Golden Plough Lodge and County Archives Redevelopment Transportation Impact Study (Update)

Paradigm Transportation Solutions Limited

August 2019

Project Summary

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Golden Plough Lodge and County Archives Redevelopment
Transportation Impact Study (Update)

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Executive Summary

Content

Paradigm Transportation Solutions Limited (Paradigm) was retained to complete (2016) and update (2019) a Transportation Impact Study (TIS) for the proposed Golden Plough Lodge and County Archives Redevelopment located at 983 Burnham Street in the Town of Cobourg, Ontario. This study includes an analysis of existing traffic conditions, a description of the proposed development, traffic forecasts for the year 2026 with and without the proposed redevelopment, and an analysis of operating conditions at the horizon year. The report also provides an assessment of the need for the proposed extension of Courthouse Road to Strathy Road as a public road per the 2010 Town of Cobourg Official Plan.

Development Concept

Northumberland County is planning to reconstruct Golden Plough Lodge to meet new legislated standards on a vacant five-acre parcel adjacent to the existing facility. The subject lands are located on the north side of Courthouse Road west of the existing long-term care home, which is planned to be demolished as part of the redevelopment project. The site is surrounded by predominantly commercial and institutional land uses with some residential dwellings fronting onto Courthouse Road opposite the proposed facility.

The new Golden Plough Lodge is proposed to feature a three-storey building comprising 180 beds, up from the current 151 bed capacity. Roadway access to the site is proposed via driveway connections to Strathy Road, Elgin Street West (via Courthouse Road (east)) and Burnham Street, with an internal circulation route (private road) provided within the subject lands. The Burnham Street access is proposed to operate under one of two scenarios:

- Scenario A – All-movements driveway with an eastbound left-turn lane at Burnham Street; or;
- Scenario B – Right-in/right-out driveway to Burnham Street.

Both scenarios were assessed as part of this study to identify the preferred option.

The current schedule envisions construction of new Golden Plough Lodge beginning in 2020 with occupancy occurring somewhere between 2023 and 2025, depending on the availability of funding.

Conclusions

The conclusions of this Transportation Impact Study are as follows:

- Under 2019 base year traffic conditions, the study area intersections operate at good overall levels of service (LOS C or better) during both the AM and PM peak hours. The eastbound left-turn 95th percentile queues on Depalma Drive at Burnham Street and on Elgin Street West at Burnham Street currently exceed available storage in the PM peak hour.
- Under 2026 background traffic conditions, the study area intersections are expected to operate at similar levels of service to base year conditions (LOS C or better) during both the weekday AM and PM peak hours. The following critical movements were identified, all of which occur in the PM peak hour:
  - The eastbound left-turn movement on Depalma Drive at Burnham Street is forecast to operate at LOS E with a v/c ratio of 1.02 (volume demand exceeds theoretical capacity), representing an increase of 0.26 from 2019 base year conditions. The 95th percentile queue is also expected to exceed available storage by 81 metres, representing an increase of 40 metres from 2019 base year conditions;
  - The southbound approach on Courthouse Road (west) at Elgin Street West is forecast to operate at LOS E with a v/c ratio of 0.34, representing an increase of 0.13 from 2019 base year conditions;
  - The eastbound left-turn movement on Elgin Street West at Burnham Street is forecast to operate at LOS E with a v/c ratio of 0.98 (volume demand approaching theoretical capacity), representing an increase of 0.19 from 2019 base year conditions. The 95th percentile queue is also expected to exceed available storage by 30 metres, representing an increase of 26 metres from 2019 base year conditions; and
  - The southbound left-turn 95th percentile queue on Burnham Street at Elgin Street West is forecast to exceed available storage by 30 metres, representing an increase of 35 metres from 2019 base year conditions.
- Under 2026 total traffic conditions for Scenario A, the study area intersections are expected to operate at similar levels of service to base year and future background conditions (LOS C or better) during both the weekday AM and PM peak hours. The following critical movements were identified, all of which occur in the PM peak hour:
  - The eastbound left-turn movement on Depalma Drive at Burnham Street is forecast to operate at LOS F with a v/c ratio of 1.03, representing an increase of 0.01 from 2026 background conditions. The 95th percentile queue is also expected to exceed

available storage by 82 metres, representing an increase of one metre from 2026 background conditions;

- The eastbound left-turn movement on Elgin Street West at Burnham Street is forecast to operate at LOS E with a v/c ratio of 0.98, representing no change from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 30 metres, representing no change from 2026 background conditions; and
- The southbound left-turn movement on Burnham Street at Elgin Street is forecast to operate at LOS D with a v/c ratio of 0.91, representing an increase of 0.12 from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 56 metres, representing an increase of 16 metres from 2026 background conditions.

- Under 2026 total traffic conditions for Scenario B, the study area intersections are expected to operate at similar levels of service to base year and future background conditions (LOS C or better) during both the weekday AM and PM peak hours. The following critical movements were identified, all of which occur in the PM peak hour:
  - The eastbound left-turn movement on Depalma Drive at Burnham Street is forecast to operate at LOS F with a v/c ratio of 1.10, representing an increase of 0.08 from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 93 metres, representing an increase of 12 metres from 2026 background conditions;
  - The eastbound left-turn movement on Elgin Street West at Burnham Street is forecast to operate at LOS F with a v/c ratio of 0.99, representing an increase of 0.01 from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 31 metres, representing an increase of one metre from 2026 background conditions; and
  - The southbound left-turn movement on Burnham Street at Elgin Street West is forecast to operate at LOS D with a v/c ratio of 0.90, representing an increase of 0.11 from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 55 metres, representing an increase of 15 metres from 2026 background conditions.
- No operational concerns were identified at any of the proposed site accesses onto the proposed roadway system surrounding the subject site;
- Scenario A (all-movements) is preferred to Scenario B (right-in/right-out) for the Burnham Street driveway configuration;
- Access impacts to the Church on the Hill are minimized by maintaining a driveway connection to Elgin Street West at the location of Courthouse Road (west); and

- The proposed extension of Courthouse Road to Strathy Road through the lands being considered for the Golden Plough Lodge and County Archives Redevelopment as a public road:
  - Is not consistently addressed in the Town of Cobourg Official Plan;
  - Is not likely required to serve future development within the Cobourg West Business Park Secondary Plan area;
  - Would not likely benefit the study area road network; and
  - Would be inconsistent with Northumberland County's vision and plans for the rebuilt long-term care home.

  A private connection is more appropriate than a public road in terms of traffic calming and community safety and can still facilitate the connection of Strathy Road to Courthouse Road as contemplated by the Town's Official Plan.

Recommendations

Based on the findings of this study, it is recommended that:

- The Golden Plough Lodge and County Archives Redevelopment proceed as planned from a transportation perspective. No roadway or traffic control improvements to the external road system are required to accommodate the proposed redevelopment. The Town of Cobourg and Northumberland County should continue to monitor signal timings at the study area intersections to ensure that a reasonable level of service is maintained into the future.
- The internal circulation route not be dedicated as a public road. If necessary, Northumberland County and/or the Town of Cobourg should initiate an amendment to the Town's Official Plan to clarify that the proposed extension of Courthouse Road is to proceed as a private road/driveway connection.
- If an all-movement access is provided on Burnham Street, Northumberland County should monitor traffic volumes to assess whether a northbound auxiliary left-turn lane will be required in the future.

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1 Introduction

1.1 Overview

Paradigm Transportation Solutions Limited (Paradigm) was retained in 2016 to conduct a Transportation Impact Study for the proposed Golden Plough Lodge and County Archives Redevelopment located at 983 Burnham Street in the Town of Cobourg, Ontario. **Figure 1.1** shows the location of the subject site. Since that time, the development concept has been revised requiring the previous study to be updated.

1.2 Purpose and Scope

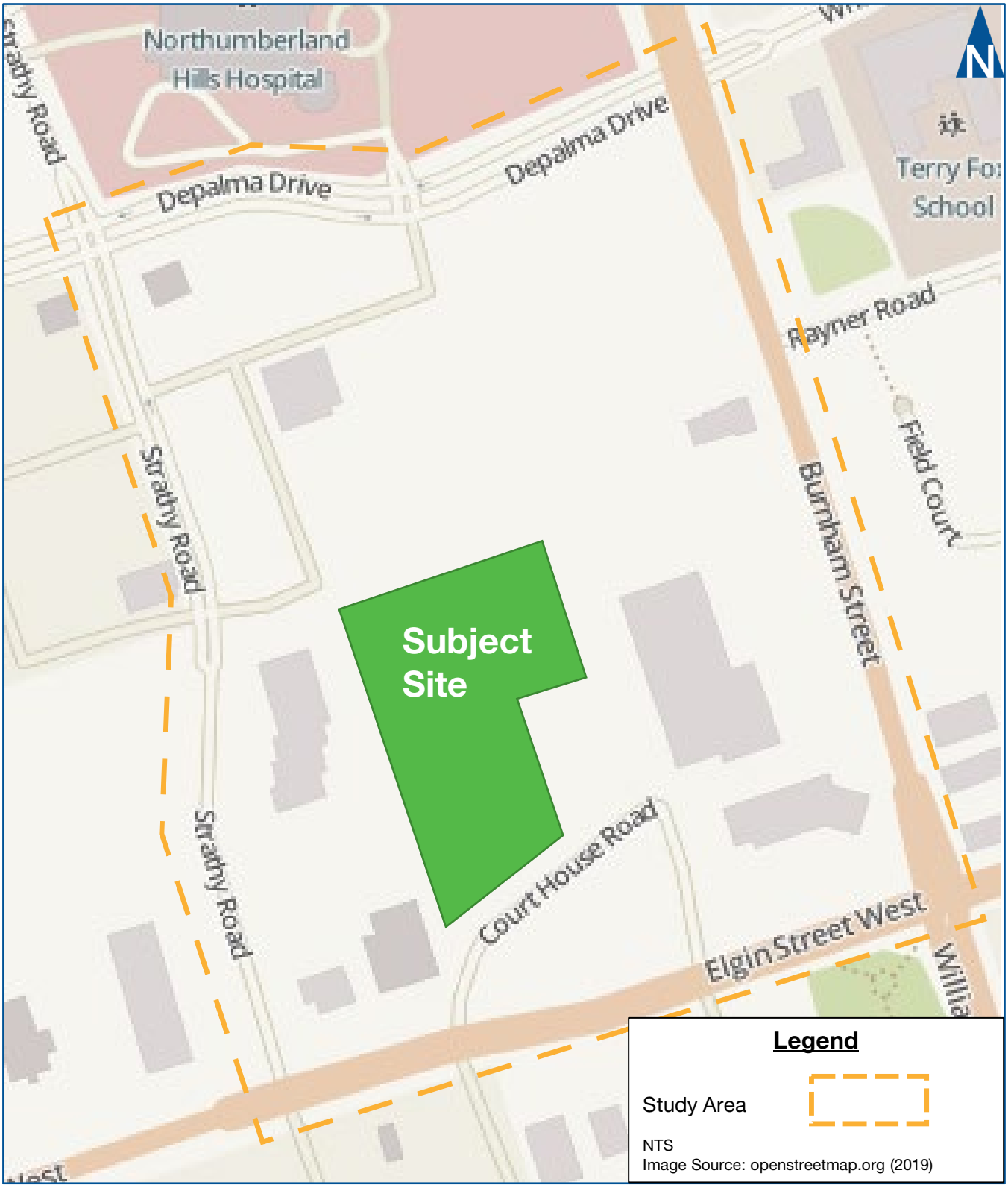
The purpose of this study is to determine the impacts of the proposed redevelopment on the surrounding road network and identify any improvements necessary to accommodate the increase in traffic generated. The scope and methodology used to carry out this study is summarized below:

- Forecast background traffic volumes in the study area for the 2026 horizon year by applying a 2% compounded per annum growth rate to base year (2019) traffic volumes;
- Estimate the net increase in traffic generated by the proposed development;
- Combine the future background traffic with the net increase in trips to determine the total traffic volumes for the 2026 horizon year;
- Analyze the future peak hour intersection operations for background and total traffic conditions for the 2026 horizon year; and
- Determine the net impact on operational performance due to the site traffic and the need for road and/or traffic control improvements to address the identified impacts.

Two alternative roadway connections to Burnham Street were assessed, as discussed further in Section 2.

The study also examined the need for a proposed extension of Courthouse Road to Strathy Road through the subject lands as a public road. The connection is shown on Schedules “I” and “J” of the 2010 Town of Cobourg Official Plan.

This study has followed standard industry practice, as neither Northumberland County or the Town of Cobourg have published guidelines for the preparation of traffic studies.



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Location of Subject Site and Study Area

Figure 1.1

1.3 Study Area

The following intersections were analyzed to determine the impacts of additional traffic generated by redevelopment of the subject site:

- Depalma Drive and Northumberland Hills Hospital driveway (west)/ Strathy Road (signalized);
- Depalma Drive and Northumberland Hills Hospital driveway (east) (signalized);
- Depalma Drive/White Street and Burnham Street (signalized);
- Golden Plough Lodge Driveway and Burnham Street (Country Road 18) (unsignalized);
- Elgin Street West (Country Road 2/20) and Burnham Street (Country Road 18/2) (signalized);
- Elgin Street West (Country Road 2) and Courthouse Road (east) (unsignalized);
- Elgin Street West (Country Road 2) and Courthouse Road (west) (unsignalized);
- Elgin Street West (Country Road 2) and Strathy Road (signalized);
- SmartCentres (Walmart/Supercentre) development driveway and Strathy Road (signalized); and
- Golden Plough Lodge driveway and Courthouse Road (unsignalized).

2 Proposed Golden Plough Lodge and County Archives Redevelopment

The existing Golden Plough Lodge is a 151 bed, long-term care home operated by Northumberland County at 983 Burnham Street in the Town of Cobourg. The home provides nursing care, personal support and nutrition services in addition to a variety of social, recreational and spiritual activities for its residents.

The County is planning to reconstruct Golden Plough Lodge to meet new legislated standards on a vacant five-acre land parcel adjacent to the existing facility. The subject lands are located on the north side of Courthouse Road west of the existing long-term care home, which is planned to be demolished as part of the redevelopment project. The site is surrounded by predominantly commercial and institutional land uses with some residential dwellings fronting onto Courthouse Road opposite the proposed facility.

Figure 2.1 illustrates the currently proposed site plan for the redevelopment, which features a three-storey building comprising 180 beds. Roadway access to the site is proposed via driveway connections to Strathy Road, Elgin Street West (via Courthouse Road (east)) and Burnham Street, with an internal circulation route (private road) provided within the subject lands. The Burnham Street access is proposed to operate under one of two scenarios:

- Scenario A – All-movements driveway with an eastbound left-turn lane at Burnham Street; or;
- Scenario B – Right-in/right-out driveway to Burnham Street.

Both scenarios were assessed as part of this study to identify the preferred option.

The current schedule envisions construction of new Golden Plough Lodge beginning in 2020 with occupancy occurring somewhere between 2023 and 2025, depending on the availability of funding.

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Site Plan

Golden Plough Lodge and County Archives Redevelopment TIS Update
190120

Figure 2.1

3 Existing Conditions

3.1 Road Network

The roadways within the study area are as follows:

- **Depalma Drive/White Street** is an east-west four-lane divided collector road under the jurisdiction of the Town of Cobourg. Depalma Drive/White Street has an urban cross-section with two through lanes in each direction and opposing left-turn lanes at Strathy Road, the Northumberland Hills Hospital driveway and Burnham Street. The speed limit is unposted and assumed to be 50 km/h within the study area. A No Stopping anytime restriction is in effect on both sides of the road. A continuous multi-use trail is provided on the north side of the roadway.
- **Strathy Road** is a north-south four-lane collector road under the jurisdiction of the Town of Cobourg. Strathy Road has an undivided urban cross-section within the study area from Elgin Street West to the SmartCentres development driveway and a divided urban cross-section from the SmartCentres development driveway to Depalma Drive. The speed limit is unposted and assumed to be 50 km/h within the study area. A No Stopping anytime restriction is in effect on the east side of the roadway from Elgin Street West to Depalma Drive. A continuous multi-use trail is provided on the east side of the roadway from Elgin Street West to Depalma Drive.
- **Elgin Street West (County Road 2/20)** is an east-west four-lane arterial road under the jurisdiction of Northumberland County. Elgin Street West is a former Provincial Highway and has an urban cross-section, two through lanes in each direction and opposing left-turn lanes at each of the four intersections within the study area. The posted speed limit is 50 km/h within the study area. Sidewalks are provided on the north and south sides of the roadway. Within the study area, Elgin Street West is a signed truck route.
- **Burnham Street (County Road 18/2)** is a north-south four-lane arterial road under the jurisdiction of Northumberland County north of Elgin Street and the Town of Cobourg to the south. Burnham Street has an urban cross-section, two through lanes in each direction and opposing left-turn lanes at its intersections with Elgin Street West and Depalma Drive/White Street. Burnham Street has a posted speed limit of 50 km/h, is a signed truck route within the study area and provides direct access to Provincial Highway 401 via exit 472. Sidewalks are provided on the east side of the roadway.
- **Courthouse Road (East Segment)** is a north-south two-lane local road under the jurisdiction of the Town of Cobourg. Courthouse Road has an undivided urban cross-section with one through lane in each direction. Left turns from Courthouse Road are restricted at its intersection with Elgin Street West. The speed limit is unposted and

assumed to be 50 km/h. Sidewalks are provided on the east side of the roadway.

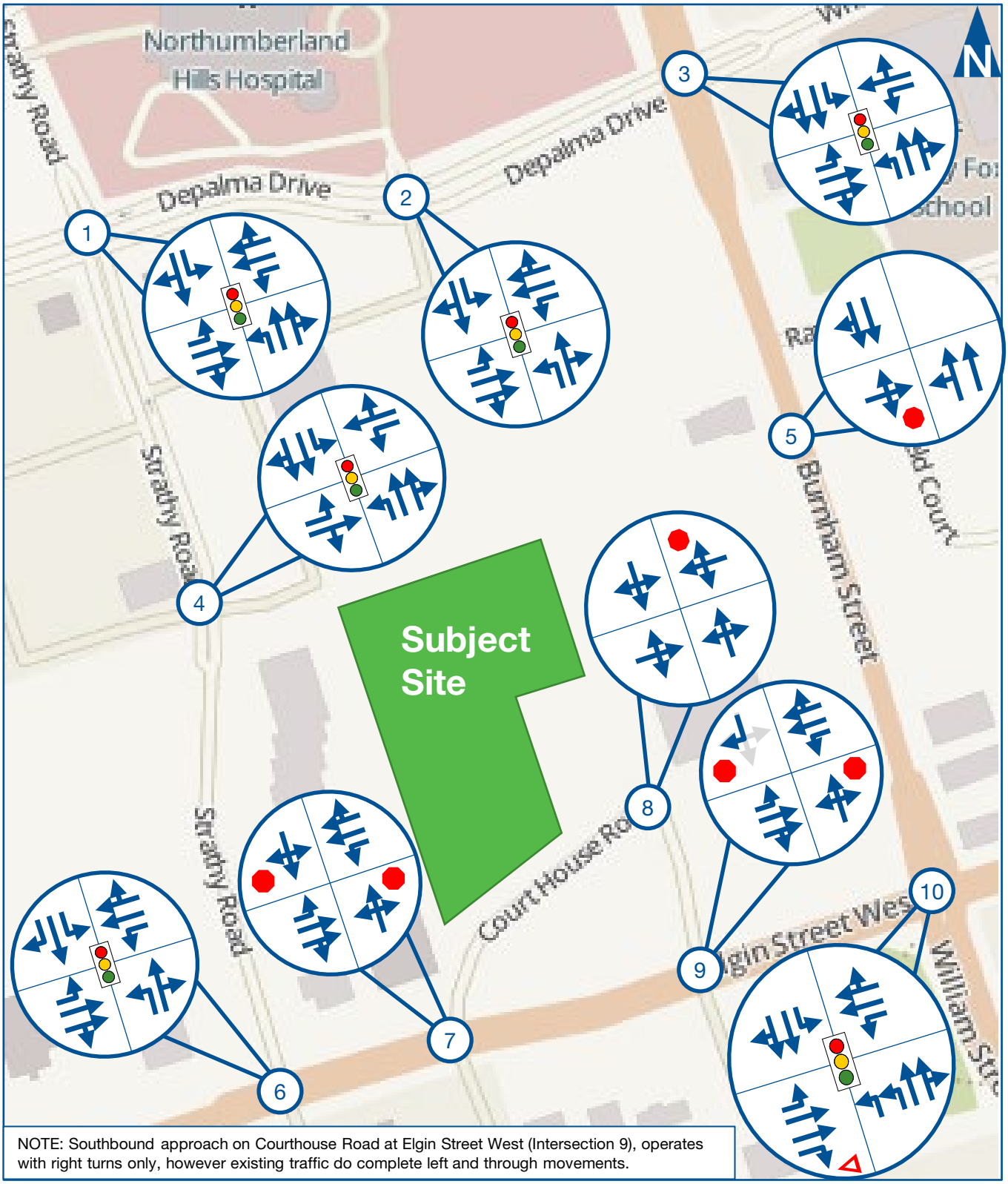
- **Courthouse Road (West Segment)** is a northeast-southwest two-lane local road under the jurisdiction of the Town of Cobourg. This segment of Courthouse Road has an undivided semi-urban cross section without curb and gutter for more than half of the segment. The speed limit is unposted and assumed to be 50 km/h. No sidewalks are provided on the roadway.

Figure 3.1 illustrates the intersection lane configurations and traffic control for the study area roads.

3.2 Traffic Volumes

Paradigm collected turning movement counts (TMCs) at all intersections within the study area for the original 2016 study. The counts were completed on 2 June 2016, except for Elgin Street West and Burnham Street, which was counted on 4 February 2016 as part of another study. **Appendix A** contains the original TMC data.

A growth rate of two percent compounded per annum was applied to the 2016 TMCs to account for potential background traffic growth since the counts were collected. The traffic volumes between intersections have not been balanced due to other local roads and driveways intersecting the study area roadways, and due to varying peak hour time frames among the individual study area intersections. **Figure 3.2** and **Figure 3.3** illustrate the base year (2019) AM and PM peak hour traffic volumes, respectively.



NOTE: Southbound approach on Courthouse Road at Elgin Street West (Intersection 9), operates with right turns only, however existing traffic do complete left and through movements.

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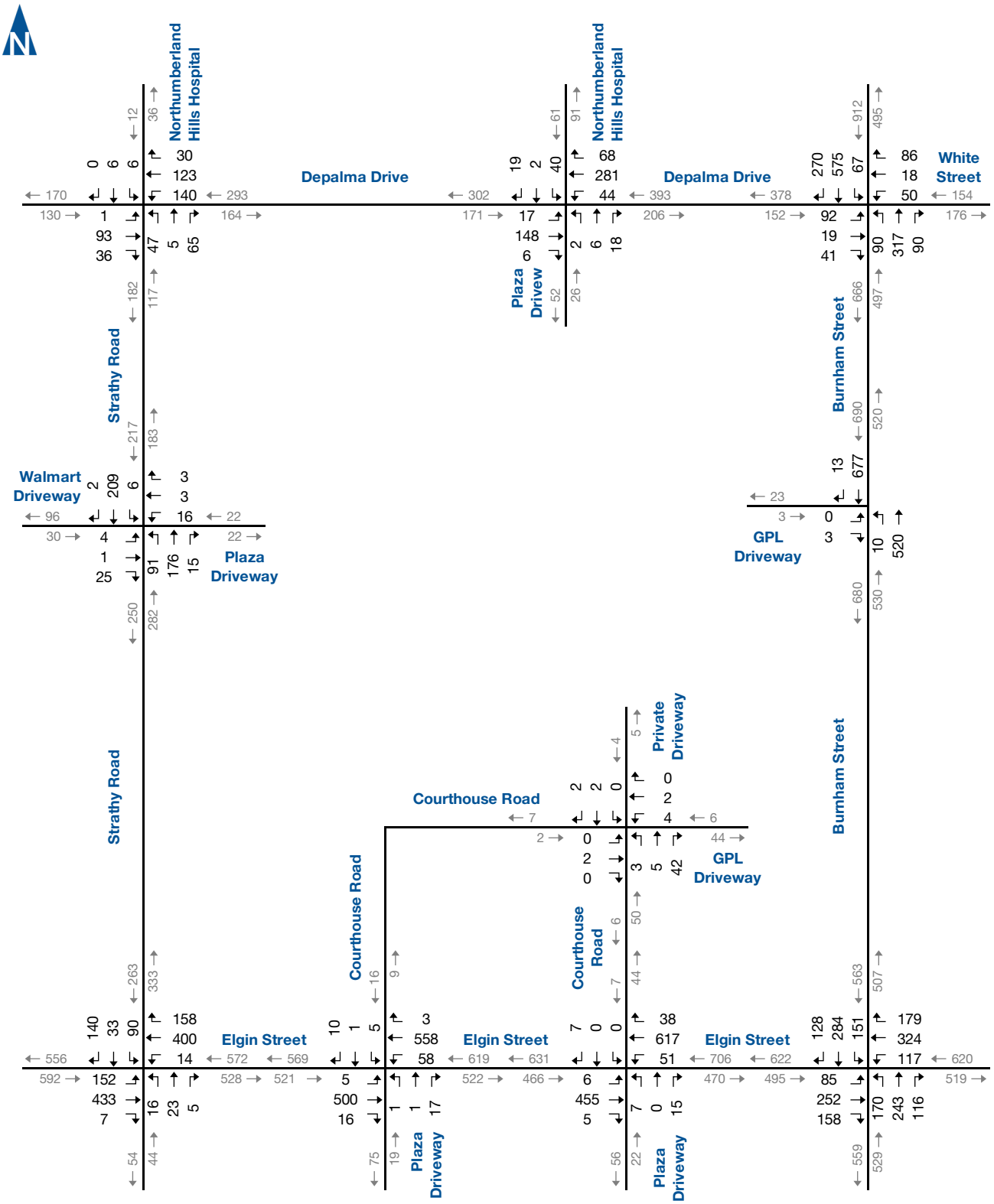
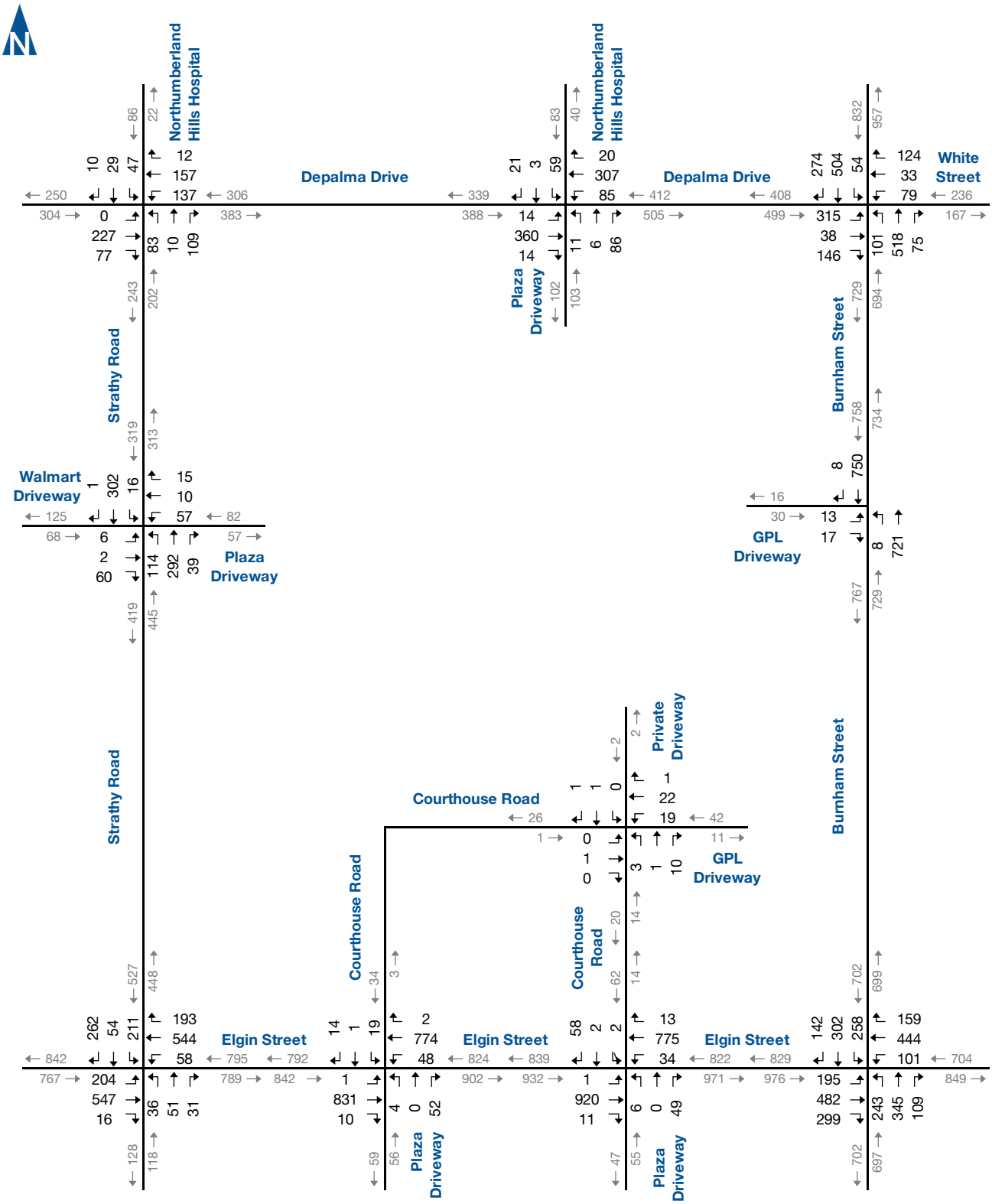
Existing Lane Configurations and Traffic Control

Figure 3.1



2019 Base Year Traffic Volumes AM Peak Hour

Figure 3.2



2019 Base Year Traffic Volumes PM Peak Hour

Figure 3.3

3.3 Traffic Operations

Intersection level of service (LOS) is a recognized method of quantifying the delay experienced by drivers at intersections. It is based on the delay experienced by individual vehicles executing the various movements. The delay is related to the number of vehicles desiring to make a movement compared to the estimated capacity for that movement. The capacity is based on several criteria related to the opposing traffic flows and intersection geometry.

Table 3.1 summarizes the level of service criteria for signalized and stop-controlled intersections. The highest or best possible rating is LOS A, under which the average total delay is equal or less than 10 seconds per vehicle. When the average delay exceeds 80 seconds for signalized intersections, 50 seconds for unsignalized intersections or when the volume to capacity ratio is greater than 1.00, the movement is classified as LOS F and remedial measures are usually implemented, if they are feasible. LOS E is usually used as a guideline for the determination of road improvement needs on through lanes, while LOS F may be acceptable for left-turn movements at peak times depending on delays.

TABLE 3.1: VEHICLE LEVEL OF SERVICE DEFINITIONS

Level of Service	Signalized Intersections Average Total Delay (sec/veh)	Unsignalized Intersections Average Total Delay (sec/veh)
A	< = 10	< = 10
B	> 10 & < = 20	> 10 & < = 15
C	> 20 & < = 35	> 15 & < = 25
D	> 35 & < = 55	> 25 & < = 35
E	> 55 & < = 80	> 35 & < = 50
F	> 80	> 50

The operations of the study area intersections were evaluated using Synchro 9.2 with Highway Capacity Manual (HCM) 2000 procedures. The intersection analysis considered the following measures of performance:

- The volume to capacity ratio for each intersection;
- The LOS for each turning movement. LOS is based on the average control delay per vehicle; and
- The estimated 95th percentile queue length.

The parameters used in the analysis included:

- Existing lane configurations;
- Heavy vehicle percentages derived from the TMCs;

- Overall intersection peak hour factors (PHF) calculated from the traffic counts;
- Signal timings provided by the Town of Cobourg and Northumberland County (and included in **Appendix B** for reference); and
- Synchro default values for all other inputs.

Table 3.2 and **Table 3.3** summarize the existing weekday AM and PM peak hour intersection operations, respectively, including 95th percentile queues for each movement (where applicable) and available vehicle storage in each lane. **Appendix C** contains the detailed Synchro reports.

All intersections currently operate at good overall levels of service (LOS C or better). The eastbound left-turn movements on Depalma Drive at Burnham Street and on Elgin Street West at Burnham Street in the PM peak hour are the only critical movements, with the 95th percentile queue lengths exceeding available storage by approximately 41 and four metres, respectively.

TABLE 3.2: 2019 BASE YEAR TRAFFIC OPERATIONS – AM PEAK HOUR

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																Overall
				Eastbound				Westbound				Northbound				Southbound				
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	1 - Depalma Drive & Strathy Road	TCS	LOS	B	B	>	**B**	B	B	>	**B**	B	B	>	**B**	B	B	>	**B**	**B**
			Delay	20	20	>	**20**	12	13	>	**12**	14	15	>	**15**	17	16	>	**17**	**15**
			V/C	0.00	0.14	>		0.28	0.11	>		0.11	0.03	>		0.03	0.01	>		**0.21**
			Q	1	11	>		21	13	>		9	5	>		3	3	>		
			Ex	20	-	>		50	-	>		45	-	>		15	-	>		
			Avail.	19	-	>		29	-	>		36	-	>		13	-	>		
	2 - Depalma Drive & Hospital Entrance/Plaza Driveway	TCS	LOS	B	B	>	**B**	A	B	>	**B**	B	B	>	**B**	B	B	>	**B**	**B**
			Delay	11	11	>	**11**	9	11	>	**10**	12	12	>	**12**	12	12	>	**12**	**11**
			V/C	0.07	0.14	>		0.10	0.28	>		0.00	0.03	>		0.10	0.02	>		**0.2**
			Q	3	11	>		6	21	>		1	4	>		8	4	>		
			Ex	65	-	>		50	-	>		-	-	>		-	-	>		
			Avail.	62	-	>		44	-	>		-	-	>		-	-	>		
	3 - Burnham Street & Depalma Drive/White Street	TCS	LOS	C	C	>	**C**	C	C	>	**C**	A	B	>	**B**	A	B	>	**B**	**B**
			Delay	23	25	>	**24**	26	27	>	**27**	9	11	>	**10**	9	14	>	**13**	**15**
			V/C	0.37	0.06	>		0.26	0.15	>		0.31	0.26	>		0.14	0.57	>		**0.48**
			Q	24	7	>		15	17	>		12	30	>		10	72	>		
			Ex	30	-	>		30	-	>		40	-	>		30	-	>		
			Avail.	6	-	>		15	-	>		28	-	>		20	-	>		
	4 - Strathy Road & Walmart Driveway	TCS	LOS	B	B	>	**B**	B	B	>	**B**	A	A	>	**A**	B	B	>	**B**	**A**
			Delay	13	11	>	**12**	13	11	>	**12**	7	8	>	**8**	11	11	>	**11**	**10**
			V/C	0.02	0.08	>		0.06	0.01	>		0.22	0.16	>		0.02	0.22	>		**0.17**
			Q	2	6	>		5	2	>		6	10	>		1	12	>		
			Ex	-	-	>		-	-	>		-	-	>		25	-	>		
			Avail.	-	-	>		-	-	>		-	-	>		24	-	>		
	5 - Burnham Street & GPL Driveway	TWSC	LOS	A		A	**A**	**Approach Not Applicable**				A	UM		**A**		UM	UM	**UM**	
			Delay	10		10	**10**					1			**0**					
			V/C	0.00		0.00						0.01								
			Q	0		0						0								
			Ex	-		-						-								
			Avail.	-		-						-								
	6 - Strathy Road & Elgin Street	TCS	LOS	A	B	>	**B**	B	B	C	**B**	B	B	>	**B**	B	B	B	**B**	**B**
			Delay	10	13	>	**13**	14	18	20	**19**	14	20	>	**18**	13	19	16	**16**	**16**
			V/C	0.30	0.33	>		0.04	0.41	0.11		0.04	0.06	>		0.17	0.08	0.09		**0.27**
			Q	18	34	>		3	32	13		4	8	>		15	10	11		
			Ex	-	-	>		-	-	40		20	-	>		-	-	-		
			Avail.	-	-	>		-	-	27		16	-	>		-	-	-		
	7 - Elgin Street & Courthouse Road (West)	TWSC	LOS	<	UM	UM	**A**	<	UM	UM	**A**	<	B	>	**B**	<	B	>	**B**	
			Delay	<			**0**	<			**1**	<	10	>	**10**	<	14	>	**14**	
			V/C	<				<				<	0.03	>		<	0.04	>		
			Q	<				<				<	1	>		<	1	>		
			Ex	<				<				<	-	>		<	-	>		
			Avail.	<				<				<	-	>		<	-	>		
	8 - Courthouse Road & GPL Driveway	AWSC	LOS	<	A	>	**A**	<	A	>	**A**	<	A	>	**A**	<	A	>	**A**	
			Delay	<	7	>	**7**	<	7	>	**7**	<	7	>	**7**	<	7	>	**7**	
			V/C	<	0.00	>		<	0.01	>		<	0.05	>		<	0.00	>		
			Q	<	-	>		<	-	>		<	-	>		<	-	>		
			Ex	<	-	>		<	-	>		<	-	>		<	-	>		
			Avail.	<	-	>		<	-	>		<	-	>		<	-	>		
	9 - Elgin Street & Courthouse Road (East)	TWSC	LOS	A	UM	>	**A**	A	UM	>	**A**	<	B	>	**B**	<	B	>	**B**	
			Delay	9		>	**0**	9		>	**1**	<	14	>	**14**	<	11	>	**11**	
			V/C	0.01		>		0.05		>		<	0.06	>		<	0.01	>		
			Q	0		>		1		>		<	1	>		<	0	>		
			Ex	30		>		40		>		<	-	>		<	-	>		
			Avail.	30		>		39		>		<	-	>		<	-	>		
	10 - Elgin Street & Burnham Street	TCS	LOS	C	C	C	**C**	C	C	>	**C**	B	B	>	**B**	B	B	>	**B**	**C**
			Delay	23	25	24	**24**	21	26	>	**25**	13	18	>	**16**	15	20	>	**18**	**21**
			V/C	0.38	0.31	0.12		0.35	0.51	>		0.22	0.27	>		0.34	0.33	>		**0.39**
			Q	19	29	14		25	47	>		13	29	>		26	38	>		
			Ex	45	-	60		60	-	>		-	-	>		55	-	>		
			Avail.	26	-	46		35	-	>		-	-	>		30	-	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds

Q - 95th Percentile Queue Length (m)
Ex. - Existing Available Storage (m)
Avail. - Available Storage (m)

TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control

< - Shared Left/Through Lane
> - Shared Right/Through Lane
UM - Unopposed Movement

TABLE 3.3: 2019 BASE YEAR TRAFFIC OPERATIONS – PM PEAK HOUR

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
PM Peak Hour	1 - Depalma Drive & Strathy Road	TCS	LOS	A	B	>	**B**	B	B	>	**B**	B	B	>	**B**	B	B	>	**B**	**B**
			Delay	0	19	>	**19**	12	10	>	**11**	15	16	>	**15**	16	17	>	**17**	**15**
			V/C	0.00	0.33	>		0.36	0.12	>		0.19	0.05	>		0.12	0.07	>		**0.28**
			Q	0	26	>		21	12	>		14	6	>		9	10	>		
			Ex	20	-	>		50	-	>		45	-	>		15	-	>		
			Avail.	20	-	>		29	-	>		31	-	>		6	-	>		
	2 - Depalma Drive & Hospital Entrance/Plaza Driveway	TCS	LOS	B	B	>	**B**	A	A	>	**A**	B	B	>	**B**	B	B	>	**B**	**B**
			Delay	12	13	>	**13**	8	10	>	**9**	13	13	>	**13**	13	13	>	**13**	**11**
			V/C	0.05	0.30	>		0.19	0.22	>		0.03	0.07	>		0.15	0.02	>		**0.22**
			Q	3	24	>		9	21	>		4	8	>		11	4	>		
			Ex	65	-	>		50	-	>		-	-	>		-	-	>		
			Avail.	62	-	>		41	-	>		-	-	>		-	-	>		
	3 - Burnham Street & Depalma Drive/White Street	TCS	LOS	C	C	>	**C**	C	C	>	**C**	B	B	>	**B**	B	B	>	**B**	**B**
			Delay	25	20	>	**23**	22	25	>	**24**	13	16	>	**15**	14	19	>	**19**	**19**
			V/C	0.76	0.10	>		0.27	0.19	>		0.36	0.44	>		0.17	0.60	>		**0.66**
			Q	71	11	>		18	20	>		14	45	>		8	61	>		
			Ex	30	-	>		30	-	>		40	-	>		30	-	>		
			Avail.	-41	-	>		12	-	>		26	-	>		22	-	>		
	4 - Strathy Road & Walmart Driveway	TCS	LOS	B	B	>	**B**	B	B	>	**B**	A	A	>	**A**	A	A	>	**A**	**A**
			Delay	16	15	>	**15**	17	15	>	**16**	5	7	>	**6**	9	9	>	**9**	**9**
			V/C	0.03	0.20	>		0.27	0.04	>		0.22	0.21	>		0.04	0.23	>		**0.23**
			Q	3	12	>		12	5	>		9	18	>		2	18	>		
			Ex	-	-	>		-	-	>		-	-	>		25	-	>		
			Avail.	-	-	>		-	-	>		-	-	>		23	-	>		
	5 - Burnham Street & GPL Driveway	TWSC	LOS	C		C	**C**	**Approach Not Applicable**				A	UM		**A**		UM	UM	**UM**	
			Delay	16		16	**16**					0			**0**					
			V/C	0.09		0.09						0.01								
			Q	2		2						0								
			Ex	-		-						-								
			Avail.	-		-						-								
	6 - Strathy Road & Elgin Street	TCS	LOS	B	B	>	**B**	B	C	C	**C**	B	C	>	**C**	B	C	B	**B**	**B**
			Delay	11	17	>	**15**	14	22	26	**23**	18	26	>	**23**	17	23	19	**19**	**19**
			V/C	0.43	0.44	>		0.14	0.54	0.20		0.08	0.19	>		0.42	0.13	0.18		**0.43**
			Q	26	48	>		9	54	22		10	21	>		44	18	15		
			Ex	-	-	>		-	-	40		20	-	>		-	-	-		
			Avail.	-	-	>		-	-	18		10	-	>		-	-	-		
	7 - Elgin Street & Courthouse Road (West)	TWSC	LOS	<	UM	UM	**A**	<	UM	UM	**A**	<	B	>	**B**	<	D	>	**D**	
			Delay	<			**0**	<			**1**	<	11	>	**11**	<	31	>	**31**	
			V/C	<				<				<	0.09	>		<	0.21	>		
			Q	<				<				<	2	>		<	6	>		
			Ex	<				<				<	-	>		<	-	>		
			Avail.	<				<				<	-	>		<	-	>		
	8 - Courthouse Road & GPL Driveway	AWSC	LOS	<	A	>	**A**	<	A	>	**A**	<	A	>	**A**	<	A	>	**A**	
			Delay	<	7	>	**7**	<	7	>	**7**	<	7	>	**7**	<	7	>	**7**	
			V/C	<	0.00	>		<	0.07	>		<	0.02	>		<	0.00	>		
			Q	<	-	>		<	-	>		<	-	>		<	-	>		
			Ex	<	-	>		<	-	>		<	-	>		<	-	>		
			Avail.	<	-	>		<	-	>		<	-	>		<	-	>		
	9 - Elgin Street & Courthouse Road (East)	TWSC	LOS	A	UM	>	**A**	B	UM	>	**A**	<	B	>	**B**	<	B	>	**B**	
			Delay	9		>	**0**	10		>	**0**	<	13	>	**13**	<	11	>	**11**	
			V/C	0.00		>		0.05		>		<	0.11	>		<	0.09	>		
			Q	0		>		1		>		<	13	>		<	11	>		
			Ex	30		>		40		>		<	-	>		<	-	>		
			Avail.	30		>		39		>		<	-	>		<	-	>		
	10 - Elgin Street & Burnham Street	TCS	LOS	D	C	C	**C**	C	C	>	**C**	B	C	>	**B**	B	C	>	**C**	**C**
			Delay	39	29	26	**30**	22	31	>	**29**	16	22	>	**20**	20	23	>	**22**	**26**
			V/C	0.79	0.55	0.20		0.35	0.65	>		0.31	0.38	>		0.61	0.37	>		**0.64**
			Q	49	59	19		22	67	>		22	49	>		50	48	>		
			Ex	45	-	60		60	-	>		-	-	>		55	-	>		
			Avail.	-4	-	41		38	-	>		-	-	>		5	-	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds

Q - 95th Percentile Queue Length (m)
Ex. - Existing Available Storage (m)
Avail. - Available Storage (m)

TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control

< - Shared Left/Through Lane
> - Shared Right/Through Lane
UM - Unopposed Movement

4 Traffic Forecasts

4.1 Horizon Years

Northumberland County and the Town of Cobourg do not have published guidelines for the preparation of traffic studies to assist in determining the future horizon year for analysis. From discussions with the County, the new Golden Plough Lodge is expected to be completed and in operation between 2023 and 2025. In the absence of a specific date, a horizon year of 2026 was selected for traffic analysis purposes to be conservative.

4.2 Future Background Traffic

At the time of writing, Paradigm was not aware of any approved, yet to be constructed developments that may also contribute to future traffic volumes in the study area.

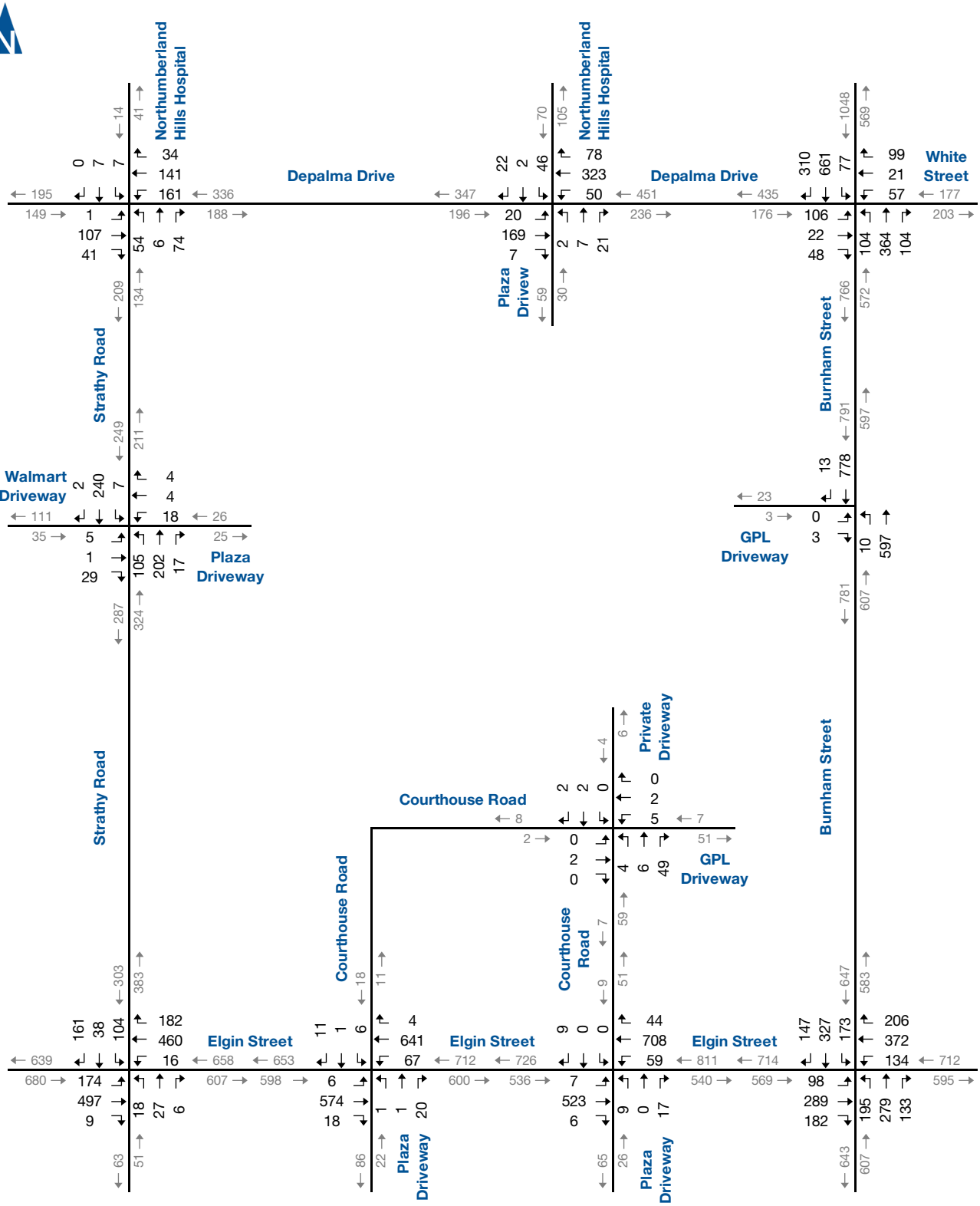
A growth rate of 2% compounded per annum has been applied to the base year traffic volumes to forecast general future background conditions. This growth rate is consistent with the factor applied in the County of Northumberland Headquarters Traffic Impact Study completed by TSH Associates (now AECOM) in 2006. **Figure 4.1** and **Figure 4.2** illustrate the 2026 background traffic forecasts for the weekday AM and PM peak hours, respectively.

4.3 Site Generated Traffic

The traffic volumes forecast to be generated by the proposed redevelopment were estimated based on the turning movement counts collected at the existing Golden Plough Lodge driveway connections to Courthouse Road and Burnham Street. From the counts, the existing 151 bed home generates 74 trips in the AM peak hour and 96 trips in the PM peak hour. After accounting for the increased capacity to 180 beds (approximately 19%), the new facility is expected to generate 88 trips in the AM peak hour and 114 trips in the PM peak hour.

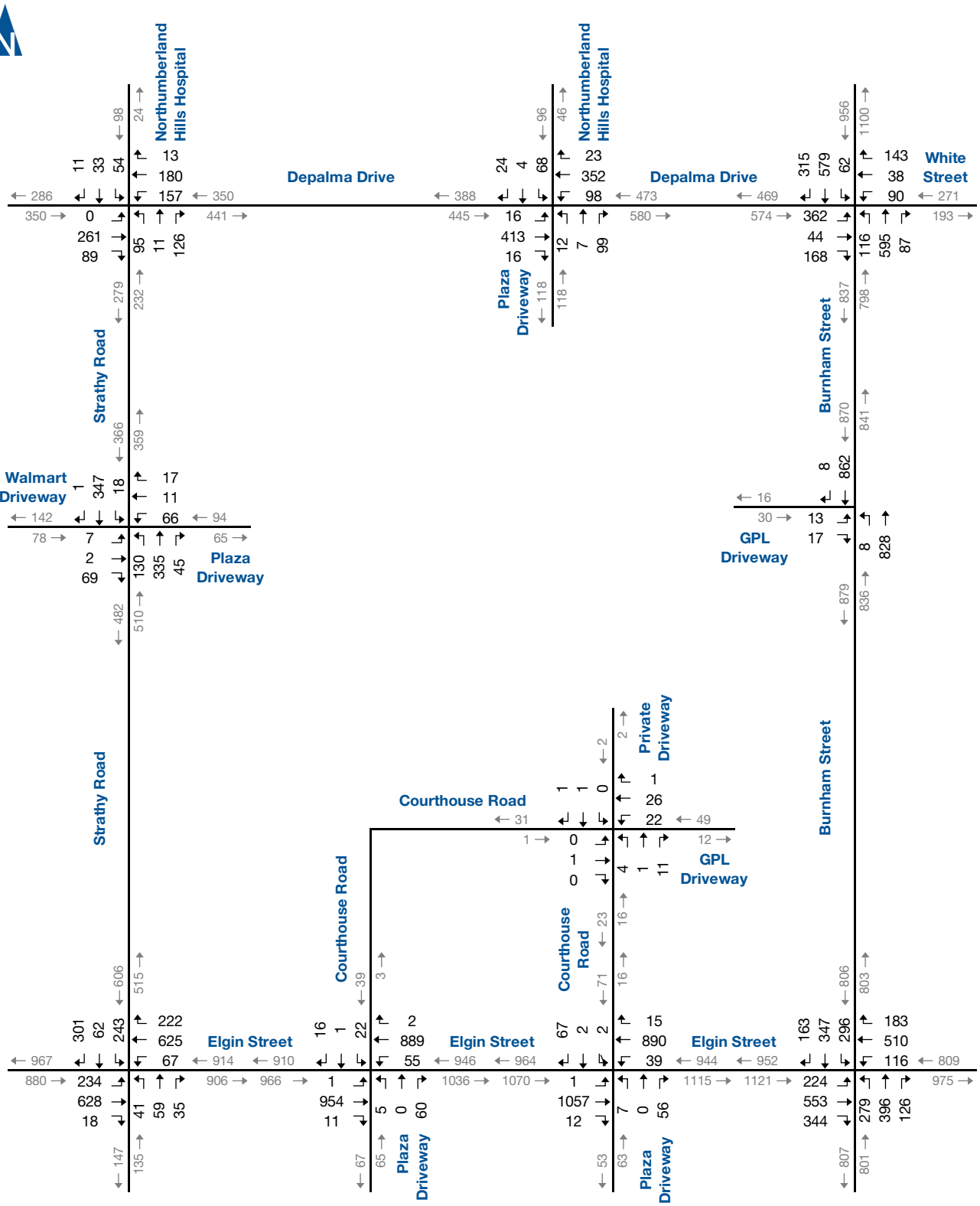
To assess validity, **Table 4.1** compares the trip generation estimates based on the traffic counts to rates contained in the Institute of Transportation Engineers Trip Generation Manual[1] (the ITE Manual) for Land Use Code 254 (Assisted Living). The table shows that the estimates based on the existing count data are higher than comparable ITE Manual values, indicating that the trip generation forecasts used herein can be considered reasonable and conservative (err on the high side).

[1] Institute of Transportation Engineers. *Trip Generation Manual (10th Edition).* Washington D.C., 2017.



2026 Background Traffic Forecast AM Peak Hour

Figure 4.1



2026 Background Traffic Forecast PM Peak Hour

Figure 4.2

TABLE 4.1: ESTIMATED SITE TRIP GENERATION

Land Use Code	Unit of Measure	Number of Units	AM Peak Hour				PM Peak Hour			
			Rate	In	Out	Total	Rate	In	Out	Total
254 - Assisted Living	Beds	180	0.19	21	13	34	0.26	18	29	47
Existing Traffic Count Data	Beds	151	0.49	65	9	74	0.64	26	70	96
Proposed Development	**Beds**	**180**	**0.49**	**77**	**11**	**88**	**0.64**	**31**	**83**	**114**

4.4 Site Trip Distribution

The estimated trip distribution was derived based on a review of existing travel patterns as captured in the TMCs. Traffic volumes entering the existing Golden Plough Lodge were removed to prevent double counting trips between the existing facility and the subject site. **Table 4.2** summarizes the resulting trip distribution.

TABLE 4.2: ESTIMATED SITE TRIP DISTRIBUTION

Origin/Destination	Distribution
East via Elgin Street West	25%
West via Elgin Street West	25%
North via Burnham Street	30%
South via Burnham Street	20%
Total	**100%**

4.5 Site Trip Assignment

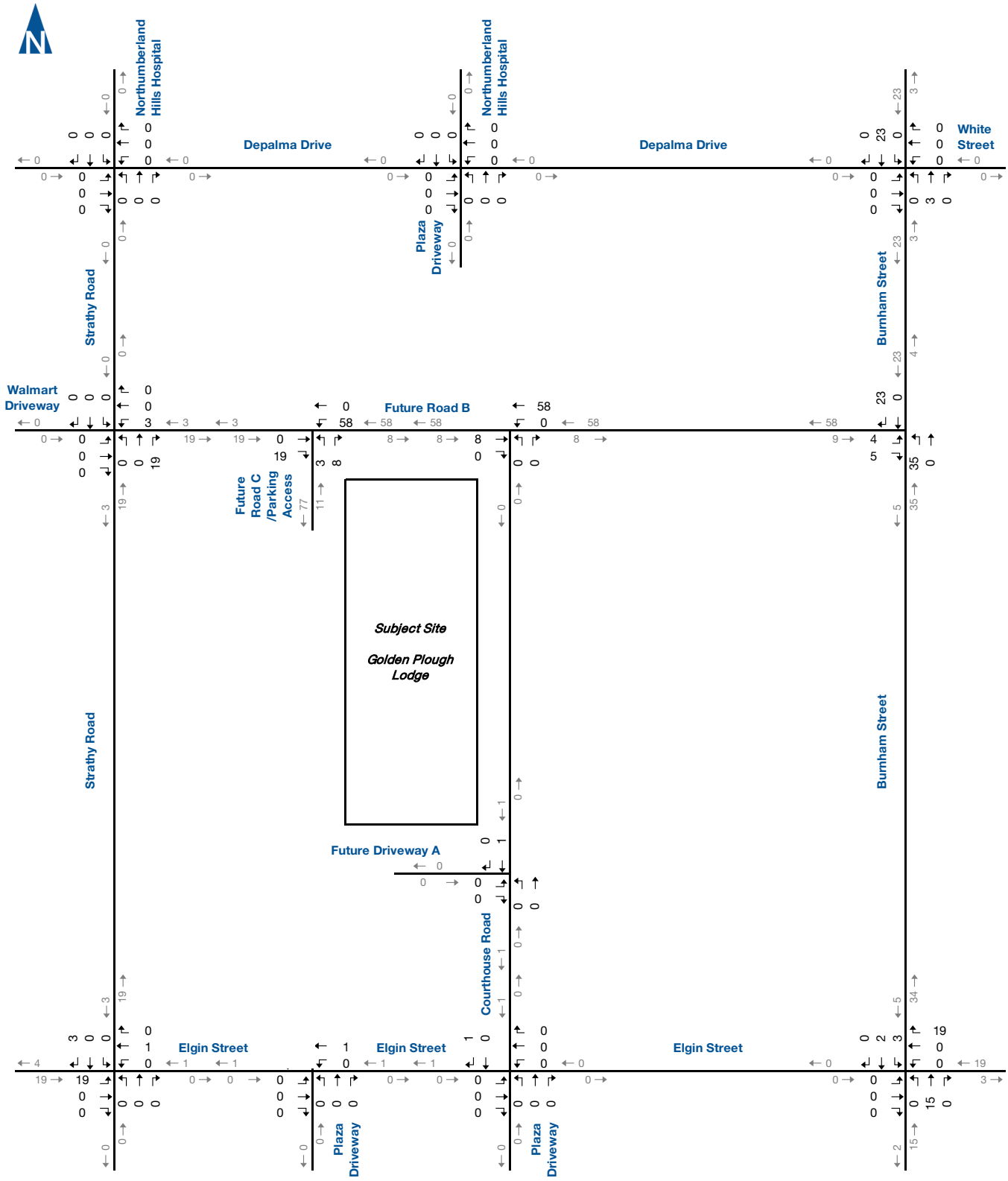
The site generated traffic for the proposed Golden Plough Lodge and County Archives Redevelopment has been assigned to the external road network based on the internal circulation route shown on the site plan (**Figure 2.1**) and the trip distribution summarized in **Table 4.2**. Separate assignments were prepared for the two driveway connection alternatives to Burnham Street described in Section 2. **Figure 4.3** and **Figure 4.4** illustrate the site generated traffic forecasts for Scenario A (all-movements) in the weekday AM and PM peak hours, respectively. **Figure 4.5** and **Figure 4.6** illustrate the site generated traffic forecasts for Scenario B (right-in/right-out) in the weekday AM and PM peak hours, respectively.

4.6 Future Total Traffic

The future background traffic forecasts (**Figure 4.1** and **Figure 4.2**) and site generated trips (**Figure 4.3** through **Figure 4.6**) were added to derive the future total traffic volumes. **Figure 4.7** and **Figure 4.8** illustrate the 2026 total traffic forecasts for Scenario A for the weekday AM and PM peak hours, respectively. **Figure 4.9** and **Figure 4.10** illustrate the total traffic forecasts for Scenario B for the weekday AM and PM peak hours, respectively.

