%		54.3%	54.3%		45.7%	45.7%		45.7%	45.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	38.8	38.8		38.8	38.8			19.2		19.2	19.2	
Actuated g/C Ratio	0.55	0.55		0.55	0.55			0.27		0.27	0.27	
v/c Ratio	0.28	0.41		0.03	0.51			0.20		0.75	0.25	
Control Delay	14.7	10.9		10.1	11.5			12.8		37.5	5.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	14.7	10.9		10.1	11.5			12.8		37.5	5.4	
LOS	B	B		B	B			B		D	A	
Approach Delay		11.2			11.5			12.8			26.4	

Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

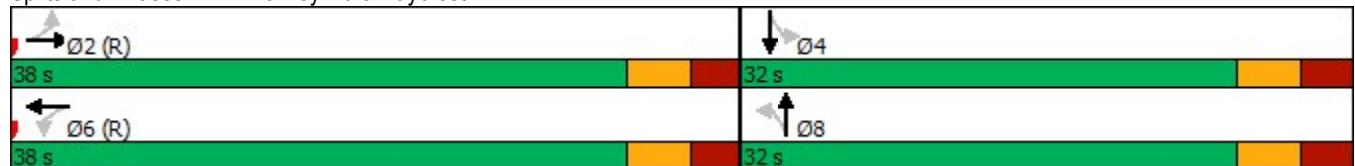


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	B			B			B			C		
Queue Length 50th (m)	4.2	27.2		0.6	33.9			5.1		28.0	0.8	
Queue Length 95th (m)	14.9	47.8		3.1	59.6			12.7		45.1	9.9	
Internal Link Dist (m)	336.2			571.8			50.0			465.7		
Turn Bay Length (m)	50.0			33.0						20.0		
Base Capacity (vph)	240	1807		305	1784			570		426	641	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.28	0.41		0.03	0.51			0.15		0.56	0.20	

Intersection Summary




































Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	17 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	13.9
Intersection LOS:	B
Intersection Capacity Utilization:	67.6%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 7: Walkley Rd & Baycrest Dr



Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 	 	 	 		 	  	 	 	 	 
Traffic Volume (vph)	403	421	98	116	427	391	159	1288	174	177	514	260
Future Volume (vph)	403	421	98	116	427	391	159	1288	174	177	514	260
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		50.0	78.0		0.0	208.0		70.0	156.0		0.0
Storage Lanes	2		1	2		0	1		1	2		1
Taper Length (m)	27.0			24.0			0.0			24.0		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.95	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor	0.99		0.97	0.99	0.98		1.00		0.96	0.99		0.97
Frt			0.850		0.928				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3288	3390	1517	3288	3084	0	1695	4871	1517	3288	3390	1517
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3244	3390	1475	3254	3084	0	1687	4871	1460	3271	3390	1469
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			209		176				168			289
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		154.1			895.6			245.1			260.6	
Travel Time (s)		11.1			64.5			17.6			18.8	
Confl. Peds. (#/hr)	26		11	11		26	8		17	17		8
Confl. Bikes (#/hr)			5			2			5			10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	448	468	109	129	474	434	177	1431	193	197	571	289
Shared Lane Traffic (%)												
Lane Group Flow (vph)	448	468	109	129	908	0	177	1431	193	197	571	289
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	29.0	29.0	7.0	29.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	13.8	39.7	39.7	13.8	39.7		13.4	33.4	33.4	13.4	33.4	33.4
Total Split (s)	19.0	40.0	40.0	19.0	40.0		26.0	46.0	46.0	15.0	35.0	35.0
Total Split (%)	15.8%	33.3%	33.3%	15.8%	33.3%		21.7%	38.3%	38.3%	12.5%	29.2%	29.2%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	12.2	35.0	35.0	9.9	32.7		16.7	40.0	40.0	8.8	32.1	32.1
Actuated g/C Ratio	0.10	0.29	0.29	0.08	0.27		0.14	0.33	0.33	0.07	0.27	0.27
v/c Ratio	1.34	0.47	0.19	0.48	0.94		0.75	0.88	0.32	0.82	0.63	0.48
Control Delay	213.8	37.1	0.7	58.1	51.9		69.3	45.5	7.8	75.1	54.1	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	213.8	37.1	0.7	58.1	51.9		69.3	45.5	7.8	75.1	54.1	18.4
LOS	F	D	A	E	D		E	D	A	E	D	B
Approach Delay		110.4			52.7			43.8			48.2	

Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024

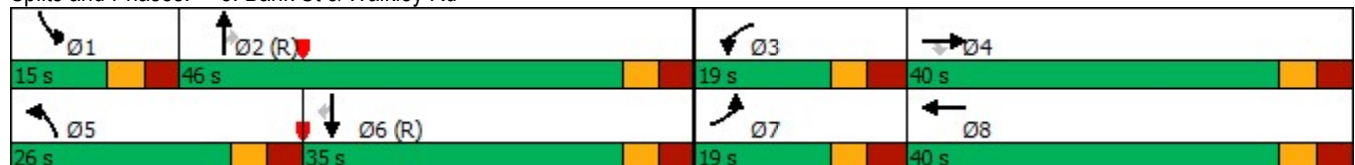


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	F			D			D			D		
Queue Length 50th (m)	~70.9	47.3	0.0	15.2	91.3		40.2	116.5	4.0	24.0	69.7	18.8
Queue Length 95th (m)	#103.0	65.0	0.0	24.5	#130.2		63.2	136.4	20.4	m#43.9	90.4	39.1
Internal Link Dist (m)		130.1			871.6			221.1			236.6	
Turn Bay Length (m)	60.0		50.0	78.0			208.0		70.0	156.0		
Base Capacity (vph)	334	988	578	334	982		276	1622	598	241	907	605
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.34	0.47	0.19	0.39	0.92		0.64	0.88	0.32	0.82	0.63	0.48

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 79 (66%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 115
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.34
 Intersection Signal Delay: 60.5 Intersection LOS: E
 Intersection Capacity Utilization 93.4% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bank St & Walkley Rd



Lanes, Volumes, Timings
9: Heron Rd & Site Access

07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↗
Traffic Volume (vph)	0	895	1204	48	0	74
Future Volume (vph)	0	895	1204	48	0	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	30.0			0.0	0.0	0.0
Storage Lanes	0			0	0	1
Taper Length (m)	15.0				2.5	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.994			0.865
Flt Protected						
Satd. Flow (prot)	0	3390	3370	0	0	1543
Flt Permitted						
Satd. Flow (perm)	0	3390	3370	0	0	1543
Link Speed (k/h)		50	50		50	
Link Distance (m)		134.3	31.3		87.7	
Travel Time (s)		9.7	2.3		6.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	994	1338	53	0	82
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	994	1391	0	0	82
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	48.2%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	232	1141	538	86	1161	183	429	566	61	329	922	144
Future Volume (vph)	232	1141	538	86	1161	183	429	566	61	329	922	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	73.0		85.0	50.0		70.0	110.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	20.0			30.0			0.0			0.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.95	1.00		0.96	0.99	0.99		0.98	0.99	
Fr _t			0.850			0.850		0.985			0.980	
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3325	1532	1679	3390	1532	3321	3329	0	1695	3299	0
Fl _t Permitted	0.102			0.115			0.950			0.950		
Satd. Flow (perm)	186	3325	1453	202	3390	1476	3278	3329	0	1669	3299	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			480			138		8			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		381.8			492.5			121.2			274.8	
Travel Time (s)		27.5			35.5			8.7			19.8	
Confl. Peds. (#/hr)	18		29	29		18	27		27	27		27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	1%	3%	2%	1%	1%	2%	0%	2%	2%	2%
Adj. Flow (vph)	258	1268	598	96	1290	203	477	629	68	366	1024	160
Shared Lane Traffic (%)												
Lane Group Flow (vph)	258	1268	598	96	1290	203	477	697	0	366	1184	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0	10.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	13.5	34.4	34.4	32.5	32.5	32.5	13.5	32.4		13.5	32.4	
Total Split (s)	20.0	59.0	59.0	39.0	39.0	39.0	32.0	39.0		32.0	39.0	
Total Split (%)	15.4%	45.4%	45.4%	30.0%	30.0%	30.0%	24.6%	30.0%		24.6%	30.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.1	3.1	1.0	1.0	1.0	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	4.3	4.3	4.3	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	52.5	52.6	52.6	34.7	34.7	34.7	22.9	32.6		25.5	35.2	
Actuated g/C Ratio	0.40	0.40	0.40	0.27	0.27	0.27	0.18	0.25		0.20	0.27	
v/c Ratio	1.10	0.94	0.68	1.81	1.43	0.41	0.82	0.83		1.10	1.31	
Control Delay	120.7	51.8	10.6	405.5	236.3	35.2	63.4	55.2		127.7	185.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	120.7	51.8	10.6	405.5	236.3	35.2	63.4	55.2		127.7	185.9	
LOS	F	D	B	F	F	D	E	E		F	F	
Approach Delay		48.6			220.8			58.5			172.2	

Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024

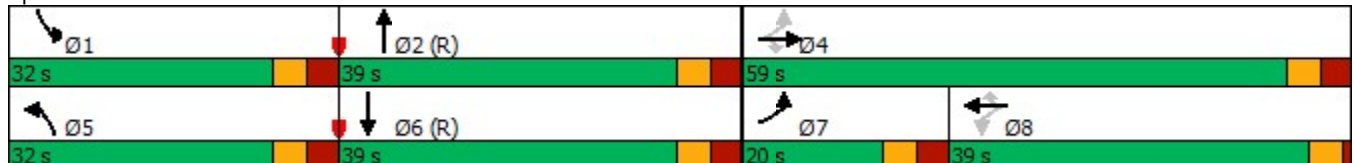


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			F			E			F		
Queue Length 50th (m)	~59.6	162.6	20.0	~37.9	~242.1	34.9	60.8	88.3		~106.3	~208.0	
Queue Length 95th (m)	#113.1	#208.7	63.2	m#34.2	m#199.9	m30.3	78.2	111.6		#166.5	#257.2	
Internal Link Dist (m)	357.8			468.5			97.2		250.8			
Turn Bay Length (m)	73.0		85.0	50.0		70.0	110.0			70.0		
Base Capacity (vph)	235	1345	873	53	904	495	651	840		332	903	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.10	0.94	0.68	1.81	1.43	0.41	0.73	0.83		1.10	1.31	

Intersection Summary






















Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 57 (44%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.81
 Intersection Signal Delay: 122.7 Intersection LOS: F
 Intersection Capacity Utilization 112.2% ICU Level of Service H
 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Bank St & Heron Rd



