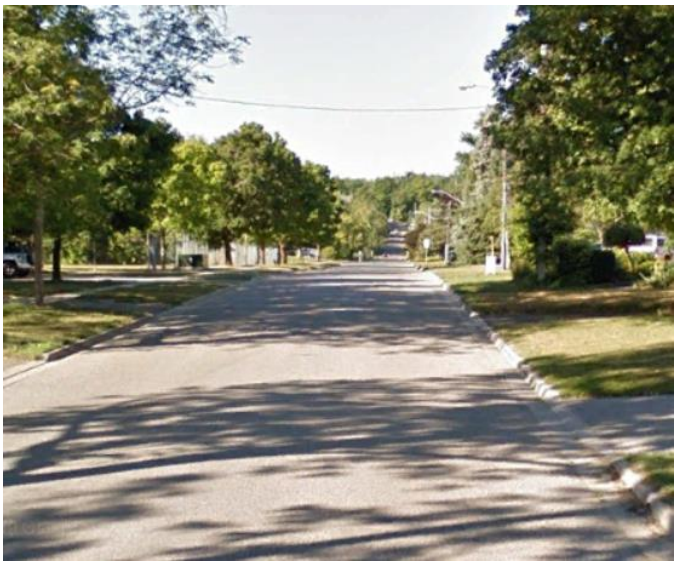

5520 & 5552 Eighth Line Plans of Subdivision

Traffic Impact Study

Final

June 16, 2022

Prepared for:

Mattamy (Erin) Limited
and 2779181 Ontario Inc.

arva

BEST MANAGED COMPANIES
Platinum member

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July 11, 2022 RVA 215876

Mattamy (Erin) Limited
and 2779181 Ontario Inc.
433 Steeles Avenue East, Unit 220
Milton, Ontario, L9T 1Y4

Attention: Eric Mueller

Dear Mr. Mueller,

Re: Traffic Impact Study for Proposed Plans of Subdivision at 5520 & 5552 Eighth Line, Town of Erin, Wellington County

RVA is pleased to submit the following Traffic Impact Study for two proposed adjacent plans of subdivision, located at 5520 and 5552 Eighth Line in the Town of Erin.

If there is any query related to this report, please feel free to contact the undersigned at 905-818-2542 or by email at AMildenberger@rvanderson.com.

Yours very truly,

R.V. ANDERSON ASSOCIATES LIMITED

Adam Mildenberger, B.A., C.E.T.
Transportation Planner

Nick Palomba, P.Eng.
Vice-President

5520 & 5552 Eighth Line Residential Development

Traffic Impact Study

Final

Mattamy (Erin) Limited

and 2779181 Ontario Inc.

RVA 215876

July 11, 2022

EXECUTIVE SUMMARY

R.V. Anderson Associates Limited (RVA) was retained by Mattamy (Erin) Limited and 2779181 Ontario Inc.to complete a Traffic Impact Study (TIS) for two proposed adjacent plans of subdivision, located at 5520 and 5552 Eighth Line in the Town of Erin. The developments are planned to include 392 single family homes and 116 townhomes, with a new local road connection (Street “E”) at Eighth Line and a new connection (Street “C”) at 17 Sideroad.

The proposed developments are projected to generate approximately 330 total two-way trips during the weekday a.m. peak hour (88 inbound and 242 outbound), and 434 total two-way trips during the weekday p.m. peak hour (270 inbound and 164 outbound).

As per the results of the intersection capacity analysis, the site generated traffic is not expected to result in any capacity, delay, or queuing concerns at the study area intersections upon build-out of the developments, and the intersections are expected to continue operating acceptably up to the final 2029 horizon year.

The existing roadway system has sufficient capacity to accommodate the anticipated traffic generation from the subject developments, and new traffic signals are not warranted at the unsignalized study area intersections up to the final 2029 horizon year. There are no geometric improvements recommended at the study area intersections as a result of the site generated traffic.

Auxiliary left-turn lanes were warranted at the intersection of Trafalgar Road at Sideroad 17 and Wellington Road 124 at Eighth Line for the final 2029 horizon year based on the MTO’s warrant methodology, however this is due to area corridor traffic volume growth (not associated with traffic generated by the subject site), and the capacity analysis results demonstrate that the intersections are expected to continue operating acceptably in 2029 under their current lane configurations. The Town/County may consider monitoring operations at these two intersections to determine if auxiliary left-turn lanes are needed to maintain an acceptable level of service in the future; however, left-turn lanes are not recommended through this study.

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1.0 INTRODUCTION

1.1 Study Objective

R.V. Anderson Associates Limited (RVA) was retained by Mattamy (Erin) Limited and 2779181 Ontario Inc. to complete a Traffic Impact Study (TIS) for two proposed adjacent plans of subdivision, located at 5520 and 5552 Eighth Line in the Town of Erin.

The study will include the estimation of traffic generation from the proposed developments, the completion of intersection capacity analyses for the study area intersections under existing and future conditions, and the identification of the anticipated operational impacts of the site generated traffic on the study area intersections and recommendations for mitigation measures where required.

1.2 Development Location

The proposed developments will be located at 5520 and 5552 Eighth Line in the Town of Erin on the west side of Eighth Line between Sideroad 17 and Dundas Street West. Access to the developments will be provided by a new local road connection (Street “E”) at Eighth Line and a new connection (Street “C”) at 17 Sideroad.

The developments are located west of “downtown” Erin. The lands fronting the east side of Eighth Line, south of Sideroad 17, are proposed to be redeveloped into a residential subdivision as discussed further in Section 3.2. Lands immediately to the west, north, and south of the developments are primarily woodland. The location of the proposed developments and their relation to the Town of Erin is shown in **Figure 1-1**.

1.3 Study Area

Traffic analysis was completed for the following study intersections:

- Sideroad 17 at Street “C”
- Eighth Line at Street “E”
- Eighth Line & Sideroad 17
- Eighth Line & Erin Heights
- Eighth Line & Dundas Street W
- Eighth Line & Wellington County Road (WR) 124
- Dundas St W & Main Street (WR 124)
- Shamrock Road (WR 23) and Main Street (WR 124)
- Sideroad 17 & Trafalgar Road (WR 24)

Figure 1-1 – Development Location

2.0 EXISTING CONDITIONS

2.1 Existing Road Network

Eighth Line is a two-lane north-south collector roadway under the jurisdiction of the Town of Erin and has an assumed speed limit of 50km/h. The horizontal alignment of Eighth Line is generally straight with a downgrade north of the intersection with Dundas Street West. South of the Dundas Street West intersection, Eighth Line transitions into a gravel road with notable curves in its horizontal and vertical alignment for an approximate 200 metre length. Near Delambro Drive the road transitions back into a paved surface until its intersection with Wellington Road 124. South of Sideroad 17 is an existing single lane bridge over the West Credit River, planned for replacement.

Dundas Street West is a two-lane east-west collector roadway under jurisdiction of the Town, with a posted speed limit of 40km/h. Dundas Street W has a generally straight horizontal alignment. The roadway is generally flat except for the segment west of the bridge on Dundas Street West, where there is a steep upgrade towards Eighth Line.

Sideroad 17 is a two-lane east-west collector roadway under the jurisdiction of the Town or Erin, with a posted speed limit of 60km/h within the study area. Sideroad 17 connects WR 23 and Shamrock Road. Within the study area, Sideroad 17 has a generally straight horizontal alignment. Vertical crests are located at various points along Sideroad 17, including at the intersection with Eighth Line.

Erin Heights Drive is a two-lane local roadway under the jurisdiction of the Town of Erin, with an assumed speed limit of 50km/h within the study area. It consists of two straight sections connected by a 90-degree bend and has a generally flat vertical alignment.

Main Street (WR 124) is a two-lane north-south arterial roadway under the jurisdiction of the County of Wellington, with a posted speed limit of 50km/h within the study area. North of the study area, Main Street consists of a large curve but otherwise has a generally straight horizontal alignment. The northern section of Main Street features a gradual sloped roadway until Erinville Drive. The remaining segment of road is generally flat. Left-turning Auxiliary lanes are located at the Dundas Street West and Shamrock Road intersections in both the northbound and southbound directions. A right-turning auxiliary lane is also located in the southbound direction at the intersection with Shamrock Road.

Trafalgar Road (WR 24) is a two-lane north-south arterial roadway under the jurisdiction of the County of Wellington, with an assumed speed limit of 80km/h. Within the study area, the horizontal alignment is generally straight, and the vertical alignment has a consistent slope throughout. Right-turning auxiliary lanes are located in the northbound and southbound directions at the intersection with Sideroad 17.

Wellington Road (WR 124) is a two-lane north-south arterial roadway under the jurisdiction of the County of Wellington, with a posted speed limit of 80km/h. Within the study area, the horizontal alignment and vertical alignment is generally straight and flat respectively. Right-turning auxiliary lanes are located in the eastbound and westbound directions at the intersection with Eighth Line.

Shamrock Road (WR 23) is a two-lane north-south arterial roadway under jurisdiction of the County of Wellington, with a speed limit of 50km/h. Shamrock Road is situated at the end of Wellington Road 23, where it intersects with Main Street. Shamrock road is flat and generally straight, with a curved approach before intersecting Main Street. Left-turn lanes are in the east and westbound directions at the intersection with Main Street.

2.2 Active Transportation Facilities

Sidewalks are currently provided along both sides of Main Street (WR 124), and along the southern side of Dundas Street east of the bridge over the waterway. No other roadways in this study area have dedicated pedestrian facilities. The Elora Cataract (Trans Canada) Trailway north of the site is an existing east-west cyclist spine route. In the County of Wellington's 2012 *Active Transportation Master Plan*, an Off-Road Spine Route is proposed just east of the site running north-south parallel to main Street. Along Wellington Road 23 and Highway 52, paved shoulders are proposed. Finally, a proposed signed route with sharrows is proposed along Main Street within the study area.

2.3 Transit Services

Wellington County is completing a Ride Well ™ pilot program. Ride Well ™ is a County wide demand based public transit service. Currently the pilot program runs from Monday to Friday, 6:00am – 7:00pm. Additionally, Denny Bus Lines Ltd. provides Thursday Bus Schedule Servicing during the AM and PM peak hours to Guelph and Orangeville.

2.4 Existing Traffic Data

Historical intersection turning movement count (TMC) data was collected in September 2021. All data utilized is provided in **Appendix A**. An analysis of the data determined that the overall peak hours for the study area road network generally occurred between 8:00 and 9:00 a.m. during the weekday a.m. peak period and between 4:00 and 5:00 p.m. during the weekday p.m. peak period. Given the 2021 counts were collected during COVID-19, it is expected current intersection volumes have not increased noticeably since 2021. Therefore, the collected 2021 volumes were assumed to reasonably represent current 2022 intersection volumes, with no growth rate applied. The assumed 2022 existing volumes for the weekday a.m. and p.m. peak hours are presented in **Figure 2-1**.

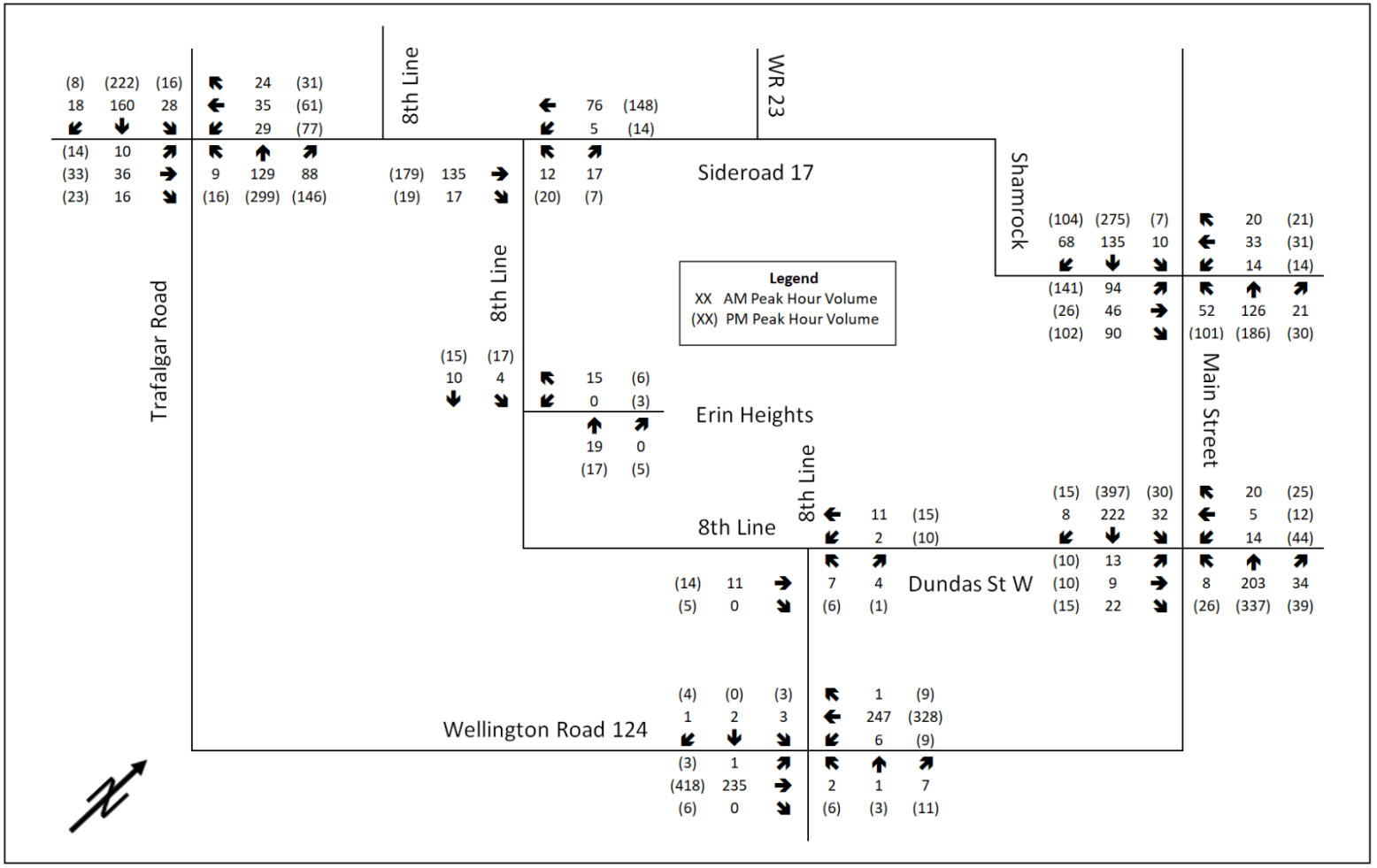


Figure 2-1 – 2022 Existing Traffic Volumes

3.0 FUTURE BACKGROUND TRAFIC

3.1 Study Horizon Year

Based on consultation with Town and County staff, the analysis adopted future planning horizons of 2024 (assumed build-out year of the developments) and 2029 (five years post build-out).

3.2 Future Background Developments

RVA is aware of a proposed residential subdivision development for the east side of Eighth line. The development is planned to consist of a 197 single family detached homes and 91 townhomes, with two proposed local road accesses along Eighth Line. It is our understanding full build-out of the background development is targeted for 2024.

Automobile trip generation for the proposed background development during peak periods of the adjacent street traffic was estimated by using the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th edition) methodology for Single Family Detached (LUC 210) and Single Family Attached (LUC 215), as presented in **Table 3-1**.

Table 3-1: Trip Generation

LUC	Rooms	Peak Hours	Total Site Trips	Directional Distribution		Directional Site Trips	
				In	Out	In	Out
210 (Detached Single Family)	197	AM	138	26%	74%	36	102
		PM	188	63%	37%	118	70
215 (Attached Single Family)	91	AM	42	31%	69%	13	29
		PM	51	57%	43%	29	22

Given the majority of trips generated by the site during the weekday a.m. and p.m. peak hours will primarily be commuter trips, and given the residential nature of the development, 2016 Transportation Tomorrow Survey (TTS) commuter data was reviewed to estimate the distribution of the background development's generated traffic to the surrounding road network. RVA has reviewed the historical travel patterns for residents of the Town of Erin, which the site is located within. **Table 3-2** outlines the estimated trip distribution assumptions for the site generated trips, which is based on the analyzed TTS data provided in **Appendix B**.

Table 3-2: Trip Distribution

Direction	Distribution Percentages
Highway 52 (South)	38%
Wellington Road 124 (N/W)	20%
Wellington Road 124 (S/E)	11%
Trafalgar Road (North)	6%
Trafalgar Road (South)	19%
Highway 23 (North)	6%
Total	**100%**

The background development generated traffic has been assigned to individual movements at the study area intersections based on the trip generation estimates and the trip distribution assumptions. The estimated peak hour site generated traffic for the planned background development is shown in **Figure 3-1**.

This future development will replace the existing Golf Course at this location. Trips generated from the golf course were subtracted from the future background development volumes as they were captured in the existing traffic counts. The trip generation from the existing golf course are shown in **Figure 3-2**.

3.3 Future Background Growth

As per consultation with Town and County staff, RVA has applied 1% growth to all turning movements to forecast future 2024 and 2029 corridor growth volumes. The estimated 2024 and 2029 corridor growth volumes are shown in **Figure 3-3** and **Figure 3-4**, respectively.

3.4 Future Background Traffic Volumes

The future background intersection volumes for the 2024 horizon year were estimated using solely corridor growth. Future background intersection volumes for the 2029 horizon year, were estimated based on a combination of corridor growth and the background development site traffic. The resulting 2024 and 2029 future background traffic volumes are shown in **Figure 3-5** and **Figure 3-6,** respectively.

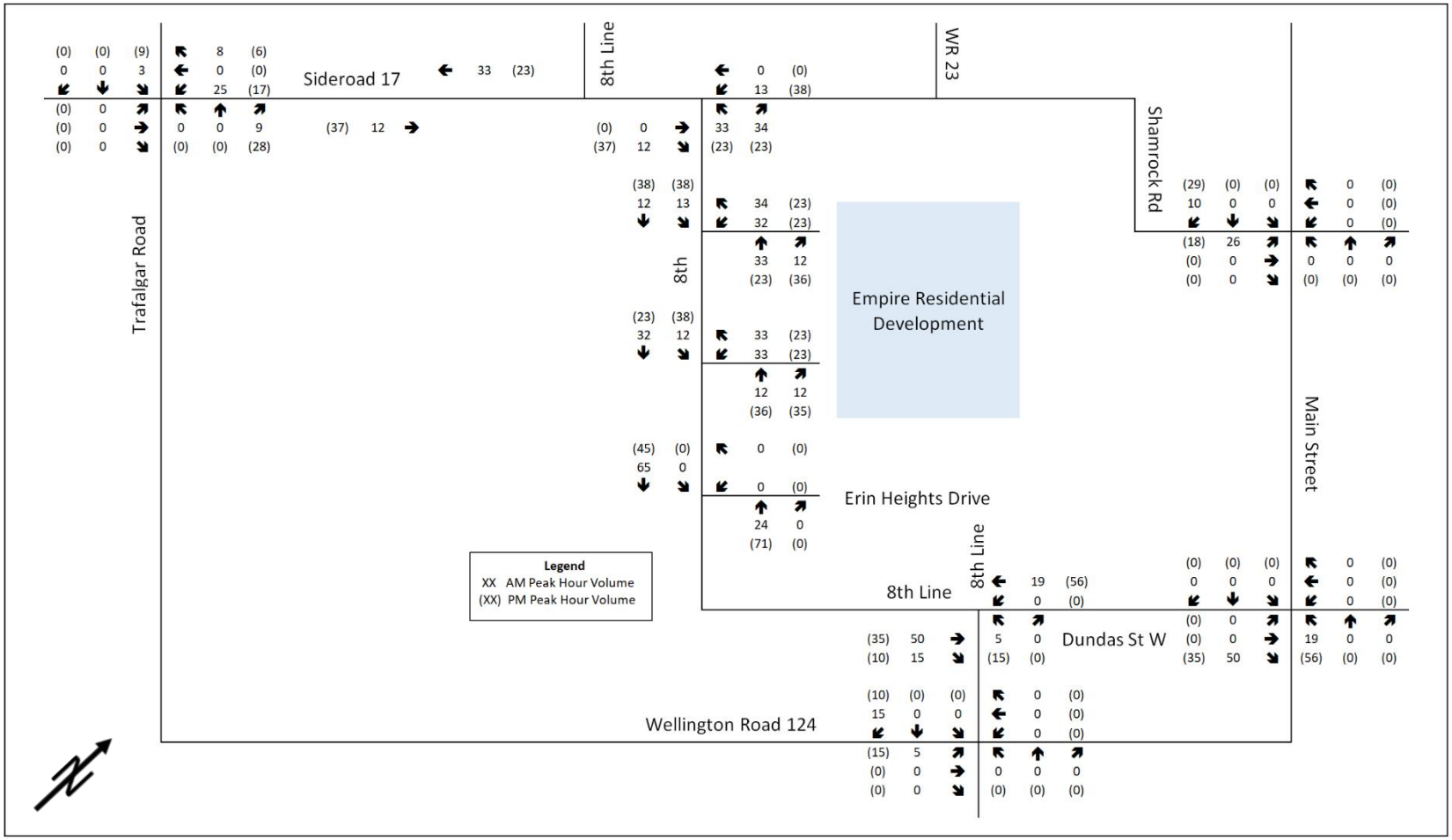


Figure 3-1 – Future Background Development Traffic Volumes

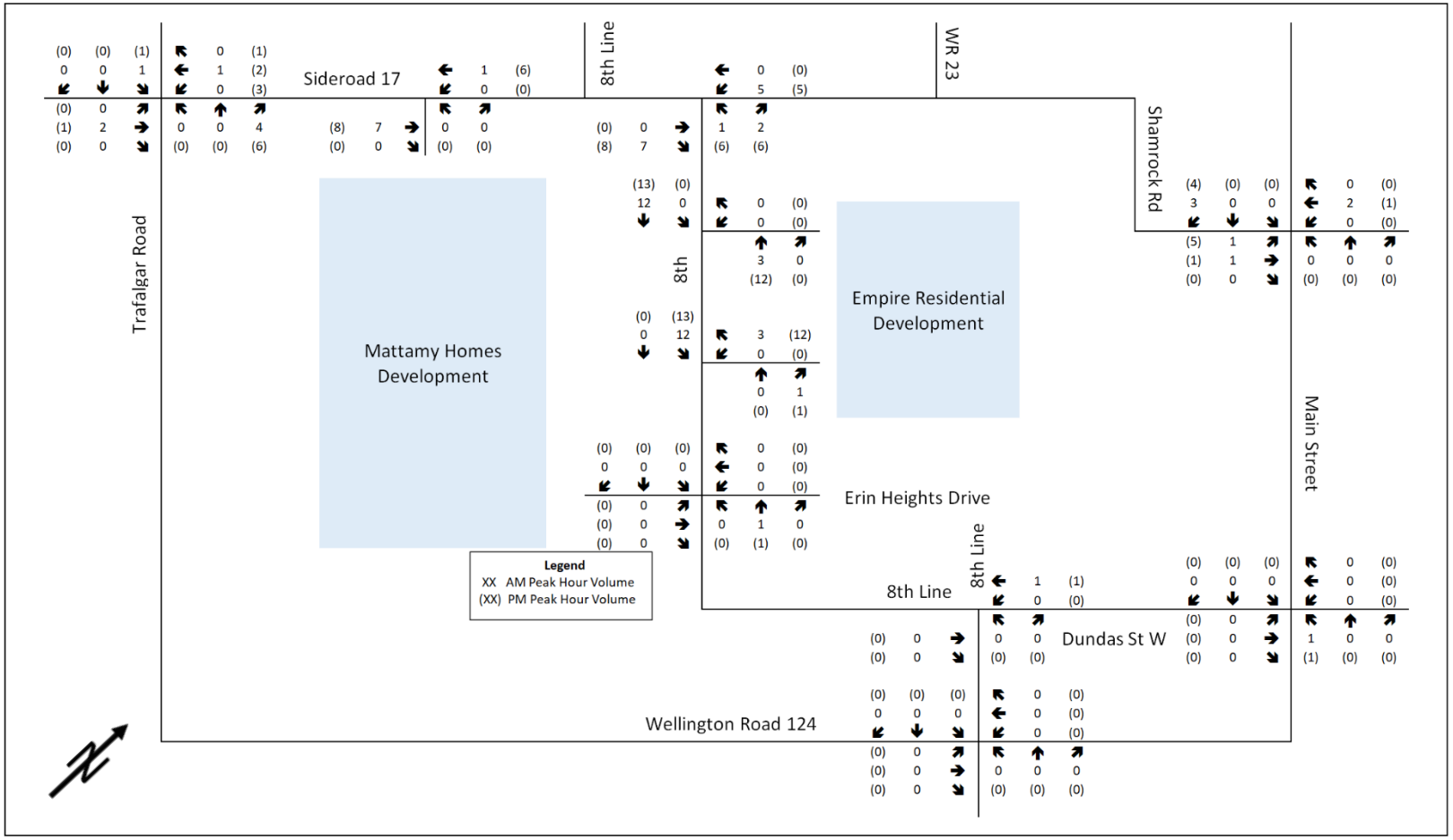


Figure 3-2 – Existing Golf Course Traffic Volumes

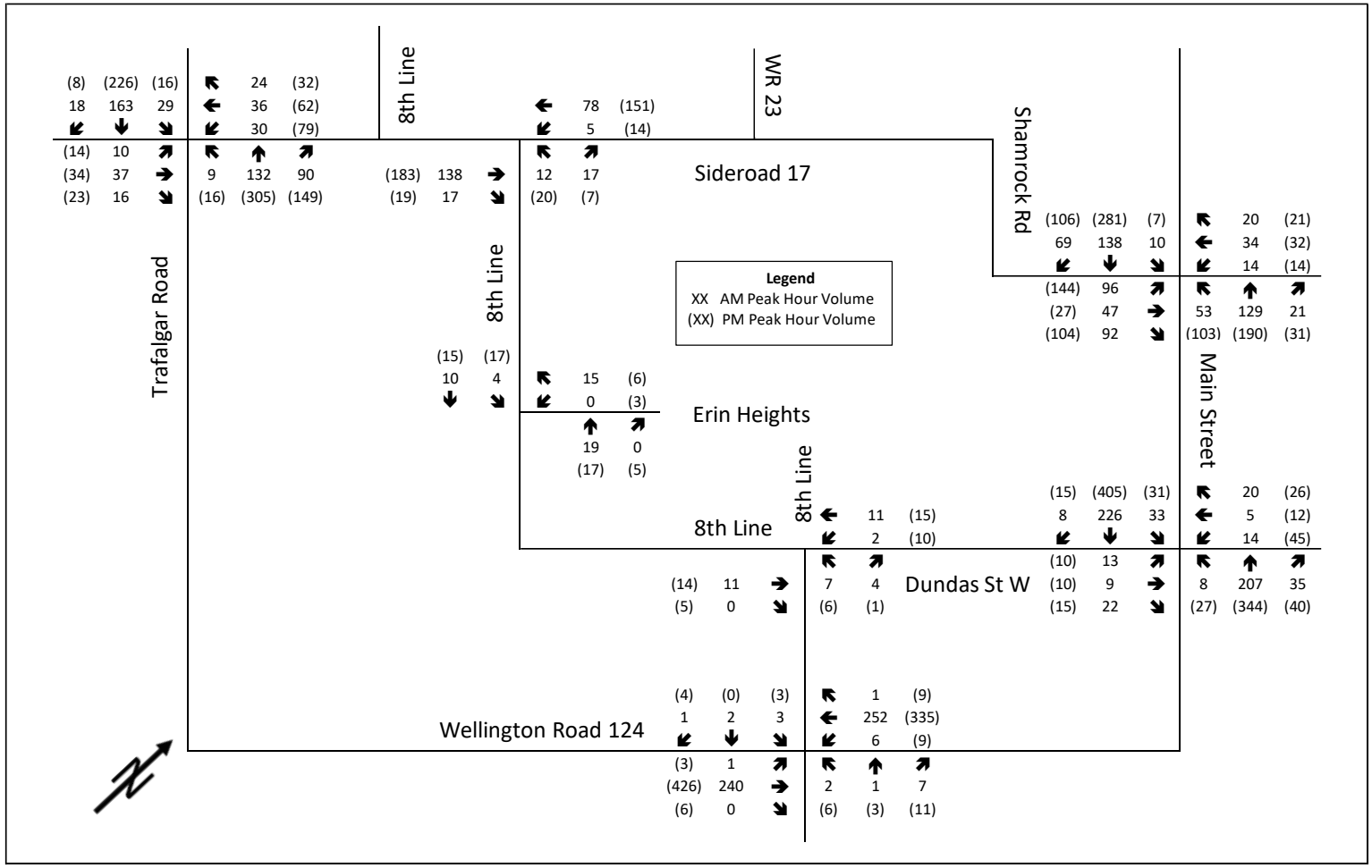


Figure 3-3 – 2024 Corridor Growth Traffic Volumes

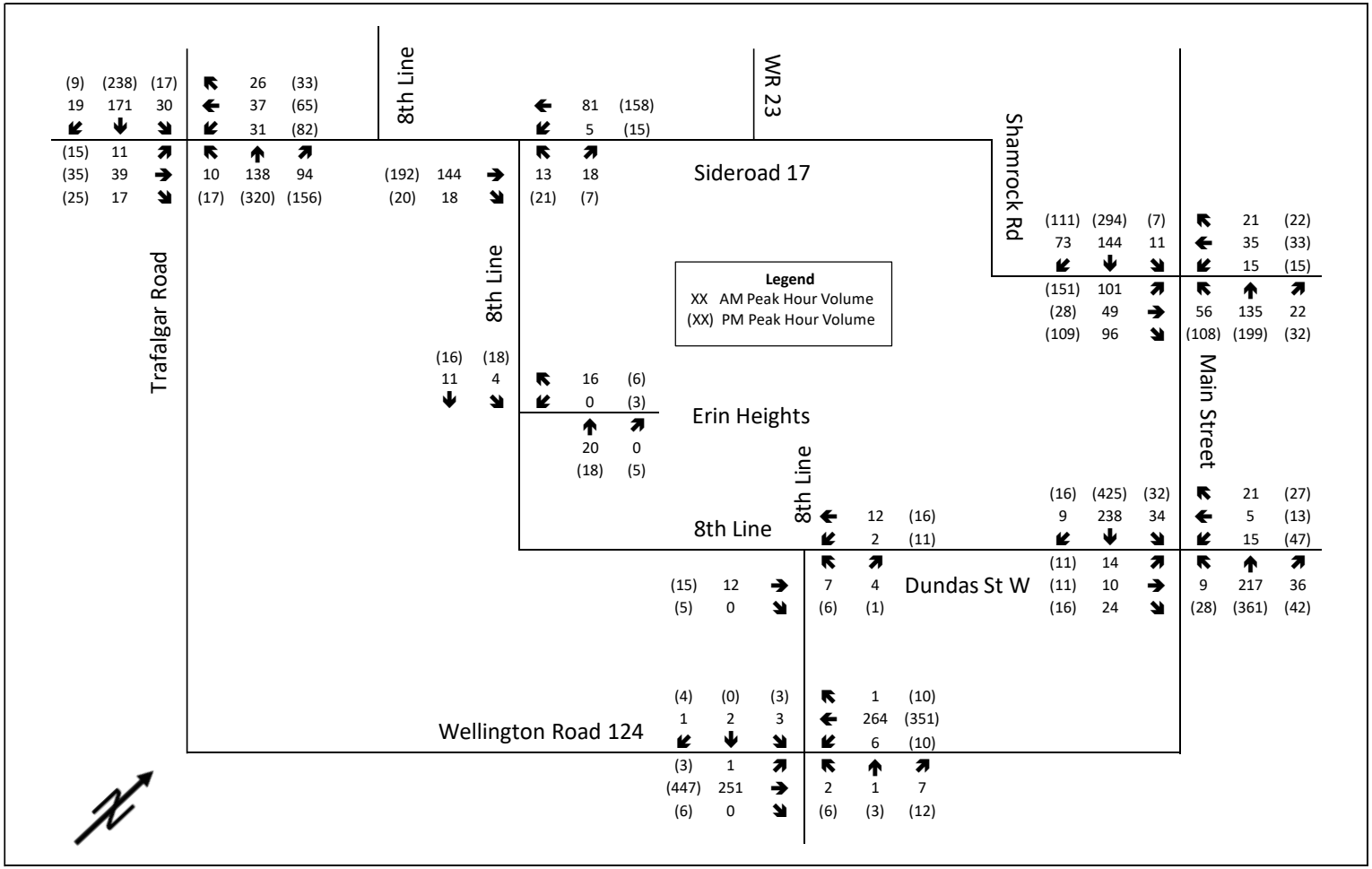


Figure 3-4 – 2029 Corridor Growth Traffic Volume

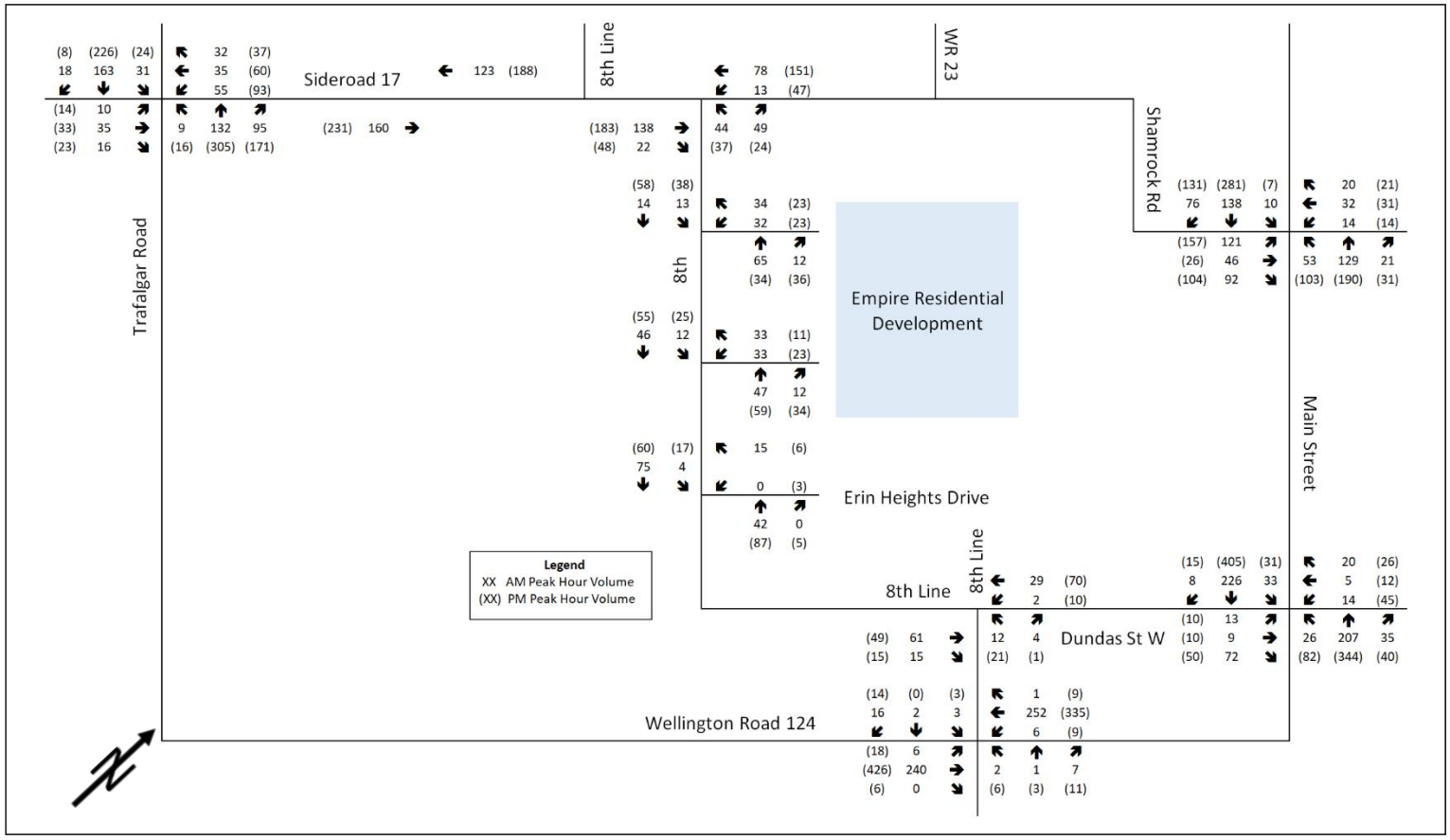


Figure 3-5 – 2024 Future Background Traffic Volumes

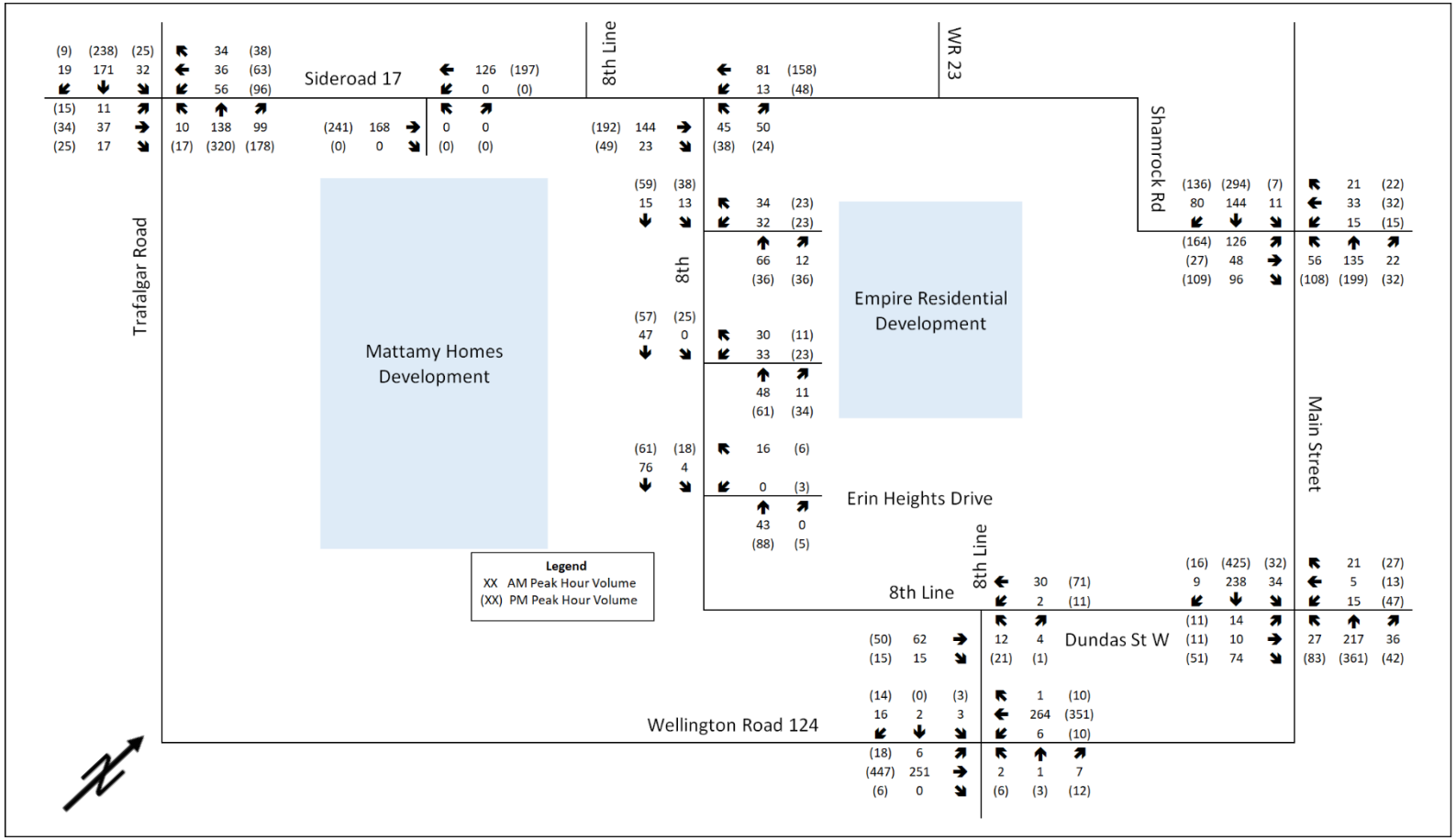


Figure 3-6 – 2029 Future Background Traffic Volumes

4.0 PROPOSED DEVELOPMENT

4.1 Draft Plan Layout

The proposed draft plan is provided in **Appendix C**. The plan shows 392 single family detached units and 116 townhouse units, with vehicular accesses provided through two new intersections with Eight Line and Sideroad 17.