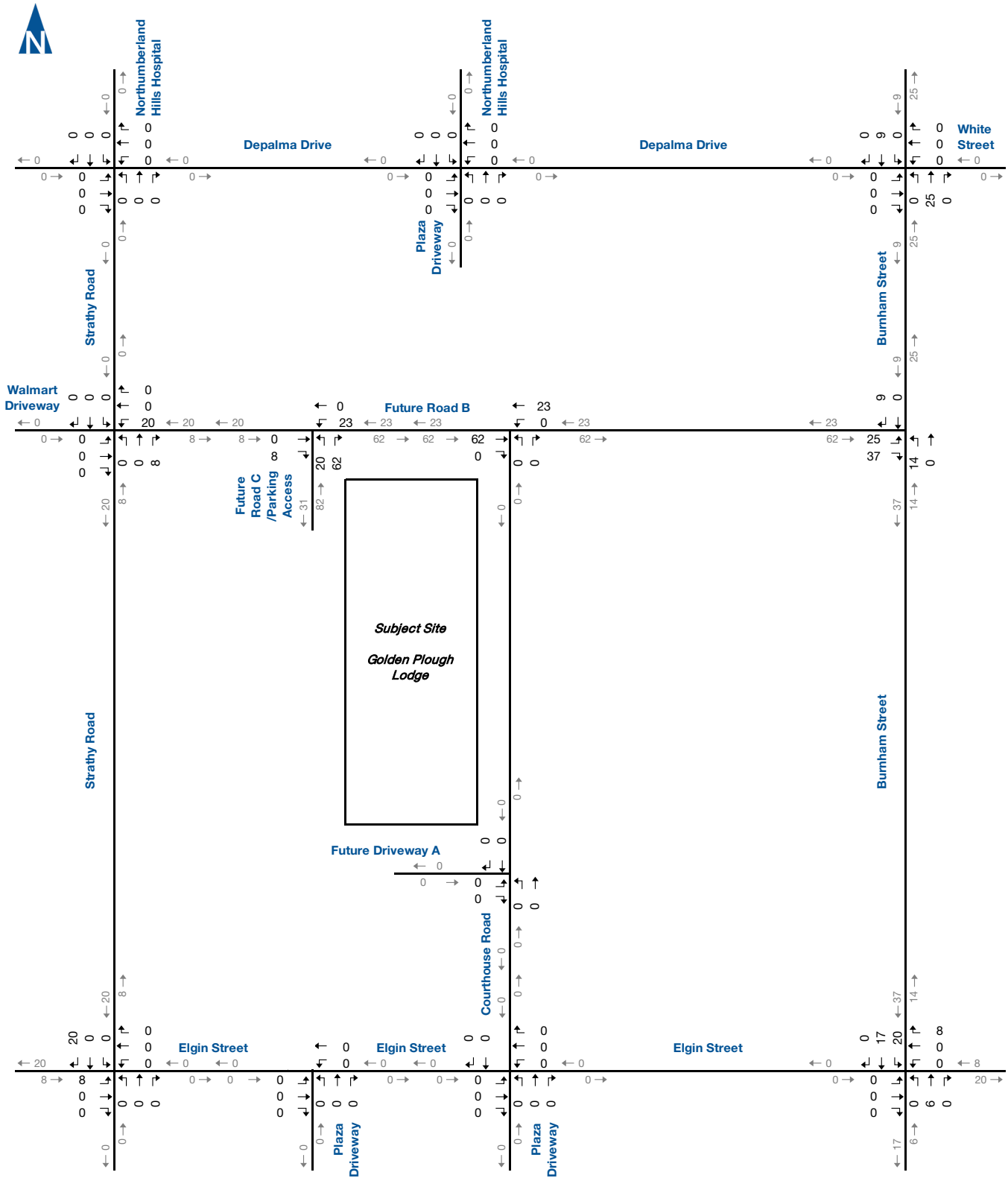
As part of redevelopment of the subject lands, the existing western connection of Courthouse Road to Elgin Street West will be eliminated, with

the public road intersection converted to a private driveway to the adjacent commercial development and the Church on the Hill. For the remainder of the analyses, vehicle trips previously using this connection have been reassigned to other intersections within the study area. More specifically, southbound left-turning traffic on Courthouse Road (west) at Elgin Street West has been rerouted via Courthouse Road (east), Future Road A, Future Road B, and Burnham Street due to the southbound left-turn restriction on Courthouse Road (east).



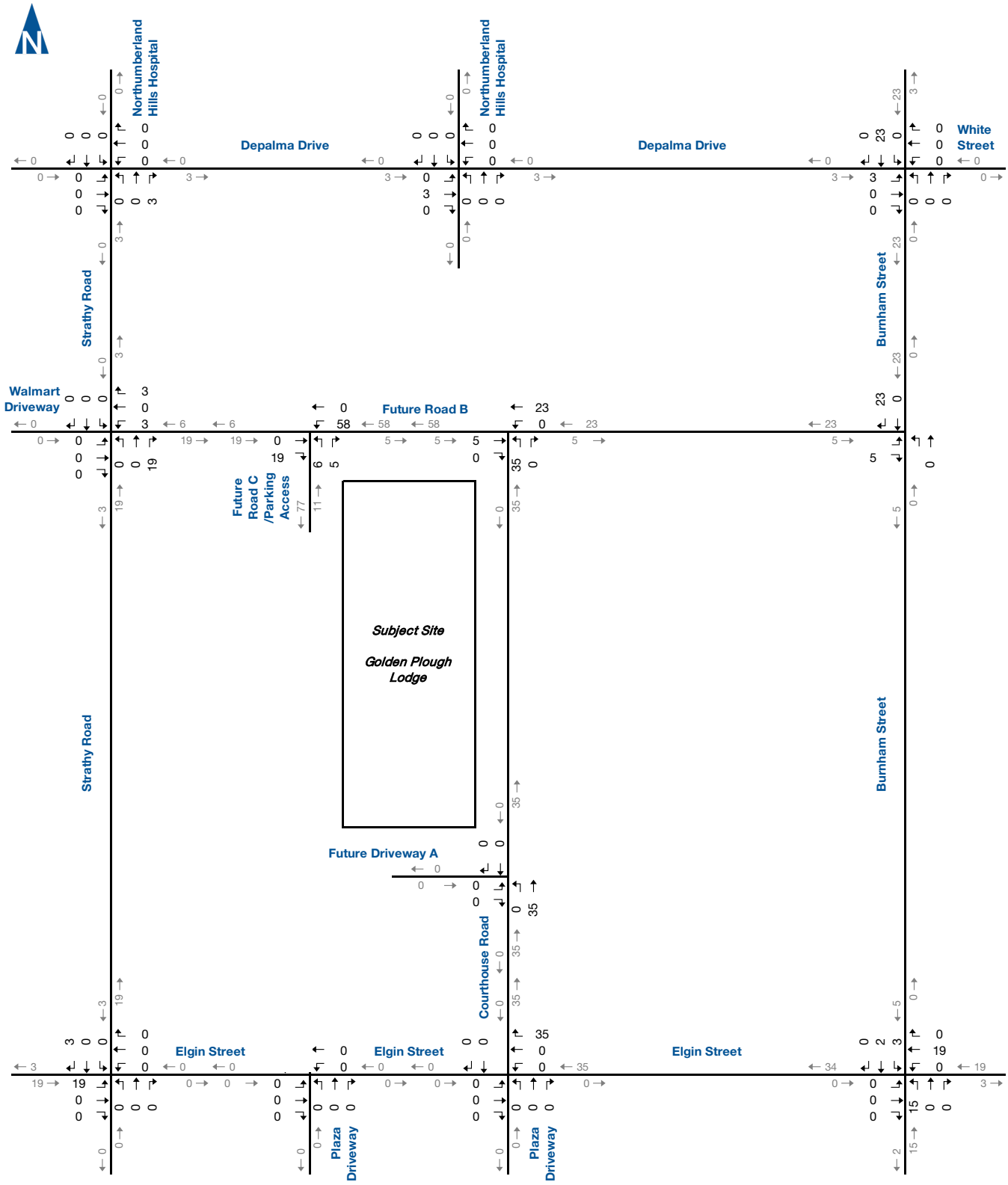
Site Generated Traffic Forecast AM Peak Hour – Scenario A

Figure 4.3



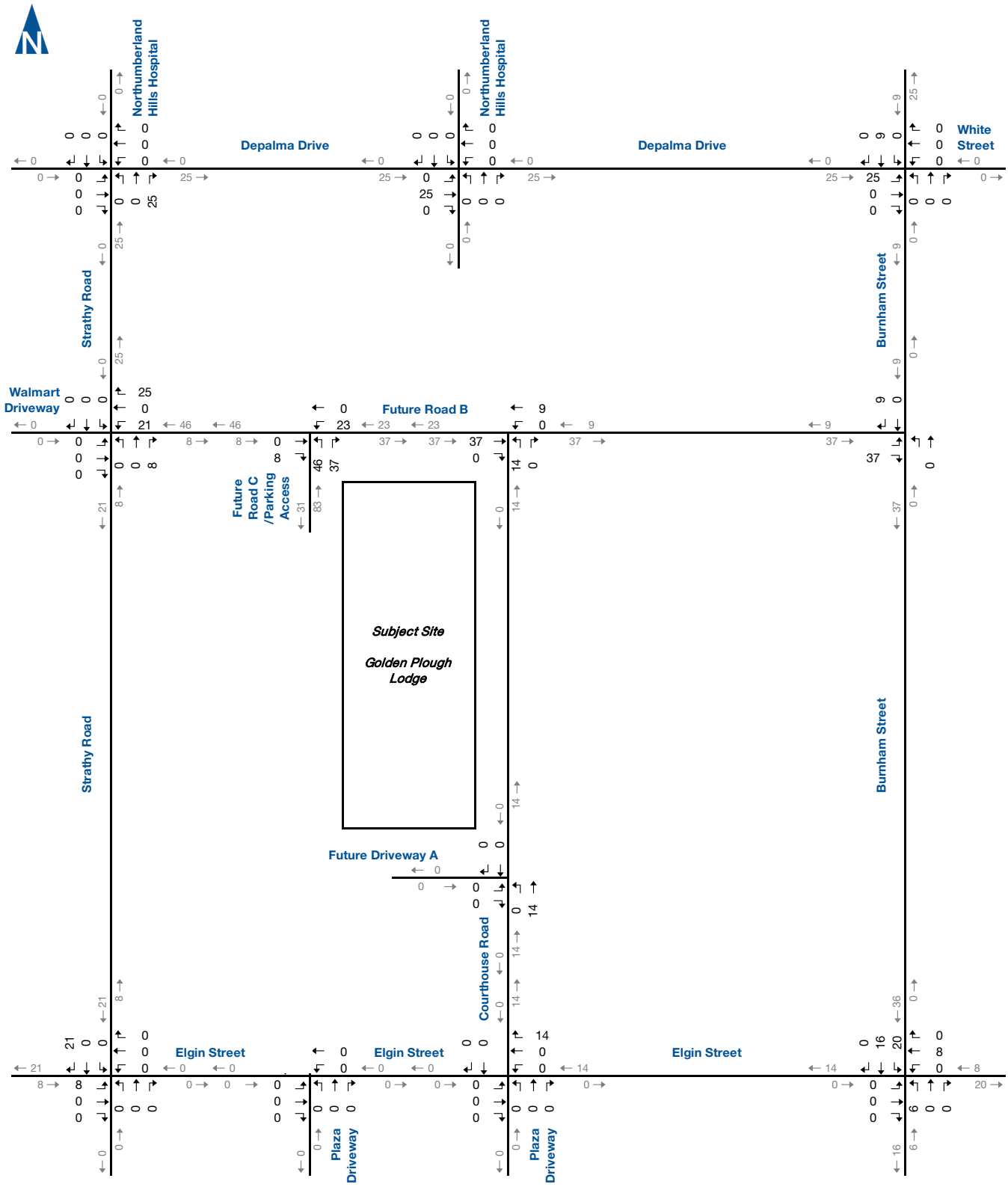
Site Generated Traffic Forecast PM Peak Hour – Scenario A

Figure 4.4

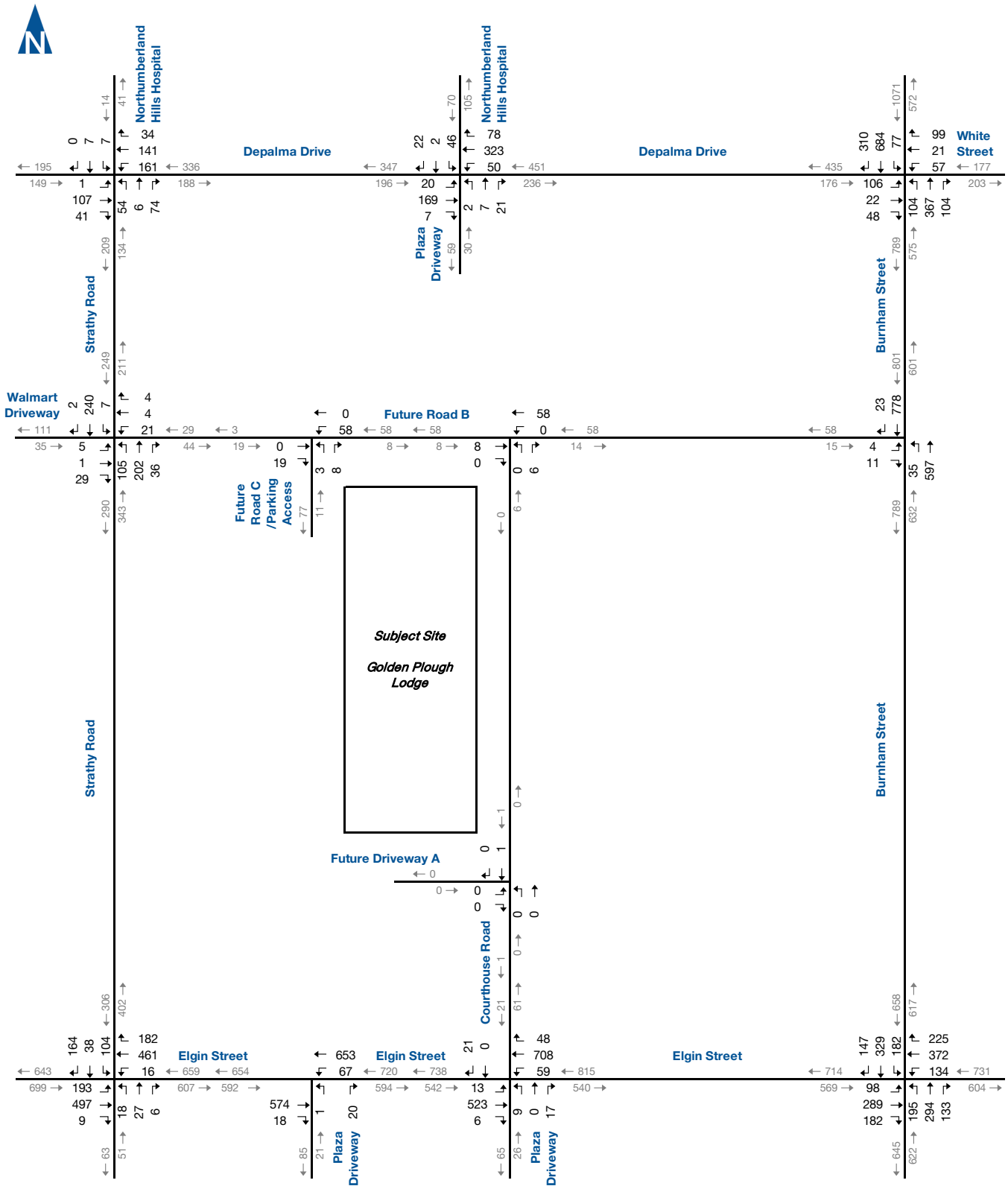


Site Generated Traffic Forecast AM Peak Hour – Scenario B

Figure 4.5

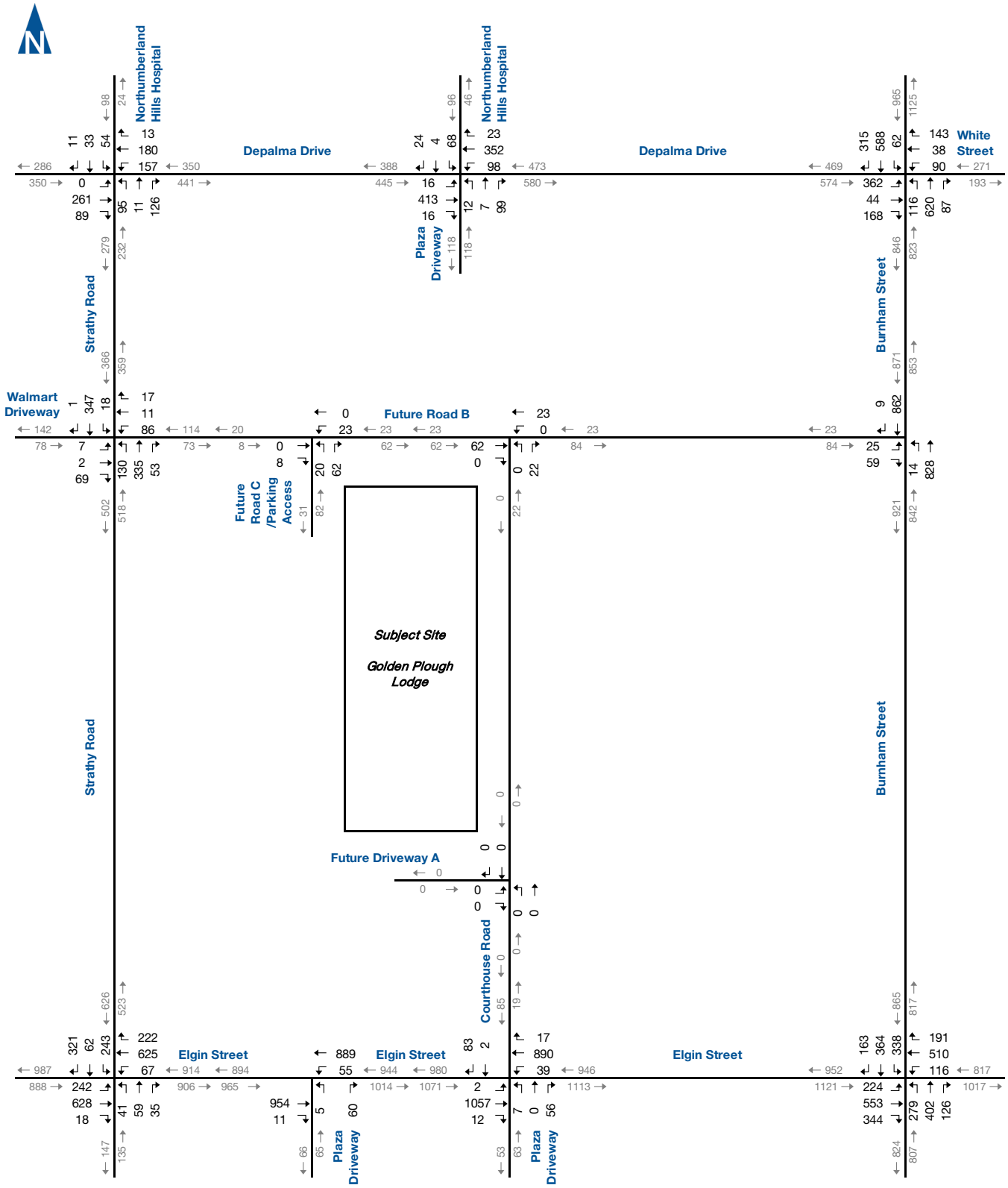


Site Generated Traffic Forecast PM Peak Hour – Scenario B



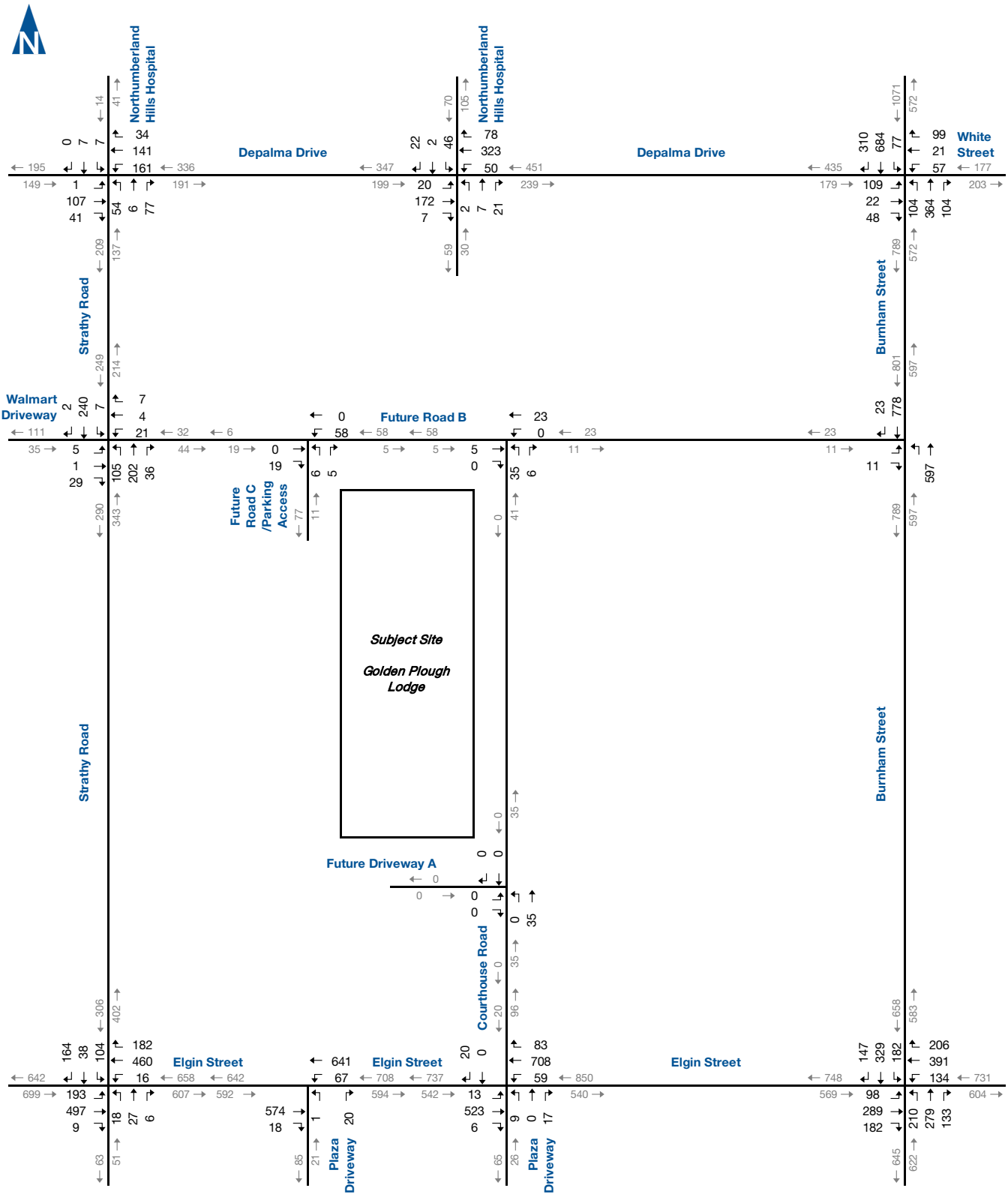
2026 Total Traffic Forecast AM Peak Hour – Scenario A

Figure 4.7



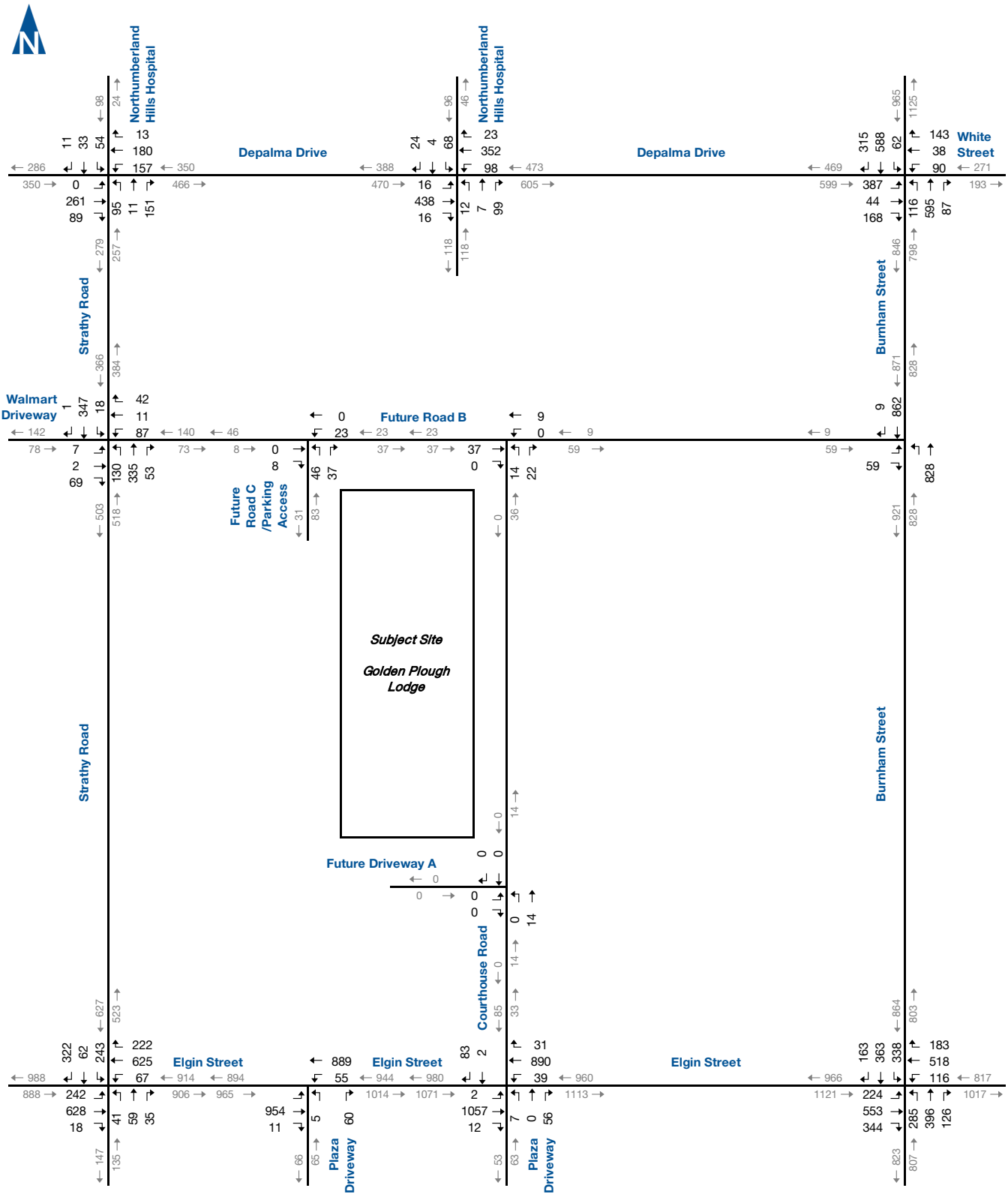
2026 Total Traffic Forecast PM Peak Hour – Scenario A

Figure 4.8



2026 Total Traffic Forecast AM Peak Hour – Scenario B

Figure 4.9



2026 Total Traffic Forecast PM Peak Hour – Scenario B

Golden Plough Lodge and County Archives Redevelopment TIS Update
190120

Figure 4.10

5 Transportation Impact Assessment

5.1 Future Background Traffic Operations

Operations of the study area intersections were analyzed under 2026 background traffic conditions (**Figure 4.1** and **Figure 4.2**) using the same methodology and parameters applied in the base year assessment. **Table 5.1** and **Table 5.2** summarize the results for the weekday AM and PM peak hours, respectively. **Appendix D** contains the detailed Synchro reports.

All study area intersections are forecast to operate with good overall levels of service (LOS C or better) and well within capacity. The following critical movements were identified, all of which occur in the PM peak hour:

- Depalma Drive/White Street and Burnham Street:
  - The eastbound left-turn movement is forecast to operate at LOS E with a v/c ratio of 1.02 (volume demand exceeds theoretical capacity), representing an increase of 0.26 from 2019 base year conditions. The 95th percentile queue is also expected to exceed available storage by 81 metres, representing an increase of 40 metres from 2019 base year conditions.
- Elgin Street West and Courthouse Road (east):
  - The southbound approach is forecast to operate at LOS E with a v/c ratio of 0.34, representing an increase of 0.13 from 2019 base year conditions.
- Elgin Street West and Burnham Street:
  - The eastbound left-turn movement is forecast to operate at LOS E with a v/c ratio of 0.98 (volume demand approaching theoretical capacity), representing an increase of 0.19 from 2019 base year conditions. The 95th percentile queue is also expected to exceed available storage by 30 metres, representing an increase of 26 metres from 2019 base year conditions.
  - The southbound left-turn 95th percentile queue is forecast to exceed available storage by 30 metres, representing an increase of 35 metres from 2019 base year conditions.

TABLE 5.1: 2026 BACKGROUND TRAFFIC OPERATIONS SUMMARY – AM PEAK HOUR

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	1 - Depalma Drive & Strathy Road	TCS	LOS	B	B	>	**B**	B	B	>	**B**	B	B	>	**B**	B	B	>	**B**	**B**
			Delay	17	17	>	**17**	12	13	>	**12**	15	16	>	**16**	18	18	>	**18**	**14**
			V/C	0.00	0.13	>		0.33	0.13	>		0.13	0.04	>		0.03	0.02	>		**0.25**
			Q	1	13	>		24	15	>		10	5	>		3	4	>		
			Ex	20	-	>		50	-	>		45	-	>		15	-	>		
			Avail.	19	-	>		26	-	>		35	-	>		12	-	>		
	2 - Depalma Drive & Hospital Entrance/Plaza Driveway	TCS	LOS	B	B	>	**B**	A	B	>	**B**	B	B	>	**B**	B	B	>	**B**	**B**
			Delay	11	11	>	**11**	9	11	>	**11**	12	12	>	**12**	12	12	>	**12**	**11**
			V/C	0.08	0.16	>		0.12	0.32	>		0.00	0.03	>		0.12	0.02	>		**0.23**
			Q	3	12	>		6	24	>		1	5	>		9	4	>		
			Ex	65	-	>		50	-	>		-	-	>		-	-	>		
			Avail.	62	-	>		44	-	>		-	-	>		-	-	>		
	3 - Burnham Street & Depalma Drive/White Street	TCS	LOS	C	C	>	**C**	C	C	>	**C**	B	B	>	**B**	A	B	>	**B**	**B**
			Delay	24	25	>	**24**	24	27	>	**26**	11	12	>	**12**	10	17	>	**16**	**17**
			V/C	0.40	0.06	>		0.22	0.16	>		0.44	0.31	>		0.18	0.68	>		**0.56**
			Q	28	8	>		17	19	>		14	36	>		11	88	>		
			Ex	30	-	>		30	-	>		40	-	>		30	-	>		
			Avail.	2	-	>		13	-	>		26	-	>		19	-	>		
	4 - Strathy Road & Walmart Driveway	TCS	LOS	B	B	>	**B**	B	B	>	**B**	A	A	>	**A**	B	B	>	**B**	**A**
			Delay	13	12	>	**12**	13	11	>	**12**	7	8	>	**8**	11	11	>	**11**	**9**
			V/C	0.02	0.09	>		0.06	0.01	>		0.26	0.18	>		0.02	0.25	>		**0.20**
			Q	2	7	>		5	3	>		7	11	>		1	13	>		
			Ex	-	-	>		-	-	>		-	-	>		25	-	>		
			Avail.	-	-	>		-	-	>		-	-	>		24	-	>		
	5 - Burnham Street & GPL Driveway	TWSC	LOS	A		A	**A**	**Approach Not Applicable**				A	UM		**A**		UM	UM	**UM**	
			Delay	9		9	**9**					0			**0**					
			V/C	0.00		0.00						0.01								
			Q	0		0						0								
			Ex	-		-						-								
			Avail.	-		-						-								
	6 - Strathy Road & Elgin Street	TCS	LOS	B	B	>	**B**	B	B	C	**B**	B	C	>	**B**	B	C	B	**B**	**B**
			Delay	10	14	>	**13**	14	19	21	**19**	15	21	>	**19**	14	20	16	**16**	**16**
			V/C	0.36	0.37	>		0.05	0.45	0.12		0.04	0.07	>		0.20	0.09	0.11		**0.31**
			Q	21	39	>		3	37	15		5	10	>		18	11	11		
			Ex	-	-	>		-	-	40		20	-	>		-	-	-		
			Avail.	-	-	>		-	-	26		15	-	>		-	-	-		
	7 - Elgin Street & Courthouse Road (West)	TWSC	LOS	<	UM	UM	**A**	<	UM	UM	**A**	<	B	>	**B**	<	C	>	**C**	
			Delay	<			**0**	<			**1**	<	10	>	**10**	<	17	>	**17**	
			V/C	<				<				<	0.03	>		<	0.05	>		
			Q	<				<				<	1	>		<	1	>		
			Ex	<				<				<	-	>		<	-	>		
			Avail.	<				<				<	-	>		<	-	>		
	8 - Courthouse Road & GPL Driveway	AWSC	LOS	<	A	>	**A**	<	A	>	**A**	<	A	>	**A**	<	A	>	**A**	
			Delay	<	7	>	**7**	<	7	>	**7**	<	7	>	**7**	<	7	>	**7**	
			V/C	<	0.00	>		<	0.01	>		<	0.06	>		<	0.00	>		
			Q	<	-	>		<	-	>		<	-	>		<	-	>		
			Ex	<	-	>		<	-	>		<	-	>		<	-	>		
			Avail.	<	-	>		<	-	>		<	-	>		<	-	>		
	9 - Elgin Street & Courthouse Road (East)	TWSC	LOS	A	UM	>	**A**	A	UM	>	**A**	<	C	>	**C**	<	B	>	**B**	
			Delay	9		>	**0**	9		>	**1**	<	17	>	**17**	<	12	>	**12**	
			V/C	0.01		>		0.06		>		<	0.08	>		<	0.02	>		
			Q	0		>		2		>		<	2	>		<	0	>		
			Ex	30		>		40		>		<	-	>		<	-	>		
			Avail.	30		>		39		>		<	-	>		<	-	>		
	10 - Elgin Street & Burnham Street	TCS	LOS	C	C	C	**C**	C	C	>	**C**	B	B	>	**B**	B	C	>	**C**	**C**
			Delay	24	25	24	**24**	21	27	>	**26**	14	19	>	**17**	17	22	>	**20**	**22**
			V/C	0.48	0.33	0.13		0.40	0.57	>		0.27	0.32	>		0.43	0.39	>		**0.46**
			Q	21	33	14		28	56	>		17	37	>		32	47	>		
			Ex	45	-	60		60	-	>		-	-	>		55	-	>		
			Avail.	24	-	46		32	-	>		-	-	>		23	-	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds

Q - 95th Percentile Queue Length (m)
Ex. - Existing Available Storage (m)
Avail. - Available Storage (m)

TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control

< - Shared Left/Through Lane
> - Shared Right/Through Lane
UM - Unopposed Movement

TABLE 5.2: 2026 BACKGROUND TRAFFIC OPERATIONS SUMMARY – PM PEAK HOUR

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
PM Peak Hour	1 - Depalma Drive & Strathy Road	TCS	LOS	A	B	>	B	B	B	>	B	B	B	>	B	B	B	>	B	B
			Delay	0	20	>	20	13	11	>	12	15	16	>	16	16	17	>	17	16
			V/C	0.00	0.39	>		0.43	0.14	>		0.22	0.06	>		0.14	0.08	>		0.33
			Q	0	30	>		23	13	>		16	6	>		10	11	>		
			Ex	20	-	>		50	-	>		45	-	>		15	-	>		
			Avail.	20	-	>		27	-	>		29	-	>		5	-	>		
	2 - Depalma Drive & Hospital Entrance/Plaza Driveway	TCS	LOS	B	B	>	B	A	A	>	A	B	B	>	B	B	B	>	B	B
			Delay	12	13	>	13	8	10	>	10	13	13	>	13	14	13	>	13	12
			V/C	0.05	0.34	>		0.23	0.25	>		0.03	0.08	>		0.17	0.02	>		0.26
			Q	3	28	>		10	23	>		4	9	>		13	5	>		
			Ex	65	-	>		50	-	>		-	-	>		-	-	>		
			Avail.	62	-	>		40	-	>		-	-	>		-	-	>		
	3 - Burnham Street & Depalma Drive/White Street	TCS	LOS	E	C	>	E	C	C	>	C	B	B	>	B	B	C	>	C	C
			Delay	76	24	>	57	25	28	>	27	13	16	>	15	13	20	>	20	27
			V/C	1.02	0.12	>		0.32	0.23	>		0.40	0.47	>		0.18	0.66	>		0.78
			Q	111	13	>		22	24	>		16	55	>		10	75	>		
			Ex	30	-	>		30	-	>		40	-	>		30	-	>		
			Avail.	-81	-	>		8	-	>		24	-	>		20	-	>		
	4 - Strathy Road & Walmart Driveway	TCS	LOS	B	B	>	B	B	B	>	B	A	A	>	A	A	A	>	A	A
			Delay	16	16	>	16	18	15	>	17	5	7	>	7	9	10	>	10	9
			V/C	0.03	0.23	>		0.30	0.04	>		0.26	0.24	>		0.05	0.27	>		
			Q	3	13	>		14	5	>		11	21	>		3	21	>		
			Ex	-	-	>		-	-	>		-	-	>		25	-	>		
			Avail.	-	-	>		-	-	>		-	-	>		23	-	>		
	5 - Burnham Street & GPL Driveway	TWSC	LOS	C		C	C	Approach Not Applicable				A	UM		A		UM	UM	UM	
			Delay	16		16	16					0			0					
			V/C	0.09		0.09						0.01								
			Q	2		2						0								
			Ex	-		-						-								
			Avail.	-		-						-								
	6 - Strathy Road & Elgin Street	TCS	LOS	B	B	>	B	B	C	C	C	C	C	>	C	C	C	B	C	C
			Delay	12	17	>	16	14	23	29	24	20	28	>	26	20	25	20	20	20
			V/C	0.50	0.47	>		0.17	0.58	0.31		0.10	0.24	>		0.50	0.16	0.20		0.50
			Q	33	60	>		11	67	31		12	26	>		56	21	16		
			Ex	-	-	>		-	-	40		20	-	>		-	-	-		
			Avail.	-	-	>		-	-	9		8	-	>		-	-	-		
	7 - Elgin Street & Courthouse Road (West)	TWSC	LOS	<	UM	UM	A	<	UM	UM	A	<	B	>	B	<	E	>	E	
			Delay	<			0	<			1	<	13	>	13	<	50	>	50	
			V/C	<				<				<	0.13	>		<	0.34	>		
			Q	<				<				<	3	>		<	10	>		
			Ex	<				<				<	-	>		<	-	>		
			Avail.	<				<				<	-	>		<	-	>		
	8 - Courthouse Road & GPL Driveway	AWSC	LOS	<	A	>	A	<	A	>	A	<	A	>	A	<	A	>	A	
			Delay	<	7	>	7	<	7	>	7	<	7	>	7	<	7	>	7	
			V/C	<	0.00	>		<	0.08	>		<	0.02	>		<	0.00	>		
			Q	<	-	>		<	-	>		<	-	>		<	-	>		
			Ex	<	-	>		<	-	>		<	-	>		<	-	>		
			Avail.	<	-	>		<	-	>		<	-	>		<	-	>		
	9 - Elgin Street & Courthouse Road (East)	TWSC	LOS	A	UM	>	A	B	UM	>	A	<	B	>	B	<	B	>	B	
			Delay	9		>	0	11		>	0	<	13	>	13	<	11	>	11	
			V/C	0.00		>		0.06		>		<	0.13	>		<	0.11	>		
			Q	0		>		2		>		<	3	>		<	3	>		
			Ex	30		>		40		>		<	-	>		<	-	>		
			Avail.	30		>		38		>		<	-	>		<	-	>		
	10 - Elgin Street & Burnham Street	TCS	LOS	E	C	C	D	C	C	>	C	B	C	>	C	C	C	>	C	C
			Delay	78	30	27	39	22	31	>	30	17	24	>	22	31	26	>	28	31
			V/C	0.98	0.58	0.24		0.41	0.69	>		0.39	0.45	>		0.79	0.45	>		0.80
			Q	75	69	20		25	80	>		27	61	>		85	62	>		
			Ex	45	-	60		60	-	>		-	-	>		55	-	>		
			Avail.	-30	-	40		35	-	>		-	-	>		-30	-	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
Q - 95th Percentile Queue Length (m)
Ex. - Existing Available Storage (m)
Avail. - Available Storage (m)
TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control
< - Shared Left/Through Lane
> - Shared Right/Through Lane
UM - Unopposed Movement

5.2 Future Total Traffic Operations

5.2.1 Scenario A – All Movements Driveway on Burnham Street

Operations of the study area intersections were analyzed under 2026 total traffic conditions for Scenario A (**Figure 4.7** and **Figure 4.8**) using the same methodology and parameters applied in the base year and future background assessments. **Table 5.3** and **Table 5.4** summarize the results for the weekday AM and PM peak hours, respectively. **Appendix E** contains the detailed Synchro reports.

The study area intersections are forecast to operate with good overall levels of service (LOS C or better) and well within capacity. The following critical movements were identified, all of which occur in the PM peak hour:

- Depalma Drive/White Street and Burnham Street:
  - The eastbound left-turn movement is forecast to operate at LOS F with a v/c ratio of 1.03, representing an increase of 0.01 from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 82 metres, representing an increase of one metre from 2026 background conditions.
- Elgin Street West and Burnham Street:
  - The eastbound left-turn movement is forecast to operate at LOS E with a v/c ratio of 0.98, representing no change from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 30 metres, representing no change from 2026 background conditions.
  - The southbound left-turn movement is forecast to operate at LOS D with a v/c ratio of 0.91, representing an increase of 0.12 from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 56 metres, representing an increase of 16 metres from 2026 background conditions.

Overall, the proposed redevelopment will have negligible impact on the study area roadways with all movements permitted at the Burnham Street driveway. All proposed connections to the internal circulation route are also forecast to operate at acceptable levels of service and well within capacity.

TABLE 5.3: 2026 TOTAL TRAFFIC OPERATIONS SUMMARY – AM PEAK HOUR – SCENARIO A

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	1 - Depalma Drive & Strathy Road	TCS	LOS	B	B	>	B	B	B	>	B	B	B	>	B	B	B	>	B	B
			Delay	17	17	>	17	12	13	>	12	15	16	>	16	18	18	>	18	14
			V/C	0.00	0.13	>		0.33	0.13	>		0.13	0.04	>		0.03	0.02	>		0.25
			Q	1	13	>		24	15	>		10	5	>		3	4	>		
			Ex	20	-	>		50	-	>		45	-	>		15	-	>		
			Avail.	19	-	>		26	-	>		35	-	>		12	-	>		
	2 - Depalma Drive & Hospital Entrance/Plaza Driveway	TCS	LOS	B	B	>	B	A	B	>	B	B	B	>	B	B	B	>	B	B
			Delay	11	11	>	11	9	11	>	11	12	12	>	12	12	12	>	12	11
			V/C	0.08	0.16	>		0.12	0.32	>		0.00	0.03	>		0.12	0.02	>		0.23
			Q	3	12	>		6	24	>		1	5	>		9	4	>		
			Ex	65	-	>		50	-	>		-	-	>		-	-	>		
			Avail.	62	-	>		44	-	>		-	-	>		-	-	>		
	3 - Burnham Street & Depalma Drive/White Street	TCS	LOS	C	C	>	C	C	C	>	C	B	B	>	B	A	B	>	B	B
			Delay	24	26	>	25	25	27	>	26	11	12	>	12	10	17	>	16	17
			V/C	0.40	0.06	>		0.23	0.16	>		0.44	0.31	>		0.18	0.69	>		0.57
			Q	28	8	>		17	19	>		14	36	>		11	92	>		
			Ex	30	-	>		30	-	>		40	-	>		30	-	>		
			Avail.	2	-	>		13	-	>		26	-	>		19	-	>		
	4 - Strathy Road & Walmart Driveway	TCS	LOS	B	B	>	B	B	B	>	B	A	A	>	A	B	B	>	B	A
			Delay	13	12	>	12	13	11	>	13	7	8	>	8	11	11	>	11	9
			V/C	0.02	0.09	>		0.08	0.01	>		0.26	0.19	>		0.03	0.25	>		0.20
			Q	2	7	>		6	3	>		7	11	>		1	13	>		
			Ex	-	-	>		-	-	>		-	-	>		25	-	>		
			Avail.	-	-	>		-	-	>		-	-	>		24	-	>		
	6 - Courthouse Road & Future Road B	RBT	LOS		UM	>	UM	<	UM		UM	<	UM	>	UM	Approach Not Applicable				
			Delay			>		<				<		>						
			V/C			>		<				<		>						
			Q			>		<				<		>						
			Ex			>		<				<		>						
			Avail.			>		<				<		>						
	8 - Burnham Street & Future Road B	TWSC	LOS	C		A	B	Approach Not Applicable				A	UM		A		UM	UM	UM	
			Delay	23		9	13					2			1					
			V/C	0.02		0.01						0.04								
			Q	1		0						1								
			Ex	15		-						-								
			Avail.	15		-						-								
	9 - Courthouse Road & Future Road A	TWSC	LOS	Approach Not Applicable				A		A	A		UM	>	UM	<	UM		UM	
			Delay					0		0	0			>		<				
			V/C					0.00		0.00				>		<				
			Q					-		-				>		<				
			Ex					-		-				>		<				
			Avail.					-		-				>		<				
	10 - Strathy Road & Elgin Street	TCS	LOS	B	B	>	B	B	B	C	B	B	C	>	B	B	C	B	B	B
			Delay	10	13	>	13	14	19	21	19	15	21	>	19	14	20	16	16	16
			V/C	0.40	0.36	>		0.05	0.45	0.12		0.04	0.07	>		0.20	0.09	0.11		0.32
			Q	23	39	>		3	37	15		5	10	>		18	11	11		
			Ex	-	-	>		-	-	40		20	-	>		-	-	-		
			Avail.	-	-	>		-	-	26		15	-	>		-	-	-		
	11 - Elgin Street & Courthouse Road (West)	TWSC	LOS		UM	UM	A	<	UM		A	<	A	>	A	Approach Not Applicable				
			Delay				0	<			1	<	9	>	9					
			V/C					<				<	0.03	>						
			Q					<				<	1	>						
			Ex					<				<	-	>						
			Avail.					<				<	-	>						
	12 - Elgin Street & Courthouse Road (East)	TWSC	LOS	A	UM	>	A	A	UM	>	A	<	C	>	C	<	B	>	B	
			Delay	9		>	0	9		>	1	<	17	>	17	<	12	>	12	
			V/C	0.02		>		0.06		>		<	0.09	>		<	0.04	>		
			Q	0		>		2		>		<	2	>		<	1	>		
			Ex	30		>		40		>		<	-	>		<	-	>		
			Avail.	30		>		39		>		<	-	>		<	-	>		
	13- Elgin Street & Burnham Street	TCS	LOS	C	C	C	C	C	C	>	C	B	B	>	B	B	C	>	C	C
			Delay	24	25	24	24	21	27	>	26	14	19	>	17	18	22	>	21	22
			V/C	0.49	0.33	0.13		0.40	0.57	>		0.27	0.33	>		0.47	0.40	>		0.47
			Q	21	33	14		28	56	>		17	39	>		34	48	>		
			Ex	45	-	60		60	-	>		-	-	>		55	-	>		
			Avail.	24	-	46		32	-	>		-	-	>		21	-	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds

Q - 95th Percentile Queue Length (m)
Ex. - Existing Available Storage (m)
Avail. - Available Storage (m)

TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control

< - Shared Left/Through Lane
> - Shared Right/Through Lane
UM - Unopposed Movement

TABLE 5.4: 2026 TOTAL TRAFFIC OPERATIONS SUMMARY – PM PEAK HOUR – SCENARIO A

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	1 - Depalma Drive & Strathy Road	TCS	LOS	A	B	>	B	B	B	>	B	B	B	>	B	B	B	>	B	B
			Delay	0	20	>	20	13	11	>	12	15	16	>	16	16	17	>	17	16
			V/C	0.00	0.39	>		0.43	0.14	>		0.22	0.06	>		0.14	0.08	>		0.33
			Q	0	30	>		23	13	>		16	6	>		10	11	>		
			Ex	20	-	>		50	-	>		45	-	>		15	-	>		
			Avail.	20	-	>		27	-	>		29	-	>		5	-	>		
	2 - Depalma Drive & Hospital Entrance/Plaza Driveway	TCS	LOS	B	B	>	B	A	A	>	A	B	B	>	B	B	B	>	B	B
			Delay	12	13	>	13	8	10	>	10	13	13	>	13	14	13	>	13	12
			V/C	0.05	0.34	>		0.23	0.25	>		0.03	0.08	>		0.17	0.02	>		0.26
			Q	3	28	>		10	23	>		4	9	>		13	5	>		
			Ex	65	-	>		50	-	>		-	-	>		-	-	>		
			Avail.	62	-	>		40	-	>		-	-	>		-	-	>		
	3 - Burnham Street & Depalma Drive/White Street	TCS	LOS	E	C	>	E	C	C	>	C	B	B	>	B	B	C	>	B	C
			Delay	79	24	>	59	25	28	>	27	13	16	>	16	13	20	>	20	28
			V/C	1.03	0.12	>		0.32	0.23	>		0.40	0.48	>		0.19	0.66	>		0.78
			Q	112	13	>		23	24	>		16	57	>		10	76	>		
			Ex	30	-	>		30	-	>		40	-	>		30	-	>		
			Avail.	-82	-	>		8	-	>		24	-	>		20	-	>		
	4 - Strathy Road & Walmart Driveway	TCS	LOS	B	B	>	B	B	B	>	B	A	A	>	A	A	A	>	A	A
			Delay	16	15	>	15	18	14	>	17	6	7	>	7	9	10	>	10	10
			V/C	0.03	0.22	>		0.38	0.04	>		0.26	0.25	>		0.05	0.28	>		0.29
			Q	3	13	>		17	5	>		12	22	>		3	22	>		
			Ex	-	-	>		-	-	>		-	-	>		25	-	>		
			Avail.	-	-	>		-	-	>		-	-	>		22	-	>		
	6 - Courthouse Road & Future Road B	RBT	LOS		UM	>	UM	<	UM		UM	<	UM	>	UM	Approach Not Applicable				
			Delay			>		<				<		>						
			V/C			>		<				<		>						
			Q			>		<				<		>						
			Ex			>		<				<		>						
			Avail.			>		<				<		>						
	8 - Burnham Street & Future Road B	TWSC	LOS	D		B	C	Approach Not Applicable				A	UM		A		UM	UM	UM	
			Delay	27		11	16					1			0					
			V/C	0.14		0.09						0.02								
			Q	4		2						1								
			Ex	-		-						-								
			Avail.	-		-						-								
	9 - Courthouse Road & Future Road A	AWSC	LOS	Approach Not Applicable				A		A	A		A	>	A	<	A		A	
			Delay					0		0	0		0	>	0	<	0		0	
			V/C					0.00		0.00			0.00	>		<	0.01			
			Q					-		-			-	>		<	-			
			Ex					-		-			-	>		<	-			
			Avail.					-		-			-	>		<	-			
	10 - Strathy Road & Elgin Street	TCS	LOS	B	B	>	B	B	C	C	C	C	C	>	C	C	C	B	C	C
			Delay	12	17	>	16	14	23	29	24	21	28	>	26	20	25	20	21	20
			V/C	0.52	0.46	>		0.17	0.57	0.31		0.10	0.23	>		0.50	0.16	0.22		0.50
			Q	34	60	>		11	67	31		12	26	>		56	21	17		
			Ex	-	-	>		-	-	40		20	-	>		-	-	-		
			Avail.	-	-	>		-	-	9		8	-	>		-	-	-		
	11 - Elgin Street & Courthouse Road (West)	TWSC	LOS		UM	UM	A	<	UM		A	<	B	>	B	Approach Not Applicable				
			Delay				0	<			1	<	12	>	12					
			V/C					<				<	0.11	>						
			Q					<				<	3	>						
			Ex					<				<	-	>						
			Avail.					<				<	-	>						
	12 - Elgin Street & Courthouse Road (East)	TWSC	LOS	A	UM	>	A	B	UM	>	A	<	B	>	B		B	>	B	
			Delay	9		>	0	11		>	0	<	13	>	13		10	>	10	
			V/C	0.00		>		0.06		>		<	0.13	>			0.12	>		
			Q	0		>		2		>		<	3	>			3	>		
			Ex	30		>		40		>		<	-	>			-	>		
			Avail.	30		>		39		>		<	-	>			-	>		
	13- Elgin Street & Burnham Street	TCS	LOS	E	C	C	D	C	C	>	C	B	C	>	C	D	C	>	D	C
			Delay	80	30	27	39	22	32	>	30	17	25	>	22	48	27	>	35	32
			V/C	0.98	0.58	0.24		0.41	0.69	>		0.40	0.45	>		0.91	0.47	>		0.86
			Q	75	69	20		25	81	>		27	62	>		111	64	>		
			Ex	45	-	60		60	-	>		-	-	>		55	-	>		
			Avail.	-30	-	40		35	-	>		-	-	>		-56	-	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
Q - 95th Percentile Queue Length (m)
Ex. - Existing Available Storage (m)
Avail. - Available Storage (m)
TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control
< - Shared Left/Through Lane
> - Shared Right/Through Lane
UM - Unopposed Movement

5.2.2 Scenario B – Right-In/Right-Out Driveway on Burnham Street

Operations of the study area intersections were analyzed under 2026 total traffic conditions for Scenario B (**Figure 4.9** and **Figure 4.10**) using the same methodology and parameters applied in the base year and future background assessments. The displaced northbound and eastbound left-turn movements from Scenario A were redistributed to other intersections within the study area. **Table 5.5** and **Table 5.6** summarize the results for the weekday AM and PM peak hours, respectively. **Appendix F** contains the detailed Synchro reports.

The study area intersections are forecast to operate with good overall levels of service (LOS C or better) and well within capacity. The following same seven critical movements as Scenario A were identified, all of which occur in the PM peak hour:

- Depalma Drive/White Street and Burnham Street:
  - The eastbound left-turn movement is forecast to operate at LOS F with a v/c ratio of 1.10, representing an increase of 0.08 from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 93 metres, representing an increase of 12 metres from 2026 background conditions.
- Elgin Street West and Burnham Street:
  - The eastbound left-turn movement is forecast to operate at LOS F with a v/c ratio of 0.99, representing an increase of 0.01 from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 31 metres, representing an increase of one metre from 2026 background conditions.
  - The southbound left-turn movement is forecast to operate at LOS D with a v/c ratio of 0.90, representing an increase of 0.11 from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 55 metres, representing an increase of 15 metres from 2026 background conditions.

Overall, the proposed redevelopment will have negligible impact on the study area roadways with left-turn movements restricted at the Burnham Street driveway. All proposed connections to the internal circulation route are also forecast to operate at acceptable levels of service and well within capacity.

TABLE 5.5: 2026 TOTAL TRAFFIC OPERATIONS SUMMARY – AM PEAK HOUR – SCENARIO B

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	1 - Depalma Drive & Strathy Road	TCS	LOS	B	B	>	**B**	B	B	>	**B**	B	B	>	**B**	B	B	>	**B**	**B**
			Delay	17	17	>	**17**	12	13	>	**12**	15	16	>	**16**	18	18	>	**18**	**14**
			V/C	0.00	0.13	>		0.33	0.13	>		0.13	0.04	>		0.03	0.02	>		**0.25**
			Q	1	13	>		24	15	>		10	5	>		3	4	>		
			Ex	20	-	>		50	-	>		45	-	>		15	-	>		
			Avail.	19	-	>		26	-	>		35	-	>		12	-	>		
	2 - Depalma Drive & Hospital Entrance/Plaza Driveway	TCS	LOS	B	B	>	**B**	A	B	>	**B**	B	B	>	**B**	B	B	>	**B**	**B**
			Delay	11	11	>	**11**	9	11	>	**11**	12	12	>	**12**	12	12	>	**12**	**11**
			V/C	0.08	0.17	>		0.12	0.32	>		0.00	0.03	>		0.12	0.02	>		**0.23**
			Q	3	13	>		6	24	>		1	5	>		9	4	>		
			Ex	65	-	>		50	-	>		-	-	>		-	-	>		
			Avail.	62	-	>		44	-	>		-	-	>		-	-	>		
	3 - Burnham Street & Depalma Drive/White Street	TCS	LOS	C	C	>	**C**	C	C	>	**C**	B	B	>	**B**	A	B	>	**B**	**B**
			Delay	24	26	>	**25**	25	27	>	**26**	11	12	>	**12**	10	17	>	**16**	**17**
			V/C	0.41	0.06	>		0.23	0.16	>		0.44	0.31	>		0.18	0.69	>		**0.57**
			Q	28	8	>		17	19	>		14	36	>		11	92	>		
			Ex	30	-	>		30	-	>		40	-	>		30	-	>		
			Avail.	2	-	>		13	-	>		26	-	>		19	-	>		
	4 - Strathy Road & Walmart Driveway	TCS	LOS	B	B	>	**B**	B	B	>	**B**	A	A	>	**A**	B	B	>	**B**	**A**
			Delay	13	12	>	**12**	13	11	>	**12**	7	8	>	**8**	11	11	>	**11**	**9**
			V/C	0.02	0.09	>		0.08	0.02	>		0.26	0.19	>		0.03	0.25	>		**0.20**
			Q	2	7	>		6	3	>		7	11	>		1	13	>		
			Ex	-	-	>		-	-	>		-	-	>		25	-	>		
			Avail.	-	-	>		-	-	>		-	-	>		24	-	>		
	6 - Courthouse Road & Future Road B	RBT	LOS		UM	>	**UM**	<	UM		**UM**	<	UM	>	**UM**	**Approach Not Applicable**				
			Delay			>		<				<		>						
			V/C			>		<				<		>						
			Q			>		<				<		>						
			Ex			>		<				<		>						
			Avail.			>		<				<		>						
	8 - Burnham Street & Future Road B	TWSC	LOS			A	**A**	**Approach Not Applicable**					UM				UM	UM	**UM**	
			Delay			9	**9**													
			V/C			0.01														
			Q			0														
			Ex			-														
			Avail.			-														
	9 - Courthouse Road & Future Road A	TWSC	LOS	**Approach Not Applicable**				A		A	**A**		UM	>	**UM**	<	UM		**UM**	
			Delay					0		0	**0**			>		<				
			V/C					0.00		0.00				>		<				
			Q					-		-				>		<				
			Ex					-		-				>		<				
			Avail.					-		-				>		<				
	10 - Strathy Road & Elgin Street	TCS	LOS	B	B	>	**B**	B	B	C	**B**	B	C	>	**B**	B	C	B	**B**	**B**
			Delay	10	13	>	**13**	14	19	21	**19**	15	21	>	**19**	14	20	16	**16**	**16**
			V/C	0.40	0.36	>		0.05	0.45	0.12		0.04	0.07	>		0.20	0.09	0.11		**0.32**
			Q	23	39	>		3	37	15		5	10	>		18	11	11		
			Ex	-	-	>		-	-	40		20	-	>		-	-	-		
			Avail.	-	-	>		-	-	26		15	-	>		-	-	-		
	11 - Elgin Street & Courthouse Road (West)	TWSC	LOS		UM	UM	**A**	<	UM		**A**	<	A	>	**A**	**Approach Not Applicable**				
			Delay				**0**	<			**1**	<	9	>	**9**					
			V/C					<				<	0.03	>						
			Q					<				<	1	>						
			Ex					<				<	-	>						
			Avail.					<				<	-	>						
	12 - Elgin Street & Courthouse Road (East)	TWSC	LOS	A	UM	>	**A**	A	UM	>	**A**	<	C	>	**C**	<	B	>	**B**	
			Delay	10		>	**0**	9		>	**1**	<	17	>	**17**	<	12	>	**12**	
			V/C	0.02		>		0.06		>		<	0.09	>		<	0.04	>		
			Q	0		>		2		>		<	2	>		<	1	>		
			Ex	30		>		40		>		<	-	>		<	-	>		
			Avail.	30		>		39		>		<	-	>		<	-	>		
	13- Elgin Street & Burnham Street	TCS	LOS	C	C	C	**C**	C	C	>	**C**	B	B	>	**B**	B	C	>	**C**	**C**
			Delay	24	25	24	**24**	21	27	>	**26**	14	19	>	**18**	18	22	>	**21**	**22**
			V/C	0.49	0.32	0.13		0.40	0.59	>		0.30	0.32	>		0.46	0.40	>		**0.48**
			Q	21	33	14		28	59	>		18	38	>		33	49	>		
			Ex	45	-	60		60	-	>		-	-	>		55	-	>		
			Avail.	24	-	46		32	-	>		-	-	>		22	-	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds

Q - 95th Percentile Queue Length (m)
Ex. - Existing Available Storage (m)
Avail. - Available Storage (m)

TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control

< - Shared Left/Through Lane
> - Shared Right/Through Lane
UM - Unopposed Movement

TABLE 5.6: 2026 TOTAL TRAFFIC OPERATIONS SUMMARY – PM PEAK HOUR – SCENARIO B

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	1 - Depalma Drive & Strathy Road	TCS	LOS	A	B	>	B	B	B	>	B	B	B	>	B	B	B	>	B	B
			Delay	0	20	>	20	13	11	>	12	15	16	>	16	16	17	>	17	16
			V/C	0.00	0.39	>		0.43	0.14	>		0.22	0.07	>		0.15	0.08	>		0.33
			Q	0	30	>		23	13	>		16	7	>		10	11	>		
			Ex	20	-	>		50	-	>		45	-	>		15	-	>		
			Avail.	20	-	>		27	-	>		29	-	>		5	-	>		
	2 - Depalma Drive & Hospital Entrance/Plaza Driveway	TCS	LOS	B	B	>	B	A	A	>	A	B	B	>	B	B	B	>	B	B
			Delay	12	13	>	13	8	10	>	10	13	13	>	13	14	13	>	13	12
			V/C	0.05	0.36	>		0.24	0.25	>		0.03	0.08	>		0.17	0.02	>		0.27
			Q	3	30	>		10	23	>		4	9	>		13	5	>		
			Ex	65	-	>		50	-	>		-	-	>		-	-	>		
			Avail.	62	-	>		40	-	>		-	-	>		-	-	>		
	3 - Burnham Street & Depalma Drive/White Street	TCS	LOS	F	C	>	E	C	C	>	C	B	B	>	B	B	C	>	C	C
			Delay	102	24	>	74	25	28	>	27	12	16	>	15	13	21	>	20	32
			V/C	1.10	0.12	>		0.32	0.23	>		0.39	0.46	>		0.18	0.66	>		0.81
			Q	123	13	>		23	24	>		16	55	>		10	76	>		
			Ex	30	-	>		30	-	>		40	-	>		30	-	>		
			Avail.	-93	-	>		8	-	>		24	-	>		20	-	>		
	4 - Strathy Road & Walmart Driveway	TCS	LOS	B	B	>	B	B	B	>	B	A	A	>	A	A	A	>	A	A
			Delay	16	15	>	15	18	15	>	17	6	7	>	7	9	10	>	10	10
			V/C	0.03	0.22	>		0.38	0.06	>		0.26	0.25	>		0.05	0.28	>		0.29
			Q	3	13	>		17	7	>		12	22	>		3	22	>		
			Ex	-	-	>		-	-	>		-	-	>		25	-	>		
			Avail.	-	-	>		-	-	>		-	-	>		22	-	>		
	6 - Courthouse Road & Future Road B	RBT	LOS		UM	>	UM	<	UM		UM	<	UM	>	UM	Approach Not Applicable				
			Delay			>		<				<		>						
			V/C			>		<				<		>						
			Q			>		<				<		>						
			Ex			>		<				<		>						
			Avail.			>		<				<		>						
	8 - Burnham Street & Future Road B	TWSC	LOS			B	B	Approach Not Applicable					UM				UM	UM	UM	
			Delay			11	11													
			V/C			0.09														
			Q			2														
			Ex			-														
			Avail.			-														
	9 - Courthouse Road & Future Road A	AWSC	LOS	Approach Not Applicable				A		A	A		A	>	A	<	A		A	
			Delay					0		0	0		0	>	0	<	0		0	
			V/C					0.00		0.00			0.00	>		<	0.01			
			Q					-		-			-	>		<	-			
			Ex					-		-			-	>		<	-			
			Avail.					-		-			-	>		<	-			
	10 - Strathy Road & Elgin Street	TCS	LOS	B	B	>	B	B	C	C	C	C	C	>	C	C	C	B	C	C
			Delay	12	17	>	16	14	23	29	24	21	28	>	26	20	25	20	21	21
			V/C	0.52	0.46	>		0.17	0.57	0.31		0.10	0.23	>		0.50	0.16	0.22		0.50
			Q	34	60	>		11	67	31		12	26	>		56	21	17		
			Ex	-	-	>		-	-	40		20	-	>		-	-	-		
			Avail.	-	-	>		-	-	9		8	-	>		-	-	-		
	11 - Elgin Street & Courthouse Road (West)	TWSC	LOS		UM	UM	A	<	UM		A	<	B	>	B	Approach Not Applicable				
			Delay				0	<			1	<	12	>	12					
			V/C					<				<	0.11	>						
			Q					<				<	3	>						
			Ex					<				<	-	>						
			Avail.					<				<	-	>						
	12 - Elgin Street & Courthouse Road (East)	TWSC	LOS	A	UM	>	A	B	UM	>	A	<	B	>	B	<	B	>	B	
			Delay	9		>	0	11		>	0	<	13	>	13	<	11	>	11	
			V/C	0.00		>		0.06		>		<	0.13	>		<	0.12	>		
			Q	0		>		1		>		<	3	>		<	3	>		
			Ex	30		>		40		>		<	-	>		<	-	>		
			Avail.	30		>		39		>		<	-	>		<	-	>		
	13- Elgin Street & Burnham Street	TCS	LOS	F	C	C	D	C	C	>	C	B	C	>	C	D	C	>	C	C
			Delay	81	30	27	39	22	32	>	30	17	25	>	22	47	27	>	35	32
			V/C	0.99	0.58	0.24		0.41	0.69	>		0.41	0.45	>		0.90	0.47	>		0.86
			Q	76	69	20		25	81	>		28	61	>		110	64	>		
			Ex	45	-	60		60	-	>		-	-	>		55	-	>		
			Avail.	-31	-	40		35	-	>		-	-	>		-55	-	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
Q - 95th Percentile Queue Length (m)
Ex. - Existing Available Storage (m)
Avail. - Available Storage (m)
TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
AWSC - All-Way Stop Control
< - Shared Left/Through Lane
> - Shared Right/Through Lane
UM - Unopposed Movement

5.3 Auxiliary Turn Lanes

No existing intersections will require the addition of auxiliary turn lanes. Either lanes are already present, or traffic volumes do not warrant their provision.