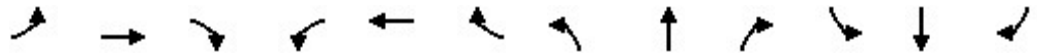
Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	1260	42	117	1199	198	23	227	129	247	465	150
Future Volume (vph)	151	1260	42	117	1199	198	23	227	129	247	465	150
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		0.0	57.0		85.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (m)	30.0			24.0			2.5			48.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99		0.93	0.99	0.99			0.99	
Frt		0.995				0.850		0.946			0.963	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3335	0	1695	3357	1473	1729	1666	0	1631	1705	0
Flt Permitted	0.950			0.950			0.178			0.227		
Satd. Flow (perm)	1699	3335	0	1680	3357	1373	322	1666	0	390	1705	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				159		22			16	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		492.5			657.5			201.9			270.3	
Travel Time (s)		35.5			47.3			14.5			19.5	
Confl. Peds. (#/hr)	12		16	16		12	19		9	9		19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	3%	0%	2%	3%	5%	0%	2%	3%	6%	2%	1%
Adj. Flow (vph)	168	1400	47	130	1332	220	26	252	143	274	517	167
Shared Lane Traffic (%)												
Lane Group Flow (vph)	168	1447	0	130	1332	220	26	395	0	274	684	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0	10.0	10.0	10.0		7.0	10.0	
Minimum Split (s)	12.4	23.4		12.4	23.4	23.4	29.9	29.9		11.5	29.9	
Total Split (s)	19.0	52.0		16.0	49.0	49.0	44.0	44.0		18.0	62.0	
Total Split (%)	14.6%	40.0%		12.3%	37.7%	37.7%	33.8%	33.8%		13.8%	47.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.1	2.1	2.1	2.6	2.6		1.0	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4	5.4	5.9	5.9		4.3	5.9	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	13.6	46.6		10.6	43.6	43.6	38.1	38.1		57.7	56.1	
Actuated g/C Ratio	0.10	0.36		0.08	0.34	0.34	0.29	0.29		0.44	0.43	
v/c Ratio	0.94	1.21		0.94	1.18	0.39	0.28	0.79		0.90	0.92	
Control Delay	104.4	122.5		121.6	130.7	12.0	44.8	52.2		59.7	53.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	104.4	122.5		121.6	130.7	12.0	44.8	52.2		59.7	53.0	
LOS	F	F		F	F	B	D	D		E	D	
Approach Delay		120.6			114.5			51.7			54.9	

Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

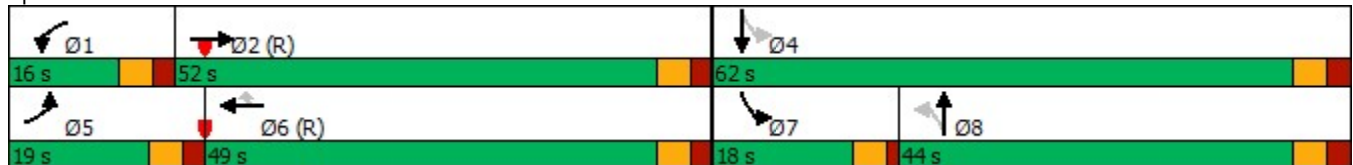


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	F			F			D			D		
Queue Length 50th (m)	46.1	~233.5		33.7	~215.4	10.9	5.1	88.3		46.1	159.6	
Queue Length 95th (m)	m47.8	m#245.5		#72.9	#257.7	31.3	14.2	#129.7		#91.4	#235.8	
Internal Link Dist (m)	468.5			633.5			177.9			246.3		
Turn Bay Length (m)	65.0			57.0			85.0			30.0		
Base Capacity (vph)	179	1197		138	1125	566	94	503		303	744	
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	0.94	1.21		0.94	1.18	0.39	0.28	0.79		0.90	0.92	

Intersection Summary




















Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 6 (5%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.21
 Intersection Signal Delay: 98.7 Intersection LOS: F
 Intersection Capacity Utilization 108.1% 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Alta Vista Dr & Heron Rd



Lanes, Volumes, Timings
3: Baycrest Dr & Heron Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	1092	305	27	1269	15	244	12	52	55	16	86
Future Volume (vph)	164	1092	305	27	1269	15	244	12	52	55	16	86
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	43.0		0.0	55.0		0.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	70.0			25.0			2.5			0.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99			1.00			0.98		1.00	0.97	
Fr _t		0.967			0.998			0.977			0.874	
Fl _t Protected	0.950			0.950				0.962		0.950		
Satd. Flow (prot)	864	3187	0	1662	3380	0	0	1595	0	1647	1542	0
Fl _t Permitted	0.103			0.078				0.695		0.649		
Satd. Flow (perm)	94	3187	0	136	3380	0	0	1133	0	1121	1542	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64			2			12			35	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		657.5			131.9			216.5			60.0	
Travel Time (s)		47.3			9.5			15.6			4.3	
Confl. Peds. (#/hr)	9		20	20		9	27		7	7		27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	100%	3%	6%	4%	2%	8%	7%	0%	8%	5%	0%	0%
Adj. Flow (vph)	182	1213	339	30	1410	17	271	13	58	61	18	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	182	1552	0	30	1427	0	0	342	0	61	114	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	29.7	29.7		29.7	29.7		35.0	35.0		35.0	35.0	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.4	1.4		1.4	1.4		2.7	2.7		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	4.7	4.7		4.7	4.7			6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	51.2	51.2		51.2	51.2			28.1		28.1	28.1	
Actuated g/C Ratio	0.57	0.57		0.57	0.57			0.31		0.31	0.31	
v/c Ratio	3.43	0.84		0.39	0.74			0.95		0.17	0.23	
Control Delay	1155.3	21.2		39.6	30.3			66.7		23.6	16.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	1155.3	21.2		39.6	30.3			66.7		23.6	16.9	
LOS	F	C		D	C			E		C	B	
Approach Delay		140.2			30.5			66.7			19.2	

Lanes, Volumes, Timings
3: Baycrest Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		F			C			E			B	
Queue Length 50th (m)	~48.5	108.0		5.0	134.6			54.7		7.5	9.7	
Queue Length 95th (m)	#88.6	142.3		m10.2	157.2			#106.3		16.8	22.0	
Internal Link Dist (m)		633.5			107.9			192.5			36.0	
Turn Bay Length (m)	43.0			55.0						30.0		
Base Capacity (vph)	53	1842		77	1924			373		361	520	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	3.43	0.84		0.39	0.74			0.92		0.17	0.22	

Intersection Summary

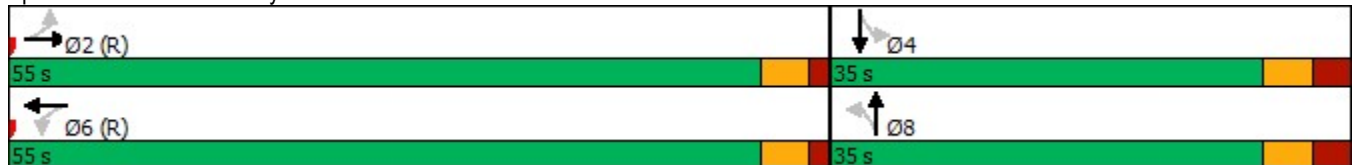
Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 14 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 3.43
 Intersection Signal Delay: 84.6
 Intersection Capacity Utilization 88.8%
 Analysis Period (min) 15
 Intersection LOS: F
 ICU Level of Service E

~ 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.






















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

Splits and Phases: 3: Baycrest Dr & Heron Rd



Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	1148	46	48	1228	20	29	23	47	9	28	45
Future Volume (vph)	65	1148	46	48	1228	20	29	23	47	9	28	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	55.0		0.0	32.0		0.0	37.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	25.0			25.0			12.0			37.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00		0.97	0.98		0.98	0.97	
Frt		0.994			0.998			0.900				0.907
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3326	0	1729	3350	0	1729	1576	0	1729	1529	0
Flt Permitted	0.161			0.174			0.704			0.706		
Satd. Flow (perm)	293	3326	0	317	3350	0	1237	1576	0	1261	1529	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			3			46				37
Link Speed (k/h)		50			50			50				50
Link Distance (m)		182.7			354.9			199.1				258.5
Travel Time (s)		13.2			25.6			14.3				18.6
Confl. Peds. (#/hr)	9		11	11		9	26		14	14		26
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	7%	0%	3%	0%	0%	5%	0%	0%	12%	0%
Adj. Flow (vph)	72	1276	51	53	1364	22	32	26	52	10	31	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	72	1327	0	53	1386	0	32	78	0	10	81	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	24.3	24.3		24.3	24.3		24.1	24.1		24.1	24.1	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3		5.3	5.3		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	67.7	67.7		67.7	67.7		16.4	16.4		16.4	16.4	
Actuated g/C Ratio	0.75	0.75		0.75	0.75		0.18	0.18		0.18	0.18	
v/c Ratio	0.33	0.53		0.22	0.55		0.14	0.24		0.04	0.26	
Control Delay	7.4	5.8		6.6	9.3		32.4	17.7		30.6	21.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.4	5.8		6.6	9.3		32.4	17.7		30.6	21.4	
LOS	A	A		A	A		C	B		C	C	
Approach Delay		5.9			9.2			22.0			22.4	

Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			C			C		
Queue Length 50th (m)	3.1	60.8		3.1	105.0		4.7	4.7		1.5	6.5	
Queue Length 95th (m)	m4.9	m82.2		m4.8	138.6		12.2	16.0		5.6	18.3	
Internal Link Dist (m)	158.7			330.9			175.1			234.5		
Turn Bay Length (m)	55.0			55.0			32.0			37.0		
Base Capacity (vph)	220	2502		238	2520		397	537		404	516	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.33	0.53		0.22	0.55		0.08	0.15		0.02	0.16	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 60 (67%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 8.5 Intersection LOS: A
 Intersection Capacity Utilization 73.1% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Sandalwood Dr & Heron Rd



Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	1062	105	41	1191	47	78	85	78	40	53	47
Future Volume (vph)	83	1062	105	41	1191	47	78	85	78	40	53	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	58.0		62.0	55.0		0.0	18.0		15.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	27.0			17.0			10.0			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.97	1.00	1.00		1.00		0.97		0.99	
Frt			0.850		0.994				0.850		0.955	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1647	3357	1547	1729	3398	0	1679	1820	1547	0	1652	0
Flt Permitted	0.117			0.169			0.661				0.894	
Satd. Flow (perm)	203	3357	1502	307	3398	0	1165	1820	1499	0	1491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117		7				60			30
Link Speed (k/h)		50			50			50				50
Link Distance (m)		354.9			465.1			176.5				237.6
Travel Time (s)		25.6			33.5			12.7				17.1
Confl. Peds. (#/hr)	6		5	5		6	4		20	20		4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	0%	0%	1%	2%	3%	0%	0%	3%	0%	7%
Adj. Flow (vph)	92	1180	117	46	1323	52	87	94	87	44	59	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	92	1180	117	46	1375	0	87	94	87	0	155	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		27.0	27.0	27.0	27.0	27.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		34.2	34.2	34.2	34.2	34.2	
Total Split (s)	55.0	55.0	55.0	55.0	55.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%	61.1%	61.1%	61.1%		38.9%	38.9%	38.9%	38.9%	38.9%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.2	6.2	6.2		6.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	51.0	51.0	51.0	51.0	51.0		27.2	27.2	27.2		27.2	
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57		0.30	0.30	0.30		0.30	
v/c Ratio	0.80	0.62	0.13	0.27	0.71		0.25	0.17	0.18		0.33	
Control Delay	69.4	22.3	5.6	15.1	16.8		25.9	24.1	10.7		21.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	69.4	22.3	5.6	15.1	16.8		25.9	24.1	10.7		21.7	
LOS	E	C	A	B	B		C	C	B		C	
Approach Delay		24.0			16.7			20.3				21.7

Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

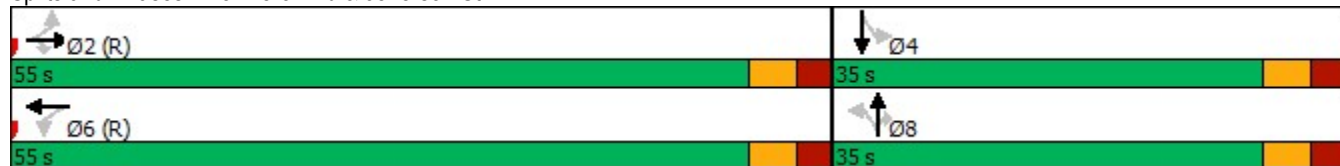


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	C			B			C			C		
Queue Length 50th (m)	15.5	109.5	7.4	3.8	83.6		11.3	12.0	3.3		16.4	
Queue Length 95th (m)	#37.5	130.8	13.7	11.4	111.1		22.9	23.1	13.5		32.0	
Internal Link Dist (m)		330.9			441.1			152.5			213.6	
Turn Bay Length (m)	58.0		62.0	55.0			18.0		15.0			
Base Capacity (vph)	115	1902	901	173	1928		372	582	520		497	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.80	0.62	0.13	0.27	0.71		0.23	0.16	0.17		0.31	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	10 (11%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.80
Intersection Signal Delay:	20.4
Intersection LOS:	C
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: 5: Heron Rd & Jefferson St