Some of the internal local road intersections have skewed intersection approach angles. The skewed angles are between 70 and 110 degrees, meaning the intersections are still considered “right-angled” intersections as per Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads.

As per the TAC Geometric Design Guide, a minimum spacing of 40 metres is acceptable between adjacent three-legged intersections. Given all internal intersection spacing exceeds 40 metres, intersection spacing internal to the developments are considered acceptable per TAC guidelines.

The new local road connection (Street “E”) at Eighth Line and new connection (Street “C”) at 17 Sideroad are proposed to be two-way stop-controlled intersections, with stop control only for the minor street approaches (Streets “E” and “C”). Urbanization of Eighth Line is planned for the frontage of the subject development (from Dundas Street to the bridge over the West Credit River) which will include sidewalk on both sides of the road from Street “E” to the stormwater management pond.

The right-of-way width is proposed to be 20 metres for the main “spine” local road, which is consistent with the Town’s Design Standards for a 20-metre right-of-way which includes an 8.5-metre-wide roadway and 5.75-metre-wide boulevards which accommodate street trees, light standards, and sidewalk on both sides, as shown in **Figure 4-1**.

The remaining “minor” local roads within the draft plan are proposed to have an 18-metre-wide right-of-way, which is similar but with sidewalk on one side of the roadway, as shown in **Figure 4-2**.

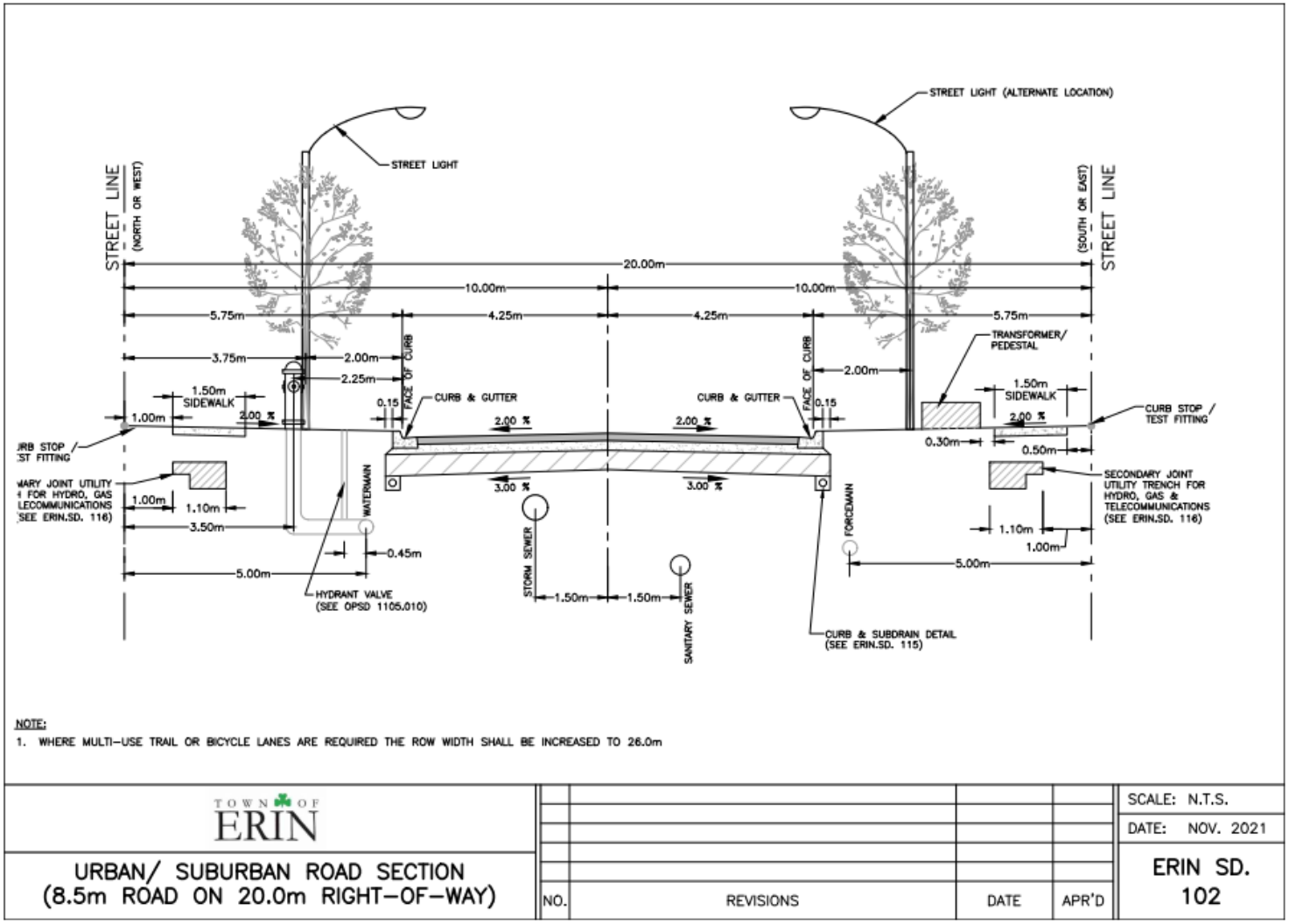


Figure 4-1 – Town of Erin's 20m Local Road Section

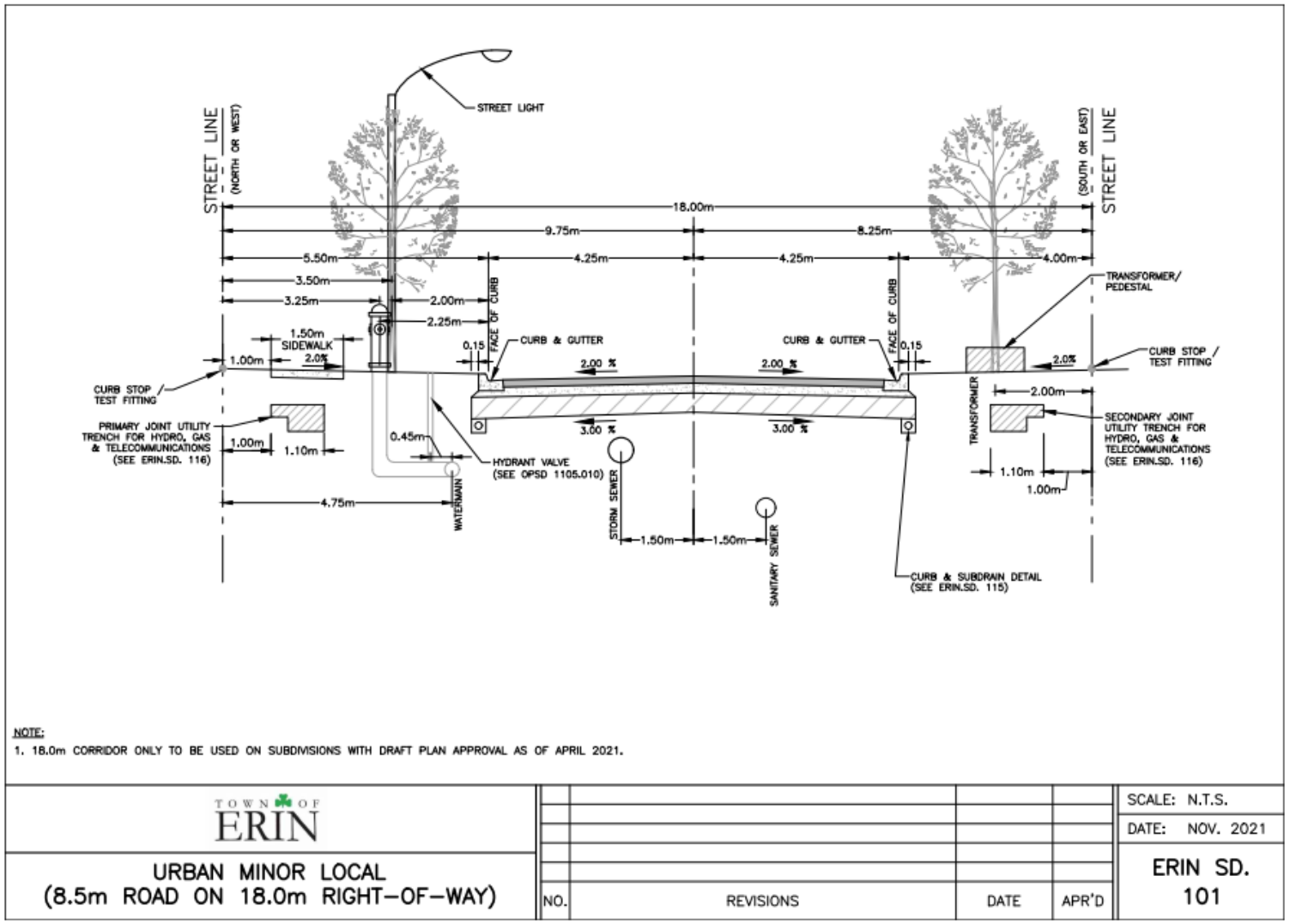


Figure 4-2 – Town of Erin's 18m Local Road Section

4.2 Trip Generation

Automobile trip generation for the proposed development during peak periods of the adjacent street traffic was estimated by using the ITE Trip Generation Manual (11th edition) methodology for Single Family Detached and Attached Housing (LUC 210 and LUC 215).

As presented in **Table 4-1,** the proposed residential development is projected to generate approximately 330 total two-way trips during the weekday a.m. peak hour (88 inbound and 242 outbound), and 434 total two-way trips during the weekday p.m. peak hour (270 inbound and 164 outbound).

Table 4-1: Trip Generation

LUC	Rooms	Peak Hours	Total Site Trips	Directional Distribution		Directional Site Trips	
				In	Out	In	Out
210 (Detached Single Family)	392	AM	274	26%	74%	71	203
		PM	368	63%	37%	232	136
215 (Attached Single Family)	116	AM	56	31%	69%	17	39
		PM	66	57%	43%	38	28
				Total	**AM**	**88**	**242**
					PM	**270**	**164**

4.3 Trip Distribution

Given the majority of trips generated by the site during the weekday a.m. and p.m. peak hours will primarily be commuter trips, and given the residential nature of the development, 2016 Transportation Tomorrow Survey (TTS) commuter data was reviewed to estimate the distribution of the site generated traffic to the surrounding road network. RVA has reviewed the historical travel patterns for residents of the Town of Erin, which the site is located within. **Table 4-2** outlines the estimated trip distribution assumptions for the site generated trips, which is based on the analyzed TTS data provided in **Appendix B**.

Table 4-2: Trip Distribution

Direction	Distribution Percentages
Highway 52 (South)	38%
Wellington Road 124 (N/W)	20%
Wellington Road 124 (S/E)	11%
Trafalgar Road (North)	6%
Trafalgar Road (South)	19%
Highway 23 (North)	6%
Total	**100%**

4.4 Trip Assignment

The site generated traffic has been assigned to individual turning movements at the study area intersections based on the trip generation estimates and the trip distribution assumptions. The estimated peak hour site generated traffic for the proposed residential development is shown in **Figure 4-3**.

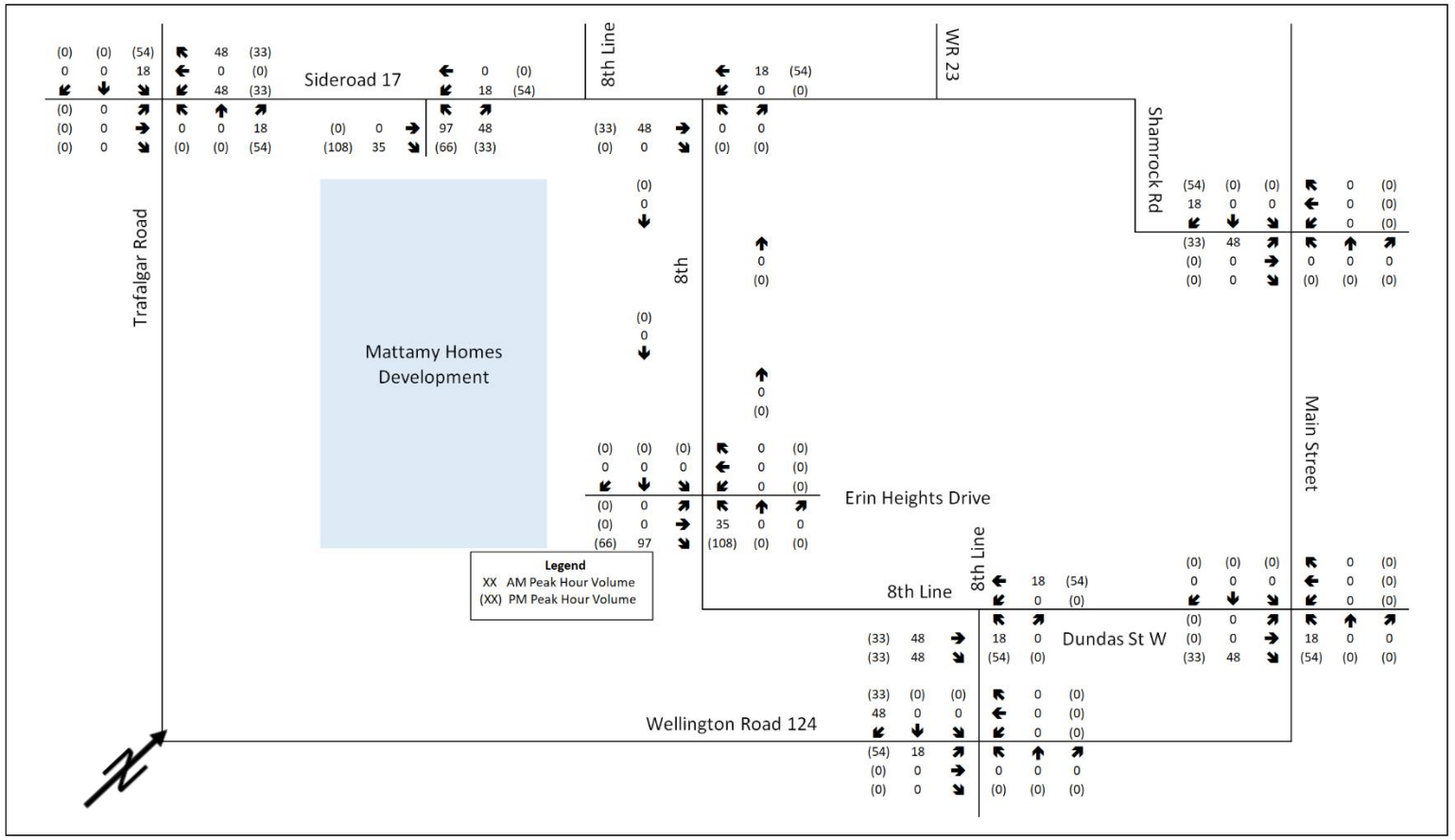


Figure 4-3 – Trip Assignment Traffic Volumes

5.0 FUTURE TOTAL TRAFFIC

5.1 Future Total Traffic Volumes

The future total intersection volumes for the 2024 and 2029 horizon years were developed by combining the estimated site generated traffic from the proposed residential development with the future background traffic at each horizon year. The resulting 2024 and 2029 future total intersection volumes, for weekday a.m. and p.m. peak hours, are presented in **Figure 5-2,** and **Figure 5-3,** respectively.

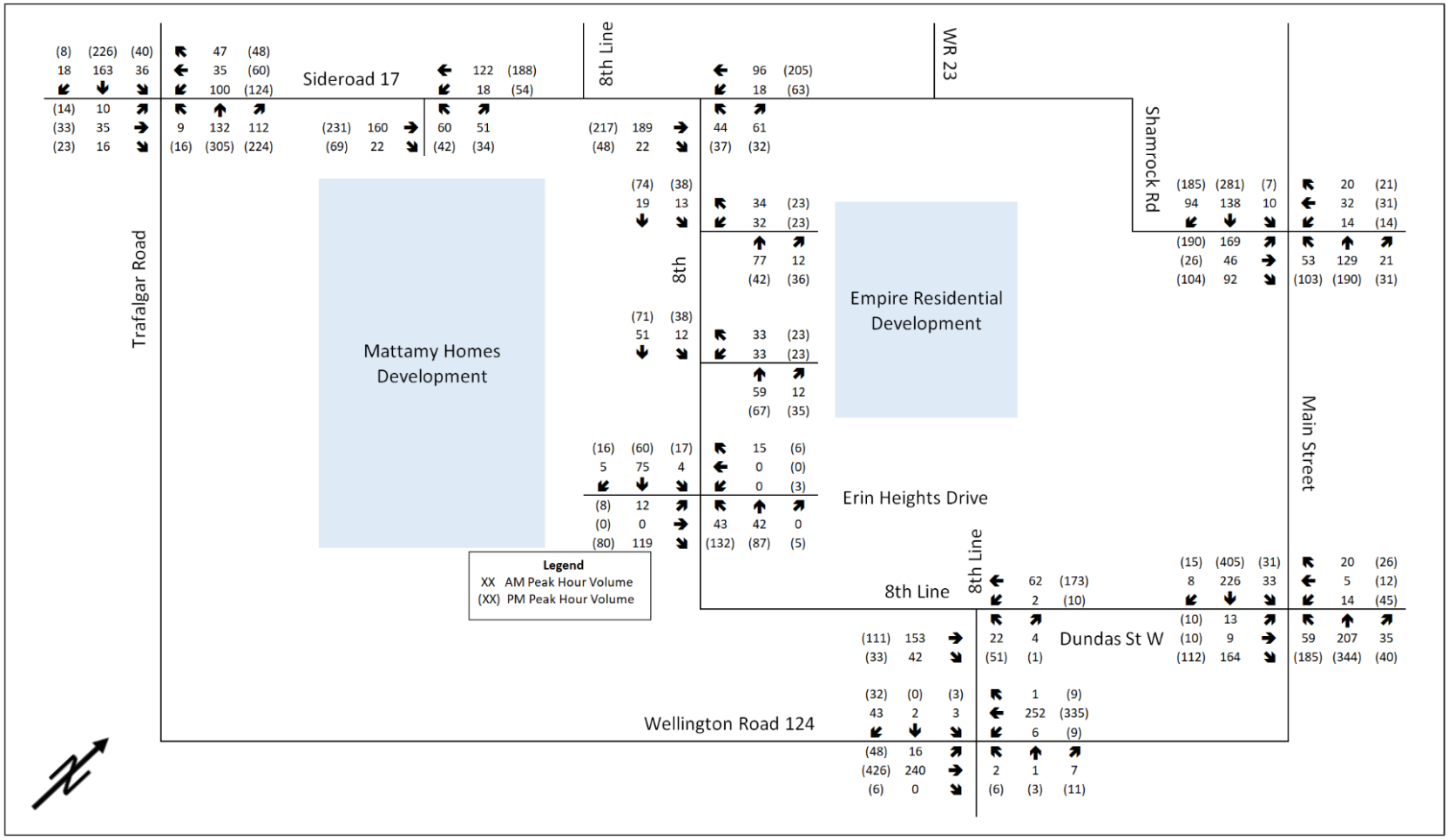


Figure 5-1 – 2024 Future Total Traffic Volumes

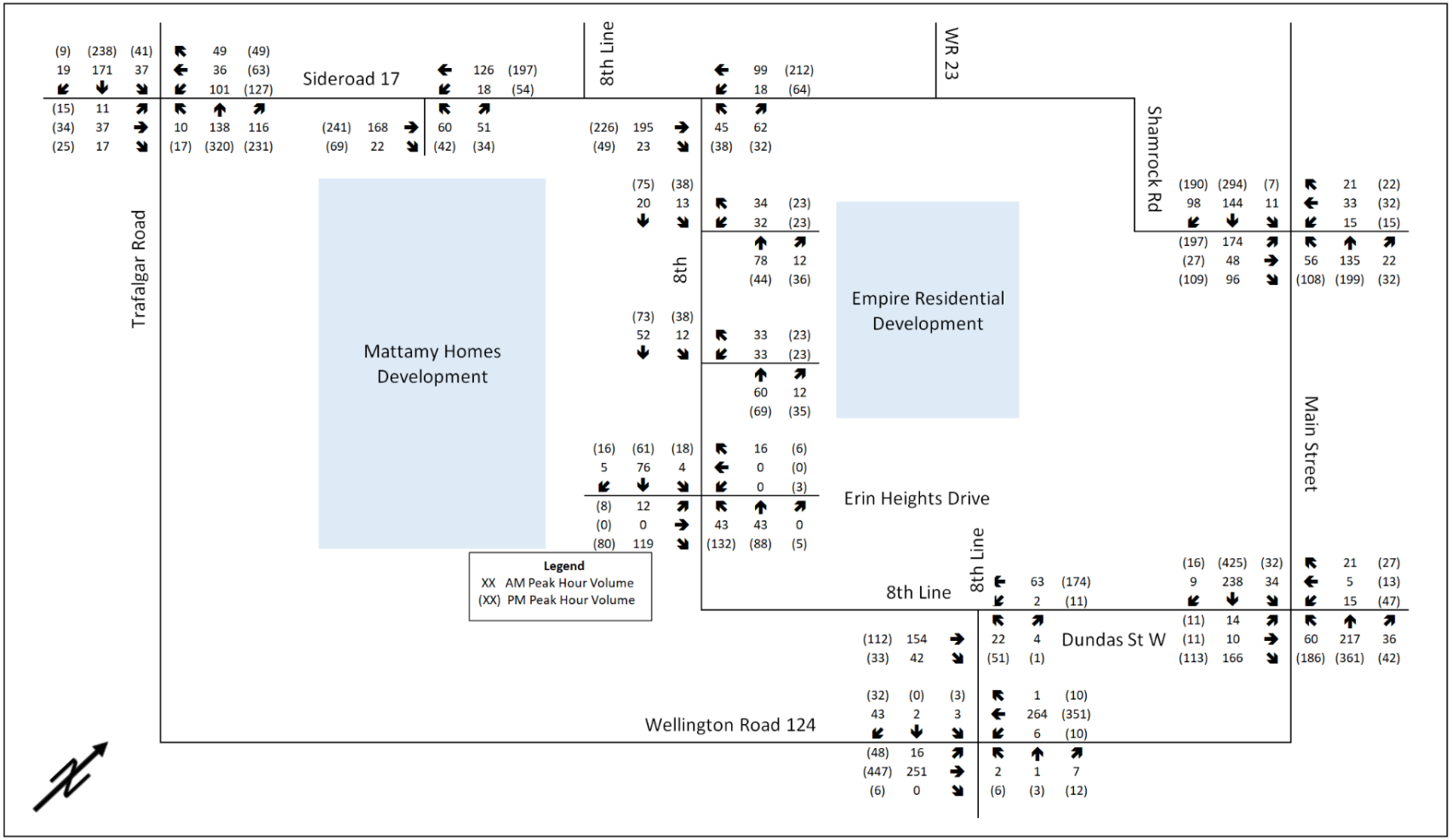


Figure 5-2 – 2029 Future Total Traffic Volumes

6.0 CAPACITY ANALYSIS

6.1 Capacity Analysis Methodology

The industry standard Synchro macroscopic traffic analysis software was utilized to analyse the intersections. Key performance measures such as Level of Service (LOS), volume-to-capacity ratio (v/c ratio), and 95th percentile queuing was reported, and are defined below:

- **Average vehicle control delay** is used to characterize LOS for the entire intersection, an approach, or movement. Delay quantifies the variations in travel time and is also a surrogate measure of driver discomfort and fuel consumption.
- **V/c ratio** quantifies the degree to which the capacity of each signal phase is utilized by a defined lane group.
- **95th percentile queue** is the queue length which is expected to be exceeded only 5% of the time; it is common practice to identify preferred storage length requirements for auxiliary turn lanes at signalized intersections based on estimated peak hour 95th percentile queueing.

Table 6-1 identifies the control delay thresholds (seconds of delay per vehicle) for each LOS based on Highway Capacity Manual (HCM) methodology.

Table 6-1: Characteristics of Level of Service at Intersections

LEVEL OF SERVICE (LOS)	CONTROL DELAY (seconds / vehicle)	
	SIGNALIZED INTERSECTION	UNSIGNALIZED INTERSECTION
A	≤ 10	≤ 10
B	> 10 to 20	> 10 to 15
C	> 20 to 35	> 15 to 25
D	> 35 to 55	> 25 to 35
E	> 55 to 80	> 35 to 50
F	> 80	> 50

Existing signal timing plans for the signalized study area intersections were provided by the Town for use in the analysis; the signal timing plans are provided in **Appendix D**.

6.2 Capacity Analysis Results

The following tables (6-2 through to 6-9) present the capacity analysis results for the study area intersections under all existing and future conditions scenarios. Detailed Highway Capacity Manual (HCM) output reports from the Synchro software are provided in **Appendix E**. The results of the analysis can be summarized as follows:

- All study area intersections are currently operating acceptably with no capacity, delay, or queueing concerns;
- Under all future condition scenarios, pre- and post-development, the intersections are expected to continue operating acceptably with no capacity or delay concerns;
- By the ultimate 2029 Future Total horizon year, average vehicle control delays (LOS) are notably low across the network, with almost all movements reporting delays of "B" or less (less than 20 seconds for signalized intersections, and 15 seconds for unsignalized intersections), and only two movements reporting LOS "C" and a single movement reporting LOS "E";
- By the ultimate 2029 Future Total horizon year, there is substantial reserve capacity across the network, with almost all movements reporting v/c ratios less than 0.50, and only two movements reporting v/c ratios between 0.50 and 0.80;
- The 95th percentile queue lengths during both peak hours in the eastbound left-turn lane at the intersection of Shamrock Road at Main Street is currently exceeding the provided storage length, and will continue operating as such under the future horizon years, as expected;
- Both proposed local road intersections on Sideroad 17 and Eighth Line are expected to operate acceptably as two-way stop-controlled intersections, respectively, with no auxiliary turn lanes required;
- The estimated traffic generated from the subject site is not expected to result in any operational concerns at the study area intersections requiring mitigation; and
- There are no geometric improvements recommended at the study area intersections as a result of the site generated traffic.

Table 6-2: Capacity Analysis Results – Street "C" at Sideroad 17

SCENARIO	MOVE.	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		V/C	LOS	95TH % QUEUE (M)	V/C	LOS	95TH % QUEUE (M)
2024 Future Total	WBLR	0.01	A	<1 veh	0.05	A	<1 veh
	SBLT	0.17	B	<1 veh	0.15	B	<1 veh
2029 Future Total	WBLR	0.01	A	<1 veh	0.05	A	<1 veh
	SBLT	0.17	B	<1 veh	0.16	B	<1 veh

Table 6-3: Capacity Analysis Results – Street "E" / Erin Heights Drive at Eighth Line

SCENARIO	MOVE.	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		V/C	LOS	95TH % QUEUE (M)	V/C	LOS	95TH % QUEUE (M)
2022 Existing	WBLR	0.02	A	<1 veh	0.01	A	<1 veh
	SBLT	0.00	A	<1 veh	0.02	A	<1 veh
2024 Future Background	WBLR	0.02	A	<1 veh	0.01	A	<1 veh
	SBLT	0.00	A	<1 veh	0.02	A	<1 veh
2024 Future Total	EBLR	0.15	A	<1 veh	0.15	B	<1 veh
	WBLR	0.02	A	<1 veh	0.02	B	<1 veh
	NBLTR	0.03	A	<1 veh	0.12	A	<1 veh
	SBLTR	0.00	A	<1 veh	0.02	A	<1 veh
2029 Future Total	EBLR	0.15	A	<1 veh	0.15	B	<1 veh
	WBLR	0.02	A	<1 veh	0.02	B	<1 veh
	NBLTR	0.03	A	<1 veh	0.12	A	<1 veh
	SBLTR	0.00	A	<1 veh	0.02	A	<1 veh

Table 6-4: Capacity Analysis Results – Eighth Line at Sideroad 17

SCENARIO	MOVE.	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		V/C	LOS	95TH % QUEUE (M)	V/C	LOS	95TH % QUEUE (M)
2022 Existing	WBLT	0.00	A	<1 veh	0.01	A	<1 veh
	NBLR	0.04	A	<1 veh	0.04	B	<1 veh
2024 Future Background	WBLT	0.01	A	<1 veh	0.04	A	<1 veh
	NBLR	0.13	B	<1 veh	0.11	B	<1 veh
2024 Future Total	WBLT	0.01	A	<1 veh	0.05	A	<1 veh
	NBLR	0.16	B	<1 veh	0.13	B	<1 veh
2029 Future Total	WBLT	0.01	A	<1 veh	0.05	A	<1 veh
	NBLR	0.16	B	<1 veh	0.14	B	<1 veh

Table 6-5: Capacity Analysis Results – Eighth Line at Dundas Street West

SCENARIO	MOVE.	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		V/C	LOS	95TH % QUEUE (M)	V/C	LOS	95TH % QUEUE (M)
2022 Existing	WBLT	0.00	A	<1 veh	0.01	A	<1 veh
	NBLR	0.03	A	<1 veh	0.01	A	<1 veh
2024 Future Background	WBLT	0.00	A	<1 veh	0.01	A	<1 veh
	NBLR	0.02	A	<1 veh	0.03	A	<1 veh
2024 Future Total	WBLT	0.00	A	<1 veh	0.01	A	<1 veh
	NBLR	0.05	B	<1 veh	0.10	B	<1 veh
2029 Future Total	WBLT	0.00	A	<1 veh	0.01	A	<1 veh
	NBLR	0.05	B	<1 veh	0.10	B	<1 veh

Table 6-6: Capacity Analysis Results – Eighth Line at Wellington Road 124

SCENARIO	MOVE.	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		V/C	LOS	95TH % QUEUE (M)	V/C	LOS	95TH % QUEUE (M)
2022 Existing	WBLT	0.00	A	<1 veh	0.00	A	<1 veh
	EBLT	0.00	A	<1 veh	0.01	A	<1 veh
	NBLTR	0.02	B	<1 veh	0.06	B	<1 veh
	SBLTR	0.01	B	<1 veh	0.02	B	<1 veh
2024 Future Background	WBLT	0.00	A	<1 veh	0.02	A	<1 veh
	EBLT	0.00	A	<1 veh	0.01	A	<1 veh
	NBLTR	0.02	B	<1 veh	0.06	C	<1 veh
	SBLTR	0.03	B	<1 veh	0.04	B	<1 veh
2024 Future Total	WBLT	0.01	A	<1 veh	0.05	A	<1 veh
	EBLT	0.00	A	<1 veh	0.01	A	<1 veh
	NBLTR	0.02	B	<1 veh	0.07	C	<1 veh
	SBLTR	0.07	B	<1 veh	0.07	B	<1 veh
2029 Future Total	WBLT	0.01	A	<1 veh	0.05	A	<1 veh
	EBLT	0.00	A	<1 veh	0.01	A	<1 veh
	NBLTR	0.02	B	<1 veh	0.08	C	<1 veh
	SBLTR	0.07	B	<1 veh	0.07	B	<1 veh

Table 6-7: Capacity Analysis Results – Sideroad 17 at Trafalgar Road

SCENARIO	MOVE.	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		V/C	LOS	95TH % QUEUE (M)	V/C	LOS	95TH % QUEUE (M)
2022 Existing	WBLTR	0.12	B	<1 veh	0.19	C	<1 veh
	EBLTR	0.16	B	<1 veh	0.46	C	18
	NBLTR	0.01	A	<1 veh	0.01	A	<1 veh
	SBLTR	0.02	A	<1 veh	0.02	A	<1 veh
2024 Future Background	WBLTR	0.12	B	<1 veh	0.20	C	<1 veh
	EBLTR	0.23	B	<1 veh	0.54	D	23
	NBLT	0.01	A	<1 veh	0.01	A	<1 veh
	SBLT	0.03	A	<1 veh	0.02	A	<1 veh
2024 Future Total	WBLTR	0.12	B	<1 veh	0.23	C	<1 veh
	EBLTR	0.35	C	12	0.71	E	39
	NBLT	0.01	A	<1 veh	0.01	A	<1 veh
	SBLT	0.03	A	<1 veh	0.04	A	<1 veh
2029 Future Total	WBLTR	0.14	B	<1 veh	0.25	C	7
	EBLTR	0.37	C	13	0.77	E	46
	NBLT	0.01	A	<1 veh	0.01	A	<1 veh
	SBLT	0.03	A	<1 veh	0.04	A	<1 veh

Table 6-8: Capacity Analysis Results – Dundas Street West at Main Street

SCENARIO	MOVE.	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR			
		V/C	LOS	95TH % QUEUE (M)	V/C	LOS	95TH % QUEUE (M)	STORAGE LENGTH
2022 Existing	EBLTR	0.26	C	7	0.13	B	<1 veh	
	WBLTR	0.23	C	7	0.39	C	13	
	NBL	0.01	A	<1 veh	0.04	A	<1 veh	35m
	NBTR	0.23	A	19	0.36	A	33	
	SBL	0.05	A	<1 veh	0.05	A	<1 veh	40m
	SBTR	0.24	A	19	0.39	A	38	
2024 Future Background	EBLTR	0.16	B	11	0.15	B	9	
	WBLTR	0.12	B	7	0.40	C	13	
	NBL	0.04	A	<1 veh	0.15	A	9	35m
	NBTR	0.26	A	20	0.37	A	35	
	SBL	0.06	A	<1 veh	0.05	A	<1 veh	40m
	SBTR	0.27	A	20	0.40	A	39	
2024 Future Total	EBLTR	0.20	B	14	0.15	B	11	
	WBLTR	0.10	B	7	0.29	B	13	
	NBL	0.11	A	7	0.35	A	8	35m
	NBTR	0.29	A	22	0.39	A	16	
	SBL	0.06	A	<1 veh	0.06	A	<1 veh	40m
	SBTR	0.30	A	22	0.43	A	40	
2029 Future Total	EBLTR	0.20	B	14	0.16	B	12	
	WBLTR	0.10	B	7	0.30	B	14	
	NBL	0.11	A	7	0.36	A	22	35m
	NBTR	0.30	A	23	0.41	A	38	
	SBL	0.06	A	<1 veh	0.06	A	<1 veh	40m
	SBTR	0.31	A	24	0.45	A	43	

Table 6-9: Capacity Analysis Results – Wellington Road 23 at Main Street

SCENARIO	MOVE.	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR			
		V/C	LOS	95TH % QUEUE (M)	V/C	LOS	95TH % QUEUE (M)	STORAGE LENGTH
2022 Existing	EBL	0.46	C	22	0.54	C	30	15m
	EBTR	0.23	C	16	0.14	B	14	
	WBL	0.07	C	<1 veh	0.06	B	<1 veh	10m
	WBTR	0.12	C	11	0.10	B	10	
	NBL	0.09	A	7	0.17	A	14	38m
	NBTR	0.16	A	15	0.23	A	24	
	SBL	0.02	A	<1 veh	0.01	A	<1 veh	50m
	SBT	0.16	A	16	0.29	A	32	
	SBR	0.05	A	<1 veh	0.07	A	<1 veh	50m
2024 Future Background	EBL	0.54	C	27	0.58	C	33	15m
	EBTR	0.21	C	16	0.14	B	14	
	WBL	0.06	B	<1 veh	0.05	B	<1 veh	10m
	WBTR	0.11	B	10	0.10	B	10	
	NBL	0.09	A	8	0.18	A	15	38m
	NBTR	0.17	A	17	0.24	A	26	
	SBL	0.02	A	<1 veh	0.01	A	<1 veh	50m
	SBT	0.17	A	17	0.30	A	35	
	SBR	0.06	A	<1 veh	0.09	A	<1 veh	50m
2024 Future Total	EBL	0.67	C	38	0.66	C	40	15m
	EBTR	0.20	B	16	0.14	B	14	
	WBL	0.05	B	<1 veh	0.05	B	<1 veh	10m
	WBTR	0.10	B	11	0.09	B	10	
	NBL	0.10	A	9	0.18	A	15	38m
	NBTR	0.18	A	19	0.24	A	26	
	SBL	0.02	A	<1 veh	0.01	A	<1 veh	50m
	SBT	0.18	A	19	0.30	A	35	
	SBR	0.07	A	<1 veh	0.12	A	9	50m
2029 Future Total	EBL	0.68	C	34	0.67	C	42	15m
	EBTR	0.21	B	17	0.14	B	14	
	WBL	0.06	B	<1 veh	0.05	B	<1 veh	10m
	WBTR	0.10	B	11	0.09	B	10	
	NBL	0.10	A	9	0.19	A	16	38m
	NBTR	0.19	A	19	0.26	A	28	
	SBL	0.02	A	<1 veh	0.01	A	<1 veh	50m
	SBT	0.19	A	19	0.32	A	37	
	SBR	0.07	A	<1 veh	0.13	A	8	50m

7.0 LEFT-TURN LANE WARRANTS

Ontario Ministry of Transportation (MTO) left-turn lane warrants were completed for the unsignalized study area intersections, where applicable, with the results illustrated in **Appendix F**. Auxiliary left-turn lanes are warranted at the following intersections:

- Northbound and southbound left-turn lanes on Trafalgar Road at Sideroad 17, which is warranted in 2029 as a result of corridor growth (not warranted in 2024 upon build-out of the subject development), with a minimum storage length of 15 metres; and
- Eastbound left-turn lane on Wellington Road 124 at Eighth Line, which is warranted in 2029 as a result of corridor growth (warranted previous to build-out of the subject development in future background scenario), with a minimum storage length of 15 metres.

Although the above mentioned left-turn lanes are warranted in 2029 as per the MTO's warrant methodology, the capacity analysis results as presented in Section 6 demonstrate that the intersections are expected to operate acceptably in 2029 under their current lane configurations.

The Town/County may consider monitoring operations at these intersections to determine if auxiliary left-turn lanes are needed to maintain an acceptable level of service in the future. However, left-turn lanes are not warranted as a result of the site generated traffic, especially given the volume of site generated traffic assigned to these left-turn movements is nominal, and due to the acceptable operating conditions up to the 2029 horizon year as demonstrated in the capacity analysis results.

8.0 SIGNAL WARRANTS

MTO Signal warrants were completed for the unsignalized study area intersections, with completed signal warrant spreadsheet provided in **Appendix G.** Traffic signals are not warranted at any of the study area intersections for the final 2029 future total horizon year due to insufficient volumes, and therefore will not be warranted for any of the preceding horizon years as well.

9.0 SUMMARY OF FINDINGS

The findings of the traffic impact study can be summarized as follows:

- The proposed residential development is projected to generate approximately 330 total two-way trips during the weekday a.m. peak hour (88 inbound and 242 outbound), and 434 total two-way trips during the weekday p.m. peak hour (270 inbound and 164 outbound).
- As per the results of the intersection capacity analysis, the site generated traffic is not expected to result in any capacity, delay, or queuing concerns at the study area intersections upon build-out of the development, and the intersections are expected to continue operating acceptably up to the final 2029 horizon year;
- Auxiliary left-turn lanes were warranted at two (2) study area intersections for the final 2029 horizon year based on the MTO's warrant methodology due to area corridor traffic volume growth, however the capacity analysis results demonstrate that the intersections are expected to continue operating acceptably in 2029 under their current lane configurations;
- New traffic signals are not warranted at the unsignalized study area intersections up to the final 2029 horizon year due to insufficient projected traffic volumes;
- The proposed internal road network layout of the subject development is considered acceptable per TAC geometric design guidelines; and
- The existing roadway system has sufficient capacity to accommodate the anticipated traffic generation from the subject development.