Guidance provided by the Ministry of Transportation Design Supplement for the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads[2] was used to assess the need for auxiliary left-turn lanes at the intersection of Future Road B and Burnham Street. Only Scenario A was analyzed since Scenario B assumes the provision of a right-in/right-out connection for Future Road B.

Forecast traffic volumes for the northbound (inbound) left-turn movement were examined using the nomograph for a four-lane undivided highway. **Appendix G** contains the warrant nomograph, which illustrates that a left-turn auxiliary lane with 15 metres of storage would be marginally warranted on Burnham Street under 2026 total traffic conditions for the AM peak hour.

5.4 Comparison on Burnham Street Driveway Configurations

As Section 5.2 illustrates, both Burnham Street driveway configurations are forecast to operate at acceptable levels of service and well within capacity. No traffic control improvements would be required to accommodate the forecast traffic volumes. Although a northbound left-turn lane at Future Road B would be warranted for Scenario A based on forecast future traffic volumes, the justification is only marginally met. The anticipated level of traffic growth on Burnham Street between 2019 and 2026 is the primary justification for the auxiliary turn lane, with trips destined to the new Golden Plough Lodge of lessor influence.

The provision of a right-in/right-out driveway reduces the number of conflict points at the proposed connection to Burnham Street, which would decrease potential safety hazard. However, the restriction of northbound and eastbound left-turn movements requires vehicles to traverse a longer and less direct route to exit or enter the site. This increases vehicular demand on the internal circulation route and external road network, causes additional emissions and energy use and may encourage cut-through traffic as vehicles utilize other routes. The provision of a right-in/right-out connection also limits the number of access points for delivery and emergency vehicles. Adding traffic to the Elgin Street West and Courthouse Road (east) and Depalma Drive/White Street and Burnham Street intersections – two locations more impacted by the access restriction – would also exacerbate operational and safety concerns.

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[2] MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads. June 2017. *Appendix 9 for Chapter 9 (Intersections).*

Considering the above, Scenario A is preferred to Scenario B for the Burnham Street driveway configuration. If the all-movements driveway is implemented, Northumberland County should monitor traffic volumes on Burnham Street to assess whether the northbound auxiliary left-turn lane will be required in the future.

5.5 Church on the Hill Driveway

The site plan (**Figure 2.1**) shows the access for the Church on the Hill relocated further north, but still connected to Elgin Street West via a private driveway at the location of Courthouse Road (west). Maintaining their driveway in generally the same location will minimize potential impacts.

6 Proposed Courthouse Road Extension

6.1 Town of Cobourg Official Plan Context

Schedules "I" (Cobourg West Business Park Secondary Plan Land Use and Transportation Plan) and "J" (Cobourg West Business Park Secondary Plan Community Design Plan) of the 2010 Town of Cobourg Official Plan[3] denote a future extension of Courthouse Road to Strathy Road through the subject lands, as shown in **Figure 6.1**. The legend on both schedules identify this proposed extension as a "Future Local Road *or Private Driveway Connection*" (emphasis added). It is noted that Schedule "E" (Transportation Plan) of the plan does not identify this connection as a future public road.

Two policies in the Town's Official Plan have bearing on the future transportation linkages within this area, specifically:

- Within Section 14.3.3 Major Institutional Area (which these lands are designated), policy 14.3.3.3.3 Evaluation Criteria states:

  Applications for approval of new development or redevelopment in the Major Institutional Area designation shall also be evaluated based on their conformity with the criteria of Section 8.3.2, the policies of this Secondary Plan, particularly Section 14.4, and the following additional criteria:

  vi) site design would permit the development of a local road connection to Strathy Road in the general area designated on Schedules "I" and "J"

  Although Policy 14.3.3.3.3 vi) references only a "local road", the legend on Schedules "I" and "J" also contemplates a "private driveway". This infers the intent of this policy and the schedule designations is to facilitate a connection between Courthouse Road and Strathy Road regardless of jurisdiction.

- Section 14.4.4 Pedestrian/Bicycle and Secondary Vehicular Connections, policy ii) states:

  Direct, clearly defined pedestrian and vehicular connections which form an extension of the public transportation system shall be required through all sites used for commercial or institutional uses. These pedestrian and vehicular routes shall provide for connections:

  a) from the existing commercial development to the south to White Street (Depalma Drive) to the north;

  b) from Strathy Road to the east to future development to the west;

  c) to future transit stops;

  d) to all buildings; and,

[3] As approved by the OMB in May 2017. Office consolidation May 2018.

e) from the proposed hospital to adjacent commercial development.

This policy does not specify the connection needs to be a public road. Rather, the linkage could be a pedestrian path, sidewalk and/or driveway.

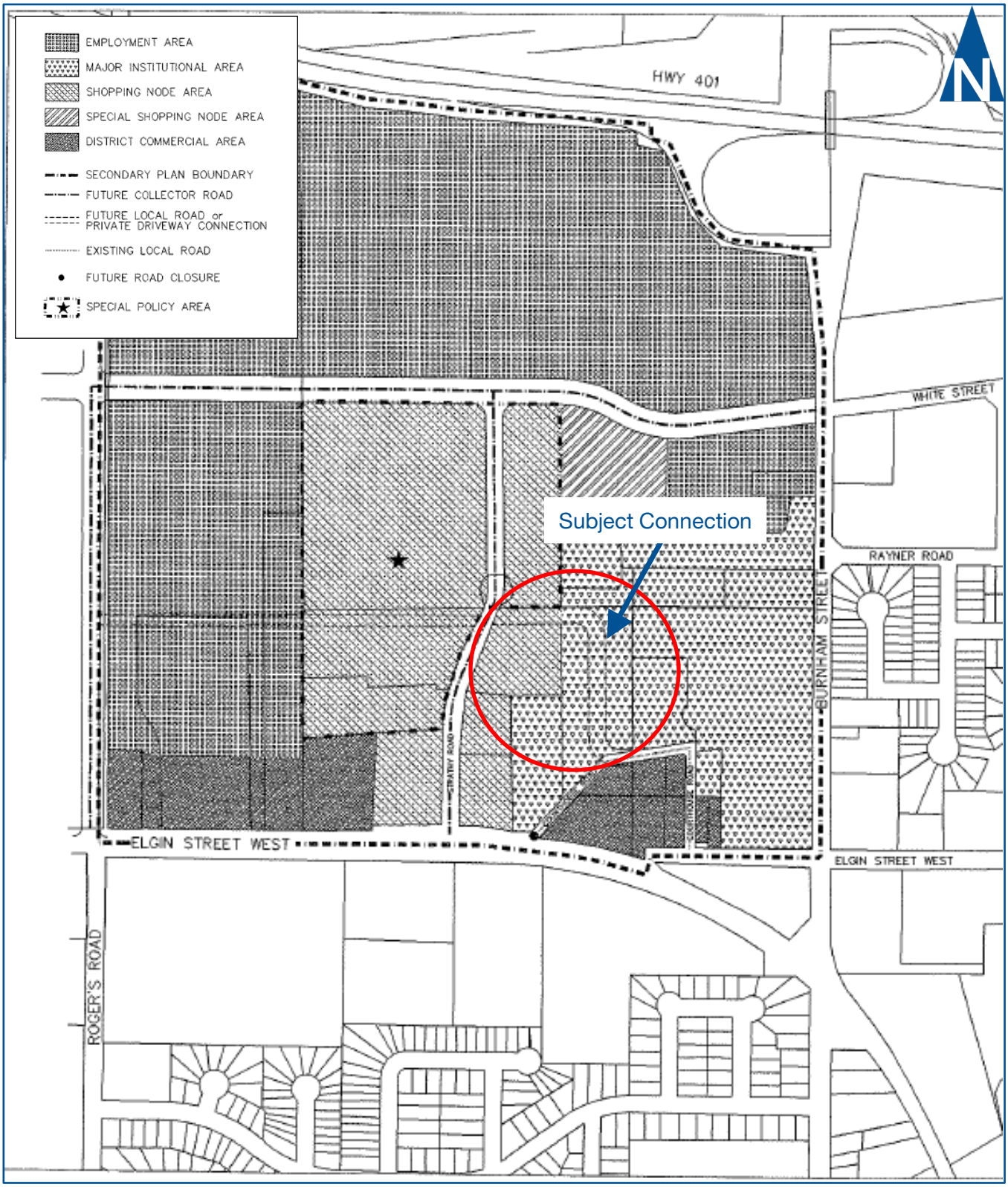
6.2 Future Development and Study Area Road Network

The need from a traffic perspective for the proposed extension of Courthouse Road to Strathy Road can be assessed based on the land uses denoted on Schedule A, Map 15 of Zoning By-Law 85-2003, as shown in **Figure 6.2**. Three future development areas within the Cobourg West Business Park Secondary Plan area have the potential to generate additional traffic that could impact the study area road network operation and potentially drive the need for the extension, being:

- The lands zones Business Park west of the SmartCentres development;
- The lands zoned Business Park on the southwest corner of Depalma Drive/White Street and Burnham Street; and
- The lands zoned Shopping Centre south of the SmartCentres development west of Strathy Road.

The trips forecast to be generated by the highest use of each development area in accordance with the provisions outlined in Zoning By-Law 85-2003 (worst case scenario) could be estimated to derive future traffic projections. However, this approach was not possible at the time of preparing this report due to unknown information (i.e. land use, potential development yield, etc.). For this reason, general approaches to assessing traffic impact were applied instead.

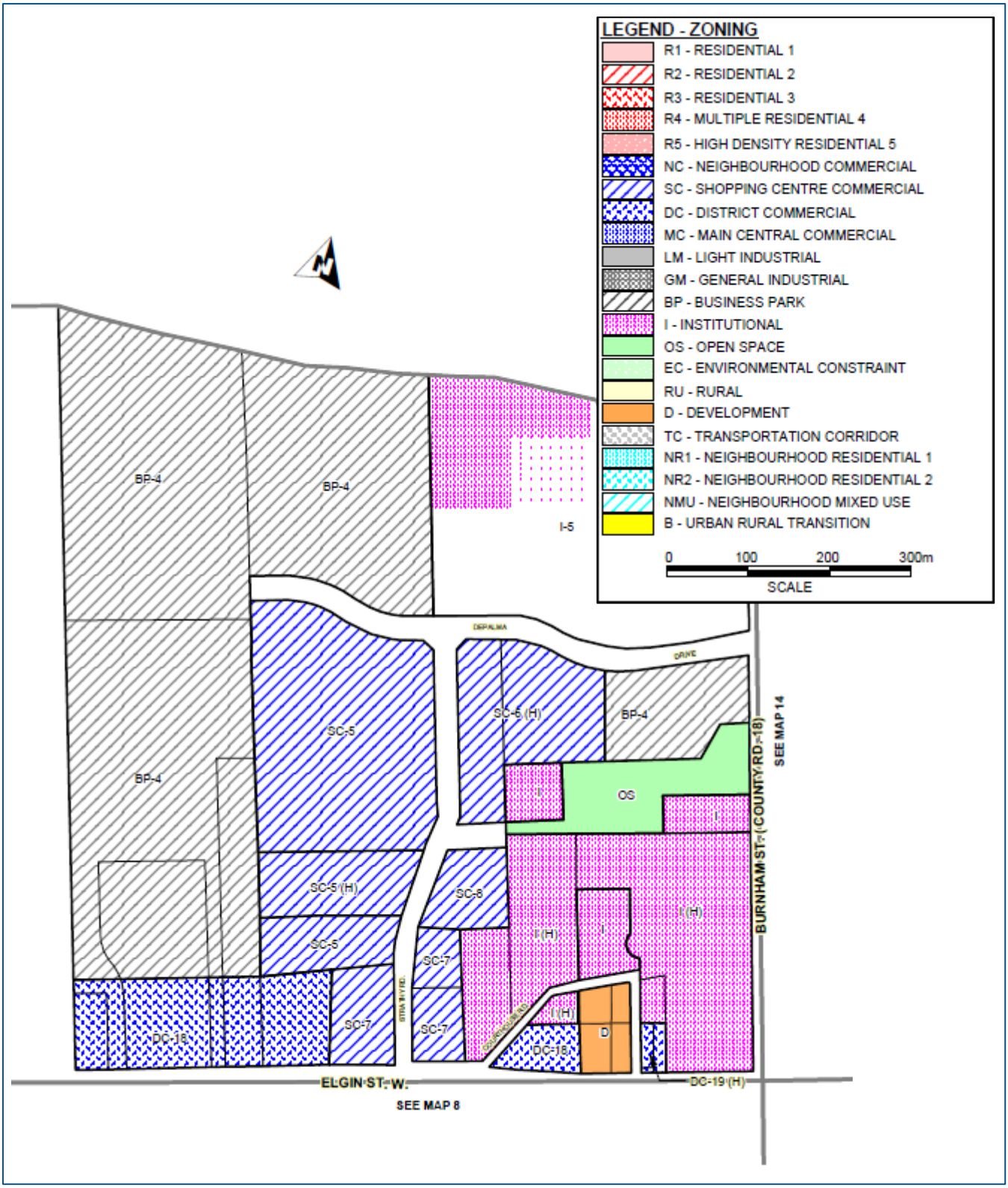
Schedule “I” of the Town’s Official Plan, as shown in **Figure 6.1**, shows a future extension of Depalma Drive westward to connect to a future northly extension of Rogers Road from Elgin Street West to Depalma Drive. It is anticipated that traffic generated by development of the Business Park lands west of the existing SmartCentres site would likely use the proposed Rogers Road extension or Strathy Road to access Elgin Street West given the availability of traffic control signals and the relatively good operation of these intersections now and into the future. Access to Burnham Street would likely be via Depalma Drive, although there are modest operational concerns identified at this intersection. Regardless, it is unlikely motorists would use a Courthouse Road extension since its intersections with Elgin Street West are not signalized, making access to the east more challenging. It would also not be desirable to direct further traffic to these unsignalized intersections for safety and operational reasons, nor beneficial to signalize either/both locations given existing signal spacing along Elgin Street West.



paradigm TRANSPORTATION SOLUTIONS LIMITED

Cobourg West Business Park Secondary Plan Land Use and Transportation Plan – Cobourg Official Plan Schedule "I"

Figure 6.1



Map 15 – Schedule A of Town of Cobourg Zoning By-Law 85-2003

Figure 6.2

The Shopping Centre lands west of Strathy Road would likely have a negligible impact on roadway network operation given the limited development potential of the block, the availability of traffic control signals and the relatively good operation of the study area intersections. Like the Business Park, access via Courthouse Road would also not be desirable.

The potential Business Park lands development on the southwest corner or Depalma Drive/White Street and Burnham Street would likely access the arterial road network via Depalma Drive. Presently, the intersection of Depalma Drive/White Street and Burnham Street operates at a good overall level of service in both the weekday AM and PM peak hours but is forecast to operate with some delay at the 2026 horizon. Signal timing adjustments are one measure that could be implemented to alleviate delay, although further details related to the proposed land use would provide a more definitive understanding of the traffic impacts on the intersection.

Overall, the study area intersections currently operate at relatively good levels of service and generally within capacity, with modest change in conditions expected to the 2026 horizon year. Development of land parcels within the Cobourg West Business Park Secondary Plan would add traffic to the study area roadways, but the planned extensions of arterial roads Depalma Drive and Rogers Road should provide adequate capacity to accommodate future demand. The Depalma Drive/White Street and Burnham Street intersection is likely the only intersection of concern within the study area with eastbound left movements expected to continue experiencing delay over time, especially if this potential growth occurs. However, it is doubtful that motorists would divert to a Courthouse Road extension since most traffic making this movement is likely destined to the Highway 401 interchange or points north. Signal timing adjustments may alleviate this delay, as could the implementation of dual left-turn lanes.

Based on the results of this assessment, the provision of a Courthouse Road extension to Strathy Road is not required from a study area road network perspective.

6.3 Golden Plough Lodge and County Archives Redevelopment

Providing a public local road connection through the lands being considered for the Golden Plough Lodge and County Archives Redevelopment would be inconsistent with Northumberland County's vision and plans for the rebuilt long-term care home. By their very nature, municipal roads can be used by the public at large, making it more difficult for the County to control traffic speeds, volumes and types of vehicles using the connection within the development plan area. Given that many of the home's residents require (or at least expect) a more passive environment for daily living and personal security, unfettered public vehicle access within the internal circulation route would be inconsistent with this objective. In this case, a private connection is more appropriate than a public road in terms of traffic calming and

community safety and would enable the County to implement measures needed to ensure this condition remains.

The internal circulation pattern planned for the development will still facilitate the connection of Strathy Road to Courthouse Road as contemplated by the Town's Official Plan. Three driveways connecting to the roadways will allow vehicles to access and egress in both directions thereby distributing traffic volumes across more roads and intersections. With the internal circulation pattern currently shown in **Figure 2.1**, a continuous route is provided between Strathy Road and Courthouse Road. The connection will also allow access and connectivity for cyclists and pedestrians in this area, assuming the property is not fenced or gated.

7 Conclusions and Recommendations

7.1 Conclusions

The conclusions of this Transportation Impact Study are as follows:

- Under 2019 base year traffic conditions, the study area intersections operate at good overall levels of service (LOS C or better) during both the AM and PM peak hours. The eastbound left-turn 95th percentile queues on Depalma Drive at Burnham Street and on Elgin Street West at Burnham Street currently exceed available storage in the PM peak hour.
- Under 2026 background traffic conditions, the study area intersections are expected to operate at similar levels of service to base year conditions (LOS C or better) during both the weekday AM and PM peak hours. The following critical movements were identified, all of which occur in the PM peak hour:
  - The eastbound left-turn movement on Depalma Drive at Burnham Street is forecast to operate at LOS E with a v/c ratio of 1.02 (volume demand exceeds theoretical capacity), representing an increase of 0.26 from 2019 base year conditions. The 95th percentile queue is also expected to exceed available storage by 81 metres, representing an increase of 40 metres from 2019 base year conditions;
  - The southbound approach on Courthouse Road (west) at Elgin Street West is forecast to operate at LOS E with a v/c ratio of 0.34, representing an increase of 0.13 from 2019 base year conditions;
  - The eastbound left-turn movement on Elgin Street West at Burnham Street is forecast to operate at LOS E with a v/c ratio of 0.98 (volume demand approaching theoretical capacity), representing an increase of 0.19 from 2019 base year conditions. The 95th percentile queue is also expected to exceed available storage by 30 metres, representing an increase of 26 metres from 2019 base year conditions; and
  - The southbound left-turn 95th percentile queue on Burnham Street at Elgin Street West is forecast to exceed available storage by 30 metres, representing an increase of 35 metres from 2019 base year conditions.
- Under 2026 total traffic conditions for Scenario A, the study area intersections are expected to operate at similar levels of service to base year and future background conditions (LOS C or better) during both the weekday AM and PM peak hours. The following critical movements were identified, all of which occur in the PM peak hour:
  - The eastbound left-turn movement on Depalma Drive at Burnham Street is forecast to operate at LOS F with a v/c ratio of 1.03,

representing an increase of 0.01 from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 82 metres, representing an increase of one metre from 2026 background conditions;

- The eastbound left-turn movement on Elgin Street West at Burnham Street is forecast to operate at LOS E with a v/c ratio of 0.98, representing no change from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 30 metres, representing no change from 2026 background conditions; and
- The southbound left-turn movement on Burnham Street at Elgin Street West is forecast to operate at LOS D with a v/c ratio of 0.91, representing an increase of 0.12 from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 56 metres, representing an increase of 16 metres from 2026 background conditions.

- Under 2026 total traffic conditions for Scenario B, the study area intersections are expected to operate at similar levels of service to base year and future background conditions (LOS C or better) during both the weekday AM and PM peak hours. The following critical movements were identified, all of which occur in the PM peak hour:
  - The eastbound left-turn movement on Depalma Drive at Burnham Street is forecast to operate at LOS F with a v/c ratio of 1.10, representing an increase of 0.08 from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 93 metres, representing an increase of 12 metres from 2026 background conditions;
  - The eastbound left-turn movement on Elgin Street West at Burnham Street is forecast to operate at LOS F with a v/c ratio of 0.99, representing an increase of 0.01 from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 31 metres, representing an increase of one metre from 2026 background conditions; and
  - The southbound left-turn movement on Burnham Street at Elgin Street West is forecast to operate at LOS D with a v/c ratio of 0.90, representing an increase of 0.11 from 2026 background conditions. The 95th percentile queue is also expected to exceed available storage by 55 metres, representing an increase of 15 metres from 2026 background conditions.
- No operational concerns were identified at any of the proposed site accesses onto the proposed roadway system surrounding the subject site;
- Scenario A (all-movements) is preferred to Scenario B (right-in/right-out) for the Burnham Street driveway configuration;

- Access impacts to the Church on the Hill are minimized by maintaining a driveway connection to Elgin Street West at the location of Courthouse Road (west); and
- The proposed extension of Courthouse Road to Strathy Road through the lands being considered for the Golden Plough Lodge and County Archives Redevelopment as a public road:
  - Is not consistently addressed in the Town of Cobourg Official Plan;
  - Is not likely required to serve future development within the Cobourg West Business Park Secondary Plan area;
  - Would not likely benefit the study area road network; and
  - Would be inconsistent with Northumberland County's vision and plans for the rebuilt long-term care home.

  A private connection is more appropriate than a public road in terms of traffic calming and community safety and can still facilitate the connection of Strathy Road to Courthouse Road as contemplated by the Town's Official Plan.

7.2 Recommendations

Based on the findings of this study, it is recommended that:

- The Golden Plough Lodge and County Archives Redevelopment proceed as planned from a transportation perspective. No roadway or traffic control improvements to the external road system are required to accommodate the proposed redevelopment. The Town of Cobourg and Northumberland County should continue to monitor signal timings at the study area intersections to ensure that a reasonable level of service is maintained into the future.
- The internal circulation route not be dedicated as a public road. If necessary, Northumberland County and/or the Town of Cobourg should initiate an amendment to the Town's Official Plan to clarify that the proposed extension of Courthouse Road is to proceed as a private road/driveway connection.
- If an all-movement access is provided on Burnham Street, Northumberland County should monitor traffic volumes to assess whether a northbound auxiliary left-turn lane will be required in the future.

Appendix A

Turning Movement Count Data

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Burnham Street & Golden Plough Lodge Driveway
Site Code:
Start Date: 06/22/2016

Turning Movement Data

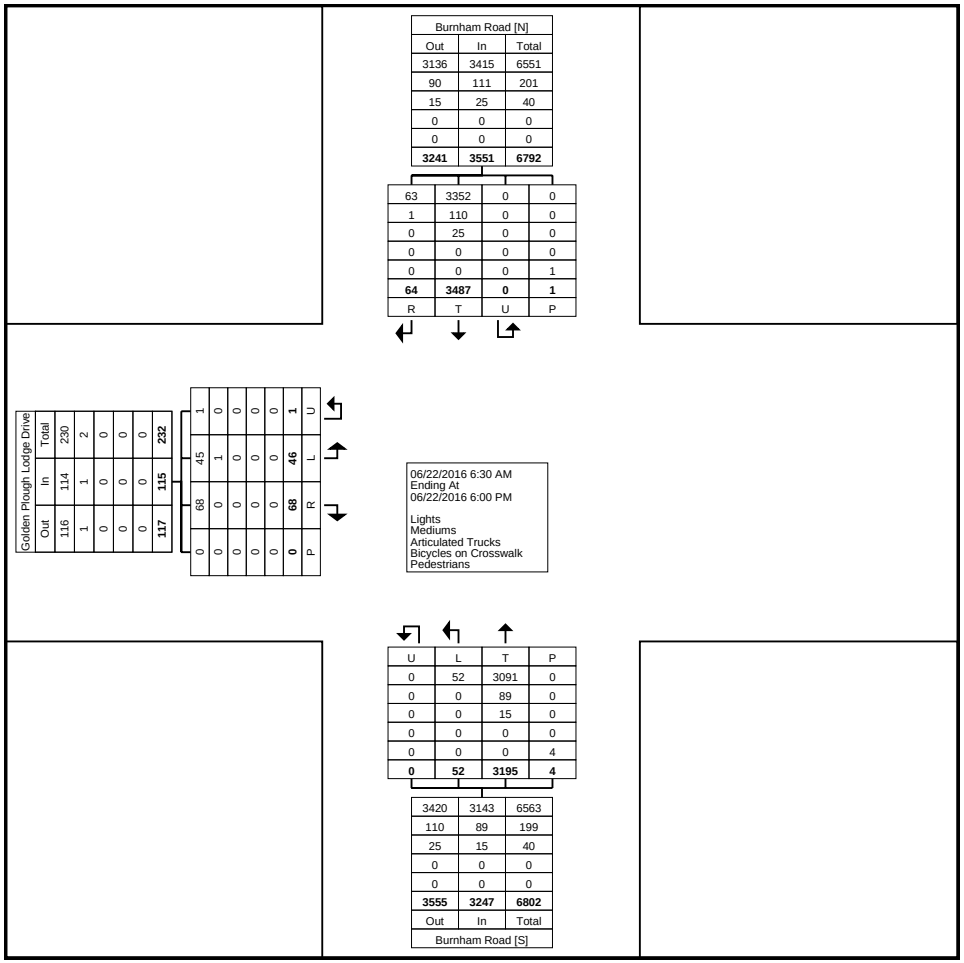
Start Time	Golden Plough Lodge Driveway Eastbound					Burnham Road Northbound					Burnham Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
6:30 AM	0	0	0	0	0	8	75	0	0	83	77	6	0	0	83	166
6:45 AM	0	1	0	0	1	2	86	0	1	88	74	8	0	0	82	171
Hourly Total	0	1	0	0	1	10	161	0	1	171	151	14	0	0	165	337
7:00 AM	3	4	0	0	7	1	110	0	0	111	67	5	0	0	72	190
7:15 AM	0	1	0	0	1	0	106	0	0	106	75	2	0	0	77	184
7:30 AM	1	2	1	0	4	1	130	0	0	131	92	4	0	0	96	231
7:45 AM	0	0	0	0	0	2	108	0	0	110	192	6	0	0	198	308
Hourly Total	4	7	1	0	12	4	454	0	0	458	426	17	0	0	443	913
8:00 AM	0	1	0	0	1	2	129	0	0	131	140	1	0	0	141	273
8:15 AM	0	1	0	0	1	5	117	0	0	122	159	3	0	0	162	285
8:30 AM	0	1	0	0	1	1	136	0	0	137	147	3	0	0	150	288
8:45 AM	1	0	0	0	1	3	136	0	0	139	151	3	0	0	154	294
Hourly Total	1	3	0	0	4	11	518	0	0	529	597	10	0	0	607	1140
9:00 AM	1	2	0	0	3	1	126	0	0	127	145	2	0	0	147	277
9:15 AM	2	3	0	0	5	2	120	0	0	122	143	2	0	0	145	272
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	3	5	0	0	8	3	246	0	0	249	288	4	0	0	292	549
3:00 PM	7	11	0	0	18	5	141	0	0	146	155	4	0	0	159	323
3:15 PM	5	5	0	0	10	2	142	0	0	144	146	1	0	0	147	301
3:30 PM	3	6	0	0	9	1	171	0	0	172	172	1	0	0	173	354
3:45 PM	4	4	0	0	8	2	151	0	0	153	193	1	0	0	194	355
Hourly Total	19	26	0	0	45	10	605	0	0	615	666	7	0	0	673	1333
4:00 PM	2	3	0	0	5	1	164	0	0	165	175	2	0	0	177	347
4:15 PM	4	8	0	0	12	3	181	0	0	184	170	3	0	0	173	369
4:30 PM	3	2	0	0	5	2	183	0	0	185	169	2	0	0	171	361
4:45 PM	1	4	0	0	5	1	135	0	1	136	188	1	0	1	189	330
Hourly Total	10	17	0	0	27	7	663	0	1	670	702	8	0	1	710	1407
5:00 PM	2	4	0	0	6	3	184	0	0	187	162	2	0	0	164	357
5:15 PM	1	3	0	0	4	3	120	0	0	123	186	1	0	0	187	314
5:30 PM	6	1	0	0	7	1	128	0	2	129	161	1	0	0	162	298
5:45 PM	0	1	0	0	1	0	116	0	0	116	148	0	0	0	148	265
Hourly Total	9	9	0	0	18	7	548	0	2	555	657	4	0	0	661	1234
Grand Total	46	68	1	0	115	52	3195	0	4	3247	3487	64	0	1	3551	6913
Approach %	40.0	59.1	0.9	-	-	1.6	98.4	0.0	-	-	98.2	1.8	0.0	-	-	-
Total %	0.7	1.0	0.0	-	1.7	0.8	46.2	0.0	-	47.0	50.4	0.9	0.0	-	51.4	-
Lights	45	68	1	-	114	52	3091	0	-	3143	3352	63	0	-	3415	6672
% Lights	97.8	100.0	100.0	-	99.1	100.0	96.7	-	-	96.8	96.1	98.4	-	-	96.2	96.5
Mediums	1	0	0	-	1	0	89	0	-	89	110	1	0	-	111	201

% Mediums	2.2	0.0	0.0	-	0.9	0.0	2.8	-	-	2.7	3.2	1.6	-	-	3.1	2.9
Articulated Trucks	0	0	0	-	0	0	15	0	-	15	25	0	0	-	25	40
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	0.5	-	-	0.5	0.7	0.0	-	-	0.7	0.6
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0.0	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	4	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Burnham Street & Golden Plough Lodge Driveway
Site Code:
Start Date: 06/22/2016
Page No: 3



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Burnham Street & Golden Plough Lodge Driveway
Site Code:
Start Date: 06/22/2016

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Golden Plough Lodge Driveway Eastbound					Burnham Road Northbound					Burnham Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:45 AM	0	0	0	0	0	2	108	0	0	110	192	6	0	0	198	308
8:00 AM	0	1	0	0	1	2	129	0	0	131	140	1	0	0	141	273
8:15 AM	0	1	0	0	1	5	117	0	0	122	159	3	0	0	162	285
8:30 AM	0	1	0	0	1	1	136	0	0	137	147	3	0	0	150	288
Total	0	3	0	0	3	10	490	0	0	500	638	13	0	0	651	1154
Approach %	0.0	100.0	0.0	-	-	2.0	98.0	0.0	-	-	98.0	2.0	0.0	-	-	-
Total %	0.0	0.3	0.0	-	0.3	0.9	42.5	0.0	-	43.3	55.3	1.1	0.0	-	56.4	-
PHF	0.000	0.750	0.000	-	0.750	0.500	0.901	0.000	-	0.912	0.831	0.542	0.000	-	0.822	0.937
Lights	0	3	0	-	3	10	476	0	-	486	606	13	0	-	619	1108
% Lights	-	100.0	-	-	100.0	100.0	97.1	-	-	97.2	95.0	100.0	-	-	95.1	96.0
Mediums	0	0	0	-	0	0	12	0	-	12	25	0	0	-	25	37
% Mediums	-	0.0	-	-	0.0	0.0	2.4	-	-	2.4	3.9	0.0	-	-	3.8	3.2
Articulated Trucks	0	0	0	-	0	0	2	0	-	2	7	0	0	-	7	9
% Articulated Trucks	-	0.0	-	-	0.0	0.0	0.4	-	-	0.4	1.1	0.0	-	-	1.1	0.8
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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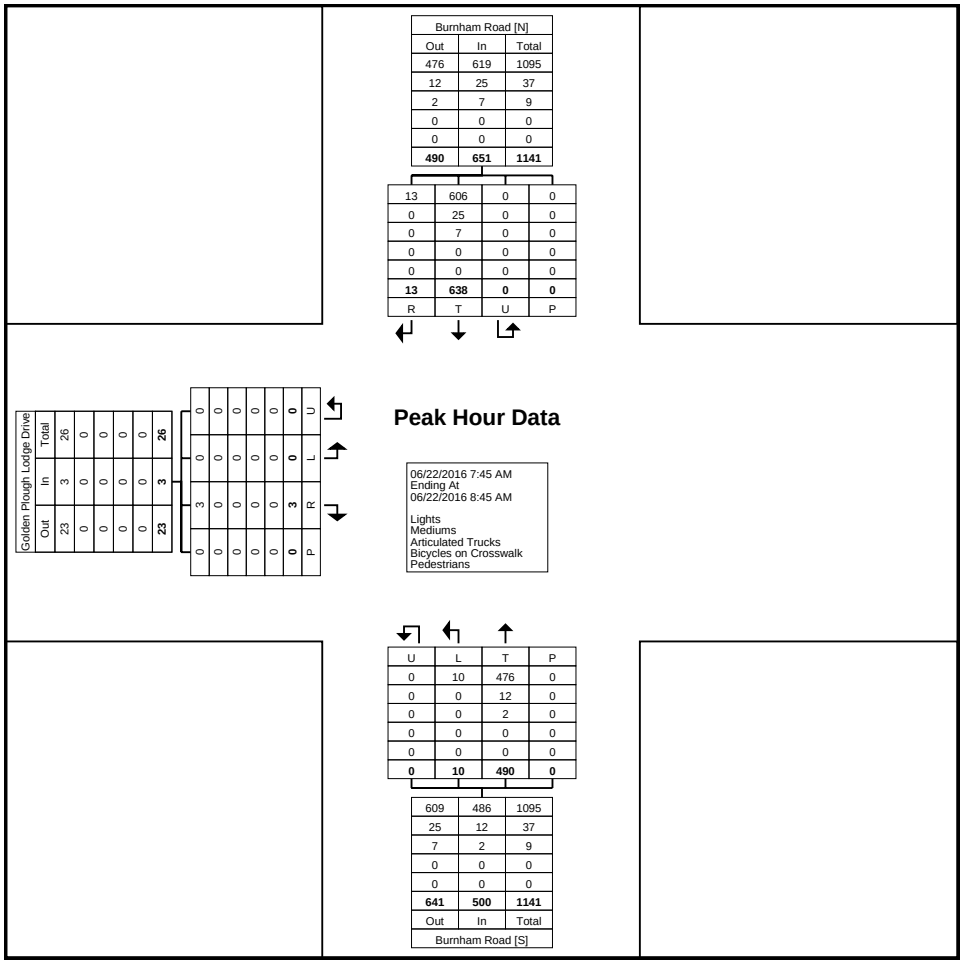


Turning Movement Peak Hour Data Plot (7:45 AM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Burnham Street & Golden Plough Lodge Driveway
Site Code:
Start Date: 06/22/2016

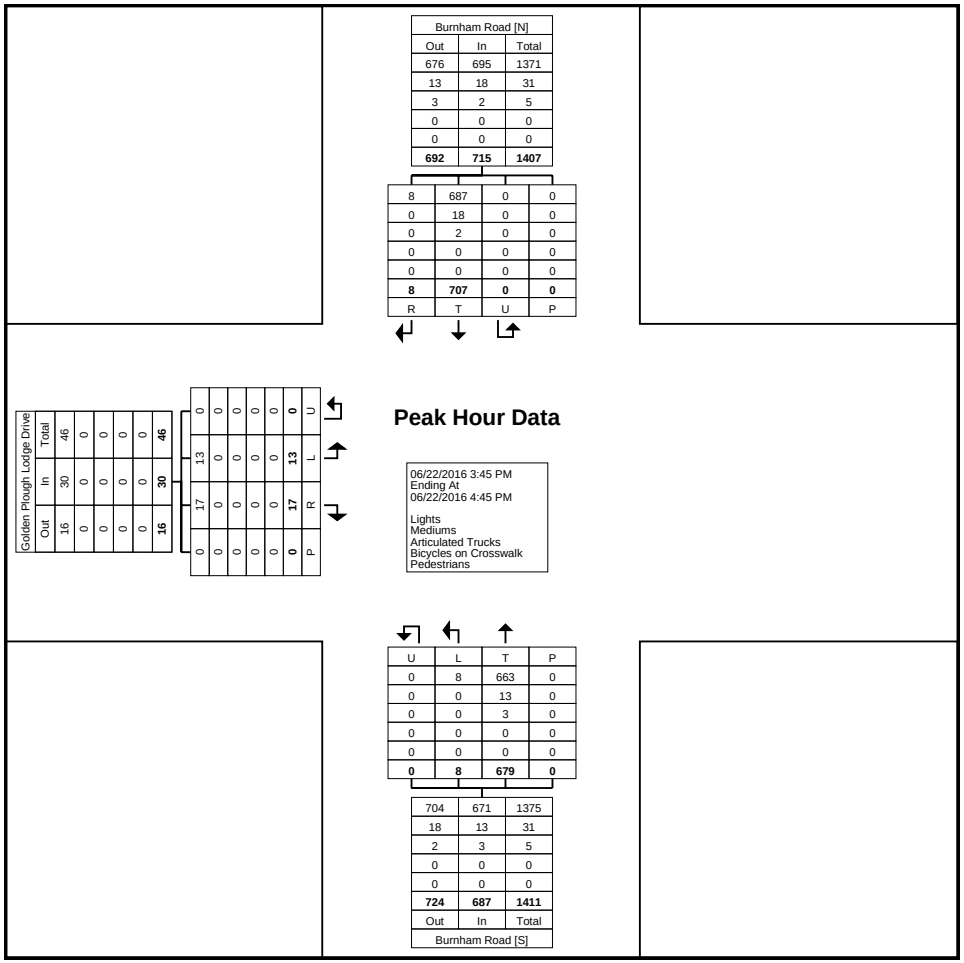
Turning Movement Peak Hour Data (3:45 PM)

Start Time	Golden Plough Lodge Driveway Eastbound					Burnham Road Northbound					Burnham Road Southbound					
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
3:45 PM	4	4	0	0	8	2	151	0	0	153	193	1	0	0	194	355
4:00 PM	2	3	0	0	5	1	164	0	0	165	175	2	0	0	177	347
4:15 PM	4	8	0	0	12	3	181	0	0	184	170	3	0	0	173	369
4:30 PM	3	2	0	0	5	2	183	0	0	185	169	2	0	0	171	361
Total	13	17	0	0	30	8	679	0	0	687	707	8	0	0	715	1432
Approach %	43.3	56.7	0.0	-	-	1.2	98.8	0.0	-	-	98.9	1.1	0.0	-	-	-
Total %	0.9	1.2	0.0	-	2.1	0.6	47.4	0.0	-	48.0	49.4	0.6	0.0	-	49.9	-
PHF	0.813	0.531	0.000	-	0.625	0.667	0.928	0.000	-	0.928	0.916	0.667	0.000	-	0.921	0.970
Lights	13	17	0	-	30	8	663	0	-	671	687	8	0	-	695	1396
% Lights	100.0	100.0	-	-	100.0	100.0	97.6	-	-	97.7	97.2	100.0	-	-	97.2	97.5
Mediums	0	0	0	-	0	0	13	0	-	13	18	0	0	-	18	31
% Mediums	0.0	0.0	-	-	0.0	0.0	1.9	-	-	1.9	2.5	0.0	-	-	2.5	2.2
Articulated Trucks	0	0	0	-	0	0	3	0	-	3	2	0	0	-	2	5
% Articulated Trucks	0.0	0.0	-	-	0.0	0.0	0.4	-	-	0.4	0.3	0.0	-	-	0.3	0.3
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Burnham Street & Golden Plough Lodge Driveway
Site Code:
Start Date: 06/22/2016



Turning Movement Peak Hour Data Plot (3:45 PM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Courthouse Road & Golden Plough Lodge Driveway
Site Code:
Start Date: 06/22/2016
Page No: 1

Turning Movement Data

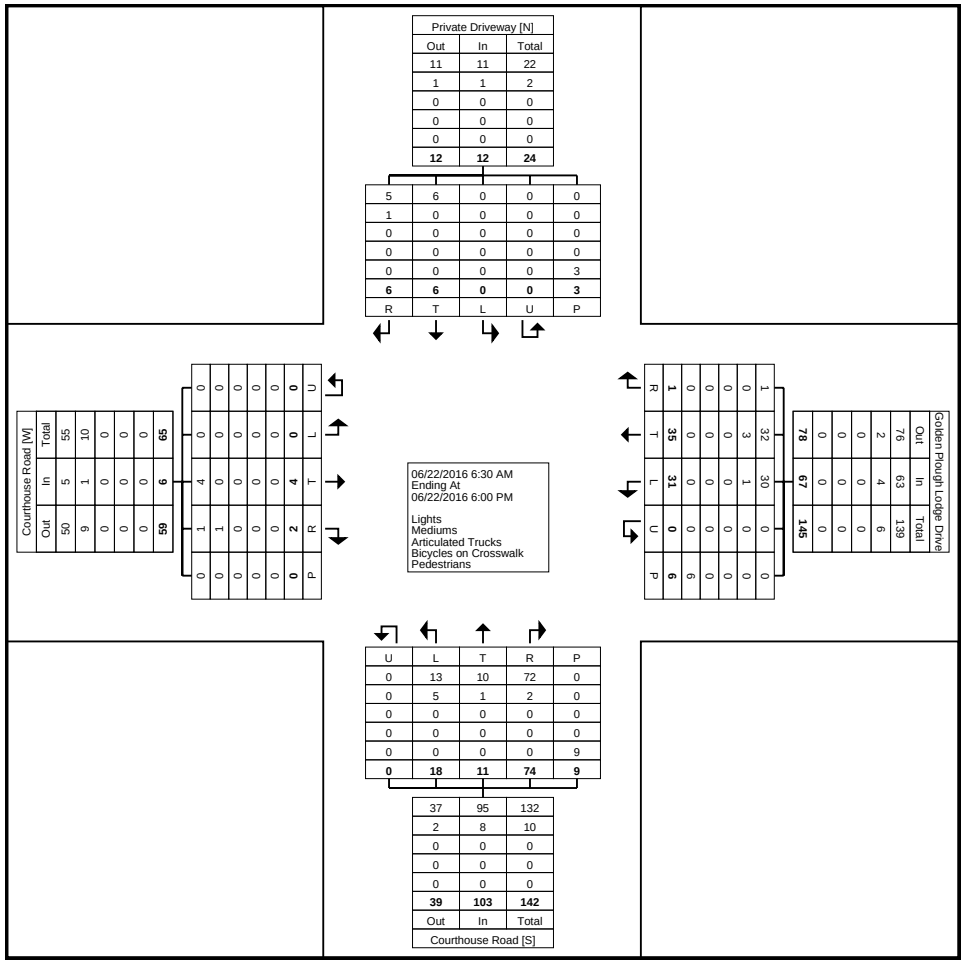
Start Time	Courthouse Road Eastbound						Golden Plough Lodge Driveway Westbound						Courthouse Road Northbound						Private Driveway Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
6:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:45 AM	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
Hourly Total	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	1	5	0	0	6	0	0	0	0	0	0	7
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	0	3
7:45 AM	0	2	0	0	0	2	1	0	0	0	0	1	0	1	13	0	1	14	0	0	0	0	0	0	17
Hourly Total	0	2	0	0	0	2	1	2	0	0	1	3	0	2	20	0	1	22	0	0	0	0	0	0	27
8:00 AM	0	0	0	0	0	0	2	0	0	0	0	2	1	1	10	0	0	12	0	1	0	0	0	1	15
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	12	0	0	13	0	0	0	0	0	0	13
8:30 AM	0	0	0	0	0	0	1	2	0	0	0	3	1	3	5	0	0	9	0	1	2	0	1	3	15
8:45 AM	0	0	0	0	0	0	1	1	0	0	0	2	1	0	1	0	2	2	0	1	0	0	0	1	5
Hourly Total	0	0	0	0	0	0	4	3	0	0	0	7	4	4	28	0	2	36	0	3	2	0	1	5	48
9:00 AM	0	0	0	0	0	0	1	0	0	0	1	1	1	0	2	0	0	3	0	0	0	0	0	0	4
9:15 AM	0	1	0	0	0	1	1	0	0	0	0	1	1	1	1	0	0	3	0	1	0	0	0	1	6
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	1	0	0	0	1	2	0	0	0	1	2	2	1	3	0	0	6	0	1	0	0	0	1	10
3:00 PM	0	0	0	0	0	0	1	1	0	0	2	2	1	1	2	0	1	4	0	1	1	0	0	2	8
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	0	1	6	0	0	0	0	0	0	6
3:30 PM	0	0	0	0	0	0	0	1	0	0	2	1	2	1	2	0	0	5	0	0	0	0	0	0	6
3:45 PM	0	0	1	0	0	1	1	0	0	0	0	1	1	0	1	0	0	2	0	0	1	0	2	1	5
Hourly Total	0	0	1	0	0	1	2	2	0	0	4	4	5	2	10	0	2	17	0	1	2	0	2	3	25
4:00 PM	0	0	0	0	0	0	2	3	0	0	0	5	0	0	1	0	0	1	0	0	1	0	0	1	7
4:15 PM	0	0	0	0	0	0	2	1	0	0	0	3	2	1	5	0	3	8	0	0	0	0	0	0	11
4:30 PM	0	1	0	0	0	1	7	9	0	0	0	16	0	0	3	0	1	3	0	0	0	0	0	0	20
4:45 PM	0	0	0	0	0	0	3	8	1	0	0	12	0	0	0	0	0	0	0	1	0	0	0	1	13
Hourly Total	0	1	0	0	0	1	14	21	1	0	0	36	2	1	9	0	4	12	0	1	1	0	0	2	51
5:00 PM	0	0	0	0	0	0	6	3	0	0	0	9	2	0	1	0	0	3	0	0	1	0	0	1	13
5:15 PM	0	0	0	0	0	0	0	2	0	0	0	2	1	0	1	0	0	2	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	2	0	1	0	0	3	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	2	1	0	0	0	3	0	1	1	0	0	2	0	0	0	0	0	0	5
Hourly Total	0	0	0	0	0	0	8	7	0	0	0	15	5	1	4	0	0	10	0	0	1	0	0	1	26
Grand Total	0	4	2	0	0	6	31	35	1	0	6	67	18	11	74	0	9	103	0	6	6	0	3	12	188
Approach %	0.0	66.7	33.3	0.0	-	-	46.3	52.2	1.5	0.0	-	-	17.5	10.7	71.8	0.0	-	-	0.0	50.0	50.0	0.0	-	-	-
Total %	0.0	2.1	1.1	0.0	-	3.2	16.5	18.6	0.5	0.0	-	35.6	9.6	5.9	39.4	0.0	-	54.8	0.0	3.2	3.2	0.0	-	6.4	-
Lights	0	4	1	0	-	5	30	32	1	0	-	63	13	10	72	0	-	95	0	6	5	0	-	11	174
% Lights	-	100.0	50.0	-	-	83.3	96.8	91.4	100.0	-	-	94.0	72.2	90.9	97.3	-	-	92.2	-	100.0	83.3	-	-	91.7	92.6

Mediums	0	0	1	0	-	1	1	3	0	0	-	4	5	1	2	0	-	8	0	0	1	0	-	1	14
% Mediums	-	0.0	50.0	-	-	16.7	3.2	8.6	0.0	-	-	6.0	27.8	9.1	2.7	-	-	7.8	-	0.0	16.7	-	-	8.3	7.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	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
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	9	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Courthouse Road & Golden Plough Lodge Driveway
Site Code:
Start Date: 06/22/2016



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Courthouse Road & Golden Plough Lodge Driveway
Site Code:
Start Date: 06/22/2016

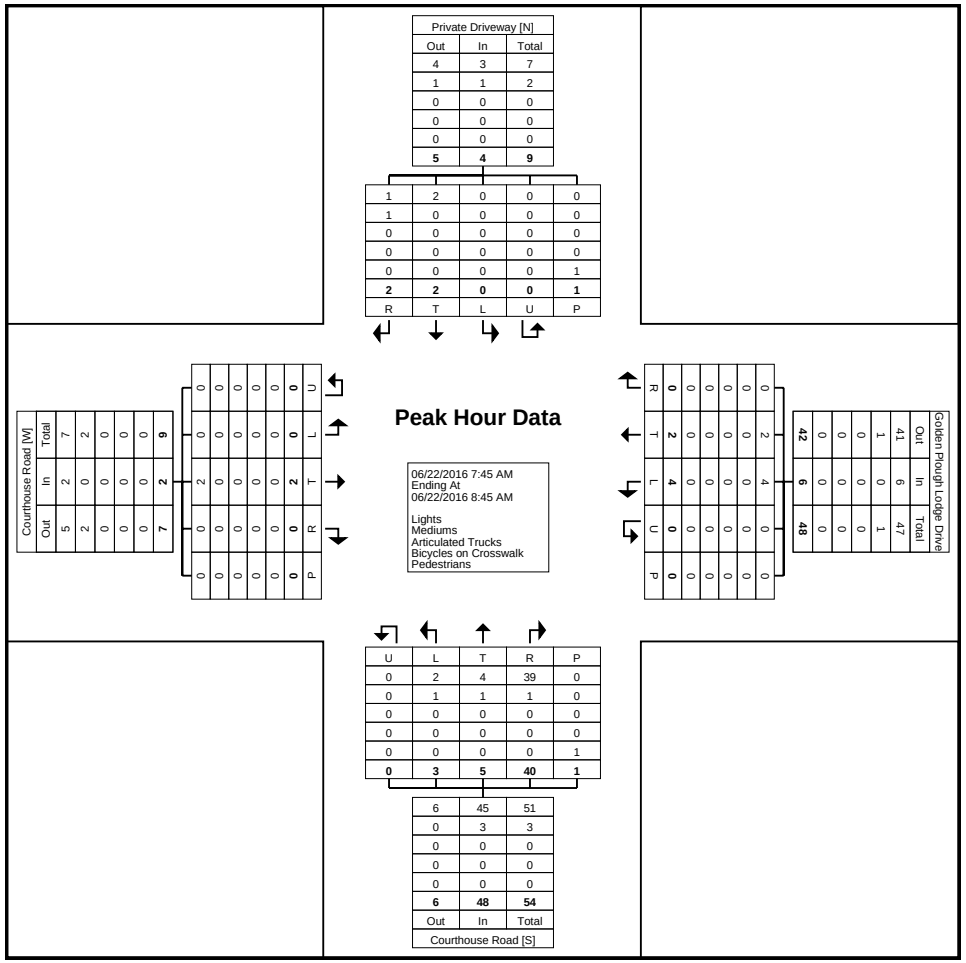
Turning Movement Peak Hour Data (7:45 AM)

Start Time	Courthouse Road Eastbound						Golden Plough Lodge Driveway Westbound						Courthouse Road Northbound						Private Driveway Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:45 AM	0	2	0	0	0	2	1	0	0	0	0	1	0	1	13	0	1	14	0	0	0	0	0	0	17
8:00 AM	0	0	0	0	0	0	2	0	0	0	0	2	1	1	10	0	0	12	0	1	0	0	0	1	15
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	12	0	0	13	0	0	0	0	0	0	13
8:30 AM	0	0	0	0	0	0	1	2	0	0	0	3	1	3	5	0	0	9	0	1	2	0	1	3	15
Total	0	2	0	0	0	2	4	2	0	0	0	6	3	5	40	0	1	48	0	2	2	0	1	4	60
Approach %	0.0	100.0	0.0	0.0	-	-	66.7	33.3	0.0	0.0	-	-	6.3	10.4	83.3	0.0	-	-	0.0	50.0	50.0	0.0	-	-	-
Total %	0.0	3.3	0.0	0.0	-	3.3	6.7	3.3	0.0	0.0	-	10.0	5.0	8.3	66.7	0.0	-	80.0	0.0	3.3	3.3	0.0	-	6.7	-
PHF	0.000	0.250	0.000	0.000	-	0.250	0.500	0.250	0.000	0.000	-	0.500	0.750	0.417	0.769	0.000	-	0.857	0.000	0.500	0.250	0.000	-	0.333	0.882
Lights	0	2	0	0	-	2	4	2	0	0	-	6	2	4	39	0	-	45	0	2	1	0	-	3	56
% Lights	-	100.0	-	-	-	100.0	100.0	100.0	-	-	-	100.0	66.7	80.0	97.5	-	-	93.8	-	100.0	50.0	-	-	75.0	93.3
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	1	1	1	0	-	3	0	0	1	0	-	1	4
% Mediums	-	0.0	-	-	-	0.0	0.0	0.0	-	-	-	0.0	33.3	20.0	2.5	-	-	6.3	-	0.0	50.0	-	-	25.0	6.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	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
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Courthouse Road & Golden Plough Lodge Driveway
Site Code:
Start Date: 06/22/2016
Page No: 5



Turning Movement Peak Hour Data Plot (7:45 AM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Courthouse Road & Golden Plough Lodge Driveway
Site Code:
Start Date: 06/22/2016

Turning Movement Peak Hour Data (4:15 PM)

Start Time	Courthouse Road Eastbound						Golden Plough Lodge Driveway Westbound						Courthouse Road Northbound						Private Driveway Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:15 PM	0	0	0	0	0	0	2	1	0	0	0	3	2	1	5	0	3	8	0	0	0	0	0	0	11
4:30 PM	0	1	0	0	0	1	7	9	0	0	0	16	0	0	3	0	1	3	0	0	0	0	0	0	20
4:45 PM	0	0	0	0	0	0	3	8	1	0	0	12	0	0	0	0	0	0	0	1	0	0	0	1	13
5:00 PM	0	0	0	0	0	0	6	3	0	0	0	9	2	0	1	0	0	3	0	0	1	0	0	1	13
Total	0	1	0	0	0	1	18	21	1	0	0	40	4	1	9	0	4	14	0	1	1	0	0	2	57
Approach %	0.0	100.0	0.0	0.0	-	-	45.0	52.5	2.5	0.0	-	-	28.6	7.1	64.3	0.0	-	-	0.0	50.0	50.0	0.0	-	-	-
Total %	0.0	1.8	0.0	0.0	-	1.8	31.6	36.8	1.8	0.0	-	70.2	7.0	1.8	15.8	0.0	-	24.6	0.0	1.8	1.8	0.0	-	3.5	-
PHF	0.000	0.250	0.000	0.000	-	0.250	0.643	0.583	0.250	0.000	-	0.625	0.500	0.250	0.450	0.000	-	0.438	0.000	0.250	0.250	0.000	-	0.500	0.713
Lights	0	1	0	0	-	1	18	20	1	0	-	39	3	1	9	0	-	13	0	1	1	0	-	2	55
% Lights	-	100.0	-	-	-	100.0	100.0	95.2	100.0	-	-	97.5	75.0	100.0	100.0	-	-	92.9	-	100.0	100.0	-	-	100.0	96.5
Mediums	0	0	0	0	-	0	0	1	0	0	-	1	1	0	0	0	-	1	0	0	0	0	-	0	2
% Mediums	-	0.0	-	-	-	0.0	0.0	4.8	0.0	-	-	2.5	25.0	0.0	0.0	-	-	7.1	-	0.0	0.0	-	-	0.0	3.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	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
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
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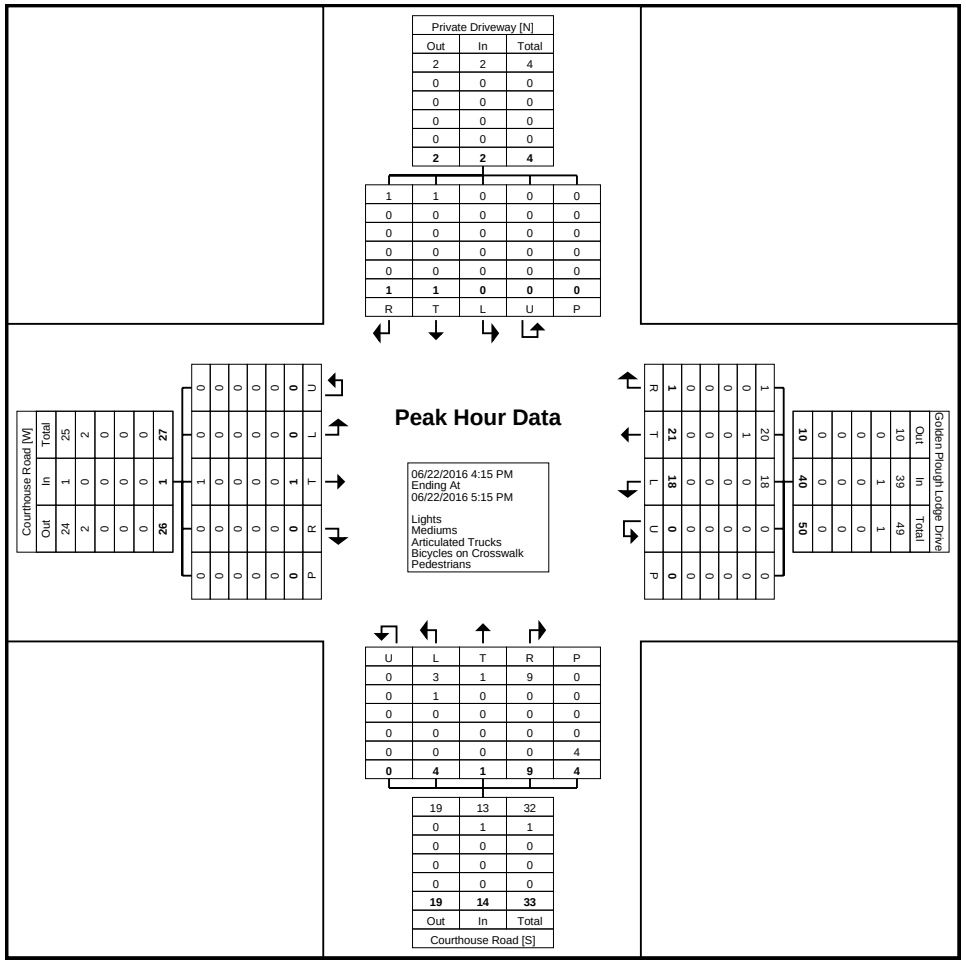
Count Name: Courthouse Road & Golden Plough Lodge Driveway
Site Code:
Start Date: 06/22/2016
Page No: 7