Lanes, Volumes, Timings
6: Heron Rd & Walkley Rd

07/23/2024

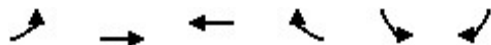


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑↑	↑↑	
Traffic Volume (vph)	13	1168	1335	1198	787	0
Future Volume (vph)	13	1168	1335	1198	787	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0			65.0	0.0	0.0
Storage Lanes	0			1	2	0
Taper Length (m)	2.5				2.5	
Lane Util. Factor	0.95	0.95	0.95	0.88	0.97	1.00
Frt				0.850		
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	3387	3390	2669	3288	0
Flt Permitted		0.921			0.950	
Satd. Flow (perm)	0	3122	3390	2669	3288	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1172		
Link Speed (k/h)		50	50		50	
Link Distance (m)		465.1	359.8		393.2	
Travel Time (s)		33.5	25.9		28.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	1298	1483	1331	874	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1312	1483	1331	874	0
Turn Type	Perm	NA	NA	custom	Prot	
Protected Phases		4		6	2!	
Permitted Phases	4		6!			
Detector Phase	4	4	6	6	2	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	33.7	33.7	16.6	16.6	16.6	
Total Split (s)	51.0	51.0	59.0	59.0	59.0	
Total Split (%)	46.4%	46.4%	53.6%	53.6%	53.6%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.4	3.4	3.3	3.3	3.3	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.7	6.6	6.6	6.6	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	C-Max	C-Max	C-Max	
Act Effct Green (s)		44.3	52.4	52.4	52.4	
Actuated g/C Ratio		0.40	0.48	0.48	0.48	
v/c Ratio		1.04	0.92	0.71	0.56	
Control Delay		70.5	37.4	4.9	22.3	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		70.5	37.4	4.9	22.3	
LOS		E	D	A	C	
Approach Delay		70.5	22.0		22.3	
Approach LOS		E	C		C	
Queue Length 50th (m)		~161.0	151.2	10.4	66.9	
Queue Length 95th (m)		#202.5	#201.1	28.4	85.1	

Lanes, Volumes, Timings

6: Heron Rd & Walkley Rd

07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Internal Link Dist (m)		441.1	335.8		369.2	
Turn Bay Length (m)				65.0		
Base Capacity (vph)		1257	1614	1885	1566	
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		1.04	0.92	0.71	0.56	

Intersection Summary




















Area Type:	Other
Cycle Length:	110
Actuated Cycle Length:	110
Offset:	53 (48%), Referenced to phase 2:SBL and 6:WBT, Start of Green
Natural Cycle:	100
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.04
Intersection Signal Delay:	34.8
Intersection LOS:	C
Intersection Capacity Utilization	89.8%
ICU Level of Service	E
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.	
! Phase conflict between lane groups.	

Splits and Phases: 6: Heron Rd & Walkley Rd



Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	807	20	24	896	218	19	14	21	138	22	97
Future Volume (vph)	101	807	20	24	896	218	19	14	21	138	22	97
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	33.0		0.0	0.0		0.0	20.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	22.0			27.0			2.5			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99	0.98			0.99		0.98		
Fr _t		0.996			0.971			0.948			0.877	
Fl _t Protected	0.950			0.950				0.983		0.950		
Satd. Flow (prot)	1695	3269	0	1729	3188	0	0	1606	0	1558	1475	0
Fl _t Permitted	0.181			0.283				0.868		0.718		
Satd. Flow (perm)	321	3269	0	508	3188	0	0	1418	0	1153	1475	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			56			23			75	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		360.2			304.5			74.0			276.3	
Travel Time (s)		25.9			21.9			5.3			19.9	
Confl. Peds. (#/hr)	30		31	31		30			23	23		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	5%	11%	0%	0%	19%	0%	0%	11%	11%	0%	10%
Adj. Flow (vph)	112	897	22	27	996	242	21	16	23	153	24	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	112	919	0	27	1238	0	0	60	0	153	132	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1	31.1	
Total Split (s)	48.0	48.0		48.0	48.0		32.0	32.0		32.0	32.0	
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%	40.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	51.5	51.5		51.5	51.5			16.5		16.5	16.5	
Actuated g/C Ratio	0.64	0.64		0.64	0.64			0.21		0.21	0.21	
v/c Ratio	0.54	0.44		0.08	0.60			0.19		0.64	0.36	
Control Delay	24.1	8.8		8.2	10.4			17.5		40.4	14.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	24.1	8.8		8.2	10.4			17.5		40.4	14.5	
LOS	C	A		A	B			B		D	B	
Approach Delay		10.5			10.4			17.5			28.4	

Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

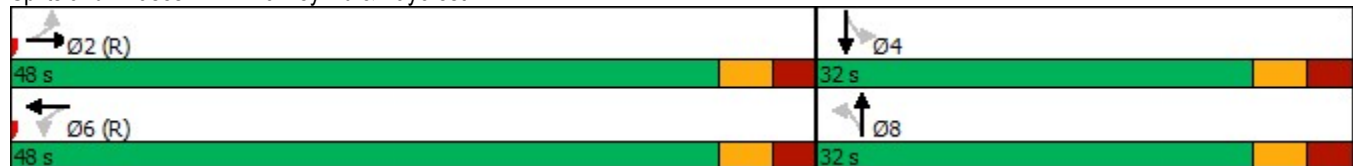


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	B				B		B				C	
Queue Length 50th (m)	8.0	30.9		1.3	46.4			4.7		21.7	7.3	
Queue Length 95th (m)	#38.5	59.2		5.9	89.0			12.1		34.8	18.3	
Internal Link Dist (m)		336.2			280.5			50.0			252.3	
Turn Bay Length (m)	50.0			33.0						20.0		
Base Capacity (vph)	206	2104		326	2070			474		373	528	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.54	0.44		0.08	0.60			0.13		0.41	0.25	

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	12.5
Intersection LOS:	B
Intersection Capacity Utilization:	73.4%
ICU Level of Service:	D
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 7: Walkley Rd & Baycrest Dr



Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↖	↑↑	↗	↖↖	↑↑		↗	↑↑↑	↗	↖↖	↑↑	↗
Traffic Volume (vph)	307	452	257	280	554	274	208	814	243	280	1223	537
Future Volume (vph)	307	452	257	280	554	274	208	814	243	280	1223	537
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		50.0	78.0		0.0	208.0		70.0	156.0		0.0
Storage Lanes	2		1	2		0	1		1	2		1
Taper Length (m)	27.0			24.0			0.0			24.0		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.95	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor	0.98		0.96	0.98	0.98		0.99		0.95	0.98		0.95
Fr _t			0.850		0.950				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3354	3293	1547	3288	3184	0	1712	4919	1502	3321	3424	1547
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3287	3293	1489	3217	3184	0	1701	4919	1428	3261	3424	1466
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			231		63				270			327
Link Speed (k/h)		50			50			50				50
Link Distance (m)		154.1			895.6			245.1				260.6
Travel Time (s)		11.1			64.5			17.6				18.8
Confl. Peds. (#/hr)	36		22	22		36	28		26	26		28
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	5%	0%	2%	1%	2%	1%	1%	3%	1%	1%	0%
Adj. Flow (vph)	341	502	286	311	616	304	231	904	270	311	1359	597
Shared Lane Traffic (%)												
Lane Group Flow (vph)	341	502	286	311	920	0	231	904	270	311	1359	597
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	35.0	35.0	7.0	35.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	13.8	41.7	41.7	13.8	41.7		13.4	33.4	33.4	13.4	33.4	33.4
Total Split (s)	25.0	41.7	41.7	25.0	41.7		19.0	38.0	38.0	27.0	46.0	46.0
Total Split (%)	19.0%	31.7%	31.7%	19.0%	31.7%		14.4%	28.9%	28.9%	20.5%	34.9%	34.9%
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)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	17.0	36.6	36.6	16.6	36.2		12.6	35.0	35.0	17.2	39.6	39.6
Actuated g/C Ratio	0.13	0.28	0.28	0.13	0.27		0.10	0.27	0.27	0.13	0.30	0.30
v/c Ratio	0.79	0.55	0.49	0.75	1.00		1.42	0.69	0.47	0.72	1.32	0.89
Control Delay	69.2	43.5	12.1	67.5	74.0		261.8	47.3	7.4	64.3	188.6	36.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.2	43.5	12.1	67.5	74.0		261.8	47.3	7.4	64.3	188.6	36.6
LOS	E	D	B	E	E		F	D	A	E	F	D
Approach Delay		43.3			72.4			74.9			131.5	

Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024

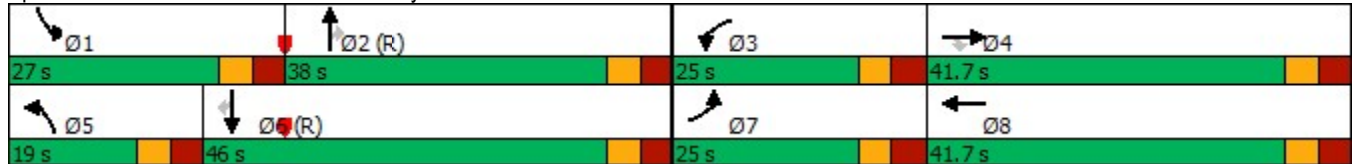


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			E			E			F		
Queue Length 50th (m)	44.3	59.2	10.9	40.4	~127.8		~80.4	77.9	0.0	40.4	~239.6	75.9
Queue Length 95th (m)	60.7	77.8	36.7	55.8	#169.1		#131.7	96.8	22.2	54.5	#281.9	#147.9
Internal Link Dist (m)	130.1			871.6			221.1			236.6		
Turn Bay Length (m)	60.0		50.0	78.0			208.0		70.0	156.0		
Base Capacity (vph)	463	916	581	454	920		163	1306	577	519	1029	669
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.55	0.49	0.69	1.00		1.42	0.69	0.47	0.60	1.32	0.89

Intersection Summary

Area Type: Other
 Cycle Length: 131.7
 Actuated Cycle Length: 131.7
 Offset: 114 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.42
 Intersection Signal Delay: 89.8
 Intersection LOS: F
 Intersection Capacity Utilization 108.2%
 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: Bank St & Walkley Rd



Lanes, Volumes, Timings
 9: Heron Rd & Site Access

07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	1199	1234	55	0	77
Future Volume (vph)	0	1199	1234	55	0	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.994			0.865
Flt Protected						
Satd. Flow (prot)	0	3390	3370	0	0	1543
Flt Permitted						
Satd. Flow (perm)	0	3390	3370	0	0	1543
Link Speed (k/h)		50	50		50	
Link Distance (m)		131.9	182.7		101.7	
Travel Time (s)		9.5	13.2		7.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1332	1371	61	0	86
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1332	1432	0	0	86
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.6%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