10.0 RECOMMENDATIONS

There are no geometric improvements recommended at the study area intersections as a result of the site generated traffic.

The Town/County may consider monitoring operations at the intersection of Trafalgar Road at Sideroad 17 and Wellington Road 124 at Eighth Line to determine if auxiliary left-turn lanes are needed to maintain an acceptable level of service in the future. However, left-turn lanes are not warranted as a result of the site generated traffic, especially given the volume of site generated traffic assigned to these left-turn movements is nominal, and due to the acceptable operating conditions up to the 2029 horizon year as demonstrated in the capacity analysis results.

APPENDIX A

TMC Data

Eighth Line @ Dundas St W

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

Municipality: Wellington
Site #: 0000000003
Intersection: Dundas St W & Eighth Line
TFR File #: 3
Count date: 1-Sep-2021

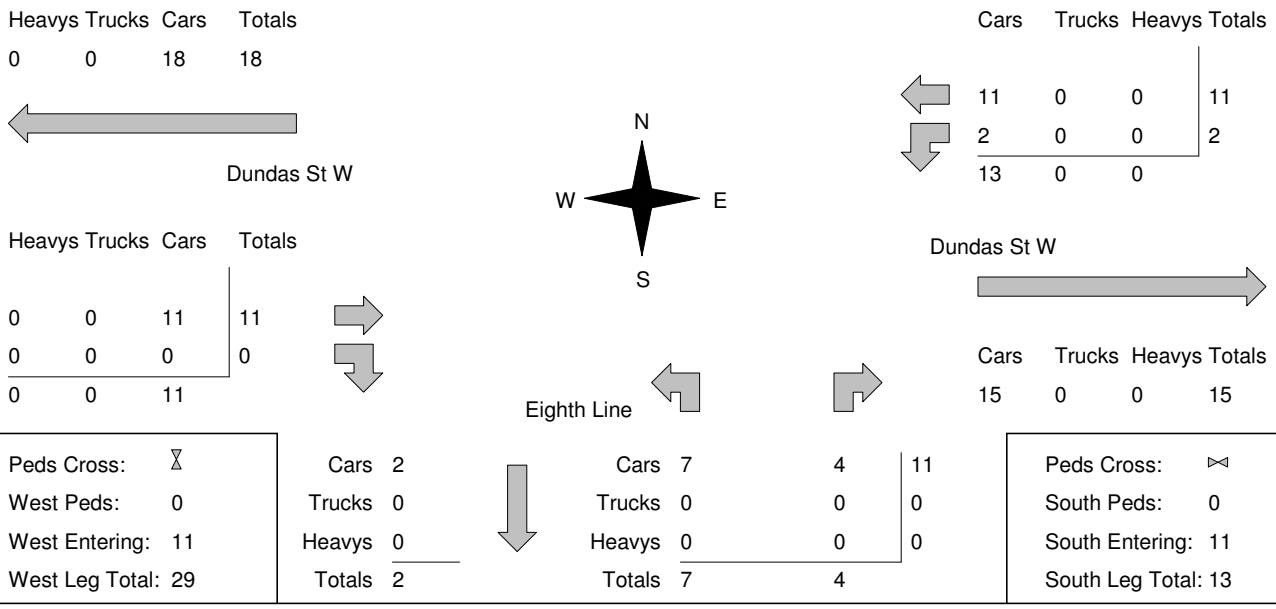
Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Dundas St W runs W/E

East Leg Total: 28
East Entering: 13
East Peds: 0
Peds Cross:



Peds Cross:
West Peds: 0
West Entering: 11
West Leg Total: 29

Cars 2
Trucks 0
Heavys 0
Totals 2

Cars 7 4 11
Trucks 0 0 0
Heavys 0 0 0
Totals 7 4

Peds Cross:
South Peds: 0
South Entering: 11
South Leg Total: 13

Comments

Eighth Line @ Dundas St W

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 17:00:00
To: 18:00:00

Municipality: Wellington
Site #: 0000000003
Intersection: Dundas St W & Eighth Line
TFR File #: 3
Count date: 1-Sep-2021

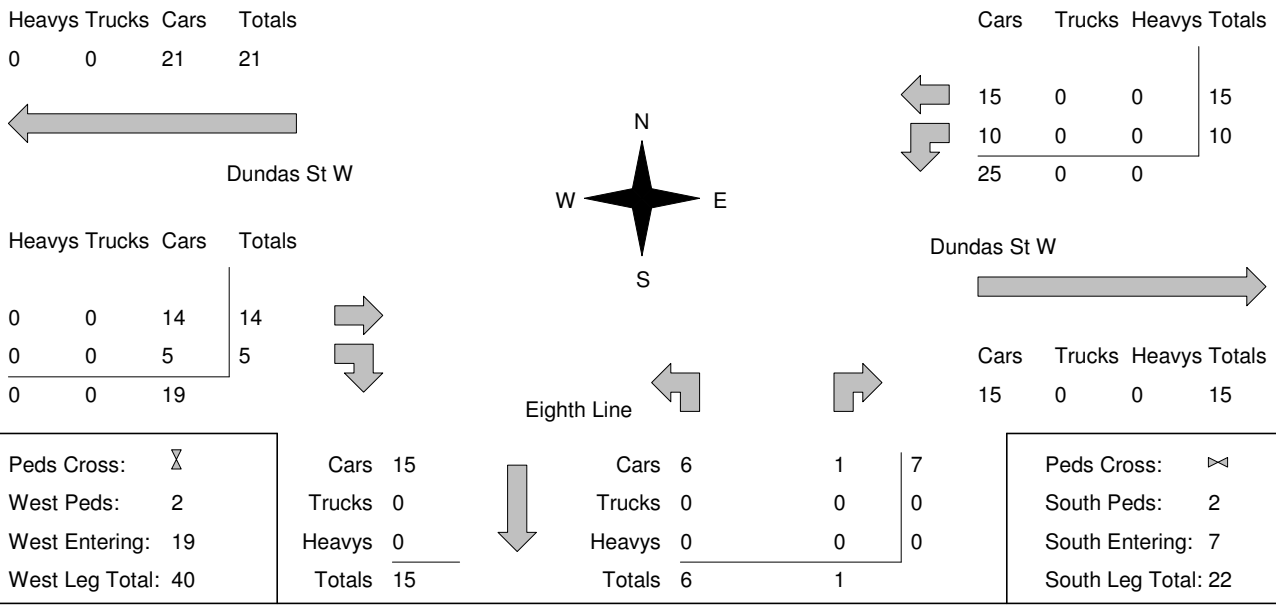
Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Dundas St W runs W/E

East Leg Total: 40
East Entering: 25
East Peds: 2
Peds Cross:



Peds Cross:
West Peds: 2
West Entering: 19
West Leg Total: 40

Cars 15
Trucks 0
Heavys 0
Totals 15

Cars 6 1 7
Trucks 0 0 0
Heavys 0 0 0
Totals 6 1

Peds Cross:
South Peds: 2
South Entering: 7
South Leg Total: 22

Comments

Eighth Line @ Dundas St W

Total Count Diagram

Municipality: Wellington
Site #: 0000000003
Intersection: Dundas St W & Eighth Line
TFR File #: 3
Count date: 1-Sep-2021

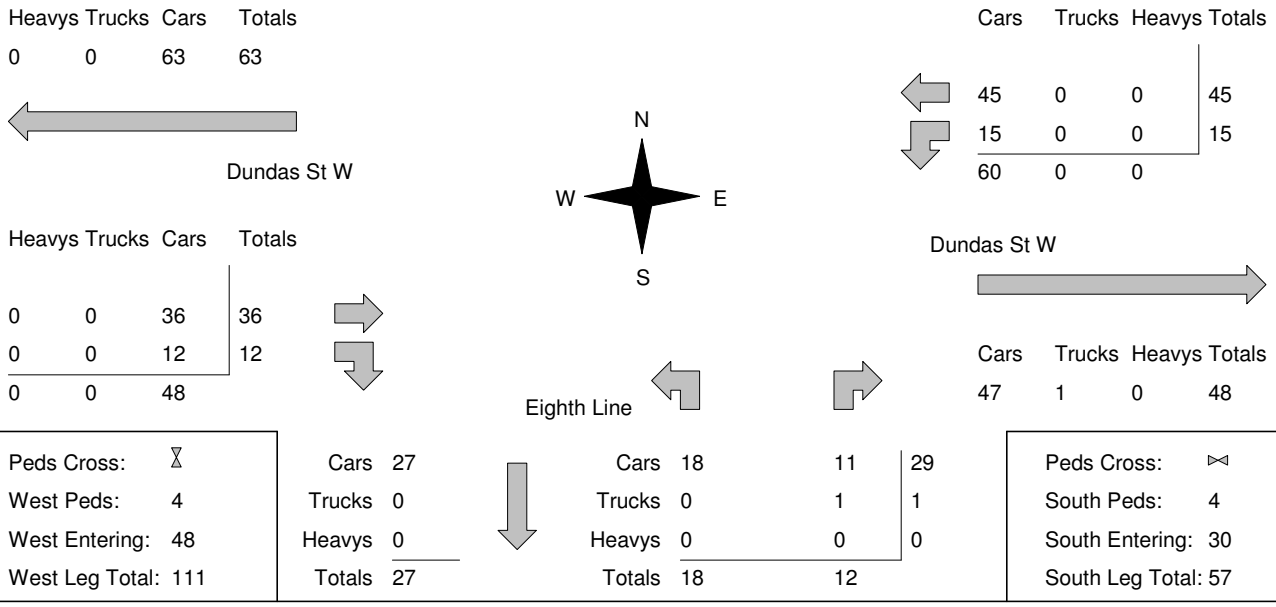
Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Dundas St W runs W/E

East Leg Total: 108
East Entering: 60
East Peds: 2
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 4
West Entering: 48
West Leg Total: 111

Cars 27
Trucks 0
Heavys 0
Totals 27

Cars 18 11 29
Trucks 0 1 1
Heavys 0 0 0
Totals 18 12

Peds Cross: ⋈
South Peds: 4
South Entering: 30
South Leg Total: 57

Comments

Eighth Line @ Erin Heights Dr

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

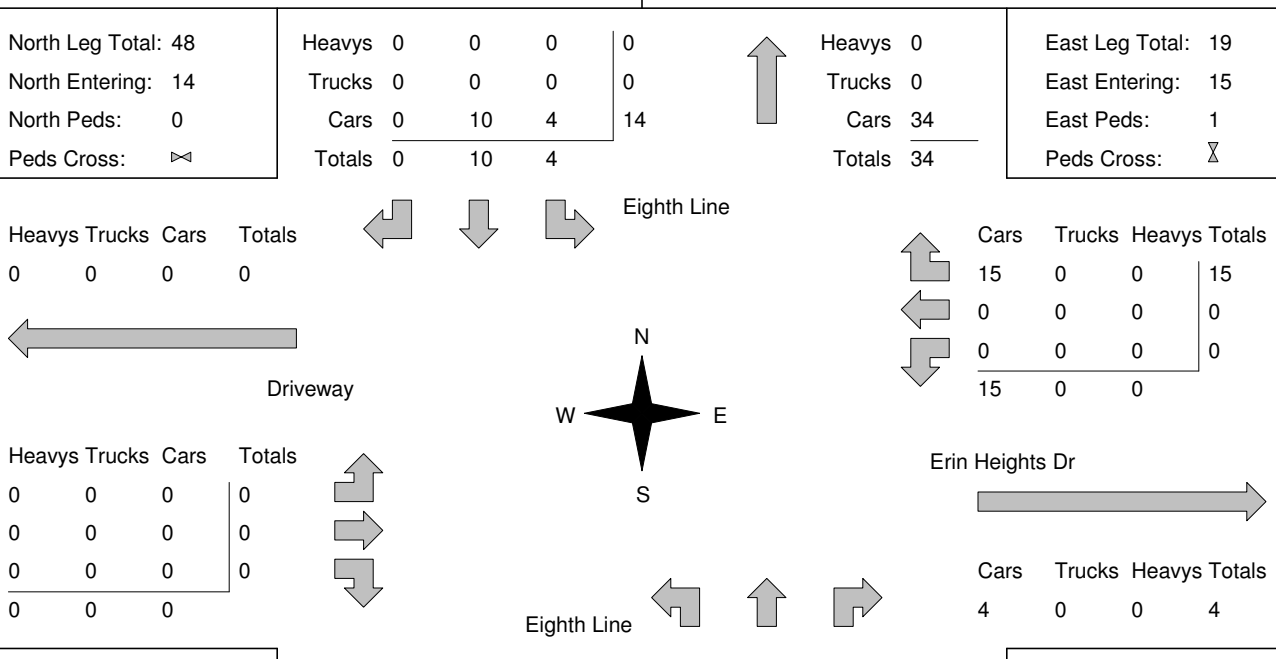
Municipality: Wellington
Site #: 0000000002
Intersection: Eighth Line & Erin Heights Dr
TFR File #: 2
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Eighth Line runs N/S



Comments

Eighth Line @ Erin Heights Dr

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 17:00:00
To: 18:00:00

Municipality: Wellington
Site #: 0000000002
Intersection: Eighth Line & Erin Heights Dr
TFR File #: 2
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Eighth Line runs N/S

North Leg Total:	55			
North Entering:	32			
North Peds:	0			
Peds Cross:	⋈			
Heavys	0	0	0	0
Trucks	0	0	0	0
Cars	0	15	17	32
Totals	0	15	17	
Heavys	0			
Trucks	0			
Cars	23			
Totals	23			
East Leg Total:	31			
East Entering:	9			
East Peds:	1			
Peds Cross:	⧖			

Eighth Line

Heavys	Trucks	Cars	Totals
0	0	0	0

Cars	Trucks	Heavys	Totals
6	0	0	6
0	0	0	0
3	0	0	3
9	0	0	

Driveway

N
W E
S

Heavys	Trucks	Cars	Totals
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	

Erin Heights Dr

Cars	Trucks	Heavys	Totals
22	0	0	22

Eighth Line

Peds Cross:	⧖			
West Peds:	0			
West Entering:	0			
West Leg Total:	0			
Cars	18			
Trucks	0			
Heavys	0			
Totals	18			
Cars	0	17	5	22
Trucks	0	0	0	0
Heavys	0	0	0	0
Totals	0	17	5	
Peds Cross:	⋈			
South Peds:	0			
South Entering:	22			
South Leg Total:	40			

Comments

Eighth Line @ Erin Heights Dr

Total Count Diagram

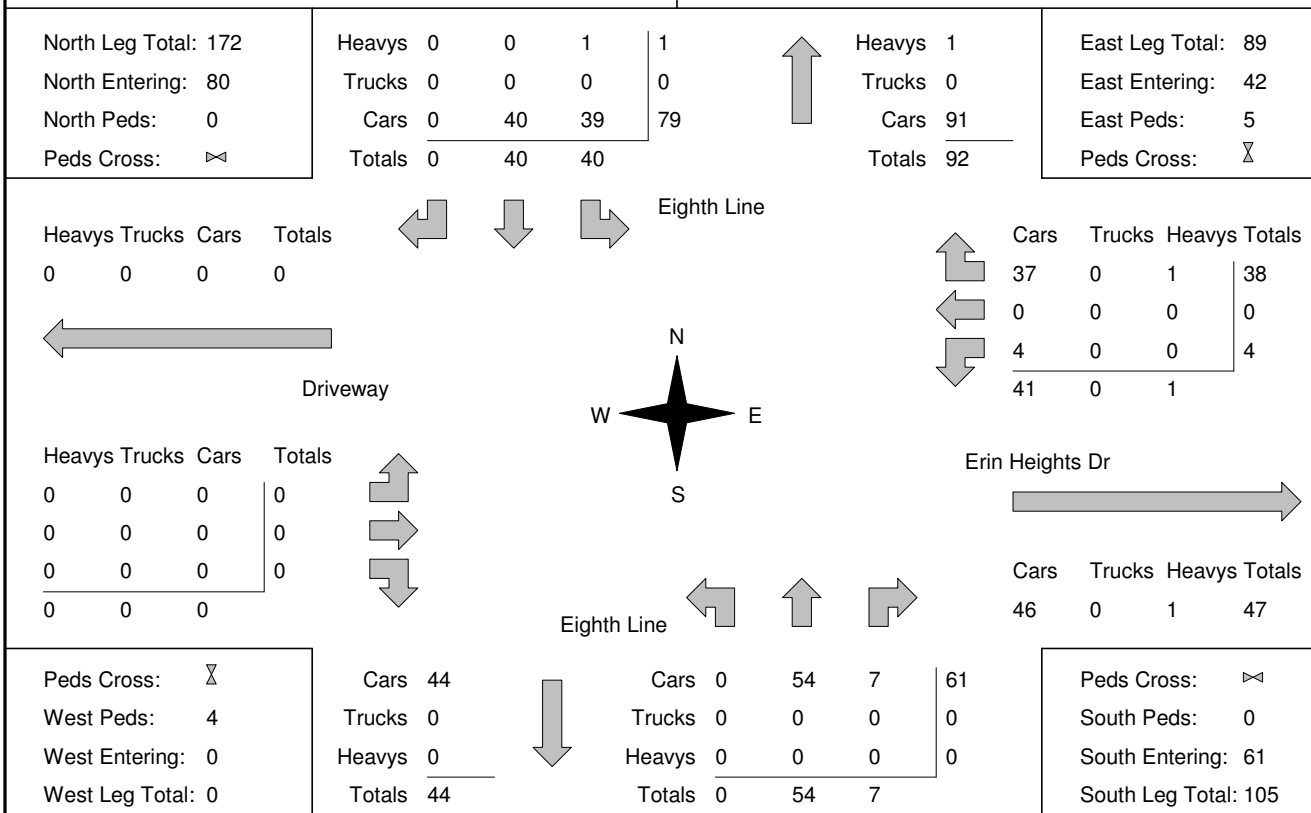
Municipality: Wellington
Site #: 0000000002
Intersection: Eighth Line & Erin Heights Dr
TFR File #: 2
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Eighth Line runs N/S



Comments

Eighth Line @ Sideroad 17

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

Municipality: Wellington
Site #: 0000000001
Intersection: Sideroad 17 & Eighth Line
TFR File #: 1
Count date: 1-Sep-2021

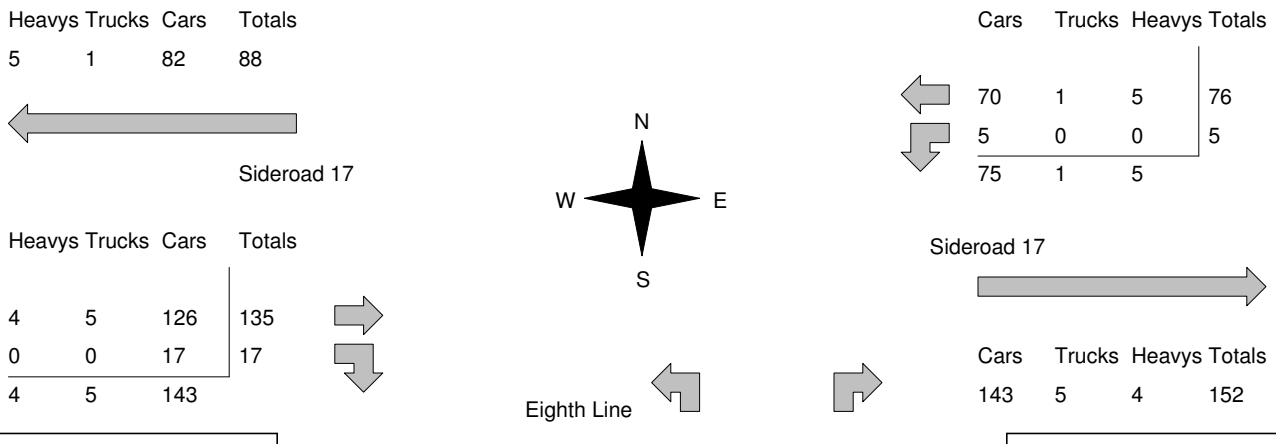
Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Sideroad 17 runs W/E

East Leg Total: 233
East Entering: 81
East Peds: 0
Peds Cross:



Peds Cross:
West Peds: 0
West Entering: 152
West Leg Total: 240

Cars 22
Trucks 0
Heavys 0
Totals 22

Cars 12 17 29
Trucks 0 0 0
Heavys 0 0 0
Totals 12 17

Peds Cross:
South Peds: 0
South Entering: 29
South Leg Total: 51

Comments

Eighth Line @ Sideroad 17

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:30:00
To: 17:30:00

Municipality: Wellington
Site #: 0000000001
Intersection: Sideroad 17 & Eighth Line
TFR File #: 1
Count date: 1-Sep-2021

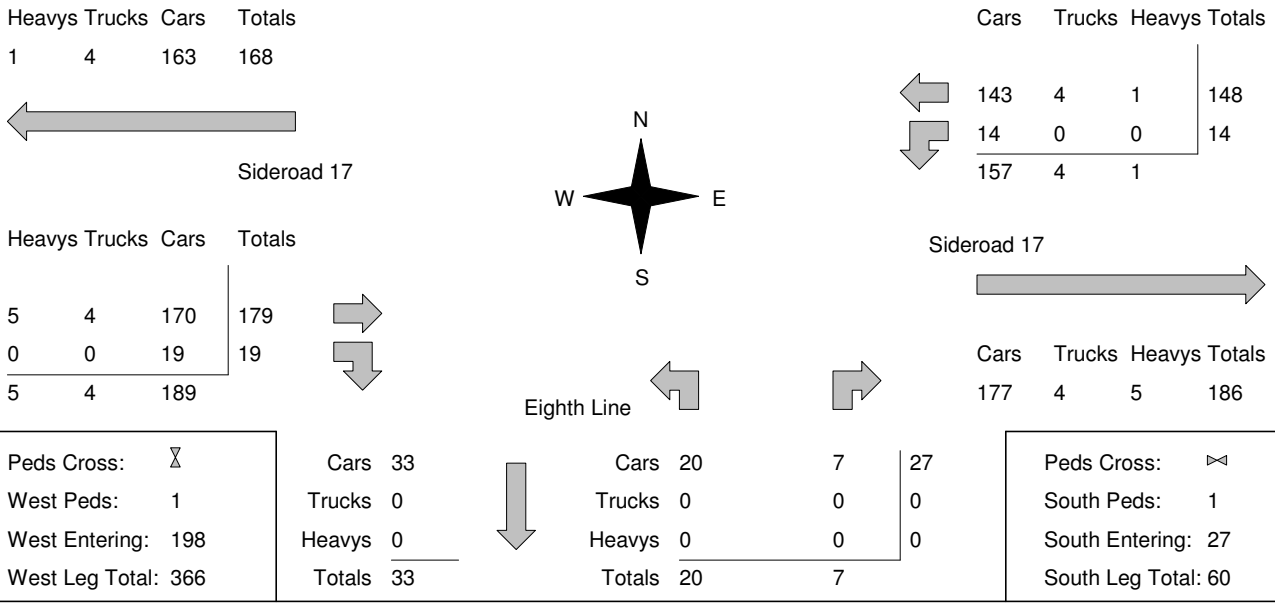
Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Sideroad 17 runs W/E

East Leg Total: 348
East Entering: 162
East Peds: 0
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 1
West Entering: 198
West Leg Total: 366

Peds Cross: ⋈
South Peds: 1
South Entering: 27
South Leg Total: 60

Comments

Eighth Line @ Sideroad 17

Total Count Diagram

Municipality: Wellington
Site #: 0000000001
Intersection: Sideroad 17 & Eighth Line
TFR File #: 1
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Sideroad 17 runs W/E

East Leg Total: 1053
East Entering: 425
East Peds: 0
Peds Cross: ⧖

Heavys	Trucks	Cars	Totals
12	6	429	447

Sideroad 17

Heavys	Trucks	Cars	Totals
14	13	563	590
1	0	67	68
15	13	630	

	Cars	Trucks	Heavys	Totals
	378	6	11	395
	30	0	0	30
	408	6	11	

Sideroad 17

Cars	Trucks	Heavys	Totals
601	13	14	628

Eighth Line

Peds Cross: ⧖
West Peds: 1
West Entering: 658
West Leg Total: 1105

Cars	97
Trucks	0
Heavys	1
Totals	98

Cars	51	38	89
Trucks	0	0	0
Heavys	1	0	1
Totals	52	38	

Peds Cross: ⋈
South Peds: 2
South Entering: 90
South Leg Total: 188

Comments

Eighth Line @ Wellington Rd 124

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 7:45:00
To: 8:45:00

Municipality: Wellington
Site #: 0000000007
Intersection: Wellington Rd 124 & Eighth Line
TFR File #: 7
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Wellington Rd 124 runs W/E

North Leg Total: 9
North Entering: 6
North Peds: 0
Peds Cross: ⋈

Heavys	0	0	0	0
Trucks	0	0	0	0
Cars	1	2	3	6
Totals	1	2	3	

Heavys	0
Trucks	0
Cars	3
Totals	3

East Leg Total: 499
East Entering: 254
East Peds: 0
Peds Cross: ⧖

Eighth Line

Heavys	Trucks	Cars	Totals
16	3	231	250

	Cars	Trucks	Heavys	Totals
	1	0	0	1
	228	3	16	247
	6	0	0	6
	235	3	16	

Wellington Rd 124

N
W E
S

Heavys	Trucks	Cars	Totals
0	0	1	1
24	3	208	235
0	0	0	0
24	3	209	

Wellington Rd 124

	Cars	Trucks	Heavys	Totals
	218	3	24	245

Eighth Line

Peds Cross: ⧖
West Peds: 2
West Entering: 236
West Leg Total: 486

Cars	8
Trucks	0
Heavys	0
Totals	8

Cars	2	1	7	10
Trucks	0	0	0	0
Heavys	0	0	0	0
Totals	2	1	7	

Peds Cross: ⋈
South Peds: 0
South Entering: 10
South Leg Total: 18

Comments

Eighth Line @ Wellington Rd 124

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:15:00
To: 17:15:00

Municipality: Wellington
Site #: 0000000007
Intersection: Wellington Rd 124 & Eighth Line
TFR File #: 7
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Wellington Rd 124 runs W/E

North Leg Total:	22			
North Entering:	7			
North Peds:	0			
Peds Cross:	⋈			

Heavys	0	0	0	0
Trucks	0	0	0	0
Cars	4	0	3	7
Totals	4	0	3	

Heavys	0
Trucks	0
Cars	15
Totals	15

East Leg Total:	778
East Entering:	346
East Peds:	0
Peds Cross:	⧖

Eighth Line

Heavys	Trucks	Cars	Totals
26	3	309	338

Cars	Trucks	Heavys	Totals
9	0	0	9
299	3	26	328
9	0	0	9
317	3	26	

Wellington Rd 124

N
W E
S

Heavys	Trucks	Cars	Totals
0	0	3	3
25	6	387	418
0	0	6	6
25	6	396	

Wellington Rd 124

Cars	Trucks	Heavys	Totals
400	6	26	432

Eighth Line

Peds Cross:	⧖		
West Peds:	0		
West Entering:	427		
West Leg Total:	765		

Cars	15			
Trucks	0			
Heavys	0			
Totals	15			

Cars	6	3	10	19
Trucks	0	0	0	0
Heavys	0	0	1	1
Totals	6	3	11	

Peds Cross:	⋈
South Peds:	0
South Entering:	20
South Leg Total:	35

Comments

Eighth Line @ Wellington Rd 124

Total Count Diagram

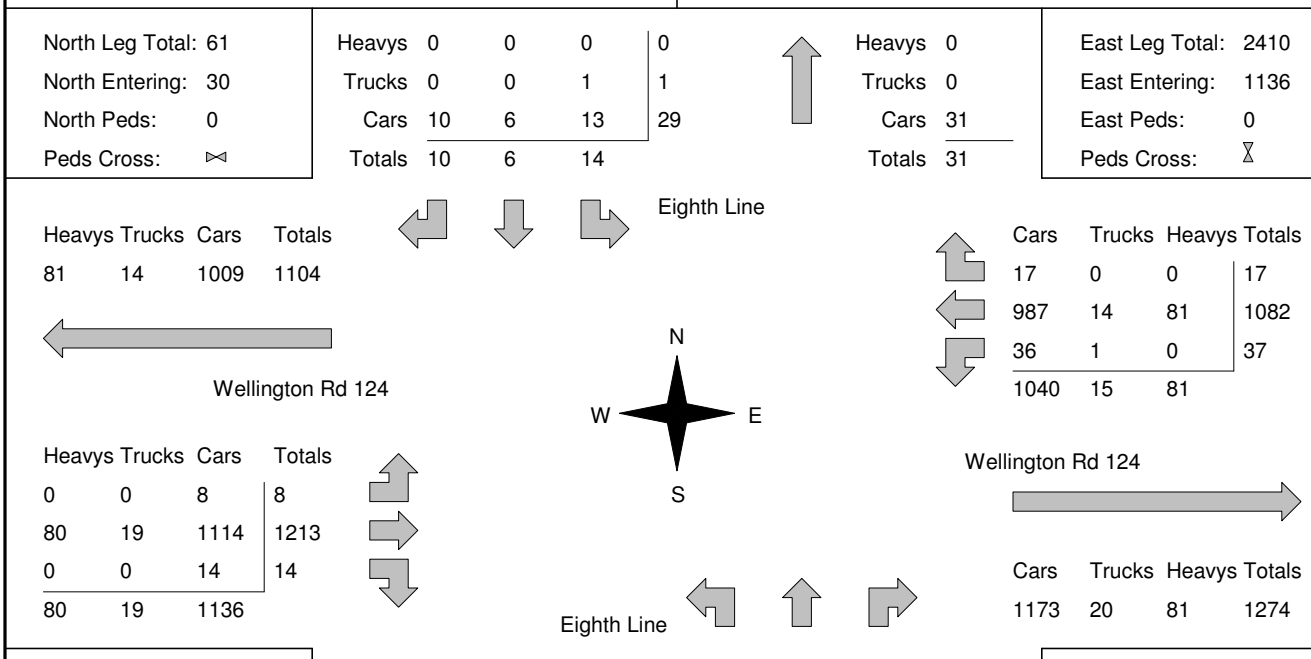
Municipality: Wellington
Site #: 0000000007
Intersection: Wellington Rd 124 & Eighth Line
TFR File #: 7
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Wellington Rd 124 runs W/E



Comments

Main St @ Dundas St

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

Municipality: Wellington
Site #: 0000000004
Intersection: Main St & Dundas St
TFR File #: 4
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Signalized Intersection ****

Major Road: Main St runs N/S

North Leg Total:	498			
North Entering:	262			
North Peds:	0			
Peds Cross:	⋈			
Heavys	1	23	0	24
Trucks	0	5	0	5
Cars	7	194	32	233
Totals	8	222	32	
Heavys	13			
Trucks	2			
Cars	221			
Totals	236			
East Leg Total:	114			
East Entering:	39			
East Peds:	4			
Peds Cross:	⧖			

Main St

Heavys	Trucks	Cars	Totals
1	0	20	21

Dundas St W

Heavys	Trucks	Cars	Totals
0	0	13	13
0	0	9	9
0	0	22	22
0	0	44	

Cars	Trucks	Heavys	Totals
19	0	1	20
5	0	0	5
14	0	0	14
38	0	1	

N
W E
S

Dundas St E

Cars	Trucks	Heavys	Totals
73	1	1	75

Main St

Peds Cross:	⧖			
West Peds:	1			
West Entering:	44			
West Leg Total:	65			
Cars	230			
Trucks	5			
Heavys	23			
Totals	258			
Cars	8	189	32	229
Trucks	0	2	1	3
Heavys	0	12	1	13
Totals	8	203	34	
Peds Cross:	⋈			
South Peds:	3			
South Entering:	245			
South Leg Total:	503			

Comments

Main St @ Dundas St

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:15:00
To: 17:15:00

Municipality: Wellington
Site #: 0000000004
Intersection: Main St & Dundas St
TFR File #: 4
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Signalized Intersection ****

Major Road: Main St runs N/S

North Leg Total: 814
North Entering: 442
North Peds: 0
Peds Cross: ⋈

Heavys	0	19	0	19
Trucks	0	3	0	3
Cars	15	375	30	420
Totals	15	397	30	

Heavys	23
Trucks	5
Cars	344
Totals	372

East Leg Total: 160
East Entering: 81
East Peds: 4
Peds Cross: ⧖

Main St

Heavys	Trucks	Cars	Totals
0	0	53	53

Dundas St W

Heavys	Trucks	Cars	Totals
0	0	10	10
0	0	10	10
0	0	15	15
0	0	35	

Cars	Trucks	Heavys	Totals
25	0	0	25
12	0	0	12
43	1	0	44
80	1	0	

N
W E
S

Dundas St E

Cars	Trucks	Heavys	Totals
79	0	0	79

Main St

Peds Cross: ⧖
West Peds: 7
West Entering: 35
West Leg Total: 88

Cars	433			
Trucks	4			
Heavys	19			
Totals	456			

Cars	26	309	39	374
Trucks	0	5	0	5
Heavys	0	23	0	23
Totals	26	337	39	

Peds Cross: ⋈
South Peds: 7
South Entering: 402
South Leg Total: 858

Comments

Main St @ Dundas St

Total Count Diagram

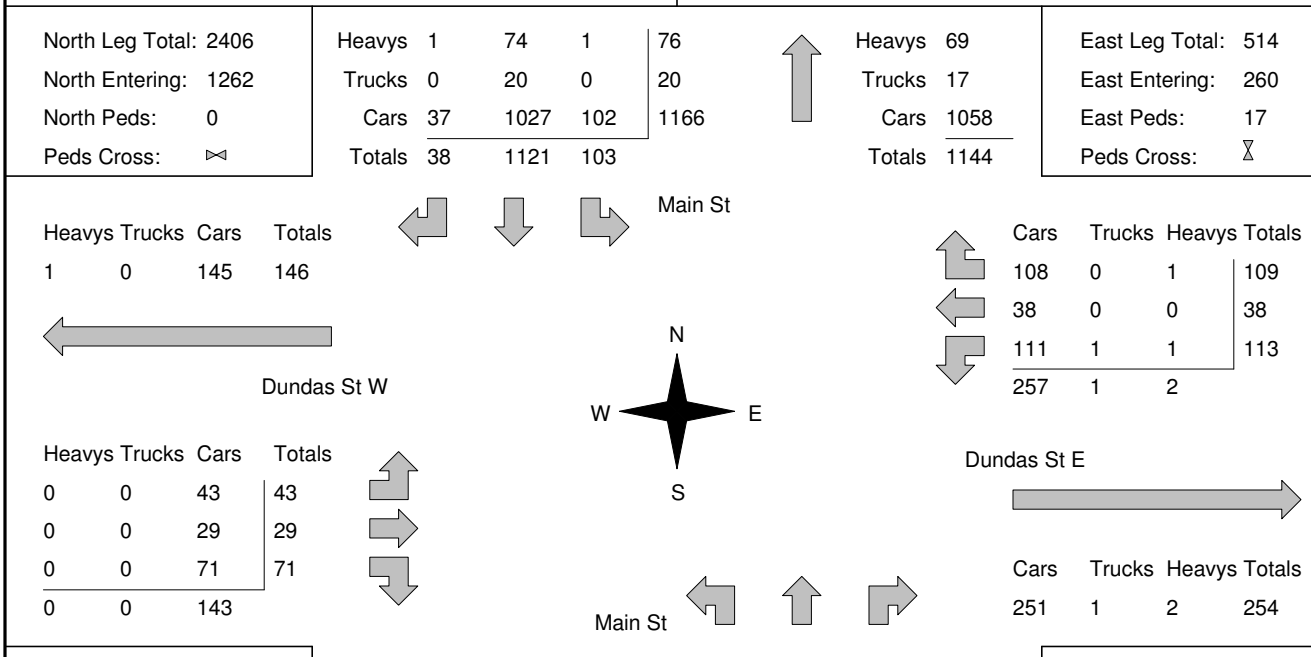
Municipality: Wellington
Site #: 0000000004
Intersection: Main St & Dundas St
TFR File #: 4
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Signalized Intersection ****

Major Road: Main St runs N/S



Comments

Main St @ Shamrock Rd

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

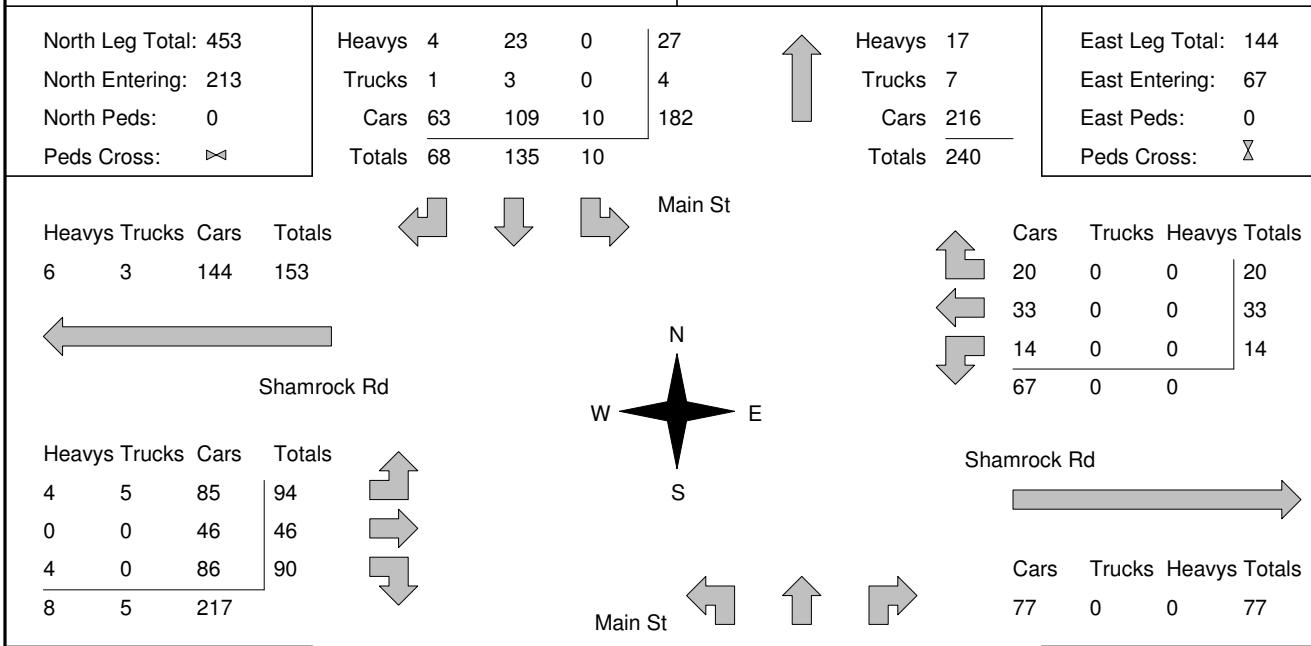
Municipality: Wellington
Site #: 0000000005
Intersection: Main St & Shamrock Rd
TFR File #: 5
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Signalized Intersection ****