Turning Movement Peak Hour Data Plot (4:15 PM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Depalma Road & Burnham Street
Site Code:
Start Date: 06/22/2016

Turning Movement Data

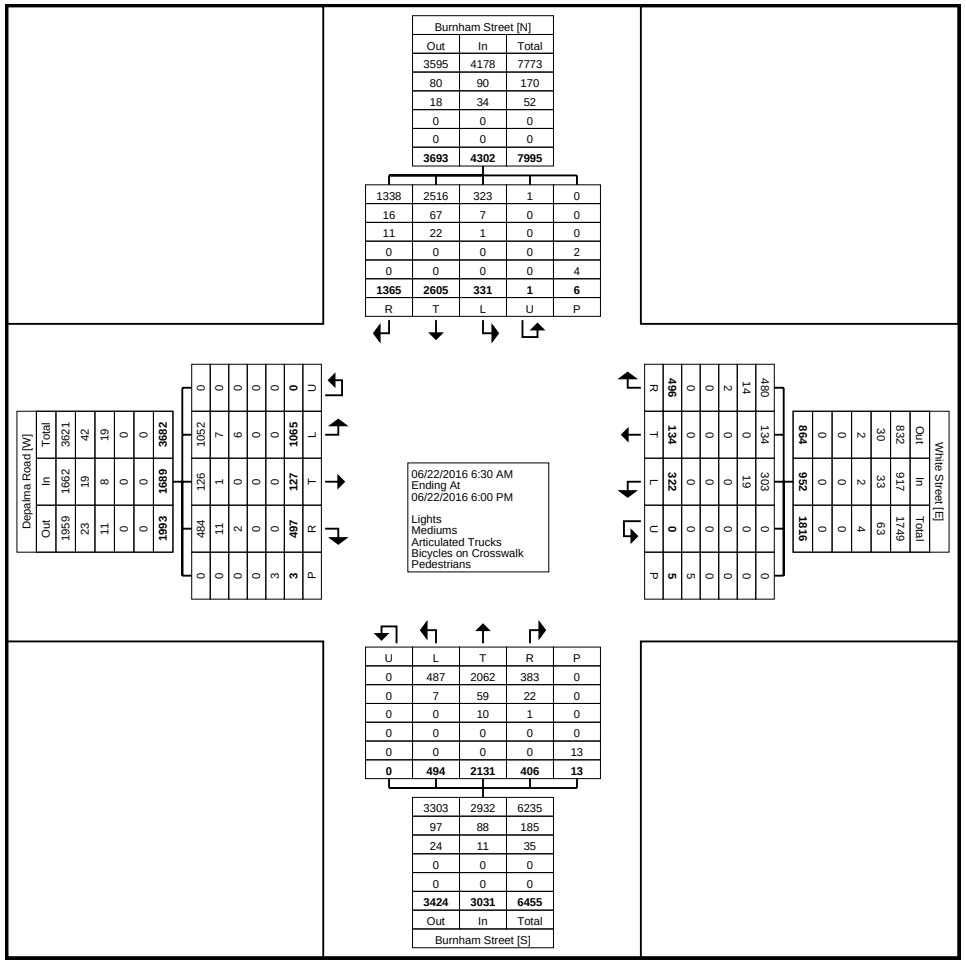
Start Time	Depalma Road Eastbound						White Street Westbound						Burnham Street Northbound						Burnham Street Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
6:30 AM	3	1	2	0	0	6	3	1	10	0	0	14	7	64	5	0	0	76	6	76	22	0	0	104	200
6:45 AM	3	0	4	0	0	7	4	2	7	0	1	13	16	54	15	0	0	85	8	70	54	0	1	132	237
Hourly Total	6	1	6	0	0	13	7	3	17	0	1	27	23	118	20	0	0	161	14	146	76	0	1	236	437
7:00 AM	9	0	5	0	0	14	4	3	12	0	0	19	16	83	7	0	0	106	8	59	47	0	0	114	253
7:15 AM	15	0	6	0	0	21	5	2	10	0	0	17	12	78	10	0	0	100	5	67	36	0	1	108	246
7:30 AM	12	4	10	0	0	26	5	2	13	0	0	20	18	96	16	0	0	130	16	78	53	0	0	147	323
7:45 AM	19	1	16	0	0	36	13	7	21	0	1	41	26	69	14	0	0	109	15	158	88	0	1	261	447
Hourly Total	55	5	37	0	0	97	27	14	56	0	1	97	72	326	47	0	0	445	44	362	224	0	2	630	1269
8:00 AM	19	2	6	0	1	27	8	3	20	0	1	31	18	85	20	0	1	123	13	119	47	0	1	179	360
8:15 AM	18	6	8	0	0	32	7	1	16	0	0	24	24	63	20	0	0	107	20	146	54	0	0	220	383
8:30 AM	31	9	9	0	0	49	19	6	24	0	0	49	17	82	31	0	0	130	15	119	65	0	0	199	427
8:45 AM	30	1	8	0	0	39	11	8	18	0	0	37	22	64	31	0	0	117	17	129	65	0	0	211	404
Hourly Total	98	18	31	0	1	147	45	18	78	0	1	141	81	294	102	0	1	477	65	513	231	0	1	809	1574
9:00 AM	25	6	17	0	0	48	25	12	22	0	0	59	22	56	30	0	0	108	15	99	60	0	0	174	389
9:15 AM	32	8	30	0	2	70	17	19	18	0	0	54	29	62	14	0	3	105	17	86	57	0	0	160	389
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	57	14	47	0	2	118	42	31	40	0	0	113	51	118	44	0	3	213	32	185	117	0	0	334	778
3:00 PM	56	3	36	0	0	95	14	10	20	0	2	44	21	99	21	0	1	141	24	100	60	1	0	185	465
3:15 PM	80	8	31	0	0	119	11	4	18	0	0	33	23	83	18	0	0	124	12	98	50	0	0	160	436
3:30 PM	70	8	39	0	0	117	36	6	30	0	0	72	23	100	28	0	5	151	14	96	53	0	1	163	503
3:45 PM	61	9	32	0	0	102	30	13	34	0	0	77	27	107	18	0	2	152	12	122	53	0	0	187	518
Hourly Total	267	28	138	0	0	433	91	33	102	0	2	226	94	389	85	0	8	568	62	416	216	1	1	695	1922
4:00 PM	80	7	43	0	0	130	19	9	29	0	0	57	25	117	17	0	1	159	11	109	65	0	0	185	531
4:15 PM	69	11	31	0	0	111	14	3	27	0	0	44	25	132	16	0	0	173	15	124	69	0	0	208	536
4:30 PM	87	9	32	0	0	128	11	6	27	0	0	44	18	132	20	0	0	170	13	120	71	0	0	204	546
4:45 PM	69	5	32	0	0	106	17	4	28	0	0	49	15	111	12	0	0	138	19	139	56	0	0	214	507
Hourly Total	305	32	138	0	0	475	61	22	111	0	0	194	83	492	65	0	1	640	58	492	261	0	0	811	2120
5:00 PM	89	8	24	0	0	121	18	7	21	0	0	46	24	122	18	0	0	164	14	117	57	0	0	188	519
5:15 PM	77	11	24	0	0	112	9	3	30	0	0	42	23	93	10	0	0	126	14	142	52	0	0	208	488
5:30 PM	49	3	27	0	0	79	17	2	23	0	0	42	23	98	12	0	0	133	15	119	66	0	0	200	454
5:45 PM	62	7	25	0	0	94	5	1	18	0	0	24	20	81	3	0	0	104	13	113	65	0	1	191	413
Hourly Total	277	29	100	0	0	406	49	13	92	0	0	154	90	394	43	0	0	527	56	491	240	0	1	787	1874
Grand Total	1065	127	497	0	3	1689	322	134	496	0	5	952	494	2131	406	0	13	3031	331	2605	1365	1	6	4302	9974
Approach %	63.1	7.5	29.4	0.0	-	-	33.8	14.1	52.1	0.0	-	-	16.3	70.3	13.4	0.0	-	-	7.7	60.6	31.7	0.0	-	-	-
Total %	10.7	1.3	5.0	0.0	-	16.9	3.2	1.3	5.0	0.0	-	9.5	5.0	21.4	4.1	0.0	-	30.4	3.3	26.1	13.7	0.0	-	43.1	-
Lights	1052	126	484	0	-	1662	303	134	480	0	-	917	487	2062	383	0	-	2932	323	2516	1338	1	-	4178	9689
% Lights	98.8	99.2	97.4	-	-	98.4	94.1	100.0	96.8	-	-	96.3	98.6	96.8	94.3	-	-	96.7	97.6	96.6	98.0	100.0	-	97.1	97.1

Mediums	7	1	11	0	-	19	19	0	14	0	-	33	7	59	22	0	-	88	7	67	16	0	-	90	230
% Mediums	0.7	0.8	2.2	-	-	1.1	5.9	0.0	2.8	-	-	3.5	1.4	2.8	5.4	-	-	2.9	2.1	2.6	1.2	0.0	-	2.1	2.3
Articulated Trucks	6	0	2	0	-	8	0	0	2	0	-	2	0	10	1	0	-	11	1	22	11	0	-	34	55
% Articulated Trucks	0.6	0.0	0.4	-	-	0.5	0.0	0.0	0.4	-	-	0.2	0.0	0.5	0.2	-	-	0.4	0.3	0.8	0.8	0.0	-	0.8	0.6
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	33.3	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	5	-	-	-	-	-	13	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	66.7	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Depalma Road & Burnham Street
Site Code:
Start Date: 06/22/2016
Page No: 3



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Depalma Road & Burnham Street
Site Code:
Start Date: 06/22/2016

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Depalma Road Eastbound						White Street Westbound						Burnham Street Northbound						Burnham Street Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:45 AM	19	1	16	0	0	36	13	7	21	0	1	41	26	69	14	0	0	109	15	158	88	0	1	261	447
8:00 AM	19	2	6	0	1	27	8	3	20	0	1	31	18	85	20	0	1	123	13	119	47	0	1	179	360
8:15 AM	18	6	8	0	0	32	7	1	16	0	0	24	24	63	20	0	0	107	20	146	54	0	0	220	383
8:30 AM	31	9	9	0	0	49	19	6	24	0	0	49	17	82	31	0	0	130	15	119	65	0	0	199	427
Total	87	18	39	0	1	144	47	17	81	0	2	145	85	299	85	0	1	469	63	542	254	0	2	859	1617
Approach %	60.4	12.5	27.1	0.0	-	-	32.4	11.7	55.9	0.0	-	-	18.1	63.8	18.1	0.0	-	-	7.3	63.1	29.6	0.0	-	-	-
Total %	5.4	1.1	2.4	0.0	-	8.9	2.9	1.1	5.0	0.0	-	9.0	5.3	18.5	5.3	0.0	-	29.0	3.9	33.5	15.7	0.0	-	53.1	-
PHF	0.702	0.500	0.609	0.000	-	0.735	0.618	0.607	0.844	0.000	-	0.740	0.817	0.879	0.685	0.000	-	0.902	0.788	0.858	0.722	0.000	-	0.823	0.904
Lights	84	18	36	0	-	138	43	17	80	0	-	140	84	287	83	0	-	454	62	523	248	0	-	833	1565
% Lights	96.6	100.0	92.3	-	-	95.8	91.5	100.0	98.8	-	-	96.6	98.8	96.0	97.6	-	-	96.8	98.4	96.5	97.6	-	-	97.0	96.8
Mediums	1	0	1	0	-	2	4	0	1	0	-	5	1	11	1	0	-	13	1	14	4	0	-	19	39
% Mediums	1.1	0.0	2.6	-	-	1.4	8.5	0.0	1.2	-	-	3.4	1.2	3.7	1.2	-	-	2.8	1.6	2.6	1.6	-	-	2.2	2.4
Articulated Trucks	2	0	2	0	-	4	0	0	0	0	-	0	0	1	1	0	-	2	0	5	2	0	-	7	13
% Articulated Trucks	2.3	0.0	5.1	-	-	2.8	0.0	0.0	0.0	-	-	0.0	0.0	0.3	1.2	-	-	0.4	0.0	0.9	0.8	-	-	0.8	0.8
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

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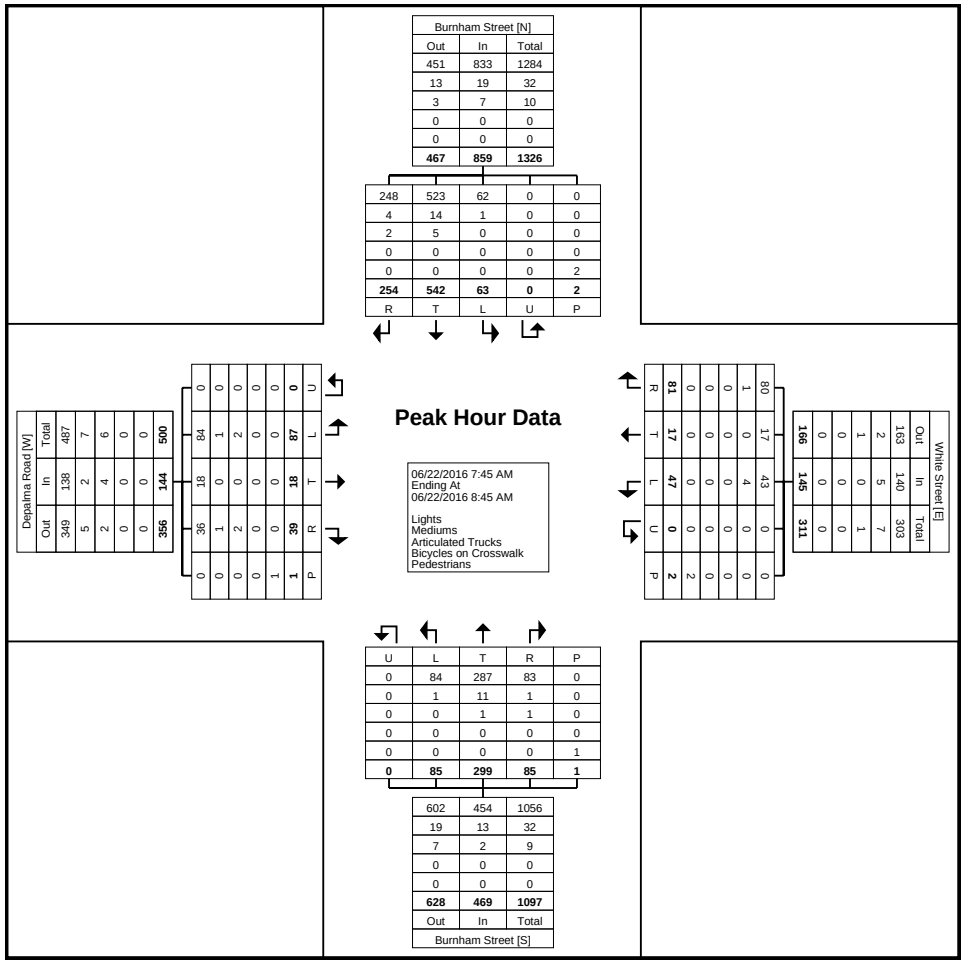
Count Name: Depalma Road & Burnham Street
Site Code:
Start Date: 06/22/2016
Page No: 5



Turning Movement Peak Hour Data Plot (7:45 AM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Depalma Road & Burnham Street
Site Code:
Start Date: 06/22/2016

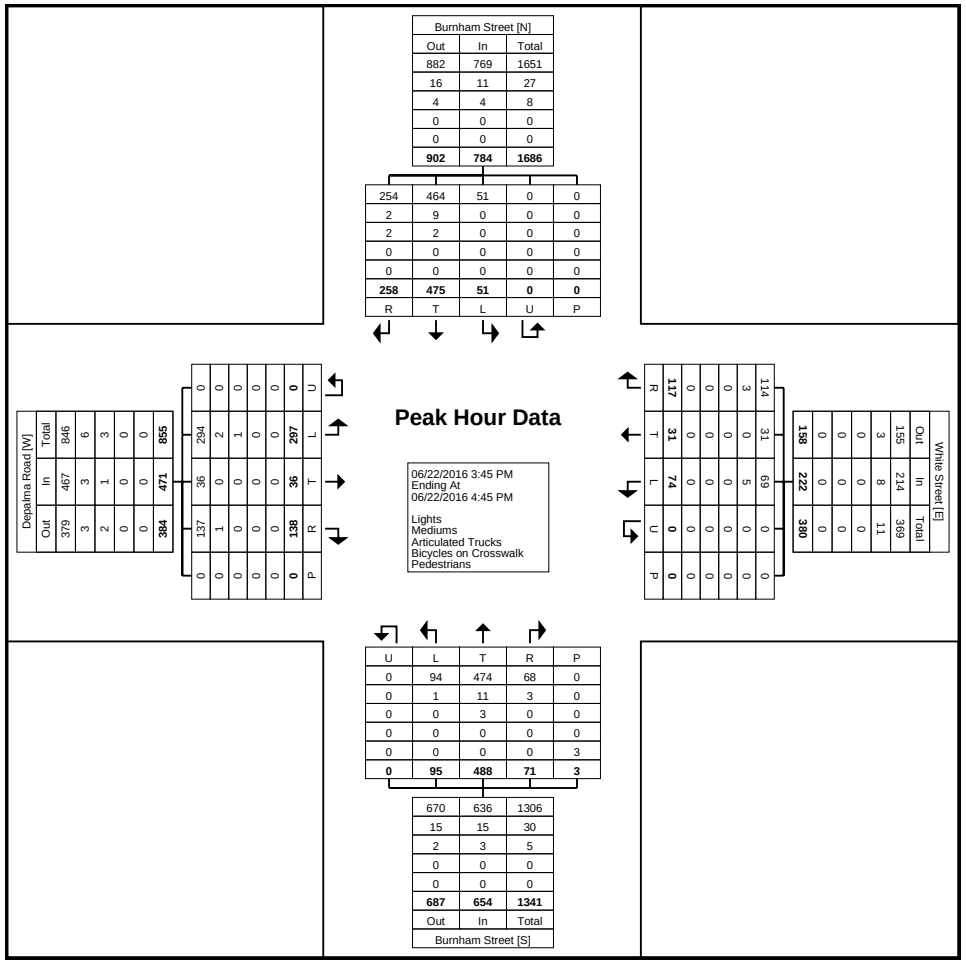
Turning Movement Peak Hour Data (3:45 PM)

Start Time	Depalma Road Eastbound						White Street Westbound						Burnham Street Northbound						Burnham Street Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
3:45 PM	61	9	32	0	0	102	30	13	34	0	0	77	27	107	18	0	2	152	12	122	53	0	0	187	518
4:00 PM	80	7	43	0	0	130	19	9	29	0	0	57	25	117	17	0	1	159	11	109	65	0	0	185	531
4:15 PM	69	11	31	0	0	111	14	3	27	0	0	44	25	132	16	0	0	173	15	124	69	0	0	208	536
4:30 PM	87	9	32	0	0	128	11	6	27	0	0	44	18	132	20	0	0	170	13	120	71	0	0	204	546
Total	297	36	138	0	0	471	74	31	117	0	0	222	95	488	71	0	3	654	51	475	258	0	0	784	2131
Approach %	63.1	7.6	29.3	0.0	-	-	33.3	14.0	52.7	0.0	-	-	14.5	74.6	10.9	0.0	-	-	6.5	60.6	32.9	0.0	-	-	-
Total %	13.9	1.7	6.5	0.0	-	22.1	3.5	1.5	5.5	0.0	-	10.4	4.5	22.9	3.3	0.0	-	30.7	2.4	22.3	12.1	0.0	-	36.8	-
PHF	0.853	0.818	0.802	0.000	-	0.906	0.617	0.596	0.860	0.000	-	0.721	0.880	0.924	0.888	0.000	-	0.945	0.850	0.958	0.908	0.000	-	0.942	0.976
Lights	294	36	137	0	-	467	69	31	114	0	-	214	94	474	68	0	-	636	51	464	254	0	-	769	2086
% Lights	99.0	100.0	99.3	-	-	99.2	93.2	100.0	97.4	-	-	96.4	98.9	97.1	95.8	-	-	97.2	100.0	97.7	98.4	-	-	98.1	97.9
Mediums	2	0	1	0	-	3	5	0	3	0	-	8	1	11	3	0	-	15	0	9	2	0	-	11	37
% Mediums	0.7	0.0	0.7	-	-	0.6	6.8	0.0	2.6	-	-	3.6	1.1	2.3	4.2	-	-	2.3	0.0	1.9	0.8	-	-	1.4	1.7
Articulated Trucks	1	0	0	0	-	1	0	0	0	0	-	0	0	3	0	0	-	3	0	2	2	0	-	4	8
% Articulated Trucks	0.3	0.0	0.0	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.0	0.6	0.0	-	-	0.5	0.0	0.4	0.8	-	-	0.5	0.4
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Depalma Road & Burnham Street
Site Code:
Start Date: 06/22/2016



Turning Movement Peak Hour Data Plot (3:45 PM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Depalma Road & Hospital Entrance
Site Code:
Start Date: 06/22/2016
Page No: 1

Turning Movement Data

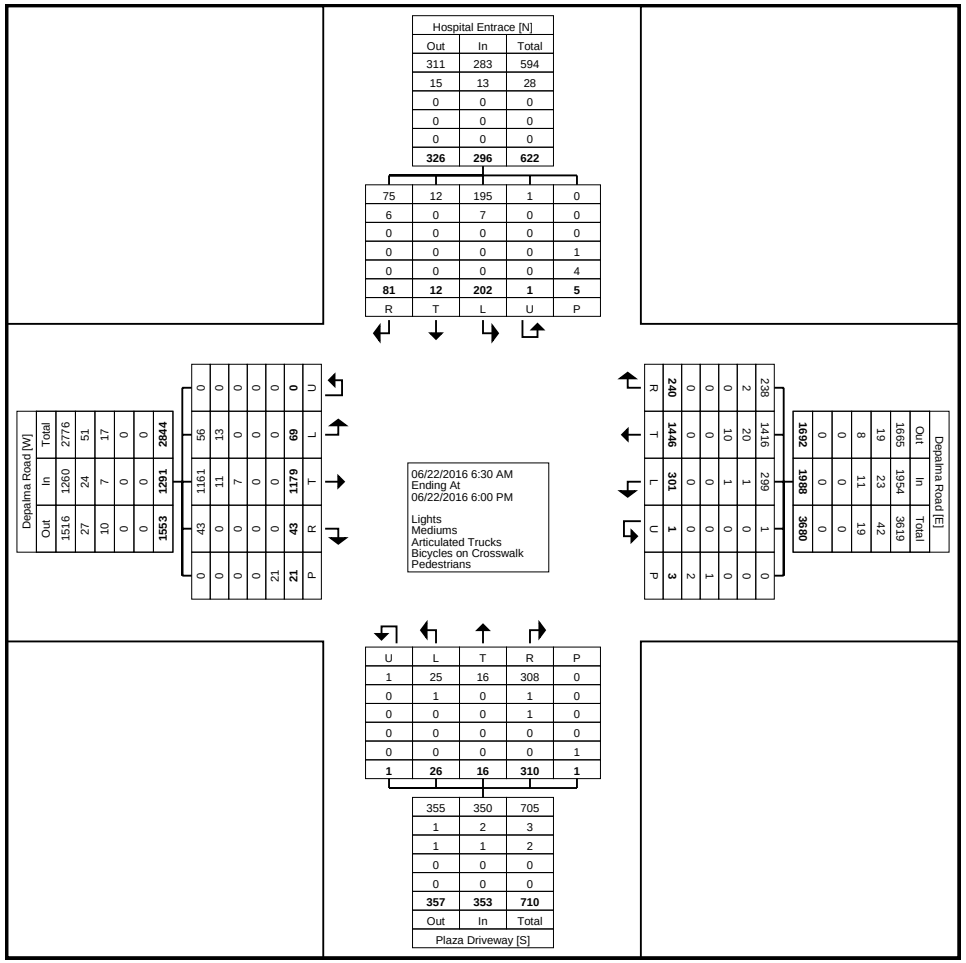
Start Time	Depalma Road Eastbound						Depalma Road Westbound						Plaza Driveway Northbound						Hospital Entrace Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
6:30 AM	1	4	0	0	0	5	2	20	6	0	0	28	0	0	0	0	0	0	3	0	1	0	0	4	37
6:45 AM	2	5	0	0	0	7	4	62	8	0	0	74	0	0	0	0	0	0	2	0	0	0	0	2	83
Hourly Total	3	9	0	0	0	12	6	82	14	0	0	102	0	0	0	0	0	0	5	0	1	0	0	6	120
7:00 AM	3	11	0	0	0	14	4	48	17	0	0	69	0	0	0	0	0	0	4	0	3	0	0	7	90
7:15 AM	4	16	0	0	0	20	5	34	9	0	1	48	0	0	1	0	0	1	4	0	1	1	2	6	75
7:30 AM	6	22	0	0	0	28	2	57	10	0	0	69	0	0	2	0	0	2	4	1	3	0	0	8	107
7:45 AM	5	27	0	0	1	32	15	92	18	0	0	125	0	0	2	0	0	2	8	0	1	0	0	9	168
Hourly Total	18	76	0	0	1	94	26	231	54	0	1	311	0	0	5	0	0	5	20	1	8	1	2	30	440
8:00 AM	4	17	0	0	1	21	6	47	17	0	0	70	0	0	4	1	0	5	5	0	7	0	0	12	108
8:15 AM	1	24	1	0	2	26	7	51	18	0	0	76	0	1	3	0	0	4	5	2	7	0	0	14	120
8:30 AM	4	36	1	0	1	41	10	66	11	0	0	87	0	2	2	0	0	4	7	0	3	0	0	10	142
8:45 AM	2	27	1	0	1	30	7	73	17	0	0	97	0	0	5	0	0	5	6	0	4	0	0	10	142
Hourly Total	11	104	3	0	5	118	30	237	63	0	0	330	0	3	14	1	0	18	23	2	21	0	0	46	512
9:00 AM	4	31	2	0	4	37	7	62	19	0	0	88	1	2	3	0	0	6	10	2	5	0	0	17	148
9:15 AM	6	45	2	0	4	53	17	64	17	0	0	98	1	2	7	0	0	10	15	0	6	0	0	21	182
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	10	76	4	0	8	90	24	126	36	0	0	186	2	4	10	0	0	16	25	2	11	0	0	38	330
3:00 PM	2	65	2	0	2	69	8	75	11	0	0	94	2	1	28	0	0	31	10	3	7	0	0	20	214
3:15 PM	3	84	0	0	1	87	10	63	5	0	0	78	3	0	23	0	1	26	14	0	2	0	0	16	207
3:30 PM	2	78	2	0	1	82	18	57	10	0	2	85	4	1	22	0	0	27	13	0	5	0	0	18	212
3:45 PM	2	85	2	0	1	89	14	76	11	0	0	101	2	0	14	0	0	16	15	1	6	0	1	22	228
Hourly Total	9	312	6	0	5	327	50	271	37	0	2	358	11	2	87	0	1	100	52	4	20	0	1	76	861
4:00 PM	3	92	6	0	0	101	21	73	4	0	0	98	4	1	25	0	0	30	15	0	4	0	0	19	248
4:15 PM	4	78	2	0	0	84	26	69	2	0	0	97	2	4	14	0	0	20	14	1	7	0	0	22	223
4:30 PM	4	84	3	0	0	91	19	71	2	0	0	92	2	1	28	0	0	31	12	1	3	0	0	16	230
4:45 PM	2	87	4	0	0	93	17	52	4	0	0	73	2	1	20	0	0	23	11	0	2	0	0	13	202
Hourly Total	13	341	15	0	0	369	83	265	12	0	0	360	10	7	87	0	0	104	52	2	16	0	0	70	903
5:00 PM	2	81	5	0	0	88	24	61	3	1	0	89	1	0	30	0	0	31	9	0	0	0	0	9	217
5:15 PM	0	69	3	0	1	72	12	58	8	0	0	78	1	0	25	0	0	26	6	0	3	0	2	9	185
5:30 PM	2	53	2	0	1	57	29	53	8	0	0	90	0	0	24	0	0	24	6	0	0	0	0	6	177
5:45 PM	1	58	5	0	0	64	17	62	5	0	0	84	1	0	28	0	0	29	4	1	1	0	0	6	183
Hourly Total	5	261	15	0	2	281	82	234	24	1	0	341	3	0	107	0	0	110	25	1	4	0	2	30	762
Grand Total	69	1179	43	0	21	1291	301	1446	240	1	3	1988	26	16	310	1	1	353	202	12	81	1	5	296	3928
Approach %	5.3	91.3	3.3	0.0	-	-	15.1	72.7	12.1	0.1	-	-	7.4	4.5	87.8	0.3	-	-	68.2	4.1	27.4	0.3	-	-	-
Total %	1.8	30.0	1.1	0.0	-	32.9	7.7	36.8	6.1	0.0	-	50.6	0.7	0.4	7.9	0.0	-	9.0	5.1	0.3	2.1	0.0	-	7.5	-
Lights	56	1161	43	0	-	1260	299	1416	238	1	-	1954	25	16	308	1	-	350	195	12	75	1	-	283	3847
% Lights	81.2	98.5	100.0	-	-	97.6	99.3	97.9	99.2	100.0	-	98.3	96.2	100.0	99.4	100.0	-	99.2	96.5	100.0	92.6	100.0	-	95.6	97.9

Mediums	13	11	0	0	-	24	1	20	2	0	-	23	1	0	1	0	-	2	7	0	6	0	-	13	62
% Mediums	18.8	0.9	0.0	-	-	1.9	0.3	1.4	0.8	0.0	-	1.2	3.8	0.0	0.3	0.0	-	0.6	3.5	0.0	7.4	0.0	-	4.4	1.6
Articulated Trucks	0	7	0	0	-	7	1	10	0	0	-	11	0	0	1	0	-	1	0	0	0	0	-	0	19
% Articulated Trucks	0.0	0.6	0.0	-	-	0.5	0.3	0.7	0.0	0.0	-	0.6	0.0	0.0	0.3	0.0	-	0.3	0.0	0.0	0.0	0.0	-	0.0	0.5
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	33.3	-	-	-	-	-	0.0	-	-	-	-	-	20.0	-	-
Pedestrians	-	-	-	-	21	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	66.7	-	-	-	-	-	100.0	-	-	-	-	-	80.0	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Depalma Road & Hospital Entrance
Site Code:
Start Date: 06/22/2016
Page No: 3



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Depalma Road & Hospital Entrance
Site Code:
Start Date: 06/22/2016

Turning Movement Peak Hour Data (8:30 AM)

Start Time	Depalma Road Eastbound						Depalma Road Westbound						Plaza Driveway Northbound						Hospital Entrace Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
8:30 AM	4	36	1	0	1	41	10	66	11	0	0	87	0	2	2	0	0	4	7	0	3	0	0	10	142
8:45 AM	2	27	1	0	1	30	7	73	17	0	0	97	0	0	5	0	0	5	6	0	4	0	0	10	142
9:00 AM	4	31	2	0	4	37	7	62	19	0	0	88	1	2	3	0	0	6	10	2	5	0	0	17	148
9:15 AM	6	45	2	0	4	53	17	64	17	0	0	98	1	2	7	0	0	10	15	0	6	0	0	21	182
Total	16	139	6	0	10	161	41	265	64	0	0	370	2	6	17	0	0	25	38	2	18	0	0	58	614
Approach %	9.9	86.3	3.7	0.0	-	-	11.1	71.6	17.3	0.0	-	-	8.0	24.0	68.0	0.0	-	-	65.5	3.4	31.0	0.0	-	-	-
Total %	2.6	22.6	1.0	0.0	-	26.2	6.7	43.2	10.4	0.0	-	60.3	0.3	1.0	2.8	0.0	-	4.1	6.2	0.3	2.9	0.0	-	9.4	-
PHF	0.667	0.772	0.750	0.000	-	0.759	0.603	0.908	0.842	0.000	-	0.944	0.500	0.750	0.607	0.000	-	0.625	0.633	0.250	0.750	0.000	-	0.690	0.843
Lights	13	130	6	0	-	149	41	253	64	0	-	358	2	6	16	0	-	24	36	2	17	0	-	55	586
% Lights	81.3	93.5	100.0	-	-	92.5	100.0	95.5	100.0	-	-	96.8	100.0	100.0	94.1	-	-	96.0	94.7	100.0	94.4	-	-	94.8	95.4
Mediums	3	8	0	0	-	11	0	7	0	0	-	7	0	0	0	0	-	0	2	0	1	0	-	3	21
% Mediums	18.8	5.8	0.0	-	-	6.8	0.0	2.6	0.0	-	-	1.9	0.0	0.0	0.0	-	-	0.0	5.3	0.0	5.6	-	-	5.2	3.4
Articulated Trucks	0	1	0	0	-	1	0	5	0	0	-	5	0	0	1	0	-	1	0	0	0	0	-	0	7
% Articulated Trucks	0.0	0.7	0.0	-	-	0.6	0.0	1.9	0.0	-	-	1.4	0.0	0.0	5.9	-	-	4.0	0.0	0.0	0.0	-	-	0.0	1.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	10	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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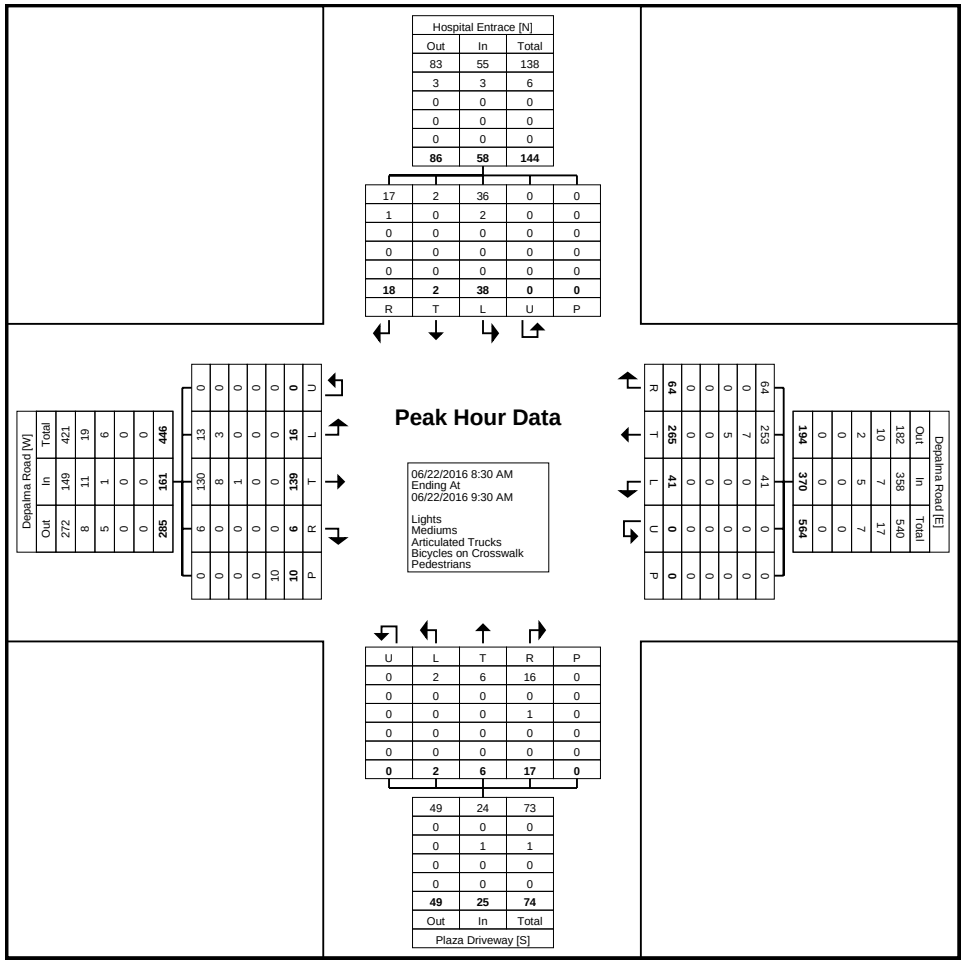
Count Name: Depalma Road & Hospital Entrance
Site Code:
Start Date: 06/22/2016
Page No: 5



Turning Movement Peak Hour Data Plot (8:30 AM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Depalma Road & Hospital Entrance
Site Code:
Start Date: 06/22/2016

Turning Movement Peak Hour Data (3:45 PM)

Start Time	Depalma Road Eastbound						Depalma Road Westbound						Plaza Driveway Northbound						Hospital Entrace Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
3:45 PM	2	85	2	0	1	89	14	76	11	0	0	101	2	0	14	0	0	16	15	1	6	0	1	22	228
4:00 PM	3	92	6	0	0	101	21	73	4	0	0	98	4	1	25	0	0	30	15	0	4	0	0	19	248
4:15 PM	4	78	2	0	0	84	26	69	2	0	0	97	2	4	14	0	0	20	14	1	7	0	0	22	223
4:30 PM	4	84	3	0	0	91	19	71	2	0	0	92	2	1	28	0	0	31	12	1	3	0	0	16	230
Total	13	339	13	0	1	365	80	289	19	0	0	388	10	6	81	0	0	97	56	3	20	0	1	79	929
Approach %	3.6	92.9	3.6	0.0	-	-	20.6	74.5	4.9	0.0	-	-	10.3	6.2	83.5	0.0	-	-	70.9	3.8	25.3	0.0	-	-	-
Total %	1.4	36.5	1.4	0.0	-	39.3	8.6	31.1	2.0	0.0	-	41.8	1.1	0.6	8.7	0.0	-	10.4	6.0	0.3	2.2	0.0	-	8.5	-
PHF	0.813	0.921	0.542	0.000	-	0.903	0.769	0.951	0.432	0.000	-	0.960	0.625	0.375	0.723	0.000	-	0.782	0.933	0.750	0.714	0.000	-	0.898	0.936
Lights	11	337	13	0	-	361	80	284	19	0	-	383	10	6	80	0	-	96	55	3	19	0	-	77	917
% Lights	84.6	99.4	100.0	-	-	98.9	100.0	98.3	100.0	-	-	98.7	100.0	100.0	98.8	-	-	99.0	98.2	100.0	95.0	-	-	97.5	98.7
Mediums	2	1	0	0	-	3	0	3	0	0	-	3	0	0	1	0	-	1	1	0	1	0	-	2	9
% Mediums	15.4	0.3	0.0	-	-	0.8	0.0	1.0	0.0	-	-	0.8	0.0	0.0	1.2	-	-	1.0	1.8	0.0	5.0	-	-	2.5	1.0
Articulated Trucks	0	1	0	0	-	1	0	2	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	3
% Articulated Trucks	0.0	0.3	0.0	-	-	0.3	0.0	0.7	0.0	-	-	0.5	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.3
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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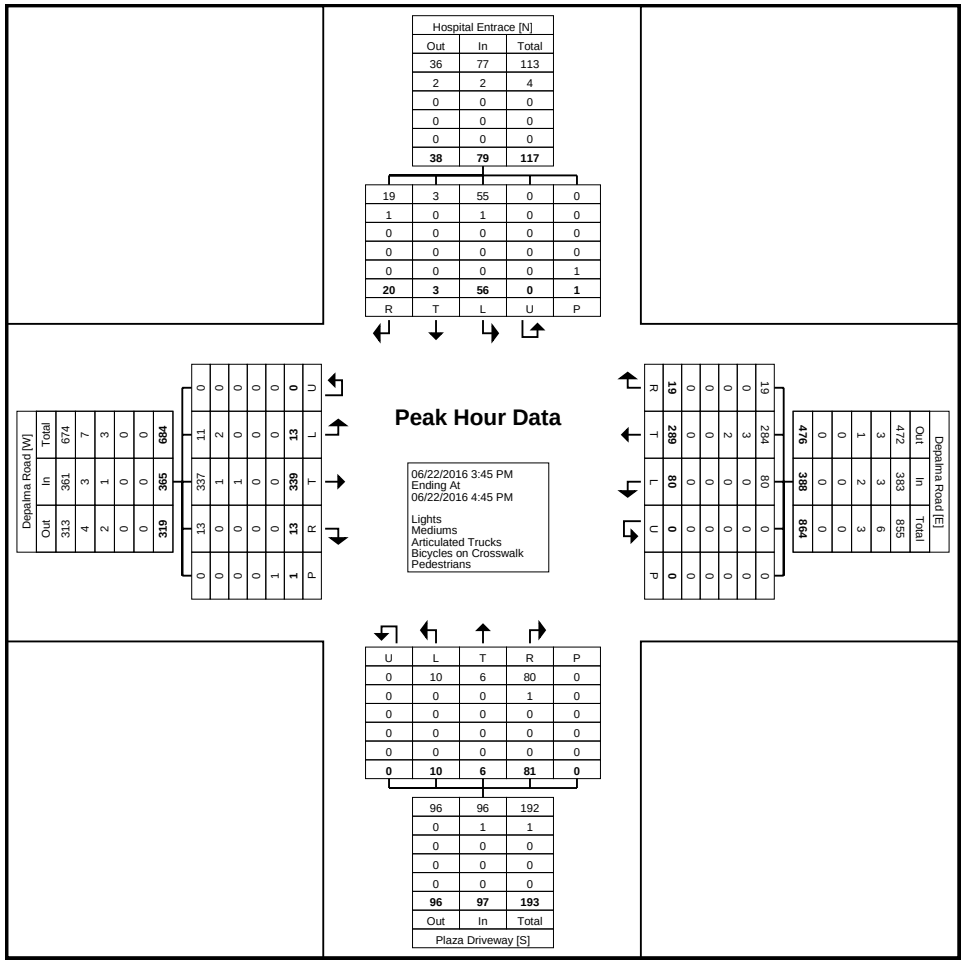

Turning Movement Peak Hour Data Plot (3:45 PM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Depalma Road & Strathy Road
Site Code:
Start Date: 06/22/2016

Turning Movement Data

Start Time	Depalma Road Eastbound						Depalma Road Westbound						Strathy Road Northbound						Strathy Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
6:30 AM	0	1	0	0	0	1	7	8	4	0	0	19	1	1	3	0	0	5	0	1	0	0	1	1	26
6:45 AM	0	1	0	0	0	1	9	32	13	0	0	54	1	1	5	0	0	7	0	2	1	0	7	3	65
Hourly Total	0	2	0	0	0	2	16	40	17	0	0	73	2	2	8	0	0	12	0	3	1	0	8	4	91
7:00 AM	0	9	1	0	1	10	14	18	15	0	1	47	1	2	7	0	0	10	1	2	0	0	5	3	70
7:15 AM	1	5	3	0	3	9	12	14	17	0	0	43	5	4	11	0	0	20	1	0	0	0	4	1	73
7:30 AM	0	9	5	0	2	14	22	19	15	0	2	56	2	0	10	0	1	12	7	2	0	0	2	9	91
7:45 AM	0	14	2	0	7	16	28	23	34	0	0	85	9	2	12	0	0	23	5	3	1	0	11	9	133
Hourly Total	1	37	11	0	13	49	76	74	81	0	3	231	17	8	40	0	1	65	14	7	1	0	22	22	367
8:00 AM	0	10	2	0	4	12	17	24	18	0	2	59	8	5	11	0	0	24	1	2	2	0	5	5	100
8:15 AM	1	13	6	0	1	20	17	33	10	0	0	60	5	2	9	0	1	16	2	2	0	0	3	4	100
8:30 AM	1	23	7	0	1	31	35	22	8	0	0	65	6	1	14	0	0	21	2	2	0	0	1	4	121
8:45 AM	0	18	8	0	0	26	38	25	13	0	0	76	7	0	14	0	0	21	1	2	0	0	3	3	126
Hourly Total	2	64	23	0	6	89	107	104	49	0	2	260	26	8	48	0	1	82	6	8	2	0	12	16	447
9:00 AM	0	21	9	0	1	30	33	30	4	0	0	67	12	2	15	0	0	29	1	2	0	0	1	3	129
9:15 AM	0	26	10	0	3	36	26	39	3	0	1	68	19	2	18	0	1	39	2	0	0	0	4	2	145
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	47	19	0	4	66	59	69	7	0	1	135	31	4	33	0	1	68	3	2	0	0	5	5	274
3:00 PM	0	42	17	0	3	59	40	38	6	0	0	84	22	5	23	0	0	50	3	5	0	0	3	8	201
3:15 PM	0	46	19	0	7	65	32	33	4	0	0	69	21	4	33	0	2	58	4	4	1	0	6	9	201
3:30 PM	0	52	20	0	3	72	29	30	2	0	1	61	14	0	31	1	0	46	8	10	3	0	1	21	200
3:45 PM	0	47	15	0	5	62	36	43	2	0	0	81	16	3	23	0	1	42	11	9	0	0	5	20	205
Hourly Total	0	187	71	0	18	258	137	144	14	0	1	295	73	12	110	1	3	196	26	28	4	0	15	58	807
4:00 PM	0	69	19	0	4	88	32	42	3	0	0	77	27	2	16	0	0	45	21	4	5	0	8	30	240
4:15 PM	0	49	17	0	1	66	32	43	3	0	1	78	15	2	28	0	2	45	3	3	0	0	3	6	195
4:30 PM	0	49	16	0	0	65	41	35	0	0	1	76	12	0	38	0	1	50	9	0	3	0	0	12	203
4:45 PM	0	59	14	0	2	73	29	34	3	0	0	66	7	0	24	0	0	31	3	3	2	0	2	8	178
Hourly Total	0	226	66	0	7	292	134	154	9	0	2	297	61	4	106	0	3	171	36	10	10	0	13	56	816
5:00 PM	0	46	16	0	0	62	26	33	2	0	0	61	13	1	33	1	0	48	5	4	1	0	2	10	181
5:15 PM	0	45	12	0	1	57	28	35	3	0	0	66	11	1	32	0	0	44	5	4	1	0	3	10	177
5:30 PM	0	39	10	0	1	49	31	29	2	0	0	62	14	2	17	0	0	33	2	4	2	0	4	8	152
5:45 PM	0	37	12	0	1	49	34	32	0	0	0	66	14	1	26	0	0	41	3	2	1	0	2	6	162
Hourly Total	0	167	50	0	3	217	119	129	7	0	0	255	52	5	108	1	0	166	15	14	5	0	11	34	672
Grand Total	3	730	240	0	51	973	648	714	184	0	9	1546	262	43	453	2	9	760	100	72	23	0	86	195	3474
Approach %	0.3	75.0	24.7	0.0	-	-	41.9	46.2	11.9	0.0	-	-	34.5	5.7	59.6	0.3	-	-	51.3	36.9	11.8	0.0	-	-	-
Total %	0.1	21.0	6.9	0.0	-	28.0	18.7	20.6	5.3	0.0	-	44.5	7.5	1.2	13.0	0.1	-	21.9	2.9	2.1	0.7	0.0	-	5.6	-
Lights	3	720	239	0	-	962	639	690	181	0	-	1510	259	41	436	2	-	738	96	68	23	0	-	187	3397
% Lights	100.0	98.6	99.6	-	-	98.9	98.6	96.6	98.4	-	-	97.7	98.9	95.3	96.2	100.0	-	97.1	96.0	94.4	100.0	-	-	95.9	97.8

Mediums	0	6	1	0	-	7	9	15	1	0	-	25	2	2	15	0	-	19	3	3	0	0	-	6	57
% Mediums	0.0	0.8	0.4	-	-	0.7	1.4	2.1	0.5	-	-	1.6	0.8	4.7	3.3	0.0	-	2.5	3.0	4.2	0.0	-	-	3.1	1.6
Articulated Trucks	0	4	0	0	-	4	0	9	2	0	-	11	1	0	2	0	-	3	1	1	0	0	-	2	20
% Articulated Trucks	0.0	0.5	0.0	-	-	0.4	0.0	1.3	1.1	-	-	0.7	0.4	0.0	0.4	0.0	-	0.4	1.0	1.4	0.0	-	-	1.0	0.6
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	2.0	-	-	-	-	-	0.0	-	-	-	-	-	11.1	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	50	-	-	-	-	-	9	-	-	-	-	-	8	-	-	-	-	-	86	-	-
% Pedestrians	-	-	-	-	98.0	-	-	-	-	-	100.0	-	-	-	-	-	88.9	-	-	-	-	-	100.0	-	-

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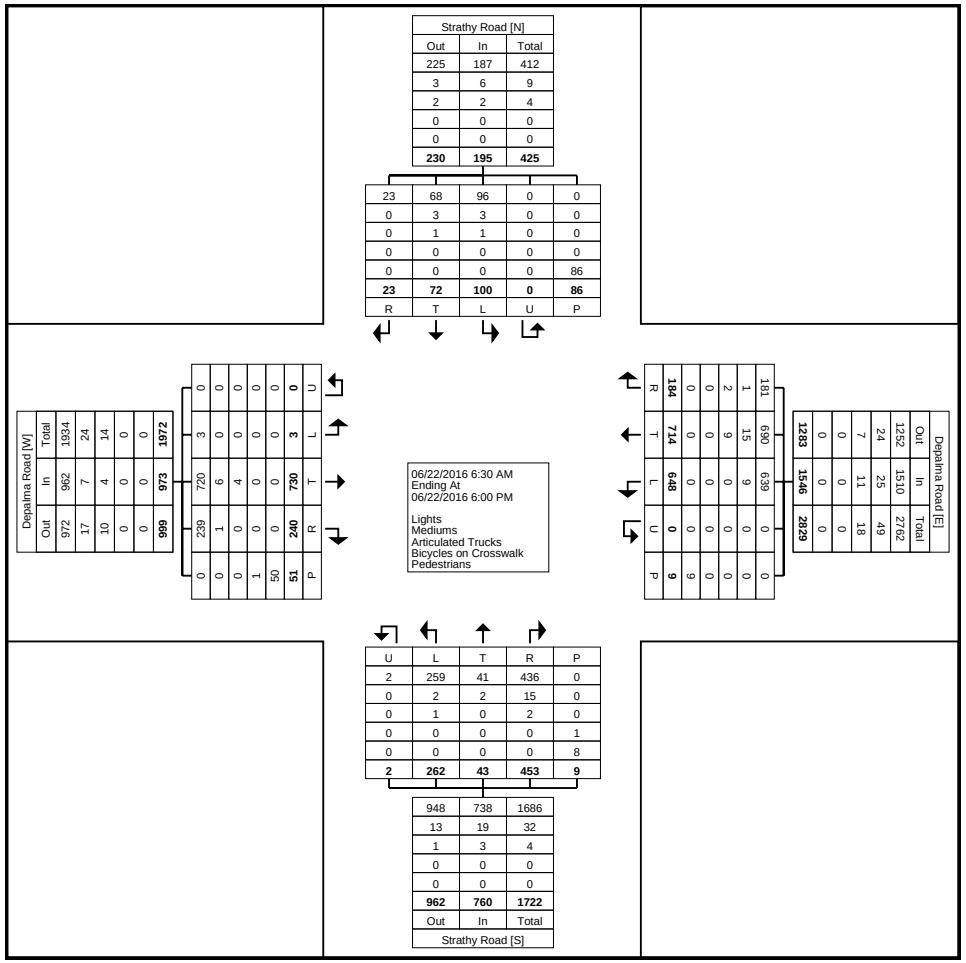

Turning Movement Data Plot

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Turning Movement Peak Hour Data (8:30 AM)

Start Time	Depalma Road Eastbound						Depalma Road Westbound						Strathy Road Northbound						Strathy Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
8:30 AM	1	23	7	0	1	31	35	22	8	0	0	65	6	1	14	0	0	21	2	2	0	0	1	4	121
8:45 AM	0	18	8	0	0	26	38	25	13	0	0	76	7	0	14	0	0	21	1	2	0	0	3	3	126
9:00 AM	0	21	9	0	1	30	33	30	4	0	0	67	12	2	15	0	0	29	1	2	0	0	1	3	129
9:15 AM	0	26	10	0	3	36	26	39	3	0	1	68	19	2	18	0	1	39	2	0	0	0	4	2	145
Total	1	88	34	0	5	123	132	116	28	0	1	276	44	5	61	0	1	110	6	6	0	0	9	12	521
Approach %	0.8	71.5	27.6	0.0	-	-	47.8	42.0	10.1	0.0	-	-	40.0	4.5	55.5	0.0	-	-	50.0	50.0	0.0	0.0	-	-	-
Total %	0.2	16.9	6.5	0.0	-	23.6	25.3	22.3	5.4	0.0	-	53.0	8.4	1.0	11.7	0.0	-	21.1	1.2	1.2	0.0	0.0	-	2.3	-
PHF	0.250	0.846	0.850	0.000	-	0.854	0.868	0.744	0.538	0.000	-	0.908	0.579	0.625	0.847	0.000	-	0.705	0.750	0.750	0.000	0.000	-	0.750	0.898
Lights	1	84	34	0	-	119	130	108	26	0	-	264	44	5	57	0	-	106	3	5	0	0	-	8	497
% Lights	100.0	95.5	100.0	-	-	96.7	98.5	93.1	92.9	-	-	95.7	100.0	100.0	93.4	-	-	96.4	50.0	83.3	-	-	-	66.7	95.4
Mediums	0	4	0	0	-	4	2	4	1	0	-	7	0	0	3	0	-	3	3	0	0	0	-	3	17
% Mediums	0.0	4.5	0.0	-	-	3.3	1.5	3.4	3.6	-	-	2.5	0.0	0.0	4.9	-	-	2.7	50.0	0.0	-	-	-	25.0	3.3
Articulated Trucks	0	0	0	0	-	0	0	4	1	0	-	5	0	0	1	0	-	1	0	1	0	0	-	1	7
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	3.4	3.6	-	-	1.8	0.0	0.0	1.6	-	-	0.9	0.0	16.7	-	-	-	8.3	1.3
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	5	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	9	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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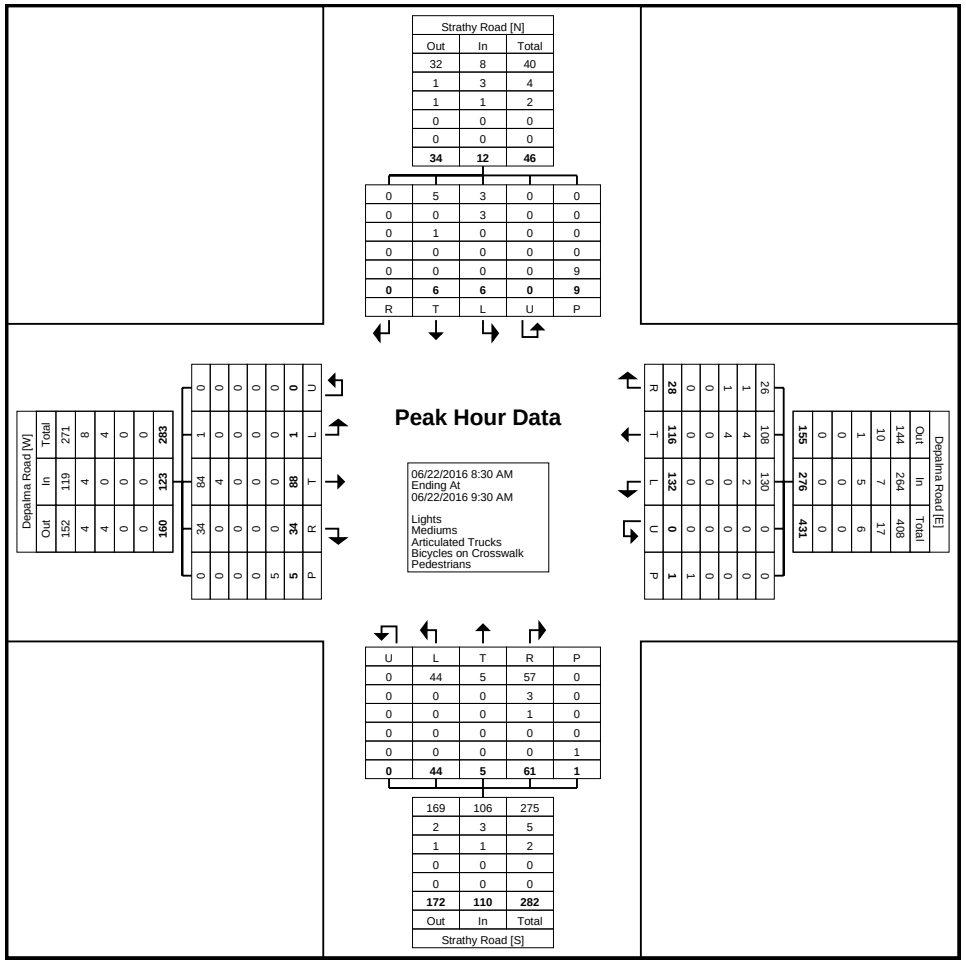
Count Name: Depalma Road & Strathy Road
Site Code:
Start Date: 06/22/2016


Strathy Road [N]
Out In Total
32 8 40
1 3 4
1 1 2
0 0 0
0 0 0
34 12 46
0 5 3 0 0
0 0 3 0 0
0 1 0 0 0
0 0 0 0 0
0 0 0 0 9
0 6 6 0 9
R T L U P
Peak Hour Data
06/22/2016 8:30 AM
Ending At
06/22/2016 9:30 AM
Lights
Mediums
Articulated Trucks
Bicycles on Crosswalk
Pedestrians
Depalma Road [W]
Out In Total
152 119 271
4 4 8
4 0 4
0 0 0
0 0 0
0 0 0
160 123 283
0 0 0 0 0 0 0 0 U
1 0 0 0 0 0 0 1 L
84 4 0 0 0 0 0 88 T
34 0 0 0 0 0 0 34 R
0 0 0 0 5 5 P
Depalma Road [E]
In Out Total
155 264 408
0 144 0
0 7 0
0 17 0
1 10 1
5 6 5
276 431 155
0 0 0
0 0 0
0 0 0
0 0 0
0 0 0
0 0 0
0 0 0
1 1 1
0 0 0
0 0 0
0 0 0
0 0 0
0 0 0
0 0 0
0 0 0

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Depalma Road & Strathy Road
Site Code:
Start Date: 06/22/2016

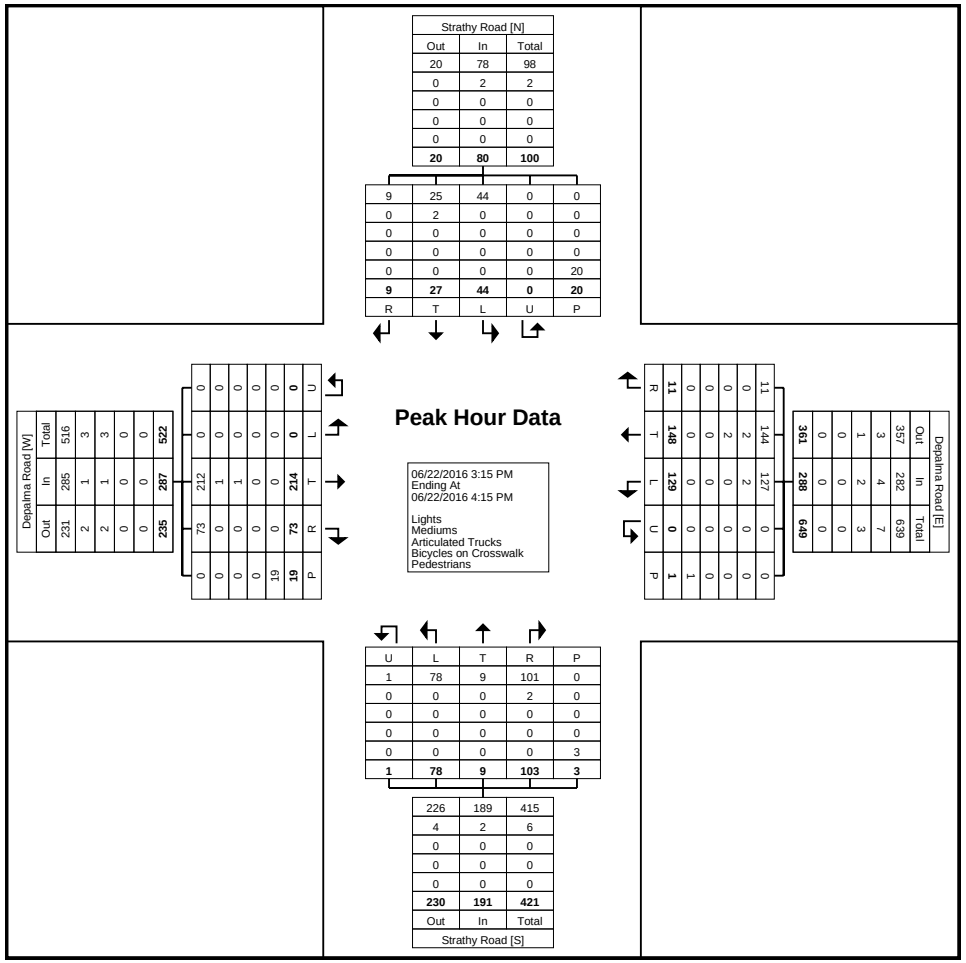
Turning Movement Peak Hour Data (3:15 PM)