1: Bank St & Heron Rd

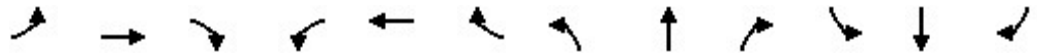
07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	869	274	90	1269	273	548	1189	29	187	363	105
Future Volume (vph)	166	869	274	90	1269	273	548	1189	29	187	363	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	73.0		85.0	50.0		70.0	110.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	20.0			30.0			0.0			0.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.97	1.00		0.98	0.99	1.00		1.00	0.99	
Frt			0.850			0.850		0.996			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3357	1446	1662	3293	1473	3225	3333	0	1712	3129	0
Flt Permitted	0.095			0.228			0.950			0.950		
Satd. Flow (perm)	171	3357	1404	398	3293	1438	3182	3333	0	1705	3129	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			304			208		2			29	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		381.8			492.5			121.2			274.8	
Travel Time (s)		27.5			35.5			8.7			19.8	
Confl. Peds. (#/hr)	8		13	13		8	12		20	20		12
Confl. Bikes (#/hr)			1			3			3			9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	3%	7%	4%	5%	5%	4%	3%	13%	1%	7%	2%
Adj. Flow (vph)	184	966	304	100	1410	303	609	1321	32	208	403	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	184	966	304	100	1410	303	609	1353	0	208	520	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0	10.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	13.5	34.4	34.4	32.5	32.5	32.5	13.5	32.4		13.5	32.4	
Total Split (s)	13.0	55.0	55.0	42.0	42.0	42.0	32.0	49.0		16.0	33.0	
Total Split (%)	10.8%	45.8%	45.8%	35.0%	35.0%	35.0%	26.7%	40.8%		13.3%	27.5%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.1	3.1	1.0	1.0	1.0	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	4.3	4.3	4.3	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	48.5	48.6	48.6	37.7	37.7	37.7	24.9	42.6		9.5	27.2	
Actuated g/C Ratio	0.40	0.40	0.40	0.31	0.31	0.31	0.21	0.36		0.08	0.23	
v/c Ratio	1.21	0.71	0.41	0.80	1.36	0.51	0.91	1.14		1.54	0.71	
Control Delay	167.7	33.4	4.3	80.6	203.8	13.9	43.8	90.7		313.7	46.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	167.7	33.4	4.3	80.6	203.8	13.9	43.8	90.7		313.7	46.7	
LOS	F	C	A	F	F	B	D	F		F	D	

Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024

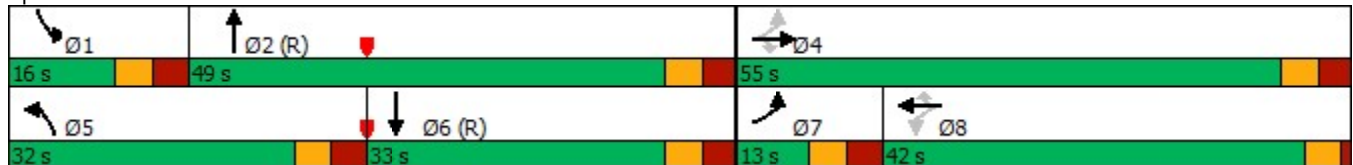


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		44.3			165.2			76.2			123.0	
Approach LOS		D			F			E			F	
Queue Length 50th (m)	~37.9	98.5	0.0	21.5	~230.2	16.4	59.8	~199.9		~68.7	56.9	
Queue Length 95th (m)	#83.2	122.2	16.7	#53.2	#272.2	42.9	m62.1	m#199.4		#115.8	76.3	
Internal Link Dist (m)		357.8			468.5			97.2			250.8	
Turn Bay Length (m)	73.0		85.0	50.0		70.0	110.0			70.0		
Base Capacity (vph)	152	1359	749	125	1034	594	685	1184		135	731	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.21	0.71	0.41	0.80	1.36	0.51	0.89	1.14		1.54	0.71	

Intersection Summary






















Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	52 (43%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	145
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.54
Intersection Signal Delay:	101.2
Intersection LOS:	F
Intersection Capacity Utilization:	113.1%
ICU Level of Service:	H
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.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Bank St & Heron Rd



Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	803	92	155	1370	264	72	288	191	158	280	133
Future Volume (vph)	108	803	92	155	1370	264	72	288	191	158	280	133
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		0.0	57.0		85.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (m)	30.0			24.0			2.5			48.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	0.99		0.97		0.83	0.99	0.95				0.99
Frt		0.985				0.850		0.940				0.952
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3216	0	1695	3293	1459	1601	1582	0	1631	1690	0
Flt Permitted	0.950			0.950			0.499			0.140		
Satd. Flow (perm)	1680	3216	0	1651	3293	1213	830	1582	0	240	1690	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14				261		36				32
Link Speed (k/h)		50			50			50				50
Link Distance (m)		492.5			657.5			201.9				270.3
Travel Time (s)		35.5			47.3			14.5				19.5
Confl. Peds. (#/hr)	54		37	37		54	21		110	110		21
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	5%	1%	2%	5%	6%	8%	2%	3%	6%	2%	0%
Adj. Flow (vph)	120	892	102	172	1522	293	80	320	212	176	311	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	994	0	172	1522	293	80	532	0	176	459	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0	10.0	10.0	10.0		7.0	10.0	
Minimum Split (s)	12.4	23.4		12.4	23.4	23.4	29.9	29.9		11.5	29.9	
Total Split (s)	13.0	34.0		13.0	34.0	34.0	30.0	30.0		13.0	43.0	
Total Split (%)	14.4%	37.8%		14.4%	37.8%	37.8%	33.3%	33.3%		14.4%	47.8%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.1	2.1	2.1	2.6	2.6		1.0	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4	5.4	5.9	5.9		4.3	5.9	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	7.6	28.6		7.6	28.6	28.6	24.2	24.2		38.7	37.1	
Actuated g/C Ratio	0.08	0.32		0.08	0.32	0.32	0.27	0.27		0.43	0.41	
v/c Ratio	0.83	0.96		1.20	1.46	0.52	0.36	1.18		0.75	0.64	
Control Delay	83.7	51.6		155.6	230.6	4.4	32.4	132.4		38.1	24.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	83.7	51.6		155.6	230.6	4.4	32.4	132.4		38.1	24.6	
LOS	F	D		F	F	A	C	F		D	C	
Approach Delay		55.0			190.8			119.4			28.3	

Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

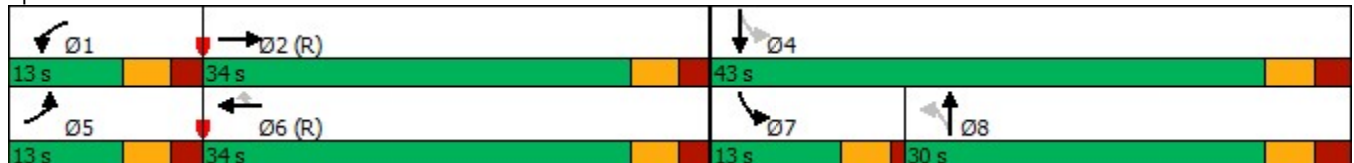


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	E			F			F			C		
Queue Length 50th (m)	20.8	87.2		~37.7	~189.0	0.6	11.2	~107.2		18.9	57.5	
Queue Length 95th (m)	#50.4	#128.6		m#47.1	m#198.1	m5.6	24.3	#167.8		#44.8	89.9	
Internal Link Dist (m)		468.5			633.5			177.9			246.3	
Turn Bay Length (m)	65.0			57.0		85.0				30.0		
Base Capacity (vph)	144	1031		143	1046	563	223	450		237	715	
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	0.83	0.96		1.20	1.46	0.52	0.36	1.18		0.74	0.64	

Intersection Summary

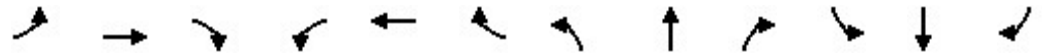
Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 10 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.46
 Intersection Signal Delay: 122.2 Intersection LOS: F
 Intersection Capacity Utilization 103.8% 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Alta Vista Dr & Heron Rd



Lanes, Volumes, Timings
3: Baycrest Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	809	253	34	1292	4	427	30	71	52	13	78
Future Volume (vph)	153	809	253	34	1292	4	427	30	71	52	13	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	43.0		0.0	55.0		0.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	70.0			25.0			2.5			0.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98		0.99	1.00			0.98		1.00	0.96	
Frt		0.964						0.982			0.871	
Flt Protected	0.950			0.950				0.961		0.950		
Satd. Flow (prot)	1729	3155	0	1478	3293	0	0	1642	0	1729	1528	0
Flt Permitted	0.096			0.162				0.699		0.687		
Satd. Flow (perm)	174	3155	0	250	3293	0	0	1170	0	1248	1528	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		75						9			31	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		657.5			134.3			489.7			60.0	
Travel Time (s)		47.3			9.7			35.3			4.3	
Confl. Peds. (#/hr)	15		27	27		15	31		8	8		31
Confl. Bikes (#/hr)						1						2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	7%	17%	5%	0%	5%	0%	2%	0%	0%	0%
Adj. Flow (vph)	170	899	281	38	1436	4	474	33	79	58	14	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	170	1180	0	38	1440	0	0	586	0	58	101	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	29.7	29.7		29.7	29.7		35.0	35.0		35.0	35.0	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.4	1.4		1.4	1.4		2.7	2.7		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	4.7	4.7		4.7	4.7			6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	50.3	50.3		50.3	50.3			29.0		29.0	29.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56			0.32		0.32	0.32	
v/c Ratio	1.75	0.66		0.27	0.78			1.53		0.14	0.20	
Control Delay	374.1	6.5		23.9	26.0			277.7		23.0	16.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	374.1	6.5		23.9	26.0			277.7		23.0	16.8	
LOS	F	A		C	C			F		C	B	

Lanes, Volumes, Timings
 3: Baycrest Dr & Heron Rd

07/23/2024

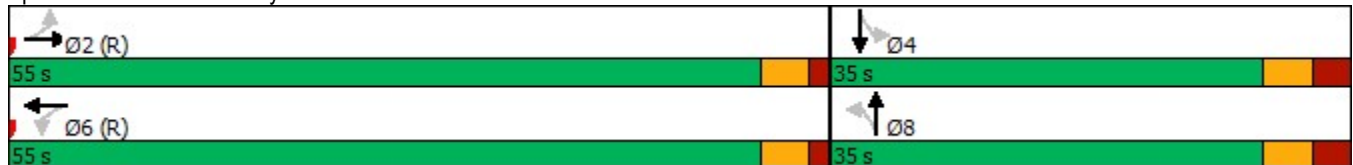


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		52.8			26.0			277.7				19.1
Approach LOS		D			C			F				B
Queue Length 50th (m)	~45.9	22.5		3.5	134.3			~143.9		7.1		8.5
Queue Length 95th (m)	m#50.5	m23.4		m11.0	162.6			#206.3		15.9		19.9
Internal Link Dist (m)		633.5			110.3			465.7				36.0
Turn Bay Length (m)	43.0			55.0						30.0		
Base Capacity (vph)	97	1796		139	1840			383		402		513
Starvation Cap Reductn	0	0		0	0			0		0		0
Spillback Cap Reductn	0	0		0	0			0		0		0
Storage Cap Reductn	0	0		0	0			0		0		0
Reduced v/c Ratio	1.75	0.66		0.27	0.78			1.53		0.14		0.20

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	51 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.75
Intersection Signal Delay:	77.1
Intersection LOS:	E
Intersection Capacity Utilization:	97.6%
ICU Level of Service:	F
Analysis Period (min):	15
~	Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.
#	95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Baycrest Dr & Heron Rd



Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	875	26	23	1163	18	57	15	39	8	15	75
Future Volume (vph)	45	875	26	23	1163	18	57	15	39	8	15	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	55.0		0.0	32.0		0.0	37.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	25.0			25.0			12.0			37.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00	1.00		0.99	0.99		0.99	0.98	
Frt		0.996			0.998			0.892				0.875
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3318	0	1601	3257	0	1478	1536	0	1729	1567	0
Flt Permitted	0.178			0.265			0.692			0.718		
Satd. Flow (perm)	324	3318	0	445	3257	0	1069	1536	0	1298	1567	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			3			43				45
Link Speed (k/h)		50			50			50				50
Link Distance (m)		148.8			354.9			199.1				258.5
Travel Time (s)		10.7			25.6			14.3				18.6
Confl. Peds. (#/hr)	7		7	7		7	5		5	5		5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	27%	8%	6%	0%	17%	15%	0%	0%	0%	0%
Adj. Flow (vph)	50	972	29	26	1292	20	63	17	43	9	17	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	50	1001	0	26	1312	0	63	60	0	9	100	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	24.3	24.3		24.3	24.3		24.1	24.1		24.1	24.1	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3		5.3	5.3		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	67.7	67.7		67.7	67.7		16.4	16.4		16.4	16.4	
Actuated g/C Ratio	0.75	0.75		0.75	0.75		0.18	0.18		0.18	0.18	
v/c Ratio	0.21	0.40		0.08	0.54		0.32	0.19		0.04	0.31	
Control Delay	3.8	2.8		9.8	11.8		37.0	15.5		30.4	21.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	3.8	2.8		9.8	11.8		37.0	15.5		30.4	21.6	
LOS	A	A		A	B		D	B		C	C	
Approach Delay		2.8			11.7			26.5			22.3	

Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024

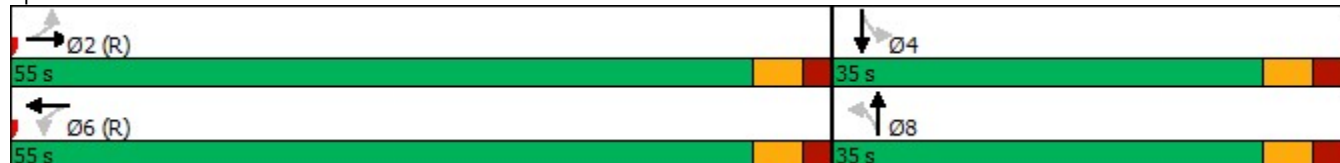


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			B			C			C		
Queue Length 50th (m)	0.8	7.3		1.9	65.8		9.6	2.5		1.3	8.2	
Queue Length 95th (m)	m1.5	m19.8		m4.1	100.6		20.8	12.4		5.2	21.3	
Internal Link Dist (m)	124.8			330.9			175.1			234.5		
Turn Bay Length (m)	55.0			55.0			32.0			37.0		
Base Capacity (vph)	243	2496		334	2450		343	522		416	533	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.21	0.40		0.08	0.54		0.18	0.11		0.02	0.19	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.54
 Intersection Signal Delay: 9.3
 Intersection LOS: A
 Intersection Capacity Utilization 62.6%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Sandalwood Dr & Heron Rd



Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	855	50	14	1119	28	33	33	28	32	27	82
Future Volume (vph)	35	855	50	14	1119	28	33	33	28	32	27	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	58.0		62.0	55.0		0.0	18.0		15.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	27.0			17.0			10.0			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.97	1.00	1.00		1.00		0.98		0.99	
Frt			0.850		0.996				0.850		0.922	
Flt Protected	0.950			0.950			0.950				0.989	
Satd. Flow (prot)	1572	3357	1419	1383	3278	0	1679	1820	1381	0	1566	0
Flt Permitted	0.143			0.246			0.656				0.930	
Satd. Flow (perm)	236	3357	1379	358	3278	0	1155	1820	1357	0	1471	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			56		4				32			51
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		354.9			465.1			176.5			237.6	
Travel Time (s)		25.6			33.5			12.7			17.1	
Confl. Peds. (#/hr)	6		4	4		6	5		5	5		5
Confl. Bikes (#/hr)			2						1			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	3%	9%	25%	5%	4%	3%	0%	12%	4%	0%	7%
Adj. Flow (vph)	39	950	56	16	1243	31	37	37	31	36	30	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	950	56	16	1274	0	37	37	31	0	157	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		27.0	27.0	27.0	27.0	27.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		34.2	34.2	34.2	34.2	34.2	
Total Split (s)	55.0	55.0	55.0	55.0	55.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%	61.1%	61.1%	61.1%		38.9%	38.9%	38.9%	38.9%	38.9%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.2	6.2	6.2		6.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	51.0	51.0	51.0	51.0	51.0		27.2	27.2	27.2		27.2	
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57		0.30	0.30	0.30		0.30	
v/c Ratio	0.29	0.50	0.07	0.08	0.69		0.11	0.07	0.07		0.33	
Control Delay	8.6	4.2	0.3	10.3	16.2		23.6	22.7	8.3		18.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	8.6	4.2	0.3	10.3	16.2		23.6	22.7	8.3		18.3	
LOS	A	A	A	B	B		C	C	A		B	

Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		4.2			16.2			18.8				18.3
Approach LOS		A			B			B				B
Queue Length 50th (m)	0.8	10.8	0.2	1.2	75.6		4.6	4.6	0.0			13.8
Queue Length 95th (m)	2.2	14.0	0.1	4.3	101.2		11.5	11.2	5.9			28.9
Internal Link Dist (m)		330.9			441.1			152.5				213.6
Turn Bay Length (m)	58.0		62.0	55.0			18.0		15.0			
Base Capacity (vph)	133	1902	805	202	1859		369	582	456			505
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	0.29	0.50	0.07	0.08	0.69		0.10	0.06	0.07			0.31

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	10 (11%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.69
Intersection Signal Delay:	11.6
Intersection LOS:	B
Intersection Capacity Utilization	85.2%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 5: Heron Rd & Jefferson St



Lanes, Volumes, Timings
6: Walkley Rd & Heron Rd

07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑↑	↑↑	
Traffic Volume (vph)	0	857	728	1160	852	63
Future Volume (vph)	0	857	728	1160	852	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0			65.0	0.0	0.0
Storage Lanes	0			1	2	0
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	0.95	0.95	0.88	0.97	0.95
Frt				0.850	0.990	
Flt Protected					0.956	
Satd. Flow (prot)	0	3390	3390	2669	3276	0
Flt Permitted					0.956	
Satd. Flow (perm)	0	3390	3390	2669	3276	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1289	9	
Link Speed (k/h)		50	50		50	
Link Distance (m)		393.2	359.1		465.1	
Travel Time (s)		28.3	25.9		33.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	952	809	1289	947	70
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	952	809	1289	1017	0
Turn Type		NA	NA	Perm	Prot	
Protected Phases		2	6		4	
Permitted Phases				6		
Detector Phase		2	6	6	4	
Switch Phase						
Minimum Initial (s)		10.0	10.0	10.0	10.0	
Minimum Split (s)		16.6	16.6	16.6	33.7	
Total Split (s)		54.0	54.0	54.0	46.0	
Total Split (%)		54.0%	54.0%	54.0%	46.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	
All-Red Time (s)		3.3	3.3	3.3	3.4	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode		C-Max	C-Max	C-Max	Max	
Act Effct Green (s)		47.4	47.4	47.4	39.3	
Actuated g/C Ratio		0.47	0.47	0.47	0.39	
v/c Ratio		0.59	0.50	0.66	0.79	
Control Delay		21.1	19.5	2.8	31.8	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		21.1	19.5	2.8	31.8	
LOS		C	B	A	C	
Approach Delay		21.1	9.3		31.8	
Approach LOS		C	A		C	
Queue Length 50th (m)		68.5	54.9	0.0	87.0	
Queue Length 95th (m)		87.8	71.5	11.4	111.7	

Lanes, Volumes, Timings
6: Walkley Rd & Heron Rd

07/23/2024

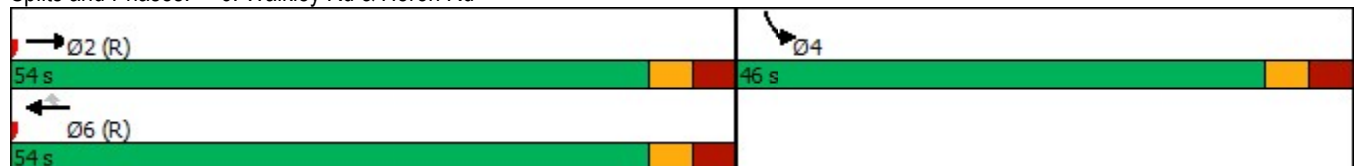


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Internal Link Dist (m)		369.2	335.1		441.1	
Turn Bay Length (m)				65.0		
Base Capacity (vph)		1606	1606	1943	1292	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.59	0.50	0.66	0.79	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	23 (23%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	17.7
Intersection LOS:	B
Intersection Capacity Utilization	63.8%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 6: Walkley Rd & Heron Rd



Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	683	11	9	696	157	27	23	30	219	8	108
Future Volume (vph)	61	683	11	9	696	157	27	23	30	219	8	108
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	33.0		0.0	0.0		0.0	20.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	22.0			27.0			2.5			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.99	0.99			0.99		0.98	0.98	
Frt		0.998			0.972			0.950			0.860	
Flt Protected	0.950			0.950				0.983		0.950		
Satd. Flow (prot)	1530	3257	0	1530	3177	0	0	1680	0	1586	1535	0
Flt Permitted	0.254			0.329				0.874		0.699		
Satd. Flow (perm)	408	3257	0	527	3177	0	0	1490	0	1147	1535	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			51			33			111	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		360.2			595.8			74.0			489.7	
Travel Time (s)		25.9			42.9			5.3			35.3	
Confl. Peds. (#/hr)	9		12	12		9	11		23	23		11
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	13%	6%	0%	13%	4%	10%	0%	0%	0%	9%	0%	0%
Adj. Flow (vph)	68	759	12	10	773	174	30	26	33	243	9	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	771	0	10	947	0	0	89	0	243	129	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1	31.1	
Total Split (s)	38.0	38.0		38.0	38.0		32.0	32.0		32.0	32.0	
Total Split (%)	54.3%	54.3%		54.3%	54.3%		45.7%	45.7%		45.7%	45.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	38.5	38.5		38.5	38.5			19.5		19.5	19.5	
Actuated g/C Ratio	0.55	0.55		0.55	0.55			0.28		0.28	0.28	
v/c Ratio	0.30	0.43		0.03	0.54			0.20		0.76	0.25	
Control Delay	15.8	11.3		10.2	12.0			12.6		37.9	6.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	15.8	11.3		10.2	12.0			12.6		37.9	6.1	
LOS	B	B		B	B			B		D	A	
Approach Delay		11.7			11.9			12.6			26.9	

Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			B			B			C	
Queue Length 50th (m)	4.5	29.2		0.6	36.5			5.4		28.6	1.7	
Queue Length 95th (m)	15.8	50.1		3.1	63.0			13.1		46.4	11.1	
Internal Link Dist (m)		336.2			571.8			50.0			465.7	
Turn Bay Length (m)	50.0			33.0						20.0		
Base Capacity (vph)	224	1792		289	1770			572		424	637	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.30	0.43		0.03	0.54			0.16		0.57	0.20	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	17 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	14.3
Intersection LOS:	B
Intersection Capacity Utilization:	68.9%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 7: Walkley Rd & Baycrest Dr



Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↖	↑↑	↗	↖↖	↑↑		↖	↑↑↑	↗	↖↖	↑↑	↗
Traffic Volume (vph)	421	438	102	121	443	406	166	1345	181	184	536	272
Future Volume (vph)	421	438	102	121	443	406	166	1345	181	184	536	272
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		50.0	78.0		0.0	208.0		70.0	156.0		0.0
Storage Lanes	2		1	2		0	1		1	2		1
Taper Length (m)	27.0			24.0			0.0			24.0		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.95	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor	0.99		0.97	0.99	0.98		1.00		0.96	1.00		0.97
Fr _t			0.850		0.928				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3288	3390	1517	3288	3084	0	1695	4871	1517	3288	3390	1517
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3247	3390	1475	3255	3084	0	1687	4871	1460	3273	3390	1469
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			209		175				168			302
Link Speed (k/h)		50		50			50			50		
Link Distance (m)		154.1		895.6			245.1			260.6		
Travel Time (s)		11.1		64.5			17.6			18.8		
Confl. Peds. (#/hr)	26		11	11		26	8		17	17		8
Confl. Bikes (#/hr)			5			2			5			10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	468	487	113	134	492	451	184	1494	201	204	596	302
Shared Lane Traffic (%)												
Lane Group Flow (vph)	468	487	113	134	943	0	184	1494	201	204	596	302
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	29.0	29.0	7.0	29.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	13.8	39.7	39.7	13.8	39.7		13.4	33.4	33.4	13.4	33.4	33.4
Total Split (s)	19.0	40.0	40.0	19.0	40.0		26.0	46.0	46.0	15.0	35.0	35.0
Total Split (%)	15.8%	33.3%	33.3%	15.8%	33.3%		21.7%	38.3%	38.3%	12.5%	29.2%	29.2%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	12.2	35.4	35.4	10.0	33.3		16.9	39.6	39.6	8.6	31.3	31.3
Actuated g/C Ratio	0.10	0.30	0.30	0.08	0.28		0.14	0.33	0.33	0.07	0.26	0.26
v/c Ratio	1.40	0.49	0.19	0.49	0.96		0.77	0.93	0.34	0.86	0.67	0.50
Control Delay	237.4	37.2	0.7	58.3	55.8		70.5	50.1	8.5	81.3	55.4	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	237.4	37.2	0.7	58.3	55.8		70.5	50.1	8.5	81.3	55.4	18.3
LOS	F	D	A	E	E		E	D	A	F	E	B
Approach Delay		121.1			56.1			47.7			50.1	

Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024

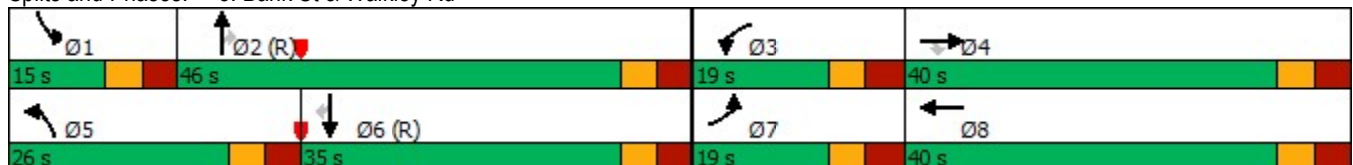


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	F			E			D			D		
Queue Length 50th (m)	~75.9	49.7	0.0	15.7	97.5		41.7	124.0	5.3	25.1	73.3	19.7
Queue Length 95th (m)	#108.5	67.6	0.0	25.3	#140.1		65.5	#153.3	22.6	m#44.2	94.1	m39.7
Internal Link Dist (m)		130.1			871.6			221.1			236.6	
Turn Bay Length (m)	60.0		50.0	78.0			208.0		70.0	156.0		
Base Capacity (vph)	334	1000	582	334	982		276	1607	594	236	883	606
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.40	0.49	0.19	0.40	0.96		0.67	0.93	0.34	0.86	0.67	0.50

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 79 (66%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 125
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.40
 Intersection Signal Delay: 65.3 Intersection LOS: E
 Intersection Capacity Utilization 95.7% 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bank St & Walkley Rd



Lanes, Volumes, Timings
9: Heron Rd & Site Access

07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↗
Traffic Volume (vph)	0	932	1256	48	0	74
Future Volume (vph)	0	932	1256	48	0	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	30.0			0.0	0.0	0.0
Storage Lanes	0			0	0	1
Taper Length (m)	15.0				2.5	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.995			0.865
Flt Protected						
Satd. Flow (prot)	0	3390	3373	0	0	1543
Flt Permitted						
Satd. Flow (perm)	0	3390	3373	0	0	1543
Link Speed (k/h)		50	50		50	
Link Distance (m)		134.3	31.3		87.7	
Travel Time (s)		9.7	2.3		6.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1036	1396	53	0	82
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1036	1449	0	0	82
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.8%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

1: Bank St & Heron Rd

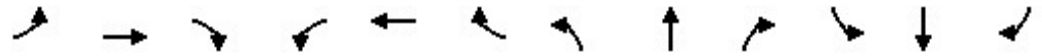
07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	1184	562	89	1207	190	448	591	63	341	962	150
Future Volume (vph)	242	1184	562	89	1207	190	448	591	63	341	962	150
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	73.0		85.0	50.0		70.0	110.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	20.0			30.0			0.0			0.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.95	1.00		0.96	0.99	1.00		0.99	0.99	
Fr _t			0.850			0.850		0.986			0.980	
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3325	1532	1679	3390	1532	3321	3332	0	1695	3299	0
Fl _t Permitted	0.102			0.115			0.950			0.950		
Satd. Flow (perm)	186	3325	1453	202	3390	1476	3281	3332	0	1670	3299	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			480			138		8			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		381.8			492.5			121.2			274.8	
Travel Time (s)		27.5			35.5			8.7			19.8	
Confl. Peds. (#/hr)	18		29	29		18	27		27	27		27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	4%	1%	3%	2%	1%	1%	2%	0%	2%	2%	2%
Adj. Flow (vph)	269	1316	624	99	1341	211	498	657	70	379	1069	167
Shared Lane Traffic (%)												
Lane Group Flow (vph)	269	1316	624	99	1341	211	498	727	0	379	1236	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0	10.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	13.5	34.4	34.4	32.5	32.5	32.5	13.5	32.4		13.5	32.4	
Total Split (s)	20.0	59.0	59.0	39.0	39.0	39.0	32.0	39.0		32.0	39.0	
Total Split (%)	15.4%	45.4%	45.4%	30.0%	30.0%	30.0%	24.6%	30.0%		24.6%	30.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.1	3.1	1.0	1.0	1.0	3.2	3.1		3.2	3.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.4	6.4	4.3	4.3	4.3	6.5	6.4		6.5	6.4	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	52.5	52.6	52.6	34.7	34.7	34.7	23.3	32.6		25.5	34.8	
Actuated g/C Ratio	0.40	0.40	0.40	0.27	0.27	0.27	0.18	0.25		0.20	0.27	
v/c Ratio	1.14	0.98	0.71	1.87	1.48	0.43	0.84	0.86		1.14	1.39	
Control Delay	136.0	58.2	12.2	429.7	259.8	35.9	64.6	57.9		140.0	216.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	136.0	58.2	12.2	429.7	259.8	35.9	64.6	57.9		140.0	216.7	
LOS	F	E	B	F	F	D	E	E		F	F	
Approach Delay		54.7			241.4			60.6			198.7	

Lanes, Volumes, Timings

1: Bank St & Heron Rd

07/23/2024



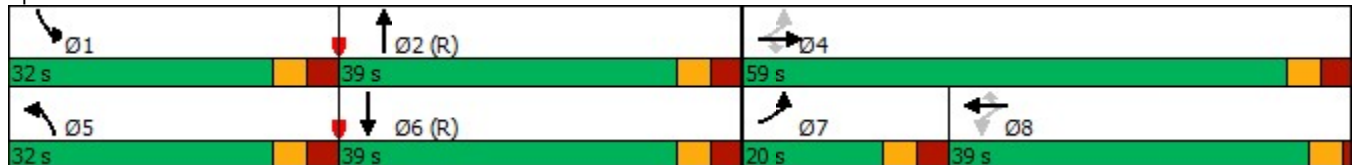
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			F			E			F		
Queue Length 50th (m)	~65.5	172.8	27.4	~39.5	~256.8	36.8	63.4	93.3		~113.2	~225.6	
Queue Length 95th (m)	#120.1	#222.5	74.1	m#34.0	m#201.0	m30.3	82.0	#123.3		#173.9	#272.0	
Internal Link Dist (m)	357.8			468.5			97.2		250.8			
Turn Bay Length (m)	73.0		85.0	50.0		70.0	110.0			70.0		
Base Capacity (vph)	235	1345	873	53	904	495	651	841		332	892	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.14	0.98	0.71	1.87	1.48	0.43	0.76	0.86		1.14	1.39	

Intersection Summary

Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	130
Offset:	57 (44%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	145
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.87
Intersection Signal Delay:	136.5
Intersection LOS:	F
Intersection Capacity Utilization:	116.1%
ICU Level of Service:	H
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.
- m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Bank St & Heron Rd



Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	1305	44	122	1245	205	24	237	134	255	486	157
Future Volume (vph)	158	1305	44	122	1245	205	24	237	134	255	486	157
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		0.0	57.0		85.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (m)	30.0			24.0			2.5			48.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99		0.93		0.99			0.99	
Frt		0.995				0.850		0.946			0.963	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3335	0	1695	3357	1473	1729	1666	0	1631	1705	0
Flt Permitted	0.950			0.950			0.139			0.205		
Satd. Flow (perm)	1700	3335	0	1681	3357	1373	253	1666	0	352	1705	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				159		22			16	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		492.5			657.5			201.9			270.3	
Travel Time (s)		35.5			47.3			14.5			19.5	
Confl. Peds. (#/hr)	12		16	16		12	19		9	9		19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	3%	0%	2%	3%	5%	0%	2%	3%	6%	2%	1%
Adj. Flow (vph)	176	1450	49	136	1383	228	27	263	149	283	540	174
Shared Lane Traffic (%)												
Lane Group Flow (vph)	176	1499	0	136	1383	228	27	412	0	283	714	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0	10.0	10.0	10.0		7.0	10.0	
Minimum Split (s)	12.4	23.4		12.4	23.4	23.4	29.9	29.9		11.5	29.9	
Total Split (s)	19.0	52.0		16.0	49.0	49.0	44.0	44.0		18.0	62.0	
Total Split (%)	14.6%	40.0%		12.3%	37.7%	37.7%	33.8%	33.8%		13.8%	47.7%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.1	2.1	2.1	2.6	2.6		1.0	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4	5.4	5.9	5.9		4.3	5.9	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max	C-Max	Max	Max		None	Max	
Act Effct Green (s)	13.6	46.6		10.6	43.6	43.6	38.1	38.1		57.7	56.1	
Actuated g/C Ratio	0.10	0.36		0.08	0.34	0.34	0.29	0.29		0.44	0.43	
v/c Ratio	0.98	1.25		0.99	1.23	0.40	0.36	0.82		0.97	0.96	
Control Delay	96.9	140.3		132.1	148.8	12.7	53.1	54.9		74.6	60.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	96.9	140.3		132.1	148.8	12.7	53.1	54.9		74.6	60.0	
LOS	F	F		F	F	B	D	D		E	E	
Approach Delay		135.8			129.8			54.8			64.2	