Major Road: Main St runs N/S



Comments

Main St @ Shamrock Rd

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:00:00
To: 17:00:00

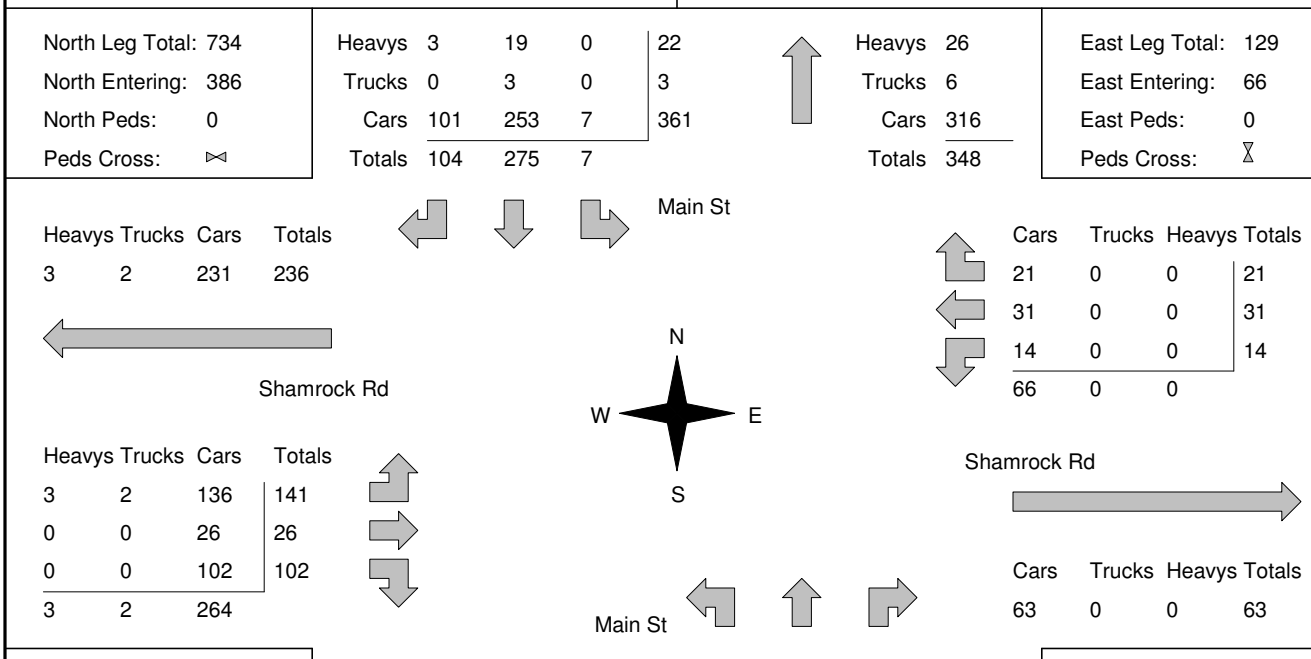
Municipality: Wellington
Site #: 0000000005
Intersection: Main St & Shamrock Rd
TFR File #: 5
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Signalized Intersection ****

Major Road: Main St runs N/S



Comments

Main St @ Shamrock Rd

Total Count Diagram

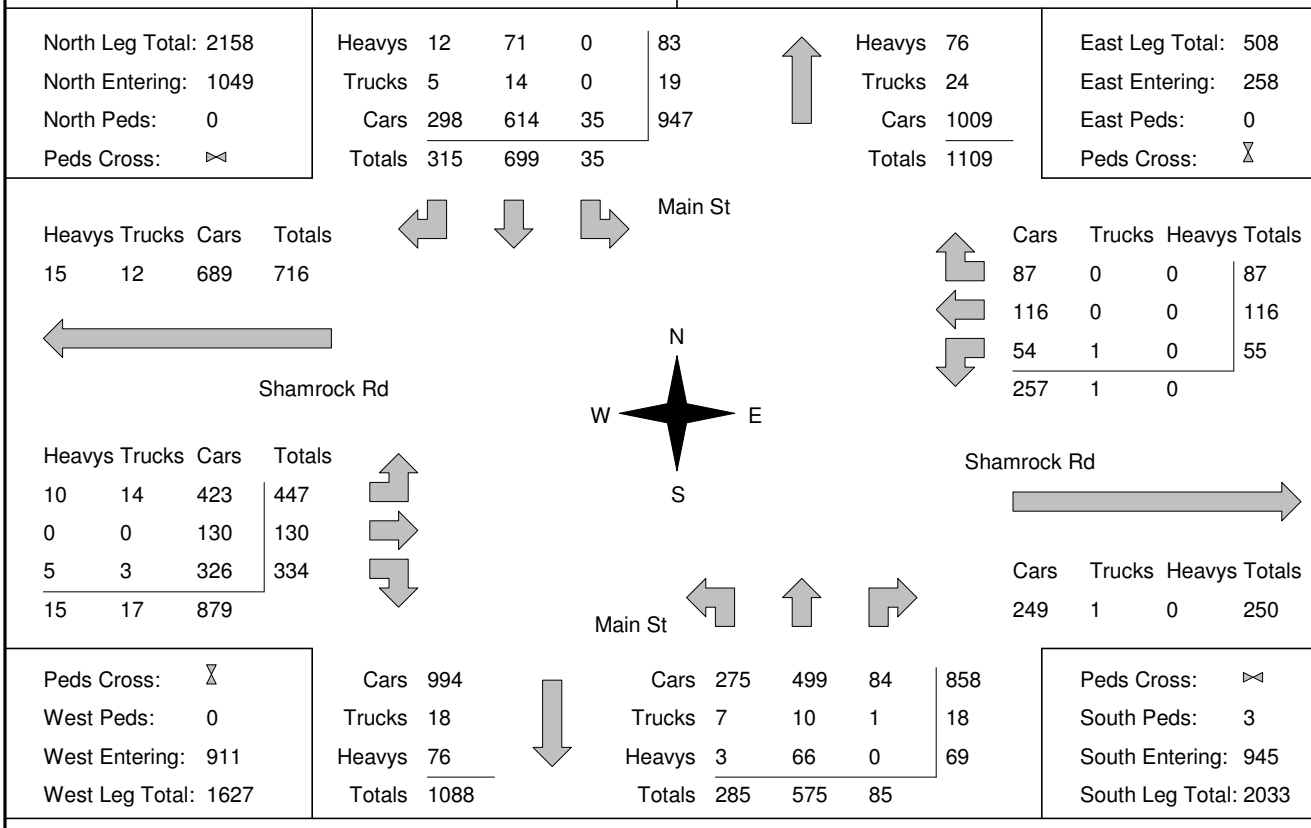
Municipality: Wellington
Site #: 0000000005
Intersection: Main St & Shamrock Rd
TFR File #: 5
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Signalized Intersection ****

Major Road: Main St runs N/S



Comments

Trafalgar Rd @ Sideroad 17

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

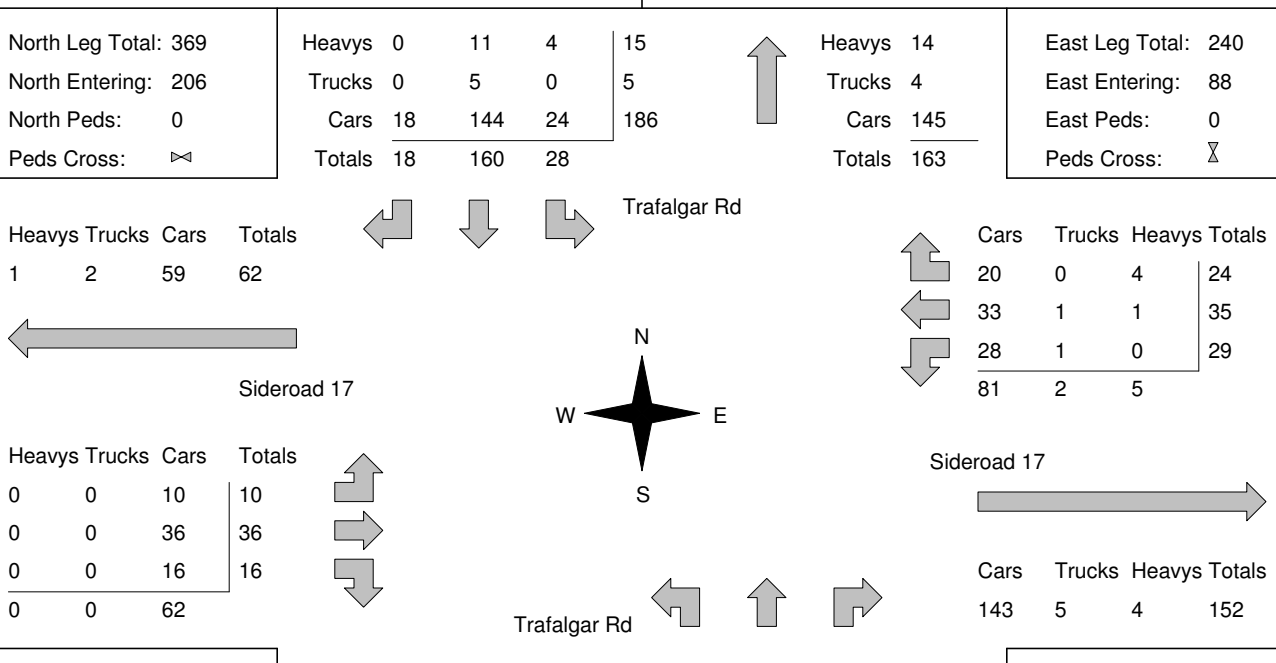
Municipality: Wellington
Site #: 0000000006
Intersection: Trafalgar Rd & Sideroad 17
TFR File #: 6
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Trafalgar Rd runs N/S



Comments

Trafalgar Rd @ Sideroad 17

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:30:00
To: 17:30:00

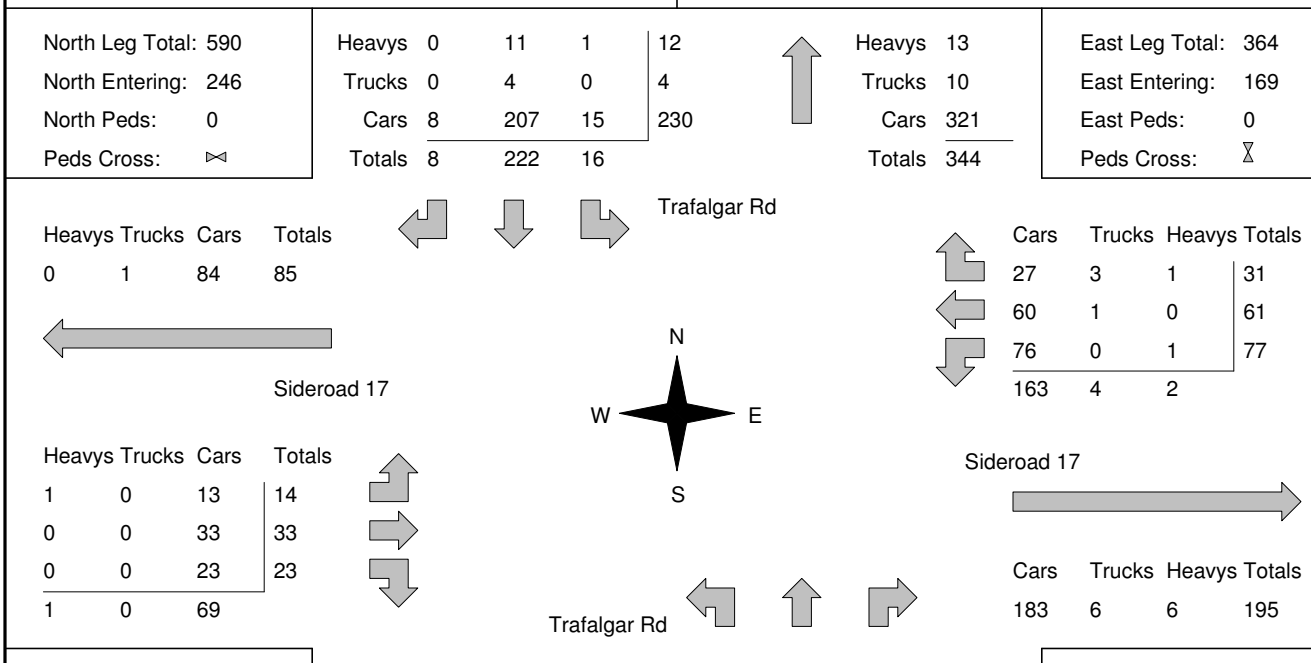
Municipality: Wellington
Site #: 0000000006
Intersection: Trafalgar Rd & Sideroad 17
TFR File #: 6
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Trafalgar Rd runs N/S



Comments

Trafalgar Rd @ Sideroad 17

Total Count Diagram

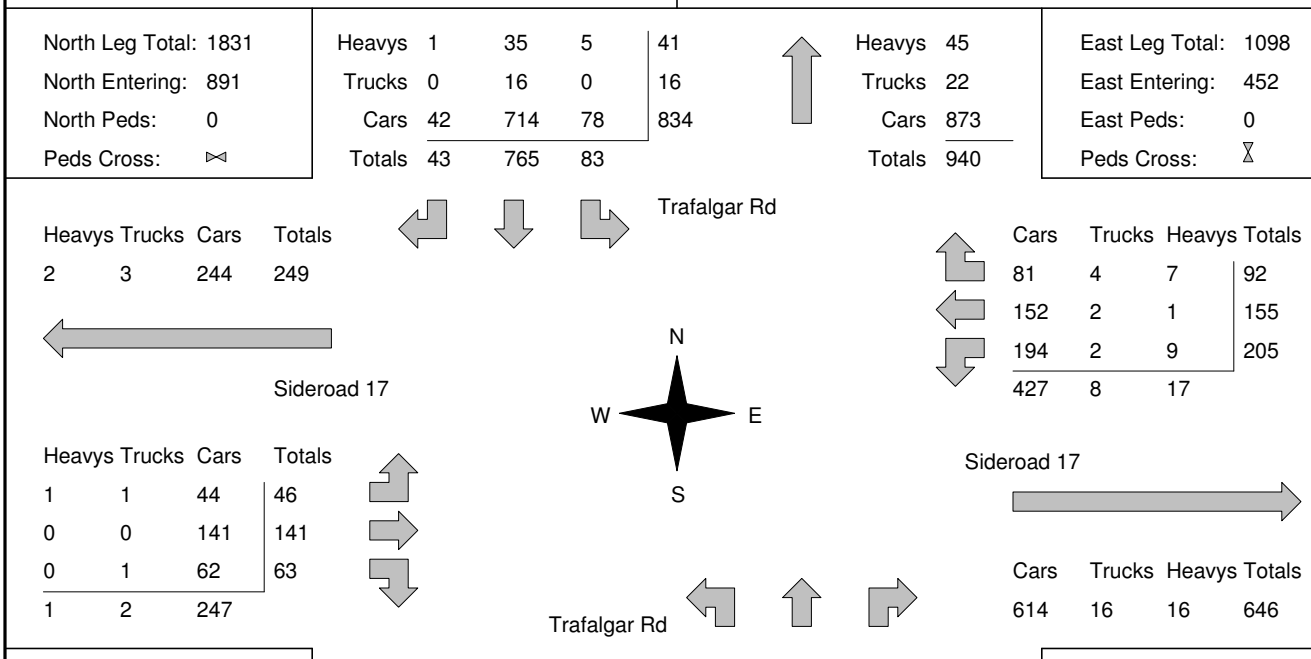
Municipality: Wellington
Site #: 0000000006
Intersection: Trafalgar Rd & Sideroad 17
TFR File #: 6
Count date: 1-Sep-2021

Weather conditions:
Clear/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Trafalgar Rd runs N/S



Comments

APPENDIX B

Transportation Tomorrow Survey

Mon Feb 28 2022 11:17:01 GMT-0500 (Eastern Standard Time) - Run Time: 1160ms

Cross Tabulation Query Form - Person - 2016 v1.1

Row: Planning district of household - pd_hhld
Column: Regional municipality of employment - region_emp

RowG:(79)
ColG:
TblG:

Filters:
No Filters

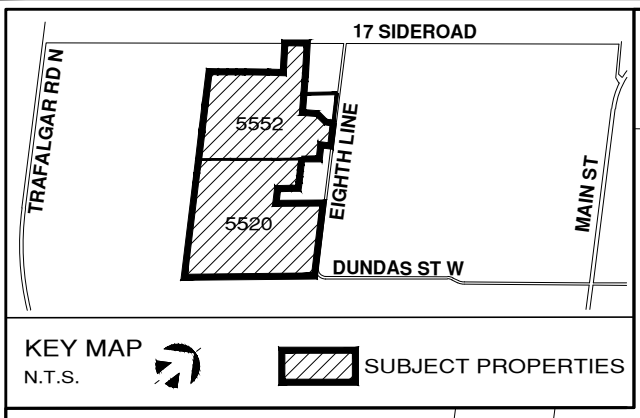
Persons 2016
Table:

	Toronto	York	Peel	Halton	Hamilton	Waterloo	Guelph	Wellington	Orangeville	Simcoe	Dufferin	
1	614	21	1844	721	34	202	152	1708	96	113	71	5576
	11%	0%	33%	13%	1%	4%	3%	31%	2%	2%	1%	100%

ROUTES	
124 NW	20%
Trafalgar S	19%
124 SE	11%
Trefalgar N	5%
HWY 23N	6%
HWY 52 S	38%
	100%

APPENDIX C

Draft Plan



17 SIDEROAD

EXISTING RESIDENTIAL

STREET 'C'

SWM Pond
1.53 ha

STREET 'C'

STREET 'B'

STREET 'A'

Medium Density Block
±64 Units
2.11 ha

15m Sanitary
Servicing Easement

LANDS TO BE RETAINED
EXISTING HOUSE AND BARN
TO REMAIN

VACANT / AGRICULTURE

STREET 'C'

Natural Heritage System

SWM Pond
1.77 ha

EIGHTH LINE

5552 EIGHTH LINE

STREET 'D'

Medium Density Block
±46 Units
1.09 ha

Park
1.93 ha

Pump
Station
0.15 ha

STREET 'E'

STREET 'F'

STREET 'A'

Natural Heritage System

EXISTING RESIDENTIAL

ERIN HEIGHTS GOLF COURSE

5520 EIGHTH LINE

STREET 'E'

NHS

STREET 'H'

EXISTING RESIDENTIAL

ERIN HEIGHTS DRIVE

Natural Heritage System

STREET 'G'

EIGHTH LINE

DELERIN CRESCENT

DUNDAS STREET W

ERIN
5552 EIGHTH LINE &
5520 EIGHTH LINE

Preliminary Composite Lotted Plan

Unit Type	Unit Count (±)	%
30' Singles	121	24
36' Singles	204	40
43' Singles	66	13
66' Singles	1	-
23' Townhouses	116	23
Total	508	100

mattamyHOMES
COSCORP INC.

SCALE 1:3500

June 2, 2022

KORSIAK | Urban Planning

S:\Korsiak & Company\MATTAMY\Erin\Lotted Plan\2022-06\Erin - Prelim Composite Lotted Plan - Jun 2 22_kc.dwg

APPENDIX D

Signal Timing Plans

Wellington County 24-36 - 124 & 23

Configuration Phase Sequence Page 1

Phase Ring (MM)1-1-1

Phase															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	1	1	2	2	2	2	1	1	2	2	1	1	2	2

Hardware Alternate Sequence Enable: No

Phase Ring Sequence

Sequence	Ring	Phase															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Barrier Mode	B		B		B		B		B							
1	1	1	2	3	4	9	10	13	14	0	0	0	0	0	0	0	0
1	2	5	6	7	8	11	12	15	16	0	0	0	0	0	0	0	0
2	1	2	1	3	4	10	9	13	14	0	0	0	0	0	0	0	0
2	2	5	6	7	8	11	12	15	16	0	0	0	0	0	0	0	0
3	1	1	2	4	3	9	10	14	13	0	0	0	0	0	0	0	0
3	2	5	6	7	8	11	12	15	16	0	0	0	0	0	0	0	0
4	1	2	1	4	3	10	9	14	13	0	0	0	0	0	0	0	0
4	2	5	6	7	8	11	12	15	16	0	0	0	0	0	0	0	0
5	1	1	2	3	4	9	10	13	14	0	0	0	0	0	0	0	0
5	2	6	5	7	8	12	11	15	16	0	0	0	0	0	0	0	0
6	1	2	1	3	4	10	9	13	14	0	0	0	0	0	0	0	0
6	2	6	5	7	8	12	11	15	16	0	0	0	0	0	0	0	0
7	1	1	2	4	3	9	10	14	13	0	0	0	0	0	0	0	0
7	2	6	5	7	8	12	11	15	16	0	0	0	0	0	0	0	0
8	1	2	1	4	3	10	9	14	13	0	0	0	0	0	0	0	0
8	2	6	5	7	8	12	11	15	16	0	0	0	0	0	0	0	0
9	1	1	2	3	4	9	10	13	14	0	0	0	0	0	0	0	0
9	2	5	6	8	7	11	12	16	15	0	0	0	0	0	0	0	0
10	1	2	1	3	4	10	9	13	14	0	0	0	0	0	0	0	0
10	2	5	6	8	7	11	12	16	15	0	0	0	0	0	0	0	0
11	1	1	2	4	3	9	10	14	13	0	0	0	0	0	0	0	0
11	2	5	6	8	7	11	12	16	15	0	0	0	0	0	0	0	0
12	1	2	1	4	3	10	9	14	13	0	0	0	0	0	0	0	0
12	2	5	6	8	7	11	12	16	15	0	0	0	0	0	0	0	0
13	1	1	2	3	4	9	10	13	14	0	0	0	0	0	0	0	0
13	2	6	5	8	7	12	11	16	15	0	0	0	0	0	0	0	0
14	1	2	1	3	4	10	9	13	14	0	0	0	0	0	0	0	0
14	2	6	5	8	7	12	11	16	15	0	0	0	0	0	0	0	0
15	1	1	2	4	3	9	10	14	13	0	0	0	0	0	0	0	0
15	2	6	5	8	7	12	11	16	15	0	0	0	0	0	0	0	0
16	1	2	1	4	3	10	9	14	13	0	0	0	0	0	0	0	0
16	2	6	5	8	7	12	11	16	15	0	0	0	0	0	0	0	0

Phase Compatibility (MM)1-1-2

Phase 1	Phase 2
1	5
1	6
2	5
2	6
3	7
3	8
4	7
4	8
9	11
9	12
10	11
10	12
13	15
13	16
14	15
14	16

Phase Direction Descriptions

Phase	Description

Overlap Direction Descriptions

Overlap	Description

Administration (MM)1-7-1
Enable CRC Check: No
CRC: 0000
Request Download Program Data: No
Enable Automatic Backup to Datakey: No

Wellington County 24-36 - 124 & 23

Configuration **Phase Sequence Page 2**

In Use(MM)1-2

Phases In Use
2
4
6
8

Exclusive Ped(MM)1-2

Phase

Backup Prevent(MM)1-1-3

Phase	Timing Phase	Backup

Simultaneous Gap(MM)1-1-4

Phase	Must Gap with Phase

Disable(MM)1-1-4

Phase

Load Switch Assignments (MMU Channel) (MM)1-3

Phase	Overlap	Type	Dim				Auto		Flash Together
			R	Y	G	D	R	Y	
1	1	V				+	Yes		
2	2	V				+	Yes		Yes
3	3	V				+	Yes		
4	4	V				+	Yes		Yes
5	5	V				-	Yes		
6	6	V				-	Yes		Yes
7	7	V				-	Yes		
8	8	V				-	Yes		Yes
9	2	P				+			
10	4	P				+			
11	6	P				-			
12	8	P				-			
13	1	O				+	Yes		
14	2	O				-	Yes		Yes
15	3	O				+	Yes		
16	4	O				-	Yes		Yes

Wellington County 24-36 - 124 & 23

Configuration Port 1 (SDLC)

SDLC Options (MM)1-4-1

Bus Interface Terminal/Facilities

BIU	Term and Facility Enable	Detector Rack Enable
1	Yes	Yes
2	Yes	No
3	No	No
4	No	No
5	No	No
6	No	No
7	No	No
8	No	No

Enable TS2/MMU Type Cabinet: No
Enable MMU Extended Status: No
Enable SDLC Stop Time: No
Enable 3 Critical RFE's Lockup: Yes
MMU To CU SDLC External Start: Enabled
Diagonstics (Test Fixture) Enable: No

Secondary To Secondary Addressing

ID	Term and Facility Enable	Detector Rack Enable
1	No	No
2	No	No
3	No	No
4	No	No
5	No	No
6	No	No
7	No	No
8	No	No

Secondary To Secondary Addressing MMU: No
Secondary To Secondary Addressing Diagonstics: No

MMU Program (MM)1-4-2

Channel Can Serve with Channel	
Channel 1	**Channel 2**
1	5
1	6
1	11
2	5
2	6
2	9
2	11
3	7
3	8
3	12
4	7
4	8
4	10
4	12
5	9
6	9
6	11
7	10
8	10
8	12
9	11
10	12

Color Check Enable (MM)1-4-3
Enable Color Check: Yes

Color Check Enable

MMU Channel	Green	Yellow	Red
1	Yes	Yes	Yes
2	Yes	Yes	Yes
3	Yes	Yes	Yes
4	Yes	Yes	Yes
5	Yes	Yes	Yes
6	Yes	Yes	Yes
7	Yes	Yes	Yes
8	Yes	Yes	Yes
9	Yes	Yes	Yes
10	Yes	Yes	Yes
11	Yes	Yes	Yes
12	Yes	Yes	Yes

Wellington County 24-36 - 124 & 23

Configuration Communications

Ethernet Port Configuration (MM)1-5-1

Controller IP:	10.70.10.51
Subnet Mask:	255.255.255.0
Default Gateway IP:	10.70.10.1
Server IP:	10.70.10.1

NTCIP Parameters (MM)1-5-5

Backup Time:	0
UDP Port:	501
Ethernet Priority:	1
Port 2 Priority:	4
Port 3A Priority:	2
Port 3B Priority:	3

Note for 2070: Port 2 is C50S, Port 3A is C21S, and Port 3B is C22S

Port Configuration (MM)1-5-2 to 1-5-4

Port	Protocol	Enable	Data Rate	Data Parity Stop	Modem Setup String	User String	Comm Port Address	System Detector 9-1	Telemetry Response Delay	Duplex Half/Full	Flow Control	AB3418 NTCIP Group Address	AB3418 NTCIP Single Flag Enable	RTS to CTS Delay	RTS Turn Off Delay	Droupout Time	Early RTS	FSK Hardware	Rail Road	Rail Road Line	ATCS Group	Wayside Device	ATCS Device	Wayside SubNode	ATCS SubNode
2	NTCIP	Yes	9600	8 N 1	None		1	0	0.0	Half	No	0	No	0.0	0.0	10	No	Yes	0	0	0	0	0	0	0
3A	NTCIP	No	19.2K	8 N 1	None		0	0	0.0	Full	Yes	0	No	0.0	0.0	10	No	Yes	0	0	0	0	0	0	0
3B	ECPIP	No	1200	8 N 1	None		0	0	0.9	Full	Yes	0	No	14.0	2.0	10	No	Yes	0	0	0	0	0	0	0

ECPIP Parameters (MM)1-5-6

Controller Address:	0
Expanded System Detector Address:	0

Local System Detector

Local System Detector	Number

Wellington County 24-36 - 124 & 23

Configuration **Logging/Display**

Enable Event Logs (MM)1-6-1

Critical RFE's:	Yes
3 Critical RFE's in 24 Hours:	Yes
MMU Flash Faults:	Yes
Local Flash Faults:	Yes
Non-Critical RFE's (Det/Test):	Yes
Detector Errors:	Yes
Coordination Errors:	Yes
Controller Download:	Yes
Preempt:	Yes
TSP:	Yes
Power On/Off:	Yes
Low Battery:	Yes
Access:	Yes
Data Change:	Yes

Alarm Logs (MM)1-6-1

Enabled: 12345678910111213141516

Display Options (MM)1-7-2

Key Click Enable:	Yes
Backlight Enable:	Yes
LED Mode:	Auto
Display Mode:	Basic

Wellington County 24-36 - 124 & 23

Logic Processor Page 1

Statement Control (MM)1-8-1

LP	Statement Control

Wellington County 24-36 - 124 & 23

Logic Processor Page 2

Logic Statements (MM)1-8-2

Wellington County 24-36 - 124 & 23

Controller Timing Plan (MM)2-1
Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Green	5	35	5	10	5	35	5	10	5	5	5	5	5	5	5	5
BK Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	16	0	10	0	16	0	10	0	10	0	10	0	10	0	10
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	19	0	10	0	19	0	10	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max 1	35	0	35	20	35	0	35	20	35	35	35	35	35	35	35	35
Max 2	40	0	40	0	40	0	40	0	40	40	40	40	40	40	40	40
Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Stp	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.2	3.0	4.2	3.0	4.2	3.0	4.2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	2.7	1.0	2.2	1.0	2.7	1.0	2.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPT Duc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
BK Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max 1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max 2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Stp	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPT Duc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
BK Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max 1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max 2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Stp	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPT Duc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
BK Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max 1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max 2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Stp	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPT Duc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Wellington County 24-36 - 124 & 23

Controller Overlaps
Vehicle Overlaps (MM)2-2

Overlap	Type	Lag Green	Yellow	Red	Advance Green

Phases

Overlap	Phase	Included	Protect	Modifier	Ped Protect	Not Overlap	Lag X Phase	Lag 2 Phase	Flash Green

PPLT FYA

Overlap	Protected Phase	Permissive Phase	Flash Arrow Output	Flash Arrow Channel	FYA Delay	FYA Clearance	Special Function Disable

Guaranteed Minimum Time Data (MM) 2-4
Phase Time Data

Phase	Min Green	Walk	Ped Clear	Yellow	Red Clear	Overlap Green
A01	5	0	7	3.0	0.0	5
B02	5	0	7	3.0	0.0	5
C03	5	0	7	3.0	0.0	5
D04	5	0	7	3.0	0.0	5
E05	5	0	7	3.0	0.0	5
F06	5	0	7	3.0	0.0	5
G07	5	0	7	3.0	0.0	5
H08	5	0	7	3.0	0.0	5
I09	5	0	7	3.0	0.0	5
J10	5	0	7	3.0	0.0	5
K11	5	0	7	3.0	0.0	5
L12	5	0	7	3.0	0.0	5
M13	5	0	7	3.0	0.0	5
N14	5	0	7	3.0	0.0	5
O15	5	0	7	3.0	0.0	5
P16	5	0	7	3.0	0.0	5

Wellington County 24-36 - 124 & 23

Controller **Pedestrian Overlaps**
Pedestrian Overlaps (MM) 2-3

Included Phase	Ped Overlap

Wellington County 24-36 - 124 & 23

Controller Start/Fash (MM) 2-5

Startup

Phase	Phase Setting
2	R
6	R

Overlap
A
B
C
D

Flash > Mon: Yes
Flash Time: 0
All Red: 0
Power Start Sequence: 1

Automatic Flash

Entry Phase
2
6

Exit Phase
2
6

Overlap Exit
A
B
C
D

Flash > Mon: Yes
Exit Flash Interval: W
Minimum Auto Flash: 8
Minimumin Recall: No
Cycle Through Phase: No

Wellington County 24-36 - 124 & 23

Controller Options
Controller Options (MM)2-6-1

Phase	Flashing Green Phase	Guaranteed Passage	Non Act 1	Non Act 2	Dual Entry	Conditional Service	Conditional Reservice	Ped Reservice	Rest In Walk	Flashing Walk	Ped Clear Yellow	Ped Clear Red	IGRN + Veh Ext
2	No	No	No	No	Yes	No	No	No	Yes	No	No	No	No
4	No	No	No	No	Yes	No	No	No	No	No	No	No	No
6	No	No	No	No	Yes	No	No	No	Yes	No	No	No	No
8	No	No	No	No	Yes	No	No	No	No	No	No	No	No

Ped Clear Protect: Off Red Revert: 2.0

Act Pre-Time (MM)2-7
Pre-Time Mode Enable: No Free Input Enables Pre-Timed: Yes

Pre-Timed Phase

Phase Recall Options (MM)2-8

Plan	Phase	Lock Detector	Vehicle Recall	Ped Recall	Max Recall	Soft Recall	No Rest	AI Calc
1	2	No	Yes	Yes	No	No	No	No
1	6	No	Yes	Yes	No	No	No	No
1	9	Yes	No	No	No	No	No	No
1	10	Yes	No	No	No	No	No	No
1	11	Yes	No	No	No	No	No	No
1	12	Yes	No	No	No	No	No	No
1	13	Yes	No	No	No	No	No	No
1	14	Yes	No	No	No	No	No	No
1	15	Yes	No	No	No	No	No	No
1	16	Yes	No	No	No	No	No	No
2	1	Yes	No	No	No	No	No	No
2	2	Yes	No	No	No	No	No	No
2	3	Yes	No	No	No	No	No	No
2	4	Yes	No	No	No	No	No	No
2	5	Yes	No	No	No	No	No	No
2	6	Yes	No	No	No	No	No	No
2	7	Yes	No	No	No	No	No	No
2	8	Yes	No	No	No	No	No	No
2	9	Yes	No	No	No	No	No	No
2	10	Yes	No	No	No	No	No	No
2	11	Yes	No	No	No	No	No	No
2	12	Yes	No	No	No	No	No	No
2	13	Yes	No	No	No	No	No	No
2	14	Yes	No	No	No	No	No	No
2	15	Yes	No	No	No	No	No	No
2	16	Yes	No	No	No	No	No	No
3	1	Yes	No	No	No	No	No	No
3	2	Yes	No	No	No	No	No	No
3	3	Yes	No	No	No	No	No	No
3	4	Yes	No	No	No	No	No	No
3	5	Yes	No	No	No	No	No	No
3	6	Yes	No	No	No	No	No	No
3	7	Yes	No	No	No	No	No	No
3	8	Yes	No	No	No	No	No	No
3	9	Yes	No	No	No	No	No	No
3	10	Yes	No	No	No	No	No	No
3	11	Yes	No	No	No	No	No	No
3	12	Yes	No	No	No	No	No	No
3	13	Yes	No	No	No	No	No	No
3	14	Yes	No	No	No	No	No	No
3	15	Yes	No	No	No	No	No	No
3	16	Yes	No	No	No	No	No	No
4	1	Yes	No	No	No	No	No	No
4	2	Yes	No	No	No	No	No	No
4	3	Yes	No	No	No	No	No	No
4	4	Yes	No	No	No	No	No	No
4	5	Yes	No	No	No	No	No	No
4	6	Yes	No	No	No	No	No	No
4	7	Yes	No	No	No	No	No	No
4	8	Yes	No	No	No	No	No	No
4	9	Yes	No	No	No	No	No	No
4	10	Yes	No	No	No	No	No	No
4	11	Yes	No	No	No	No	No	No
4	12	Yes	No	No	No	No	No	No
4	13	Yes	No	No	No	No	No	No
4	14	Yes	No	No	No	No	No	No
4	15	Yes	No	No	No	No	No	No
4	16	Yes	No	No	No	No	No	No

Wellington County 24-36 - 124 & 23

Coordination Options

Coordination Options (MM)3-1

Manual Pattern:	Auto
ECPI Coord:	Yes
System Source:	TBC
System Format:	STD
Splits In:	Seconds
Offsets In:	Seconds
Transition:	Smooth
Max Select:	MAXINH
Dwell/Add Time:	0
Dly Coord Wz-Lz:	No
Force Off:	Float
Offset Reference:	Lead
Use Ped Time:	Yes
Ped Recall:	No
Ped Resv:	No
Local Zero Ovrd:	No
Fo Add Ini Green:	No
Re-sync Count:	0
Multisync:	No

Split Demand (MM)3-5

Demand 1	Demand 2
Phase	Phase

Demand	Detector	Call Time	Cycle Count

Auto Perm Minimum Green (Seconds) (MM)3-4

Phase	Min Green

Wellington County 24-36 - 124 & 23

Coordination Pattern Data

Pattern Data (MM)3-2

Pattern	Split Pattern	TS2	Cycle	Std(COS)	Offset Value	Splits In	Offsets In	Actuated Coord

Pattern	Timing Plan	Actuated Walk Rest	Sequence	Phase Reservice	Action Plan	XArt Pattern	Vehicle Perm 1	Vehicle Perm 2	Vehicle Perm 3

Pattern	Ring Split Ext 1	Ring Split Ext 2	Ring Split Ext 3	Ring Split Ext 4	Split Demand Pattern 1	Split Demand Pattern 2	Ring Displ 2	Ring Displ 3	Ring Displ 4

Split Preference Phases

Pattern	Phase	Preference 1	Preference 2

Special Functions

Pattern	Function	Output

Split Pattern Data (MM)3-3

Coord Phases

Split Pattern	Phase	Split

Split/Modes

Split Pattern	Mode	Phase														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Wellington County 24-36 - 124 & 23

Preemptor **Preempt Plan (MM)4-1**

Preempt Phases

Preempt	Phase	Track Clear Veh	Dwell Veh	Dwell Ped	Cycling Veh	Cycling Ped	Exit Phase	Exit Calls	Special Function

Preempt Overlaps

Preempt	Overlap	Track Clear	Enable Trailing	Dwell Overlap	Cycling Overlap

Preempt	Enable	Preempt Override	Interlock Enable	Detector Lock	Delay	Inhibit	Override Flash	Duration	CLR > GRN
1	No	Yes	No	Yes	0	0	No	0	No
2	No	Yes	No	Yes	0	0	No	0	No
3	No	Yes	No	Yes	0	0	No	0	No
4	No	Yes	No	Yes	0	0	No	0	No
5	No	Yes	No	Yes	0	0	No	0	No
6	No	Yes	No	Yes	0	0	No	0	No
7	No	Yes	No	Yes	0	0	No	0	No
8	No	Yes	No	Yes	0	0	No	0	No
9	No	Yes	No	Yes	0	0	No	0	No
10	No	Yes	No	Yes	0	0	No	0	No

Preempt	Term Overlap Asap	PC Through Yellow	Terminate Phase	Ped Dark	Track Clearance Re-service	Dwell Flash	Linked Pmt	Flash Exit Color	Preempt To Coord	Fault Type
1	No	No	No	No	No	Off	0	Red	No	Hard
2	No	No	No	No	No	Off	0	Green	No	Hard
3	No	No	No	No	No	Off	0	Green	No	Hard
4	No	No	No	No	No	Off	0	Green	No	Hard
5	No	No	No	No	No	Off	0	Green	No	Hard
6	No	No	No	No	No	Off	0	Green	No	Hard
7	No	No	No	No	No	Off	0	Green	No	Hard
8	No	No	No	No	No	Off	0	Green	No	Hard
9	No	No	No	No	No	Off	0	Green	No	Hard
10	No	No	No	No	No	Off	0	Green	No	Hard

Preempt	Exit Timing Plan	Reservice	Free During Pmt Ring 1	Free During Pmt Ring 2	Free During Pmt Ring 3	Free During Pmt Ring 4
1	0	0	No	No	No	No
2	0	0	No	No	No	No
3	0	0	No	No	No	No
4	0	0	No	No	No	No
5	0	0	No	No	No	No
6	0	0	No	No	No	No
7	0	0	No	No	No	No
8	0	0	No	No	No	No
9	0	0	No	No	No	No
10	0	0	No	No	No	No

Preempt	Entrance Walk	Entrance Ped Clear	Entrance Min Green	Entrance Yellow	Entrance Red	Track Clear Min Green	Gate Down Ext Green	Gate Down Max Green	Track Clear Yellow	Track Clear Red
1	0	255	5	4.0	1.0	0	0	0	4.0	1.0
2	0	255	5	4.0	1.0	0	0	0	4.0	1.0
3	0	255	5	4.0	1.0	0	0	0	4.0	1.0
4	0	255	5	4.0	1.0	0	0	0	4.0	1.0
5	0	255	5	4.0	1.0	0	0	0	4.0	1.0
6	0	255	5	4.0	1.0	0	0	0	4.0	1.0
7	0	255	5	4.0	1.0	0	0	0	4.0	1.0
8	0	255	5	4.0	1.0	0	0	0	4.0	1.0
9	0	255	5	4.0	1.0	0	0	0	4.0	1.0
10	0	255	5	4.0	1.0	0	0	0	4.0	1.0