Start Time	Depalma Road Eastbound						Depalma Road Westbound						Strathy Road Northbound						Strathy Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
3:15 PM	0	46	19	0	7	65	32	33	4	0	0	69	21	4	33	0	2	58	4	4	1	0	6	9	201
3:30 PM	0	52	20	0	3	72	29	30	2	0	1	61	14	0	31	1	0	46	8	10	3	0	1	21	200
3:45 PM	0	47	15	0	5	62	36	43	2	0	0	81	16	3	23	0	1	42	11	9	0	0	5	20	205
4:00 PM	0	69	19	0	4	88	32	42	3	0	0	77	27	2	16	0	0	45	21	4	5	0	8	30	240
Total	0	214	73	0	19	287	129	148	11	0	1	288	78	9	103	1	3	191	44	27	9	0	20	80	846
Approach %	0.0	74.6	25.4	0.0	-	-	44.8	51.4	3.8	0.0	-	-	40.8	4.7	53.9	0.5	-	-	55.0	33.8	11.3	0.0	-	-	-
Total %	0.0	25.3	8.6	0.0	-	33.9	15.2	17.5	1.3	0.0	-	34.0	9.2	1.1	12.2	0.1	-	22.6	5.2	3.2	1.1	0.0	-	9.5	-
PHF	0.000	0.775	0.913	0.000	-	0.815	0.896	0.860	0.688	0.000	-	0.889	0.722	0.563	0.780	0.250	-	0.823	0.524	0.675	0.450	0.000	-	0.667	0.881
Lights	0	212	73	0	-	285	127	144	11	0	-	282	78	9	101	1	-	189	44	25	9	0	-	78	834
% Lights	-	99.1	100.0	-	-	99.3	98.4	97.3	100.0	-	-	97.9	100.0	100.0	98.1	100.0	-	99.0	100.0	92.6	100.0	-	-	97.5	98.6
Mediums	0	1	0	0	-	1	2	2	0	0	-	4	0	0	2	0	-	2	0	2	0	0	-	2	9
% Mediums	-	0.5	0.0	-	-	0.3	1.6	1.4	0.0	-	-	1.4	0.0	0.0	1.9	0.0	-	1.0	0.0	7.4	0.0	-	-	2.5	1.1
Articulated Trucks	0	1	0	0	-	1	0	2	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	3
% Articulated Trucks	-	0.5	0.0	-	-	0.3	0.0	1.4	0.0	-	-	0.7	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.4
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	19	-	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	20	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Depalma Road & Strathy Road
Site Code:
Start Date: 06/22/2016



Turning Movement Peak Hour Data Plot (3:15 PM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin St & William St/Burnham St
Site Code:
Start Date: 02/04/2016

Turning Movement Data

Start Time	Burnham Street Southbound						Elgin Street Westbound						William Street Northbound						Elgin Street Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
6:30 AM	7	20	16	0	0	43	16	29	8	0	0	53	10	46	11	0	0	67	10	28	16	0	0	54	217
6:45 AM	8	28	21	0	0	57	23	21	6	0	0	50	9	45	11	0	1	65	9	25	13	0	0	47	219
Hourly Total	15	48	37	0	0	100	39	50	14	0	0	103	19	91	22	0	1	132	19	53	29	0	0	101	436
7:00 AM	9	32	15	0	1	56	27	54	13	0	1	94	14	49	20	0	0	83	7	15	12	0	0	34	267
7:15 AM	12	39	16	0	0	67	21	44	13	0	0	78	8	52	16	0	1	76	11	26	14	0	0	51	272
7:30 AM	16	58	25	0	0	99	37	46	12	0	0	95	15	60	29	0	0	104	14	46	18	0	0	78	376
7:45 AM	39	87	45	0	0	171	42	56	24	0	0	122	29	63	47	0	0	139	28	37	17	0	1	82	514
Hourly Total	76	216	101	0	1	393	127	200	62	0	1	389	66	224	112	0	1	402	60	124	61	0	1	245	1429
8:00 AM	44	65	35	0	1	144	33	57	29	0	0	119	24	54	22	0	0	100	27	43	17	0	1	87	450
8:15 AM	25	85	27	0	0	137	47	60	31	0	1	138	19	61	31	0	0	111	29	41	11	0	0	81	467
8:30 AM	30	77	26	0	0	133	22	58	35	0	2	115	38	62	38	0	2	138	38	44	23	0	0	105	491
8:45 AM	26	66	34	0	3	126	54	88	30	0	4	172	29	63	40	0	6	132	39	77	20	0	2	136	566
Hourly Total	125	293	122	0	4	540	156	263	125	0	7	544	110	240	131	0	8	481	133	205	71	0	3	409	1974
9:00 AM	34	69	34	0	2	137	57	77	27	0	0	161	23	51	38	0	1	112	34	47	16	0	1	97	507
9:15 AM	31	56	48	0	0	135	36	82	18	0	0	136	19	53	44	0	0	116	38	69	21	0	0	128	515
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	65	125	82	0	2	272	93	159	45	0	0	297	42	104	82	0	1	228	72	116	37	0	1	225	1022
11:00 AM	21	54	39	0	0	114	23	78	16	0	0	117	21	61	70	0	2	152	72	75	20	0	1	167	550
11:15 AM	25	39	35	0	0	99	38	102	29	0	0	169	24	50	50	0	0	124	46	84	39	0	0	169	561
11:30 AM	28	57	36	0	0	121	29	139	18	0	4	186	11	64	65	0	3	140	58	111	31	0	0	200	647
11:45 AM	25	60	46	0	1	131	41	110	28	0	5	179	20	50	70	0	3	140	67	94	33	0	0	194	644
Hourly Total	99	210	156	0	1	465	131	429	91	0	9	651	76	225	255	0	8	556	243	364	123	0	1	730	2402
12:00 PM	28	50	44	0	3	122	27	109	35	0	0	171	27	75	80	0	1	182	77	85	34	0	1	196	671
12:15 PM	32	59	45	0	3	136	25	103	22	0	0	150	22	59	71	0	0	152	73	96	23	0	1	192	630
12:30 PM	24	60	43	0	2	127	30	125	30	0	0	185	34	60	60	0	2	154	59	86	31	0	1	176	642
12:45 PM	37	62	35	0	2	134	41	112	19	0	0	172	21	62	91	0	3	174	78	97	34	0	4	209	689
Hourly Total	121	231	167	0	10	519	123	449	106	0	0	678	104	256	302	0	6	662	287	364	122	0	7	773	2632
1:00 PM	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
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	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
3:00 PM	34	66	39	0	1	139	48	147	31	0	2	226	23	61	63	0	1	147	76	130	31	0	1	237	749
3:15 PM	31	59	58	0	3	148	45	108	30	0	0	183	28	75	52	0	2	155	70	109	43	0	3	222	708
3:30 PM	29	64	52	0	1	145	38	114	14	0	1	166	19	80	63	0	4	162	64	121	41	0	2	226	699
3:45 PM	32	85	73	0	7	190	29	99	20	0	3	148	28	82	50	0	3	160	73	110	51	0	7	234	732
Hourly Total	126	274	222	0	12	622	160	468	95	0	6	723	98	298	228	0	10	624	283	470	166	0	13	919	2888
4:00 PM	42	77	60	0	1	179	38	97	31	0	0	166	28	88	64	0	0	180	75	114	49	0	1	238	763
4:15 PM	44	91	79	0	0	214	25	100	15	0	0	140	26	48	64	0	0	138	69	109	35	0	0	213	705

4:30 PM	33	90	44	0	2	167	36	115	23	0	0	174	18	59	50	0	2	127	63	118	44	0	1	225	693
4:45 PM	38	92	52	0	1	182	39	96	22	0	0	157	26	70	52	0	0	148	62	114	38	0	1	214	701
Hourly Total	157	350	235	0	4	742	138	408	91	0	0	637	98	265	230	0	2	593	269	455	166	0	3	890	2862
5:00 PM	13	85	47	0	0	145	35	118	24	0	0	177	25	81	74	0	0	180	69	129	50	0	1	248	750
5:15 PM	28	71	55	0	0	154	22	89	31	0	0	142	25	58	57	0	2	140	59	118	32	0	0	209	645
5:30 PM	28	70	40	0	0	138	29	88	21	0	0	138	35	50	48	0	0	133	49	97	35	0	0	181	590
5:45 PM	17	52	47	0	0	116	22	78	25	0	0	125	28	53	46	0	2	127	59	78	28	0	0	165	533
Hourly Total	86	278	189	0	0	553	108	373	101	0	0	582	113	242	225	0	4	580	236	422	145	0	1	803	2518
Grand Total	870	2025	1311	0	34	4206	1075	2799	730	0	23	4604	726	1945	1587	0	41	4258	1602	2573	920	0	30	5095	18163
Approach %	20.7	48.1	31.2	0.0	-	-	23.3	60.8	15.9	0.0	-	-	17.1	45.7	37.3	0.0	-	-	31.4	50.5	18.1	0.0	-	-	-
Total %	4.8	11.1	7.2	0.0	-	23.2	5.9	15.4	4.0	0.0	-	25.3	4.0	10.7	8.7	0.0	-	23.4	8.8	14.2	5.1	0.0	-	28.1	-
Lights	846	1973	1258	0	-	4077	1037	2733	710	0	-	4480	700	1897	1563	0	-	4160	1575	2526	886	0	-	4987	17704
% Lights	97.2	97.4	96.0	-	-	96.9	96.5	97.6	97.3	-	-	97.3	96.4	97.5	98.5	-	-	97.7	98.3	98.2	96.3	-	-	97.9	97.5
Mediums	19	38	42	0	-	99	30	54	15	0	-	99	22	40	24	0	-	86	27	38	24	0	-	89	373
% Mediums	2.2	1.9	3.2	-	-	2.4	2.8	1.9	2.1	-	-	2.2	3.0	2.1	1.5	-	-	2.0	1.7	1.5	2.6	-	-	1.7	2.1
Articulated Trucks	5	14	11	0	-	30	8	12	5	0	-	25	4	8	0	0	-	12	0	9	10	0	-	19	86
% Articulated Trucks	0.6	0.7	0.8	-	-	0.7	0.7	0.4	0.7	-	-	0.5	0.6	0.4	0.0	-	-	0.3	0.0	0.3	1.1	-	-	0.4	0.5
Pedestrians	-	-	-	-	34	-	-	-	-	-	23	-	-	-	-	-	41	-	-	-	-	-	30	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

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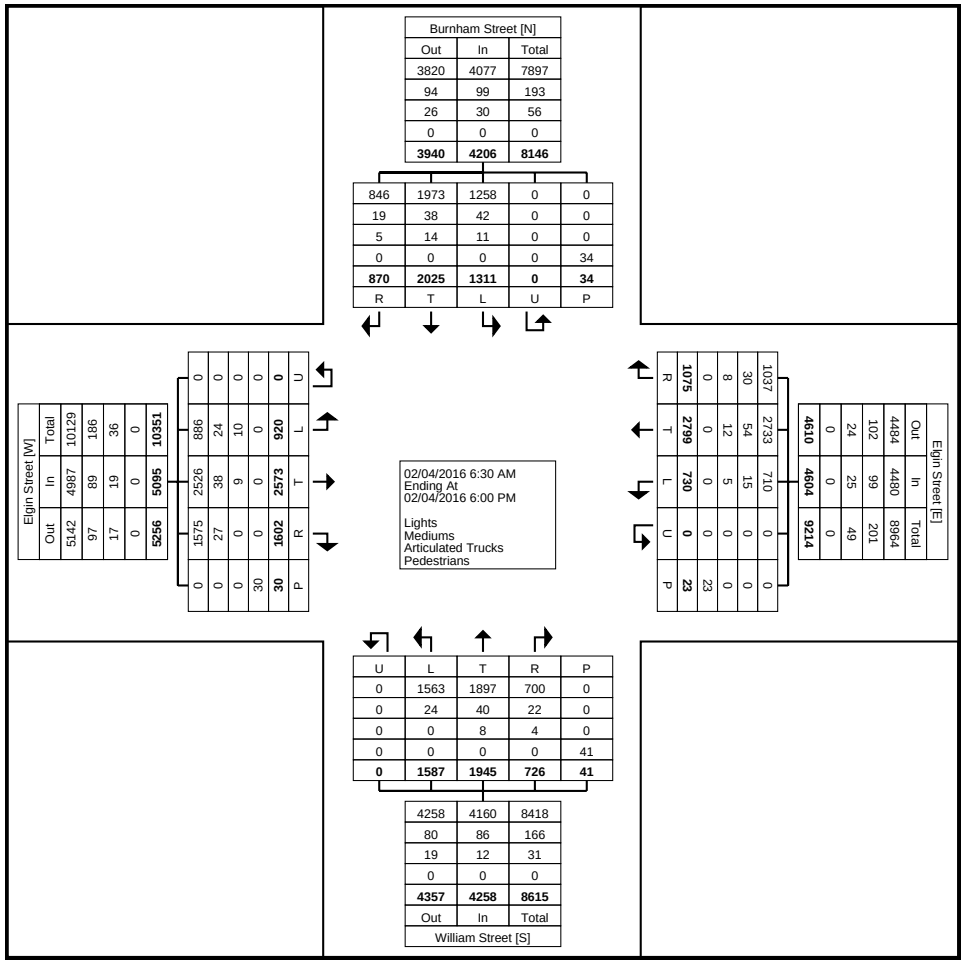
Count Name: Elgin St & William St/Burnham St
Site Code:
Start Date: 02/04/2016
Page No: 3



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin St & William St/Burnham St
Site Code:
Start Date: 02/04/2016

Turning Movement Peak Hour Data (8:30 AM)

Start Time	Burnham Street Southbound						Elgin Street Westbound						William Street Northbound						Elgin Street Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
8:30 AM	30	77	26	0	0	133	22	58	35	0	2	115	38	62	38	0	2	138	38	44	23	0	0	105	491
8:45 AM	26	66	34	0	3	126	54	88	30	0	4	172	29	63	40	0	6	132	39	77	20	0	2	136	566
9:00 AM	34	69	34	0	2	137	57	77	27	0	0	161	23	51	38	0	1	112	34	47	16	0	1	97	507
9:15 AM	31	56	48	0	0	135	36	82	18	0	0	136	19	53	44	0	0	116	38	69	21	0	0	128	515
Total	121	268	142	0	5	531	169	305	110	0	6	584	109	229	160	0	9	498	149	237	80	0	3	466	2079
Approach %	22.8	50.5	26.7	0.0	-	-	28.9	52.2	18.8	0.0	-	-	21.9	46.0	32.1	0.0	-	-	32.0	50.9	17.2	0.0	-	-	-
Total %	5.8	12.9	6.8	0.0	-	25.5	8.1	14.7	5.3	0.0	-	28.1	5.2	11.0	7.7	0.0	-	24.0	7.2	11.4	3.8	0.0	-	22.4	-
PHF	0.890	0.870	0.740	0.000	-	0.969	0.741	0.866	0.786	0.000	-	0.849	0.717	0.909	0.909	0.000	-	0.902	0.955	0.769	0.870	0.000	-	0.857	0.918
Lights	113	261	129	0	-	503	158	291	106	0	-	555	102	220	154	0	-	476	148	229	77	0	-	454	1988
% Lights	93.4	97.4	90.8	-	-	94.7	93.5	95.4	96.4	-	-	95.0	93.6	96.1	96.3	-	-	95.6	99.3	96.6	96.3	-	-	97.4	95.6
Mediums	5	4	13	0	-	22	10	11	3	0	-	24	5	7	6	0	-	18	1	6	2	0	-	9	73
% Mediums	4.1	1.5	9.2	-	-	4.1	5.9	3.6	2.7	-	-	4.1	4.6	3.1	3.8	-	-	3.6	0.7	2.5	2.5	-	-	1.9	3.5
Articulated Trucks	3	3	0	0	-	6	1	3	1	0	-	5	2	2	0	0	-	4	0	2	1	0	-	3	18
% Articulated Trucks	2.5	1.1	0.0	-	-	1.1	0.6	1.0	0.9	-	-	0.9	1.8	0.9	0.0	-	-	0.8	0.0	0.8	1.3	-	-	0.6	0.9
Pedestrians	-	-	-	-	5	-	-	-	-	-	6	-	-	-	-	-	9	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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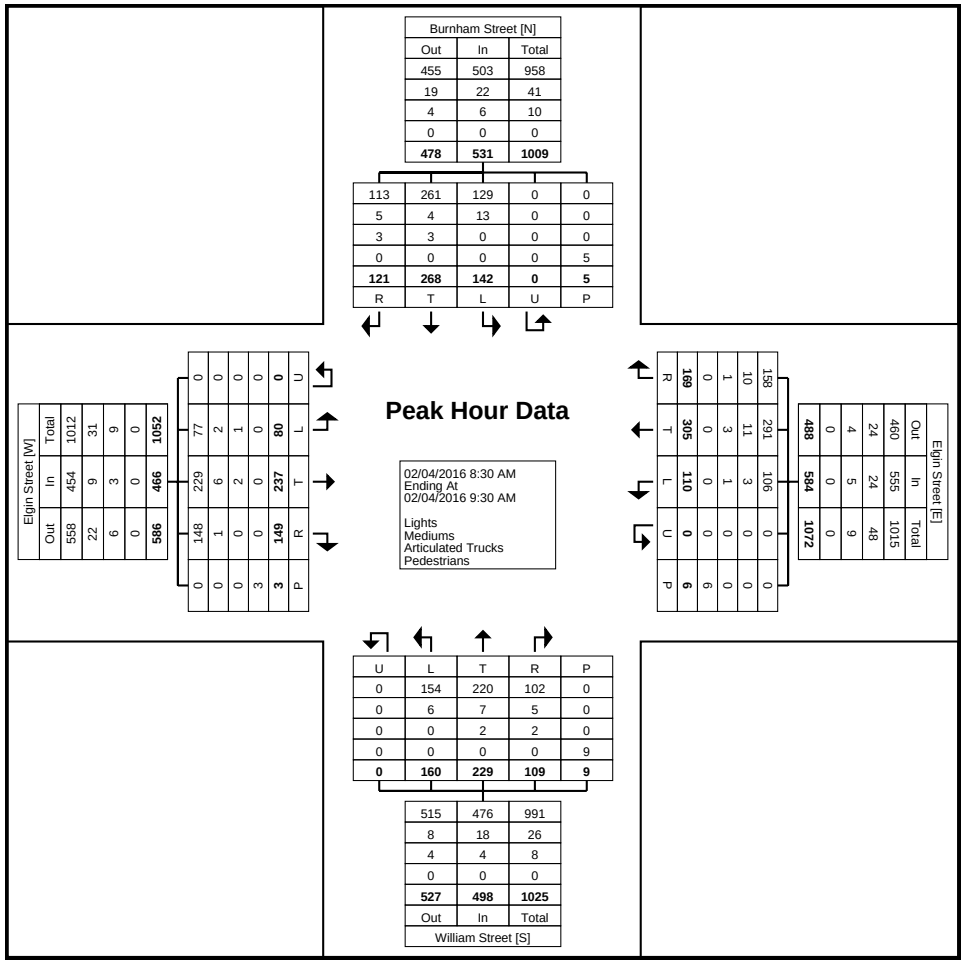
Count Name: Elgin St & William St/Burnham St
Site Code:
Start Date: 02/04/2016



Turning Movement Peak Hour Data Plot (8:30 AM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin St & William St/Burnham St
Site Code:
Start Date: 02/04/2016

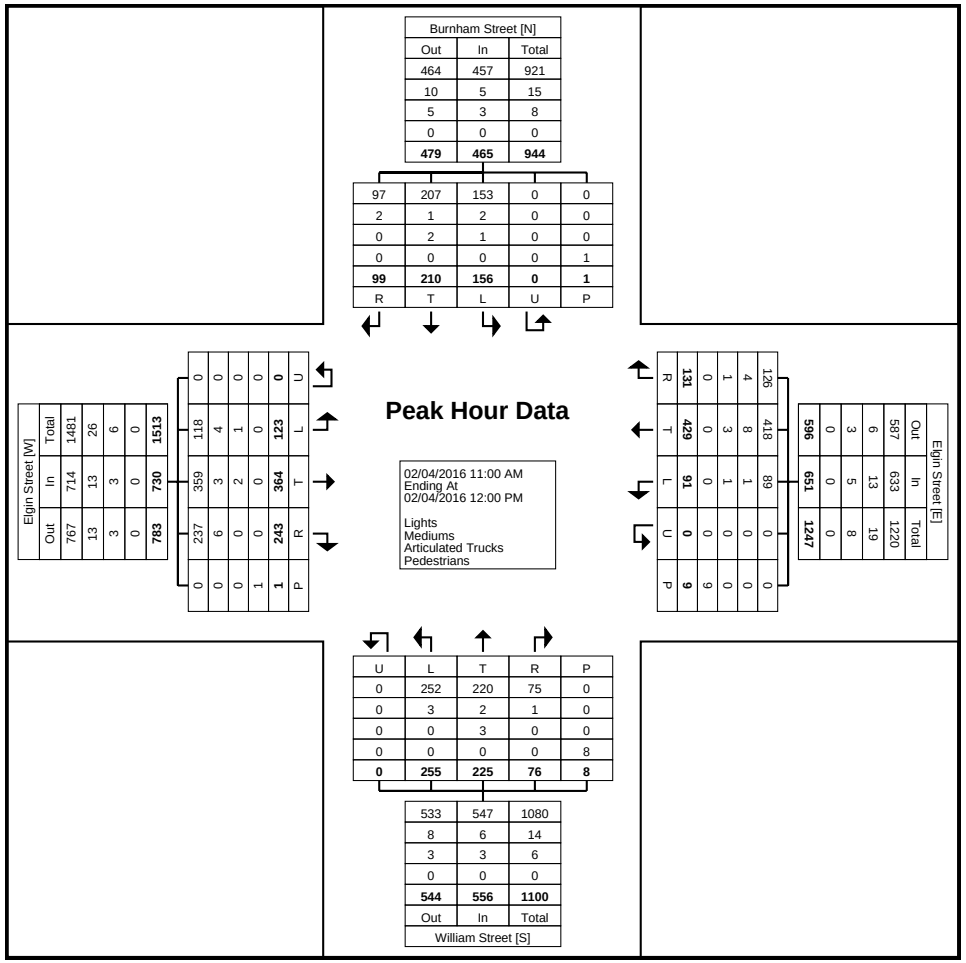
Turning Movement Peak Hour Data (11:00 AM)

Start Time	Burnham Street Southbound						Elgin Street Westbound						William Street Northbound						Elgin Street Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
11:00 AM	21	54	39	0	0	114	23	78	16	0	0	117	21	61	70	0	2	152	72	75	20	0	1	167	550
11:15 AM	25	39	35	0	0	99	38	102	29	0	0	169	24	50	50	0	0	124	46	84	39	0	0	169	561
11:30 AM	28	57	36	0	0	121	29	139	18	0	4	186	11	64	65	0	3	140	58	111	31	0	0	200	647
11:45 AM	25	60	46	0	1	131	41	110	28	0	5	179	20	50	70	0	3	140	67	94	33	0	0	194	644
Total	99	210	156	0	1	465	131	429	91	0	9	651	76	225	255	0	8	556	243	364	123	0	1	730	2402
Approach %	21.3	45.2	33.5	0.0	-	-	20.1	65.9	14.0	0.0	-	-	13.7	40.5	45.9	0.0	-	-	33.3	49.9	16.8	0.0	-	-	-
Total %	4.1	8.7	6.5	0.0	-	19.4	5.5	17.9	3.8	0.0	-	27.1	3.2	9.4	10.6	0.0	-	23.1	10.1	15.2	5.1	0.0	-	30.4	-
PHF	0.884	0.875	0.848	0.000	-	0.887	0.799	0.772	0.784	0.000	-	0.875	0.792	0.879	0.911	0.000	-	0.914	0.844	0.820	0.788	0.000	-	0.913	0.928
Lights	97	207	153	0	-	457	126	418	89	0	-	633	75	220	252	0	-	547	237	359	118	0	-	714	2351
% Lights	98.0	98.6	98.1	-	-	98.3	96.2	97.4	97.8	-	-	97.2	98.7	97.8	98.8	-	-	98.4	97.5	98.6	95.9	-	-	97.8	97.9
Mediums	2	1	2	0	-	5	4	8	1	0	-	13	1	2	3	0	-	6	6	3	4	0	-	13	37
% Mediums	2.0	0.5	1.3	-	-	1.1	3.1	1.9	1.1	-	-	2.0	1.3	0.9	1.2	-	-	1.1	2.5	0.8	3.3	-	-	1.8	1.5
Articulated Trucks	0	2	1	0	-	3	1	3	1	0	-	5	0	3	0	0	-	3	0	2	1	0	-	3	14
% Articulated Trucks	0.0	1.0	0.6	-	-	0.6	0.8	0.7	1.1	-	-	0.8	0.0	1.3	0.0	-	-	0.5	0.0	0.5	0.8	-	-	0.4	0.6
Pedestrians	-	-	-	-	1	-	-	-	-	-	9	-	-	-	-	-	8	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin St & William St/Burnham St
Site Code:
Start Date: 02/04/2016
Page No: 7



Turning Movement Peak Hour Data Plot (11:00 AM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin St & William St/Burnham St
Site Code:
Start Date: 02/04/2016

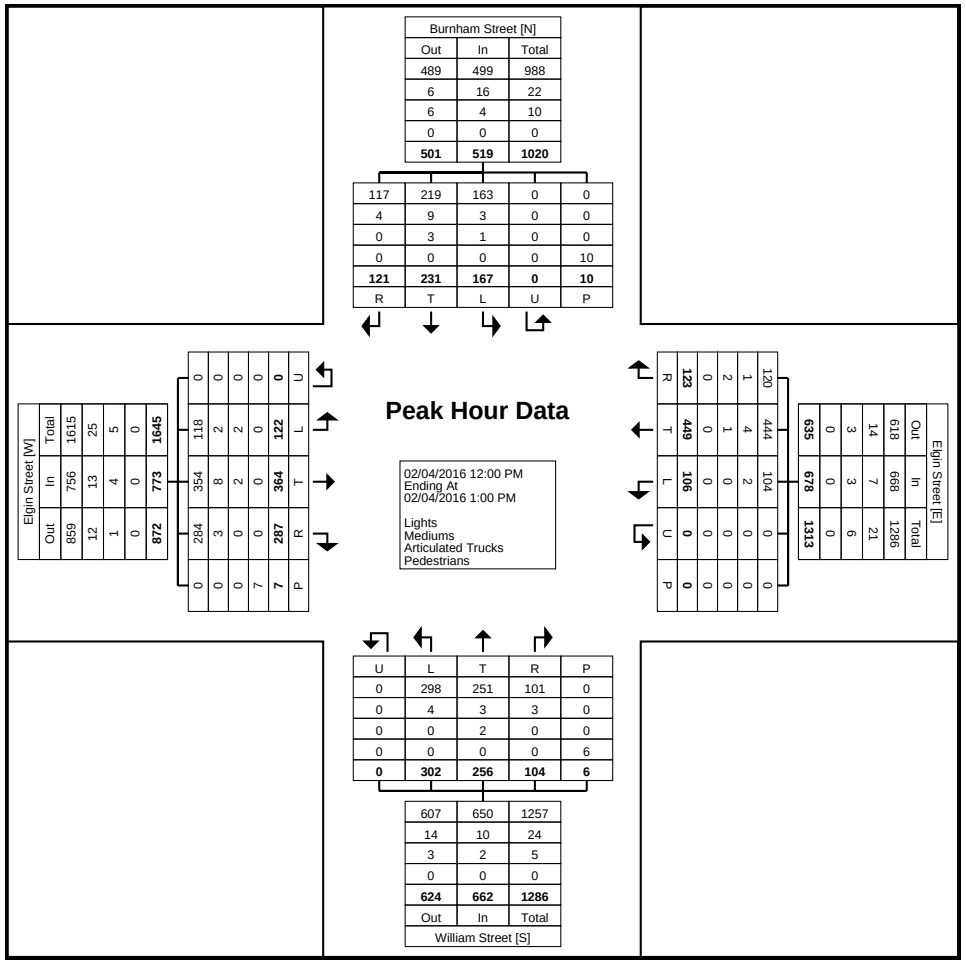
Turning Movement Peak Hour Data (12:00 PM)

Start Time	Burnham Street Southbound						Elgin Street Westbound						William Street Northbound						Elgin Street Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
12:00 PM	28	50	44	0	3	122	27	109	35	0	0	171	27	75	80	0	1	182	77	85	34	0	1	196	671
12:15 PM	32	59	45	0	3	136	25	103	22	0	0	150	22	59	71	0	0	152	73	96	23	0	1	192	630
12:30 PM	24	60	43	0	2	127	30	125	30	0	0	185	34	60	60	0	2	154	59	86	31	0	1	176	642
12:45 PM	37	62	35	0	2	134	41	112	19	0	0	172	21	62	91	0	3	174	78	97	34	0	4	209	689
Total	121	231	167	0	10	519	123	449	106	0	0	678	104	256	302	0	6	662	287	364	122	0	7	773	2632
Approach %	23.3	44.5	32.2	0.0	-	-	18.1	66.2	15.6	0.0	-	-	15.7	38.7	45.6	0.0	-	-	37.1	47.1	15.8	0.0	-	-	-
Total %	4.6	8.8	6.3	0.0	-	19.7	4.7	17.1	4.0	0.0	-	25.8	4.0	9.7	11.5	0.0	-	25.2	10.9	13.8	4.6	0.0	-	29.4	-
PHF	0.818	0.931	0.928	0.000	-	0.954	0.750	0.898	0.757	0.000	-	0.916	0.765	0.853	0.830	0.000	-	0.909	0.920	0.938	0.897	0.000	-	0.925	0.955
Lights	117	219	163	0	-	499	120	444	104	0	-	668	101	251	298	0	-	650	284	354	118	0	-	756	2573
% Lights	96.7	94.8	97.6	-	-	96.1	97.6	98.9	98.1	-	-	98.5	97.1	98.0	98.7	-	-	98.2	99.0	97.3	96.7	-	-	97.8	97.8
Mediums	4	9	3	0	-	16	1	4	2	0	-	7	3	3	4	0	-	10	3	8	2	0	-	13	46
% Mediums	3.3	3.9	1.8	-	-	3.1	0.8	0.9	1.9	-	-	1.0	2.9	1.2	1.3	-	-	1.5	1.0	2.2	1.6	-	-	1.7	1.7
Articulated Trucks	0	3	1	0	-	4	2	1	0	0	-	3	0	2	0	0	-	2	0	2	2	0	-	4	13
% Articulated Trucks	0.0	1.3	0.6	-	-	0.8	1.6	0.2	0.0	-	-	0.4	0.0	0.8	0.0	-	-	0.3	0.0	0.5	1.6	-	-	0.5	0.5
Pedestrians	-	-	-	-	10	-	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	7	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin St & William St/Burnham St
Site Code:
Start Date: 02/04/2016



Turning Movement Peak Hour Data Plot (12:00 PM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin St & William St/Burnham St
Site Code:
Start Date: 02/04/2016

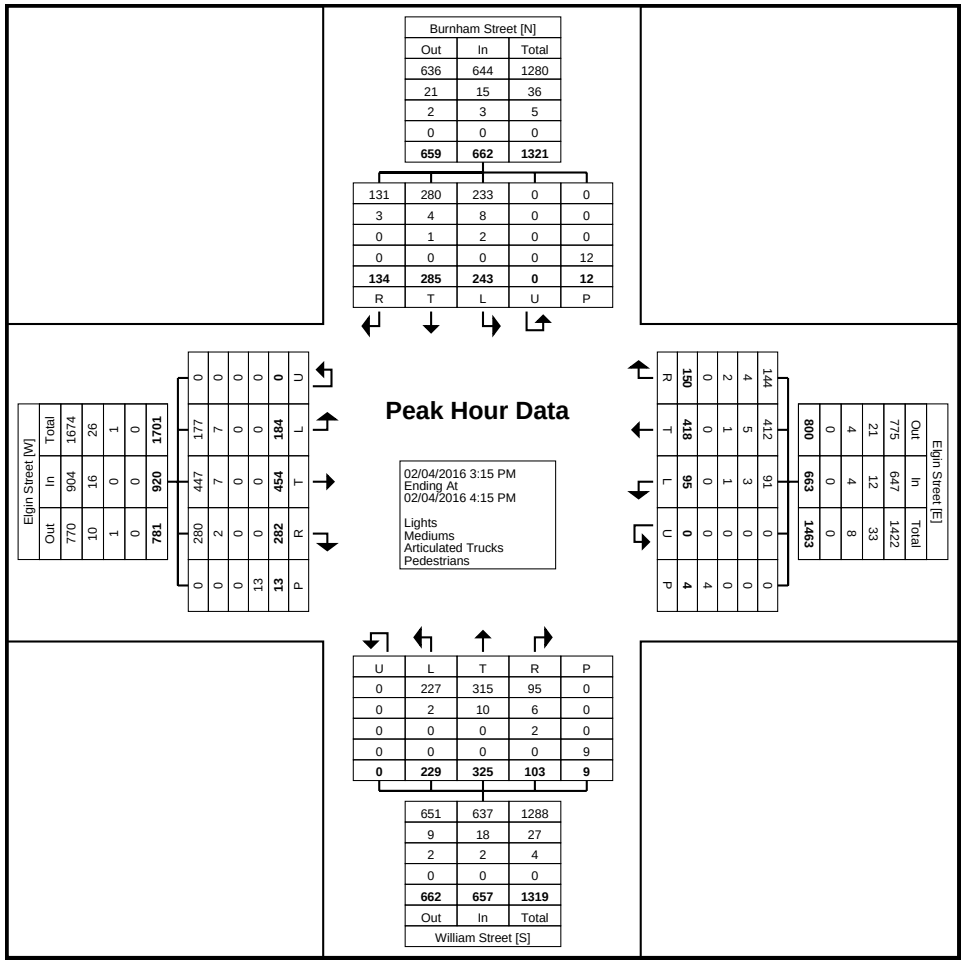
Turning Movement Peak Hour Data (3:15 PM)

Start Time	Burnham Street Southbound						Elgin Street Westbound						William Street Northbound						Elgin Street Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
3:15 PM	31	59	58	0	3	148	45	108	30	0	0	183	28	75	52	0	2	155	70	109	43	0	3	222	708
3:30 PM	29	64	52	0	1	145	38	114	14	0	1	166	19	80	63	0	4	162	64	121	41	0	2	226	699
3:45 PM	32	85	73	0	7	190	29	99	20	0	3	148	28	82	50	0	3	160	73	110	51	0	7	234	732
4:00 PM	42	77	60	0	1	179	38	97	31	0	0	166	28	88	64	0	0	180	75	114	49	0	1	238	763
Total	134	285	243	0	12	662	150	418	95	0	4	663	103	325	229	0	9	657	282	454	184	0	13	920	2902
Approach %	20.2	43.1	36.7	0.0	-	-	22.6	63.0	14.3	0.0	-	-	15.7	49.5	34.9	0.0	-	-	30.7	49.3	20.0	0.0	-	-	-
Total %	4.6	9.8	8.4	0.0	-	22.8	5.2	14.4	3.3	0.0	-	22.8	3.5	11.2	7.9	0.0	-	22.6	9.7	15.6	6.3	0.0	-	31.7	-
PHF	0.798	0.838	0.832	0.000	-	0.871	0.833	0.917	0.766	0.000	-	0.906	0.920	0.923	0.895	0.000	-	0.913	0.940	0.938	0.902	0.000	-	0.966	0.951
Lights	131	280	233	0	-	644	144	412	91	0	-	647	95	315	227	0	-	637	280	447	177	0	-	904	2832
% Lights	97.8	98.2	95.9	-	-	97.3	96.0	98.6	95.8	-	-	97.6	92.2	96.9	99.1	-	-	97.0	99.3	98.5	96.2	-	-	98.3	97.6
Mediums	3	4	8	0	-	15	4	5	3	0	-	12	6	10	2	0	-	18	2	7	7	0	-	16	61
% Mediums	2.2	1.4	3.3	-	-	2.3	2.7	1.2	3.2	-	-	1.8	5.8	3.1	0.9	-	-	2.7	0.7	1.5	3.8	-	-	1.7	2.1
Articulated Trucks	0	1	2	0	-	3	2	1	1	0	-	4	2	0	0	0	-	2	0	0	0	0	-	0	9
% Articulated Trucks	0.0	0.4	0.8	-	-	0.5	1.3	0.2	1.1	-	-	0.6	1.9	0.0	0.0	-	-	0.3	0.0	0.0	0.0	-	-	0.0	0.3
Pedestrians	-	-	-	-	12	-	-	-	-	-	4	-	-	-	-	-	9	-	-	-	-	-	13	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin St & William St/Burnham St
Site Code:
Start Date: 02/04/2016



Turning Movement Peak Hour Data Plot (3:15 PM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin Street & Courthouse Road (East leg)
Site Code:
Start Date: 06/22/2016

Turning Movement Data

Start Time	Elgin Street Eastbound						Elgin Street Westbound						Plaza Driveway Northbound						Courthouse Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
6:30 AM	0	56	0	0	0	56	0	54	0	0	0	54	0	0	0	0	0	0	0	0	1	0	0	1	111
6:45 AM	0	52	3	0	0	55	0	66	1	0	0	67	1	0	0	0	0	1	1	0	0	0	0	1	124
Hourly Total	0	108	3	0	0	111	0	120	1	0	0	121	1	0	0	0	0	1	1	0	1	0	0	2	235
7:00 AM	0	61	0	0	0	61	0	101	0	0	1	101	2	0	0	0	1	2	0	0	0	0	0	0	164
7:15 AM	1	55	1	0	0	57	1	79	11	0	0	91	0	0	0	0	1	0	0	0	0	0	0	0	148
7:30 AM	1	83	1	0	0	85	6	102	8	0	0	116	0	0	2	0	0	2	0	0	0	0	0	0	203
7:45 AM	6	108	0	0	1	114	5	135	26	0	0	166	0	0	2	0	1	2	0	0	1	0	0	1	283
Hourly Total	8	307	2	0	1	317	12	417	45	0	1	474	2	0	4	0	3	6	0	0	1	0	0	1	798
8:00 AM	3	119	0	0	0	122	6	90	13	0	0	109	0	0	5	0	1	5	2	0	3	0	0	5	241
8:15 AM	3	87	1	0	0	91	19	161	18	0	0	198	3	0	2	0	0	5	0	0	1	0	0	1	295
8:30 AM	2	110	0	0	0	112	5	133	11	0	0	149	0	0	1	0	0	1	0	0	2	0	0	2	264
8:45 AM	0	122	3	0	1	125	10	140	3	0	0	153	1	0	5	0	0	6	0	0	4	0	1	4	288
Hourly Total	8	438	4	0	1	450	40	524	45	0	0	609	4	0	13	0	1	17	2	0	10	0	1	12	1088
9:00 AM	1	110	1	0	0	112	14	147	4	1	2	166	3	0	6	0	2	9	0	0	0	0	0	0	287
9:15 AM	0	121	6	0	0	127	10	142	4	0	1	156	2	0	2	0	0	4	0	0	4	0	0	4	291
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	1	231	7	0	0	239	24	289	8	1	3	322	5	0	8	0	2	13	0	0	4	0	0	4	578
3:00 PM	5	218	5	0	1	228	8	220	3	0	2	231	0	0	14	0	3	14	0	0	10	0	2	10	483
3:15 PM	1	185	2	0	0	188	14	188	8	0	0	210	4	0	13	0	0	17	0	1	2	0	0	3	418
3:30 PM	0	193	5	0	0	198	11	178	10	1	0	200	1	0	12	0	4	13	0	0	4	0	4	4	415
3:45 PM	2	192	1	0	0	195	6	207	4	1	0	218	0	0	9	0	0	9	1	0	5	0	1	6	428
Hourly Total	8	788	13	0	1	809	39	793	25	2	2	859	5	0	48	0	7	53	1	1	21	0	7	23	1744
4:00 PM	1	239	3	0	0	243	9	182	2	0	0	193	2	0	10	0	1	12	0	0	3	0	0	3	451
4:15 PM	2	205	4	0	0	211	10	177	5	0	0	192	4	0	16	0	0	20	1	0	3	0	1	4	427
4:30 PM	1	217	1	0	0	219	8	163	5	0	1	176	3	0	16	0	1	19	2	1	16	0	2	19	433
4:45 PM	0	209	3	0	0	212	10	182	1	0	0	193	1	0	7	0	0	8	0	0	6	0	0	6	419
Hourly Total	4	870	11	0	0	885	37	704	13	0	1	754	10	0	49	0	2	59	3	1	28	0	3	32	1730
5:00 PM	0	222	3	0	0	225	8	198	4	0	0	210	1	0	14	0	0	15	0	1	8	0	0	9	459
5:15 PM	0	219	3	0	1	222	6	187	2	0	0	195	1	0	9	0	2	10	0	0	25	0	1	25	452
5:30 PM	0	200	2	1	0	203	5	159	2	0	0	166	0	0	6	0	0	6	0	0	1	0	0	1	376
5:45 PM	1	206	1	0	0	208	5	151	2	0	0	158	1	0	2	0	1	3	0	0	2	0	1	2	371
Hourly Total	1	847	9	1	1	858	24	695	10	0	0	729	3	0	31	0	3	34	0	1	36	0	2	37	1658
Grand Total	30	3589	49	1	4	3669	176	3542	147	3	7	3868	30	0	153	0	18	183	7	3	101	0	13	111	7831
Approach %	0.8	97.8	1.3	0.0	-	-	4.6	91.6	3.8	0.1	-	-	16.4	0.0	83.6	0.0	-	-	6.3	2.7	91.0	0.0	-	-	-
Total %	0.4	45.8	0.6	0.0	-	46.9	2.2	45.2	1.9	0.0	-	49.4	0.4	0.0	2.0	0.0	-	2.3	0.1	0.0	1.3	0.0	-	1.4	-
Lights	29	3500	44	1	-	3574	174	3452	140	2	-	3768	29	0	149	0	-	178	7	3	98	0	-	108	7628
% Lights	96.7	97.5	89.8	100.0	-	97.4	98.9	97.5	95.2	66.7	-	97.4	96.7	-	97.4	-	-	97.3	100.0	100.0	97.0	-	-	97.3	97.4

Mediums	1	73	5	0	-	79	2	79	7	1	-	89	1	0	4	0	-	5	0	0	3	0	-	3	176
% Mediums	3.3	2.0	10.2	0.0	-	2.2	1.1	2.2	4.8	33.3	-	2.3	3.3	-	2.6	-	-	2.7	0.0	0.0	3.0	-	-	2.7	2.2
Articulated Trucks	0	16	0	0	-	16	0	11	0	0	-	11	0	0	0	0	-	0	0	0	0	0	-	0	27
% Articulated Trucks	0.0	0.4	0.0	0.0	-	0.4	0.0	0.3	0.0	0.0	-	0.3	0.0	-	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.3
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	5	-	-	-	-	-	5	-	-
% Bicycles on Crosswalk	-	-	-	-	25.0	-	-	-	-	-	14.3	-	-	-	-	-	27.8	-	-	-	-	-	38.5	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	6	-	-	-	-	-	13	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	75.0	-	-	-	-	-	85.7	-	-	-	-	-	72.2	-	-	-	-	-	61.5	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

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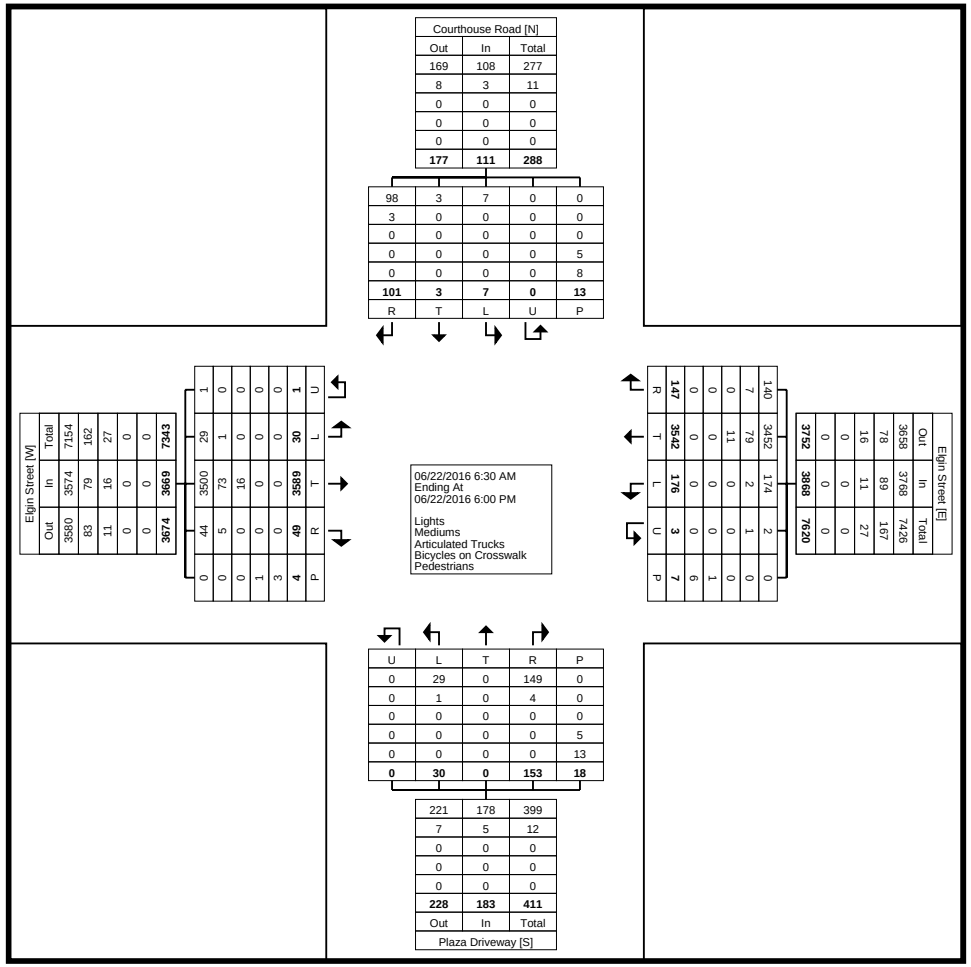
Count Name: Elgin Street & Courthouse Road (East leg)
Site Code:
Start Date: 06/22/2016
Page No: 3



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin Street & Courthouse Road (East leg)
Site Code:
Start Date: 06/22/2016

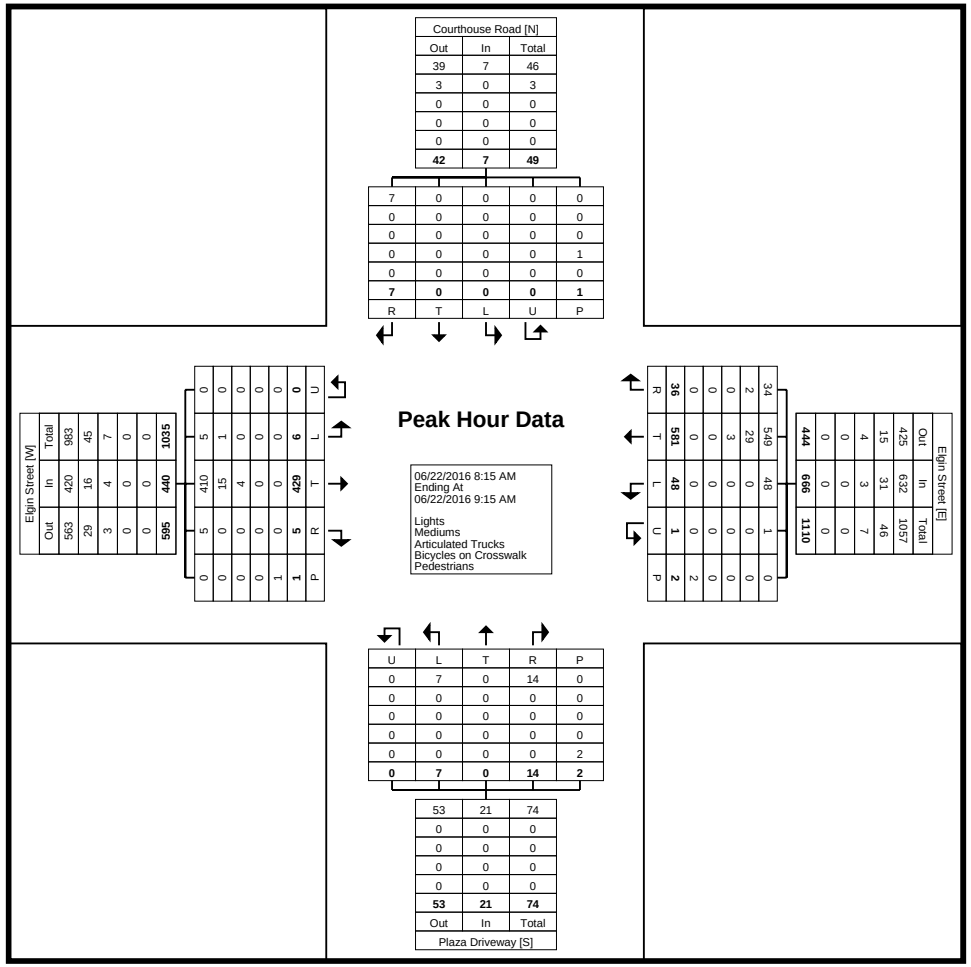
Turning Movement Peak Hour Data (8:15 AM)

Start Time	Elgin Street Eastbound						Elgin Street Westbound						Plaza Driveway Northbound						Courthouse Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
8:15 AM	3	87	1	0	0	91	19	161	18	0	0	198	3	0	2	0	0	5	0	0	1	0	0	1	295
8:30 AM	2	110	0	0	0	112	5	133	11	0	0	149	0	0	1	0	0	1	0	0	2	0	0	2	264
8:45 AM	0	122	3	0	1	125	10	140	3	0	0	153	1	0	5	0	0	6	0	0	4	0	1	4	288
9:00 AM	1	110	1	0	0	112	14	147	4	1	2	166	3	0	6	0	2	9	0	0	0	0	0	0	287
Total	6	429	5	0	1	440	48	581	36	1	2	666	7	0	14	0	2	21	0	0	7	0	1	7	1134
Approach %	1.4	97.5	1.1	0.0	-	-	7.2	87.2	5.4	0.2	-	-	33.3	0.0	66.7	0.0	-	-	0.0	0.0	100.0	0.0	-	-	-
Total %	0.5	37.8	0.4	0.0	-	38.8	4.2	51.2	3.2	0.1	-	58.7	0.6	0.0	1.2	0.0	-	1.9	0.0	0.0	0.6	0.0	-	0.6	-
PHF	0.500	0.879	0.417	0.000	-	0.880	0.632	0.902	0.500	0.250	-	0.841	0.583	0.000	0.583	0.000	-	0.583	0.000	0.000	0.438	0.000	-	0.438	0.961
Lights	5	410	5	0	-	420	48	549	34	1	-	632	7	0	14	0	-	21	0	0	7	0	-	7	1080
% Lights	83.3	95.6	100.0	-	-	95.5	100.0	94.5	94.4	100.0	-	94.9	100.0	-	100.0	-	-	100.0	-	-	100.0	-	-	100.0	95.2
Mediums	1	15	0	0	-	16	0	29	2	0	-	31	0	0	0	0	-	0	0	0	0	0	-	0	47
% Mediums	16.7	3.5	0.0	-	-	3.6	0.0	5.0	5.6	0.0	-	4.7	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	4.1
Articulated Trucks	0	4	0	0	-	4	0	3	0	0	-	3	0	0	0	0	-	0	0	0	0	0	-	0	7
% Articulated Trucks	0.0	0.9	0.0	-	-	0.9	0.0	0.5	0.0	0.0	-	0.5	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	0.6
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	100.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	0.0	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin Street & Courthouse Road (East leg)
Site Code:
Start Date: 06/22/2016
Page No: 5



Turning Movement Peak Hour Data Plot (8:15 AM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin Street & Courthouse Road (East leg)
Site Code:
Start Date: 06/22/2016

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Elgin Street Eastbound						Elgin Street Westbound						Plaza Driveway Northbound						Courthouse Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:30 PM	1	217	1	0	0	219	8	163	5	0	1	176	3	0	16	0	1	19	2	1	16	0	2	19	433
4:45 PM	0	209	3	0	0	212	10	182	1	0	0	193	1	0	7	0	0	8	0	0	6	0	0	6	419
5:00 PM	0	222	3	0	0	225	8	198	4	0	0	210	1	0	14	0	0	15	0	1	8	0	0	9	459
5:15 PM	0	219	3	0	1	222	6	187	2	0	0	195	1	0	9	0	2	10	0	0	25	0	1	25	452
Total	1	867	10	0	1	878	32	730	12	0	1	774	6	0	46	0	3	52	2	2	55	0	3	59	1763
Approach %	0.1	98.7	1.1	0.0	-	-	4.1	94.3	1.6	0.0	-	-	11.5	0.0	88.5	0.0	-	-	3.4	3.4	93.2	0.0	-	-	-
Total %	0.1	49.2	0.6	0.0	-	49.8	1.8	41.4	0.7	0.0	-	43.9	0.3	0.0	2.6	0.0	-	2.9	0.1	0.1	3.1	0.0	-	3.3	-
PHF	0.250	0.976	0.833	0.000	-	0.976	0.800	0.922	0.600	0.000	-	0.921	0.500	0.000	0.719	0.000	-	0.684	0.250	0.500	0.550	0.000	-	0.590	0.960
Lights	1	862	9	0	-	872	32	723	10	0	-	765	6	0	43	0	-	49	2	2	55	0	-	59	1745
% Lights	100.0	99.4	90.0	-	-	99.3	100.0	99.0	83.3	-	-	98.8	100.0	-	93.5	-	-	94.2	100.0	100.0	100.0	-	-	100.0	99.0
Mediums	0	2	1	0	-	3	0	6	2	0	-	8	0	0	3	0	-	3	0	0	0	0	-	0	14
% Mediums	0.0	0.2	10.0	-	-	0.3	0.0	0.8	16.7	-	-	1.0	0.0	-	6.5	-	-	5.8	0.0	0.0	0.0	-	-	0.0	0.8
Articulated Trucks	0	3	0	0	-	3	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	4
% Articulated Trucks	0.0	0.3	0.0	-	-	0.3	0.0	0.1	0.0	-	-	0.1	0.0	-	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.2
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	100.0	-	-	-	-	-	33.3	-	-	-	-	-	33.3	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	0.0	-	-	-	-	-	66.7	-	-	-	-	-	66.7	-	-

Paradigm Transportation Solutions Limited
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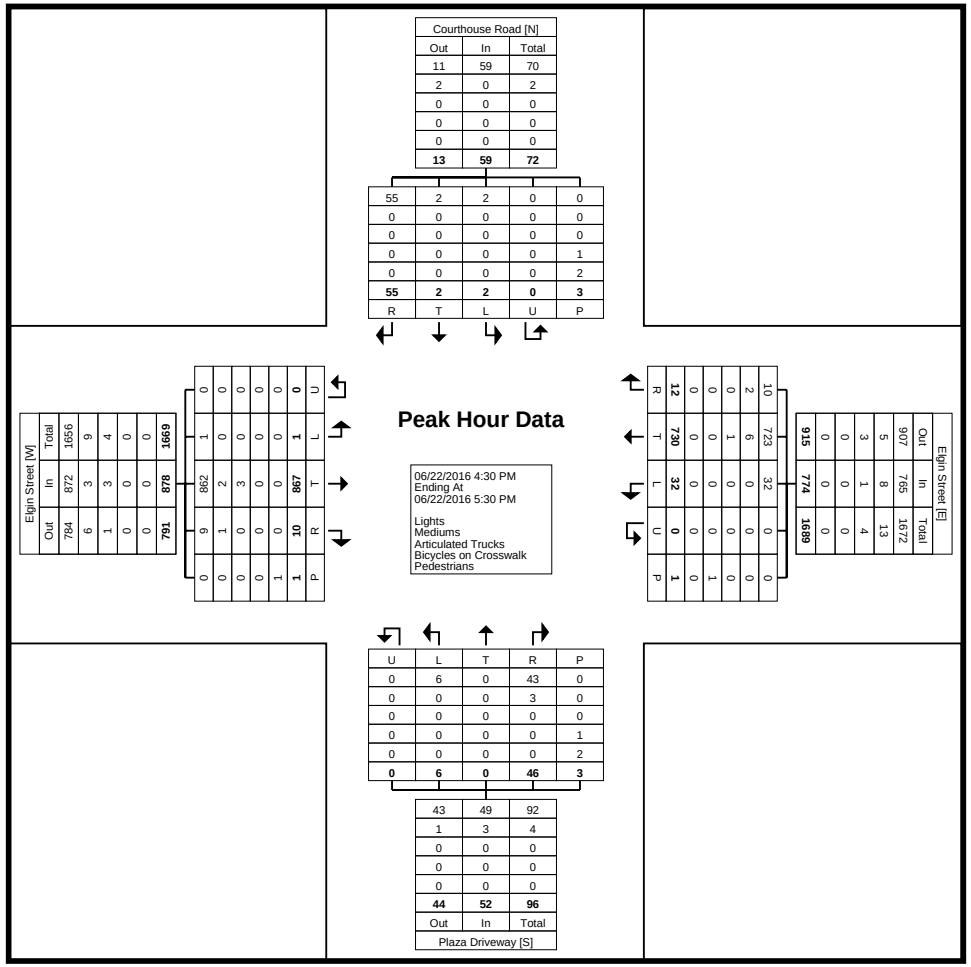
Page No: 7



Turning Movement Peak Hour Data Plot (4:30 PM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin Street & Courthouse Road (West leg)
Site Code:
Start Date: 06/22/2016

Turning Movement Data

Start Time	Elgin Street Eastbound						Elgin Street Westbound						Plaza Driveway Northbound						Courthouse Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
6:30 AM	2	52	0	0	0	54	4	48	1	0	0	53	0	1	2	0	0	3	0	0	0	0	0	0	110
6:45 AM	1	61	0	0	0	62	2	60	0	0	0	62	0	0	1	0	0	1	0	0	0	0	0	0	125
Hourly Total	3	113	0	0	0	116	6	108	1	0	0	115	0	1	3	0	0	4	0	0	0	0	0	0	235
7:00 AM	0	54	0	0	0	54	5	84	0	0	0	89	0	0	1	0	1	1	0	0	0	0	0	0	144
7:15 AM	0	59	1	0	0	60	0	85	0	0	0	85	0	0	0	0	1	0	2	0	3	0	0	5	150
7:30 AM	2	85	0	1	0	88	3	89	1	0	0	93	1	0	3	0	0	4	0	0	0	0	0	0	185
7:45 AM	2	108	2	0	0	112	6	128	0	1	0	135	0	0	0	0	1	0	0	0	1	0	0	1	248
Hourly Total	4	306	3	1	0	314	14	386	1	1	0	402	1	0	4	0	3	5	2	0	4	0	0	6	727
8:00 AM	0	118	2	0	0	120	13	82	0	2	0	97	0	0	4	0	1	4	0	0	0	0	0	0	221
8:15 AM	0	99	1	0	0	100	13	139	1	1	0	154	0	0	2	0	0	2	1	0	0	0	0	1	257
8:30 AM	0	110	8	0	0	118	14	120	0	0	0	134	0	0	3	0	0	3	3	0	3	0	0	6	261
8:45 AM	2	128	6	1	0	137	15	140	0	0	0	155	0	1	2	0	1	3	1	0	0	0	2	1	296
Hourly Total	2	455	17	1	0	475	55	481	1	3	0	540	0	1	11	0	2	12	5	0	3	0	2	8	1035
9:00 AM	2	117	1	0	0	120	16	128	2	0	0	146	0	0	7	0	3	7	1	1	3	0	0	5	278
9:15 AM	1	116	0	0	0	117	10	138	1	2	0	151	1	0	4	0	0	5	0	0	3	0	0	3	276
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	3	233	1	0	0	237	26	266	3	2	0	297	1	0	11	0	3	12	1	1	6	0	0	8	554
3:00 PM	0	203	5	0	0	208	21	200	0	1	0	222	0	0	10	0	1	10	2	0	2	0	2	4	444
3:15 PM	0	171	4	0	0	175	14	182	0	0	0	196	0	0	16	0	0	16	0	0	2	0	0	2	389
3:30 PM	0	178	4	0	0	182	12	179	0	0	0	191	0	0	10	0	0	10	1	0	2	0	3	3	386
3:45 PM	0	170	2	0	0	172	17	195	1	1	0	214	2	0	15	0	0	17	1	0	1	0	0	2	405
Hourly Total	0	722	15	0	0	737	64	756	1	2	0	823	2	0	51	0	1	53	4	0	7	0	5	11	1624
4:00 PM	0	211	3	0	1	214	13	174	0	1	0	188	2	0	19	0	0	21	4	0	3	0	0	7	430
4:15 PM	0	188	5	0	1	193	9	181	1	0	0	191	2	0	16	0	0	18	1	0	4	0	1	5	407
4:30 PM	1	195	4	0	0	200	11	168	1	1	0	181	1	0	15	0	0	16	4	0	7	0	2	11	408
4:45 PM	0	186	2	0	0	188	12	174	1	2	0	189	2	0	10	0	0	12	6	0	3	0	0	9	398
Hourly Total	1	780	14	0	2	795	45	697	3	4	0	749	7	0	60	0	0	67	15	0	17	0	3	32	1643
5:00 PM	0	202	0	0	0	202	13	192	0	2	0	207	1	0	11	0	0	12	6	0	2	0	0	8	429
5:15 PM	0	200	3	0	0	203	9	195	0	3	0	207	0	0	13	0	0	13	2	1	1	0	1	4	427
5:30 PM	0	183	1	0	0	184	10	153	2	0	0	165	1	0	6	0	0	7	1	0	2	0	1	3	359
5:45 PM	0	198	1	0	0	199	6	152	1	0	0	159	0	0	5	0	2	5	1	0	1	0	1	2	365
Hourly Total	0	783	5	0	0	788	38	692	3	5	0	738	2	0	35	0	2	37	10	1	6	0	3	17	1580
Grand Total	13	3392	55	2	2	3462	248	3386	13	17	0	3664	13	2	175	0	11	190	37	2	43	0	13	82	7398
Approach %	0.4	98.0	1.6	0.1	-	-	6.8	92.4	0.4	0.5	-	-	6.8	1.1	92.1	0.0	-	-	45.1	2.4	52.4	0.0	-	-	-
Total %	0.2	45.9	0.7	0.0	-	46.8	3.4	45.8	0.2	0.2	-	49.5	0.2	0.0	2.4	0.0	-	2.6	0.5	0.0	0.6	0.0	-	1.1	-
Lights	12	3317	54	2	-	3385	236	3295	13	17	-	3561	11	2	161	0	-	174	36	2	37	0	-	75	7195
% Lights	92.3	97.8	98.2	100.0	-	97.8	95.2	97.3	100.0	100.0	-	97.2	84.6	100.0	92.0	-	-	91.6	97.3	100.0	86.0	-	-	91.5	97.3