Lanes, Volumes, Timings
2: Alta Vista Dr & Heron Rd

07/23/2024

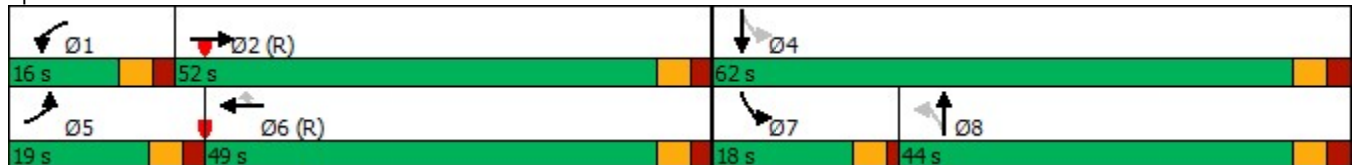


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	F			F			D			E		
Queue Length 50th (m)	48.4	~247.8		35.4	~229.7		12.4	5.5	93.6	47.9	172.0	
Queue Length 95th (m)	m48.0	m#245.8		#76.6	#272.3		33.8	15.9	#143.4	#96.1	#253.1	
Internal Link Dist (m)	468.5			633.5			177.9			246.3		
Turn Bay Length (m)	65.0			57.0			85.0			30.0		
Base Capacity (vph)	179	1197		138	1125		566	74	503	291	744	
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	0.98	1.25		0.99	1.23		0.40	0.36	0.82	0.97	0.96	

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 6 (5%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.25
 Intersection Signal Delay: 111.6 Intersection LOS: F
 Intersection Capacity Utilization 111.4% ICU Level of Service H
 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Alta Vista Dr & Heron Rd



Lanes, Volumes, Timings
3: Baycrest Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	1140	316	28	1320	16	251	12	54	56	16	89
Future Volume (vph)	164	1140	316	28	1320	16	251	12	54	56	16	89
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	43.0		0.0	55.0		0.0	0.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	70.0			25.0			2.5			0.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			0.98		1.00	0.97	
Frt		0.967			0.998			0.977			0.873	
Flt Protected	0.950			0.950				0.962		0.950		
Satd. Flow (prot)	864	3187	0	1662	3380	0	0	1595	0	1647	1540	0
Flt Permitted	0.088			0.079				0.694		0.646		
Satd. Flow (perm)	80	3187	0	138	3380	0	0	1131	0	1116	1540	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64			2			12			30	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		657.5			131.9			216.5			60.0	
Travel Time (s)		47.3			9.5			15.6			4.3	
Confl. Peds. (#/hr)	9		20	20		9	27		7	7		27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	100%	3%	6%	4%	2%	8%	7%	0%	8%	5%	0%	0%
Adj. Flow (vph)	182	1267	351	31	1467	18	279	13	60	62	18	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	182	1618	0	31	1485	0	0	352	0	62	117	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	29.7	29.7		29.7	29.7		35.0	35.0		35.0	35.0	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.4	1.4		1.4	1.4		2.7	2.7		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	4.7	4.7		4.7	4.7			6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	50.8	50.8		50.8	50.8			28.5		28.5	28.5	
Actuated g/C Ratio	0.56	0.56		0.56	0.56			0.32		0.32	0.32	
v/c Ratio	4.04	0.89		0.40	0.78			0.96		0.18	0.23	
Control Delay	1450.1	24.1		39.3	31.3			69.9		23.6	17.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	1450.1	24.1		39.3	31.3			69.9		23.6	17.9	
LOS	F	C		D	C			E		C	B	
Approach Delay		168.3			31.5			69.9			19.9	

Lanes, Volumes, Timings
 3: Baycrest Dr & Heron Rd

07/23/2024

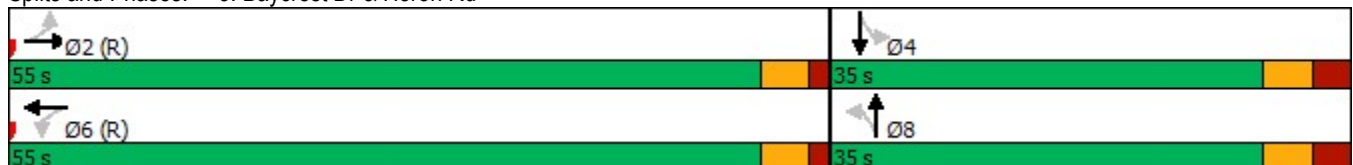


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		F			C			E			B	
Queue Length 50th (m)	~51.3	117.5		5.2	140.1			57.1		7.6	10.7	
Queue Length 95th (m)	#91.5	#160.1		m10.3	165.4			#110.5		17.1	23.3	
Internal Link Dist (m)		633.5			107.9			192.5			36.0	
Turn Bay Length (m)	43.0			55.0						30.0		
Base Capacity (vph)	45	1827			78	1909			372	359		516
Starvation Cap Reductn	0	0			0	0			0	0		0
Spillback Cap Reductn	0	0			0	0			0	0		0
Storage Cap Reductn	0	0			0	0			0	0		0
Reduced v/c Ratio	4.04	0.89			0.40	0.78			0.95	0.17		0.23

Intersection Summary





















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 14 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 4.04
 Intersection Signal Delay: 98.5 Intersection LOS: F
 Intersection Capacity Utilization 91.1% 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Baycrest Dr & Heron Rd



Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	1196	47	50	1279	20	30	24	48	9	30	47
Future Volume (vph)	68	1196	47	50	1279	20	30	24	48	9	30	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	55.0		0.0	32.0		0.0	37.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	25.0			25.0			12.0			37.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00		0.97	0.98		0.98	0.97	
Frt		0.994			0.998			0.901			0.908	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	3327	0	1729	3350	0	1729	1578	0	1729	1530	0
Flt Permitted	0.148			0.162			0.702			0.705		
Satd. Flow (perm)	269	3327	0	295	3350	0	1233	1578	0	1259	1530	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			3			40			32	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		182.7			354.9			199.1			258.5	
Travel Time (s)		13.2			25.6			14.3			18.6	
Confl. Peds. (#/hr)	9		11	11		9	26		14	14		26
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	7%	0%	3%	0%	0%	5%	0%	0%	12%	0%
Adj. Flow (vph)	76	1329	52	56	1421	22	33	27	53	10	33	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	1381	0	56	1443	0	33	80	0	10	85	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	24.3	24.3		24.3	24.3		24.1	24.1		24.1	24.1	
Total Split (s)	55.0	55.0		55.0	55.0		35.0	35.0		35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3		5.3	5.3		6.1	6.1		6.1	6.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	67.7	67.7		67.7	67.7		16.4	16.4		16.4	16.4	
Actuated g/C Ratio	0.75	0.75		0.75	0.75		0.18	0.18		0.18	0.18	
v/c Ratio	0.38	0.55		0.25	0.57		0.15	0.25		0.04	0.28	
Control Delay	9.0	5.9		7.3	9.5		32.5	20.1		30.6	23.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.0	5.9		7.3	9.5		32.5	20.1		30.6	23.6	
LOS	A	A		A	A		C	C		C	C	
Approach Delay		6.1			9.4			23.7			24.4	

Lanes, Volumes, Timings
4: Sandalwood Dr & Heron Rd

07/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			C			C		
Queue Length 50th (m)	3.5	61.7		3.3	111.9		4.9	5.9		1.5	7.9	
Queue Length 95th (m)	m5.5	m87.8		m5.0	147.6		12.6	17.5		5.6	20.0	
Internal Link Dist (m)	158.7			330.9			175.1			234.5		
Turn Bay Length (m)	55.0			55.0			32.0			37.0		
Base Capacity (vph)	202	2503		222	2520		395	533		404	513	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.38	0.55		0.25	0.57		0.08	0.15		0.02	0.17	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 60 (67%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.57
 Intersection Signal Delay: 8.8 Intersection LOS: A
 Intersection Capacity Utilization 74.6% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Sandalwood Dr & Heron Rd



Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	1106	109	43	1239	49	82	89	82	42	56	49
Future Volume (vph)	86	1106	109	43	1239	49	82	89	82	42	56	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	58.0		62.0	55.0		0.0	18.0		15.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	27.0			17.0			10.0			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.97	1.00	1.00		1.00		0.97		0.99	
Frt			0.850		0.994				0.850		0.955	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1647	3357	1547	1729	3398	0	1679	1820	1547	0	1652	0
Flt Permitted	0.104			0.155			0.650				0.889	
Satd. Flow (perm)	180	3357	1502	282	3398	0	1145	1820	1499	0	1482	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121		7				53		29	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		354.9			465.1			176.5			237.6	
Travel Time (s)		25.6			33.5			12.7			17.1	
Confl. Peds. (#/hr)	6		5	5		6	4		20	20		4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	0%	0%	1%	2%	3%	0%	0%	3%	0%	7%
Adj. Flow (vph)	96	1229	121	48	1377	54	91	99	91	47	62	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	1229	121	48	1431	0	91	99	91	0	163	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		27.0	27.0	27.0	27.0	27.0	
Minimum Split (s)	30.6	30.6	30.6	30.6	30.6		34.2	34.2	34.2	34.2	34.2	
Total Split (s)	55.0	55.0	55.0	55.0	55.0		35.0	35.0	35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%	61.1%	61.1%	61.1%		38.9%	38.9%	38.9%	38.9%	38.9%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.3	2.3	2.3	2.3	2.3		2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.6	5.6	5.6	5.6	5.6		6.2	6.2	6.2		6.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)	51.0	51.0	51.0	51.0	51.0		27.2	27.2	27.2		27.2	
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57		0.30	0.30	0.30		0.30	
v/c Ratio	0.94	0.65	0.13	0.30	0.74		0.26	0.18	0.19		0.35	
Control Delay	102.5	22.7	5.2	16.7	17.6		26.2	24.2	12.5		22.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	102.5	22.7	5.2	16.7	17.6		26.2	24.2	12.5		22.4	
LOS	F	C	A	B	B		C	C	B		C	
Approach Delay		26.6			17.5			21.1			22.4	

Lanes, Volumes, Timings
5: Heron Rd & Jefferson St

07/23/2024

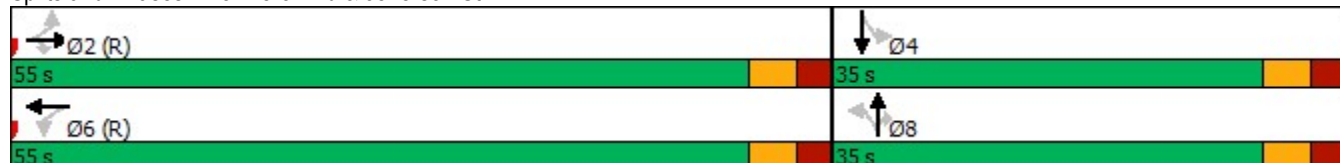


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	C			B			C			C		
Queue Length 50th (m)	15.9	114.5	7.1	4.0	89.6		11.9	12.6	4.7			17.8
Queue Length 95th (m)	m#40.9	136.2	13.2	12.5	119.1		23.8	24.1	15.2			33.7
Internal Link Dist (m)		330.9			441.1			152.5				213.6
Turn Bay Length (m)	58.0		62.0	55.0			18.0		15.0			
Base Capacity (vph)	102	1902	903	159	1928		366	582	515			493
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	0.94	0.65	0.13	0.30	0.74		0.25	0.17	0.18			0.33

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 10 (11%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 21.9 Intersection LOS: C
 Intersection Capacity Utilization 92.8% ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Heron Rd & Jefferson St