Preempt	Min Dwell Time	Extend Preempt Input Time	Max Preempt Call Time	Exit Yellow Time	Exit Red Time	Preempt Active Out	Preempt Active Dwell	Other Priority Preempt	Non-Priority Preempt
1	0	0.0	0	4.0	1.0	On	No	Off	Off
2	0	0.0	0	4.0	1.0	On	No	Off	Off
3	0	0.0	0	4.0	1.0	On	No	Off	Off
4	0	0.0	0	4.0	1.0	On	No	Off	Off
5	0	0.0	0	4.0	1.0	On	No	Off	Off
6	0	0.0	0	4.0	1.0	On	No	Off	Off
7	0	0.0	0	4.0	1.0	On	No	Off	Off
8	0	0.0	0	4.0	1.0	On	No	Off	Off
9	0	0.0	0	4.0	1.0	On	No	Off	Off
10	0	0.0	0	4.0	1.0	On	No	Off	Off

Preemptor **Preempt Filtering**
Enable Preempt Filtering and TSP/SCP
(MM)4-2

Input	Solid	Pulsing
3	Preemption -3	Preemption -7
4	Preemption -4	Preemption -8
5	Preemption -5	Preemption -9
6	Preemption -6	Preemption -10

Wellington County 24-36 - 124 & 23

Time Base **Clock/Calendar**
Clock/Calendar Options (MM)5-1

Enable Action Plan:	0
Sync Reference Time:	12:00 AM
Sync Reference:	Reference Time
Day Light Savings:	No
Time Reset Input Set Time:	3:30:00
Standard Time From GMT:	0

Wellington County 24-36 - 124 & 23

Time Base Action Plan
Action Plan (MM)5-2

Plan	Pattern	Veh Det Plan	Flash	Red Rest	Controller Seq	Timing Plan	System Override	Detector Log	Veh Det Diag Plan	Ped Det Diag Plan	Dimming Enable

Action Plan Phases

Plan	Phase	Ped Rcl	Walk 2	Vex 2	Veh Rcl	Max Rcl	Max 2	Max 3	CS Inhibit	Omit

Acion Plan Special Functions

Plan	Function

Action Plan Auxiliary Functions

Plan	Function

Logic Statement Control

Plan	LP	Statement Control

Wellington County 24-36 - 124 & 23

Time Base Day Plan/Schedule
Day Plan (MM)5-3

Plan	Event	Action Plan	Start Time

Schedule (MM)5-4

Schedule Number	Day Plan Number	Months	Days of Week	Days of Month

Wellington County 24-36 - 124 & 23

Time Base Exceptions
Exception Day Program (MM)5-5

Day	Fixed/Float	Month	Day of Week/Month	Week of Month/Year	Day Plan
1	FLOAT	0	0	0	0
2	FLOAT	0	0	0	0
3	FLOAT	0	0	0	0
4	FLOAT	0	0	0	0
5	FLOAT	0	0	0	0
6	FLOAT	0	0	0	0
7	FLOAT	0	0	0	0
8	FLOAT	0	0	0	0
9	FLOAT	0	0	0	0
10	FLOAT	0	0	0	0
11	FLOAT	0	0	0	0
12	FLOAT	0	0	0	0
13	FLOAT	0	0	0	0
14	FLOAT	0	0	0	0
15	FLOAT	0	0	0	0
16	FLOAT	0	0	0	0
17	FLOAT	0	0	0	0
18	FLOAT	0	0	0	0
19	FLOAT	0	0	0	0
20	FLOAT	0	0	0	0
21	FLOAT	0	0	0	0
22	FLOAT	0	0	0	0
23	FLOAT	0	0	0	0
24	FLOAT	0	0	0	0
25	FLOAT	0	0	0	0
26	FLOAT	0	0	0	0
27	FLOAT	0	0	0	0
28	FLOAT	0	0	0	0
29	FLOAT	0	0	0	0
30	FLOAT	0	0	0	0
31	FLOAT	0	0	0	0
32	FLOAT	0	0	0	0
33	FLOAT	0	0	0	0
34	FLOAT	0	0	0	0
35	FLOAT	0	0	0	0
36	FLOAT	0	0	0	0

Wellington County 24-36 - 124 & 23

Detectors

Detectors Page 1

Vehicle Detectors Setup (MM)6-1

Vehicle Plan	Detector Number	Called	Type
4	4	4	N
4	8	8	G

Vehicle Detector Setup (MM)6-2 continued

Detector Number	ECPI	TS2 Detector	Detector Description
1	N-NTCIP	Yes	
2	N-NTCIP	Yes	
3	N-NTCIP	Yes	
4	N-NTCIP	Yes	
5	N-NTCIP	Yes	
6	N-NTCIP	Yes	
7	N-NTCIP	Yes	
8	G-GREEN EXT	Yes	
9	N-NTCIP	Yes	
10	N-NTCIP	Yes	
11	N-NTCIP	Yes	
12	N-NTCIP	Yes	
13	N-NTCIP	Yes	
14	N-NTCIP	Yes	
15	N-NTCIP	Yes	
16	N-NTCIP	Yes	
17	N-NTCIP	Yes	
18	N-NTCIP	Yes	
19	N-NTCIP	Yes	
20	N-NTCIP	Yes	
21	N-NTCIP	Yes	
22	N-NTCIP	Yes	
23	N-NTCIP	Yes	
24	N-NTCIP	Yes	
25	N-NTCIP	Yes	
26	N-NTCIP	Yes	
27	N-NTCIP	Yes	
28	N-NTCIP	Yes	
29	N-NTCIP	Yes	
30	N-NTCIP	Yes	
31	N-NTCIP	Yes	
32	N-NTCIP	Yes	
33	N-NTCIP	Yes	
34	N-NTCIP	Yes	
35	N-NTCIP	Yes	
36	N-NTCIP	Yes	
37	N-NTCIP	Yes	
38	N-NTCIP	Yes	
39	N-NTCIP	Yes	
40	N-NTCIP	Yes	
41	N-NTCIP	Yes	
42	N-NTCIP	Yes	
43	N-NTCIP	Yes	
44	N-NTCIP	Yes	
45	N-NTCIP	Yes	
46	N-NTCIP	Yes	
47	N-NTCIP	Yes	
48	N-NTCIP	Yes	
49	N-NTCIP	Yes	
50	N-NTCIP	Yes	
51	N-NTCIP	Yes	
52	N-NTCIP	Yes	
53	N-NTCIP	Yes	
54	N-NTCIP	Yes	
55	N-NTCIP	Yes	
56	N-NTCIP	Yes	
57	N-NTCIP	Yes	
58	N-NTCIP	Yes	
59	N-NTCIP	Yes	
60	N-NTCIP	Yes	
61	N-NTCIP	Yes	
62	N-NTCIP	Yes	
63	N-NTCIP	Yes	
64	N-NTCIP	Yes	

Vehicle Detector Setup (MM)6-2 continued

Detector Number	Vehicle Plan	Assigned Phase	Switch Phase	Extend Time/Passage Time	Delay Time	Queue Limit/Disconnect Time	Added Option	Call Option	NTCIP Occupancy	NTCIP Volume	ECPI Log	Lock In	Ext Option
1	1	1	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
1	2	1	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
1	3	1	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
1	4	1	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
2	1	2	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
2	2	2	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
2	3	2	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
2	4	2	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
3	1	4	0	0.0	10.0	0	No	Yes	No	No	No	None	Passage
3	2	4	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
3	3	3	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
3	4	3	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
4	1	4	0	0.0	10.0	0	No	Yes	No	No	No	None	Passage
4	2	4	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
4	3	4	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
4	4	4	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
5	1	5	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
5	2	5	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
5	3	5	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
5	4	5	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
6	1	6	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage

6	2	6	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
6	3	6	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
6	4	6	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
7	1	7	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
7	2	7	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
7	3	7	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
7	4	7	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
8	1	8	0	0.0	4.0	0	No	Yes	No	No	No	None	Passage
8	2	8	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
8	3	8	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
8	4	8	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
9	1	9	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
9	2	9	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
9	3	9	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
9	4	9	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
10	1	10	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
10	2	10	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
10	3	10	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
10	4	10	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
11	1	11	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
11	2	11	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
11	3	11	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
11	4	11	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
12	1	12	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
12	2	12	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
12	3	12	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
12	4	12	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
13	1	13	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
13	2	13	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
13	3	13	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
13	4	13	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
14	1	14	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
14	2	14	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
14	3	14	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
14	4	14	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
15	1	15	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
15	2	15	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
15	3	15	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
15	4	15	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
16	1	16	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
16	2	16	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
16	3	16	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage
16	4	16	0	0.0	0.0	0	No	Yes	No	No	No	None	Passage

Ped Detector Options (MM)6-3

Phase Ped Detector (NTCIP)

Local Ped Detector	Number
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16

Local System Detector

Local System Detector	Number

Wellington County 24-36 - 124 & 23

Detectors

Detectors Page 2

Log - Speed Detector Setup (MM)6-5
NTCIP Log Period: 0 ECPI Log Period: TBAP Length Unit: Inch

Speed Detector	Local Detector	One/Two Detector	Vehicle Length	Trap Length	Enable Log
1	0	1	0	0	No
2	0	1	0	0	No
3	0	1	0	0	No
4	0	1	0	0	No
5	0	1	0	0	No
6	0	1	0	0	No
7	0	1	0	0	No
8	0	1	0	0	No
9	0	1	0	0	No
10	0	1	0	0	No
11	0	1	0	0	No
12	0	1	0	0	No
13	0	1	0	0	No
14	0	1	0	0	No
15	0	1	0	0	No
16	0	1	0	0	No

Vehicle Detector Diagnostics (MM)6-6

Plan	Detector	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay
1	1	0	0	0	1	255	0
1	2	0	0	0	1	255	0
1	3	0	0	0	1	255	0
1	4	0	0	0	1	255	0
1	5	0	0	0	1	255	0
1	6	0	0	0	1	255	0
1	7	0	0	0	1	255	0
1	8	0	0	0	1	255	0
1	9	0	0	0	1	255	0
1	10	0	0	0	1	255	0
1	11	0	0	0	1	255	0
1	12	0	0	0	1	255	0
1	13	0	0	0	1	255	0
1	14	0	0	0	1	255	0
1	15	0	0	0	1	255	0
1	16	0	0	0	1	255	0
1	17	0	0	0	1	255	0
1	18	0	0	0	1	255	0
1	19	0	0	0	1	255	0
1	20	0	0	0	1	255	0
1	21	0	0	0	1	255	0
1	22	0	0	0	1	255	0
1	23	0	0	0	1	255	0
1	24	0	0	0	1	255	0
1	25	0	0	0	1	255	0
1	26	0	0	0	1	255	0
1	27	0	0	0	1	255	0
1	28	0	0	0	1	255	0
1	29	0	0	0	1	255	0
1	30	0	0	0	1	255	0
1	31	0	0	0	1	255	0
1	32	0	0	0	1	255	0
1	33	0	0	0	1	255	0
1	34	0	0	0	1	255	0
1	35	0	0	0	1	255	0
1	36	0	0	0	1	255	0
1	37	0	0	0	1	255	0
1	38	0	0	0	1	255	0
1	39	0	0	0	1	255	0
1	40	0	0	0	1	255	0
1	41	0	0	0	1	255	0
1	42	0	0	0	1	255	0
1	43	0	0	0	1	255	0
1	44	0	0	0	1	255	0
1	45	0	0	0	1	255	0
1	46	0	0	0	1	255	0
1	47	0	0	0	1	255	0
1	48	0	0	0	1	255	0
1	49	0	0	0	1	255	0
1	50	0	0	0	1	255	0
1	51	0	0	0	1	255	0
1	52	0	0	0	1	255	0
1	53	0	0	0	1	255	0
1	54	0	0	0	1	255	0
1	55	0	0	0	1	255	0
1	56	0	0	0	1	255	0
1	57	0	0	0	1	255	0
1	58	0	0	0	1	255	0
1	59	0	0	0	1	255	0
1	60	0	0	0	1	255	0

1	61	0	0	0	1	255	0
1	62	0	0	0	1	255	0
1	63	0	0	0	1	255	0
1	64	0	0	0	1	255	0
2	1	0	0	0	1	255	0
2	2	0	0	0	1	255	0
2	3	0	0	0	1	255	0
2	4	0	0	0	1	255	0
2	5	0	0	0	1	255	0
2	6	0	0	0	1	255	0
2	7	0	0	0	1	255	0
2	8	0	0	0	1	255	0
2	9	0	0	0	1	255	0
2	10	0	0	0	1	255	0
2	11	0	0	0	1	255	0
2	12	0	0	0	1	255	0
2	13	0	0	0	1	255	0
2	14	0	0	0	1	255	0
2	15	0	0	0	1	255	0
2	16	0	0	0	1	255	0
2	17	0	0	0	1	255	0
2	18	0	0	0	1	255	0
2	19	0	0	0	1	255	0
2	20	0	0	0	1	255	0
2	21	0	0	0	1	255	0
2	22	0	0	0	1	255	0
2	23	0	0	0	1	255	0
2	24	0	0	0	1	255	0
2	25	0	0	0	1	255	0
2	26	0	0	0	1	255	0
2	27	0	0	0	1	255	0
2	28	0	0	0	1	255	0
2	29	0	0	0	1	255	0
2	30	0	0	0	1	255	0
2	31	0	0	0	1	255	0
2	32	0	0	0	1	255	0
2	33	0	0	0	1	255	0
2	34	0	0	0	1	255	0
2	35	0	0	0	1	255	0
2	36	0	0	0	1	255	0
2	37	0	0	0	1	255	0
2	38	0	0	0	1	255	0
2	39	0	0	0	1	255	0
2	40	0	0	0	1	255	0
2	41	0	0	0	1	255	0
2	42	0	0	0	1	255	0
2	43	0	0	0	1	255	0
2	44	0	0	0	1	255	0
2	45	0	0	0	1	255	0
2	46	0	0	0	1	255	0
2	47	0	0	0	1	255	0
2	48	0	0	0	1	255	0
2	49	0	0	0	1	255	0
2	50	0	0	0	1	255	0
2	51	0	0	0	1	255	0
2	52	0	0	0	1	255	0
2	53	0	0	0	1	255	0
2	54	0	0	0	1	255	0
2	55	0	0	0	1	255	0
2	56	0	0	0	1	255	0
2	57	0	0	0	1	255	0
2	58	0	0	0	1	255	0
2	59	0	0	0	1	255	0
2	60	0	0	0	1	255	0
2	61	0	0	0	1	255	0
2	62	0	0	0	1	255	0
2	63	0	0	0	1	255	0
2	64	0	0	0	1	255	0
3	1	0	0	0	1	255	0
3	2	0	0	0	1	255	0
3	3	0	0	0	1	255	0
3	4	0	0	0	1	255	0
3	5	0	0	0	1	255	0
3	6	0	0	0	1	255	0
3	7	0	0	0	1	255	0
3	8	0	0	0	1	255	0
3	9	0	0	0	1	255	0
3	10	0	0	0	1	255	0
3	11	0	0	0	1	255	0
3	12	0	0	0	1	255	0
3	13	0	0	0	1	255	0
3	14	0	0	0	1	255	0
3	15	0	0	0	1	255	0
3	16	0	0	0	1	255	0
3	17	0	0	0	1	255	0
3	18	0	0	0	1	255	0
3	19	0	0	0	1	255	0
3	20	0	0	0	1	255	0
3	21	0	0	0	1	255	0
3	22	0	0	0	1	255	0
3	23	0	0	0	1	255	0
3	24	0	0	0	1	255	0
3	25	0	0	0	1	255	0
3	26	0	0	0	1	255	0

	27	0	0	0	1	255	0
3	28	0	0	0	1	255	0
3	29	0	0	0	1	255	0
3	30	0	0	0	1	255	0
3	31	0	0	0	1	255	0
3	32	0	0	0	1	255	0
3	33	0	0	0	1	255	0
3	34	0	0	0	1	255	0
3	35	0	0	0	1	255	0
3	36	0	0	0	1	255	0
3	37	0	0	0	1	255	0
3	38	0	0	0	1	255	0
3	39	0	0	0	1	255	0
3	40	0	0	0	1	255	0
3	41	0	0	0	1	255	0
3	42	0	0	0	1	255	0
3	43	0	0	0	1	255	0
3	44	0	0	0	1	255	0
3	45	0	0	0	1	255	0
3	46	0	0	0	1	255	0
3	47	0	0	0	1	255	0
3	48	0	0	0	1	255	0
3	49	0	0	0	1	255	0
3	50	0	0	0	1	255	0
3	51	0	0	0	1	255	0
3	52	0	0	0	1	255	0
3	53	0	0	0	1	255	0
3	54	0	0	0	1	255	0
3	55	0	0	0	1	255	0
3	56	0	0	0	1	255	0
3	57	0	0	0	1	255	0
3	58	0	0	0	1	255	0
3	59	0	0	0	1	255	0
3	60	0	0	0	1	255	0
3	61	0	0	0	1	255	0
3	62	0	0	0	1	255	0
3	63	0	0	0	1	255	0
3	64	0	0	0	1	255	0
4	1	0	0	0	1	255	0
4	2	0	0	0	1	255	0
4	3	0	0	0	1	255	0
4	4	0	0	0	1	255	0
4	5	0	0	0	1	255	0
4	6	0	0	0	1	255	0
4	7	0	0	0	1	255	0
4	8	0	0	0	1	255	0
4	9	0	0	0	1	255	0
4	10	0	0	0	1	255	0
4	11	0	0	0	1	255	0
4	12	0	0	0	1	255	0
4	13	0	0	0	1	255	0
4	14	0	0	0	1	255	0
4	15	0	0	0	1	255	0
4	16	0	0	0	1	255	0
4	17	0	0	0	1	255	0
4	18	0	0	0	1	255	0
4	19	0	0	0	1	255	0
4	20	0	0	0	1	255	0
4	21	0	0	0	1	255	0
4	22	0	0	0	1	255	0
4	23	0	0	0	1	255	0
4	24	0	0	0	1	255	0
4	25	0	0	0	1	255	0
4	26	0	0	0	1	255	0
4	27	0	0	0	1	255	0
4	28	0	0	0	1	255	0
4	29	0	0	0	1	255	0
4	30	0	0	0	1	255	0
4	31	0	0	0	1	255	0
4	32	0	0	0	1	255	0
4	33	0	0	0	1	255	0
4	34	0	0	0	1	255	0
4	35	0	0	0	1	255	0
4	36	0	0	0	1	255	0
4	37	0	0	0	1	255	0
4	38	0	0	0	1	255	0
4	39	0	0	0	1	255	0
4	40	0	0	0	1	255	0
4	41	0	0	0	1	255	0
4	42	0	0	0	1	255	0
4	43	0	0	0	1	255	0
4	44	0	0	0	1	255	0
4	45	0	0	0	1	255	0
4	46	0	0	0	1	255	0
4	47	0	0	0	1	255	0
4	48	0	0	0	1	255	0
4	49	0	0	0	1	255	0
4	50	0	0	0	1	255	0
4	51	0	0	0	1	255	0
4	52	0	0	0	1	255	0
4	53	0	0	0	1	255	0
4	54	0	0	0	1	255	0
4	55	0	0	0	1	255	0
4	56	0	0	0	1	255	0

	57	0	0	0	1	255	0
4	58	0	0	0	1	255	0
4	59	0	0	0	1	255	0
4	60	0	0	0	1	255	0
4	61	0	0	0	1	255	0
4	62	0	0	0	1	255	0
4	63	0	0	0	1	255	0
4	64	0	0	0	1	255	0

Pedestrian Detector Diagnotics (MM)6-7

Plan	Detector	Counts	Act	Pres	Multiplier

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Configuration

Controller Sequence Priority

	1	2	3	4	5	6	7	8	9	10	11	12
Ring 1 Phases . .	1	2	3	4	9	10	0	0	0	0	0	0
Ring 2 Phases . .	5	6	7	8	11	12	0	0	0	0	0	0

Phase

	1	2	3	4	5	6	7	8	9	10	11	12
In Use.		X		X		X		X				
Exclusive Ped . . .												
Direction												

Overlap

	A	B	C	D
Direction . . .				

Load Switch Channel/Driver Group Assign (Info Only):

Load Switch (MMU) Channel	Signal Driver Phase/ Ovlap	Group Ped
1	1	.
2	2	.
3	3	.
4	4	.
5	5	.
6	6	.
7	7	.
8	8	.
9	2	X
10	4	X
11	6	X
12	8	X
13	A	.
14	B	.
15	C	.
16	D	.

Configuration Continued

```
                Enable BIU: 1  2  3  4  5  6  7  8
Terminal/Facilities. . . . . .  .  .  .  .  .  .  .
Detector Rack. . . . . .  .  .  .  .  .  .  .  .

Type 2 Runs as Type 1. . .  .
MMU Disable. . . . . .  X
Diagnostic Enable. . . . .  .
Peer-Peer Comm Enable. . .  .

                             1    2    3    4    5    6    7    8    9   10
Peer To Peer Addresses . . 255  255  255  255  255  255  255  255  255  255
```

Port 2:

```
Port 2 Protocol . . . . . Terminal
Port 2 Enable . . . . . YES
AB3418 Address. . . . . 0
AB3418 Group Address. . . . . 0
AB3418 Response Delay . . . . . 0
AB3418 Single Flag Enable . . . NO
AB3418 Drop-Out Time. . . . . 0
AB3418 TOD SF Select. . . . . 0
Data Rate . . . . . 1200 bps
Data, Parity, Stop. . . . . 8, 0, 1
```

Port 3:

```
Port 3 Protocol . . . . . Telemetry
Port 3 Enable . . . . . YES
Telemetry Address . . . . . 1
System Detector 9-16 Address. . 0
Telemetry Response Delay. . . . 8700
AB3418 Address. . . . . 0
AB3418 Group Address. . . . . 0
AB3418 Response Delay . . . . . 0
AB3418 Single Flag Enable . . . NO
AB3418 Drop-Out Time. . . . . 0
AB3418 TOD SF Select. . . . . 0
Duplex. . . . . Full
Data Rate . . . . . 1200 bps
Data, Parity, Stop. . . . . 8, 0, 1
```

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Configuration Continued

Event Enabling		Alarm Enabling	
Critical RFE'S (MMU/TF)	X	ALARM 1	X
Non-Critical RFE'S (DET/TEST)	X	ALARM 2	.
Detector Errors	X	ALARM 3	.
Coordination Errors	X	ALARM 4	.
MMU Flash Faults.	X	ALARM 5	.
Local Flash Faults.	X	ALARM 6	.
Preempt	X	ALARM 7	.
Power On/Off.	X	ALARM 8	.
Low Battery	X	ALARM 9	.
		ALARM 10.	.
		ALARM 11.	.
		ALARM 12.	.
		ALARM 13.	.
		ALARM 14.	.
		ALARM 15.	.
		ALARM 16.	.

Supervisor Access Code. . . ****
Data Change Access Code . . ****

MMU Compatibility Program (Info Only)

Channel Is Allowed to Time With Channel

	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
3	.	.	.	.	.	.	.	.	.	.	.	.	.		
4	.	.	.	.	.	.	.	.	.	.	.	.			
5	.	.	.	.	.	.	.	.	.	.	.				
6	.	.	.	.	.	.	.	.	.	.					
7	.	.	.	.	.	.	.	.	.						
8	.	.	.	.	.	.	.	.							
9	.	.	.	.	.	.	.								
10	.	.	.	.	.	.									
11	.	.	.	.	.										
12	.	.	.	.											
13	.	.	.												
14	.	.													
15	.														

Version Info:

Software Assy.	Part No.	Version
Boot	27831	2.83
Program	45561	7.9
Application		. 3
Help	27891	6.33
Configuration	27918	C000

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By-Phase Timing Data

	Phase											
Direction	1	2	3	4	5	6	7	8	9	10	11	12
Minimum Green	1	24	5	8	5	24	5	8	5	5	5	5
Bike Min Green	0	0	0	0	0	0	0	0	0	0	0	0
Cond Serv Min Grn	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10
Ped Clearance	0	8	0	8	0	8	0	8	0	16	0	16
Veh Extension	5.0	5.0	5.0	3.0	5.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0
Alt Veh Exten	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Extension	0	0	0	0	0	0	0	0	0	0	0	0
Max 1	35	35	35	26	35	35	35	26	35	35	35	35
Max 2	40	40	40	40	40	40	40	40	40	40	40	40
Max 3	0	0	0	0	0	0	0	0	0	0	0	0
Det. Fail Max	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Change	3.0	5.5	3.0	4.0	3.0	5.5	3.0	4.0	3.0	3.0	3.0	3.0
Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act. B4 Init	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Actuation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	30	30	30	30	30	30	30	30	30	30	30	30
Time B4 Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Cars Waiting	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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No-Serve Phases

	Phase Cannot Serve With Phase										
Phase	12	11	10	9	8	7	6	5	4	3	2
1	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	
3	.	.	.	.	.	.	.	.	.		
4	.	.	.	.	.	.	.	.			
5	.	.	.	.	.	.	.				
6	.	.	.	.	.	.					
7	.	.	.	.	.						
8	.	.	.	.							
9	.	.	.								
10	.	.									
11	.										

Ped Carryover

Ped Start Phase	Carry Over Phase
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0

Vehicle/Ped Phase as Overlap

Ped Ovlap Phase	Ped Phase As Overlap Consists of Ped Phases											
	1	2	3	4	5	6	7	8	9	10	11	12
1	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	.	.	.	.	.
9	.	.	.	.	.	.	.	.	.	.	.	.
10	.	.	.	.	.	.	.	.	.	.	.	.
11	.	.	.	.	.	.	.	.	.	.	.	.
12	.	.	.	.	.	.	.	.	.	.	.	.

Veh Ovlap Phase	Veh Phase As Overlap Consists of Veh Phases											
	1	2	3	4	5	6	7	8	9	10	11	12
1	X	.	.	.	.	.	.	.	.	.	.	.
2	.	X	.	.	.	.	.	.	.	.	.	.
3	.	.	X	.	.	.	.	.	.	.	.	.
4	.	.	.	X	.	.	.	.	.	.	.	.
5	.	.	.	.	X	.	.	.	.	.	.	.
6	.	.	.	.	.	X	.	.	.	.	.	.
7	.	.	.	.	.	.	X	.	.	.	.	.
8	.	.	.	.	.	.	.	X	.	.	.	.
9	.	.	.	.	.	.	.	.	X	.	.	.
10	.	.	.	.	.	.	.	.	.	X	.	.
11	.	.	.	.	.	.	.	.	.	.	X	.
12	.	.	.	.	.	.	.	.	.	.	.	X

Overlap Data

Overlap A	Phase: 1	2	3	4	5	6	7	8	9	10	11	12
Standard.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.
Permitted	.	.	.	.	.	.	.	.	.	.	.	.
Enable Lag.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Lead	.	.	.	.	.	.	.	.	.	.	.	.
Spare	.	.	.	.	.	.	.	.	.	.	.	.
Advance Green Timer	.	.	.	0.0								

	Green	Yellow	Red
Lag/Lead Timers	0.0	0.0	0.0

Overlap B	Phase: 1	2	3	4	5	6	7	8	9	10	11	12
Standard.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.
Permitted	.	.	.	.	.	.	.	.	.	.	.	.
Enable Lag.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Lead	.	.	.	.	.	.	.	.	.	.	.	.
Spare	.	.	.	.	.	.	.	.	.	.	.	.
Advance Green Timer	.	.	.	0.0								

	Green	Yellow	Red
Lag/Lead Timers	0.0	0.0	0.0

Overlap C	Phase: 1	2	3	4	5	6	7	8	9	10	11	12
Standard.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.
Permitted	.	.	.	.	.	.	.	.	.	.	.	.
Enable Lag.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Lead	.	.	.	.	.	.	.	.	.	.	.	.
Spare	.	.	.	.	.	.	.	.	.	.	.	.
Advance Green Timer	.	.	.	0.0								

	Green	Yellow	Red
Lag/Lead Timers	0.0	0.0	0.0

Overlap D	Phase: 1	2	3	4	5	6	7	8	9	10	11	12
Standard.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.
Permitted	.	.	.	.	.	.	.	.	.	.	.	.
Enable Lag.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Lead	.	.	.	.	.	.	.	.	.	.	.	.
Spare	.	.	.	.	.	.	.	.	.	.	.	.
Advance Green Timer	.	.	.	0.0								

	Green	Yellow	Red
Lag/Lead Timers	0.0	0.0	0.0

Power Start, Remote Flash

	Phase																	
	1	2	3	4	5	6	7	8	9	10	11	12	Overlap					
													A		B		C	D
Power Start		X				X												
External Start		X				X												
Into Remote Flash		X				X												
Exit Remote Flash		X				X												
Remote Flash Yellow																		
Flash Together		X		X		X		X		X		X			X			X

Initialization Interval:

Power Start	Yellow
External Start	Yellow

Power Start All Red Time	0
Power Start Flash Time	0

Remote Flash Options:

Out of Flash Yellow	NO
Out of Flash All Red	NO
Minimum Recall	NO
Alternate Flash	NO
Flash Thru Load Switches	NO
Cycle Through Phases	NO

Option Data

	Phase											
	1	2	3	4	5	6	7	8	9	10	11	12
Guaranteed Passage												
Call To NonActuated 1		X				X						
Call To NonActuated 2				X				X				
Dual Entry		X		X		X		X		X		X
Conditional Service	X		X		X		X		X		X	
Conditional Reservice												
Actuated Rest in Walk		X				X						
Flashing Walk												

Enable Programmable Options

Dual Entry	ON	Backup Protection Group 1	OFF
Conditional Service	OFF	Backup Protection Group 2	OFF
Ped Clearance Protection	OFF	Backup Protection Group 3	OFF
Special Preempt Overlap Flash	OFF	Simultaneous Gap Group 1	OFF
Cond Service Det Cross Switch	OFF	Simultaneous Gap Group 2	OFF
Lock Detectors in Red Only	OFF	Simultaneous Gap Group 3	OFF

Five Section Left Turn Control

Phases:	5-2	7-4	1-6	3-8	11-10	9-12
Left Turn Head						

Recall Data, Dimming

	Phase											
	1	2	3	4	5	6	7	8	9	10	11	12
Locking Detector. . . .	.	.	.	.	.	.	.	.	.	.	.	.
Vehicle Recall.	.	X	.	.	.	X	.	.	.	.	.	.
Pedestrian Recall . . .	.	X	.	.	.	X	.	.	.	.	.	.
Recall To Max	.	.	.	.	.	.	.	.	.	.	.	.
Soft Recall	.	.	.	.	.	.	.	.	.	.	.	.
Don't Rest Here	.	.	.	.	.	.	.	.	.	.	.	.
Ped Dark if No Call . .	.	.	.	.	.	.	.	.	.	.	.	.

Dimming:

	Load Switch															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green/Walk. . . .	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Yellow/Ped Clear.	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Red/Don't Walk. .	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

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Detector Type/Timers

Det.	Locking Memory	Log Enable	Timers Extend	Delay	Don't Reset Extend	Type
1	NO	NO	0.0	0	.	0 - Normal
2	NO	NO	0.0	0	.	0 - Normal
3	NO	NO	0.0	0	.	0 - Normal
4	NO	NO	0.0	0	.	0 - Normal
5	NO	NO	0.0	0	.	0 - Normal
6	NO	NO	0.0	0	.	0 - Normal
7	NO	NO	0.0	0	.	0 - Normal
8	NO	NO	0.0	0	.	0 - Normal
9	NO	NO	0.0	0	.	0 - Normal
10	NO	NO	0.0	0	.	0 - Normal
11	NO	NO	0.0	0	.	0 - Normal
12	NO	NO	0.0	0	.	0 - Normal
13	NO	NO	0.0	0	.	0 - Normal
14	NO	NO	0.0	0	.	0 - Normal
15	NO	NO	0.0	0	.	0 - Normal
16	NO	NO	0.0	0	.	0 - Normal
17	NO	NO	0.0	0	.	0 - Normal
18	NO	NO	0.0	0	.	0 - Normal
19	NO	NO	0.0	0	.	0 - Normal
20	NO	NO	0.0	0	.	0 - Normal
21	NO	NO	0.0	0	.	0 - Normal
22	NO	NO	0.0	0	.	0 - Normal
23	NO	NO	0.0	0	.	0 - Normal
24	NO	NO	0.0	0	.	0 - Normal
25	NO	NO	0.0	0	.	0 - Normal
26	NO	NO	0.0	0	.	0 - Normal
27	NO	NO	0.0	0	.	0 - Normal
28	NO	NO	0.0	0	.	0 - Normal
29	NO	NO	0.0	0	.	0 - Normal
30	NO	NO	0.0	0	.	0 - Normal
31	NO	NO	0.0	0	.	0 - Normal
32	NO	NO	0.0	0	.	0 - Normal

Detector Names

Det 1: Detector 1	Det 17: Detector 17
Det 2: Detector 2	Det 18: Detector 18
Det 3: Detector 3	Det 19: Detector 19
Det 4: Detector 4	Det 20: Detector 20
Det 5: Detector 5	Det 21: Detector 21
Det 6: Detector 6	Det 22: Detector 22
Det 7: Detector 7	Det 23: Detector 23
Det 8: Detector 8	Det 24: Detector 24
Det 9: Detector 9	Det 25: Detector 25
Det 10: Detector 10	Det 26: Detector 26
Det 11: Detector 11	Det 27: Detector 27
Det 12: Detector 12	Det 28: Detector 28
Det 13: Detector 13	Det 29: Detector 29
Det 14: Detector 14	Det 30: Detector 30
Det 15: Detector 15	Det 31: Detector 31
Det 16: Detector 16	Det 32: Detector 32

Detector Type/Timers

33	NO	NO	0.0	0	.	0 - Normal
34	NO	NO	0.0	0	.	0 - Normal
35	NO	NO	0.0	0	.	0 - Normal
36	NO	NO	0.0	0	.	0 - Normal
37	NO	NO	0.0	0	.	0 - Normal
38	NO	NO	0.0	0	.	0 - Normal
39	NO	NO	0.0	0	.	0 - Normal
40	NO	NO	0.0	0	.	0 - Normal
41	NO	NO	0.0	0	.	0 - Normal
42	NO	NO	0.0	0	.	0 - Normal
43	NO	NO	0.0	0	.	0 - Normal
44	NO	NO	0.0	0	.	0 - Normal
45	NO	NO	0.0	0	.	0 - Normal
46	NO	NO	0.0	0	.	0 - Normal
47	NO	NO	0.0	0	.	0 - Normal
48	NO	NO	0.0	0	.	0 - Normal
49	NO	NO	0.0	0	.	0 - Normal
50	NO	NO	0.0	0	.	0 - Normal
51	NO	NO	0.0	0	.	0 - Normal
52	NO	NO	0.0	0	.	0 - Normal
53	NO	NO	0.0	0	.	0 - Normal
54	NO	NO	0.0	0	.	0 - Normal
55	NO	NO	0.0	0	.	0 - Normal
56	NO	NO	0.0	0	.	0 - Normal
57	NO	NO	0.0	0	.	0 - Normal
58	NO	NO	0.0	0	.	0 - Normal
59	NO	NO	0.0	0	.	0 - Normal
60	NO	NO	0.0	0	.	0 - Normal
61	NO	NO	0.0	0	.	0 - Normal
62	NO	NO	0.0	0	.	0 - Normal
63	NO	NO	0.0	0	.	0 - Normal
64	NO	NO	0.0	0	.	0 - Normal

Detector Names

Det 33: Detector 33	Det 49: Detector 49
Det 34: Detector 34	Det 50: Detector 50
Det 35: Detector 35	Det 51: Detector 51
Det 36: Detector 36	Det 52: Detector 52
Det 37: Detector 37	Det 53: Detector 53
Det 38: Detector 38	Det 54: Detector 54
Det 39: Detector 39	Det 55: Detector 55
Det 40: Detector 40	Det 56: Detector 56
Det 41: Detector 41	Det 57: Detector 57
Det 42: Detector 42	Det 58: Detector 58
Det 43: Detector 43	Det 59: Detector 59
Det 44: Detector 44	Det 60: Detector 60
Det 45: Detector 45	Det 61: Detector 61
Det 46: Detector 46	Det 62: Detector 62
Det 47: Detector 47	Det 63: Detector 63
Det 48: Detector 48	Det 64: Detector 64

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Detector Phase Assignment

	Phase											
Det.	1	2	3	4	5	6	7	8	9	10	11	12
1	.	.	.	X	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	X	.	.	.	.
3	.	.	X	.	.	.	.	.	.	.	.	.
4	.	.	.	X	.	.	.	.	.	.	.	.
5	.	.	.	.	X	.	.	.	.	.	.	.
6	.	.	.	.	.	X	.	.	.	.	.	.
7	.	.	.	.	.	.	X	.	.	.	.	.
8	.	.	.	.	.	.	.	X	.	.	.	.
9	.	.	.	.	.	.	.	.	X	.	.	.
10	.	.	.	.	.	.	.	.	.	X	.	.
11	.	.	.	.	.	.	.	.	.	.	X	.
12	.	.	.	.	.	.	.	.	.	.	.	X
13	.	.	.	.	.	.	.	.	.	.	.	.
14	.	.	.	.	.	.	.	.	.	.	.	.
15	.	.	.	.	.	.	.	.	.	.	.	.
16	.	.	.	.	.	.	.	.	.	.	.	.
17	.	.	.	.	.	.	.	.	.	.	.	.
18	.	.	.	.	.	.	.	.	.	.	.	.
19	.	.	.	.	.	.	.	.	.	.	.	.
20	.	.	.	.	.	.	.	.	.	.	.	.
21	.	.	.	.	.	.	.	.	.	.	.	.
22	.	.	.	.	.	.	.	.	.	.	.	.
23	.	.	.	.	.	.	.	.	.	.	.	.
24	.	.	.	.	.	.	.	.	.	.	.	.
25	.	.	.	.	.	.	.	.	.	.	.	.
26	.	.	.	.	.	.	.	.	.	.	.	.
27	.	.	.	.	.	.	.	.	.	.	.	.
28	.	.	.	.	.	.	.	.	.	.	.	.
29	.	.	.	.	.	.	.	.	.	.	.	.
30	.	.	.	.	.	.	.	.	.	.	.	.
31	.	.	.	.	.	.	.	.	.	.	.	.
32	.	.	.	.	.	.	.	.	.	.	.	.

Detector Cross Switching

	Phase											
Det.	1	2	3	4	5	6	7	8	9	10	11	12
1	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	.	.	.	.	.
9	.	.	.	.	.	.	.	.	.	.	.	.
10	.	.	.	.	.	.	.	.	.	.	.	.
11	.	.	.	.	.	.	.	.	.	.	.	.
12	.	.	.	.	.	.	.	.	.	.	.	.
13	.	.	.	.	.	.	.	.	.	.	.	.
14	.	.	.	.	.	.	.	.	.	.	.	.
15	.	.	.	.	.	.	.	.	.	.	.	.
16	.	.	.	.	.	.	.	.	.	.	.	.
17	.	.	.	.	.	.	.	.	.	.	.	.
18	.	.	.	.	.	.	.	.	.	.	.	.
19	.	.	.	.	.	.	.	.	.	.	.	.
20	.	.	.	.	.	.	.	.	.	.	.	.
21	.	.	.	.	.	.	.	.	.	.	.	.
22	.	.	.	.	.	.	.	.	.	.	.	.
23	.	.	.	.	.	.	.	.	.	.	.	.
24	.	.	.	.	.	.	.	.	.	.	.	.
25	.	.	.	.	.	.	.	.	.	.	.	.
26	.	.	.	.	.	.	.	.	.	.	.	.
27	.	.	.	.	.	.	.	.	.	.	.	.
28	.	.	.	.	.	.	.	.	.	.	.	.
29	.	.	.	.	.	.	.	.	.	.	.	.
30	.	.	.	.	.	.	.	.	.	.	.	.
31	.	.	.	.	.	.	.	.	.	.	.	.
32	.	.	.	.	.	.	.	.	.	.	.	.