Mediums	1	64	0	0	-	65	11	80	0	0	-	91	2	0	12	0	-	14	1	0	6	0	-	7	177
% Mediums	7.7	1.9	0.0	0.0	-	1.9	4.4	2.4	0.0	0.0	-	2.5	15.4	0.0	6.9	-	-	7.4	2.7	0.0	14.0	-	-	8.5	2.4
Articulated Trucks	0	11	1	0	-	12	1	11	0	0	-	12	0	0	2	0	-	2	0	0	0	0	-	0	26
% Articulated Trucks	0.0	0.3	1.8	0.0	-	0.3	0.4	0.3	0.0	0.0	-	0.3	0.0	0.0	1.1	-	-	1.1	0.0	0.0	0.0	-	-	0.0	0.4
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	5	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	38.5	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	11	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	61.5	-	-

Paradigm Transportation Solutions Limited
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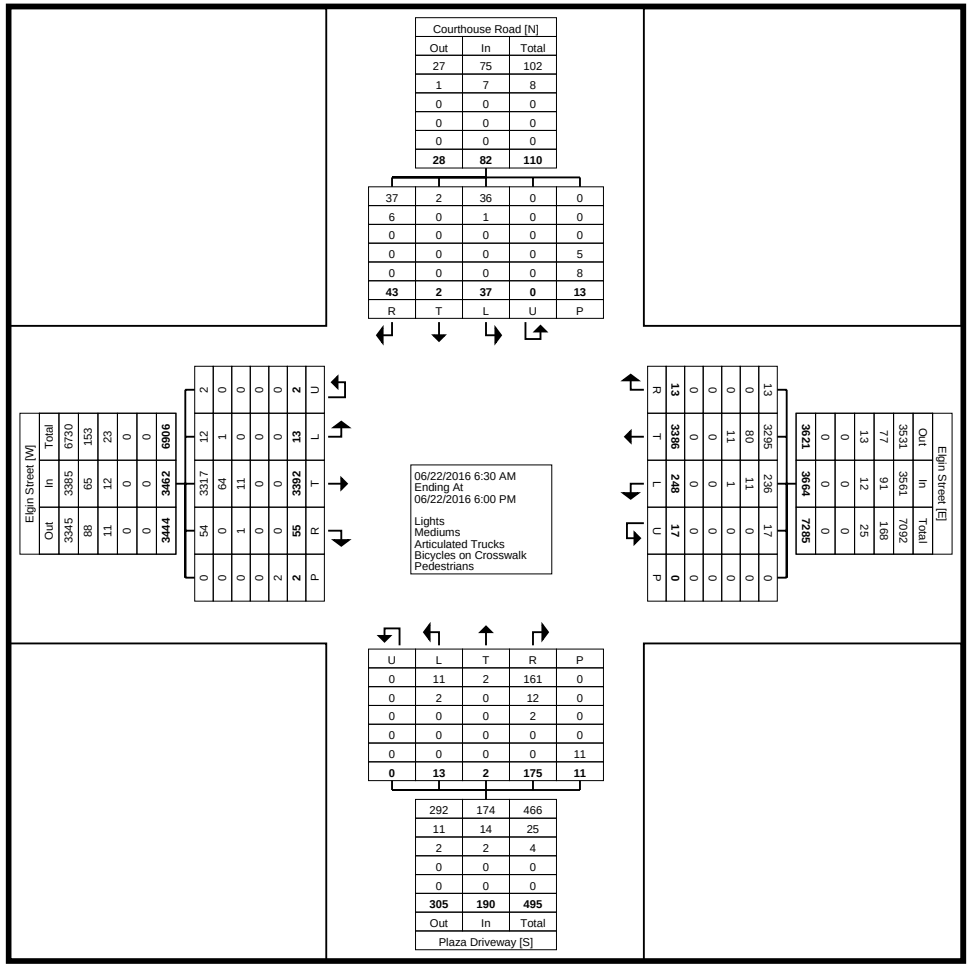

Turning Movement Data Plot

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22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
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Count Name: Elgin Street & Courthouse Road (West leg)
Site Code:
Start Date: 06/22/2016

Turning Movement Peak Hour Data (8:30 AM)

Start Time	Elgin Street Eastbound						Elgin Street Westbound						Plaza Driveway Northbound						Courthouse Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
8:30 AM	0	110	8	0	0	118	14	120	0	0	0	134	0	0	3	0	0	3	3	0	3	0	0	6	261
8:45 AM	2	128	6	1	0	137	15	140	0	0	0	155	0	1	2	0	1	3	1	0	0	0	2	1	296
9:00 AM	2	117	1	0	0	120	16	128	2	0	0	146	0	0	7	0	3	7	1	1	3	0	0	5	278
9:15 AM	1	116	0	0	0	117	10	138	1	2	0	151	1	0	4	0	0	5	0	0	3	0	0	3	276
Total	5	471	15	1	0	492	55	526	3	2	0	586	1	1	16	0	4	18	5	1	9	0	2	15	1111
Approach %	1.0	95.7	3.0	0.2	-	-	9.4	89.8	0.5	0.3	-	-	5.6	5.6	88.9	0.0	-	-	33.3	6.7	60.0	0.0	-	-	-
Total %	0.5	42.4	1.4	0.1	-	44.3	5.0	47.3	0.3	0.2	-	52.7	0.1	0.1	1.4	0.0	-	1.6	0.5	0.1	0.8	0.0	-	1.4	-
PHF	0.625	0.920	0.469	0.250	-	0.898	0.859	0.939	0.375	0.250	-	0.945	0.250	0.250	0.571	0.000	-	0.643	0.417	0.250	0.750	0.000	-	0.625	0.938
Lights	5	455	14	1	-	475	52	501	3	2	-	558	1	1	12	0	-	14	4	1	7	0	-	12	1059
% Lights	100.0	96.6	93.3	100.0	-	96.5	94.5	95.2	100.0	100.0	-	95.2	100.0	100.0	75.0	-	-	77.8	80.0	100.0	77.8	-	-	80.0	95.3
Mediums	0	12	0	0	-	12	2	24	0	0	-	26	0	0	2	0	-	2	1	0	2	0	-	3	43
% Mediums	0.0	2.5	0.0	0.0	-	2.4	3.6	4.6	0.0	0.0	-	4.4	0.0	0.0	12.5	-	-	11.1	20.0	0.0	22.2	-	-	20.0	3.9
Articulated Trucks	0	4	1	0	-	5	1	1	0	0	-	2	0	0	2	0	-	2	0	0	0	0	-	0	9
% Articulated Trucks	0.0	0.8	6.7	0.0	-	1.0	1.8	0.2	0.0	0.0	-	0.3	0.0	0.0	12.5	-	-	11.1	0.0	0.0	0.0	-	-	0.0	0.8
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	50.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	50.0	-	-

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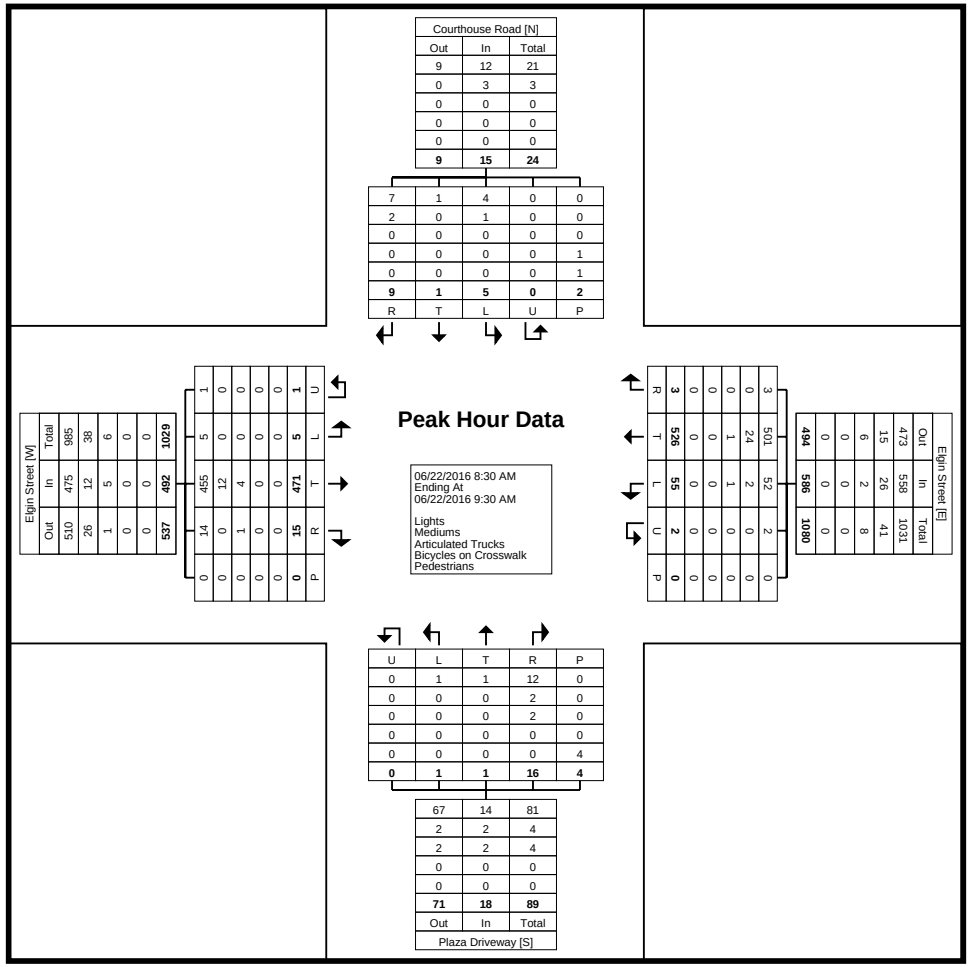

Turning Movement Peak Hour Data Plot (8:30 AM)

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Count Name: Elgin Street & Courthouse Road (West leg)
Site Code:
Start Date: 06/22/2016

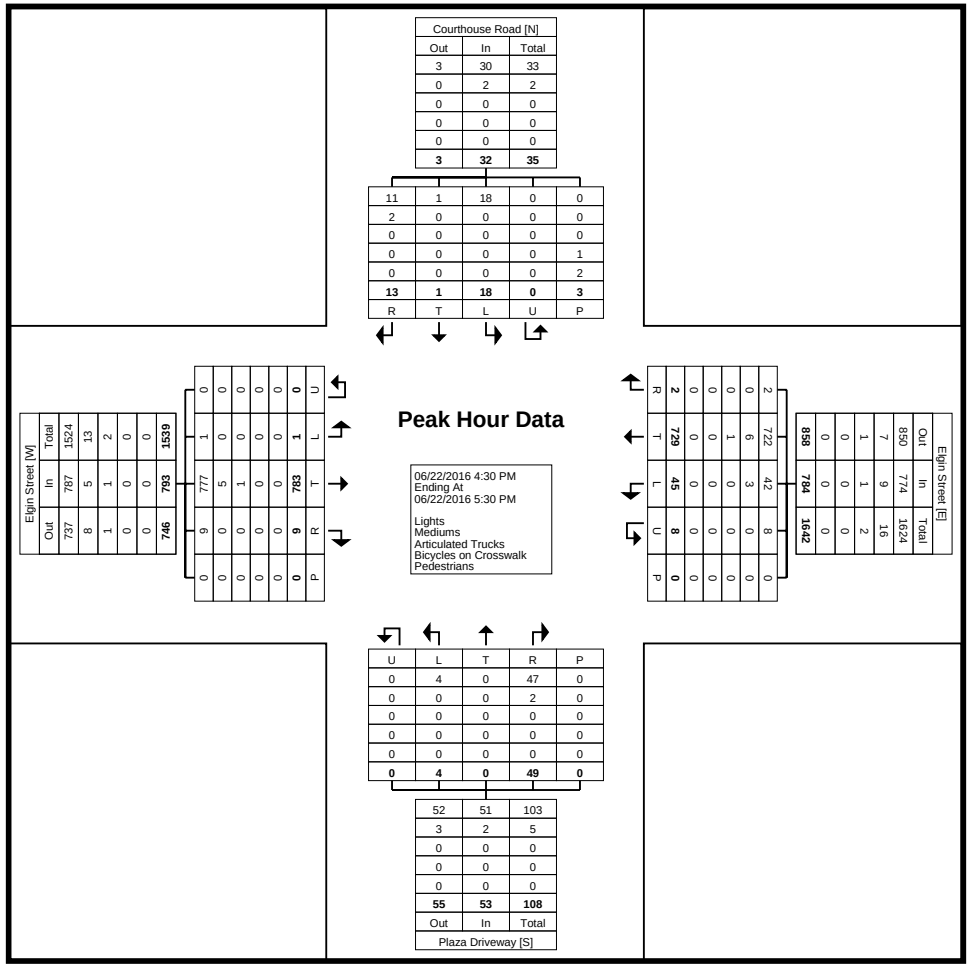
Turning Movement Peak Hour Data (4:30 PM)

Start Time	Elgin Street Eastbound						Elgin Street Westbound						Plaza Driveway Northbound						Courthouse Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:30 PM	1	195	4	0	0	200	11	168	1	1	0	181	1	0	15	0	0	16	4	0	7	0	2	11	408
4:45 PM	0	186	2	0	0	188	12	174	1	2	0	189	2	0	10	0	0	12	6	0	3	0	0	9	398
5:00 PM	0	202	0	0	0	202	13	192	0	2	0	207	1	0	11	0	0	12	6	0	2	0	0	8	429
5:15 PM	0	200	3	0	0	203	9	195	0	3	0	207	0	0	13	0	0	13	2	1	1	0	1	4	427
Total	1	783	9	0	0	793	45	729	2	8	0	784	4	0	49	0	0	53	18	1	13	0	3	32	1662
Approach %	0.1	98.7	1.1	0.0	-	-	5.7	93.0	0.3	1.0	-	-	7.5	0.0	92.5	0.0	-	-	56.3	3.1	40.6	0.0	-	-	-
Total %	0.1	47.1	0.5	0.0	-	47.7	2.7	43.9	0.1	0.5	-	47.2	0.2	0.0	2.9	0.0	-	3.2	1.1	0.1	0.8	0.0	-	1.9	-
PHF	0.250	0.969	0.563	0.000	-	0.977	0.865	0.935	0.500	0.667	-	0.947	0.500	0.000	0.817	0.000	-	0.828	0.750	0.250	0.464	0.000	-	0.727	0.969
Lights	1	777	9	0	-	787	42	722	2	8	-	774	4	0	47	0	-	51	18	1	11	0	-	30	1642
% Lights	100.0	99.2	100.0	-	-	99.2	93.3	99.0	100.0	100.0	-	98.7	100.0	-	95.9	-	-	96.2	100.0	100.0	84.6	-	-	93.8	98.8
Mediums	0	5	0	0	-	5	3	6	0	0	-	9	0	0	2	0	-	2	0	0	2	0	-	2	18
% Mediums	0.0	0.6	0.0	-	-	0.6	6.7	0.8	0.0	0.0	-	1.1	0.0	-	4.1	-	-	3.8	0.0	0.0	15.4	-	-	6.3	1.1
Articulated Trucks	0	1	0	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Articulated Trucks	0.0	0.1	0.0	-	-	0.1	0.0	0.1	0.0	0.0	-	0.1	0.0	-	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33.3	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66.7	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin Street & Courthouse Road (West leg)
Site Code:
Start Date: 06/22/2016



Turning Movement Peak Hour Data Plot (4:30 PM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin Street & Strathy Road
Site Code:
Start Date: 06/22/2016
Page No: 1

Turning Movement Data

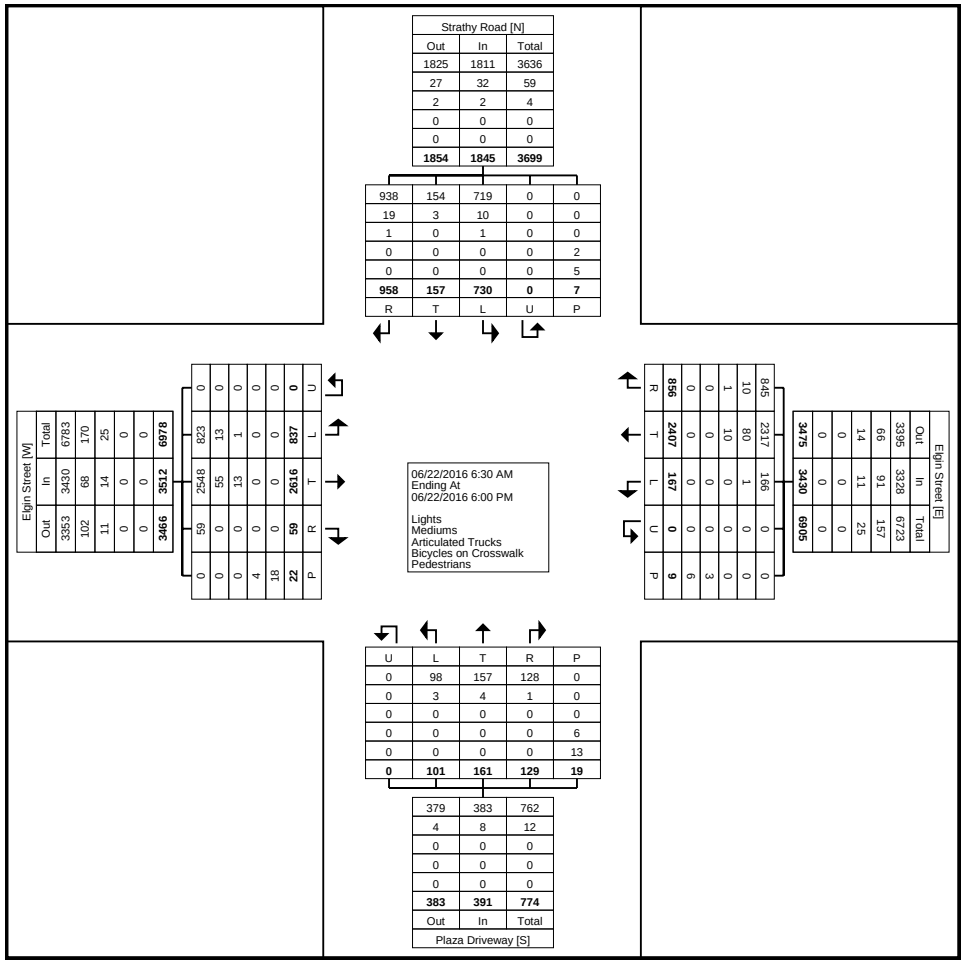
Start Time	Elgin Street Eastbound						Elgin Street Westbound						Plaza Driveway Northbound						Strathy Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
6:30 AM	8	58	1	0	1	67	1	42	2	0	0	45	0	0	0	0	0	0	1	0	6	0	0	7	119
6:45 AM	9	54	0	0	0	63	1	44	14	0	0	59	0	2	1	0	1	3	4	2	5	0	0	11	136
Hourly Total	17	112	1	0	1	130	2	86	16	0	0	104	0	2	1	0	1	3	5	2	11	0	0	18	255
7:00 AM	16	48	1	0	0	65	2	69	13	0	0	84	0	0	3	0	1	3	5	0	17	0	0	22	174
7:15 AM	27	53	0	0	1	80	2	74	11	0	1	87	0	1	2	0	2	3	6	0	18	0	0	24	194
7:30 AM	16	72	0	0	0	88	0	73	14	0	0	87	0	2	4	0	0	6	10	0	20	0	0	30	211
7:45 AM	30	96	2	0	1	128	3	115	12	0	0	130	2	0	1	0	2	3	17	2	25	0	0	44	305
Hourly Total	89	269	3	0	2	361	7	331	50	0	1	388	2	3	10	0	5	15	38	2	80	0	0	120	884
8:00 AM	24	105	1	0	1	130	3	60	14	0	0	77	0	2	1	0	1	3	16	1	14	0	0	31	241
8:15 AM	19	82	3	0	0	104	3	109	25	0	0	137	3	3	1	0	0	7	16	4	26	0	0	46	294
8:30 AM	29	89	1	0	1	119	1	98	22	0	0	121	3	7	1	0	0	11	26	9	27	0	0	62	313
8:45 AM	24	121	3	0	2	148	1	106	36	0	1	143	7	0	0	0	1	7	18	7	28	0	1	53	351
Hourly Total	96	397	8	0	4	501	8	373	97	0	1	478	13	12	3	0	2	28	76	21	95	0	1	192	1199
9:00 AM	44	108	2	0	1	154	4	79	48	0	0	131	3	9	1	0	2	13	17	9	41	0	0	67	365
9:15 AM	46	90	1	0	0	137	7	94	43	0	0	144	2	6	3	0	0	11	24	6	36	0	0	66	358
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	90	198	3	0	1	291	11	173	91	0	0	275	5	15	4	0	2	24	41	15	77	0	0	133	723
3:00 PM	44	138	3	0	0	185	15	133	49	0	0	197	10	19	9	0	3	38	62	10	64	0	1	136	556
3:15 PM	51	119	6	0	4	176	13	123	50	0	0	186	8	11	4	0	0	23	51	15	68	0	0	134	519
3:30 PM	47	135	2	0	4	184	13	126	34	0	2	173	7	6	9	0	2	22	44	16	60	0	2	120	499
3:45 PM	50	123	4	0	0	177	14	131	49	0	1	194	9	12	7	0	0	28	42	10	55	0	0	107	506
Hourly Total	192	515	15	0	8	722	55	513	182	0	3	750	34	48	29	0	5	111	199	51	247	0	3	497	2080
4:00 PM	59	147	5	0	0	211	15	122	48	0	1	185	8	10	12	0	1	30	49	10	45	0	0	104	530
4:15 PM	37	132	3	0	0	172	12	121	54	0	0	187	7	13	17	0	0	37	42	11	65	0	0	118	514
4:30 PM	49	142	3	0	0	194	10	99	70	0	1	179	4	13	5	0	0	22	53	5	73	0	1	131	526
4:45 PM	42	134	4	0	0	180	6	120	45	0	0	171	2	11	4	0	0	17	49	9	49	0	1	107	475
Hourly Total	187	555	15	0	0	757	43	462	217	0	2	722	21	47	38	0	1	106	193	35	232	0	2	460	2045
5:00 PM	43	154	1	0	0	198	11	128	63	0	0	202	8	10	10	0	0	28	39	5	58	0	0	102	530
5:15 PM	52	133	3	0	3	188	14	131	54	0	1	199	5	6	12	0	0	23	55	3	57	0	1	115	525
5:30 PM	40	150	7	0	0	197	7	107	46	0	1	160	7	6	10	0	0	23	35	5	50	0	0	90	470
5:45 PM	31	133	3	0	3	167	9	103	40	0	0	152	6	12	12	0	3	30	49	18	51	0	0	118	467
Hourly Total	166	570	14	0	6	750	41	469	203	0	2	713	26	34	44	0	3	104	178	31	216	0	1	425	1992
Grand Total	837	2616	59	0	22	3512	167	2407	856	0	9	3430	101	161	129	0	19	391	730	157	958	0	7	1845	9178
Approach %	23.8	74.5	1.7	0.0	-	-	4.9	70.2	25.0	0.0	-	-	25.8	41.2	33.0	0.0	-	-	39.6	8.5	51.9	0.0	-	-	-
Total %	9.1	28.5	0.6	0.0	-	38.3	1.8	26.2	9.3	0.0	-	37.4	1.1	1.8	1.4	0.0	-	4.3	8.0	1.7	10.4	0.0	-	20.1	-
Lights	823	2548	59	0	-	3430	166	2317	845	0	-	3328	98	157	128	0	-	383	719	154	938	0	-	1811	8952
% Lights	98.3	97.4	100.0	-	-	97.7	99.4	96.3	98.7	-	-	97.0	97.0	97.5	99.2	-	-	98.0	98.5	98.1	97.9	-	-	98.2	97.5

Mediums	13	55	0	0	-	68	1	80	10	0	-	91	3	4	1	0	-	8	10	3	19	0	-	32	199
% Mediums	1.6	2.1	0.0	-	-	1.9	0.6	3.3	1.2	-	-	2.7	3.0	2.5	0.8	-	-	2.0	1.4	1.9	2.0	-	-	1.7	2.2
Articulated Trucks	1	13	0	0	-	14	0	10	1	0	-	11	0	0	0	0	-	0	1	0	1	0	-	2	27
% Articulated Trucks	0.1	0.5	0.0	-	-	0.4	0.0	0.4	0.1	-	-	0.3	0.0	0.0	0.0	-	-	0.0	0.1	0.0	0.1	-	-	0.1	0.3
Bicycles on Crosswalk	-	-	-	-	4	-	-	-	-	-	3	-	-	-	-	-	6	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	18.2	-	-	-	-	-	33.3	-	-	-	-	-	31.6	-	-	-	-	-	28.6	-	-
Pedestrians	-	-	-	-	18	-	-	-	-	-	6	-	-	-	-	-	13	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	81.8	-	-	-	-	-	66.7	-	-	-	-	-	68.4	-	-	-	-	-	71.4	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin Street & Strathy Road
Site Code:
Start Date: 06/22/2016



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin Street & Strathy Road
Site Code:
Start Date: 06/22/2016

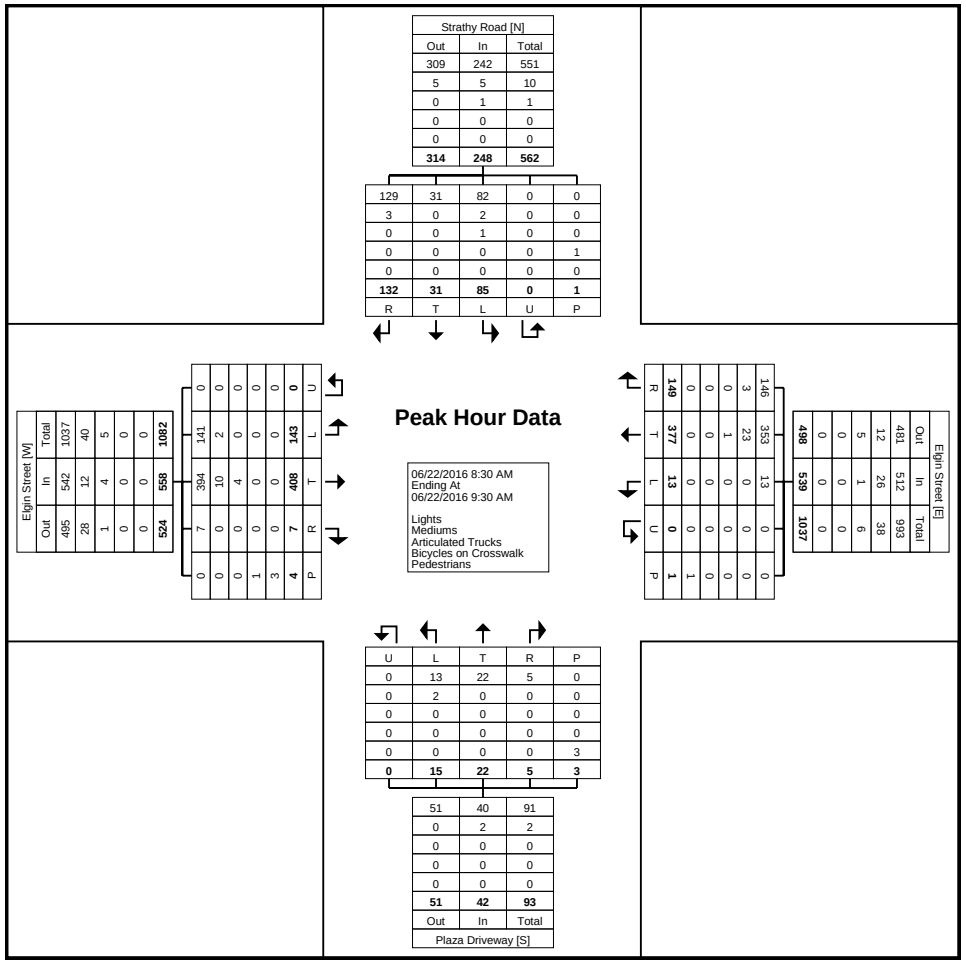
Turning Movement Peak Hour Data (8:30 AM)

Start Time	Elgin Street Eastbound						Elgin Street Westbound						Plaza Driveway Northbound						Strathy Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
8:30 AM	29	89	1	0	1	119	1	98	22	0	0	121	3	7	1	0	0	11	26	9	27	0	0	62	313
8:45 AM	24	121	3	0	2	148	1	106	36	0	1	143	7	0	0	0	1	7	18	7	28	0	1	53	351
9:00 AM	44	108	2	0	1	154	4	79	48	0	0	131	3	9	1	0	2	13	17	9	41	0	0	67	365
9:15 AM	46	90	1	0	0	137	7	94	43	0	0	144	2	6	3	0	0	11	24	6	36	0	0	66	358
Total	143	408	7	0	4	558	13	377	149	0	1	539	15	22	5	0	3	42	85	31	132	0	1	248	1387
Approach %	25.6	73.1	1.3	0.0	-	-	2.4	69.9	27.6	0.0	-	-	35.7	52.4	11.9	0.0	-	-	34.3	12.5	53.2	0.0	-	-	-
Total %	10.3	29.4	0.5	0.0	-	40.2	0.9	27.2	10.7	0.0	-	38.9	1.1	1.6	0.4	0.0	-	3.0	6.1	2.2	9.5	0.0	-	17.9	-
PHF	0.777	0.843	0.583	0.000	-	0.906	0.464	0.889	0.776	0.000	-	0.936	0.536	0.611	0.417	0.000	-	0.808	0.817	0.861	0.805	0.000	-	0.925	0.950
Lights	141	394	7	0	-	542	13	353	146	0	-	512	13	22	5	0	-	40	82	31	129	0	-	242	1336
% Lights	98.6	96.6	100.0	-	-	97.1	100.0	93.6	98.0	-	-	95.0	86.7	100.0	100.0	-	-	95.2	96.5	100.0	97.7	-	-	97.6	96.3
Mediums	2	10	0	0	-	12	0	23	3	0	-	26	2	0	0	0	-	2	2	0	3	0	-	5	45
% Mediums	1.4	2.5	0.0	-	-	2.2	0.0	6.1	2.0	-	-	4.8	13.3	0.0	0.0	-	-	4.8	2.4	0.0	2.3	-	-	2.0	3.2
Articulated Trucks	0	4	0	0	-	4	0	1	0	0	-	1	0	0	0	0	-	0	1	0	0	0	-	1	6
% Articulated Trucks	0.0	1.0	0.0	-	-	0.7	0.0	0.3	0.0	-	-	0.2	0.0	0.0	0.0	-	-	0.0	1.2	0.0	0.0	-	-	0.4	0.4
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	25.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	100.0	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	75.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	0.0	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin Street & Strathy Road
Site Code:
Start Date: 06/22/2016



Turning Movement Peak Hour Data Plot (8:30 AM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin Street & Strathy Road
Site Code:
Start Date: 06/22/2016

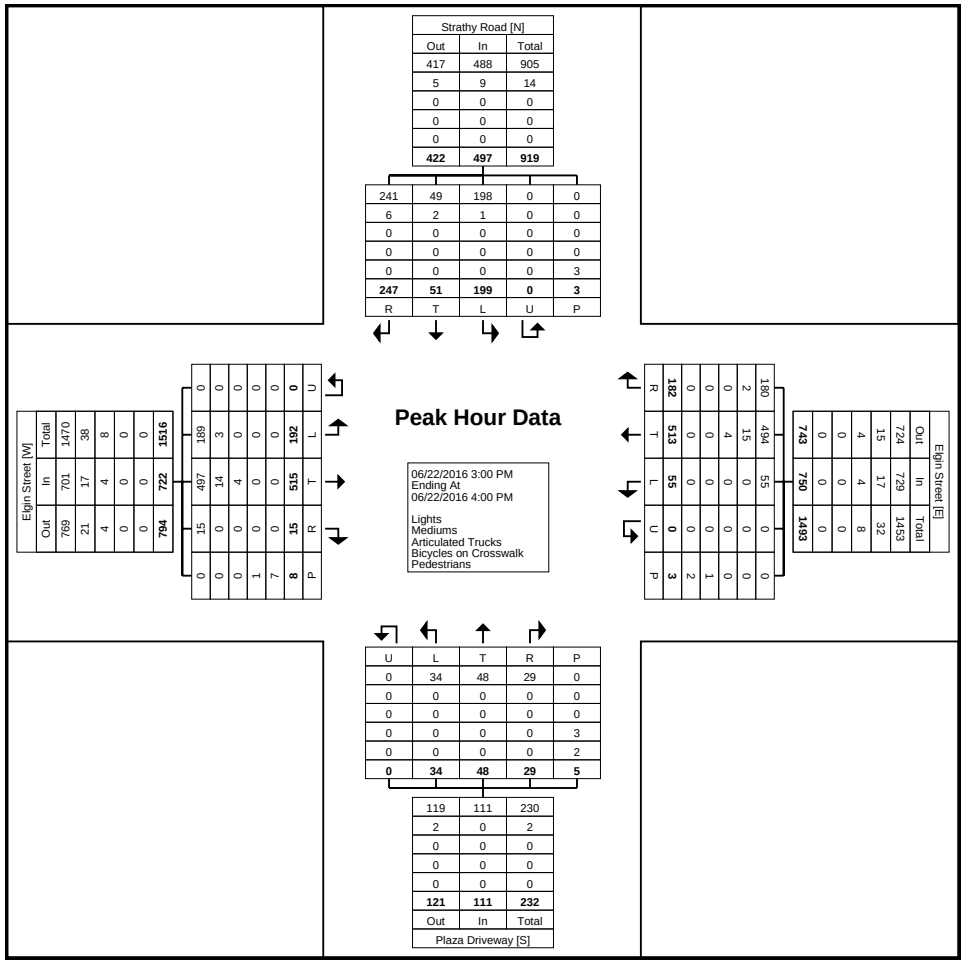
Turning Movement Peak Hour Data (3:00 PM)

Start Time	Elgin Street Eastbound						Elgin Street Westbound						Plaza Driveway Northbound						Strathy Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
3:00 PM	44	138	3	0	0	185	15	133	49	0	0	197	10	19	9	0	3	38	62	10	64	0	1	136	556
3:15 PM	51	119	6	0	4	176	13	123	50	0	0	186	8	11	4	0	0	23	51	15	68	0	0	134	519
3:30 PM	47	135	2	0	4	184	13	126	34	0	2	173	7	6	9	0	2	22	44	16	60	0	2	120	499
3:45 PM	50	123	4	0	0	177	14	131	49	0	1	194	9	12	7	0	0	28	42	10	55	0	0	107	506
Total	192	515	15	0	8	722	55	513	182	0	3	750	34	48	29	0	5	111	199	51	247	0	3	497	2080
Approach %	26.6	71.3	2.1	0.0	-	-	7.3	68.4	24.3	0.0	-	-	30.6	43.2	26.1	0.0	-	-	40.0	10.3	49.7	0.0	-	-	-
Total %	9.2	24.8	0.7	0.0	-	34.7	2.6	24.7	8.8	0.0	-	36.1	1.6	2.3	1.4	0.0	-	5.3	9.6	2.5	11.9	0.0	-	23.9	-
PHF	0.941	0.933	0.625	0.000	-	0.976	0.917	0.964	0.910	0.000	-	0.952	0.850	0.632	0.806	0.000	-	0.730	0.802	0.797	0.908	0.000	-	0.914	0.935
Lights	189	497	15	0	-	701	55	494	180	0	-	729	34	48	29	0	-	111	198	49	241	0	-	488	2029
% Lights	98.4	96.5	100.0	-	-	97.1	100.0	96.3	98.9	-	-	97.2	100.0	100.0	100.0	-	-	100.0	99.5	96.1	97.6	-	-	98.2	97.5
Mediums	3	14	0	0	-	17	0	15	2	0	-	17	0	0	0	0	-	0	1	2	6	0	-	9	43
% Mediums	1.6	2.7	0.0	-	-	2.4	0.0	2.9	1.1	-	-	2.3	0.0	0.0	0.0	-	-	0.0	0.5	3.9	2.4	-	-	1.8	2.1
Articulated Trucks	0	4	0	0	-	4	0	4	0	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	8
% Articulated Trucks	0.0	0.8	0.0	-	-	0.6	0.0	0.8	0.0	-	-	0.5	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.4
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	12.5	-	-	-	-	-	33.3	-	-	-	-	-	60.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	7	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	87.5	-	-	-	-	-	66.7	-	-	-	-	-	40.0	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Elgin Street & Strathy Road
Site Code:
Start Date: 06/22/2016



Turning Movement Peak Hour Data Plot (3:00 PM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Strathy Road & Walmart Entrance
Site Code:
Start Date: 06/22/2016

Turning Movement Data

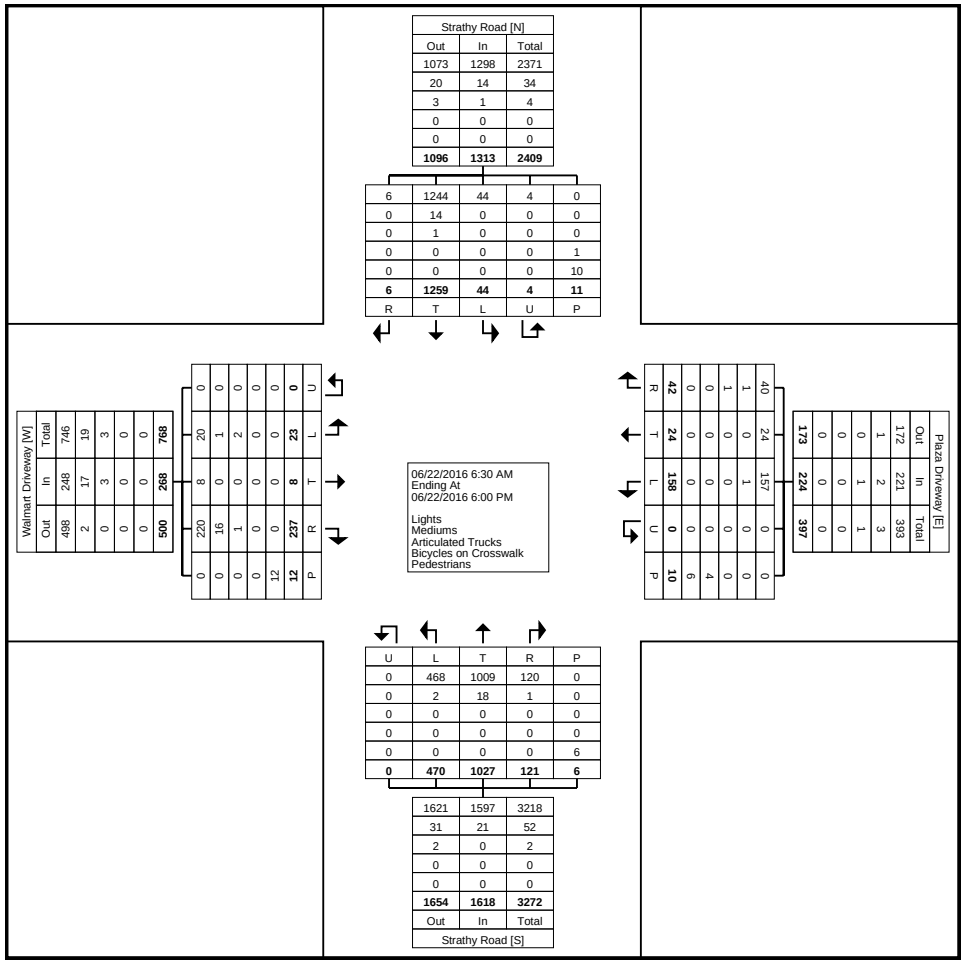
Start Time	Walmart Driveway Eastbound						Plaza Driveway Westbound						Strathy Road Northbound						Strathy Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	8	0	6	1	0	0	7	15
6:45 AM	0	0	1	0	0	1	0	0	1	0	0	1	3	16	0	0	0	19	0	9	0	0	0	9	30
Hourly Total	0	0	1	0	0	1	0	0	1	0	0	1	3	23	1	0	0	27	0	15	1	0	0	16	45
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	6	18	0	0	0	24	0	21	0	0	0	21	45
7:15 AM	0	0	2	0	0	2	0	0	0	0	1	0	4	27	1	0	0	32	0	21	0	0	0	21	55
7:30 AM	0	0	2	0	0	2	1	0	1	0	1	2	15	17	0	0	0	32	1	31	0	0	0	32	68
7:45 AM	0	0	6	0	1	6	2	0	0	0	0	2	10	26	0	0	0	36	1	35	1	0	0	37	81
Hourly Total	0	0	10	0	1	10	3	0	1	0	2	4	35	88	1	0	0	124	2	108	1	0	0	111	249
8:00 AM	3	1	2	0	1	6	0	0	0	0	0	0	6	26	3	0	0	35	0	31	0	0	0	31	72
8:15 AM	0	0	5	0	0	5	1	0	1	0	0	2	20	23	1	0	0	44	0	35	0	0	0	35	86
8:30 AM	1	0	6	0	0	7	3	1	0	0	0	4	14	36	1	0	0	51	1	50	0	0	0	51	113
8:45 AM	3	0	3	0	3	6	5	0	0	0	0	5	13	22	2	0	0	37	1	44	1	0	0	46	94
Hourly Total	7	1	16	0	4	24	9	1	1	0	0	11	53	107	7	0	0	167	2	160	1	0	0	163	365
9:00 AM	0	1	10	0	0	11	3	0	1	0	1	4	30	47	7	0	0	84	1	53	1	0	1	55	154
9:15 AM	0	0	5	0	1	5	4	2	2	0	0	8	29	61	4	0	0	94	3	50	0	0	0	53	160
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	1	15	0	1	16	7	2	3	0	1	12	59	108	11	0	0	178	4	103	1	0	1	108	314
3:00 PM	2	0	17	0	1	19	15	4	3	0	1	22	29	57	8	0	1	94	3	79	0	1	0	83	218
3:15 PM	5	1	21	0	2	27	10	2	2	0	0	14	29	61	7	0	0	97	2	81	0	1	0	84	222
3:30 PM	0	1	21	0	0	22	10	3	4	0	1	17	28	49	7	0	0	84	5	78	0	0	0	83	206
3:45 PM	0	0	15	0	2	15	11	2	3	0	2	16	35	51	8	0	2	94	2	66	0	0	1	68	193
Hourly Total	7	2	74	0	5	83	46	11	12	0	4	69	121	218	30	0	3	369	12	304	0	2	1	318	839
4:00 PM	1	1	13	0	0	15	9	1	2	0	0	12	31	55	10	0	0	96	1	80	0	0	0	81	204
4:15 PM	1	1	16	0	0	18	7	0	4	0	0	11	28	51	9	0	0	88	1	79	1	1	0	82	199
4:30 PM	2	1	18	0	0	21	16	3	3	0	1	22	37	75	10	0	0	122	8	74	1	0	2	83	248
4:45 PM	1	0	13	0	0	14	17	2	6	0	0	25	23	59	9	0	0	91	3	71	0	0	0	74	204
Hourly Total	5	3	60	0	0	68	49	6	15	0	1	70	119	240	38	0	0	397	13	304	2	1	2	320	855
5:00 PM	2	1	14	0	0	17	9	2	3	0	0	14	16	78	10	0	0	104	1	64	0	0	3	65	200
5:15 PM	1	0	12	0	1	13	12	2	2	0	0	16	31	63	8	0	1	102	3	76	0	1	0	80	211
5:30 PM	1	0	15	0	0	16	10	0	0	0	0	10	20	50	9	0	0	79	3	56	0	0	2	59	164
5:45 PM	0	0	20	0	0	20	13	0	4	0	2	17	13	52	6	0	2	71	4	69	0	0	2	73	181
Hourly Total	4	1	61	0	1	66	44	4	9	0	2	57	80	243	33	0	3	356	11	265	0	1	7	277	756
Grand Total	23	8	237	0	12	268	158	24	42	0	10	224	470	1027	121	0	6	1618	44	1259	6	4	11	1313	3423
Approach %	8.6	3.0	88.4	0.0	-	-	70.5	10.7	18.8	0.0	-	-	29.0	63.5	7.5	0.0	-	-	3.4	95.9	0.5	0.3	-	-	-
Total %	0.7	0.2	6.9	0.0	-	7.8	4.6	0.7	1.2	0.0	-	6.5	13.7	30.0	3.5	0.0	-	47.3	1.3	36.8	0.2	0.1	-	38.4	-
Lights	20	8	220	0	-	248	157	24	40	0	-	221	468	1009	120	0	-	1597	44	1244	6	4	-	1298	3364
% Lights	87.0	100.0	92.8	-	-	92.5	99.4	100.0	95.2	-	-	98.7	99.6	98.2	99.2	-	-	98.7	100.0	98.8	100.0	100.0	-	98.9	98.3

Mediums	1	0	16	0	-	17	1	0	1	0	-	2	2	18	1	0	-	21	0	14	0	0	-	14	54
% Mediums	4.3	0.0	6.8	-	-	6.3	0.6	0.0	2.4	-	-	0.9	0.4	1.8	0.8	-	-	1.3	0.0	1.1	0.0	0.0	-	1.1	1.6
Articulated Trucks	2	0	1	0	-	3	0	0	1	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	5
% Articulated Trucks	8.7	0.0	0.4	-	-	1.1	0.0	0.0	2.4	-	-	0.4	0.0	0.0	0.0	-	-	0.0	0.0	0.1	0.0	0.0	-	0.1	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	40.0	-	-	-	-	-	0.0	-	-	-	-	-	9.1	-	-
Pedestrians	-	-	-	-	12	-	-	-	-	-	6	-	-	-	-	-	6	-	-	-	-	-	10	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	60.0	-	-	-	-	-	100.0	-	-	-	-	-	90.9	-	-

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Strathy Road & Walmart Entrance
Site Code:
Start Date: 06/22/2016
Page No: 3



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Strathy Road & Walmart Entrance
Site Code:
Start Date: 06/22/2016

Turning Movement Peak Hour Data (8:30 AM)

Start Time	Walmart Driveway Eastbound						Plaza Driveway Westbound						Strathy Road Northbound						Strathy Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
8:30 AM	1	0	6	0	0	7	3	1	0	0	0	4	14	36	1	0	0	51	1	50	0	0	0	51	113
8:45 AM	3	0	3	0	3	6	5	0	0	0	0	5	13	22	2	0	0	37	1	44	1	0	0	46	94
9:00 AM	0	1	10	0	0	11	3	0	1	0	1	4	30	47	7	0	0	84	1	53	1	0	1	55	154
9:15 AM	0	0	5	0	1	5	4	2	2	0	0	8	29	61	4	0	0	94	3	50	0	0	0	53	160
Total	4	1	24	0	4	29	15	3	3	0	1	21	86	166	14	0	0	266	6	197	2	0	1	205	521
Approach %	13.8	3.4	82.8	0.0	-	-	71.4	14.3	14.3	0.0	-	-	32.3	62.4	5.3	0.0	-	-	2.9	96.1	1.0	0.0	-	-	-
Total %	0.8	0.2	4.6	0.0	-	5.6	2.9	0.6	0.6	0.0	-	4.0	16.5	31.9	2.7	0.0	-	51.1	1.2	37.8	0.4	0.0	-	39.3	-
PHF	0.333	0.250	0.600	0.000	-	0.659	0.750	0.375	0.375	0.000	-	0.656	0.717	0.680	0.500	0.000	-	0.707	0.500	0.929	0.500	0.000	-	0.932	0.814
Lights	2	1	20	0	-	23	15	3	3	0	-	21	84	161	13	0	-	258	6	194	2	0	-	202	504
% Lights	50.0	100.0	83.3	-	-	79.3	100.0	100.0	100.0	-	-	100.0	97.7	97.0	92.9	-	-	97.0	100.0	98.5	100.0	-	-	98.5	96.7
Mediums	1	0	4	0	-	5	0	0	0	0	-	0	2	5	1	0	-	8	0	2	0	0	-	2	15
% Mediums	25.0	0.0	16.7	-	-	17.2	0.0	0.0	0.0	-	-	0.0	2.3	3.0	7.1	-	-	3.0	0.0	1.0	0.0	-	-	1.0	2.9
Articulated Trucks	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	2
% Articulated Trucks	25.0	0.0	0.0	-	-	3.4	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.5	0.0	-	-	0.5	0.4
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-
Pedestrians	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-

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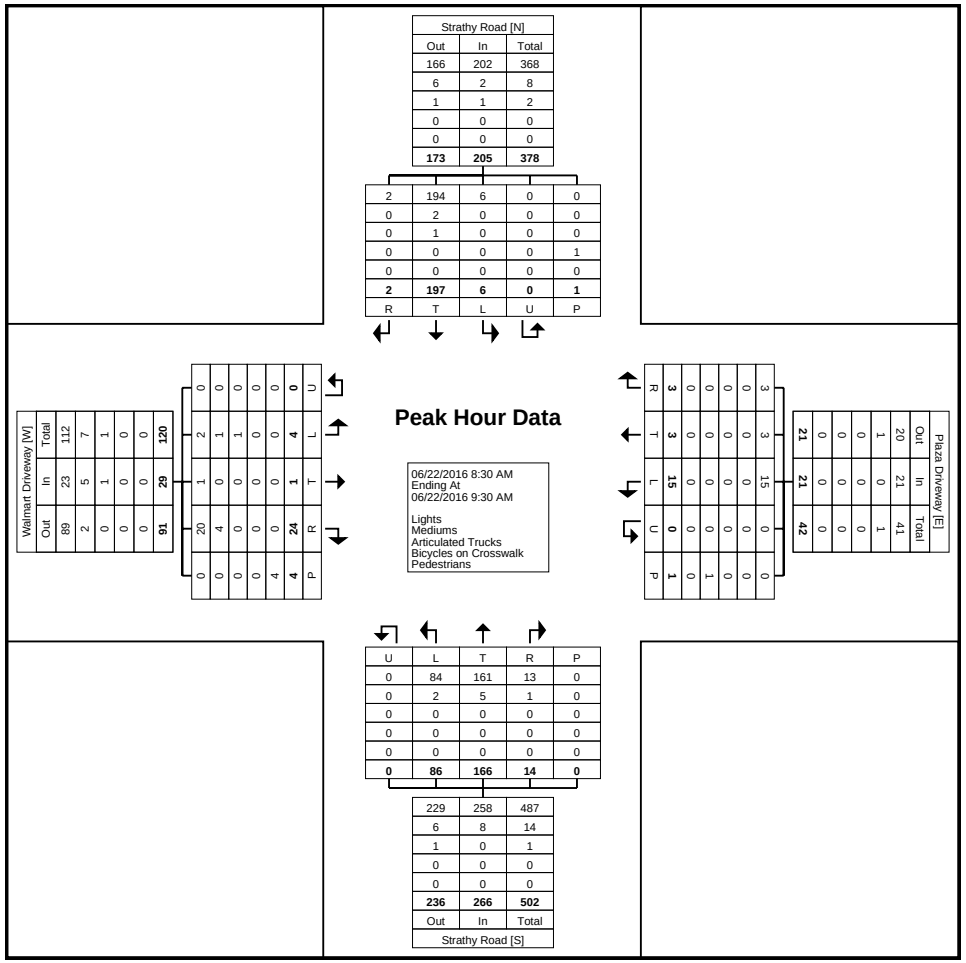
Count Name: Strathy Road & Walmart Entrance
Site Code:
Start Date: 06/22/2016



Turning Movement Peak Hour Data Plot (8:30 AM)

Paradigm Transportation Solutions Limited
22 King Street South, Suite 300

Waterloo, Ontario, Canada N2J 1N8
519-896-3163 cbowness@ptsl.com

Count Name: Strathy Road & Walmart Entrance
Site Code:
Start Date: 06/22/2016

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Walmart Driveway Eastbound						Plaza Driveway Westbound						Strathy Road Northbound						Strathy Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:30 PM	2	1	18	0	0	21	16	3	3	0	1	22	37	75	10	0	0	122	8	74	1	0	2	83	248
4:45 PM	1	0	13	0	0	14	17	2	6	0	0	25	23	59	9	0	0	91	3	71	0	0	0	74	204
5:00 PM	2	1	14	0	0	17	9	2	3	0	0	14	16	78	10	0	0	104	1	64	0	0	3	65	200
5:15 PM	1	0	12	0	1	13	12	2	2	0	0	16	31	63	8	0	1	102	3	76	0	1	0	80	211
Total	6	2	57	0	1	65	54	9	14	0	1	77	107	275	37	0	1	419	15	285	1	1	5	302	863
Approach %	9.2	3.1	87.7	0.0	-	-	70.1	11.7	18.2	0.0	-	-	25.5	65.6	8.8	0.0	-	-	5.0	94.4	0.3	0.3	-	-	-
Total %	0.7	0.2	6.6	0.0	-	7.5	6.3	1.0	1.6	0.0	-	8.9	12.4	31.9	4.3	0.0	-	48.6	1.7	33.0	0.1	0.1	-	35.0	-
PHF	0.750	0.500	0.792	0.000	-	0.774	0.794	0.750	0.583	0.000	-	0.770	0.723	0.881	0.925	0.000	-	0.859	0.469	0.938	0.250	0.250	-	0.910	0.870
Lights	6	2	54	0	-	62	54	9	14	0	-	77	107	271	37	0	-	415	15	282	1	1	-	299	853
% Lights	100.0	100.0	94.7	-	-	95.4	100.0	100.0	100.0	-	-	100.0	100.0	98.5	100.0	-	-	99.0	100.0	98.9	100.0	100.0	-	99.0	98.8
Mediums	0	0	3	0	-	3	0	0	0	0	-	0	0	4	0	0	-	4	0	3	0	0	-	3	10
% Mediums	0.0	0.0	5.3	-	-	4.6	0.0	0.0	0.0	-	-	0.0	0.0	1.5	0.0	-	-	1.0	0.0	1.1	0.0	0.0	-	1.0	1.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	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	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	100.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	0.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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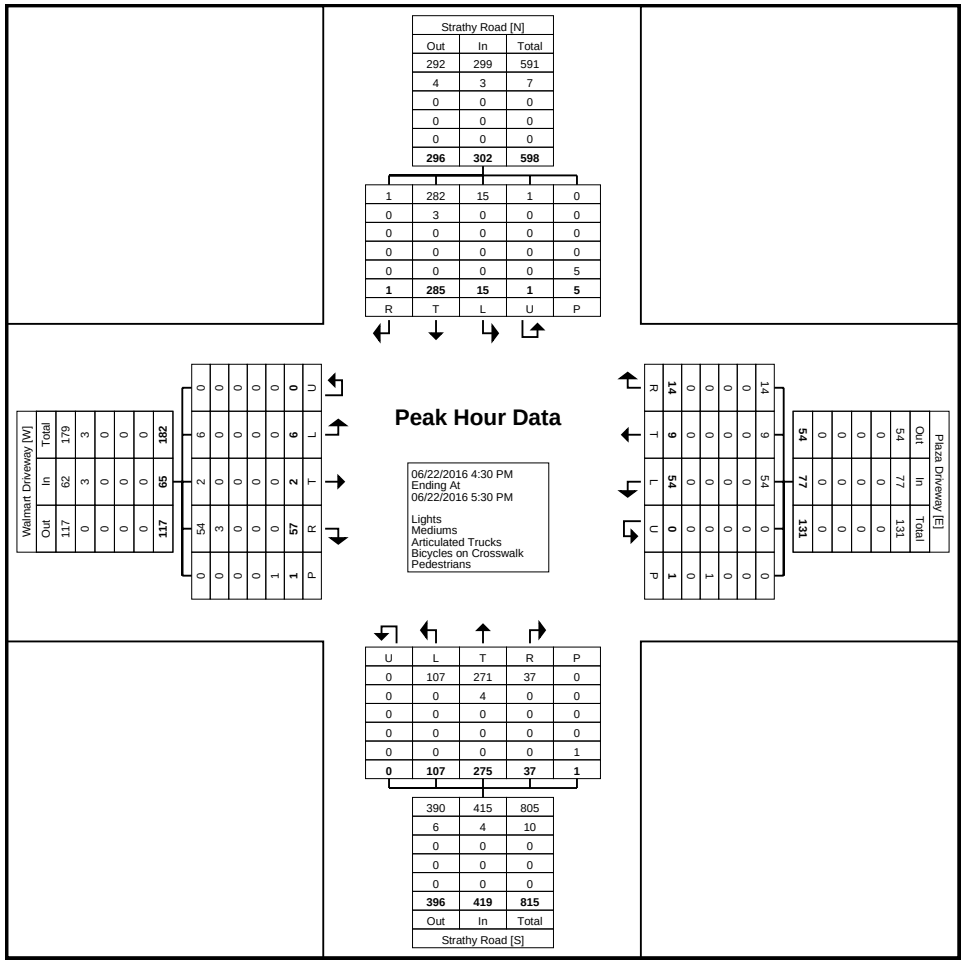


Turning Movement Peak Hour Data Plot (4:30 PM)

Appendix B

Signal Timing Plans

MICROPROCESSOR MODEL 170

LOCATION Hwy 2 and STRATHY Road

DISTRICT 43 - BANCROFT

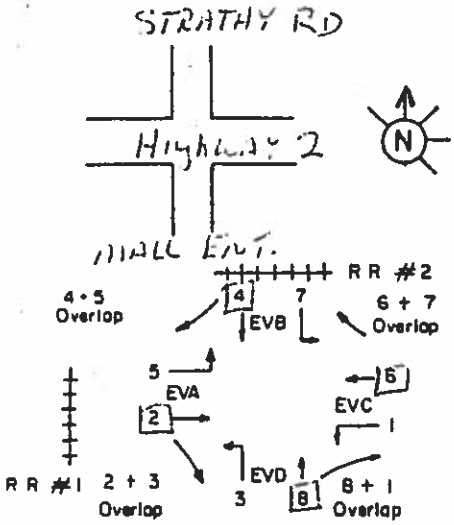
TIMING BASED ON T.M DATED JULY 94

PROGRAM NUMBER (C-C-0) 114

TIMING INSTALLATION DATE [illegible] 4/94

INSTALLED BY [illegible]

PROM CHECK SUM 1(F-9-A) 77 ; 2 (F-9-B) 124



FAZE FUNCTION FLAGS		1	2	3	4	5	6	7	8
PERMIT	0		✓		✓		✓		✓
RED LOCK	1								
AMBER LOCK	2								
VEH RECALL	3								
PED. RECALL	4		✓				✓		
VEH MAX. RECALL	5								
OVERLAP A	6								
OVERLAP B	7								
DBL. ENTRY	8		✓		✓		✓		✓
RED TIMING RNG.	9								
ARROW ADV. GREEN	A								
RED REST	B								
REST IN WALK	C		✓				✓		
FLASHING GREEN	D								
STARTUP	E		✓				✓		
(Reserved)	F								

KEYSTROKES F – F – FUNCTION #

LAG FAZES	1	2	3	4	5	6	7	8
LAGS C-F-0		✓		✓		✓		✓

(C-0-6): 7

FAZE AND PREEMPT TIMES		1 (WBLT)	2	3	4	5 (EBLT)	6	7	8	PREEMPT	E	
WALK	0		15		20		15		20	RR1 DELAY		0
FLASH D/W	1		5		5		5		5	RR1 CLEAR		1
MIN. GREEN	2	8	20		10	8	20		10	EV A DELAY		2
TYPE 3 DET.	3									EV A CLEAR		3
ADD/VEH	4	•	•	•	•	•	•	•	•	EV B DELAY		4
VEH. EXTEN.	5	3.0	4.0	•	3.0	3.0	4.0	•	3.0	EV B CLEAR		5
MAX. GAP	6	3.0	4.0	•	3.0	3.0	4.0	•	3.0	EV C DELAY		6
MIN. GAP	7	3.0	4.0	•	3.0	3.0	4.0	•	3.0	EV C CLEAR		7
MAX. EXTEN.	8	15	25		15	15	25		15	EV D DELAY		8
MAX 2	9									EV D CLEAR		9
CALL TO FAZE	A									RR2 DELAY		A
GRN CLEAR	B	•		•		•		•		RR2 CLEAR		B
REDUCE BY	C	•	•	•	•	•	•	•	•	EV CLR. TMR.		C
REDUCE EVERY	D	•	•	•	•	•	•	•	•	EV DLY. TMR		D
AMBER	E	3.0	4.1	•	4.1	3.0	4.1	•	4.1	RR CLR. TMR.		E
RED CLEAR	F	1.0	2.1	•	2.4	1.0	2.1	•	2.4	RR DLY. TMR.		F

KEYSTROKES F – FAZE # – INTERVAL #

MAX INITIAL (F-0-E): 0

RED REVERT (F-0-F): 5.0

PREFERRED LEFT TURN: MAIN ST. (F-0-C)_____ (1 or 5) or SIDE ST. (F-0-D)_____ (3 or 7)

EMERG. VEH. FAZES: EVA - FAZE 2 WITH (F-C-A)_____ (5 or 6)

EVB - FAZE 4 WITH (F-C-B)_____ (7 or 8)

DETECTION FAZE	1	2		3	4		5	6		7	8	
		Pres.	L.D		Pres.	L.D.		Pres.	L.D.		Pres	L.D
DELAY					10						10	
CARRY OVER	•	•	•	•	•	•	•	•	•	•	•	•

Pres. Presence Detection at Stop Bar L.D. Long Distance Detection

NOTE EV Delays must be greater than F1, F3, F5 or F7 Minimum Greens

Installed Jan 9/95 RP

MICROPROCESSOR MODEL 170 "PRETIMED OPERATION"

TIMINGS TO BE USED DURING LOSS OF DETECTION

LOCATION HWY 2 at STRATHY ROAD DISTRICT 43-BANCROFT

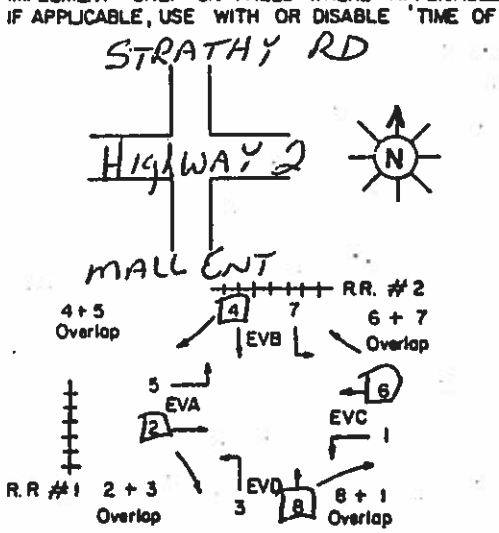
TIMING BASED ON T.M. DATED JULY 94

PROGRAM NUMBER (C-C-0) 114

RECORD INSTALLATION DATES ON REVERSE SIDE

CHANGES FROM NORMAL TIMING ARE CIRCLED.
IMPLEMENT ONLY ON FAZES WHERE APPLICABLE.
IF APPLICABLE, USE WITH OR DISABLE 'TIME OF DAY FUNCTIONS'

PROM CHECK SUM 1(F-9-A) 77 ; 2 (F-9-B) 124



LAG FAZES	1	2	3	4	5	6	7	8
LAGS C-F-0		✓		✓		✓		✓

(C-0-6) = 7

FAZE FUNCTION FLAGS		FAZE # 1	2	3	4	5	6	7	8
PERMIT	0		✓		✓		✓		✓
RED LOCK	1								
AMBER LOCK	2								
VEH RECALL	3								
PED RECALL	4		✓				✓		
VEH. MAX. RECALL	5		✓		✓		✓		✓
OVERLAP A	6								
OVERLAP B	7								
DBL. ENTRY	8		✓		✓		✓		✓
RED TIMING RNG	9								
ARROW ADV GREEN	A								
RED REST	B								
REST IN WALK	C		✓				✓		
FLASHING GREEN	D								
STARTUP	E		✓				✓		
(Reserved)	F								

KEYSTROKES: F-F- FUNCTION #

KEYSTROKES F-FAZE # - INTERVAL #

FAZE AND PREEMPT TIMES		FAZE # 1	2	3	4	5	6	7	8	PREEMPT	E	
WALK	0		15		20		15		20	RR1 DELAY		0
FLASH D/W	1		5		5		5		5	RR1 CLEAR		1
MIN. GREEN	2		20		10		20		10	EV A DELAY		2
TYPE 3 DET.	3									EV A CLEAR		3
ADD/VEH	4	.	.	.	.	.	.	.	.	EV B DELAY		4
VEH. EXTEN	5	.	4.0	.	3.0	.	4.0	.	3.0	EV B CLEAR		5
MAX. GAP	6	.	4.0	.	3.0	.	4.0	.	3.0	EV C DELAY		6
MIN. GAP	7	.	4.0	.	3.0	.	4.0	.	3.0	EV C CLEAR		7
MAX. EXTEN	8		10		5		10		5	EV D DELAY		8
MAX. 2	9									EV D CLEAR		9
CALL TO FAZE	A									RR2 DELAY		A
GRN CLEAR	B	.		.		.		.		RR2 CLEAR		B
REDUCE BY	C	.	.	.	.	.	.	.	.	EV CLR. TMR.		C
REDUCE EVERY	D	.	.	.	.	.	.	.	.	EV DLY. TMR		D
AMBER	E	.	4.1	.	4.1	.	4.1	.	4.1	RR CLR. TMR.		E
RED CLEAR	F	.	2.1	.	2.4	.	2.1	.	2.4	RR DLY. TMR.		F

MAX. INITIAL (F-0-E) = Ø

RED REVERT (F-0-F) = 5

PREFERRED LEFT TURN: MAIN ST. (F-0-C) _____ (1 or 5) or SIDE ST. (F-0-D) _____ (3 or 7)

EMERG. VEH. FAZES: EVA-FAZE 2 WITH (F-C-A) _____ (5 or 6)
EVB-FAZE 4 WITH (F-C-B) _____ (7 or 8)

DETECTION FAZE	1	2 Pres.	2 L.D.	3	4 Pres.	4 L.D.	5	6 Pres.	6 L.D.	7	8 Pres.	8 L.D.
DELAY					10						10	
CARRY OVER	.	.	.	.	.	.	.	.	.	.	.	.