Lanes, Volumes, Timings
6: Walkley Rd & Heron Rd

07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑↑	↑↑	
Traffic Volume (vph)	14	1216	1387	1248	818	0
Future Volume (vph)	14	1216	1387	1248	818	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0			65.0	0.0	0.0
Storage Lanes	0			1	2	0
Taper Length (m)	2.5				2.5	
Lane Util. Factor	0.95	0.95	0.95	0.88	0.97	0.95
Frt				0.850		
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	3387	3390	2669	3288	0
Flt Permitted		0.782			0.950	
Satd. Flow (perm)	0	2651	3390	2669	3288	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				1176		
Link Speed (k/h)		50	50		50	
Link Distance (m)		393.2	359.8		465.1	
Travel Time (s)		28.3	25.9		33.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	1351	1541	1387	909	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1367	1541	1387	909	0
Turn Type	Perm	NA	NA	Perm	Prot	
Protected Phases		2	6		4	
Permitted Phases	2			6		
Detector Phase	2	2	6	6	4	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	16.6	16.6	16.6	16.6	33.7	
Total Split (s)	59.0	59.0	59.0	59.0	51.0	
Total Split (%)	53.6%	53.6%	53.6%	53.6%	46.4%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.3	3.3	3.3	3.3	3.4	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	Max	
Act Effct Green (s)		52.4	52.4	52.4	44.3	
Actuated g/C Ratio		0.48	0.48	0.48	0.40	
v/c Ratio		1.08	0.95	0.74	0.69	
Control Delay		80.1	42.3	5.8	30.4	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		80.1	42.3	5.8	30.4	
LOS		F	D	A	C	
Approach Delay		80.1	25.0		30.4	
Approach LOS		F	C		C	
Queue Length 50th (m)		~173.3	162.0	14.2	81.6	
Queue Length 95th (m)		#215.0	#214.8	37.5	103.6	

Lanes, Volumes, Timings
6: Walkley Rd & Heron Rd

07/23/2024

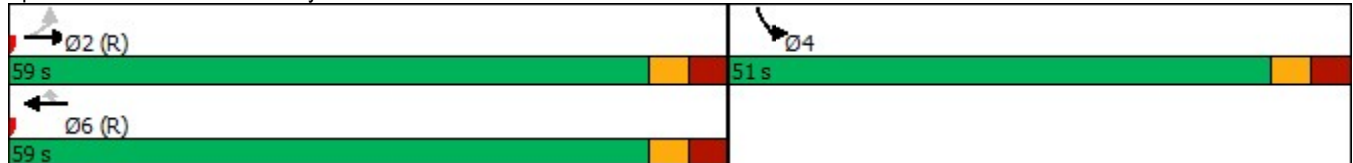


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Internal Link Dist (m)		369.2	335.8		441.1	
Turn Bay Length (m)				65.0		
Base Capacity (vph)		1262	1614	1887	1324	
Starvation Cap Reductn		0	0	0	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		1.08	0.95	0.74	0.69	

Intersection Summary

Area Type:	Other
Cycle Length:	110
Actuated Cycle Length:	110
Offset:	53 (48%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.08
Intersection Signal Delay:	40.4
Intersection LOS:	D
Intersection Capacity Utilization	93.0%
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: 6: Walkley Rd & Heron Rd



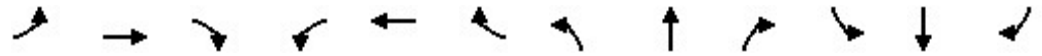
Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	842	20	25	934	225	19	15	22	144	22	100
Future Volume (vph)	103	842	20	25	934	225	19	15	22	144	22	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	33.0		0.0	0.0		0.0	20.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	22.0			27.0			2.5			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99	0.98			0.99		0.98		
Frt		0.997			0.971			0.948				0.877
Flt Protected	0.950			0.950				0.983		0.950		
Satd. Flow (prot)	1695	3273	0	1729	3189	0	0	1606	0	1558	1475	0
Flt Permitted	0.167			0.268				0.871		0.717		
Satd. Flow (perm)	296	3273	0	482	3189	0	0	1423	0	1152	1475	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			55			24				67
Link Speed (k/h)		50			50			50				50
Link Distance (m)		360.2			304.5			74.0				276.3
Travel Time (s)		25.9			21.9			5.3				19.9
Confl. Peds. (#/hr)	30		31	31		30			23	23		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	5%	11%	0%	0%	19%	0%	0%	11%	11%	0%	10%
Adj. Flow (vph)	114	936	22	28	1038	250	21	17	24	160	24	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	958	0	28	1288	0	0	62	0	160	135	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4		4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0		10.0
Minimum Split (s)	25.9	25.9		25.9	25.9		31.1	31.1		31.1		31.1
Total Split (s)	48.0	48.0		48.0	48.0		32.0	32.0		32.0		32.0
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%		40.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3		3.3
All-Red Time (s)	2.6	2.6		2.6	2.6		2.8	2.8		2.8		2.8
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0		0.0
Total Lost Time (s)	5.9	5.9		5.9	5.9			6.1		6.1		6.1
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None		None
Act Effct Green (s)	51.2	51.2		51.2	51.2			16.8		16.8		16.8
Actuated g/C Ratio	0.64	0.64		0.64	0.64			0.21		0.21		0.21
v/c Ratio	0.60	0.46		0.09	0.63			0.19		0.66		0.37
Control Delay	29.5	9.2		8.6	11.1			17.2		41.1		16.0
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0		0.0
Total Delay	29.5	9.2		8.6	11.1			17.2		41.1		16.0
LOS	C	A		A	B			B		D		B
Approach Delay		11.3			11.0			17.2				29.6

Lanes, Volumes, Timings
7: Walkley Rd & Baycrest Dr

07/23/2024

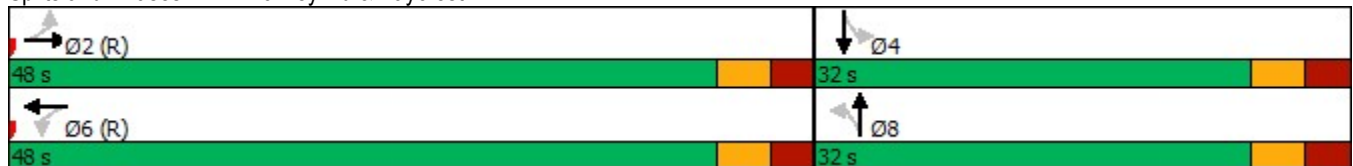


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	B				B			B			C	
Queue Length 50th (m)	8.8	33.6		1.4	51.0			4.8		22.6	8.7	
Queue Length 95th (m)	#41.6	62.5		6.0	95.3			12.3		36.5	20.0	
Internal Link Dist (m)		336.2			280.5			50.0			252.3	
Turn Bay Length (m)	50.0			33.0						20.0		
Base Capacity (vph)	189	2094		308	2059			476		372	522	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.60	0.46		0.09	0.63			0.13		0.43	0.26	

Intersection Summary
































Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	13.3
Intersection LOS:	B
Intersection Capacity Utilization:	80.5%
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: 7: Walkley Rd & Baycrest Dr



Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			  		 	 	
Traffic Volume (vph)	321	470	268	291	577	286	217	849	253	291	1276	561
Future Volume (vph)	321	470	268	291	577	286	217	849	253	291	1276	561
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		50.0	78.0		0.0	208.0		70.0	156.0		0.0
Storage Lanes	2		1	2		0	1		1	2		1
Taper Length (m)	27.0			24.0			0.0			24.0		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.95	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor	0.98		0.96	0.98	0.98		0.99		0.95	0.98		0.95
Fr _t			0.850		0.950				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3354	3293	1547	3288	3184	0	1712	4919	1502	3321	3424	1547
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3291	3293	1489	3219	3184	0	1702	4919	1428	3264	3424	1466
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			229		63				281			324
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		154.1			895.6			245.1			260.6	
Travel Time (s)		11.1			64.5			17.6			18.8	
Confl. Peds. (#/hr)	36		22	22		36	28		26	26		28
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	5%	0%	2%	1%	2%	1%	1%	3%	1%	1%	0%
Adj. Flow (vph)	357	522	298	323	641	318	241	943	281	323	1418	623
Shared Lane Traffic (%)												
Lane Group Flow (vph)	357	522	298	323	959	0	241	943	281	323	1418	623
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	35.0	35.0	7.0	35.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	13.8	41.7	41.7	13.8	41.7		13.4	33.4	33.4	13.4	33.4	33.4
Total Split (s)	25.0	41.7	41.7	25.0	41.7		19.0	38.0	38.0	27.0	46.0	46.0
Total Split (%)	19.0%	31.7%	31.7%	19.0%	31.7%		14.4%	28.9%	28.9%	20.5%	34.9%	34.9%
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)	3.5	3.4	3.4	3.5	3.4		3.1	3.1	3.1	3.1	3.1	3.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.7	6.7	6.8	6.7		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	17.3	36.4	36.4	16.8	35.9		12.6	34.6	34.6	17.6	39.6	39.6
Actuated g/C Ratio	0.13	0.28	0.28	0.13	0.27		0.10	0.26	0.26	0.13	0.30	0.30
v/c Ratio	0.81	0.57	0.52	0.77	1.05		1.48	0.73	0.48	0.73	1.38	0.93
Control Delay	70.6	44.3	13.8	68.3	86.8		285.6	48.7	7.5	64.6	212.4	43.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.6	44.3	13.8	68.3	86.8		285.6	48.7	7.5	64.6	212.4	43.7
LOS	E	D	B	E	F		F	D	A	E	F	D
Approach Delay		44.5			82.2			79.7			147.8	

Lanes, Volumes, Timings
8: Bank St & Walkley Rd

07/23/2024

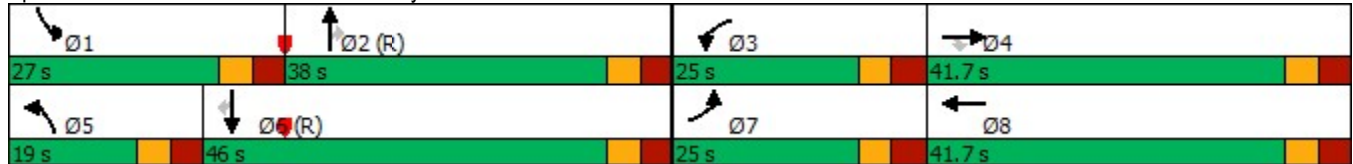


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	D			F			E			F		
Queue Length 50th (m)	46.7	62.4	13.8	41.9	~139.1		~85.8	82.6	0.0	41.9	~256.4	87.4
Queue Length 95th (m)	#64.3	80.9	41.1	57.8	#180.6		#138.1	101.4	22.8	56.4	#299.0	#164.5
Internal Link Dist (m)	130.1			871.6			221.1			236.6		
Turn Bay Length (m)	60.0		50.0	78.0			208.0		70.0	156.0		
Base Capacity (vph)	463	909	576	454	913		163	1292	582	519	1029	667
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.57	0.52	0.71	1.05		1.48	0.73	0.48	0.62	1.38	0.93

Intersection Summary

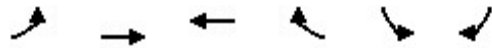
Area Type: Other
 Cycle Length: 131.7
 Actuated Cycle Length: 131.7
 Offset: 114 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.48
 Intersection Signal Delay: 99.2 Intersection LOS: F
 Intersection Capacity Utilization 110.7% ICU Level of Service H
 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: Bank St & Walkley Rd



Lanes, Volumes, Timings
9: Heron Rd & Site Access

07/23/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	1250	1287	55	0	77
Future Volume (vph)	0	1250	1287	55	0	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.994			0.865
Flt Protected						
Satd. Flow (prot)	0	3390	3370	0	0	1543
Flt Permitted						
Satd. Flow (perm)	0	3390	3370	0	0	1543
Link Speed (k/h)		50	50		50	
Link Distance (m)		131.9	182.7		101.7	
Travel Time (s)		9.5	13.2		7.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1389	1430	61	0	86
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1389	1491	0	0	86
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	51.1%
ICU Level of Service	A
Analysis Period (min)	15