Detector Cross Switching

	Phase											
Det.	1	2	3	4	5	6	7	8	9	10	11	12
33	.	.	.	.	.	.	.	.	.	.	.	.
34	.	.	.	.	.	.	.	.	.	.	.	.
35	.	.	.	.	.	.	.	.	.	.	.	.
36	.	.	.	.	.	.	.	.	.	.	.	.
37	.	.	.	.	.	.	.	.	.	.	.	.
38	.	.	.	.	.	.	.	.	.	.	.	.
39	.	.	.	.	.	.	.	.	.	.	.	.
40	.	.	.	.	.	.	.	.	.	.	.	.
41	.	.	.	.	.	.	.	.	.	.	.	.
42	.	.	.	.	.	.	.	.	.	.	.	.
43	.	.	.	.	.	.	.	.	.	.	.	.
44	.	.	.	.	.	.	.	.	.	.	.	.
45	.	.	.	.	.	.	.	.	.	.	.	.
46	.	.	.	.	.	.	.	.	.	.	.	.
47	.	.	.	.	.	.	.	.	.	.	.	.
48	.	.	.	.	.	.	.	.	.	.	.	.
49	.	.	.	.	.	.	.	.	.	.	.	.
50	.	.	.	.	.	.	.	.	.	.	.	.
51	.	.	.	.	.	.	.	.	.	.	.	.
52	.	.	.	.	.	.	.	.	.	.	.	.
53	.	.	.	.	.	.	.	.	.	.	.	.
54	.	.	.	.	.	.	.	.	.	.	.	.
55	.	.	.	.	.	.	.	.	.	.	.	.
56	.	.	.	.	.	.	.	.	.	.	.	.
57	.	.	.	.	.	.	.	.	.	.	.	.
58	.	.	.	.	.	.	.	.	.	.	.	.
59	.	.	.	.	.	.	.	.	.	.	.	.
60	.	.	.	.	.	.	.	.	.	.	.	.
61	.	.	.	.	.	.	.	.	.	.	.	.
62	.	.	.	.	.	.	.	.	.	.	.	.
63	.	.	.	.	.	.	.	.	.	.	.	.
64	.	.	.	.	.	.	.	.	.	.	.	.

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Ped/SD Local Assign,Log Interval

	Phase Ped Detector											
	1	2	3	4	5	6	7	8	9	10	11	12
Is Ped Detector No. . . .	1	2	3	4	5	6	7	8	9	10	11	12

	*Local System Detector No.															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Is Local Detector No. . .	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Detector Log Interval . . 5

*NOTE: System master designations cross referenced to local system detector numbers are:

- SDA1 = 1 & 9
- SDA2 = 2 & 10
- SDB1 = 3 & 11
- SDB2 = 4 & 12
- SDC1 = 5 & 13
- SDC2 = 6 & 14
- SDD1 = 7 & 15
- SDD2 = 8 & 16

Diagnostic Plans/Fail Action

	Detector															
Plan	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
*Fail Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Detector															
Plan	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
*Fail Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*NOTE: 0 = No Action, 1 = Min Recall, 2 = Max Recall in Effect
3 = Detector Fail Max Tiime from By-Phase Timing Data

Diagnostic Plans/Fail Action

	Detector															
Plan	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
*Fail Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Detector															
Plan	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
1 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8 Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scaling	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
*Fail Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*NOTE: 0 = No Action, 1 = Min Recall, 2 = Max Recall in Effect
3 = Detector Fail Max Tiime from By-Phase Timing Data

Ped Diagnostic Plans

Plan		1	2	3	4	5	6	7	8	9	10	11	12
1	Diagnostic	0	1	0	1	0	1	0	1	0	0	0	0
	Scaling	1	1	1	1	1	1	1	1	1	1	1	1
2	Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0
	Scaling	1	1	1	1	1	1	1	1	1	1	1	1
3	Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0
	Scaling	1	1	1	1	1	1	1	1	1	1	1	1
4	Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0
	Scaling	1	1	1	1	1	1	1	1	1	1	1	1
5	Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0
	Scaling	1	1	1	1	1	1	1	1	1	1	1	1
6	Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0
	Scaling	1	1	1	1	1	1	1	1	1	1	1	1
7	Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0
	Scaling	1	1	1	1	1	1	1	1	1	1	1	1
8	Diagnostic	0	0	0	0	0	0	0	0	0	0	0	0
	Scaling	1	1	1	1	1	1	1	1	1	1	1	1

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Detector Diagnostic Intervals

Diagnostic Number	*No-Activity Diagnostic Interval	*Max Presence Diagnostic Interval	Erratic Counts
1	1	1	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	0	0	0
16	0	0	0
17	0	0	0
18	0	0	0
19	0	0	0
20	0	0	0
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0
25	0	0	0
26	0	0	0
27	0	0	0
28	0	0	0
29	0	0	0
30	0	0	0
31	0	0	0
32	0	0	0

*NOTE: Scaling is specified in each detector diagnostic plan.

Wellington county 12 -24 124 & Dundas Erin 7/4/2013 6:24

Speed Detectors

	Local Speed Detector							
One Detector Speed:	1	2	3	4	5	6	7	8
Local Detector Number. . . .	0	0	0	0	0	0	0	0
Vehicle Length	0	0	0	0	0	0	0	0
Loop Length.	0	0	0	0	0	0	0	0
Two Detector Speed:								
Local Detector Number. . . .	0	0	0	0	0	0	0	0
Speed Trap Length.	0	0	0	0	0	0	0	0

	Local Speed Detector							
One Detector Speed:	9	10	11	12	13	14	15	16
Local Detector Number. . . .	0	0	0	0	0	0	0	0
Vehicle Length	0	0	0	0	0	0	0	0
Loop Length.	0	0	0	0	0	0	0	0
Two Detector Speed:								
Local Detector Number. . . .	0	0	0	0	0	0	0	0
Speed Trap Length.	0	0	0	0	0	0	0	0

Units. . . . . Inches

NOTE: Speed Detector 1 = STA, Speed Detector 2 = STB

Wellington county 12 -24 124 & Dundas Erin 7/4/2013 6:24

Coordinator Manual Command and Options

Manual Enable . . . . . Pattern 0

Split Units . . . . . Percent OffsetUnits . . . . . Percent
Interconnect Format . PLAN Interconnect Source . TLM
Transition. . . . . SMOOTH Dwell Period. 0
Resync Count. 0

Actuated Coord Phase . . . . Actuated Walk Rest . . . .
Inhibit Max Timing . . . . . Max 2 Select . . . . . .
Floating Force Off . . . . . Multisync. . . . . .

Split Demand:	Call	Time	Cyc Count	Phase 1	2	3	4	5	6	7	8	9	10	11	12
Demand 1 . .		0	0	.	.	.	.	.	.	.	.	.	.	.	.
Demand 2 . .		0	0	.	.	.	.	.	.	.	.	.	.	.	.

	Phase 1	2	3	4	5	6	7	8	9	10	11	12
Auto Permissive Min Green .	0	0	0	0	0	0	0	0	0	0	0	0

	A	B	C	D	E	F
Free Alternate Sequence . .	.	.	.	.	.	.

Coordination Patterns

Preemptors

Preemptor 1

Active	Det Lock	Ped Dark
Priority Preemption	Yel-Red To Grn	Ped Active
Outputs Only During Hold	Flash All Outputs	Zero Ped Clr Time
Terminate Overlap ASAP	Terminate Phases	Ped Clr Thru Yel
Don't Override Flash	Duration Time 0	
Flash During Hold	Delay Time 0	
No CVM in Flash	Inhibit Time 0	
Fast Flash Grn on Hold Phase	Min Ped Clear 0	
Enable Max Time	Max Time 0	
	Exit Max 0	
	Min Hold Time 0	
	Hold Delay Time 0	

	Green	Yellow	Red
Minimum	0	0.0	0.0
Track Clear	0	0.0	0.0
Hold		0.0	0.0

Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12/	A	B	C	D
Terminate Overlap																
Track Clearance Phase																
Hold Phases																
Exit Phases																
Exit Calls on Phase																

Out of Flash Color for Exit Phases . . . . Green

Preemptor 2

Active	Det Lock	Ped Dark
Priority Preemption	Yel-Red To Grn	Ped Active
Outputs Only During Hold	Flash All Outputs	Zero Ped Clr Time
Terminate Overlap ASAP	Terminate Phases	Ped Clr Thru Yel
Don't Override Flash	Duration Time 0	
Flash During Hold	Delay Time 0	
No CVM in Flash	Inhibit Time 0	
Fast Flash Grn on Hold Phase	Min Ped Clear 0	
Enable Max Time	Max Time 0	
	Exit Max 0	
	Min Hold Time 0	
	Hold Delay Time 0	

	Green	Yellow	Red
Minimum	0	0.0	0.0
Track Clear	0	0.0	0.0
Hold		0.0	0.0

Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12/	A	B	C	D
Terminate Overlap																
Track Clearance Phase																
Hold Phases																
Exit Phases																
Exit Calls on Phase																

Out of Flash Color for Exit Phases . . . . Green
Linked Preemptor 0

Preemptors

Preemptor 3

Active	Det Lock	Ped Dark
Priority Preemption	Yel-Red To Grn	Ped Active
Outputs Only During Hold	Flash All Outputs	Zero Ped Clr Time
Terminate Overlap ASAP	Terminate Phases	Ped Clr Thru Yel
Don't Override Flash	Duration Time 0	
Flash During Hold	Delay Time 0	
No CVM in Flash	Inhibit Time 0	
Fast Flash Grn on Hold Phase	Min Ped Clear 0	
Enable Max Time	Max Time 0	
	Exit Max 0	
	Min Hold Time 0	
	Hold Delay Time 0	

	Green	Yellow	Red
Minimum	0	0.0	0.0
Track Clear	0	0.0	0.0
Hold		0.0	0.0

Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12/	A	B	C	D
Terminate Overlap																
Track Clearance Phase																
Hold Phases																
Exit Phases																
Exit Calls on Phase																

Out of Flash Color for Exit Phases . . . . Green

Linked Preemptor 0

Preemptor 4

Active	Det Lock	Ped Dark
Priority Preemption	Yel-Red To Grn	Ped Active
Outputs Only During Hold	Flash All Outputs	Zero Ped Clr Time
Terminate Overlap ASAP	Terminate Phases	Ped Clr Thru Yel
Don't Override Flash	Duration Time 0	
Flash During Hold	Delay Time 0	
No CVM in Flash	Inhibit Time 0	
Fast Flash Grn on Hold Phase	Min Ped Clear 0	
Enable Max Time	Max Time 0	
	Exit Max 0	
	Min Hold Time 0	
	Hold Delay Time 0	

	Green	Yellow	Red
Minimum	0	0.0	0.0
Track Clear	0	0.0	0.0
Hold		0.0	0.0

Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12/	A	B	C	D
Terminate Overlap																
Track Clearance Phase																
Hold Phases																
Exit Phases																
Exit Calls on Phase																

Out of Flash Color for Exit Phases . . . . Green

Linked Preemptor 0

Preemptors

Preemptor 5

Active	Det Lock.	Ped Dark . . . . .
Priority Preemption.	Yel-Red To Grn. . .	Ped Active . . . . .
Outputs Only During Hold . . .	Flash All Outputs .	Zero Ped Clr Time. .
Terminate Overlap ASAP	Terminate Phases. .	Ped Clr Thru Yel . .
Don't Override Flash	Duration Time. . . 0	
Flash During Hold.	Delay Time 0	
No CVM in Flash.	Inhibit Time . . . 0	
Fast Flash Grn on Hold Phase. .	Min Ped Clear. . . 0	
Enable Max Time.	Max Time 0	
	Exit Max 0	
	Min Hold Time. . . 0	
	Hold Delay Time. . 0	

	Green	Yellow	Red
Minimum	0	0.0	0.0
Track Clear	0	0.0	0.0
Hold.		0.0	0.0

Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12/	A	B	C	D
Terminate Overlap																
Track Clearance Phase																
Hold Phases																
Exit Phases																
Exit Calls on Phase																

Out of Flash Color for Exit Phases . . . . Green

Linked Preemptor 0

Preemptor 6

Active	Det Lock.	Ped Dark . . . . .
Priority Preemption.	Yel-Red To Grn. . .	Ped Active . . . . .
Outputs Only During Hold . . .	Flash All Outputs .	Zero Ped Clr Time. .
Terminate Overlap ASAP	Terminate Phases. .	Ped Clr Thru Yel . .
Don't Override Flash	Duration Time. . . 0	
Flash During Hold.	Delay Time 0	
No CVM in Flash.	Inhibit Time . . . 0	
Fast Flash Grn on Hold Phase. .	Min Ped Clear. . . 0	
Enable Max Time.	Max Time 0	
	Exit Max 0	
	Min Hold Time. . . 0	
	Hold Delay Time. . 0	

	Green	Yellow	Red
Minimum	0	0.0	0.0
Track Clear	0	0.0	0.0
Hold.		0.0	0.0

Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12/	A	B	C	D
Terminate Overlap																
Track Clearance Phase																
Hold Phases																
Exit Phases																
Exit Calls on Phase																

Out of Flash Color for Exit Phases . . . . Green

Linked Preemptor 0

Bus Preemptors

	Bus Preemptor 1	2	3	4
Preemptor Active	.	.	.	.
Detector Lock	.	.	.	.
Maximum Time	0	0	0	0
Reservice Time	0	0	0	0
Delay Time	0	0	0	0
Inhibit Time	0	0	0	0
Entrance Green	0	0	0	0
Entrance Ped Clearance	0	0	0	0
Entrance Yellow	0.0	0.0	0.0	0.0
Entrance Red	0.0	0.0	0.0	0.0
Minimum Hold Time	0	0	0	0

	Hold Phases 1	2	3	4	5	6	7	8	9	10	11	12
Preemptor 1	.	.	.	.	.	.	.	.	.	.	.	.
Preemptor 2	.	.	.	.	.	.	.	.	.	.	.	.
Preemptor 3	.	.	.	.	.	.	.	.	.	.	.	.
Preemptor 4	.	.	.	.	.	.	.	.	.	.	.	.

NIC/TOD Clock/Calendar

Manual NIC Program Step 0

Manual TOD Program Step 0

NIC Resync Time 0000

Sync Reference is . . . . . Reference Time

Week 1 Begins on 1st Sunday . . . . . NO If NO, then week containing Jan. 1

Disable Daylight Savings Time . . . . . NO

Daylight Savings
Begins Last Sunday in March . . . . . NO If NO, then Second Sunday as per 2007 DST Law

Wellington county 12 -24 124 & Dundas Erin 7/4/2013 6:24

TOD Weekly/Yearly

Weekly Program Numbers

	1	2	3	4	5	6	7	8	9	10	
Sunday . . .	1	1	1	1	1	1	1	1	1	1	Program No.
Monday . . .	1	1	1	1	1	1	1	1	1	1	Program No.
Tuesday. . .	1	1	1	1	1	1	1	1	1	1	Program No.
Wednesday. .	1	1	1	1	1	1	1	1	1	1	Program No.
Thursday . .	1	1	1	1	1	1	1	1	1	1	Program No.
Friday . . .	1	1	1	1	1	1	1	1	1	1	Program No.
Saturday . .	1	1	1	1	1	1	1	1	1	1	Program No.

Week of Year

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Prog	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Prog	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
Prog	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Holiday Programs

Holiday	Type	Month	Day of Week/ Day of Month	Week of Year/ Year	Program
1	Fixed	0	0	0	0
2	Fixed	0	0	0	0
3	Fixed	0	0	0	0
4	Fixed	0	0	0	0
5	Fixed	0	0	0	0
6	Fixed	0	0	0	0
7	Fixed	0	0	0	0
8	Fixed	0	0	0	0
9	Fixed	0	0	0	0
10	Fixed	0	0	0	0
11	Fixed	0	0	0	0
12	Fixed	0	0	0	0
13	Fixed	0	0	0	0
14	Fixed	0	0	0	0
15	Fixed	0	0	0	0
16	Fixed	0	0	0	0
17	Fixed	0	0	0	0
18	Fixed	0	0	0	0
19	Fixed	0	0	0	0
20	Fixed	0	0	0	0
21	Fixed	0	0	0	0
22	Fixed	0	0	0	0
23	Fixed	0	0	0	0
24	Fixed	0	0	0	0
25	Fixed	0	0	0	0
26	Fixed	0	0	0	0
27	Fixed	0	0	0	0
28	Fixed	0	0	0	0
29	Fixed	0	0	0	0
30	Fixed	0	0	0	0
31	Fixed	0	0	0	0
32	Fixed	0	0	0	0
33	Fixed	0	0	0	0
34	Fixed	0	0	0	0
35	Fixed	0	0	0	0
36	Fixed	0	0	0	0

NIC Program Steps

Step	Program	Step Begins	Pattern	Override

TOD Program Steps

APPENDIX E

Synchro Software Output Reports

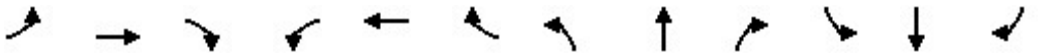
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	135	17	5	76	12	17
Future Volume (Veh/h)	135	17	5	76	12	17
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	147	18	5	83	13	18
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			165		249	156
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			165		249	156
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	98
cM capacity (veh/h)			1426		741	895

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	165	88	31
Volume Left	0	5	13
Volume Right	18	0	18
cSH	1700	1426	823
Volume to Capacity	0.10	0.00	0.04
Queue Length 95th (m)	0.0	0.1	0.9
Control Delay (s)	0.0	0.5	9.5
Lane LOS		A	A
Approach Delay (s)	0.0	0.5	9.5
Approach LOS			A

Intersection Summary			
Average Delay		1.2	
Intersection Capacity Utilization		18.1%	ICU Level of Service
Analysis Period (min)		15	

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	50	44	9	266	36	258
v/c Ratio	0.16	0.14	0.01	0.19	0.04	0.19
Control Delay	11.5	11.6	4.6	4.0	4.4	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	11.6	4.6	4.0	4.4	4.2
Queue Length 50th (m)	1.0	0.9	0.0	0.0	0.0	0.0
Queue Length 95th (m)	7.9	7.3	1.6	18.9	4.0	19.2
Internal Link Dist (m)	1308.1	285.1		328.5		907.9
Turn Bay Length (m)			35.0		40.0	
Base Capacity (vph)	973	951	1046	1599	1037	1536
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	0.05	0.05	0.01	0.17	0.03	0.17

Intersection Summary



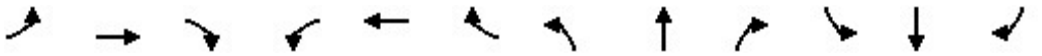
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	9	22	14	5	20	8	203	34	32	222	8
Future Volume (vph)	13	9	22	14	5	20	8	203	34	32	222	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.93			0.93		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1765			1728		1825	1759		1825	1691	
Flt Permitted		0.88			0.88		0.60	1.00		0.60	1.00	
Satd. Flow (perm)		1582			1548		1152	1759		1144	1691	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	15	10	25	16	6	22	9	228	38	36	249	9
RTOR Reduction (vph)	0	23	0	0	21	0	0	5	0	0	1	0
Lane Group Flow (vph)	0	27	0	0	23	0	9	261	0	36	257	0
Heavy Vehicles (%)	0%	0%	0%	5%	0%	0%	0%	7%	6%	0%	13%	13%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		3.1			3.1		30.4	30.4		30.4	30.4	
Effective Green, g (s)		3.1			3.1		30.4	30.4		30.4	30.4	
Actuated g/C Ratio		0.07			0.07		0.65	0.65		0.65	0.65	
Clearance Time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		104			102		745	1137		739	1093	
v/s Ratio Prot								0.15			c0.15	
v/s Ratio Perm		c0.02			0.02		0.01			0.03		
v/c Ratio		0.26			0.23		0.01	0.23		0.05	0.24	
Uniform Delay, d1		20.9			20.8		3.0	3.4		3.0	3.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.3			1.2		0.0	0.1		0.0	0.1	
Delay (s)		22.2			22.0		3.0	3.5		3.1	3.6	
Level of Service		C			C		A	A		A	A	
Approach Delay (s)		22.2			22.0			3.5			3.5	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	47.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	11	0	11	2	7	4
Future Volume (Veh/h)	11	0	11	2	7	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	14	0	14	2	9	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			14		44	14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			14		44	14
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		99	100
cM capacity (veh/h)			1617		963	1072

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	14	16	14
Volume Left	0	14	9
Volume Right	0	0	5
cSH	1700	1617	999
Volume to Capacity	0.01	0.01	0.01
Queue Length 95th (m)	0.0	0.2	0.3
Control Delay (s)	0.0	6.3	8.7
Lane LOS		A	A
Approach Delay (s)	0.0	6.3	8.7
Approach LOS			A

Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	17.4%	ICU Level of Service	A
Analysis Period (min)	15		



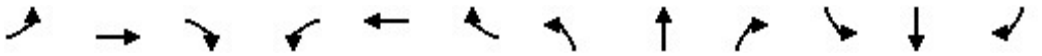
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	36	16	29	35	24	9	129	88	28	160	18
Future Volume (Veh/h)	10	36	16	29	35	24	9	129	88	28	160	18
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	10	38	17	30	36	25	9	134	92	29	167	19
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	420	469	167	413	396	134	186			226		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	420	469	167	413	396	134	186			226		
tC, single (s)	7.1	6.5	6.2	7.1	6.6	6.4	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.5	2.3			2.3		
p0 queue free %	98	92	98	94	93	97	99			98		
cM capacity (veh/h)	492	481	882	494	519	876	1336			1275		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	65	91	143	92	196	19
Volume Left	10	30	9	0	29	0
Volume Right	17	25	0	92	0	19
cSH	548	574	1336	1700	1275	1700
Volume to Capacity	0.12	0.16	0.01	0.05	0.02	0.01
Queue Length 95th (m)	3.0	4.3	0.2	0.0	0.5	0.0
Control Delay (s)	12.5	12.5	0.5	0.0	1.3	0.0
Lane LOS	B	B	A		A	
Approach Delay (s)	12.5	12.5	0.3		1.2	
Approach LOS	B	B				

Intersection Summary				
Average Delay	3.8			
Intersection Capacity Utilization	36.3%	ICU Level of Service		A
Analysis Period (min)	15			

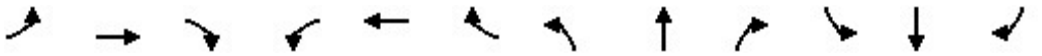
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	109	158	16	61	60	171	12	157	79
v/c Ratio	0.46	0.39	0.07	0.17	0.09	0.17	0.02	0.16	0.08
Control Delay	28.0	11.5	20.0	15.1	6.5	6.0	6.1	6.7	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	11.5	20.0	15.1	6.5	6.0	6.1	6.7	2.2
Queue Length 50th (m)	10.7	4.9	1.5	3.5	2.4	6.3	0.5	6.5	0.0
Queue Length 95th (m)	21.9	16.2	5.3	10.8	7.3	15.3	2.4	15.5	4.3
Internal Link Dist (m)		8.8		90.4		95.4		205.2	
Turn Bay Length (m)	15.0		7.0		35.0		50.0		50.0
Base Capacity (vph)	411	624	415	611	690	1014	736	953	933
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	0.25	0.04	0.10	0.09	0.17	0.02	0.16	0.08

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	46	90	14	33	20	52	126	21	10	135	68
Future Volume (vph)	94	46	90	14	33	20	52	126	21	10	135	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.90		1.00	0.94		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1659	1685		1825	1812		1690	1705		1825	1614	1526
Flt Permitted	0.72	1.00		0.66	1.00		0.66	1.00		0.65	1.00	1.00
Satd. Flow (perm)	1253	1685		1262	1812		1169	1705		1247	1614	1526
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	109	53	105	16	38	23	60	147	24	12	157	79
RTOR Reduction (vph)	0	85	0	0	19	0	0	7	0	0	0	32
Lane Group Flow (vph)	109	73	0	16	42	0	60	164	0	12	157	47
Heavy Vehicles (%)	10%	0%	4%	0%	0%	0%	8%	12%	0%	0%	19%	7%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	11.6	11.6		11.6	11.6		36.0	36.0		36.0	36.0	36.0
Effective Green, g (s)	11.6	11.6		11.6	11.6		36.0	36.0		36.0	36.0	36.0
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.59	0.59		0.59	0.59	0.59
Clearance Time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	238	320		240	345		691	1007		737	954	902
v/s Ratio Prot		0.04			0.02			0.10			c0.10	
v/s Ratio Perm	c0.09			0.01			0.05			0.01		0.03
v/c Ratio	0.46	0.23		0.07	0.12		0.09	0.16		0.02	0.16	0.05
Uniform Delay, d1	21.9	20.9		20.2	20.4		5.4	5.6		5.1	5.6	5.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.4	0.4		0.1	0.2		0.1	0.1		0.0	0.1	0.0
Delay (s)	23.3	21.2		20.3	20.6		5.4	5.7		5.1	5.7	5.3
Level of Service	C	C		C	C		A	A		A	A	A
Approach Delay (s)		22.1			20.5			5.6			5.6	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	60.9	Sum of lost time (s)	13.3
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	235	0	6	247	1	2	1	7	3	2	1
Future Volume (Veh/h)	1	235	0	6	247	1	2	1	7	3	2	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	1	250	0	6	263	1	2	1	7	3	2	1
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	264			250			529	528	250	534	527	263
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	264			250			529	528	250	534	527	263
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	99	100	100
cM capacity (veh/h)	1312			1327			459	456	794	453	457	781

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	251	0	269	1	10	6
Volume Left	1	0	6	0	2	3
Volume Right	0	0	0	1	7	1
cSH	1312	1700	1327	1700	651	488
Volume to Capacity	0.00	0.00	0.00	0.00	0.02	0.01
Queue Length 95th (m)	0.0	0.0	0.1	0.0	0.4	0.3
Control Delay (s)	0.0	0.0	0.2	0.0	10.6	12.5
Lane LOS	A		A		B	B
Approach Delay (s)	0.0		0.2		10.6	12.5
Approach LOS					B	B

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	29.1%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	0	19	0	4	10
Future Volume (Veh/h)	15	0	19	0	4	10
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	0	21	0	4	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	40	21			21	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	40	21			21	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	974	1062			1608	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	16	21	15
Volume Left	16	0	4
Volume Right	0	0	0
cSH	974	1700	1608
Volume to Capacity	0.02	0.01	0.00
Queue Length 95th (m)	0.4	0.0	0.1
Control Delay (s)	8.8	0.0	1.9
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	1.9
Approach LOS	A		

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	14.0%	ICU Level of Service	A
Analysis Period (min)	15		

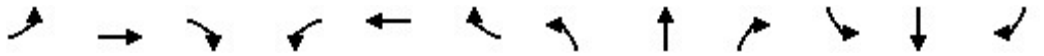
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	179	19	14	148	20	7
Future Volume (Veh/h)	179	19	14	148	20	7
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	190	20	15	157	21	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			210		387	200
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			210		387	200
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		97	99
cM capacity (veh/h)			1373		613	846

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	210	172	28
Volume Left	0	15	21
Volume Right	20	0	7
cSH	1700	1373	659
Volume to Capacity	0.12	0.01	0.04
Queue Length 95th (m)	0.0	0.3	1.0
Control Delay (s)	0.0	0.8	10.7
Lane LOS		A	B
Approach Delay (s)	0.0	0.8	10.7
Approach LOS			B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	29.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	36	85	27	392	31	430
v/c Ratio	0.12	0.29	0.04	0.31	0.04	0.33
Control Delay	12.4	15.2	5.8	6.3	5.8	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	15.2	5.8	6.3	5.8	6.6
Queue Length 50th (m)	1.4	4.1	0.9	15.9	1.0	18.3
Queue Length 95th (m)	6.6	12.7	3.7	33.3	4.1	37.6
Internal Link Dist (m)	1308.1	285.1		328.5		907.9
Turn Bay Length (m)			35.0		40.0	
Base Capacity (vph)	903	847	841	1510	870	1544
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	0.04	0.10	0.03	0.26	0.04	0.28

Intersection Summary



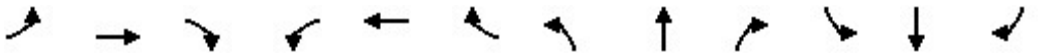
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	15	44	12	25	26	337	39	30	397	15
Future Volume (vph)	10	10	15	44	12	25	26	337	39	30	397	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.96		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1781			1774		1825	1765		1825	1806	
Flt Permitted		0.88			0.81		0.51	1.00		0.53	1.00	
Satd. Flow (perm)		1583			1479		984	1765		1019	1806	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	10	16	46	12	26	27	351	41	31	414	16
RTOR Reduction (vph)	0	14	0	0	23	0	0	4	0	0	2	0
Lane Group Flow (vph)	0	22	0	0	62	0	27	388	0	31	428	0
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	8%	0%	0%	6%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		5.2			5.2		29.7	29.7		29.7	29.7	
Effective Green, g (s)		5.2			5.2		29.7	29.7		29.7	29.7	
Actuated g/C Ratio		0.11			0.11		0.61	0.61		0.61	0.61	
Clearance Time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		170			158		603	1083		625	1108	
v/s Ratio Prot								0.22			c0.24	
v/s Ratio Perm		0.01			c0.04		0.03			0.03		
v/c Ratio		0.13			0.39		0.04	0.36		0.05	0.39	
Uniform Delay, d1		19.5			20.1		3.7	4.6		3.7	4.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			1.6		0.0	0.2		0.0	0.2	
Delay (s)		19.9			21.7		3.7	4.8		3.8	5.0	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		19.9			21.7			4.8			4.9	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	48.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	14	5	10	15	6	1
Future Volume (Veh/h)	14	5	10	15	6	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	16	6	12	18	7	1
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			22		61	19
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			22		61	19
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		99	100
cM capacity (veh/h)			1607		943	1065

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	22	30	8
Volume Left	0	12	7
Volume Right	6	0	1
cSH	1700	1607	957
Volume to Capacity	0.01	0.01	0.01
Queue Length 95th (m)	0.0	0.2	0.2
Control Delay (s)	0.0	2.9	8.8
Lane LOS		A	A
Approach Delay (s)	0.0	2.9	8.8
Approach LOS			A

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	18.0%	ICU Level of Service	A
Analysis Period (min)	15		



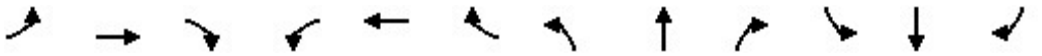
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	33	23	77	61	31	16	299	146	16	222	8
Future Volume (Veh/h)	14	33	23	77	61	31	16	299	146	16	222	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	15	35	24	81	64	33	17	315	154	17	234	8
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	682	771	234	658	625	315	242			469		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	682	771	234	658	625	315	242			469		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.3	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.4	2.2			2.3		
p0 queue free %	95	89	97	75	84	95	99			98		
cM capacity (veh/h)	291	324	810	330	390	701	1336			1072		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	74	178	332	154	251	8
Volume Left	15	81	17	0	17	0
Volume Right	24	33	0	154	0	8
cSH	391	390	1336	1700	1072	1700
Volume to Capacity	0.19	0.46	0.01	0.09	0.02	0.00
Queue Length 95th (m)	5.2	17.6	0.3	0.0	0.4	0.0
Control Delay (s)	16.3	21.8	0.5	0.0	0.7	0.0
Lane LOS	C	C	A		A	
Approach Delay (s)	16.3	21.8	0.3		0.7	
Approach LOS	C	C				

Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	51.5%	ICU Level of Service		A
Analysis Period (min)	15			

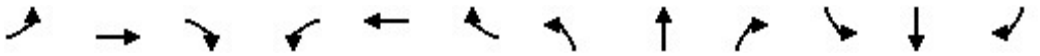
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	150	137	15	55	107	230	7	293	111
v/c Ratio	0.54	0.31	0.06	0.14	0.17	0.24	0.01	0.29	0.12
Control Delay	29.2	8.8	19.1	14.0	7.9	7.3	6.9	8.2	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	8.8	19.1	14.0	7.9	7.3	6.9	8.2	2.2
Queue Length 50th (m)	15.1	2.6	1.4	3.0	4.8	9.9	0.3	14.2	0.0
Queue Length 95th (m)	30.0	13.8	5.3	10.4	13.8	24.3	1.9	32.2	6.0
Internal Link Dist (m)		8.8		90.4		95.4		205.2	
Turn Bay Length (m)	15.0		7.0		35.0		50.0		50.0
Base Capacity (vph)	436	628	421	607	627	962	677	1021	956
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	0.34	0.22	0.04	0.09	0.17	0.24	0.01	0.29	0.12

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	26	102	14	31	21	101	186	30	7	275	104
Future Volume (vph)	141	26	102	14	31	21	101	186	30	7	275	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.88		1.00	0.94		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1755	1692		1825	1806		1789	1666		1825	1779	1585
Flt Permitted	0.72	1.00		0.67	1.00		0.58	1.00		0.62	1.00	1.00
Satd. Flow (perm)	1332	1692		1286	1806		1094	1666		1182	1779	1585
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	150	28	109	15	33	22	107	198	32	7	293	111
RTOR Reduction (vph)	0	86	0	0	17	0	0	7	0	0	0	47
Lane Group Flow (vph)	150	51	0	15	38	0	107	223	0	7	293	64
Heavy Vehicles (%)	4%	0%	0%	0%	0%	0%	2%	15%	0%	0%	8%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	12.7	12.7		12.7	12.7		35.1	35.1		35.1	35.1	35.1
Effective Green, g (s)	12.7	12.7		12.7	12.7		35.1	35.1		35.1	35.1	35.1
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.57	0.57		0.57	0.57	0.57
Clearance Time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	276	351		267	375		628	957		679	1021	910
v/s Ratio Prot		0.03			0.02			0.13			c0.16	
v/s Ratio Perm	c0.11			0.01			0.10			0.01		0.04
v/c Ratio	0.54	0.14		0.06	0.10		0.17	0.23		0.01	0.29	0.07
Uniform Delay, d1	21.6	19.8		19.4	19.6		6.1	6.4		5.6	6.6	5.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.2	0.2		0.1	0.1		0.1	0.1		0.0	0.2	0.0
Delay (s)	23.8	20.0		19.5	19.7		6.3	6.5		5.6	6.8	5.8
Level of Service	C	B		B	B		A	A		A	A	A
Approach Delay (s)		22.0			19.7			6.4			6.5	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	61.1	Sum of lost time (s)	13.3
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	418	6	9	328	9	6	3	11	3	0	4
Future Volume (Veh/h)	3	418	6	9	328	9	6	3	11	3	0	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	3	480	7	10	377	10	7	3	13	3	0	5
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	387			487			888	893	480	898	890	377
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	387			487			888	893	480	898	890	377
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			97	99	98	99	100	99
cM capacity (veh/h)	1183			1086			262	280	590	252	281	674

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	483	7	387	10	23	8
Volume Left	3	0	10	0	7	3
Volume Right	0	7	0	10	13	5
cSH	1183	1700	1086	1700	387	414
Volume to Capacity	0.00	0.00	0.01	0.01	0.06	0.02
Queue Length 95th (m)	0.1	0.0	0.2	0.0	1.4	0.4
Control Delay (s)	0.1	0.0	0.3	0.0	14.9	13.9
Lane LOS	A		A		B	B
Approach Delay (s)	0.1		0.3		14.9	13.9
Approach LOS					B	B

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	38.8%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	3	6	17	5	17	15
Future Volume (Veh/h)	3	6	17	5	17	15
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	4	8	24	7	24	21
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	96	28			31	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	96	28			31	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			98	
cM capacity (veh/h)	894	1054			1595	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	12	31	45
Volume Left	4	0	24
Volume Right	8	7	0
cSH	994	1700	1595
Volume to Capacity	0.01	0.02	0.02
Queue Length 95th (m)	0.3	0.0	0.3
Control Delay (s)	8.7	0.0	3.9
Lane LOS	A		A
Approach Delay (s)	8.7	0.0	3.9
Approach LOS	A		

Intersection Summary			
Average Delay		3.2	
Intersection Capacity Utilization		18.4%	ICU Level of Service
Analysis Period (min)		15	

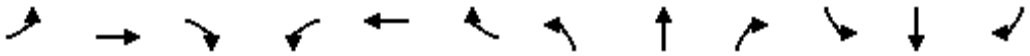
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	138	22	13	78	44	49
Future Volume (Veh/h)	138	22	13	78	44	49
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	150	24	14	85	48	53
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			174		275	162
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			174		275	162
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		93	94
cM capacity (veh/h)			1415		712	888

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	174	99	101
Volume Left	0	14	48
Volume Right	24	0	53
cSH	1700	1415	795
Volume to Capacity	0.10	0.01	0.13
Queue Length 95th (m)	0.0	0.2	3.3
Control Delay (s)	0.0	1.1	10.2
Lane LOS		A	B
Approach Delay (s)	0.0	1.1	10.2
Approach LOS			B

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	27.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	106	44	29	272	37	263
v/c Ratio	0.30	0.16	0.04	0.25	0.05	0.25
Control Delay	9.5	12.3	5.6	6.3	5.7	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	12.3	5.6	6.3	5.7	6.6
Queue Length 50th (m)	1.7	1.5	1.0	9.9	1.3	10.1
Queue Length 95th (m)	10.8	7.4	3.5	20.0	4.2	20.3
Internal Link Dist (m)	1308.1	285.1		328.5		907.9
Turn Bay Length (m)			35.0		40.0	
Base Capacity (vph)	955	843	933	1432	924	1377
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	0.11	0.05	0.03	0.19	0.04	0.19

Intersection Summary



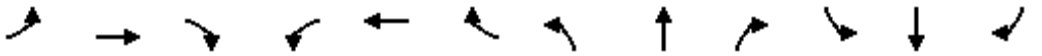
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	9	72	14	5	20	26	207	35	33	226	8
Future Volume (vph)	13	9	72	14	5	20	26	207	35	33	226	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.90			0.93		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1711			1728		1825	1759		1825	1691	
Flt Permitted		0.94			0.84		0.60	1.00		0.59	1.00	
Satd. Flow (perm)		1622			1471		1147	1759		1137	1691	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	15	10	81	16	6	22	29	233	39	37	254	9
RTOR Reduction (vph)	0	70	0	0	19	0	0	6	0	0	1	0
Lane Group Flow (vph)	0	36	0	0	25	0	29	266	0	37	262	0
Heavy Vehicles (%)	0%	0%	0%	5%	0%	0%	0%	7%	6%	0%	13%	13%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		6.5			6.5		27.0	27.0		27.0	27.0	
Effective Green, g (s)		6.5			6.5		27.0	27.0		27.0	27.0	
Actuated g/C Ratio		0.14			0.14		0.57	0.57		0.57	0.57	
Clearance Time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		224			203		658	1010		653	971	
v/s Ratio Prot								0.15			c0.15	
v/s Ratio Perm		c0.02			0.02		0.03			0.03		
v/c Ratio		0.16			0.12		0.04	0.26		0.06	0.27	
Uniform Delay, d1		17.8			17.8		4.4	5.0		4.4	5.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			0.3		0.0	0.1		0.0	0.2	
Delay (s)		18.2			18.0		4.4	5.2		4.4	5.2	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.2			18.0			5.1			5.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	47.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	61	15	2	29	12	4
Future Volume (Veh/h)	61	15	2	29	12	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	76	19	2	36	15	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			95		126	86
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			95		126	86
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	99
cM capacity (veh/h)			1512		873	979