Pres. Presence Detection of Stop Bar L.D. Long Distance Detection

May, 1986

NOTE: EV Delays must be greater than F1, F3, F5 or F7 Minimum Greens

Programmed EPAC Data IP

9/19/2007
2:38:45PM

Intersection Name: Elgin and Strathy **Intersection Alias: 111**

Access Code: 9999 Channel: 17 Address: 001 IP: 172.16.16.111 / 24 Revision: 3.33e

Access Data

Port 2 Comm :1200 Baud
Port 3 Comm :1200 Baud

Phase Data

Vehical Basic Timings / Vehical Density Timings

Phase	Min_Grn	Passage	Max1	Max2	Yellow	All Red	Added Initial	Max_Initial	Time B4 Reduction	Cars Before	Time To Reduce	Min_Gap
1	6	3.0	18	18	3.0	1.0	0.0	0	0	0	0	0.0
2	10	3.0	30	30	4.0	2.0	0.0	0	0	0	0	0.0
3	6	3.0	18	18	3.0	1.0	0.0	0	0	0	0	0.0
4	12	3.0	20	20	4.0	2.0	0.0	0	0	0	0	0.0
5	6	3.0	18	18	3.0	1.0	0.0	0	0	0	0	0.0
6	10	3.0	30	30	4.0	2.0	0.0	0	0	0	0	0.0
7	6	3.0	18	18	3.0	1.0	0.0	0	0	0	0	0.0
8	12	3.0	20	20	4.0	2.0	0.0	0	0	0	0	0.0

Pedestrian Timing / Extended Actuated / General Control / Miscellaneous

Phase	Walk	Ped Clear	Flashing Walk	Ped Clear	Rest in Walk	Initialize	Non-Act Response	Veh Recall	Ped Recall	Recall Delay	Non Lock	Dual Entry	Last Car Passage	Conditional Service	No Simultaneous Gap Out
1	0	0	No	0	No	Inactive	None	None	None	0	Yes	No	No	No	No
2	10	16	No	2	No	Yellow	NonActI	Max	Non Act	0	Yes	Yes	No	No	No
3	0	0	No	0	No	Inactive	None	None	None	0	Yes	No	No	No	No
4	10	23	No	2	No	Inactive	NonActII	None	None	0	Yes	Yes	No	No	No
5	0	0	No	0	No	Inactive	None	None	None	0	Yes	No	No	No	No
6	10	16	No	2	No	Yellow	NonActI	Max	Non Act	0	Yes	Yes	No	No	No
7	0	0	No	0	No	Inactive	None	None	None	0	Yes	No	No	No	No
8	10	23	No	2	No	Inactive	NonActII	None	None	0	Yes	Yes	No	No	No

Special Sequence

Phase	Phase Omit	Minus Yellow Phase	Omit Call
1	2	0	0
2	0	0	0
3	4	0	0
4	0	0	0
5	6	0	0
6	0	0	0
7	8	0	0
8	0	0	0

Vehical Detector Phase Assignment

Assigned Phase	Mode	Switched Phase	Extend	Delay

Default Data

Pedestrian Detector

Default Data

Special Detector Phase Assignment

Assign Phase	Mode	Switched Phase	Extend	Delay

Default Data

Unit Data

General Control

Startup Time: 5sec Startup State: Flash Red Revert: 4sec

Auto Ped Clear: No Stop Time Reset: No Alternate Sequence: 0

ABC connector Input Modes: 0

ABC connector Output Modes: 0

D connector Input Modes: 0

D connector Output Modes: 0

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash

Test A = Flash

Phase	Flash Entry Phase	Flash Exit Phase

Default Data - No Flash

Channel	Flash Color	Flash Alternat

Default Data - No Flash

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	Overlaps															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	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
Plus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
1	1	2
2	1	3
3	1	4
4	1	1
5	2	6
6	2	7
7	2	8
8	2	5

Phase(s)

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

Alternate Sequences

Alternate Sequences

Port 1 Data

BIU Addr	Port Status	Message 40

Default Data

Phase
D (s)

No
Alternate
Sequences

Channel Assignment

Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set	
Ph.1 Veh	1	1 - Ph.1 RYG	1	Ph.2 Veh	2	2 - Ph.2 RYG	2	Ph.3 Veh	3	3 - Ph.3 RYG	3
Ph.4 Veh	4	4 - Ph.4 RYG	4	Ph.5 Veh	5	5 - Ph.5 RYG	5	Ph.6 Veh	6	6 - Ph.6 RYG	6
Ph.7 Veh	7	7 - Ph.7 RYG	7	Ph.8 Veh	8	8 - Ph.8 RYG	8	Ph.2 Ped	9	10 - Ph.2 DPW	10
Ph.4 Ped	10	12 - Ph.4 DPW	12	Ph.6 Ped	11	14 - Ph.6 DPW	14	Ph.8 Ped	12	16 - Ph.8 DPW	16
Ph.1 OLP	13	17 - Ph.1 RYG	17	Ph.2 OLP	14	18 - Ph.2 RYG	18	Ph.3 OLP	15	19 - Ph.3 RYG	19
Ph.4 OLP	16	20 - Ph.4 RYG	20	Ph.1 Ped	17	9 - Ph.1 DPW	9	Ph.3 Ped	18	11 - Ph.3 DPW	11
Ph.5 Ped	19	13 - Ph.5 DPW	13	Ph.7 Ped	20	15 - Ph.7 DPW	15				

Coordination Data

General Coordination Data

Operation Mode: 1=Auto
Coordination Mode: 1=Yield
Maximun Mode: 0=Inhibit
Correction Mode: 2=Short Way

Offset Mode: 0=Beg Grn
Force Mode: 1=Cycle
Max Dwell Time: 0
Yield Period: 0

Manual Dial: 1
Manual Split: 1
Manual Offset: 1

Dial/Split	Cycle
1/1	100
1/2	110
1/3	120
1/4	140

Split Times and Phase Mode:

Dial 1 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	12	0=Actuated	2	40	1=Coordinate	3	12	0=Actuated	4	36	0=Actuated
5	12	0=Actuated	6	40	1=Coordinate	7	12	0=Actuated	8	36	0=Actuated

Dial 1 / Split 2

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	12	0=Actuated	2	50	1=Coordinate	3	12	0=Actuated	4	36	0=Actuated
5	12	0=Actuated	6	50	1=Coordinate	7	12	0=Actuated	8	36	0=Actuated

Dial 1 / Split 3

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	12	0=Actuated	2	56	1=Coordinate	3	12	0=Actuated	4	40	0=Actuated
5	19	0=Actuated	6	49	1=Coordinate	7	14	0=Actuated	8	38	0=Actuated

Dial 1 / Split 4

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	12	0=Actuated	2	74	1=Coordinate	3	12	0=Actuated	4	42	0=Actuated
5	18	0=Actuated	6	68	1=Coordinate	7	18	0=Actuated	8	36	0=Actuated

Traffic Plan Data

Plan: **1/1/1**	Offset Time: 73	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/2/1**	Offset Time: 83	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/3/1**	Offset Time: 41	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/4/1**	Offset Time: 104	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2 Cycle Zero Reference Hours: 24 Min: 0

End of Daylight Saving Month: 11 Week: 1

Source Day	Equate Days 1	2	3	4	5	6	7
1	7	59	0	0	0	0	0
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	0:1	0/0/4																	
2	1	8:0	1/2/1																	
3	1	20:0	0/0/4																	
4	2	0:1	0/0/4																	
5	2	6:0	1/1/1																	
6	2	9:0	1/2/1																	
7	2	15:0	1/3/1																	
8	2	19:0	1/2/1																	
9	2	21:30	0/0/4																	

AUX Events

Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8

Event	Month	Day	Year	Special Day	Special Week
1	1	1	0	59	0
2	7	1	0	59	0
3	12	25	0	59	0
4	12	26	0	59	0

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8
Special Function 1	X							
Special Function 2		X						
ial Function 3			X					
Special Function 4				X				
Special Function 5					X			
Special Function 6						X		
Special Function 7							X	
Special Function 8								X

Phase Function

Phase Function Map	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
Phase 8 Max2								X								
e 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Dimming Data

Channel	Red	Yellow	Green	Alternate

Default Data - No Dimming Programmed

Preemption Data

General Preemption Data

Ring	Min Grn/Walk Time
1	10
2	10
3	10
4	10

sh > Preepmt 1 | Preepmt 2 = Preempt 3 | Preepmt 4 = Preempt 5
Preepmt 1 > Preempt 2 | Preepmt 3 = Preempt 4 | Preepmt 5 = Preempt 6

Preempt Timers

Preempt	Non-Locking	Link to Preempt	Delay	Extend	Duration	MaxCall	Lock-Out	Select Ped Clear	Select Yel	Select Red	Track Grn	Track Ped	Track Yel	Track Red	Dwell Green	Return Ped Clear	Return Yel	Return Red
1	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
2	No	0	0	0	0	0	0	8	4.0	2.0	0	0	4.0	0.0	10	0	4.0	2.0
3	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
4	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
5	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
6	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0

Preempt 1

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 2

Phase	Exit Phase	Exit Calls
2	Yes	No
6	Yes	No

Preempt 3

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 4

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 5

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 6

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Priority Timers

Priority	Non-Locking	Delay	Extend	Duration	Dwell	Max_Call	Lock-Out	Skip Phases
1	No	0	0	0	0	0	0	0=Do not Skip Phases
2	No	0	0	0	0	0	0	0=Do not Skip Phases
3	No	0	0	0	0	0	0	0=Do not Skip Phases
4	No	0	0	0	0	0	0	0=Do not Skip Phases
5	No	0	0	0	0	0	0	0=Do not Skip Phases
6	No	0	0	0	0	0	0	0=Do not Skip Phases

Priority 1

Phase	Exit Phase	Exit Calls

Priority 2

Phase	Exit Phase	Exit Calls

Priority 3

Phase	Exit Phase	Exit Calls

Priority 4

Phase	Exit Phase	Exit Calls

Priority 5

Phase	Exit Phase	Exit Calls

Priority 6

Phase	Exit Phase	Exit Calls

Preempt 1

Vehical Phases

Ph.	Track	Dwell	Cycle

Default Data

Pedestrian Phases

Ph	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp	Track	Dwell	Cycle

Default Data

Preempt 2

Vehical Phases

	Track	Dwell	Cycle
4	Red	Green	No
8	Red	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp	Track	Dwell	Cycle

Default Data

Preempt 3

Vehical Phases
Ph. Track Dwell Cycle

Default Data

Pedestrian Phases
Ph. Track Dwell Cycle

Default Data

Overlaps
Ovlp. Track Dwell Cycle

Default Data

Preempt 4

Vehical Phases
Ph. Track Dwell Cycle

Default Data

Pedestrian Phases
Ph. Track Dwell Cycle

Default Data

Overlaps
Ovlp. Track Dwell Cycle

Default Data

Preempt 5

Vehical Phases
Ph. Track Dwell Cycle

Default Data

Pedestrian Phases
Ph. Track Dwell Cycle

Default Data

Overlaps
Ovlp. Track Dwell Cycle

Default Data

Preempt 6

Vehical Phases
Ph. Track Dwell Cycle

Default Data

Pedestrian Phases
Ph. Track Dwell Cycle

Default Data

Overlaps
Ovlp. Track Dwell Cycle

Default Data

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15 1st Phone:

Local Free: No Cycle Failure: No Coord Failure: No Conflict Flash: No Remote Flash: No 2nd Phone:

Local Fash: No Cycle Fault: No Coord Fault: No Premption: No Voltage Monitor: No

Special Status 1: No Special Status 2: No Special Status 3: No Special Status 4: No Special Status 5: No Special Status 6: No

Traffic Responsive

System Detector Channel Veh/Hr Average Time(mins) Occupancy Correction/10 Min Volume % Queue 1 Detectors System Detectors Weight Factor Queue 2 Detectors System Detectors Weight Factor

Default Data

Default Data

Default Data

Sample Interval:

Queue: 1 Input Selection: 0=Average
Detector Failed Level : 0

Queue: 2 Input Selection: 0=Average
Detector Failed Level : 0

Queue: Level Enter Leave Dial / Split / Offset
/ /

Default Data

Vehical Detector
Diagnostic Value 0
Detector Max Presence No Activity Erratic Count

Default Data - Diag 0 Values

Vehical Detector
Diagnostic Value 1
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Special Detector
Diagnostic Value 0
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 0 Vali

Pedestrian Detector
Diagnostic Value 0
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector
Diagnostic Value 1
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Special Detector
Diagnostic Value 1
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:
Detector 1 Detector_2 Distance :

Measurement:

Default Data

Dial/Split/Offset
//

Default Data

Speed Trap Low Treshold Speed Trap High Treshold

Volume Detector Data

Volume Detector Number	Controller Detector Channel	Report Interval

Default Data

20. EPAC300 PROGRAM LOG

Prepared By .....: _____ Date: ___/___/___

Approved By.....: _____ Date: ___/___/___

Intersection Name.....: ELGIN & STRATHY

UTILITIES - ACCESS

Access Code .....: _____ Codes: Four Digits (0000 - 9999)

PHASE DATA - VEHICLE TIMINGS

Basic Times — Phase:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	6	10	6	12	6	10	6	12								
Passage Time	30	30	30	30	30	30	30	30								
Maximum No 1	18	30	18	20	18	30	18	20								
Maximum No 2	18	30	18	20	18	30	18	20								
Yellow Change	30	40	30	40	30	40	30	40								
Red Clearance	10	20	10	20	10	20	10	20								

Density Times — Phase:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Seconds/Actuation																
Maximum Initial																
Time B4 Reduction																
Cars B4 Reduction																
Time To Reduce																
Minimum Gap																

PHASE DATA - PEDESTRIAN TIMINGS & CONTROL

Pedestrian Times — Phase:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Walk		10		10		10		10								
Pedestrian Clearance		16		23		16		23								

Pedestrian Control — Phase:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flashing Walk																
Extended Pedestrian Clear		2		2		2		2								
Act Rest In Walk																

Pedestrian Control Entry: "1" = Yes & "0" = No

PHASE DATA - VEHICLE CONTROL

Veh Control — Phase:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Non-Lock Memory	1	1	1	1	1	1	1	1								
Dual Entry		1		1		1		1								
Last Car Passage																
Conditional Service																
No Simultaneous Gap																

Vehicle Control Entry: "1" = Yes & "0" = No

PHASE DATA - GENERAL CONTROL

General Control — Phase:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Initialization	1	3	1	1	1	3	1	1								
Non-Act Response	0	1	0	2	0	1	0	2								
Vehicle Recall		3				3										
Pedestrian Recall		3				3										
Recall Delay																

Codes	0	1	2	3	4
Initialization	NONE	INACTIVE	RED	YELLOW	GREEN
Non-Act Response	NONE	TO NA I	TO NA II	TO BOTH	----
Vehicle Recall	NONE	1 CALL	MINIMUM	MAXIMUM	SOFT
Pedestrian Recall	NONE	1 CALL	PED	NA	NA+

PHASE DATA - SEQUENCE CONTROL

Sequence Control — Phase:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phase Omit	2		4		6		8									
Phase - Yellow																
Phase Omit Call																

Codes	0	01 TO 16 (# - PHASE)
Phase Omit	NONE	Phase Is Omitted By # - Phase On
Phase - Yellow	NONE	Phase Yellow Is Omitted By # - Phase Yellow
Phase Omit Call	NONE	When Omitted, Dets Call # Phase

PHASE DATA - VEH DETECTOR CONTROL

Control — Detector:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Assigned Phase	1	2	3	4	5	6	7	8								
Operation Mode																
Switch																
Extend Time																
Delay Time																

Control — Detector:	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Assigned Phase																
Operation Mode																
Switch																
Extend Time																
Delay Time																

Codes	0	1	2	3	4
Operation Mode	NORM VEH	NORM PED	ONE CALL	ST BAR A	ST BAR B
Assigned Phase	NONE	Detector Is Assigned To # - Phase			
Switch	NONE	Detector Is Switched To # - Phase When The Assigned Phase Is Yellow / Red & # - Phase Is Green			

PHASE DATA - VEH DETECTOR CONTROL

Control — Detector:	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Assigned Phase ..... :																
Operation Mode ..... :																
Switch ..... :																
Extend Time ..... :																
Delay Time ..... :																

Control — Detector:	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
Assigned Phase ..... :																
Operation Mode ..... :																
Switch ..... :																
Extend Time ..... :																
Delay Time ..... :																

Codes ..... :	0	1	2	3	4
Operation Mode ..... :	NORM VEH	NORM PED	ONE CALL	ST BAR A	ST BAR B
Assigned Phase ..... :	NONE	Detector Is Assigned To # - Phase			
Switch ..... :	NONE	Detector Is Switched To # - Phase When The Assigned Phase Is Yellow / Red & # - Phase Is Green			

PHASE DATA - PED DETECTOR CONTROL

Control — Detector:	1	2	3	4	5	6	7	8
Assigned Phase ..... :	1	2	3	4	5	6	7	8
Operation Mode ..... :	1	1	1	1	1	1	1	1
Switch ..... :								
Extend Time ..... :								
Delay Time ..... :								

Codes ..... :	0	1	2	3	4
Operation Mode ..... :	NORM VEH	NORM PED	ONE CALL	ST BAR A	ST BAR B
Assigned Phase ..... :	NONE	Detector Is Assigned To # - Phase			
Switch ..... :	NONE	Detector Is Switched To # - Phase When The Assigned Phase Is Yellow / Red & # - Phase Is Green			

PHASE DATA - SPC DETECTOR CONTROL

Control — Detector:	1	2	3	4	5	6	7	8
Assigned Phase ..... :								
Operation Mode ..... :								
Switch ..... :								
Extend Time ..... :								
Delay Time ..... :								

Codes ..... :	0	1	2	3	4
Operation Mode ..... :	NORM VEH	NORM PED	ONE CALL	ST BAR A	ST BAR B
Assigned Phase ..... :	NONE	Detector Is Assigned To # - Phase			
Switch ..... :	NONE	Detector Is Switched To # - Phase When The Assigned Phase Is Yellow / Red & # - Phase Is Green			

UNIT DATA - STARTUP & MISC

Startup Time..... :	5	Time In Seconds
Startup State ..... :		0-Flash 1-Red
Red Revert..... :	40	Time In Tenth Second
Auto Pedestrian Clear..... :		0-No 1-Yes
Stop Time Reset ..... :		0-No 1-Yes
Alternate Sequence..... :		00-15 Alt Sequence ##

UNIT DATA - AUTOMATIC FLASH

TST A = Flash ..... : ____ 0 - NO / 1 - YES For TEST A Input For An Automatic Flash Input

Control Channel:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Flash ..... :																								
Alt Flash ..... :																								

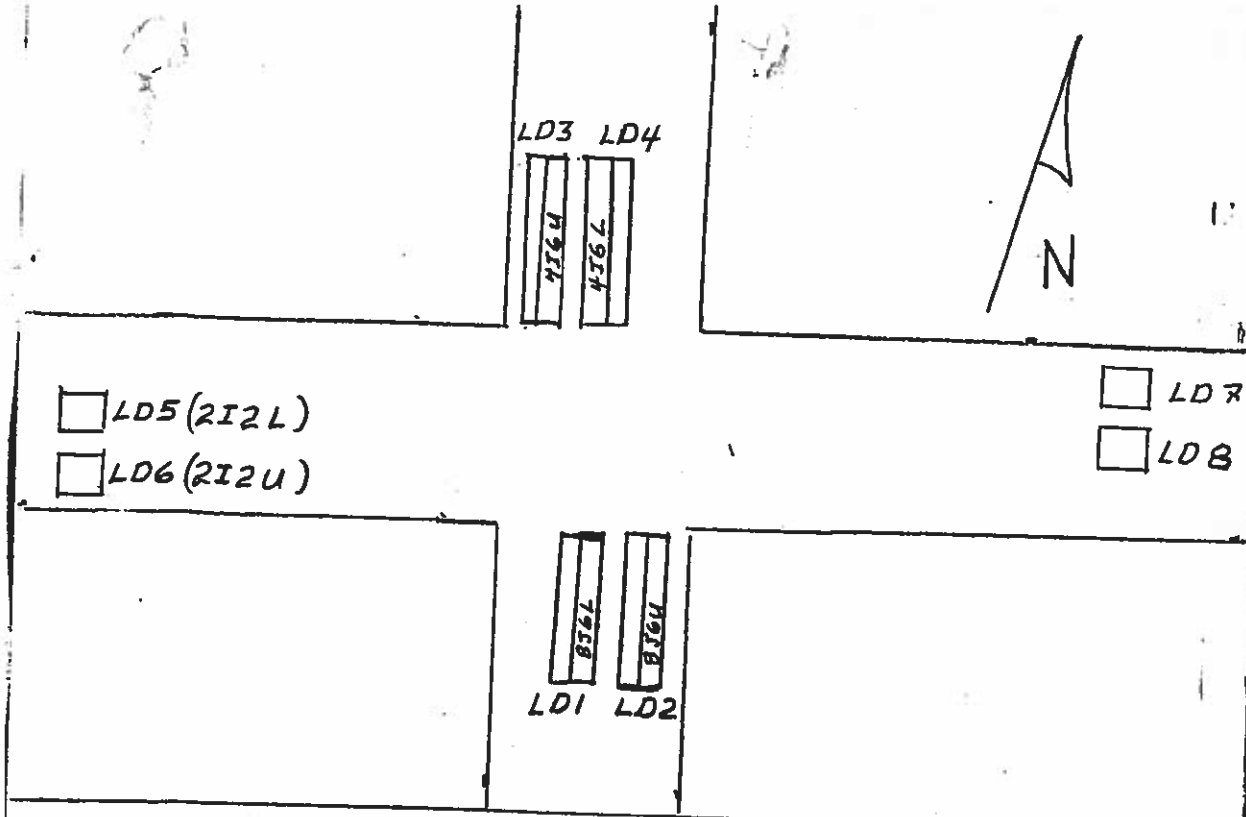
Control Phase:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flash Entry Phase..... :																
Flash Exit Phase ..... :																

Codes ..... :	0	1	2	
Flash ..... :	NO	RED	YEL	All = 0 Then Voltage Monitor Flash
Alt Flash ..... :	NO	YES	--	Used To Provide Wig-Wag Flashing
Flash Entry Phase..... :	NO	YES	--	Phase(s) To Precede Automatic Flash
Flash Exit Phase ..... :	NO	YES	--	Phase(s) To Follow Automatic Flash

UNIT DATA - OVERLAP

Control Phase:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
OL A Phase(s)..... :																
OL B Phase(s)..... :																
OL C Phase(s) ..... :																
OL D Phase(s) ..... :																
OL E Phase(s)..... :																
OL F Phase(s)..... :																
OL G Phase(s) ..... :																
OL H Phase(s) ..... :																
OL I Phase(s)..... :																
OL J Phase(s) ..... :																
OL K Phase(s)..... :																
OL L Phase(s)..... :																
OL M Phase(s)..... :																
OL N Phase(s) ..... :																
OL O Phase(s) ..... :																
OL P Phase(s)..... :																

Codes: 0 - NO 1 - YES Phase Is Included In Overlap

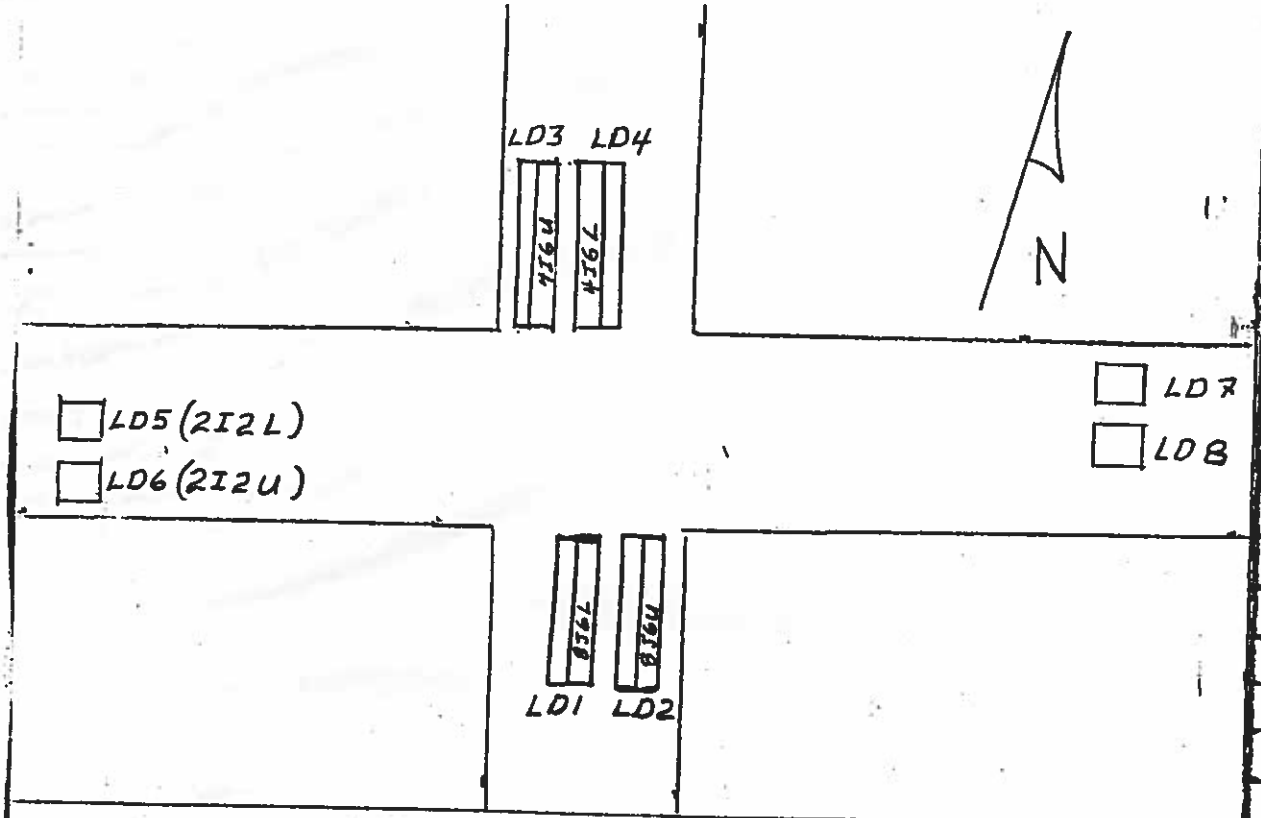


HWY 2 & STRATHY

LOOP	DIRECTION	COUNT	OBSERVE DELAY
LD 1	N/B		D88
LD2	N/B		D77
LD3	S/B		D77
LD4	S/B		D78
LD5	E/B	D52	
LD6	E/B	D51	
LD7	W/B	D61	
LD8	W/B	D62	

OTHER INFORMATION

LOCATION NUMBER		DETECTOR TYPE	DISTANCE FROM STOP BLOCK	LOOP SIZE LENGTH	LOOP SIZE WIDTH	NUMBER OF TURNS	INDUCT	FREQUENCY
8J6L	LD1	LOOP	+8'	49'	6'	2-4-2	560 uh	11 KHZ
8J6U	LD2	LOOP	+8'	49'	6'	2-4-2	560 uh	11 KHZ
4I6U	LD3	LOOP	+10'	53'	6'	2-4-2	525 uh	12 KHZ
4I6U	LD4	LOOP	+10'	53'	6'	2-4-2	525 uh	12 KHZ
2I2L	LD5	LOOP	295'	6'	6'	4	230 uh	13 KHZ
2I2U	LD6	LOOP	295'	6'	6'	4	225 uh	14 KHZ
6J2U	LD7	LOOP	280'	6'	6'	4	230 uh	13 KHZ
6J2L	LD8	LOOP	280'	6'	6'	4	225 uh	14 KHZ



HWY 2 & STRATHY

DET	DIRECTION	COUNT	OBSERVE DELAY
LD 1	N/B		D88
LD2	N/B		D77
LD3	S/B		D77
LD4	S/B		D78
LD5	E/B	D52	
LD6	E/B	D51	
LD7	W/B	D61	
LD8	W/B	D62	

OTHER INFORMATION

	LOCATION NUMBER		DETECTOR TYPE	DISTANCE FROM STOP BLOCK	LOOP SIZE LENGTH	WIDTH	NUMBER OF TURNS	INDUCT	FREQUENCY
✓	8J6L	LD1	LOOP	+8'	49'	6'	2-4-2	560 uh	11 KHZ
✓	8J6U	LD2	LOOP	+8'	49'	6'	2-4-2	560 uh	11 KHZ
✓	4I6U	LD3	LOOP	+10'	53'	6'	2-4-2	525 uh	12 KHZ
✓	4I6L	LD4	LOOP	+10'	53'	6'	2-4-2	525 uh	12 KHZ
✓	2I2L	LD5	LOOP	295'	6'	6'	4	230 uh	13 KHZ
✓	2I2U	LD6	LOOP	295'	6'	6'	4	225 uh	14 KHZ
✓	6J2U	LD7	LOOP	280'	6'	6'	4	230 uh	13 KHZ
✓	6J2L	LD8	LOOP	280'	6'	6'	4	225 uh	14 KHZ

Tacel Ltd.

TRAFFIC CONTROL EQUIPMENT

FORM: COF.01
REF: QP.08

This certifies that the following equipment has been tested under FULL LOAD conditions and is deemed fit for operation.

To be completed by the supplier prior to delivery.

Controller

Make: EAGLE TRAFFIC CONTROL SYSTEMS.

Model: EPAC3108 M34 Rev: 3.32 d

Serial No.: G01 68712

Cabinet

Make: TACEL LTD. Model: "M"

Serial No.: 0205 331-28-12 Print No.: TTP8D-0039

Conflict Monitor

Make: E . D . I Model: SSM-12LE-CAN

Rev: 0431 Serial No.: 011006012

CVM test sheet attached: Y ✓ N ___

Start Test Date: 08/05/02 End Test Date: 22/05/02

Start Test Time: 16:00 End Test Time: 12:00

Customer: GUILD ELECTRIC.

P.O.#: 72377-03 Technician: [signature]

Date: 23/05/02 Approved By: [signature]

Warranty Certificate

This Equipment shall be covered free from any defects, including parts and labour, for a one (1) year period, from the date this equipment is put into field operation.

Date of Field Installation: _____

Location: _____

Regional Representative: _____

Note: Copy to be sent to supplier, upon completion, for their records.

ISSUE: 1
ISSUE DATE: 24 FEB. 1999
PAGE NUMBER 1 OF 1

179 BARTLEY DRIVE, UNIT B, TORONTO, ONTARIO M4A 1E8
TEL: (416)750-4646 FAX: (416)750-4649
E-MAIL: tacel@interlog.com
WEB SITE: http://www.tacel.ca

TEST REPORT NAME
Tacel02.61

MONITOR TYPE
NEMA12CHAN

DATE
03/22/02

TACEL LTD.

TESTER: ATSI PCMT-2000 S/W #PT1515

CONFLICT MONITOR TEST REPORT

(C)1998, ATHENS TECHNICAL SPECIALISTS

MFR: EBERLE DESIGN INC.

TESTED BY: A.ANPALAGAN

MODEL: SSM-12LE-CAN REV.0431

TESTED AT: TACEL LTD.

SERIAL: 011006012

REFERENCE: W.O #3720

COMMENT: GUILD ELECTRIC J.N :- 0205331-28-12

TIMER SELF-TEST OK

VOLTAGE SELF-TEST OK

RUNNING NEMA TS1 INDICATOR TESTS. (018 TESTS) 14:02:19
No Indicator Faults Observed.

RUNNING NEMA TS1 SYSTEM/TIMING TESTS. (026 TESTS) 14:02:25
Found START-DELAY Time: 2576 mS.
Found INIT-FLASH Time: 6999 mS.
Found POWR-INT Fault-to-Transfer Time: 0513 mS.
Found DC1-FAIL Fault-to-Transfer Time: 0209 mS.
Found DC2-FAIL Fault-to-Transfer Time: 0205 mS.
Found CVM-FAIL Fault-to-Transfer Time: 0181 mS.
Found CONFLICT Fault-to-Transfer Time: 0341 mS.
Found RED-FAIL Fault-to-Transfer Time: 0891 mS.
No Errors Detected.

RUNNING NEMA TS1 CONFLICT/VOLTAGE TESTS. (276 TESTS) 14:04:17
Running RED voltage tests at 70V and 48V RMS.
Running YGW voltage tests at 25V and 15V RMS, and at 115VCAP.
No Errors Detected.

NEMA TS1 STANDARDS TESTS COMPLETED. NO DEPARTURES FROM TS1 STANDARDS FOUND.

RUNNING NEMA TS1 GRN/GRN PERMISSIVES TESTS. (066 TESTS) 14:09:09
No Permissives Detected.

RUNNING NEMA TS1 YEL/YEL PERMISSIVES TESTS. (066 TESTS) 14:10:39
No Permissives Detected.

RUNNING NEMA TS1 WLK/WLK PERMISSIVES TESTS. (066 TESTS) 14:12:10
No Permissives Detected.

RUNNING NEMA TS1 GRN/YEL PERMISSIVES TESTS. (066 TESTS) 14:13:40
No Permissives Detected.

RUNNING NEMA TS1 YEL/GRN PERMISSIVES TESTS. (066 TESTS) 14:15:11
No Permissives Detected.

RUNNING NEMA TS1 GRN/WLK PERMISSIVES TESTS. (066 TESTS) 14:16:42
No Permissives Detected.

RUNNING NEMA TS1 WLK/GRN PERMISSIVES TESTS. (066 TESTS) 14:18:13
No Permissives Detected.

```
RUNNING NEMA TS1 YEL/WLK PERMISSIVES TESTS.   (066 TESTS)            14:19:43
   No Permissives Detected.

RUNNING NEMA TS1 WLK/YEL PERMISSIVES TESTS.   (066 TESTS)            14:21:14
   No Permissives Detected.

RUNNING NEMA TS1 EXTENDED TESTS.                                     14:23:06
 Running Short-Yellow Tests.                  (012 Tests)
   No Variances Detected.
 Running Red/Green Dual Display Tests.        (012 Tests)
   No Variances Detected.
 Running Green/Yellow Dual Display Tests.     (012 Tests)
   No Variances Detected.
 Running Yellow/Red Dual Display Tests.       (012 Tests)
   No Variances Detected.
 Running Dark Signal Head (Walk-Only) Tests   (012 Tests)
   No Variances Detected.
 Running Watchdog Failure Test.               (001 Test)
   No Variances Detected.
 Running Test for Latching of 24VDC Errors.   (002 Tests)
   No Variances Detected.
 Running Test for Latching of CVM Errors.     (001 Test)
   No Variances Detected.

ALL SPECIFIED TESTS ARE COMPLETED.                                   14:29:40
```

FORM: ADD #01
REF: QP.09

Controller Cabinet Configuration Sheet

Customer: Guild Electric.
P.O. No.: 72377-03
Item: EPAC 3108M34 in an Eight Phase "M" Cabinet
Location:
Print #: TTP8D-0039
Monitor: Eberle Design Inc. SSM-12LE-CAN
Main St.:
Side St.:

Install Loadswitches

			Mon Chan
LS1	Phase 1	Main Street Advance Left Turn Arrow	1
LS2	Phase 2	Main Street Through Vehicles	2
LS3	Phase 3	Side Street Advance Left Turn Arrow	3
LS4	Phase 4	Side Street Through Vehicles	4
LS5	Phase 5	Main Street Advance Left Turn Arrow	5
LS6	Phase 6	Main Street Through Vehicles	6
LS7	Phase 7	Side Street Advance Left Turn Arrow	7
LS8	Phase 8	Side Street Through Vehicles	8
LS9	Phase 2	Main Street Pedestrians	9
LS10	Phase 4	Side Street Pedestrians	10
LS11	Phase 6	Main Street Pedestrians	11
LS12	Phase 8	Side Street Pedestrians	12

Install Flasher in Position FL1

Install Flash Transfer Relays As Follows

FR1
FR2
FR3
FR4

ISSUE: 01
ISSUE DATE: 26 APR 02

Detector Wire Hook Up Terminals

PHASE 1	Veh 1	X1 - X3	Main Street Left Turn Loop
PHASE 2	Veh 2	Y1 - Y3	Main Street Through Loops
PHASE 3	Veh 3	X4 - X6	Side Street Left Turn Loop
PHASE 4	Veh 4	Y4 - Y6	Side Street Through Loops
PHASE 5	Veh 5	X7 - X9	Main Street Left Turn Loop
PHASE 6	Veh 6	Y7 - Y9	Main Street Through Loops
PHASE 7	Veh 7	X10 - X12	Side Street Left Turn Loop
PHASE 8	Veh 8	Y10 - Y12	Side Street Through Loops

Pedestrian Pushbutton Hook Up Terminals

PHASE 2	Ped 2	W1 - W5	Main Street Pedestrian Push Buttons
PHASE 4	Ped 4	W2 - W5	Side Street Pedestrian Push Buttons
PHASE 6	Ped 6	W3 - W5	Main Street Pedestrian Push Buttons
PHASE 8	Ped 8	W4 - W5	Side Street Pedestrian Push Buttons

Optical Fire Lane Detector Hook Up Terminals

PRE 1	Yellow	X14	
	Orange	X15	Main Street Optical Detector
	Blue	X16	
PRE 2	Yellow	X18	
	Orange	X17	Side Street Optical Detector
	Blue	X16	

CONFLICT MONITOR MUST BE ABLE TO DETECT FAST FLASHING GREEN OUTPUTS DIRECTLY (150 - 180 FPM)

TACEL LTD. WORKORDER 3720

Programmed EPAC Data IP

9/19/2007
2:28:29PM

Intersection Name: Burnham and DePalma (White)

Intersection Alias: 101

Access Code: 9999 Channel: 17 Address: 001 Revision: 3.33e
IP: 172.16.16.101 / 24

Access Data

Port 2 Comm :19200 Baud
Port 3 Comm :1200 Baud

Phase Data

Vehical Basic Timings

Phase	Min_Grn	Passage	Max1	Max2	Yellow	All Red
1	6	3.0	12	30	3.0	1.0
2	16	3.0	31	50	4.0	2.0
3	6	2.0	10	30	3.0	1.0
4	8	3.0	31	50	4.0	2.0
5	6	2.0	12	30	3.0	1.0
6	16	3.0	31	50	4.0	2.0
7	6	2.0	10	30	3.0	1.0
8	8	3.0	31	50	4.0	2.0

Vehical Density Timings

Added Initial	Max_Initial	Time B4 Reduction	Cars Before	Time To Reduce	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
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

Pedestrian Timing

Phase	Walk	Ped Clear	Flashing Walk	Extended Actuated Ped Clear	Rest in Walk
1	0	0	No	0	No
2	10	24	No	2	No
3	0	0	No	0	No
4	10	25	No	2	No
5	0	0	No	0	No
6	10	24	No	2	No
7	0	0	No	0	No
8	10	25	No	2	No

General Control

Initialize	Non-Act Response	Veh Recall	Ped Recall	Recall Delay
Inactive	None	None	None	0
Yellow	NonActI	Min	Non Act+	0
Inactive	None	None	None	0
Inactive	NonActII	None	None	0
Inactive	None	None	None	0
Yellow	NonActI	Min	Non Act+	0
Inactive	None	None	None	0
Inactive	NonActII	None	None	0

Miscellaneous

Non Lock	Dual Entry	Last Car Passage	Conditional Service	No Simultaneous Gap Out
Yes	No	No	No	No
Yes	Yes	No	No	No
Yes	No	No	No	No
Yes	Yes	No	No	No
Yes	No	No	No	No
Yes	Yes	No	No	No
Yes	No	No	No	No
Yes	Yes	No	No	No

Special Sequence
Default Data

Vehical Detector Phase Assignment

	Assigned Phase	Mode	Switched Phase	Extend	Delay
Default Data					

Pedestrian Detector
Default Data

Special Detector Phase Assignment

	Assign Phase	Mode	Switched Phase	Extend	Delay
: **Default Data**					

Unit Data

General Control

Startup Time: 5sec Startup State: Flash Red Revert: 4sec
Auto Ped Clear: No Stop Time Reset: No Alternate Sequence: 0
ABC connector Input Modes: 0
ABC connector Output Modes: 0
D connector Input Modes: 0
D connector Output Modes: 0

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash
Test A = Flash

Phase	Flash Entry Phase	Flash Exit Phase	Channel	Flash Color	Flash Alternat
Default Data - No Flash			**Default Data - No Flash**		

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	Overlaps															

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	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
Plus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
1	1	2
2	1	3
3	1	4
4	1	1
5	2	6
6	2	7
7	2	8
8	2	5

Phase(s)

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

Alternate Sequences

Alternate Sequences

Port 1 Data

BIU Addr	Port Status	Message 40

Phase Pair(s)

Default Data

No Alternate Sequences

Channel Assignment

Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set	
Ph.1 Veh	1	1 - Ph.1 RYG	1	Ph.2 Veh	2	2 - Ph.2 RYG	2	Ph.3 Veh	3	3 - Ph.3 RYG	3
Ph.4 Veh	4	4 - Ph.4 RYG	4	Ph.5 Veh	5	5 - Ph.5 RYG	5	Ph.6 Veh	6	6 - Ph.6 RYG	6
Ph.7 Veh	7	7 - Ph.7 RYG	7	Ph.8 Veh	8	8 - Ph.8 RYG	8	Ph.2 Ped	9	10 - Ph.2 DPW	10
Ph.4 Ped	10	12 - Ph.4 DPW	12	Ph.6 Ped	11	14 - Ph.6 DPW	14	Ph.8 Ped	12	16 - Ph.8 DPW	16
Ph.1 OLP	13	17 - Ph.1 RYG	17	Ph.2 OLP	14	18 - Ph.2 RYG	18	Ph.3 OLP	15	19 - Ph.3 RYG	19
Ph.4 OLP	16	20 - Ph.4 RYG	20	Ph.1 Ped	17	9 - Ph.1 DPW	9	Ph.3 Ped	18	11 - Ph.3 DPW	11
Ph.5 Ped	19	13 - Ph.5 DPW	13	Ph.7 Ped	20	15 - Ph.7 DPW	15				

Coordination Data

General Coordination Data

Operation Mode: 1=Auto

Coordination Mode: 1=Yield

Maximun Mode: 0=Inhibit

Correction Mode: 2=Short Way

Offset Mode: 0=Beg Grn

Force Mode: 1=Cycle

Max Dwell Time: 0

Yield Period: 0

Manual Dial: 1

Manual Split: 1

Manual Offset: 1

Dial/Split	Cycle
1/1	100
1/2	110
1/3	120
1/4	140

Split Times and Phase Mode:

Dial 1 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	13	0=Actuated	2	44	1=Coordinate	3	13	0=Actuated	4	30	0=Actuated
[illegible]	13	0=Actuated	6	44	1=Coordinate	7	13	0=Actuated	8	30	0=Actuated

Dial 1 / Split 2

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	12	0=Actuated	2	48	1=Coordinate	3	12	0=Actuated	4	38	0=Actuated
5	12	0=Actuated	6	38	1=Coordinate	7	12	0=Actuated	8	48	0=Actuated

Dial 1 / Split 3

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	14	0=Actuated	2	54	1=Coordinate	3	14	0=Actuated	4	38	0=Actuated
5	14	0=Actuated	6	54	1=Coordinate	7	14	0=Actuated	8	38	0=Actuated

Dial 1 / Split 4

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	12	0=Actuated	2	78	1=Coordinate	3	12	0=Actuated	4	38	0=Actuated
5	12	0=Actuated	6	78	1=Coordinate	7	12	0=Actuated	8	38	0=Actuated

Traffic Plan Data

Plan: **1/1/1**	Offset Time: 5	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/2/1**	Offset Time: 106	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/3/1**	Offset Time: 15	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/4/1**	Offset Time: 41	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2 Cycle Zero ReferenceHours: 24 Min: 0

End of Daylight Saving Month: 11 Week: 1

Source Day	Equate Days 1	2	3	4	5	6	7
1	7	59	0	0	0	0	0
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	0:1	0/0/4																	
2	1	8:0	1/2/1																	
3	1	20:0	0/0/4																	
4	2	0:1	0/0/4																	
5	2	6:0	1/1/1																	
6	2	9:0	1/2/1																	
7	2	15:0	1/3/1																	
8	2	19:0	1/2/1																	
9	2	21:30	0/0/4																	

AUX. Events

Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8

Event	Month	Day	Year	Special Day	Special Week
1	1	1	0	59	0
2	7	1	0	59	0
3	12	25	0	59	0
[illegible]	12	26	0	59	0

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8
Special Function 1	X							
Special Function 2		X						
Special Function 3			X					
Special Function 4				X				
Special Function 5					X			
Special Function 6						X		
Special Function 7							X	
Special Function 8								X

Phase Function

Phase Function Map	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
Phase 8 Max2								X								
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Dimming Data

Channel	Red	Yellow	Green	Alternate

Default Data - No Dimming Programmed

Preemption Data

General Preemption Data

Ring	Min Grn/Walk Time
1	5
2	5
3	5
4	5

Flash > Preempt 1 | Preempt 2 = Preempt 3 | Preempt 4 = Preempt 5
Preempt 1 > Preempt 2 | Preempt 3 = Preempt 4 | Preempt 5 = Preempt 6

Preempt Timers

Preempt	Non-Locking	Link to Preempt	Delay	Extend	Duration	MaxCall	Lock-Out	Select Ped Clear	Select Yel	Select Red	Track Grn	Track Ped	Track Yel	Track Red	Dwell Green	Return Ped Clear	Return Yel	Return Red
1	No	0	0	0	0	0	0	8	4.0	2.0	0	0	4.0	0.0	10	0	4.0	2.0
2	No	0	0	0	0	0	0	8	4.0	2.0	0	0	4.0	0.0	10	0	4.0	2.0
3	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
4	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
5	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
6	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0

Preempt 1

Phase	Exit Phase	Exit Calls
4	Yes	No
8	Yes	No

Preempt 2

Phase	Exit Phase	Exit Calls
2	Yes	No
6	Yes	No

Preempt 3

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 4

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 5

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 6

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Priority Timers

Priority	Non-Locking	Delay	Extend	Duration	Dwell	Max_Call	Lock-Out	Skip Phases
1	No	0	0	0	0	0	0	0=Do not Skip Phases
2	No	0	0	0	0	0	0	0=Do not Skip Phases
3	No	0	0	0	0	0	0	0=Do not Skip Phases
4	No	0	0	0	0	0	0	0=Do not Skip Phases
5	No	0	0	0	0	0	0	0=Do not Skip Phases
6	No	0	0	0	0	0	0	0=Do not Skip Phases

Priority 1

Phase	Exit Phase	Exit Calls

Priority 2

Phase	Exit Phase	Exit Calls

Priority 3

Phase	Exit Phase	Exit Calls

Priority 4

Phase	Exit Phase	Exit Calls

Priority 5

Phase	Exit Phase	Exit Calls

Priority 6

Phase	Exit Phase	Exit Calls

Preempt 1

Vehical Phases

Ph.	Track	Dwell	Cycle
2	Red	Green	No
6	Red	Green	No

Pedestrian Phases

Ph	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp	Track	Dwell	Cycle

Default Data

Preempt 2

Vehical Phases

Ph.	Track	Dwell	Cycle
4	Red	Green	No
8	Red	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle

Default Data

Preempt 3

Vehical Phases
Ph. Track Dwell Cycle

Pedestrian Phases
Ph. Track Dwell Cycle

Overlaps
Ovlp. Track Dwell Cycle

Default Data **Default Data** **Default Data**

Preempt 4

Vehical Phases
Ph. Track Dwell Cycle

Pedestrian Phases
Ph. Track Dwell Cycle

Overlaps
Ovlp. Track Dwell Cycle

Default Data **Default Data** **Default Data**

Preempt 5

Vehical Phases
Ph. Track Dwell Cycle

Pedestrian Phases
Ph. Track Dwell Cycle

Overlaps
Ovlp. Track Dwell Cycle

Default Data **Default Data** **Default Data**

Preempt 6

Vehical Phases
Ph. Track Dwell Cycle

Pedestrian Phases
Ph. Track Dwell Cycle

Overlaps
Ovlp. Track Dwell Cycle

Default Data **Default Data** **Default Data**

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15 1st Phone:

Local Free: No Cycle Failure: No Coord Failure: No Conflict Flash: No Remote Flash: No 2nd Phone:

Local Fash: No Cycle Fault: No Coord Fault: No Premption: No Voltage Monitor: No

Special Status 1: No Special Status 2: No Special Status 3: No Special Status 4: No Special Status 5: No Special Status 6: No

Traffic Responsive

System Detector Detector Channel Veh/Hr Average Time(mins) Occupancy Correction/10 Min Volume % Queue 1 Detectors System Detectors Weight Factor Queue 2 Detectors System Detectors Weight Factor

Default Data

Sample Interval:

Default Data **Default Data**

Queue: 1 Input Selection: 0=Average Queue:

Detector Failed Level : 0 Level Enter Leave Dial / Split / Offset

Queue: 2 Input Selection: 0=Average / /

Detector Failed Level : 0 **Default Data**

Vehical Detector
Diagnostic Value 0
Detector Max Presence No Activity Erratic Count

Default Data - Diag 0 Values

Vehical Detector
Diagnostic Value 1
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Special Detector
Diagnostic Value 0
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 0 Vali

Pedestrian Detector
Diagnostic Value 0
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector
Diagnostic Value 1
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Special Detector
Diagnostic Value 1
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:

Measurement:

Detector 1 Detector_2 Distance :

Default Data

Dial/Split/Offset
//

Default Data

Speed Trap Low Treshold Speed Trap High Treshold

Volume Detector Data

Volume Detector Number	Controller Detector Channel	Report Interval

Default Data

Phase Vehicle Basic Timing Data

Date: [illegible] Time: 11:40:25

Intersection Name: Depalma & Burnham

Source: Database

Phase	1	2	3	4	5	6	7	8
Minimum Green	8	16	6	16	8	16	6	16
Passage	3.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Maximum 1	12	31	10	31	12	31	10	31
Maximum 2	30	50	30	50	30	50	30	50
Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0

Phase	9	10	11	12	13	14	15	16
Minimum Green	0	0	0	0	0	0	0	0
Passage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum 1	0	0	0	0	0	0	0	0
Maximum 2	0	0	0	0	0	0	0	0
Yellow Change	3.0	4.0	3.0	3.0	4.0	3.0	3.0	3.0
Red Clearance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Pedestrian Timing Data

Date: 11/5/20 Time: 11:30:31

Intersection Name: Depulma & Burnham

Source: Database

Phase	1	2	3	4	5	6	7	8
Walk	0	18	0	18	0	18	0	18
Pedestrian Clear	0	13	0	13	0	13	0	13
Flashing Walk	0	0	0	0	0	0	0	0
Extended Ped Clear	0	0	0	0	0	0	0	0
Act Rest in Walk	0	0	0	0	0	0	0	0

Phase	9	10	11	12	13	14	15	16
Walk	0	0	0	0	0	0	0	0
Pedestrian Clear	0	0	0	0	0	0	0	0
Flashing Walk	0	0	0	0	0	0	0	0
Extended Ped Clear	0	0	0	0	0	0	0	0
Act Rest in Walk	0	0	0	0	0	0	0	0

Phase General Control Data

Date [illegible] Time [illegible]

Intersection Name: Depalma & Burnham
Source: Database

Phase	1	2	3	4	5	6
Initial	1-Inactive	3-Yellow	1-Inactive	1-Inactive	1-Inactive	3-Yellow
Non-Actuated Response	0-None	1-NonAct1	0-None	2-NonAct2	0-None	1-NonAct1
Vehicle Recalls	0-None	2-Min	0-None	0-None	0-None	2-Min
Ped Recalls	0-None	4-NonAct4	0-None	0-None	0-None	4-NonAct4
Recall Delay	0	0	0	0	0	0

Phase	7	8	9	10	11	12
Initial	1-Inactive	1-Inactive	0-None	0-None	0-None	0-None
Non-Actuated Response	0-None	2-NonAct2	0-None	0-None	0-None	0-None
Vehicle Recalls	0-None	0-None	0-None	0-None	0-None	0-None
Ped Recalls	0-None	0-None	0-None	0-None	0-None	0-None
Recall Delay	0	0	0	0	0	0

Phase	13	14	15	16
Initial	0-None	0-None	0-None	0-None
Non-Actuated Response	0-None	0-None	0-None	0-None
Vehicle Recalls	0-None	0-None	0-None	0-None
Ped Recalls	0-None	0-None	0-None	0-None
Recall Delay	0	0	0	0

Phase Miscellaneous Data

Date: 11/5/20 Time: 11:40:41

Intersection Name: Depalma & Burnham

Source: Database

Phase	1	2	3	4	5	6	7	8
Non-Locking Memory	1	1	1	1	1	1	1	1
Dual Entry	0	1	0	1	0	1	0	1
Last Car Passage	0	0	0	0	0	0	0	0
Conditional Service	0	0	0	0	0	0	0	0
No Simultaneous Gap Out	0	0	0	0	0	0	0	0

Phase	9	10	11	12	13	14	15	16
Non-Locking Memory	0	0	0	0	0	0	0	0
Dual Entry	0	0	0	0	0	0	0	0
Last Car Passage	0	0	0	0	0	0	0	0
Conditional Service	0	0	0	0	0	0	0	0
No Simultaneous Gap Out	0	0	0	0	0	0	0	0

Preempt Overlap Data

Date [illegible] Time 11:42:08

Intersection Name	Depalma & Burnham
Source	Database

	Ring1	Ring2	Ring3	Ring4
Min Green/Walk Time	5	5	5	5
Flash0OverPreempts	1			
Preempt1OverPreempt2	1			
Preempt2OverPreempt3	1			
Preempt3OverPreempt4	1			
Preempt4OverPreempt5	1			
Preempt5OverPreempt6	1			

Prototype Pre-Timed Data

Date [illegible]/2001 Time [illegible]

Intersection Name Degraffenreid & Burnham

Source Database

NonLock	0	SetPedClear	8
Link	0	SetRedClear	2.0
Delay	0	SetYelChange	4.0
Extend	0	TrackGreen	0
Duration	0	TrackPedClear	0
MaxCall	0	TrackRedClear	0.0
LockOut	0	TrackYelChange	4.0
		DwellGreen	10
		ReturnPedClear	0
		ReturnRedClear	2.0
		ReturnYelChange	4.0

Label	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ExitPhase	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
ExitCalls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Dwell Switch Data

Date [illegible] Time [illegible]

Intersection Name: Depalma & Burnham

Source: Database

	1	2	3	4	5	6	7	8
Veh Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Veh Dwell Status	0	1-Green	0	0	0	1-Green	0	0
Veh Cycle Status								
Ped Track Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Ped Dwell Status								
Ped Cycle Status	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont W
Overlap Track Status	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont W
Overlap Dwell Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Overlap Cycle Status								

	9	10	11	12	13	14	15	16
Veh Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Veh Dwell Status								
Veh Cycle Status								
Ped Track Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Ped Dwell Status								
Ped Cycle Status	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont W
Overlap Track Status	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont W
Overlap Dwell Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Overlap Cycle Status								

Preempt Ctrl 2 Time Data

Date [illegible] 2002 Time 11:12:34

Intersection Name	Depalma & Burnham
Source	Database

NonLock	0	SelPedClear	8
Link	0	SelRedClear	2.0
Delay	0	SelYelChange	4.0
Extend	0	TrackGreen	0
Duration	0	TrackPedClear	0
MaxCall	0	TrackRedClear	0.0
LockOut	0	TrackYelChange	4.0
		DwellGreen	10
		ReturnPedClear	0
		ReturnRedClear	2.0
		ReturnYelChange	4.0