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	95	38	20
Volume Left	0	2	15
Volume Right	19	0	5
cSH	1700	1512	897
Volume to Capacity	0.06	0.00	0.02
Queue Length 95th (m)	0.0	0.0	0.5
Control Delay (s)	0.0	0.4	9.1
Lane LOS		A	A
Approach Delay (s)	0.0	0.4	9.1
Approach LOS			A

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	14.1%	ICU Level of Service	A
Analysis Period (min)	15		



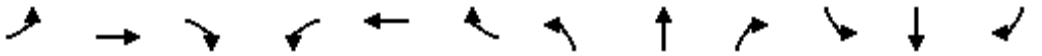
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	35	16	55	35	32	9	132	95	31	163	18
Future Volume (Veh/h)	10	35	16	55	35	32	9	132	95	31	163	18
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	10	36	17	57	36	33	9	138	99	32	170	19
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	441	489	170	425	409	138	189			237		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	441	489	170	425	409	138	189			237		
tC, single (s)	7.1	6.5	6.2	7.1	6.6	6.4	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.5	2.3			2.3		
p0 queue free %	98	92	98	88	93	96	99			97		
cM capacity (veh/h)	471	467	879	484	509	872	1333			1263		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	63	126	147	99	202	19
Volume Left	10	57	9	0	32	0
Volume Right	17	33	0	99	0	19
cSH	535	557	1333	1700	1263	1700
Volume to Capacity	0.12	0.23	0.01	0.06	0.03	0.01
Queue Length 95th (m)	3.0	6.6	0.2	0.0	0.6	0.0
Control Delay (s)	12.6	13.3	0.5	0.0	1.4	0.0
Lane LOS	B	B	A		A	
Approach Delay (s)	12.6	13.3	0.3		1.3	
Approach LOS	B	B				

Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	41.2%	ICU Level of Service		A
Analysis Period (min)	15			

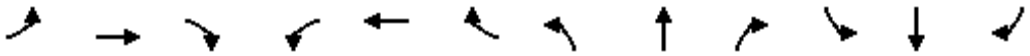
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	141	160	16	60	62	174	12	160	88
v/c Ratio	0.54	0.37	0.06	0.15	0.09	0.18	0.02	0.17	0.10
Control Delay	29.6	10.6	19.2	14.3	7.3	6.8	6.9	7.5	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	10.6	19.2	14.3	7.3	6.8	6.9	7.5	2.3
Queue Length 50th (m)	14.2	4.9	1.5	3.4	2.7	7.0	0.5	7.2	0.0
Queue Length 95th (m)	27.2	16.0	5.1	10.4	8.2	17.3	2.6	17.4	4.9
Internal Link Dist (m)		8.8		90.4		95.4		205.2	
Turn Bay Length (m)	15.0		7.0		35.0		50.0		50.0
Base Capacity (vph)	411	623	412	608	669	984	712	925	912
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	0.34	0.26	0.04	0.10	0.09	0.18	0.02	0.17	0.10

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	46	92	14	32	20	53	129	21	10	138	76
Future Volume (vph)	121	46	92	14	32	20	53	129	21	10	138	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.90		1.00	0.94		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1659	1683		1825	1811		1690	1705		1825	1614	1526
Flt Permitted	0.72	1.00		0.66	1.00		0.66	1.00		0.65	1.00	1.00
Satd. Flow (perm)	1254	1683		1260	1811		1166	1705		1244	1614	1526
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	141	53	107	16	37	23	62	150	24	12	160	88
RTOR Reduction (vph)	0	85	0	0	18	0	0	7	0	0	0	38
Lane Group Flow (vph)	141	75	0	16	42	0	62	167	0	12	160	50
Heavy Vehicles (%)	10%	0%	4%	0%	0%	0%	8%	12%	0%	0%	19%	7%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	12.8	12.8		12.8	12.8		35.1	35.1		35.1	35.1	35.1
Effective Green, g (s)	12.8	12.8		12.8	12.8		35.1	35.1		35.1	35.1	35.1
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.57	0.57		0.57	0.57	0.57
Clearance Time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	262	352		263	378		668	977		713	925	875
v/s Ratio Prot		0.04			0.02			0.10			c0.10	
v/s Ratio Perm	c0.11			0.01			0.05			0.01		0.03
v/c Ratio	0.54	0.21		0.06	0.11		0.09	0.17		0.02	0.17	0.06
Uniform Delay, d1	21.6	20.0		19.4	19.6		5.9	6.2		5.6	6.2	5.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.1	0.3		0.1	0.1		0.1	0.1		0.0	0.1	0.0
Delay (s)	23.7	20.3		19.5	19.7		5.9	6.3		5.6	6.3	5.8
Level of Service	C	C		B	B		A	A		A	A	A
Approach Delay (s)		21.9			19.7			6.2			6.1	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	61.2	Sum of lost time (s)	13.3
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	240	0	6	252	1	2	1	7	3	2	16
Future Volume (Veh/h)	6	240	0	6	252	1	2	1	7	3	2	16
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	6	255	0	6	268	1	2	1	7	3	2	17
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	269			255			565	548	255	554	547	268
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	269			255			565	548	255	554	547	268
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	99	100	98
cM capacity (veh/h)	1306			1322			425	443	789	438	443	776

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	261	0	274	1	10	22
Volume Left	6	0	6	0	2	3
Volume Right	0	0	0	1	7	17
cSH	1306	1700	1322	1700	631	661
Volume to Capacity	0.00	0.00	0.00	0.00	0.02	0.03
Queue Length 95th (m)	0.1	0.0	0.1	0.0	0.4	0.8
Control Delay (s)	0.2	0.0	0.2	0.0	10.8	10.6
Lane LOS	A		A		B	B
Approach Delay (s)	0.2		0.2		10.8	10.6
Approach LOS					B	B

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	29.6%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	15	42	0	4	75
Future Volume (Veh/h)	0	15	42	0	4	75
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	16	46	0	4	82
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	136	46			46	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	136	46			46	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	98			100	
cM capacity (veh/h)	860	1029			1575	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	16	46	86
Volume Left	0	0	4
Volume Right	16	0	0
cSH	1029	1700	1575
Volume to Capacity	0.02	0.03	0.00
Queue Length 95th (m)	0.4	0.0	0.1
Control Delay (s)	8.6	0.0	0.4
Lane LOS	A		A
Approach Delay (s)	8.6	0.0	0.4
Approach LOS	A		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	17.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	183	48	47	151	37	24
Future Volume (Veh/h)	183	48	47	151	37	24
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	195	51	50	161	39	26
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			246		482	220
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			246		482	220
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		93	97
cM capacity (veh/h)			1332		527	824

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	246	211	65
Volume Left	0	50	39
Volume Right	51	0	26
cSH	1700	1332	616
Volume to Capacity	0.14	0.04	0.11
Queue Length 95th (m)	0.0	0.9	2.7
Control Delay (s)	0.0	2.1	11.5
Lane LOS		A	B
Approach Delay (s)	0.0	2.1	11.5
Approach LOS			B

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	72	87	85	400	32	438
v/c Ratio	0.20	0.29	0.12	0.32	0.04	0.34
Control Delay	9.4	14.7	6.3	6.4	5.9	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.4	14.7	6.3	6.4	5.9	6.7
Queue Length 50th (m)	1.3	4.2	3.1	16.4	1.1	18.8
Queue Length 95th (m)	8.8	12.9	9.1	34.7	4.3	39.0
Internal Link Dist (m)	1308.1	285.1		328.5		907.9
Turn Bay Length (m)			35.0		40.0	
Base Capacity (vph)	1001	884	833	1508	863	1543
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	0.07	0.10	0.10	0.27	0.04	0.28

Intersection Summary

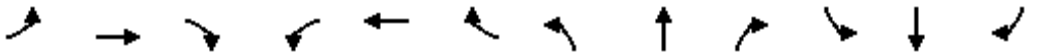
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	50	45	12	26	82	344	40	31	405	15
Future Volume (vph)	10	10	50	45	12	26	82	344	40	31	405	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.90			0.96		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1722			1773		1825	1765		1825	1806	
Flt Permitted		0.93			0.79		0.51	1.00		0.53	1.00	
Satd. Flow (perm)		1619			1443		977	1765		1011	1806	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	10	52	47	12	27	85	358	42	32	422	16
RTOR Reduction (vph)	0	46	0	0	24	0	0	4	0	0	1	0
Lane Group Flow (vph)	0	26	0	0	63	0	85	396	0	32	437	0
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	8%	0%	0%	6%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		5.0			5.0		27.7	27.7		27.7	27.7	
Effective Green, g (s)		5.0			5.0		27.7	27.7		27.7	27.7	
Actuated g/C Ratio		0.11			0.11		0.60	0.60		0.60	0.60	
Clearance Time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		175			156		585	1058		606	1082	
v/s Ratio Prot								0.22			c0.24	
v/s Ratio Perm		0.02			c0.04		0.09			0.03		
v/c Ratio		0.15			0.40		0.15	0.37		0.05	0.40	
Uniform Delay, d1		18.7			19.2		4.1	4.8		3.8	4.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4			1.7		0.1	0.2		0.0	0.2	
Delay (s)		19.1			20.9		4.2	5.0		3.9	5.1	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		19.1			20.9			4.9			5.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	46.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	49	15	10	70	21	1
Future Volume (Veh/h)	49	15	10	70	21	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	58	18	12	82	25	1
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			76		173	67
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			76		173	67
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		97	100
cM capacity (veh/h)			1536		815	1002

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	76	94	26
Volume Left	0	12	25
Volume Right	18	0	1
cSH	1700	1536	821
Volume to Capacity	0.04	0.01	0.03
Queue Length 95th (m)	0.0	0.2	0.7
Control Delay (s)	0.0	1.0	9.5
Lane LOS		A	A
Approach Delay (s)	0.0	1.0	9.5
Approach LOS			A

Intersection Summary			
Average Delay		1.7	
Intersection Capacity Utilization		20.9%	ICU Level of Service
Analysis Period (min)		15	



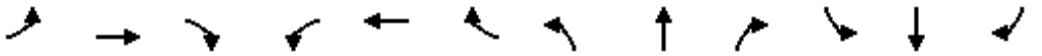
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	33	23	93	60	37	16	305	171	24	226	8
Future Volume (Veh/h)	14	33	23	93	60	37	16	305	171	24	226	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	15	35	24	98	63	39	17	321	180	25	238	8
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	714	823	238	684	651	321	246			501		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	714	823	238	684	651	321	246			501		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.3	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.4	2.2			2.3		
p0 queue free %	94	88	97	69	83	94	99			98		
cM capacity (veh/h)	272	299	806	313	374	695	1332			1043		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	74	200	338	180	263	8
Volume Left	15	98	17	0	25	0
Volume Right	24	39	0	180	0	8
cSH	367	372	1332	1700	1043	1700
Volume to Capacity	0.20	0.54	0.01	0.11	0.02	0.00
Queue Length 95th (m)	5.7	23.3	0.3	0.0	0.6	0.0
Control Delay (s)	17.3	25.4	0.5	0.0	1.0	0.0
Lane LOS	C	D	A		A	
Approach Delay (s)	17.3	25.4	0.3		1.0	
Approach LOS	C	D				

Intersection Summary				
Average Delay	6.4			
Intersection Capacity Utilization	55.8%	ICU Level of Service	B	
Analysis Period (min)	15			

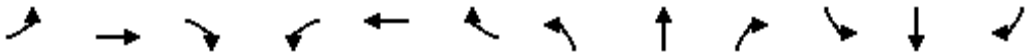
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	167	139	15	55	110	235	7	299	139
v/c Ratio	0.58	0.31	0.05	0.13	0.18	0.25	0.01	0.30	0.14
Control Delay	30.1	8.5	18.8	13.7	8.4	7.7	7.3	8.7	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	8.5	18.8	13.7	8.4	7.7	7.3	8.7	2.1
Queue Length 50th (m)	17.1	2.6	1.4	3.0	5.2	10.6	0.3	15.2	0.0
Queue Length 95th (m)	33.2	13.8	5.1	10.3	14.9	25.9	2.0	34.5	6.9
Internal Link Dist (m)		8.8		90.4		95.4		205.2	
Turn Bay Length (m)	15.0		7.0		35.0		50.0		50.0
Base Capacity (vph)	431	623	416	600	617	953	667	1009	959
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.22	0.04	0.09	0.18	0.25	0.01	0.30	0.14

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	26	104	14	31	21	103	190	31	7	281	131
Future Volume (vph)	157	26	104	14	31	21	103	190	31	7	281	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.88		1.00	0.94		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1755	1691		1825	1806		1789	1666		1825	1779	1585
Flt Permitted	0.72	1.00		0.67	1.00		0.58	1.00		0.61	1.00	1.00
Satd. Flow (perm)	1332	1691		1284	1806		1088	1666		1176	1779	1585
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	167	28	111	15	33	22	110	202	33	7	299	139
RTOR Reduction (vph)	0	87	0	0	17	0	0	8	0	0	0	60
Lane Group Flow (vph)	167	52	0	15	38	0	110	227	0	7	299	79
Heavy Vehicles (%)	4%	0%	0%	0%	0%	0%	2%	15%	0%	0%	8%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	13.4	13.4		13.4	13.4		35.1	35.1		35.1	35.1	35.1
Effective Green, g (s)	13.4	13.4		13.4	13.4		35.1	35.1		35.1	35.1	35.1
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.57	0.57		0.57	0.57	0.57
Clearance Time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	288	366		278	391		617	946		667	1010	900
v/s Ratio Prot		0.03			0.02			0.14			c0.17	
v/s Ratio Perm	c0.13			0.01			0.10			0.01		0.05
v/c Ratio	0.58	0.14		0.05	0.10		0.18	0.24		0.01	0.30	0.09
Uniform Delay, d1	21.7	19.6		19.2	19.4		6.4	6.7		5.8	6.9	6.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.8	0.2		0.1	0.1		0.1	0.1		0.0	0.2	0.0
Delay (s)	24.5	19.7		19.3	19.5		6.6	6.8		5.8	7.1	6.1
Level of Service	C	B		B	B		A	A		A	A	A
Approach Delay (s)		22.3			19.4			6.7			6.8	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	61.8	Sum of lost time (s)	13.3
Intersection Capacity Utilization	90.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	426	6	9	335	9	6	3	11	3	0	14
Future Volume (Veh/h)	18	426	6	9	335	9	6	3	11	3	0	14
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	21	490	7	10	385	10	7	3	13	3	0	16
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	395			497			953	947	490	952	944	385
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	395			497			953	947	490	952	944	385
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			97	99	98	99	100	98
cM capacity (veh/h)	1175			1077			230	256	582	229	257	667

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	511	7	395	10	23	19
Volume Left	21	0	10	0	7	3
Volume Right	0	7	0	10	13	16
cSH	1175	1700	1077	1700	357	512
Volume to Capacity	0.02	0.00	0.01	0.01	0.06	0.04
Queue Length 95th (m)	0.4	0.0	0.2	0.0	1.6	0.9
Control Delay (s)	0.5	0.0	0.3	0.0	15.8	12.3
Lane LOS	A		A		C	B
Approach Delay (s)	0.5		0.3		15.8	12.3
Approach LOS					C	B

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	47.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	3	6	87	5	17	60
Future Volume (Veh/h)	3	6	87	5	17	60
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	4	8	121	7	24	83
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	256	124			128	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	256	124			128	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			98	
cM capacity (veh/h)	726	932			1470	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	12	128	107
Volume Left	4	0	24
Volume Right	8	7	0
cSH	851	1700	1470
Volume to Capacity	0.01	0.08	0.02
Queue Length 95th (m)	0.3	0.0	0.4
Control Delay (s)	9.3	0.0	1.8
Lane LOS	A		A
Approach Delay (s)	9.3	0.0	1.8
Approach LOS	A		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	20.8%	ICU Level of Service	A
Analysis Period (min)	15		

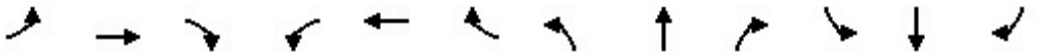
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	189	22	18	96	44	61
Future Volume (Veh/h)	189	22	18	96	44	61
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	205	24	20	104	48	66
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			229		361	217
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			229		361	217
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		92	92
cM capacity (veh/h)			1351		632	828

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	229	124	114
Volume Left	0	20	48
Volume Right	24	0	66
cSH	1700	1351	733
Volume to Capacity	0.13	0.01	0.16
Queue Length 95th (m)	0.0	0.3	4.2
Control Delay (s)	0.0	1.3	10.8
Lane LOS		A	B
Approach Delay (s)	0.0	1.3	10.8
Approach LOS			B

Intersection Summary			
Average Delay		3.0	
Intersection Capacity Utilization		33.3%	ICU Level of Service A
Analysis Period (min)		15	

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	209	44	66	272	37	263
v/c Ratio	0.46	0.15	0.11	0.29	0.06	0.30
Control Delay	8.3	12.0	6.4	7.0	6.1	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.3	12.0	6.4	7.0	6.1	7.4
Queue Length 50th (m)	1.7	1.5	2.3	9.9	1.3	10.1
Queue Length 95th (m)	14.0	7.3	7.0	21.6	4.5	22.0
Internal Link Dist (m)	1308.1	285.1		328.5		907.9
Turn Bay Length (m)			35.0		40.0	
Base Capacity (vph)	1009	845	873	1342	866	1289
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	0.21	0.05	0.08	0.20	0.04	0.20

Intersection Summary



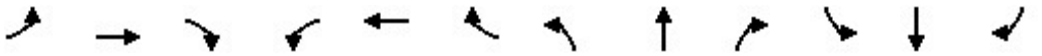
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	9	164	14	5	20	59	207	35	33	226	8
Future Volume (vph)	13	9	164	14	5	20	59	207	35	33	226	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.88			0.93		1.00	0.98		1.00	0.99	
Flt Protected		1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1687			1728		1825	1759		1825	1691	
Flt Permitted		0.97			0.84		0.60	1.00		0.59	1.00	
Satd. Flow (perm)		1642			1478		1147	1759		1137	1691	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	15	10	184	16	6	22	66	233	39	37	254	9
RTOR Reduction (vph)	0	150	0	0	18	0	0	7	0	0	1	0
Lane Group Flow (vph)	0	59	0	0	26	0	66	265	0	37	262	0
Heavy Vehicles (%)	0%	0%	0%	5%	0%	0%	0%	7%	6%	0%	13%	13%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.4			8.4		24.0	24.0		24.0	24.0	
Effective Green, g (s)		8.4			8.4		24.0	24.0		24.0	24.0	
Actuated g/C Ratio		0.18			0.18		0.52	0.52		0.52	0.52	
Clearance Time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		300			270		599	919		594	884	
v/s Ratio Prot								0.15			c0.15	
v/s Ratio Perm		c0.04			0.02		0.06			0.03		
v/c Ratio		0.20			0.10		0.11	0.29		0.06	0.30	
Uniform Delay, d1		15.9			15.6		5.5	6.2		5.4	6.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			0.2		0.1	0.2		0.0	0.2	
Delay (s)		16.2			15.8		5.6	6.3		5.4	6.4	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		16.2			15.8			6.2			6.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	45.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	153	42	2	62	22	4
Future Volume (Veh/h)	153	42	2	62	22	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	191	52	2	78	28	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			243		299	217
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			243		299	217
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		96	99
cM capacity (veh/h)			1335		696	828

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	243	80	33
Volume Left	0	2	28
Volume Right	52	0	5
cSH	1700	1335	713
Volume to Capacity	0.14	0.00	0.05
Queue Length 95th (m)	0.0	0.0	1.1
Control Delay (s)	0.0	0.2	10.3
Lane LOS		A	B
Approach Delay (s)	0.0	0.2	10.3
Approach LOS			B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	20.6%	ICU Level of Service	A
Analysis Period (min)	15		



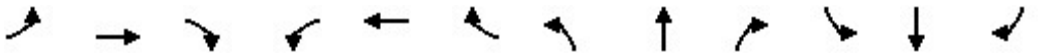
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	35	16	100	35	47	9	132	112	36	163	18
Future Volume (Veh/h)	10	35	16	100	35	47	9	132	112	36	163	18
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	10	36	17	104	36	49	9	138	117	38	170	19
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	469	519	170	437	421	138	189			255		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	469	519	170	437	421	138	189			255		
tC, single (s)	7.1	6.5	6.2	7.1	6.6	6.4	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.5	2.3			2.3		
p0 queue free %	98	92	98	78	93	94	99			97		
cM capacity (veh/h)	440	447	879	472	499	872	1333			1243		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	63	189	147	117	208	19
Volume Left	10	104	9	0	38	0
Volume Right	17	49	0	117	0	19
cSH	514	542	1333	1700	1243	1700
Volume to Capacity	0.12	0.35	0.01	0.07	0.03	0.01
Queue Length 95th (m)	3.2	11.8	0.2	0.0	0.7	0.0
Control Delay (s)	13.0	15.2	0.5	0.0	1.7	0.0
Lane LOS	B	C	A		A	
Approach Delay (s)	13.0	15.2	0.3		1.5	
Approach LOS	B	C				

Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	44.9%	ICU Level of Service		A
Analysis Period (min)	15			

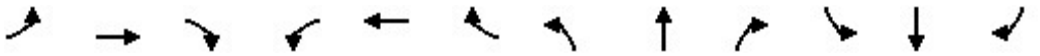
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	197	160	16	60	62	174	12	160	109
v/c Ratio	0.67	0.34	0.05	0.14	0.10	0.18	0.02	0.18	0.12
Control Delay	33.9	9.8	18.4	13.6	8.3	7.7	7.9	8.5	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	9.8	18.4	13.6	8.3	7.7	7.9	8.5	2.4
Queue Length 50th (m)	20.9	4.9	1.5	3.4	3.1	8.1	0.6	8.4	0.0
Queue Length 95th (m)	37.4	15.8	5.1	10.4	8.7	18.4	2.8	18.5	5.6
Internal Link Dist (m)		8.8		90.4		95.4		205.2	
Turn Bay Length (m)	15.0		7.0		35.0		50.0		50.0
Base Capacity (vph)	397	607	399	589	647	953	689	895	895
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	0.50	0.26	0.04	0.10	0.10	0.18	0.02	0.18	0.12

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	46	92	14	32	20	53	129	21	10	138	94
Future Volume (vph)	169	46	92	14	32	20	53	129	21	10	138	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.90		1.00	0.94		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1659	1683		1825	1811		1690	1705		1825	1614	1526
Flt Permitted	0.72	1.00		0.66	1.00		0.66	1.00		0.65	1.00	1.00
Satd. Flow (perm)	1254	1683		1260	1811		1166	1705		1244	1614	1526
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	197	53	107	16	37	23	62	150	24	12	160	109
RTOR Reduction (vph)	0	82	0	0	18	0	0	8	0	0	0	48
Lane Group Flow (vph)	197	78	0	16	42	0	62	166	0	12	160	61
Heavy Vehicles (%)	10%	0%	4%	0%	0%	0%	8%	12%	0%	0%	19%	7%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	14.8	14.8		14.8	14.8		35.1	35.1		35.1	35.1	35.1
Effective Green, g (s)	14.8	14.8		14.8	14.8		35.1	35.1		35.1	35.1	35.1
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.56	0.56		0.56	0.56	0.56
Clearance Time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	293	394		295	424		647	946		690	896	847
v/s Ratio Prot		0.05			0.02			0.10			c0.10	
v/s Ratio Perm	c0.16			0.01			0.05			0.01		0.04
v/c Ratio	0.67	0.20		0.05	0.10		0.10	0.18		0.02	0.18	0.07
Uniform Delay, d1	22.0	19.4		18.8	19.0		6.6	6.9		6.3	6.9	6.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.0	0.2		0.1	0.1		0.1	0.1		0.0	0.1	0.0
Delay (s)	28.0	19.7		18.8	19.1		6.7	7.0		6.3	7.0	6.5
Level of Service	C	B		B	B		A	A		A	A	A
Approach Delay (s)		24.2			19.0			6.9			6.8	
Approach LOS		C			B			A			A	

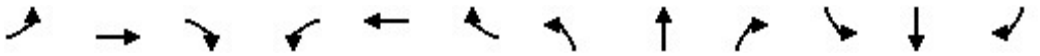
Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	63.2	Sum of lost time (s)	13.3
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	240	0	6	252	1	2	1	7	3	2	43
Future Volume (Veh/h)	16	240	0	6	252	1	2	1	7	3	2	43
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	17	255	0	6	268	1	2	1	7	3	2	46
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	269			255			616	570	255	576	569	268
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	269			255			616	570	255	576	569	268
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			99	100	99	99	100	94
cM capacity (veh/h)	1306			1322			375	426	789	421	427	776

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	272	0	274	1	10	51
Volume Left	17	0	6	0	2	3
Volume Right	0	0	0	1	7	46
cSH	1306	1700	1322	1700	604	717
Volume to Capacity	0.01	0.00	0.00	0.00	0.02	0.07
Queue Length 95th (m)	0.3	0.0	0.1	0.0	0.4	1.7
Control Delay (s)	0.6	0.0	0.2	0.0	11.1	10.4
Lane LOS	A		A		B	B
Approach Delay (s)	0.6		0.2		11.1	10.4
Approach LOS					B	B

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	35.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	0	119	0	0	15	43	42	0	4	75	5
Future Volume (Veh/h)	12	0	119	0	0	15	43	42	0	4	75	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	0	129	0	0	16	47	46	0	4	82	5
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	248	232	84	362	235	46	87			46		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	248	232	84	362	235	46	87			46		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	87	100	100	98	97			100		
cM capacity (veh/h)	680	649	980	506	647	1029	1522			1575		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	142	16	93	91
Volume Left	13	0	47	4
Volume Right	129	16	0	5
cSH	942	1029	1522	1575
Volume to Capacity	0.15	0.02	0.03	0.00
Queue Length 95th (m)	4.0	0.4	0.7	0.1
Control Delay (s)	9.5	8.6	3.9	0.3
Lane LOS	A	A	A	A
Approach Delay (s)	9.5	8.6	3.9	0.3
Approach LOS	A	A		

Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	32.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	160	22	18	122	60	51
Future Volume (Veh/h)	160	22	18	122	60	51
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	174	24	20	133	65	55
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			198		359	186
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			198		359	186
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		90	94
cM capacity (veh/h)			1387		634	861

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	198	153	120
Volume Left	0	20	65
Volume Right	24	0	55
cSH	1700	1387	721
Volume to Capacity	0.12	0.01	0.17
Queue Length 95th (m)	0.0	0.3	4.5
Control Delay (s)	0.0	1.1	11.0
Lane LOS		A	B
Approach Delay (s)	0.0	1.1	11.0
Approach LOS			B

Intersection Summary			
Average Delay		3.2	
Intersection Capacity Utilization		33.6%	ICU Level of Service A
Analysis Period (min)		15	

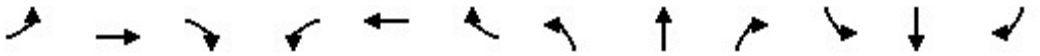
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	217	48	63	205	37	32
Future Volume (Veh/h)	217	48	63	205	37	32
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	231	51	67	218	39	34
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			282		608	256
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			282		608	256
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		91	96
cM capacity (veh/h)			1292		438	787

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	282	285	73
Volume Left	0	67	39
Volume Right	51	0	34
cSH	1700	1292	552
Volume to Capacity	0.17	0.05	0.13
Queue Length 95th (m)	0.0	1.2	3.4
Control Delay (s)	0.0	2.2	12.5
Lane LOS		A	B
Approach Delay (s)	0.0	2.2	12.5
Approach LOS			B

Intersection Summary			
Average Delay		2.4	
Intersection Capacity Utilization		42.6%	ICU Level of Service
Analysis Period (min)		15	

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	137	87	193	400	32	438
v/c Ratio	0.34	0.29	0.32	0.37	0.05	0.39
Control Delay	8.1	14.8	8.8	7.7	6.2	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.1	14.8	8.8	7.7	6.2	8.1
Queue Length 50th (m)	1.4	4.2	7.9	16.4	1.1	18.8
Queue Length 95th (m)	11.5	12.8	21.2	35.8	4.3	40.2
Internal Link Dist (m)	1308.1	285.1		328.5		907.9
Turn Bay Length (m)			35.0		40.0	
Base Capacity (vph)	972	858	786	1423	814	1456
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	0.14	0.10	0.25	0.28	0.04	0.30

Intersection Summary



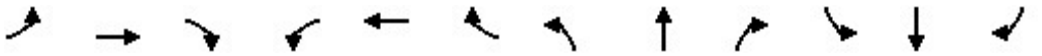
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	112	45	12	26	185	344	40	31	405	15
Future Volume (vph)	10	10	112	45	12	26	185	344	40	31	405	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.88			0.96		1.00	0.98		1.00	0.99	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1693			1773		1825	1765		1825	1806	
Flt Permitted		0.96			0.83		0.51	1.00		0.53	1.00	
Satd. Flow (perm)		1639			1506		977	1765		1011	1806	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	10	117	47	12	27	193	358	42	32	422	16
RTOR Reduction (vph)	0	100	0	0	23	0	0	5	0	0	1	0
Lane Group Flow (vph)	0	37	0	0	64	0	193	395	0	32	437	0
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	8%	0%	0%	6%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.0			7.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)		7.0			7.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio		0.15			0.15		0.57	0.57		0.57	0.57	
Clearance Time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		241			221		555	1003		574	1026	
v/s Ratio Prot								0.22			c0.24	
v/s Ratio Perm		0.02			c0.04		0.20			0.03		
v/c Ratio		0.15			0.29		0.35	0.39		0.06	0.43	
Uniform Delay, d1		17.7			18.0		5.5	5.7		4.6	5.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			0.7		0.4	0.3		0.0	0.3	
Delay (s)		18.0			18.8		5.9	6.0		4.6	6.1	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.0			18.8			5.9			6.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	47.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	111	33	10	173	51	1
Future Volume (Veh/h)	111	33	10	173	51	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	131	39	12	204	60	1
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			170		378	150
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			170		378	150
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		90	100
cM capacity (veh/h)			1420		622	901

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	170	216	61
Volume Left	0	12	60
Volume Right	39	0	1
cSH	1700	1420	625
Volume to Capacity	0.10	0.01	0.10
Queue Length 95th (m)	0.0	0.2	2.5
Control Delay (s)	0.0	0.5	11.4
Lane LOS		A	B
Approach Delay (s)	0.0	0.5	11.4
Approach LOS			B

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		



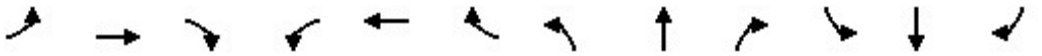
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	33	23	124	60	48	16	305	224	40	226	8
Future Volume (Veh/h)	14	33	23	124	60	48	16	305	224	40	226	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	15	35	24	131	63	51	17	321	236	42	238	8
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	760	913	238	718	685	321	246			557		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	760	913	238	718	685	321	246			557		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.3	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.4	2.2			2.3		
p0 queue free %	94	87	97	55	82	93	99			96		
cM capacity (veh/h)	243	261	806	288	350	695	1332			994		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	74	245	338	236	280	8
Volume Left	15	131	17	0	42	0
Volume Right	24	51	0	236	0	8
cSH	328	346	1332	1700	994	1700
Volume to Capacity	0.23	0.71	0.01	0.14	0.04	0.00
Queue Length 95th (m)	6.5	39.2	0.3	0.0	1.0	0.0
Control Delay (s)	19.2	37.0	0.5	0.0	1.7	0.0
Lane LOS	C	E	A		A	
Approach Delay (s)	19.2	37.0	0.3		1.6	
Approach LOS	C	E				

Intersection Summary				
Average Delay	9.4			
Intersection Capacity Utilization	60.7%	ICU Level of Service	B	
Analysis Period (min)	15			

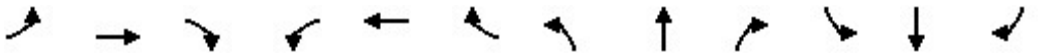
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	202	139	15	55	110	235	7	299	197
v/c Ratio	0.66	0.29	0.05	0.13	0.18	0.25	0.01	0.30	0.20
Control Delay	32.6	8.1	18.4	13.3	9.0	8.3	7.7	9.3	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.6	8.1	18.4	13.3	9.0	8.3	7.7	9.3	2.1
Queue Length 50th (m)	21.3	2.6	1.4	3.0	5.6	11.5	0.3	16.6	0.0
Queue Length 95th (m)	40.0	13.8	5.1	10.3	15.2	26.4	2.1	35.3	8.3
Internal Link Dist (m)		8.8		90.4		95.4		205.2	
Turn Bay Length (m)	15.0		7.0		35.0		50.0		50.0
Base Capacity (vph)	423	613	408	589	606	935	654	990	970
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.23	0.04	0.09	0.18	0.25	0.01	0.30	0.20

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	26	104	14	31	21	103	190	31	7	281	185
Future Volume (vph)	190	26	104	14	31	21	103	190	31	7	281	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.88		1.00	0.94		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1755	1691		1825	1806		1789	1666		1825	1779	1585
Flt Permitted	0.72	1.00		0.67	1.00		0.58	1.00		0.61	1.00	1.00
Satd. Flow (perm)	1332	1691		1284	1806		1088	1666		1176	1779	1585
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	202	28	111	15	33	22	110	202	33	7	299	197
RTOR Reduction (vph)	0	85	0	0	17	0	0	8	0	0	0	87
Lane Group Flow (vph)	202	54	0	15	38	0	110	227	0	7	299	110
Heavy Vehicles (%)	4%	0%	0%	0%	0%	0%	2%	15%	0%	0%	8%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	14.6	14.6		14.6	14.6		35.1	35.1		35.1	35.1	35.1
Effective Green, g (s)	14.6	14.6		14.6	14.6		35.1	35.1		35.1	35.1	35.1
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.56	0.56		0.56	0.56	0.56
Clearance Time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	308	391		297	418		606	928		655	991	883
v/s Ratio Prot		0.03			0.02			0.14			c0.17	
v/s Ratio Perm	c0.15			0.01			0.10			0.01		0.07
v/c Ratio	0.66	0.14		0.05	0.09		0.18	0.24		0.01	0.30	0.12
Uniform Delay, d1	21.9	19.2		18.8	19.0		6.9	7.2		6.2	7.4	6.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.0	0.2		0.1	0.1		0.1	0.1		0.0	0.2	0.1
Delay (s)	26.9	19.4		18.9	19.1		7.0	7.3		6.2	7.6	6.7
Level of Service	C	B		B	B		A	A		A	A	A
Approach Delay (s)		23.8			19.0			7.2			7.2	
Approach LOS		C			B			A			A	

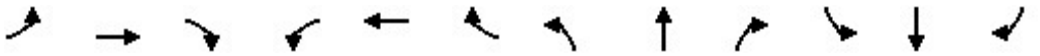
Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	63.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	426	6	9	335	9	6	3	11	3	0	32
Future Volume (Veh/h)	48	426	6	9	335	9	6	3	11	3	0	32
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	55	490	7	10	385	10	7	3	13	3	0	37
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	395			497			1042	1015	490	1020	1012	385
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	395			497			1042	1015	490	1020	1012	385
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			96	99	98	99	100	94
cM capacity (veh/h)	1175			1077			190	227	582	201	228	667

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	545	7	395	10	23	40
Volume Left	55	0	10	0	7	3
Volume Right	0	7	0	10	13	37
cSH	1175	1700	1077	1700	317	568
Volume to Capacity	0.05	0.00	0.01	0.01	0.07	0.07
Queue Length 95th (m)	1.1	0.0	0.2	0.0	1.8	1.7
Control Delay (s)	1.3	0.0	0.3	0.0	17.2	11.8
Lane LOS	A		A		C	B
Approach Delay (s)	1.3		0.3		17.2	11.8
Approach LOS					C	B

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	56.5%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	80	3	0	6	132	87	5	17	60	16
Future Volume (Veh/h)	8	0	80	3	0	6	132	87	5	17	60	16
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	11	0	111	4	0	8	183	121	7	24	83	22
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	640	636	94	744	644	124	105			128		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	640	636	94	744	644	124	105			128		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	89	98	100	99	88			98		
cM capacity (veh/h)	347	344	968	264	340	932	1499			1470		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	122	12	311	129
Volume Left	11	4	183	24
Volume Right	111	8	7	22
cSH	834	506	1499	1470
Volume to Capacity	0.15	0.02	0.12	0.02
Queue Length 95th (m)	3.9	0.6	3.2	0.4
Control Delay (s)	10.1	12.3	5.0	1.5
Lane LOS	B	B	A	A
Approach Delay (s)	10.1	12.3	5.0	1.5
Approach LOS	B	B		

Intersection Summary				
Average Delay	5.4			
Intersection Capacity Utilization	31.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	231	69	54	188	42	34
Future Volume (Veh/h)	231	69	54	188	42	34
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	251	75	59	204	46	37
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			326		610	288
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			326		610	288
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		90	95
cM capacity (veh/h)			1245		439	755

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	326	263	83
Volume Left	0	59	46
Volume Right	75	0	37
cSH	1700	1245	540
Volume to Capacity	0.19	0.05	0.15
Queue Length 95th (m)	0.0	1.1	4.1
Control Delay (s)	0.0	2.1	12.9
Lane LOS		A	B
Approach Delay (s)	0.0	2.1	12.9
Approach LOS			B

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

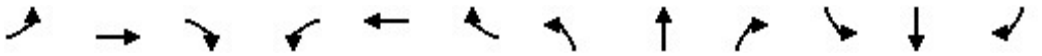
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	195	23	18	99	45	62
Future Volume (Veh/h)	195	23	18	99	45	62
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	212	25	20	108	49	67
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			237		372	224
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			237		372	224
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		92	92
cM capacity (veh/h)			1342		623	820

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	237	128	116
Volume Left	0	20	49
Volume Right	25	0	67
cSH	1700	1342	723
Volume to Capacity	0.14	0.01	0.16
Queue Length 95th (m)	0.0	0.3	4.3
Control Delay (s)	0.0	1.3	10.9
Lane LOS		A	B
Approach Delay (s)	0.0	1.3	10.9
Approach LOS			B

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	33.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	214	47	67	284	38	277
v/c Ratio	0.47	0.16	0.11	0.31	0.06	0.31
Control Delay	8.4	11.9	6.5	7.2	6.1	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.4	11.9	6.5	7.2	6.1	7.6
Queue Length 50th (m)	1.8	1.6	2.3	10.4	1.3	10.7
Queue Length 95th (m)	14.2	7.5	7.2	22.8	4.7	23.3
Internal Link Dist (m)	1308.1	285.1		328.5		907.9
Turn Bay Length (m)			35.0		40.0	
Base Capacity (vph)	1009	836	862	1345	858	1290
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	0.21	0.06	0.08	0.21	0.04	0.21

Intersection Summary



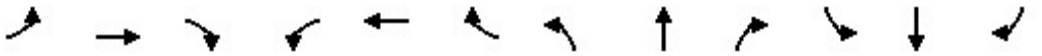
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	10	166	15	5	21	60	217	36	34	238	9
Future Volume (vph)	14	10	166	15	5	21	60	217	36	34	238	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.88			0.93		1.00	0.98		1.00	0.99	
Flt Protected		1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1688			1726		1825	1760		1825	1691	
Flt Permitted		0.97			0.83		0.59	1.00		0.59	1.00	
Satd. Flow (perm)		1641			1460		1132	1760		1125	1691	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	16	11	187	17	6	24	67	244	40	38	267	10
RTOR Reduction (vph)	0	153	0	0	20	0	0	7	0	0	1	0
Lane Group Flow (vph)	0	61	0	0	27	0	67	277	0	38	276	0
Heavy Vehicles (%)	0%	0%	0%	5%	0%	0%	0%	7%	6%	0%	13%	13%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.4			8.4		24.0	24.0		24.0	24.0	
Effective Green, g (s)		8.4			8.4		24.0	24.0		24.0	24.0	
Actuated g/C Ratio		0.18			0.18		0.52	0.52		0.52	0.52	
Clearance Time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		300			267		591	920		588	884	
v/s Ratio Prot								0.16			c0.16	
v/s Ratio Perm		c0.04			0.02		0.06			0.03		
v/c Ratio		0.20			0.10		0.11	0.30		0.06	0.31	
Uniform Delay, d1		15.9			15.6		5.6	6.2		5.4	6.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			0.2		0.1	0.2		0.0	0.2	
Delay (s)		16.3			15.8		5.6	6.4		5.5	6.4	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		16.3			15.8			6.2			6.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	45.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	154	42	2	63	22	4
Future Volume (Veh/h)	154	42	2	63	22	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	192	52	2	79	28	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			244		301	218
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			244		301	218
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		96	99
cM capacity (veh/h)			1334		694	827

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	244	81	33
Volume Left	0	2	28
Volume Right	52	0	5
cSH	1700	1334	711
Volume to Capacity	0.14	0.00	0.05
Queue Length 95th (m)	0.0	0.0	1.1
Control Delay (s)	0.0	0.2	10.3
Lane LOS		A	B
Approach Delay (s)	0.0	0.2	10.3
Approach LOS			B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	20.7%	ICU Level of Service	A
Analysis Period (min)	15		



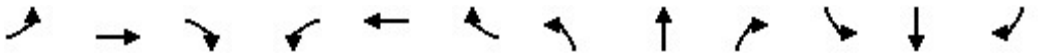
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	37	17	101	36	49	10	138	116	37	171	19
Future Volume (Veh/h)	11	37	17	101	36	49	10	138	116	37	171	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	11	39	18	105	38	51	10	144	121	39	178	20
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	490	541	178	458	440	144	198			265		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	490	541	178	458	440	144	198			265		
tC, single (s)	7.1	6.5	6.2	7.1	6.6	6.4	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.5	2.3			2.3		
p0 queue free %	97	91	98	77	92	94	99			97		
cM capacity (veh/h)	422	433	870	453	485	865	1322			1233		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	68	194	154	121	217	20
Volume Left	11	105	10	0	39	0
Volume Right	18	51	0	121	0	20
cSH	497	526	1322	1700	1233	1700
Volume to Capacity	0.14	0.37	0.01	0.07	0.03	0.01
Queue Length 95th (m)	3.6	12.8	0.2	0.0	0.7	0.0
Control Delay (s)	13.4	15.8	0.6	0.0	1.7	0.0
Lane LOS	B	C	A		A	
Approach Delay (s)	13.4	15.8	0.3		1.5	
Approach LOS	B	C				

Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	46.0%	ICU Level of Service	A	
Analysis Period (min)	15			

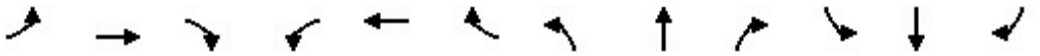
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	202	168	17	62	65	183	13	167	114
v/c Ratio	0.68	0.35	0.06	0.14	0.10	0.19	0.02	0.19	0.13
Control Delay	34.4	9.8	18.4	13.5	8.4	7.8	8.0	8.7	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	9.8	18.4	13.5	8.4	7.8	8.0	8.7	2.4
Queue Length 50th (m)	21.5	5.2	1.5	3.5	3.3	8.7	0.6	8.8	0.0
Queue Length 95th (m)	38.4	16.5	5.3	10.5	9.0	19.2	2.9	19.2	5.8
Internal Link Dist (m)		8.8		90.4		95.4		205.2	
Turn Bay Length (m)	15.0		7.0		35.0		50.0		50.0
Base Capacity (vph)	395	608	395	588	640	950	682	892	894
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	0.51	0.28	0.04	0.11	0.10	0.19	0.02	0.19	0.13

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	48	96	15	33	21	56	135	22	11	144	98
Future Volume (vph)	174	48	96	15	33	21	56	135	22	11	144	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.90		1.00	0.94		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1659	1684		1825	1810		1690	1705		1825	1614	1526
Flt Permitted	0.72	1.00		0.65	1.00		0.65	1.00		0.64	1.00	1.00
Satd. Flow (perm)	1251	1684		1250	1810		1159	1705		1233	1614	1526
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	202	56	112	17	38	24	65	157	26	13	167	114
RTOR Reduction (vph)	0	86	0	0	18	0	0	8	0	0	0	51
Lane Group Flow (vph)	202	82	0	17	44	0	65	175	0	13	167	63
Heavy Vehicles (%)	10%	0%	4%	0%	0%	0%	8%	12%	0%	0%	19%	7%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	15.0	15.0		15.0	15.0		35.1	35.1		35.1	35.1	35.1
Effective Green, g (s)	15.0	15.0		15.0	15.0		35.1	35.1		35.1	35.1	35.1
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.55	0.55		0.55	0.55	0.55
Clearance Time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	295	398		295	428		641	943		682	893	844
v/s Ratio Prot		0.05			0.02			0.10			c0.10	
v/s Ratio Perm	c0.16			0.01			0.06			0.01		0.04
v/c Ratio	0.68	0.21		0.06	0.10		0.10	0.19		0.02	0.19	0.07
Uniform Delay, d1	22.0	19.4		18.7	18.9		6.7	7.0		6.4	7.0	6.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.4	0.3		0.1	0.1		0.1	0.1		0.0	0.1	0.0
Delay (s)	28.5	19.7		18.8	19.0		6.8	7.1		6.4	7.1	6.6
Level of Service	C	B		B	B		A	A		A	A	A
Approach Delay (s)		24.5			19.0			7.0			6.9	
Approach LOS		C			B			A			A	

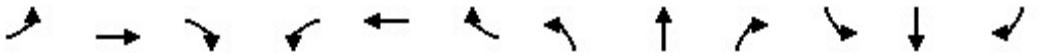
Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	63.4	Sum of lost time (s)	13.3
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	251	0	6	264	1	2	1	7	3	2	43
Future Volume (Veh/h)	16	251	0	6	264	1	2	1	7	3	2	43
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	17	267	0	6	281	1	2	1	7	3	2	46
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	282			267			641	595	267	602	594	281
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	282			267			641	595	267	602	594	281
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			99	100	99	99	100	94
cM capacity (veh/h)	1292			1308			361	413	777	405	413	763

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	284	0	287	1	10	51
Volume Left	17	0	6	0	2	3
Volume Right	0	0	0	1	7	46
cSH	1292	1700	1308	1700	589	703
Volume to Capacity	0.01	0.00	0.00	0.00	0.02	0.07
Queue Length 95th (m)	0.3	0.0	0.1	0.0	0.4	1.8
Control Delay (s)	0.6	0.0	0.2	0.0	11.2	10.5
Lane LOS	A		A		B	B
Approach Delay (s)	0.6		0.2		11.2	10.5
Approach LOS					B	B

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	36.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	0	119	0	0	16	43	43	0	4	76	5
Future Volume (Veh/h)	12	0	119	0	0	16	43	43	0	4	76	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	0	129	0	0	17	47	47	0	4	83	5
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	252	234	86	364	237	47	88			47		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	252	234	86	364	237	47	88			47		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	87	100	100	98	97			100		
cM capacity (veh/h)	677	647	979	504	645	1028	1520			1573		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	142	17	94	92
Volume Left	13	0	47	4
Volume Right	129	17	0	5
cSH	940	1028	1520	1573
Volume to Capacity	0.15	0.02	0.03	0.00
Queue Length 95th (m)	4.0	0.4	0.7	0.1
Control Delay (s)	9.5	8.6	3.8	0.3
Lane LOS	A	A	A	A
Approach Delay (s)	9.5	8.6	3.8	0.3
Approach LOS	A	A		

Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	32.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	168	22	18	126	60	51
Future Volume (Veh/h)	168	22	18	126	60	51
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	183	24	20	137	65	55
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			207		372	195
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			207		372	195
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		90	94
cM capacity (veh/h)			1376		623	851

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	207	157	120
Volume Left	0	20	65
Volume Right	24	0	55
cSH	1700	1376	711
Volume to Capacity	0.12	0.01	0.17
Queue Length 95th (m)	0.0	0.3	4.6
Control Delay (s)	0.0	1.1	11.1
Lane LOS		A	B
Approach Delay (s)	0.0	1.1	11.1
Approach LOS			B

Intersection Summary			
Average Delay		3.1	
Intersection Capacity Utilization		34.3%	ICU Level of Service A
Analysis Period (min)		15	

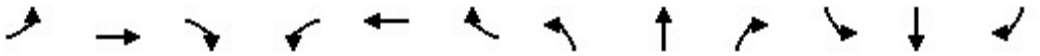
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	226	49	64	212	38	32
Future Volume (Veh/h)	226	49	64	212	38	32
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	240	52	68	226	40	34
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			292		628	266
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			292		628	266
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		91	96
cM capacity (veh/h)			1281		426	778

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	292	294	74
Volume Left	0	68	40
Volume Right	52	0	34
cSH	1700	1281	538
Volume to Capacity	0.17	0.05	0.14
Queue Length 95th (m)	0.0	1.3	3.6
Control Delay (s)	0.0	2.2	12.8
Lane LOS		A	B
Approach Delay (s)	0.0	2.2	12.8
Approach LOS			B

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	140	91	194	420	33	460
v/c Ratio	0.35	0.30	0.33	0.38	0.05	0.41
Control Delay	8.3	15.1	8.9	7.9	6.2	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.3	15.1	8.9	7.9	6.2	8.3
Queue Length 50th (m)	1.5	4.4	8.0	17.5	1.1	20.1
Queue Length 95th (m)	12.1	13.7	21.7	38.4	4.5	43.3
Internal Link Dist (m)	1308.1	285.1		328.5		907.9
Turn Bay Length (m)			35.0		40.0	
Base Capacity (vph)	962	857	764	1410	792	1441
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	0.15	0.11	0.25	0.30	0.04	0.32

Intersection Summary



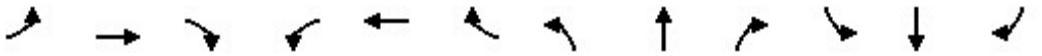
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	11	113	47	13	27	186	361	42	32	425	16
Future Volume (vph)	11	11	113	47	13	27	186	361	42	32	425	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.89			0.96		1.00	0.98		1.00	0.99	
Flt Protected		1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1696			1774		1825	1765		1825	1806	
Flt Permitted		0.96			0.83		0.50	1.00		0.52	1.00	
Satd. Flow (perm)		1636			1518		957	1765		993	1806	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	11	11	118	49	14	28	194	376	44	33	443	17
RTOR Reduction (vph)	0	101	0	0	24	0	0	5	0	0	1	0
Lane Group Flow (vph)	0	39	0	0	67	0	194	415	0	33	459	0
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	8%	0%	0%	6%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.1			7.1		27.4	27.4		27.4	27.4	
Effective Green, g (s)		7.1			7.1		27.4	27.4		27.4	27.4	
Actuated g/C Ratio		0.15			0.15		0.57	0.57		0.57	0.57	
Clearance Time (s)		6.0			6.0		7.5	7.5		7.5	7.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		241			224		546	1007		566	1030	
v/s Ratio Prot								0.24			c0.25	
v/s Ratio Perm		0.02			c0.04		0.20			0.03		
v/c Ratio		0.16			0.30		0.36	0.41		0.06	0.45	
Uniform Delay, d1		17.9			18.2		5.5	5.8		4.6	5.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			0.8		0.4	0.3		0.0	0.3	
Delay (s)		18.2			19.0		5.9	6.1		4.6	6.2	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.2			19.0			6.0			6.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	112	33	11	174	51	1
Future Volume (Veh/h)	112	33	11	174	51	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	132	39	13	205	60	1
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			171		382	152
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			171		382	152
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		90	100
cM capacity (veh/h)			1418		618	900

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	171	218	61
Volume Left	0	13	60
Volume Right	39	0	1
cSH	1700	1418	621
Volume to Capacity	0.10	0.01	0.10
Queue Length 95th (m)	0.0	0.2	2.5
Control Delay (s)	0.0	0.5	11.4
Lane LOS		A	B
Approach Delay (s)	0.0	0.5	11.4
Approach LOS			B

Intersection Summary			
Average Delay		1.8	
Intersection Capacity Utilization		28.2%	ICU Level of Service
Analysis Period (min)		15	



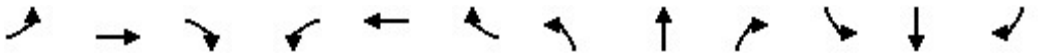
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	34	25	127	63	49	17	320	231	41	238	9
Future Volume (Veh/h)	15	34	25	127	63	49	17	320	231	41	238	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	16	36	26	134	66	52	18	337	243	43	251	9
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	795	953	251	754	719	337	260			580		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	795	953	251	754	719	337	260			580		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.3	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.4	2.2			2.3		
p0 queue free %	93	85	97	50	80	92	99			96		
cM capacity (veh/h)	225	246	793	269	334	681	1316			974		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	78	252	355	243	294	9
Volume Left	16	134	18	0	43	0
Volume Right	26	52	0	243	0	9
cSH	312	326	1316	1700	974	1700
Volume to Capacity	0.25	0.77	0.01	0.14	0.04	0.01
Queue Length 95th (m)	7.4	46.6	0.3	0.0	1.1	0.0
Control Delay (s)	20.4	45.2	0.5	0.0	1.7	0.0
Lane LOS	C	E	A		A	
Approach Delay (s)	20.4	45.2	0.3		1.6	
Approach LOS	C	E				

Intersection Summary				
Average Delay	11.1			
Intersection Capacity Utilization	62.6%	ICU Level of Service	B	
Analysis Period (min)	15			

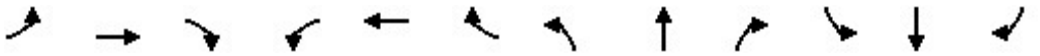
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	210	145	16	57	115	246	7	313	202
v/c Ratio	0.67	0.30	0.05	0.13	0.19	0.26	0.01	0.32	0.21
Control Delay	33.2	8.0	18.3	13.2	9.2	8.6	7.9	9.5	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	8.0	18.3	13.2	9.2	8.6	7.9	9.5	2.1
Queue Length 50th (m)	22.3	2.6	1.5	3.1	6.1	12.5	0.3	17.9	0.0
Queue Length 95th (m)	41.6	14.1	5.4	10.4	15.9	27.8	2.1	37.1	8.4
Internal Link Dist (m)		8.8		90.4		95.4		205.2	
Turn Bay Length (m)	15.0		7.0		35.0		50.0		50.0
Base Capacity (vph)	421	614	404	586	595	930	645	986	968
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	0.50	0.24	0.04	0.10	0.19	0.26	0.01	0.32	0.21

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	27	109	15	32	22	108	199	32	7	294	190
Future Volume (vph)	197	27	109	15	32	22	108	199	32	7	294	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.88		1.00	0.94		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1755	1691		1825	1805		1789	1666		1825	1779	1585
Flt Permitted	0.72	1.00		0.66	1.00		0.57	1.00		0.61	1.00	1.00
Satd. Flow (perm)	1330	1691		1277	1805		1074	1666		1165	1779	1585
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	210	29	116	16	34	23	115	212	34	7	313	202
RTOR Reduction (vph)	0	89	0	0	18	0	0	8	0	0	0	90
Lane Group Flow (vph)	210	56	0	16	39	0	115	238	0	7	313	112
Heavy Vehicles (%)	4%	0%	0%	0%	0%	0%	2%	15%	0%	0%	8%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	14.9	14.9		14.9	14.9		35.1	35.1		35.1	35.1	35.1
Effective Green, g (s)	14.9	14.9		14.9	14.9		35.1	35.1		35.1	35.1	35.1
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.55	0.55		0.55	0.55	0.55
Clearance Time (s)	6.4	6.4		6.4	6.4		6.9	6.9		6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	313	398		300	424		595	923		645	986	878
v/s Ratio Prot		0.03			0.02			0.14			c0.18	
v/s Ratio Perm	c0.16			0.01			0.11			0.01		0.07
v/c Ratio	0.67	0.14		0.05	0.09		0.19	0.26		0.01	0.32	0.13
Uniform Delay, d1	22.0	19.1		18.7	18.9		7.0	7.3		6.3	7.6	6.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.6	0.2		0.1	0.1		0.2	0.1		0.0	0.2	0.1
Delay (s)	27.5	19.3		18.8	19.0		7.2	7.5		6.3	7.8	6.8
Level of Service	C	B		B	B		A	A		A	A	A
Approach Delay (s)		24.2			19.0			7.4			7.4	
Approach LOS		C			B			A			A	

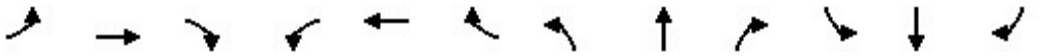
Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	63.3	Sum of lost time (s)	13.3
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	447	6	10	351	10	6	3	12	3	0	32
Future Volume (Veh/h)	48	447	6	10	351	10	6	3	12	3	0	32
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	55	514	7	11	403	11	7	3	14	3	0	37
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	414			521			1086	1060	514	1064	1056	403
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	414			521			1086	1060	514	1064	1056	403
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			96	99	98	98	100	94
cM capacity (veh/h)	1156			1056			176	213	564	187	214	652

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	569	7	414	11	24	40
Volume Left	55	0	11	0	7	3
Volume Right	0	7	0	11	14	37
cSH	1156	1700	1056	1700	305	549
Volume to Capacity	0.05	0.00	0.01	0.01	0.08	0.07
Queue Length 95th (m)	1.1	0.0	0.2	0.0	1.9	1.8
Control Delay (s)	1.3	0.0	0.3	0.0	17.8	12.1
Lane LOS	A		A		C	B
Approach Delay (s)	1.3		0.3		17.8	12.1
Approach LOS					C	B

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	58.5%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	80	3	0	6	132	88	5	18	61	16
Future Volume (Veh/h)	8	0	80	3	0	6	132	88	5	18	61	16
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	11	0	111	4	0	8	183	122	7	25	85	22
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	646	641	96	748	648	126	107			129		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	646	641	96	748	648	126	107			129		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	89	98	100	99	88			98		
cM capacity (veh/h)	344	341	966	262	338	930	1497			1469		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	122	12	312	132
Volume Left	11	4	183	25
Volume Right	111	8	7	22
cSH	831	503	1497	1469
Volume to Capacity	0.15	0.02	0.12	0.02
Queue Length 95th (m)	3.9	0.6	3.2	0.4
Control Delay (s)	10.1	12.3	5.0	1.5
Lane LOS	B	B	A	A
Approach Delay (s)	10.1	12.3	5.0	1.5
Approach LOS	B	B		

Intersection Summary				
Average Delay	5.4			
Intersection Capacity Utilization	31.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	241	69	54	197	42	34
Future Volume (Veh/h)	241	69	54	197	42	34
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	262	75	59	214	46	37
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			337		632	300
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			337		632	300
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		89	95
cM capacity (veh/h)			1234		426	745

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	337	273	83
Volume Left	0	59	46
Volume Right	75	0	37
cSH	1700	1234	527
Volume to Capacity	0.20	0.05	0.16
Queue Length 95th (m)	0.0	1.1	4.2
Control Delay (s)	0.0	2.1	13.1
Lane LOS		A	B
Approach Delay (s)	0.0	2.1	13.1
Approach LOS			B

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		

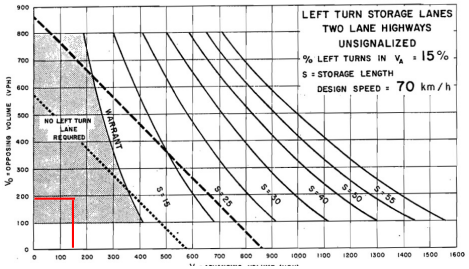
APPENDIX F

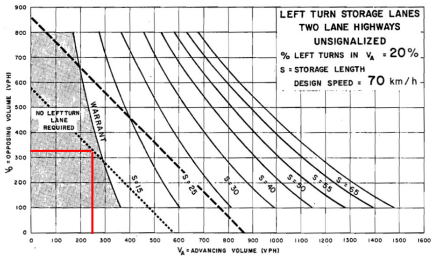
Auxiliary Left-Turn Lane Warrants

2029 Future Total Scenarios

Mattamy SR 17 Access

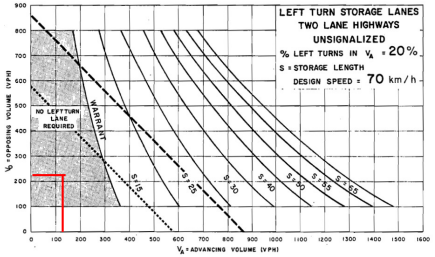
EB					
AM			PM		
DS =	60	km/h	DS =	60	km/h
Va=	144		Va=	251	
Vo =	190		Vo =	310	
VL =	18		VL =	54	
% LT =	12%		% LT =	22%	

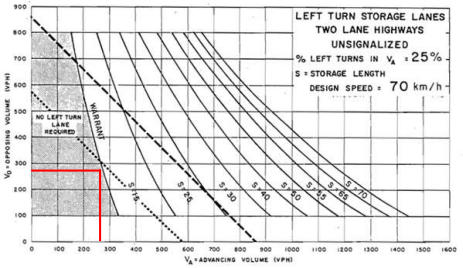




SR 17 x 8th Line

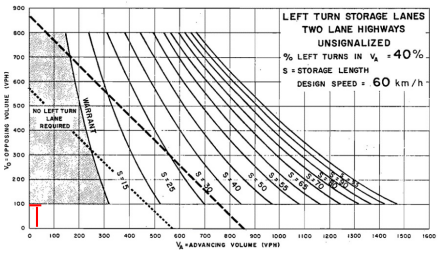
WB					
AM			PM		
DS =	60	km/h	DS =	60	km/h
Va=	118		Va=	276	
Vo =	219		Vo =	275	
VL =	18		VL =	64	
% LT =	16%		% LT =	23%	

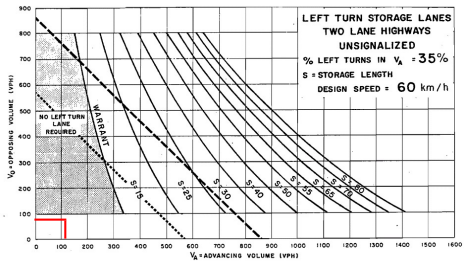




Empire N Access

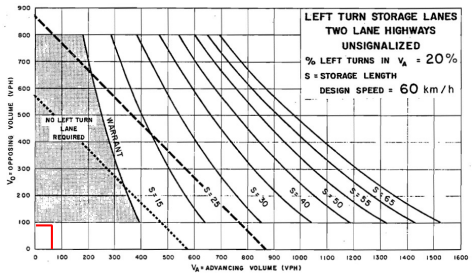
SB					
AM			PM		
DS =	50	km/h	DS =	50	km/h
Va=	33		Va=	113	
Vo =	90		Vo =	80	
VL =	13		VL =	38	
% LT =	39%		% LT =	34%	

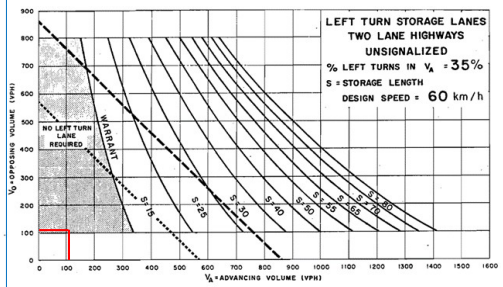




Empire S Access

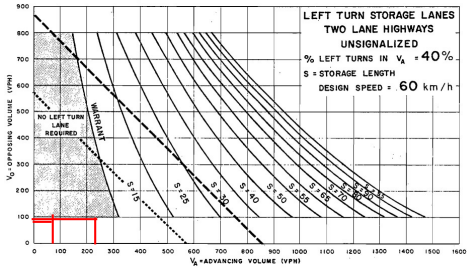
SB					
AM			PM		
DS =	50	km/h	DS =	50	km/h
Va=	64		Va=	111	
Vo =	72		Vo =	104	
VL =	12		VL =	38	
% LT =	19%		% LT =	34%	

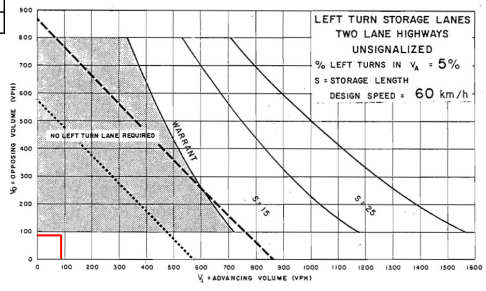


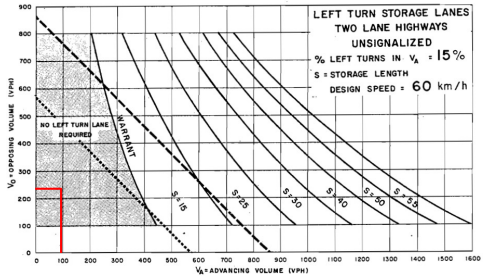


Erin Heights Drive x Mattamy 8th Line

NB					
AM			PM		
DS =	50	km/h	DS =	50	km/h
Va=	86		Va=	226	
Vo =	85		Vo =	95	
VL =	43		VL =	132	
% LT =	50%		% LT =	59%	
SB					
AM			PM		
DS =	50	km/h	DS =	50	km/h
Va=	85		Va=	95	
Vo =	86		Vo =	226	
VL =	4		VL =	18	
% LT =	5%		% LT =	19%	



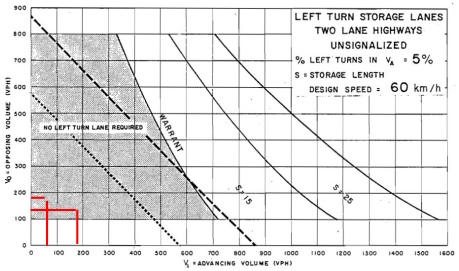




2029 Future Total Scenarios

Dundas & 8th Line

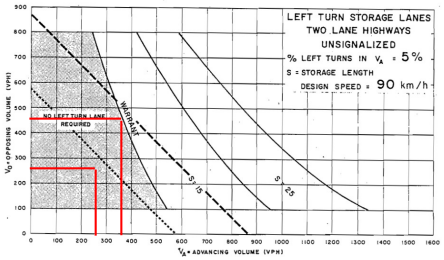
WB					
	AM			PM	
DS =	50	km/h	DS =	50	km/h
Va=	65		Va=	185	
Vo =	196		Vo =	145	
VL =	2		VL =	11	
% LT =	3%		% LT =	6%	

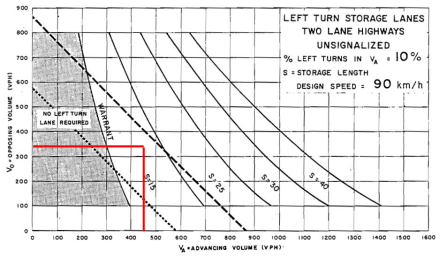


WR 124 x 8th Line

EB					
	AM			PM	
DS =	80	km/h	DS =	80	km/h
Va=	268		Va=	454	
Vo =	265		Vo =	361	
VL =	16		VL =	48	
% LT =	6%		% LT =	11%	

WB					
	AM			PM	
DS =	80	km/h	DS =	80	km/h
Va=	265		Va=	361	
Vo =	268		Vo =	454	
VL =	6		VL =	10	
% LT =	2%		% LT =	3%	



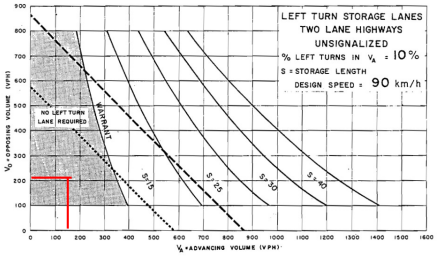


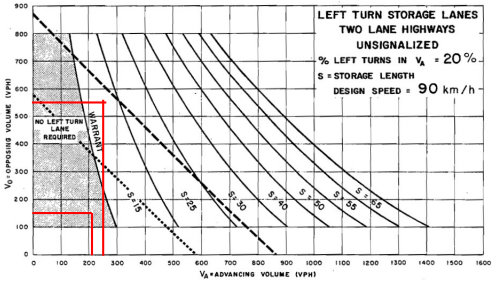
Warrants

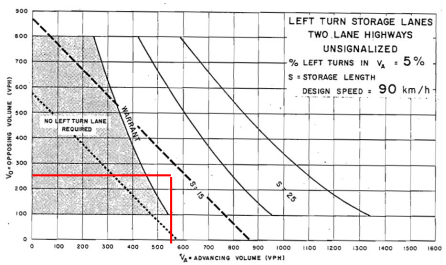
SR 17 x Trafalgar

NB					
	AM			PM	
DS =	80	km/h	DS =	80	km/h
Va=	148		Va=	551	
Vo =	208		Vo =	246	
VL =	10		VL =	17	
% LT =	7%		% LT =	3%	

SB					
AM			PM		
DS =	80	km/h	DS =	80	km/h
Va=	208		Va=	246	
Vo =	148		Vo =	551	
VL =	37		VL =	41	
% LT =	18%		% LT =	17%	



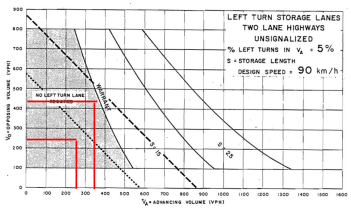


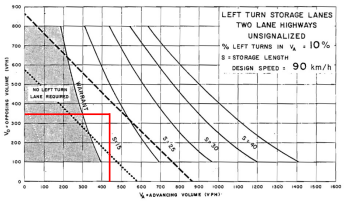


Warrants

WR 124 x 8th Line

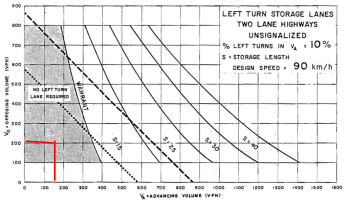
EB					
AM			PM		
DS =	80	km/h	DS =	80	km/h
Va=	256		Va=	432	
Vo =	253		Vo =	344	
VL =	16		VL =	48	
% LT =	6%		% LT =	11%	
WB					
AM			PM		
DS =	80	km/h	DS =	80	km/h
Va=	253		Va=	344	
Vo =	256		Vo =	432	
VL =	6		VL =	9	
% LT =	2%		% LT =	3%	

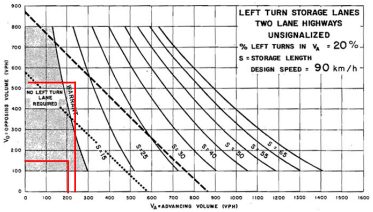


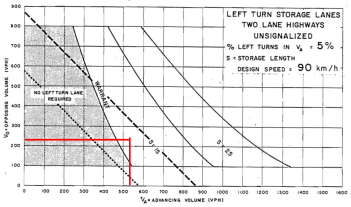


SR 17 x Trafalgar

NB					
AM			PM		
DS =	80	km/h	DS =	80	km/h
Va=	141		Va=	529	
Vo =	199		Vo =	235	
VL =	9		VL =	16	
% LT =	7%		% LT =	3%	
SB					
AM			PM		
DS =	80	km/h	DS =	80	km/h
Va=	199		Va=	235	
Vo =	141		Vo =	529	
VL =	36		VL =	40	
% LT =	18%		% LT =	17%	







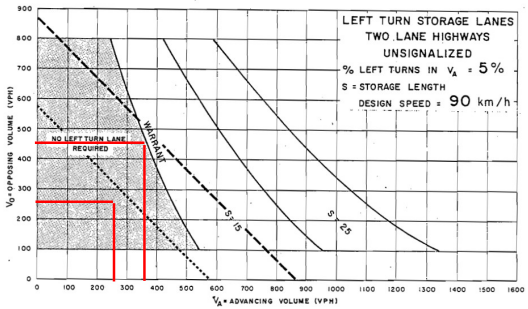
2024 Future Background Scenario

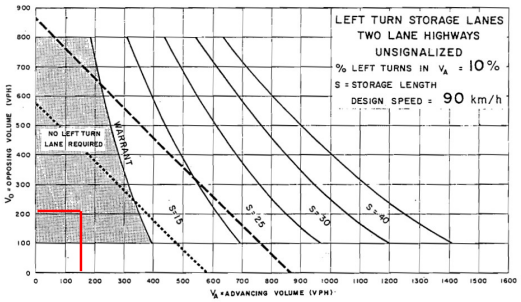
WR 124 x 8th Line

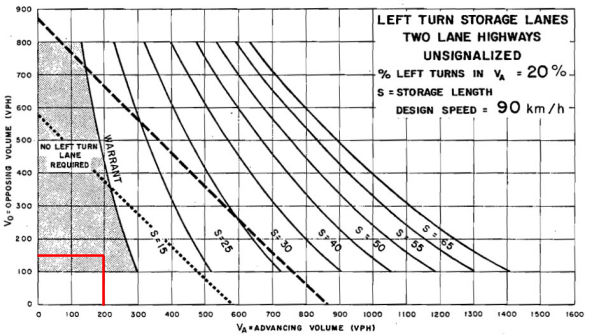
EB					
AM			PM		
DS =	80	km/h	DS =	80	km/h
Va=	251		Va=	432	
Vo =	253		Vo =	344	
VL =	11		VL =	33	
% LT =	4%		% LT =	8%	
WB					
AM			PM		
DS =	80	km/h	DS =	80	km/h
Va=	253		Va=	344	
Vo =	251		Vo =	432	
VL =	6		VL =	9	
% LT =	2%		% LT =	3%	

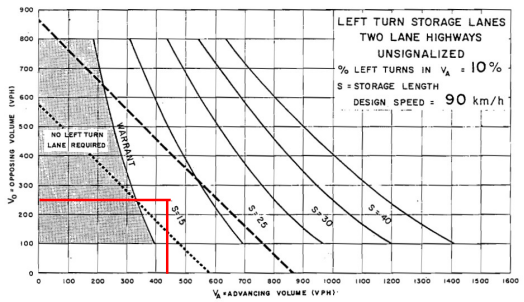
SR 17 x Trafalgar

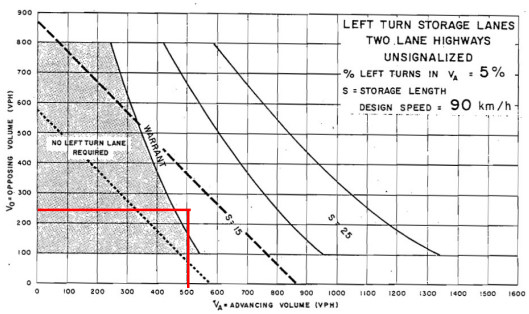
NB					
AM			PM		
DS =	80	km/h	DS =	80	km/h
Va=	141		Va=	507	
Vo =	197		Vo =	235	
VL =	9		VL =	16	
% LT =	7%		% LT =	3%	
SB					
AM			PM		
DS =	80	km/h	DS =	80	km/h
Va=	197		Va=	235	
Vo =	141		Vo =	507	
VL =	34		VL =	32	
% LT =	17%		% LT =	14%	

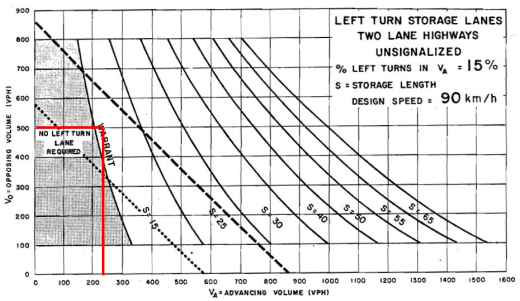












APPENDIX G

Signal Warrants

Intersection: 8TH LINE & SR17 Count Date: 2029

Summary Results

Justification			Compliance		Signal Justified? YES	Signal Justified? NO
1. Minimum Vehicular Volume	A	Total Volume	66	%	☐	☑
	B	Crossing Volume	31	%		
2. Delay to Cross Traffic	A	Main Road	56	%	☐	☑
	B	Crossing Road	52	%		
3. Combination	A	Justificaton 1	31	%	☐	☑
	B	Justification 2	52	%		
4. 4-Hr Volume			19	%	☐	☑

Intersection: SR17 & TRAFALGAR Count Date: 2029

Summary Results

Justification			Compliance		Signal Justified? YES	Signal Justified? NO
1. Minimum Vehicular Volume	A	Total Volume	85	%	☐	☑
	B	Crossing Volume	100	%		
2. Delay to Cross Traffic	A	Main Road	65	%	☐	☑
	B	Crossing Road	100	%		
3. Combination	A	Justificaton 1	85	%	☐	☑
	B	Justification 2	65	%		
4. 4-Hr Volume			43	%	☐	☑

Intersection: Erin Heights& 8th Line Count Date: 2029

Summary Results

Justification			Compliance		Signal Justified? YES	Signal Justified? NO
1. Minimum Vehicular Volume	A	Total Volume	48	%	☐	☑
	B	Crossing Volume	61	%		
2. Delay to Cross Traffic	A	Main Road	32	%	☐	☑
	B	Crossing Road	17	%		
3. Combination	A	Justificaton 1	48	%	☐	☑
	B	Justification 2	17	%		
4. 4-Hr Volume			18	%	☐	☑

Intersection: 8TH LINE & DUNDAS Count Date: 2029

Summary Results

Justification			Compliance		Signal Justified? YES	Signal Justified? NO
1. Minimum Vehicular Volume	A	Total Volume	44	%	☐	☑
	B	Crossing Volume	13	%		
2. Delay to Cross Traffic	A	Main Road	39	%	☐	☑
	B	Crossing Road	45	%		
3. Combination	A	Justificaton 1	13	%	☐	☑
	B	Justification 2	39	%		
4. 4-Hr Volume			7	%	☐	☑

Intersection: 8TH LINE & WR 124 Count Date: 2029

Summary Results

Justification			Compliance		Signal Justified? YES	Signal Justified? NO
1. Minimum Vehicular Volume	A	Total Volume	73	%	☐	☑
	B	Crossing Volume	31	%		
2. Delay to Cross Traffic	A	Main Road	68	%	☐	☑
	B	Crossing Road	12	%		
3. Combination	A	Justificaton 1	31	%	☐	☑
	B	Justification 2	12	%		
4. 4-Hr Volume			8	%	☐	☑

Intersection: SR 17 ACCESS / SIDEROAD 17 Count Date: 2029

Summary Results

Justification			Compliance		Signal Justified? YES	Signal Justified? NO
1. Minimum Vehicular Volume	A	Total Volume	66	%	☐	☑
	B	Crossing Volume	33	%		
2. Delay to Cross Traffic	A	Main Road	56	%	☐	☑
	B	Crossing Road	62	%		
3. Combination	A	Justificaton 1	33	%	☐	☑
	B	Justification 2	56	%		
4. 4-Hr Volume			20	%	☐	☑

Intersection: S ACCESS / ERIN HEIGHTS / 8TH LINE Count Date: 2029

Summary Results

Justification			Compliance		Signal Justified? YES	Signal Justified? NO
1. Minimum Vehicular Volume	A	Total Volume	48	%	☐	☑
	B	Crossing Volume	61	%		
2. Delay to Cross Traffic	A	Main Road	32	%	☐	☑
	B	Crossing Road	17	%		
3. Combination	A	Justificaton 1	48	%	☐	☑
	B	Justification 2	17	%		
4. 4-Hr Volume			18	%	☐	☑