Label	1	2	4	4	5	6	7	8	9	10	11	12	13	14	15	16
ExitPhase	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
ExitCalls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Prompt Load Switch Data

Date [illegible] Time 11:42:41

Intersection Name: Depaham & Burnham

Source: Database

	1	2	3	4	5	6	7	8
Veh Track Status	0-Red	0-Red	0 Red	0 Red	0-Red	0-Red	0-Red	0-Red
Veh Dwell Status	0	0	0	1-Green	0	0	0	1-Green
Veh Cycle Status								
Ped Track Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Ped Dwell Status								
Ped Cycle Status	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont W
Overlap Track Status	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont W
Overlap Dwell Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Overlap Cycle Status								

	9	10	11	12	13	14	15	16
Veh Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Veh Dwell Status								
Veh Cycle Status								
Ped Track Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Ped Dwell Status								
Ped Cycle Status	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont W
Overlap Track Status	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont Walk	0-Dont W
Overlap Dwell Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Overlap Cycle Status								

Programmed EPAC Data IP

9/19/2007
2:34:13PM

Intersection Name: Elgin and Burnham **Intersection Alias: 105**

Access Code: 9999 Channel: 17 Address: 001 IP: 172.16.16.105 / 24 Revision: 3.33e

Access Data

Port 2 Comm :19200 Baud
Port 3 Comm :1200 Baud

Phase Data

Vehical Basic Timings

Phase	Min_Grn	Passage	Max1	Max2	Yellow	All Red
1	6	2.0	16	16	3.0	1.0
2	16	3.0	37	37	4.0	2.0
3	6	3.0	32	32	3.0	1.0
4	16	3.0	30	30	4.0	2.0
5	6	2.0	16	16	3.0	1.0
6	16	3.0	37	37	4.0	2.0
7	6	3.0	32	32	3.0	1.0
8	16	3.0	30	30	4.0	2.0

Vehical Density Timings

Phase	Added Initial	Max_Initial	Time B4 Reduction	Cars Before	Time To Reduce	Min_Gap
1	0.0	0	0	0	0	0.0
2	0.0	0	0	0	0	0.0
3	0.0	0	0	0	0	0.0
4	0.0	0	0	0	0	0.0
5	0.0	0	0	0	0	0.0
6	0.0	0	0	0	0	0.0
7	0.0	0	0	0	0	0.0
8	0.0	0	0	0	0	0.0

Pedestrian Timing

Phase	Walk	Ped Clear	Flashing Walk	Extended Actuated Ped Clear	Extended Actuated Rest in Walk
1	0	0	No	0	No
2	7	32	No	2	No
3	0	0	No	0	No
4	7	21	No	2	No
5	0	0	No	0	No
6	7	32	No	2	No
7	0	0	No	0	No
8	7	21	No	2	No

General Control

Phase	Initialize	Non-Act Response	Veh Recall	Ped Recall	Recall Delay
1	Inactive	None	None	None	0
2	Yellow	NonActI	Min	None	0
3	Inactive	None	None	None	0
4	Inactive	NonActII	None	None	0
5	Inactive	None	None	None	0
6	Yellow	NonActI	Min	None	0
7	Inactive	None	None	None	0
8	Inactive	NonActII	None	None	0

Miscellaneous

Phase	Non Lock	Dual Entry	Last Car Passage	Conditional Service	No Simultaneous Gap Out
1	Yes	No	No	No	No
2	Yes	Yes	No	No	No
3	Yes	No	No	No	No
4	Yes	Yes	No	No	No
5	Yes	No	No	No	No
6	Yes	Yes	No	No	No
7	Yes	No	No	No	No
8	Yes	Yes	No	No	No

Special Sequence

Phase	Phase Omit	Minus Yellow Phase	Omit Call
1	2	0	0
2	0	0	0
3	4	0	0
4	0	0	0
5	6	0	0
6	0	0	0
7	8	0	0
8	0	0	0

Vehical Detector Phase Assignment

	Assigned Phase	Mode	Switched Phase	Extend	Delay
Default Data					

Pedestrian Detector

Default Data

Special Detector Phase Assignment

	Assign Phase	Mode	Switched Phase	Extend	Delay
:					
Default Data					

Unit Data

General Control

Startup Time: 5sec Startup State: Flash Red Revert: 4sec

Auto Ped Clear: No Stop Time Reset: No Alternate Sequence: 0

ABC connector Input Modes: 0

ABC connector Output Modes: 0

D connector Input Modes: 0

D connector Output Modes: 0

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash

Test A = Flash

Phase	Flash Entry Phase	Flash Exit Phase
Default Data - No Flash		

Channel	Flash Color	Flash Alternat
Default Data - No Flash		

Overlaps

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	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
Plus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
1	1	2
2	1	3
3	1	4
4	1	1
5	2	6
6	2	7
7	2	8
8	2	5

Phase(s)

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

Alternate Sequences

Alternate Sequences

Port 1 Data

BIU Addr	Port Status	Message 40

Default Data

Phase
(s)

No
Alternate
Sequences

Channel Assignment

Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set	
Ph.1 Veh	1	1 - Ph.1 RYG	1	Ph.2 Veh	2	2 - Ph.2 RYG	2	Ph.3 Veh	3	3 - Ph.3 RYG	3
Ph.4 Veh	4	4 - Ph.4 RYG	4	Ph.5 Veh	5	5 - Ph.5 RYG	5	Ph.6 Veh	6	6 - Ph.6 RYG	6
Ph.7 Veh	7	7 - Ph.7 RYG	7	Ph.8 Veh	8	8 - Ph.8 RYG	8	Ph.2 Ped	9	10 - Ph.2 DPW	10
Ph.4 Ped	10	12 - Ph.4 DPW	12	Ph.6 Ped	11	14 - Ph.6 DPW	14	Ph.8 Ped	12	16 - Ph.8 DPW	16
Ph.1 OLP	13	17 - Ph.1 RYG	17	Ph.2 OLP	14	18 - Ph.2 RYG	18	Ph.3 OLP	15	19 - Ph.3 RYG	19
Ph.4 OLP	16	20 - Ph.4 RYG	20	Ph.1 Ped	17	9 - Ph.1 DPW	9	Ph.3 Ped	18	11 - Ph.3 DPW	11
Ph.5 Ped	19	13 - Ph.5 DPW	13	Ph.7 Ped	20	15 - Ph.7 DPW	15				

Coordination Data

General Coordination Data

Operation Mode: 1=Auto
Coordination Mode: 1=Yield
Maximun Mode: 0=Inhibit
Correction Mode: 2=Short Way

Offset Mode: 0=Beg Grn
Force Mode: 1=Cycle
Max Dwell Time: 0
Yield Period: 0

Manual Dial: 1
Manual Split: 1
Manual Offset: 1

Dial/Split	Cycle
1/1	100
1/2	110
1/3	120
1/4	140

Split Times and Phase Modes

Dial 1 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	11	0=Actuated	2	43	1=Coordinate	3	11	0=Actuated	4	35	0=Actuated
5	11	0=Actuated	6	43	1=Coordinate	7	15	0=Actuated	8	31	0=Actuated

Dial 1 / Split 2

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	11	0=Actuated	2	47	1=Coordinate	3	11	0=Actuated	4	41	0=Actuated
5	11	0=Actuated	6	47	1=Coordinate	7	16	0=Actuated	8	36	0=Actuated

Dial 1 / Split 3

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	12	0=Actuated	2	49	1=Coordinate	3	14	0=Actuated	4	45	0=Actuated
5	16	0=Actuated	6	45	1=Coordinate	7	24	0=Actuated	8	35	0=Actuated

Dial 1 / Split 4

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	12	0=Actuated	2	47	1=Coordinate	3	46	0=Actuated	4	35	0=Actuated
5	12	0=Actuated	6	47	1=Coordinate	7	14	0=Actuated	8	67	0=Actuated

Traffic Plan Data

Plan: **1/1/1**	Offset Time: 7	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/2/1**	Offset Time: 7	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/3/1**	Offset Time: 72	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/4/1**	Offset Time: 21	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2 Cycle Zero Reference Hours: 24 Min: 0

End of Daylight Saving Month: 11 Week: 1

Source Day	Equate Days 1	2	3	4	5	6	7
1	7	59	0	0	0	0	0
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	0:1	0/0/4																	
2	1	8:0	1/2/1																	
3	1	20:0	0/0/4																	
4	2	0:1	0/0/4																	
5	2	6:0	1/1/1																	
6	2	9:0	1/2/1																	
7	2	15:0	1/3/1																	
8	2	19:0	1/2/1																	
9	2	21:30	0/0/4																	

AUX Events

Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8

Event	Month	Day	Year	Special Day	Special Week
1	1	1	0	59	0
2	7	1	0	59	0
3	12	25	0	59	0
4	12	26	0	59	0

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8
Special Function 1	X							
Special Function 2		X						
Special Function 3			X					
Special Function 4				X				
Special Function 5					X			
Special Function 6						X		
Special Function 7							X	
Special Function 8								X

Phase Function

Phase Function Map	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
Phase 8 Max2								X								
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Dimming Data

Channel	Red	Yellow	Green	Alternate

Default Data - No Dimming Programmed

Preemption Data

General Preemption Data

Ring	Min Grn/Walk Time
1	16
2	16
3	16
4	16

Flash > Preempt 1 Preempt 2 = Preempt 3 Preempt 4 = Preempt 5
Preempt 1 > Preempt 2 Preempt 3 = Preempt 4 Preempt 5 = Preempt 6

Preempt Timers

Preempt	Non-Locking	Link to Preempt	Delay	Extend	Duration	MaxCall	Lock-Out	Select: Ped Clear	Select: Yel	Select: Red	Track: Grn	Track: Ped	Track: Yel	Track: Red	Dwell Green	Return: Ped Clear	Return: Yel	Return: Red
1	No	0	0	0	0	0	0	11	4.0	2.0	0	0	4.0	0.0	10	8	4.0	2.0
2	No	0	0	0	0	0	0	11	4.0	2.0	0	0	4.0	0.0	10	8	4.0	2.0
3	No	3	5	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
4	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
5	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
6	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0

Preempt 1

Phase	Exit Phase	Exit Calls
1	No	Yes
2	Yes	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	Yes	Yes
7	No	Yes
8	No	Yes

Preempt 2

Phase	Exit Phase	Exit Calls
1	No	Yes
2	Yes	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	Yes	Yes
7	No	Yes
8	No	Yes

Preempt 3

Phase	Exit Phase	Exit Calls
1	No	Yes
2	Yes	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	Yes	Yes
7	No	Yes
8	No	Yes

Preempt 4

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 5

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 6

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Priority Timers

Priority	Non-Locking	Delay	Extend	Duration	Dwell	Max_Call	Lock-Out	Skip Phases
1	No	0	0	0	0	0	0	0=Do not Skip Phases
2	No	0	0	0	0	0	0	0=Do not Skip Phases
3	No	5	0	0	0	0	0	0=Do not Skip Phases
4	No	0	0	0	0	0	0	0=Do not Skip Phases
5	No	0	0	0	0	0	0	0=Do not Skip Phases
6	No	0	0	0	0	0	0	0=Do not Skip Phases

Priority 1

Phase	Exit Phase	Exit Calls

Priority 2

Phase	Exit Phase	Exit Calls

Priority 3

Phase	Exit Phase	Exit Calls
7	Yes	No

Priority 4

Phase	Exit Phase	Exit Calls

Priority 5

Phase	Exit Phase	Exit Calls

Priority 6

Phase	Exit Phase	Exit Calls

Preempt 1

Vehical Phases

Ph.	Track	Dwell	Cycle
2	Red	Green	No
6	Red	Green	No

Pedestrian Phases

Ph	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp	Track	Dwell	Cycle

Default Data

Preempt 2

Vehical Phases

Ph.	Track	Dwell	Cycle
4	Red	Green	No
8	Red	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp	Track	Dwell	Cycle

Default Data

Preempt 3

Vehical Phases
Ph. Track Dwell Cycle

Default Data

Pedestrian Phases
Ph. Track Dwell Cycle

Default Data

Overlaps
Ovlp. Track Dwell Cycle

Default Data

Preempt 4

Vehical Phases
Ph. Track Dwell Cycle

Default Data

Pedestrian Phases
Ph. Track Dwell Cycle

Default Data

Overlaps
Ovlp. Track Dwell Cycle

Default Data

Preempt 5

Vehical Phases
Ph. Track Dwell Cycle

Default Data

Pedestrian Phases
Ph. Track Dwell Cycle

Default Data

Overlaps
Ovlp. Track Dwell Cycle

Default Data

Preempt 6

Vehical Phases
Ph. Track Dwell Cycle

Default Data

Pedestrian Phases
Ph. Track Dwell Cycle

Default Data

Overlaps
Ovlp. Track Dwell Cycle

Default Data

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15 1st Phone:

Local Free: No Cycle Failure: No Coord Failure: No Conflict Flash: No Remote Flash: No 2nd Phone:

Local Fash: No Cycle Fault: No Coord Fault: No Premption: No Voltage Monitor: No

Special Status 1: No Special Status 2: No Special Status 3: No Special Status 4: No Special Status 5: No Special Status 6: No

Traffic Responsive

System Detector Detector Channel Veh/Hr Average Time(mins) Occupancy Correction/10 Min Volume % Queue 1 Detectors System Detectors Weight Factor Queue 2 Detectors System Detectors Weight Factor

Default Data

Default Data

Default Data

Sample Interval:

Queue: 1 Input Selection: 0=Average
Detector Failed Level : 0

Queue: 2 Input Selection: 0=Average
Detector Failed Level : 0

Queue:
Level Enter Leave Dial / Split / Offset
/ /

Default Data

Vehical Detector
Diagnostic Value 0
Detector Max Presence No Activity Erratic Count

Default Data - Diag 0 Values

Vehical Detector
Diagnostic Value 1
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Special Detector
Diagnostic Value 0
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 0 Vah

Pedestrian Detector
Diagnostic Value 0
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector
Diagnostic Value 1
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Special Detector
Diagnostic Value 1
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:

Measurement:
Detector 1 Detector_2 Distance :

Default Data

Dial/Split/Offset
//

Default Data

Speed Trap Low Treshold Speed Trap High Treshold

Volume Detector Data

Volume Detector Number	Controller Detector Channel	Report Interval

Default Data

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

Adv WB EB SB NB Adv WB NB SB
Ai Elgin Elgin Adj Ai Elgin Adv
EB

ASE DATA - VEHICLE TIMINGS

PHASE	1	2	3	4	5	6	7	8
MIN GRN:	6	16	8	16	6	16	8	16
PASS/10:	20	30	30	30	20	30	30	30
MAX # 1:	10	37	32	30	10	37	32	30
MAX # 2:	10	37	32	30	10	37	32	30
YEL/10 :	30	40	30	40	30	40	30	40
RED/10 :	10	20	20	20	10	20	20	20
AINI/10:	0	0	0	0	0	0	0	0
MAX INI:	0	0	0	0	0	0	0	0
TIM BEF:	0	0	0	0	0	0	0	0
CAR BEF:	0	0	0	0	0	0	0	0
TIME To:	0	0	0	0	0	0	0	0
MGAP/10:	0	0	0	0	0	0	0	0

47
6
53
62
5
67
55
120 sec

PHASE DATA - PEDESTRIAN & VEHICLE CONTROL DATA

PHASE	1	2	3	4	5	6	7	8
WALK .:	0	17 21	0	16	0	21	0	16
PED CLR	0	12 16	0	11	0	16	0	11
PEDESTRIAN CONTROL								
FL WK :	0	0	0	0	0	0	0	0
XT PCL:	0	0	0	0	0	0	0	0
ACT RIW:	0	0	0	0	0	0	0	0
VEHICLE CONTROL								
NL MEM :	1	1	1	1	1	1	1	1
2 ENTRY:	0	1	0	1	0	1	0	1
LC PASS:	0	0	0	0	0	0	0	0
CON SER:	0	0	0	0	0	0	0	0

Pedestrian & Vehicle Control Entry: '1' = Yes & '0' = No

ASE DATA - GENERAL CONTROL DATA

SE	1	2	3	4	5	6	7	8
ITIAL:	1	3	1	1	1	3	1	1
RESP:	0	1	0	2	0	1	0	2
REC:	0	2	0	0	0	2	0	0
REC:	0	0	0	0	0	0	0	0
Y :	0	0	0	0	0	0	0	0

	0	1	2	3	4	5
IAL ..	NONE	INACTV	RED	YELLOW	GREEN	DARK
SP ..	NONE	TO NA1	TO NA2	TO BOTH	---	---
EC ..	NONE	1 CALL	MINI'M	MAXIMUM	SOFT	---
EC ..	NONE	1 CALL	RECALL	NON ACT	NA+	---

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

PHASE DATA - SEQUENCE CONTROL DATA

PHASE	1	2	3	4	5	6	7	8
OMIT :	2	0	4	0	6	0	8	0
-YEL :	0	0	0	0	0	0	0	0

CODES.....0.....1 TO 8 (#-PHASE).....
OMIT .....: NONE Phase Is Omitted By #-Phase On.
-YEL .....: NONE Phase Yellow Is Omitted By #-Phase Yellow.

PHASE DATA - VEH DETECTOR CONTROL DATA

DETECTOR	1	2	3	4	5	6	7	8
ASSIGN :	1	2	3	4	5	6	7	8
OP MODE:	0	0	0	0	0	0	0	0
SWITCH :	0	0	0	0	0	0	0	0
EXTD\10:	0	0	0	0	0	0	0	0
DELAY .:	0	0	0	0	0	0	0	0

PHASE DATA - PED DETECTOR CONTROL DATA

DETECTOR	1	2	3	4	5	6	7	8
ASSIGN :	1	2	3	4	5	6	7	8
OP MODE:	1	1	1	1	1	1	1	1
SWITCH :	0	0	0	0	0	0	0	0
EXTD\10:	0	0	0	0	0	0	0	0
DELAY .:	0	0	0	0	0	0	0	0

PHASE DATA - SPC DETECTOR CONTROL DATA

DETECTOR	1	2	3	4	5	6	7	8
ASSIGN :	0	0	0	0	0	0	0	0
OP MODE:	0	0	0	0	0	0	0	0
SWITCH :	0	0	0	0	0	0	0	0
EXTD\10:	0	0	0	0	0	0	0	0
DELAY .:	0	0	0	0	0	0	0	0

CODES:
ASSIGN ..: 0-None #-Detector Is Assigned To #-Phase
OP MODE .: 0-Norm Veh 1-Norm Ped 2-One Call 3-St Bar A
4-St Bar B
SWITCH ..: 0-None #-Detector Is Switched To #-Ph When The
Assigned Ph Is Yel/Red & #-Ph Is Green.

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

UNIT DATA - GENERAL CONTROL

```
==========================================================================
     STARTUP TIME ..........:    5        HDWE I/O    RING...1..2..3..4
 (1) STARTUP STATE .........:    0   (3)  INPUT RESPONSE :  1  2  0  0
     RED REV /10 ...........:   40   (3)  OUTPUT SELECT  :  1  2  0  0
 (2) AUTO PED CLEAR ........:    0   (4) 'D' CONN INPUT MODE .....:  0
 (2) STOP TIME RESET .......:    0   (4) 'D' CONN OUTPUT MODE ....:  0
   (1) = 0-Flash & 1-All Red           (3) = Hdw Rng # For I/O (0-None)
   (2) = 0-No & 1-Yes                  (4) = 0-Std & 1-Alt Function

  TEST A INPUT - REM FLASH .:    0              Codes: 0-No & 1-Yes
   S   Phase....1.2.3.4 5.6.7.8.A.B.C.D.E.F.G.H    Codes:
 L W F  FLSH .: . . . . . . . . . . . . . . . .  < 0-No & 1-Yes
 O I L  YEL ..: . . . . . . . . . . . . . . . .  < 0-Red & 1-Yel
 A T A  ALT ..: . . . . . . . . . . . . . . . .  < 0-No & 1-Yes
 D C S Phase....1.2.3.4 5.6.7.8
   H H  ENTER.: . . . . . . . . .    < Flash Entry In Phase
        EXIT .: . . . . . . . . .    < Flash Exit In Phase
```

UNIT DATA - OVERLAP CONTROL

```
==========================================================================

 PHASE ........1....2....3....4....5....6....7....8....#.
  OVLAP A :     .    .    .    .    .    .    .    .    0
  OVLAP B :     .    .    .    .    .    .    .    .    0
  OVLAP C :     .    .    .    .    .    .    .    .    0
  OVLAP D :     .    .    .    .    .    .    .    .    0
  OVLAP E :     .    .    .    .    .    .    .    .    0
  OVLAP F :     .    .    .    .    .    .    .    .    0
  OVLAP G :     .    .    .    .    .    .    .    .    0
  OVLAP H :     .    .    .    .    .    .    .    .    0
    Phase: 0-None  1-Include In Ovlp
      # .: Overlap Uses '#' Ped Outputs

 OVERLAP.......A....B....C....D....E....F....G....H.
  TRL GRN :    0    0    0    0    0    0    0    0
  YEL /10 :   40   40   40   40   40   40   40   40
  RED /10 :   20   20   20   20   20   20   20   20
 -GRN/YEL :    0    0    0    0    0    0    0    0
 +GRN ....:    0    0    0    0    0    0    0    0
    -GRN/YEL: 0-None  #-Ph G Kills Ol G & #-Ph Y Kills Ol Y
    +GRN ...: Overlap Green Starts with #-Ph Green
```

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

UNIT DATA - RING STRUCTURE

	PHASE	RING	PH NXT	CONCURRENT PHASES
Ring Structure	1	1	2	5 6 . . . .
	2	1	3	5 6 . . . .
	3	1	4	7 8 . . . .
	4	1	1	7 8 . . . .
1 To 4 Rings	5	2	6	1 2 . . . .
	6	2	7	1 2 . . . .
	7	2	8	3 4 . . . .
	8	2	5	3 4 . . . .
Excl Ped >	9	1	0	I/O ...: 0

PH NXT : Phase Next or Phase To Follow.

CONCURRENT PHASES: Phases In Other Rings Allowed To Run Concurrent.

< I/O For Excl Ped

UNIT DATA - ALTERNATE SEQUENCES

SEQUENCE	REVERSE PHASES				SEQUENCE	REVERSE PHASES			
00	.....NONE.....				08	78	00	00	00
01	00	00	00	00	09	12	78	00	00
02	34	00	00	00	10	34	78	00	00
03	12	34	00	00	11	12	34	78	00
04	56	00	00	00	12	56	78	00	00
05	12	56	00	00	13	12	56	78	00
06	34	56	00	00	14	34	56	78	00
07	12	34	56	00	15	12	34	56	78

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

PREEMPTION DATA - GENERAL

```
==========================================================================
  MINIMUM GREEN / WALK
   RING.........................1.......2.......3.......4    Time In
     Minimum Time ..........:   16      16      16      16    Seconds

   FUNCTIONS:                          PRIORITY: 0-No, Equal Priority
     Preemption Over Flash .:   1                  1-Yes, 1st Has Priority
     Preempt PE1 Over PE2 ..:   1     - When a Function Has Priority
     Preempt PE2 Over PE3 ..:   1       Over Another, The Function Of
     Preempt PE3 Over PE4 ..:   1       Lower Priority Will Terminate
     Preempt PE4 Over PE5 ..:   1       And The Higher Priority Will
     Preempt PE5 Over PE6 ..:   1       Assume Control.
```

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

PREEMPT DATA - PREEMPT 1

```
N-Lock ...:     0   0-No 1-Yes   Selective Ped Clr :   11 |
                                   :  :    Yel /10 :   40 |  Preempt
Link PE# .:     0   Preempt #      :  :    Red /10 :   20 |  Interval
                                 Track Green (*)...:    0  > Times In
Delay ....:     0 |                :   Ped Clr ....:    0 |  Seconds
Extend ...:     0 |  Time In       :   Yel /10 ....:   40 |
Duration .:     0  > Seconds      :   Red /10 ....:    0  * - If 0,
                  |  (0-999)     Dwell Green ......:   10 |  Skip All
MxCall ...:     0 |              Return Ped Clr ...:    8 |    Track
Lock Out .:     0 |                :    Yel /10 ...:   40 |  Intervals
                                   :    Red /10 ...:   20
PHASE.....1..2..3..4..5..6..7..8.
Exit ..:  0  1  0  0  0  1  0  0  0-No
Calls .:  1  1  1  1  1  1  1  1  1-Yes
```

PREEMPT DATA - PREEMPT 1

```
 STATUS     PHASE VEHICLE.....1.2.3.4.5.6.7.8.  CYCLE
 --------    Track Status..._ 0 0 0 0 0 0 0 0   --------
 Vehicle:    Dwell Status..._ 0 1 0 0 0 1 0 0   Vehicle:
  0-Red      Cycle ........_ 0 0 0 0 0 0 0 0    0-No
  1-Grn                                         1-Act'd
  2-Fl R    PHASE PEDESTRIAN..1.2.3.4.5.6.7.8.   2-Mn Rec
  3-Fl Y     Track Status..._ 0 0 0 0 0 0 0 0    3-Mx Rec
  4-Dark     Dwell Status..._ 0 0 0 0 0 0 0 0   Pedest:
             Cycle ........_ 0 0 0 0 0 0 0 0    0-No
 Pedest:                                        1-Act'd
  0-D Wk    OVERLAP VEHICLE...A.B.C.D.E.F.G.H.   2-Recall
  1-Walk     Track Status..._ 0 0 0 0 0 0 0 0   Overlap:
  2-Fl W     Dwell Status..._ 0 0 0 0 0 0 0 0    0-No
  3-Dark     Cycle ........_ 0 0 0 0 0 0 0 0    1-Act'd
```

PREEMPT DATA - PREEMPT 1

```
N-Lock ....:     0   0-No 1-Yes                 LOW PRIORITY ROUTINES
                                              ----------------------------
Skip ......:     0   0-No 1-Yes              - When No Dwell Phases Are Set
                                               This Routine Is Disabled.
Delay .....:     0 |                         - Skip (Yes) Will Allow Phases
Extend ....:     0 |  Time In                  To Be Skipped To Service The
Duration ..:     0  > Seconds                  Dwell Phases
Dwell .....:     0 |  (0-999)                - Set MxCall = 0 To Disable.
MxCall ....:     0 |                         - Lock Out Duration Will Be
Lock Out ..:     0 |                           Dependent On Calls If = 0.
                                             - Calls (Yes) Will Place A Ped
PHASE.....1.2.3.4.5.6.7.8.                     Call On Exit From Routine.
Dwell .:  0 0 0 0 0 0 0 0                        0-No
Calls .:  0 0 0 0 0 0 0 0                        1-Yes
```

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

PREEMPT DATA - PREEMPT 2

```
N-Lock ...:     0   0-No 1-Yes   Selective Ped Clr :   11 |
                                   :  :    Yel /10 :   40 |  Preempt
Link PE# .:     0   Preempt #      :  :    Red /10 :   20 |  Interval
                                 Track Green (*)...:    0  > Times In
Delay ....:     0 |                :   Ped Clr ....:    0 |  Seconds
Extend ...:     0 |  Time In       :   Yel /10 ....:   40 |
Duration .:     0  > Seconds      :   Red /10 ....:    0  * - If 0,
                  |  (0-999)     Dwell Green ......:   10 |  Skip All
MxCall ...:     0 |              Return Ped Clr ...:    8 |    Track
Lock Out .:     0 |                :    Yel /10 ...:   40 |  Intervals
                                   :    Red /10 ...:   20
PHASE.....1..2..3..4..5..6..7..8.
Exit ..:  0  1  0  0  0  1  0  0  0-No
Calls .:  1  1  1  1  1  1  1  1  1-Yes
```

PREEMPT DATA - PREEMPT 2

```
 STATUS     PHASE VEHICLE.....1.2.3.4.5.6.7.8.  CYCLE
 --------    Track Status..._ 0 0 0 0 0 0 0 0   --------
 Vehicle:    Dwell Status..._ 0 0 0 1 0 0 0 1   Vehicle:
  0-Red      Cycle ........_ 0 0 0 0 0 0 0 0    0-No
  1-Grn                                         1-Act'd
  2-Fl R    PHASE PEDESTRIAN..1.2.3.4.5.6.7.8.   2-Mn Rec
  3-Fl Y     Track Status..._ 0 0 0 0 0 0 0 0    3-Mx Rec
  4-Dark     Dwell Status..._ 0 0 0 0 0 0 0 0   Pedest:
             Cycle ........_ 0 0 0 0 0 0 0 0    0-No
 Pedest:                                        1-Act'd
  0-D Wk    OVERLAP VEHICLE...A.B.C.D.E.F.G.H.   2-Recall
  1-Walk     Track Status..._ 0 0 0 0 0 0 0 0   Overlap:
  2-Fl W     Dwell Status..._ 0 0 0 0 0 0 0 0    0-No
  3-Dark     Cycle ........_ 0 0 0 0 0 0 0 0    1-Act'd
```

PREEMPT DATA - PREEMPT 2

```
N-Lock ....:     0   0-No 1-Yes                  LOW PRIORITY ROUTINES
                                                 ----------------------------
Skip ......:     0   0-No 1-Yes                - When No Dwell Phases Are Set
                                                 This Routine Is Disabled.
Delay .....:     0 |                           - Skip (Yes) Will Allow Phases
Extend ....:     0 |  Time In                     To Be Skipped To Service The
Duration ..:     0  > Seconds                    Dwell Phases
Dwell .....:     0 |  (0-999)                  - Set MxCall = 0 To Disable.
MxCall ....:     0 |                           - Lock Out Duration Will Be
Lock Out ..:     0 |                              Dependent On Calls If = 0.
                                               - Calls (Yes) Will Place A Ped
PHASE.....1.2.3.4.5.6.7.8.                       Call On Exit From Routine.
Dwell .:  0 0 0 0 0 0 0 0                          0-No
Calls .:  0 0 0 0 0 0 0 0                          1-Yes
```

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

PREEMPT DATA - PREEMPT 3

```
N-Lock ...:     0   0-No 1-Yes   Selective Ped Clr :    8 |
                                   :  :    Yel /10 :   40 |  Preempt
Link PE# .:     3   Preempt #      :  :    Red /10 :   20 |  Interval
                                 Track Green (*)...:   10  > Times In
Delay ....:     5 |                :   Ped Clr ....:    8 |  Seconds
Extend ...:     0 |  Time In       :   Yel /10 ....:   40 |
Duration .:     0  > Seconds      :   Red /10 ....:   20  * - If 0,
                  |  (0-999)     Dwell Green ......:   10 |  Skip All
MxCall ...:     0 |              Return Ped Clr ...:    8 |    Track
Lock Out .:     0 |                :    Yel /10 ...:   40 |  Intervals
                                   :    Red /10 ...:   20
PHASE.....1..2..3..4..5..6..7..8.
Exit ..:  0  1  0  0  0  1  0  0  0-No
Calls .:  1  1  1  1  1  1  1  1  1-Yes
```

PREEMPT DATA - PREEMPT 3

```
 STATUS     PHASE VEHICLE.....1.2.3.4.5.6.7.8.  CYCLE
 --------    Track Status..._ 0 0 0 0 0 0 0 0   --------
 Vehicle:    Dwell Status..._ 0 0 0 0 0 0 0 0   Vehicle:
  0-Red      Cycle ........_ 0 0 0 0 0 0 0 0    0-No
  1-Grn                                         1-Act'd
  2-Fl R    PHASE PEDESTRIAN..1.2.3.4.5.6.7.8.   2-Mn Rec
  3-Fl Y     Track Status..._ 0 0 0 0 0 0 0 0    3-Mx Rec
  4-Dark     Dwell Status..._ 0 0 0 0 0 0 0 0   Pedest:
             Cycle ........_ 0 0 0 0 0 0 0 0    0-No
 Pedest:                                        1-Act'd
  0-D Wk    OVERLAP VEHICLE...A.B.C.D.E.F.G.H.   2-Recall
  1-Walk     Track Status..._ 0 0 0 0 0 0 0 0   Overlap:
  2-Fl W     Dwell Status..._ 0 0 0 0 0 0 0 0    0-No
  3-Dark     Cycle ........_ 0 0 0 0 0 0 0 0    1-Act'd
```

PREEMPT DATA - PREEMPT 3

```
N-Lock ....:     0   0-No 1-Yes                  LOW PRIORITY ROUTINES
                                                 ----------------------------
Skip ......:     0   0-No 1-Yes              - When No Dwell Phases Are Set
                                               This Routine Is Disabled.
Delay .....:     5 |                         - Skip (Yes) Will Allow Phases
Extend ....:     0 |  Time In                  To Be Skipped To Service The
Duration ..:     0  > Seconds                  Dwell Phases
Dwell .....:     0 |  (0-999)                - Set MxCall = 0 To Disable.
MxCall ....:     0 |                         - Lock Out Duration Will Be
Lock Out ..:     0 |                           Dependent On Calls If = 0.
                                             - Calls (Yes) Will Place A Ped
PHASE.....1.2.3.4.5.6.7.8.                     Call On Exit From Routine.
Dwell .:  0 0 0 0 0 0 1 0                        0-No
Calls .:  0 0 0 0 0 0 0 0                        1-Yes
```

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

PHASE DATA - VEHICLE TIMINGS

PHASE	1	2	3	4	5	6	7	8
MIN GRN:	6	16	8	16	6	16	8	16
PASS/10:	20	30	30	30	20	30	30	30
MAX # 1:	10	37	32	30	10	37	32	30
MAX # 2:	10	37	32	30	10	37	32	30
YEL/10 :	30	40	30	40	30	40	30	40
RED/10 :	10	20	20	20	10	20	20	20
AINI/10:	0	0	0	0	0	0	0	0
MAX INI:	0	0	0	0	0	0	0	0
TIM BEF:	0	0	0	0	0	0	0	0
CAR BEF:	0	0	0	0	0	0	0	0
TIME To:	0	0	0	0	0	0	0	0
MGAP/10:	0	0	0	0	0	0	0	0

PHASE DATA - PEDESTRIAN & VEHICLE CONTROL DATA

PHASE	1	2	3	4	5	6	7	8
WALK .:	0	17	0	16	0	21	0	16
PED CLR	0	12	0	11	0	16	0	11
PEDESTRIAN CONTROL								
FL WK :	0	0	0	0	0	0	0	0
ACT PCL:	0	0	0	0	0	0	0	0
ACT RIW:	0	0	0	0	0	0	0	0
VEHICLE CONTROL								
NL MEM :	1	1	1	1	1	1	1	1
2 ENTRY:	0	1	0	1	0	1	0	1
LC PASS:	0	0	0	0	0	0	0	0
CON SER:	0	0	0	0	0	0	0	0

Pedestrian & Vehicle Control Entry: '1' = Yes & '0' = No

PHASE DATA - GENERAL CONTROL DATA

PHASE	1	2	3	4	5	6	7	8
INITIAL:	1	3	1	1	1	3	1	1
NA RESP:	0	1	0	2	0	1	0	2
VEH REC:	0	2	0	0	0	2	0	0
PED REC:	0	0	0	0	0	0	0	0
DELAY :	0	0	0	0	0	0	0	0

Codes	0	1	2	3	4	5
INITIAL ..	NONE	INACTV	RED	YELLOW	GREEN	DARK
NA RESP ..	NONE	TO NA1	TO NA2	TO BOTH	---	---
VEH REC ..	NONE	1 CALL	MINI'M	MAXIMUM	SOFT	---
PED REC ..	NONE	1 CALL	RECALL	NON ACT	NA+	---

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

PHASE DATA - SEQUENCE CONTROL DATA

PHASE	1	2	3	4	5	6	7	8
OMIT :	2	0	4	0	6	0	8	0
-YEL :	0	0	0	0	0	0	0	0

CODES.....0.....1 TO 8 (#-PHASE).....
OMIT .....: NONE Phase Is Omitted By #-Phase On.
-YEL .....: NONE Phase Yellow Is Omitted By #-Phase Yellow.

PHASE DATA - VEH DETECTOR CONTROL DATA

DETECTOR	1	2	3	4	5	6	7	8
ASSIGN :	1	2	3	4	5	6	7	8
OP MODE:	0	0	0	0	0	0	0	0
SWITCH :	0	0	0	0	0	0	0	0
EXTD\10:	0	0	0	0	0	0	0	0
DELAY .:	0	0	0	0	0	0	0	0

PHASE DATA - PED DETECTOR CONTROL DATA

DETECTOR	1	2	3	4	5	6	7	8
ASSIGN :	1	2	3	4	5	6	7	8
OP MODE:	1	1	1	1	1	1	1	1
SWITCH :	0	0	0	0	0	0	0	0
EXTD\10:	0	0	0	0	0	0	0	0
DELAY .:	0	0	0	0	0	0	0	0

PHASE DATA - SPC DETECTOR CONTROL DATA

DETECTOR	1	2	3	4	5	6	7	8
ASSIGN :	0	0	0	0	0	0	0	0
OP MODE:	0	0	0	0	0	0	0	0
SWITCH :	0	0	0	0	0	0	0	0
EXTD\10:	0	0	0	0	0	0	0	0
DELAY .:	0	0	0	0	0	0	0	0

CODES:
ASSIGN ..: 0-None #-Detector Is Assigned To #-Phase
OP MODE .: 0-Norm Veh 1-Norm Ped 2-One Call 3-St Bar A
4-St Bar B
SWITCH ..: 0-None #-Detector Is Switched To #-Ph When The
Assigned Ph Is Yel/Red & #-Ph Is Green.

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

UNIT DATA - GENERAL CONTROL
==========

```
     STARTUP TIME ..........:    5        HDWE I/O    RING...1..2..3..4
 (1) STARTUP STATE .........:    0   (3)  INPUT RESPONSE :  1  2  0  0
     RED REV /10 ...........:   40   (3)  OUTPUT SELECT  :  1  2  0  0
 (2) AUTO PED CLEAR ........:    0   (4) 'D' CONN INPUT MODE .....:  0
 (2) STOP TIME RESET .......:    0   (4) 'D' CONN OUTPUT MODE ....:  0
   (1) = 0-Flash & 1-All Red           (3) = Hdw Rng # For I/O (0-None)
   (2) = 0-No & 1-Yes                  (4) = 0-Std & 1-Alt Function

  TEST A INPUT - REM FLASH .:    0              Codes: 0-No & 1-Yes
   S   Phase....1.2.3.4 5.6.7.8.A.B.C.D.E.F.G.H    Codes:
 L W F  FLSH .: . . . . . . . . . . . . . . . .  < 0-No & 1-Yes
 O I L  YEL ..: . . . . . . . . . . . . . . . .  < 0-Red & 1-Yel
 A T A  ALT ..: . . . . . . . . . . . . . . . .  < 0-No & 1-Yes
 D C S Phase....1.2.3.4 5.6.7.8
   H H  ENTER.: . . . . . . . . .    < Flash Entry In Phase
        EXIT .: . . . . . . . . .    < Flash Exit In Phase
```

UNIT DATA - OVERLAP CONTROL
==========

```
 PHASE .........1....2....3....4....5....6....7....8....#.
  OVLAP A :     .    .    .    .    .    .    .    .    0
  OVLAP B :     .    .    .    .    .    .    .    .    0
  OVLAP C :     .    .    .    .    .    .    .    .    0
  OVLAP D :     .    .    .    .    .    .    .    .    0
  OVLAP E :     .    .    .    .    .    .    .    .    0
  OVLAP F :     .    .    .    .    .    .    .    .    0
  OVLAP G :     .    .    .    .    .    .    .    .    0
  OVLAP H :     .    .    .    .    .    .    .    .    0
    Phase: 0-None  1-Include In Ovlp
      # .: Overlap Uses '#' Ped Outputs

 OVERLAP.......A....B....C....D....E....F....G....H.
  TRL GRN :     0    0    0    0    0    0    0    0
  YEL /10 :    40   40   40   40   40   40   40   40
  RED /10 :    20   20   20   20   20   20   20   20
 -GRN/YEL :     0    0    0    0    0    0    0    0
 +GRN ....:     0    0    0    0    0    0    0    0
    -GRN/YEL: 0-None  #-Ph G Kills Ol G & #-Ph Y Kills Ol Y
    +GRN ...: Overlap Green Starts with #-Ph Green
```

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

UNIT DATA - RING STRUCTURE

	PHASE	RING	PH NXT	CONCURRENT PHASES
Ring Structure	1	1	2	5 6 . . . .
	2	1	3	5 6 . . . .
	3	1	4	7 8 . . . .
	4	1	1	7 8 . . . .
1 To 4 Rings	5	2	6	1 2 . . . .
	6	2	7	1 2 . . . .
	7	2	8	3 4 . . . .
	8	2	5	3 4 . . . .
Excl Ped >	9	1	0	I/O ...: 0

PH NXT : Phase Next or Phase To Follow.

CONCURRENT PHASES: Phases In Other Rings Allowed To Run Concurrent.

< I/O For Excl Ped

UNIT DATA - ALTERNATE SEQUENCES

SEQUENCE	REVERSE PHASES				SEQUENCE	REVERSE PHASES			
00	.....NONE.....				08	78	00	00	00
01	00	00	00	00	09	12	78	00	00
02	34	00	00	00	10	34	78	00	00
03	12	34	00	00	11	12	34	78	00
04	56	00	00	00	12	56	78	00	00
05	12	56	00	00	13	12	56	78	00
06	34	56	00	00	14	34	56	78	00
07	12	34	56	00	15	12	34	56	78

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

PREEMPTION DATA - GENERAL

MINIMUM GREEN / WALK

RING	1	2	3	4	Time In
Minimum Time	16	16	16	16	Seconds

FUNCTIONS:

Preemption Over Flash .:	1
Preempt PE1 Over PE2 ..:	1
Preempt PE2 Over PE3 ..:	1
Preempt PE3 Over PE4 ..:	1
Preempt PE4 Over PE5 ..:	1
Preempt PE5 Over PE6 ..:	1

PRIORITY: 0-No, Equal Priority
1-Yes, 1st Has Priority

- When a Function Has Priority Over Another, The Function Of Lower Priority Will Terminate And The Higher Priority Will Assume Control.

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

PREEMPT DATA - PREEMPT 1

```
N-Lock ...:     0   0-No 1-Yes   Selective Ped Clr :   11 |
                                   :  :    Yel /10 :   40 |  Preempt
Link PE# .:     0   Preempt #      :  :    Red /10 :   20 |  Interval
                                 Track Green (*)...:    0  > Times In
Delay ....:     0 |                :   Ped Clr ....:    0 |  Seconds
Extend ...:     0 |  Time In       :   Yel /10 ....:   40 |
Duration .:     0  > Seconds      :   Red /10 ....:    0 |  * - If 0,
                  |  (0-999)     Dwell Green ......:   10 |  Skip All
MxCall ...:     0 |              Return Ped Clr ...:    8 |    Track
Lock Out .:     0 |                :    Yel /10 ...:   40 |  Intervals
                                   :    Red /10 ...:   20
PHASE.....1..2..3..4..5..6..7..8.
Exit ..:  0  1  0  0  0  1  0  0  0-No
Calls .:  1  1  1  1  1  1  1  1  1-Yes
```

PREEMPT DATA - PREEMPT 1

```
 STATUS     PHASE VEHICLE.....1.2.3.4.5.6.7.8.  CYCLE
 --------    Track Status..._  0 0 0 0 0 0 0 0   --------
 Vehicle:    Dwell Status..._  0 1 0 0 0 1 0 0   Vehicle:
  0-Red      Cycle ........_  0 0 0 0 0 0 0 0    0-No
  1-Grn                                           1-Act'd
  2-Fl R    PHASE PEDESTRIAN..1.2.3.4.5.6.7.8.    2-Mn Rec
  3-Fl Y     Track Status..._  0 0 0 0 0 0 0 0    3-Mx Rec
  4-Dark     Dwell Status..._  0 0 0 0 0 0 0 0   Pedest:
             Cycle ........_  0 0 0 0 0 0 0 0    0-No
 Pedest:                                          1-Act'd
  0-D Wk    OVERLAP VEHICLE...A.B.C.D.E.F.G.H.    2-Recall
  1-Walk     Track Status..._  0 0 0 0 0 0 0 0   Overlap:
  2-Fl W     Dwell Status..._  0 0 0 0 0 0 0 0    0-No
  3-Dark     Cycle ........_  0 0 0 0 0 0 0 0    1-Act'd
```

PREEMPT DATA - PREEMPT 1

```
N-Lock ....:     0   0-No 1-Yes                 LOW PRIORITY ROUTINES
                                              ----------------------------
Skip ......:     0   0-No 1-Yes              - When No Dwell Phases Are Set
                                               This Routine Is Disabled.
Delay .....:     0 |                         - Skip (Yes) Will Allow Phases
Extend ....:     0 |  Time In                  To Be Skipped To Service The
Duration ..:     0  > Seconds                  Dwell Phases
Dwell .....:     0 |  (0-999)                - Set MxCall = 0 To Disable.
MxCall ....:     0 |                         - Lock Out Duration Will Be
Lock Out ..:     0 |                           Dependent On Calls If = 0.
                                             - Calls (Yes) Will Place A Ped
PHASE.....1.2.3.4.5.6.7.8.                     Call On Exit From Routine.
Dwell .:  0 0 0 0 0 0 0 0                        0-No
Calls .:  0 0 0 0 0 0 0 0                        1-Yes
```

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

PREEMPT DATA - PREEMPT 2

```
N-Lock ...:     0   0-No 1-Yes   Selective Ped Clr :   11 |
                                   :  :    Yel /10 :   40 |  Preempt
Link PE# .:     0   Preempt #      :  :    Red /10 :   20 |  Interval
                                 Track Green (*)...:    0  > Times In
Delay ....:     0 |                :   Ped Clr ....:    0 |  Seconds
Extend ...:     0 |  Time In       :   Yel /10 ....:   40 |
Duration .:     0  > Seconds      :   Red /10 ....:    0 |  * - If 0,
                  |  (0-999)     Dwell Green ......:   10 |  Skip All
MxCall ...:     0 |              Return Ped Clr ...:    8 |    Track
Lock Out .:     0 |                :    Yel /10 ...:   40 |  Intervals
                                   :    Red /10 ...:   20
PHASE.....1..2..3..4..5..6..7..8.
Exit ..:  0  1  0  0  0  1  0  0  0-No
Calls .:  1  1  1  1  1  1  1  1  1-Yes
```

PREEMPT DATA - PREEMPT 2

```
 STATUS     PHASE VEHICLE.....1.2.3.4.5.6.7.8.  CYCLE
 --------    Track Status..._  0 0 0 0 0 0 0 0  --------
 Vehicle:    Dwell Status..._  0 0 0 1 0 0 0 1  Vehicle:
  0-Red      Cycle ........_  0 0 0 0 0 0 0 0   0-No
  1-Grn                                          1-Act'd
  2-Fl R    PHASE PEDESTRIAN..1.2.3.4.5.6.7.8.   2-Mn Rec
  3-Fl Y     Track Status..._  0 0 0 0 0 0 0 0   3-Mx Rec
  4-Dark     Dwell Status..._  0 0 0 0 0 0 0 0  Pedest:
             Cycle ........_  0 0 0 0 0 0 0 0   0-No
 Pedest:                                         1-Act'd
  0-D Wk    OVERLAP VEHICLE...A.B.C.D.E.F.G.H.   2-Recall
  1-Walk     Track Status..._  0 0 0 0 0 0 0 0  Overlap:
  2-Fl W     Dwell Status..._  0 0 0 0 0 0 0 0   0-No
  3-Dark     Cycle ........_  0 0 0 0 0 0 0 0   1-Act'd
```

PREEMPT DATA - PREEMPT 2

```
N-Lock ....:     0   0-No 1-Yes                 LOW PRIORITY ROUTINES
                                              ----------------------------
Skip ......:     0   0-No 1-Yes              - When No Dwell Phases Are Set
                                               This Routine Is Disabled.
Delay .....:     0 |                         - Skip (Yes) Will Allow Phases
Extend ....:     0 |  Time In                  To Be Skipped To Service The
Duration ..:     0  > Seconds                  Dwell Phases
Dwell .....:     0 |  (0-999)                - Set MxCall = 0 To Disable.
MxCall ....:     0 |                         - Lock Out Duration Will Be
Lock Out ..:     0 |                           Dependent On Calls If = 0.
                                             - Calls (Yes) Will Place A Ped
PHASE.....1.2.3.4.5.6.7.8.                     Call On Exit From Routine.
Dwell .:  0 0 0 0 0 0 0 0                        0-No
Calls .:  0 0 0 0 0 0 0 0                        1-Yes
```

SOLO: SOLO INTERSECTIONS
LOCAL DATABASE ... For: #14 - William/Burnham/Elgin

PREEMPT DATA - PREEMPT 3

```
N-Lock ...:     0   0-No 1-Yes   Selective Ped Clr :     8 |
                                   :  :    Yel /10 :    40 |  Preempt
Link PE# .:     3   Preempt #      :  :    Red /10 :    20 |  Interval
                                 Track Green (*)...:    10  > Times In
Delay ....:     5 |                :   Ped Clr ....:     8 |  Seconds
Extend ...:     0 |  Time In       :   Yel /10 ....:    40 |
Duration .:     0  > Seconds       :   Red /10 ....:    20  * - If 0,
                  |  (0-999)     Dwell Green ......:    10 |  Skip All
MxCall ...:     0 |              Return Ped Clr ...:     8 |   Track
Lock Out .:     0 |                :    Yel /10 ...:    40 |  Intervals
                                   :    Red /10 ...:    20
PHASE.....1..2..3..4..5..6..7..8.
Exit ..:  0  1  0  0  0  1  0  0  0-No
Calls .:  1  1  1  1  1  1  1  1  1-Yes
```

PREEMPT DATA - PREEMPT 3

```
 STATUS     PHASE VEHICLE.....1.2.3.4.5.6.7.8.  CYCLE
 --------    Track Status..._  0 0 0 0 0 0 0 0   --------
 Vehicle:    Dwell Status..._  0 0 0 0 0 0 0 0   Vehicle:
  0-Red      Cycle ........_  0 0 0 0 0 0 0 0    0-No
  1-Grn                                          1-Act'd
  2-Fl R    PHASE PEDESTRIAN..1.2.3.4.5.6.7.8.   2-Mn Rec
  3-Fl Y      Track Status..._  0 0 0 0 0 0 0 0   3-Mx Rec
  4-Dark      Dwell Status..._  0 0 0 0 0 0 0 0   Pedest:
              Cycle ........_  0 0 0 0 0 0 0 0    0-No
 Pedest:                                          1-Act'd
  0-D Wk    OVERLAP VEHICLE...A.B.C.D.E.F.G.H.   2-Recall
  1-Walk      Track Status..._  0 0 0 0 0 0 0 0   Overlap:
  2-Fl W      Dwell Status..._  0 0 0 0 0 0 0 0    0-No
  3-Dark      Cycle ........_  0 0 0 0 0 0 0 0    1-Act'd
```

PREEMPT DATA - PREEMPT 3

```
N-Lock ....:     0   0-No 1-Yes                 LOW PRIORITY ROUTINES
                                              ----------------------------
Skip ......:     0   0-No 1-Yes              - When No Dwell Phases Are Set
                                                This Routine Is Disabled.
Delay .....:     5 |                         - Skip (Yes) Will Allow Phases
Extend ....:     0 |  Time In                   To Be Skipped To Service The
Duration ..:     0  > Seconds                   Dwell Phases
Dwell .....:     0 |  (0-999)                - Set MxCall = 0 To Disable.
MxCall ....:     0 |                         - Lock Out Duration Will Be
Lock Out ..:     0 |                            Dependent On Calls If = 0.
                                             - Calls (Yes) Will Place A Ped
PHASE.....1.2.3.4.5.6.7.8.                     Call On Exit From Routine.
Dwell .:  0 0 0 0 0 0 1 0                        0-No
Calls .:  0 0 0 0 0 0 0 0                        1-Yes
```

INTERSECTION NAME:

Phasing:

1. Westbound Left Turn
2. Eastbound
3. Not Used
4. Northbound
5. Eastbound Left Turn
6. Westbound
7. Not Used
8. Southbound

PHASE DATA - VEHICLE TIMINGS

	PHASE	1	2	3	4	5	6	7	8	Offset
Basic Times	Minimum Green	6	16	0	16	6	16	0	16	-
	Passage	2	3	0	3	2	3	0	3	-
	Maximum No. 1	12	44	0	32	12	44	0	32	86
	Maximum No. 2	0	47	0	45	0	47	0	45	91
	Yellow Change	3	4	0	4	3	4	0	4	-
	Red Clearance	1	2	0	2	1	2	0	2	-
Density Times	Seconds/Actuation	0	0	0	0	0	0	0	0	
	Maximum Initial	0	0	0	0	0	0	0	0	
	Time Before Reduction	0	0	0	0	0	0	0	0	
	Cars Before Reduction	0	0	0	0	0	0	0	0	
	Time To Reduce	0	0	0	0	0	0	0	0	
	Minimum Gap	0	0	0	0	0	0	0	0	

PHASE DATA - PEDESTRIAN & VEHICLE CONTROL

	PHASE	1	2	3	4	5	6	7	8
Pedestrian Times	Walk	0	7	0	7	0	7	0	7
	Pedestrian Clearance	0	15	0	25	0	15	0	25
Pedestrian Control	Flashing Walk	0	0	0	0	0	0	0	0
	Extended Ped Clear	0	2	0	2	0	2	0	2
	Actuated Rest In Walk	0	0	0	0	0	0	0	0
Vehicle Control	Non Lock Memory	1	1	0	1	1	1	0	1
	Dual Entry	0	1	0	1	0	1	0	1
	Last Car Passage	0	0	0	0	0	0	0	0
	Conditional Service	0	0	0	0	0	0	0	0

"1" = Yes & "0" = No

PREEMPT TIME DATA

Preempt General Data

Min Green/Walk Time	Ring1	Ring2	Ring3	Ring4
	5	**5**	**5**	**5**

FlashOverPreempts	**1**
Preempt1OverPreempt2	**1**
Preempt2OverPreempt3	**1**
Preempt3OverPreempt4	**1**
Preempt4OverPreempt5	**1**
Preempt5OverPreempt6	**1**

Preempt Pre 1 Time Data

SelPedClear	**8**
SelRedClear	**2.0**
SelYelChange	**4.0**
TrackGreen	0
TrackPedClear	0
TrackRedClear	0.0
TrackYelChange	**4.0**
DwellGreen	**10**
ReturnPedClear	0
ReturnRedClear	**2.0**
ReturnYelChange	**4.0**
NonLock	0
Link	0
Delay	0
Extend	0
Duration	0
MaxCall	0
LockOut	0

PHASE	1	2	3	4	5	6	7	8
Veh Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Veh Dwell Status	0-Red	1-Green	0-Red	0-Red	0-Red	1-Green	0-Red	0-Red
Veh Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Ped Track Status	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW
Ped Dwell Status	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW
Ped Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Overlap Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Overlap Dwell Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Overlap Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
ExitPhase	0	0	0	**1**	0	0	0	**1**
ExitCalls	0	0	0	0	0	0	0	0

Note: DW - Don't Walk

Preempt Pre 2 Time Data

SelPedClear	**8**
SelRedClear	**2.0**
SelYelChange	**4.0**
TrackGreen	0
TrackPedClear	0
TrackRedClear	0.0
TrackYelChange	**4.0**
DwellGreen	**10**
ReturnPedClear	0
ReturnRedClear	**2.0**
ReturnYelChange	**4.0**
NonLock	0
Link	0
Delay	0
Extend	0
Duration	0
MaxCall	0
LockOut	0

PHASE	1	2	3	4	5	6	7	8
Veh Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Veh Dwell Status	0-Red	0-Red	0-Red	1-Green	0-Red	0-Red	0-Red	1-Green
Veh Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Ped Track Status	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW
Ped Dwell Status	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW
Ped Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Overlap Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Overlap Dwell Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Overlap Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
ExitPhase	0	**1**	0	0	0	**1**	0	0
ExitCalls	0	0	0	0	0	0	0	0

Note: DW - Don't Walk

Preempt Pre 3 Time Data

SelPedClear	**8**
SelRedClear	**2.0**
SelYelChange	**4.0**
TrackGreen	**10**
TrackPedClear	**8**
TrackRedClear	**2.0**
TrackYelChange	**4.0**
DwellGreen	**10**
ReturnPedClear	**8**
ReturnRedClear	**2.0**
ReturnYelChange	**4.0**
NonLock	0
Link	0

PHASE	1	2	3	4	5	6	7	8
Veh Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Veh Dwell Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Veh Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Ped Track Status	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW
Ped Dwell Status	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW
Ped Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Overlap Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Overlap Dwell Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Overlap Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
ExitPhase	0	0	0	0	0	0	0	0

Delay	0
Extend	0
Duration	0
MaxCall	0
LockOut	0

ExitCalls	1	1	1	1	1	1	1	1

Note: DW - Don't Walk

Preempt Pre 4 Time Data

SelPedClear	**8**
SelRedClear	**2.0**
SelYelChange	**4.0**
TrackGreen	**10**
TrackPedClear	**8**
TrackRedClear	**2.0**
TrackYelChange	**4.0**
DwellGreen	**10**
ReturnPedClear	**8**
ReturnRedClear	**2.0**
ReturnYelChange	**4.0**
NonLock	0
Link	0
Delay	0
Extend	0
Duration	0
MaxCall	0
LockOut	0

PHASE	1	2	3	4	5	6	7	8
Veh Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Veh Dwell Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Veh Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Ped Track Status	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW
Ped Dwell Status	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW
Ped Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Overlap Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Overlap Dwell Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Overlap Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
ExitPhase	0	0	0	0	0	0	0	0
ExitCalls	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**

Note: DW - Don't Walk

Preempt Pre 5 Time Data

SelPedClear	**8**
SelRedClear	**2.0**
SelYelChange	**4.0**
TrackGreen	**10**
TrackPedClear	**8**
TrackRedClear	**2.0**
TrackYelChange	**4.0**
DwellGreen	**10**

PHASE	1	2	3	4	5	6	7	8
Veh Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Veh Dwell Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Veh Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Ped Track Status	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW
Ped Dwell Status	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW
Ped Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No

ReturnPedClear	**8**
ReturnRedClear	**2.0**
ReturnYelChange	**4.0**
NonLock	0
Link	0
Delay	0
Extend	0
Duration	0
MaxCall	0
LockOut	0

Overlap Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Overlap Dwell Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Overlap Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
ExitPhase	0	0	0	0	0	0	0	0
ExitCalls	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**

Note: DW - Don't Walk

Preempt Pre 6 Time Data

SelPedClear	**8**
SelRedClear	**2.0**
SelYelChange	**4.0**
TrackGreen	**10**
TrackPedClear	**8**
TrackRedClear	**2.0**
TrackYelChange	**4.0**
DwellGreen	**10**
ReturnPedClear	**8**
ReturnRedClear	**2.0**
ReturnYelChange	**4.0**
NonLock	0
Link	0
Delay	0
Extend	0
Duration	0
MaxCall	0
LockOut	0

PHASE	1	2	3	4	5	6	7	8
Veh Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Veh Dwell Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Veh Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Ped Track Status	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW
Ped Dwell Status	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW	0-DW
Ped Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
Overlap Track Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Overlap Dwell Status	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red	0-Red
Overlap Cycle Status	0-No	0-No	0-No	0-No	0-No	0-No	0-No	0-No
ExitPhase	0	0	0	0	0	0	0	0
ExitCalls	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**

Note: DW - Don't Walk

Programmed EPAC Data IP

9/19/2007
2:41:54PM

Intersection Name: Strathy and DePalma

Intersection Alias: 104

Access Code: 9999 Channel: 17 Address: 001 Revision: 3.33e
IP: 172.16.16.104 / 24

Access Data

Port 2 Comm :19200 Baud
Port 3 Comm :1200 Baud

Phase Data

Vehical Basic Timings

Phase	Min_Grn	Passage	Max1	Max2	Yellow	All Red
1	6	2.0	12	0	3.0	1.0
2	16	3.0	31	47	4.0	2.0
3	6	2.0	10	0	3.0	1.0
4	16	3.0	31	45	4.0	2.0
5	6	2.0	12	0	3.0	1.0
6	16	3.0	31	47	4.0	2.0
7	6	2.0	10	0	3.0	1.0
8	16	3.0	31	45	4.0	2.0

Vehical Density Timings

Added Initial	Max_Initial	Time B4 Reduction	Cars Before	Time To Reduce	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
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

Pedestrian Timing

Phase	Walk	Ped Clear	Flashing Walk	Extended Actuated Ped Clear	Rest in Walk
1	0	0	No	0	No
2	7	23	No	2	No
3	0	0	No	0	No
4	7	25	No	2	No
5	0	0	No	0	No
6	7	23	No	2	No
7	0	0	No	0	No
8	7	25	No	2	No

General Control

Initialize	Non-Act Response	Veh Recall	Ped Recall	Recall Delay
Inactive	None	None	None	0
Yellow	NonActI	Min	Non Act+	0
Inactive	None	None	None	0
Inactive	NonActII	None	None	0
Inactive	None	None	None	0
Yellow	NonActI	Min	Non Act+	0
Inactive	None	None	None	0
Inactive	NonActII	None	None	5

Miscellaneous

Non Lock	Dual Entry	Last Car Passage	Conditional Service	No Simultaneous Gap Out
Yes	No	No	No	No
Yes	Yes	No	No	No
Yes	No	No	No	No
Yes	Yes	No	No	No
Yes	No	No	No	No
Yes	Yes	No	No	No
Yes	No	No	No	No
Yes	Yes	No	No	No

Special Sequence
Default Data

Vehical Detector Phase Assignment

	Assigned Phase	Mode	Switched Phase	Extend	Delay
Vehical Detector Channel :1	1	Veh	0	0.0	0
Vehical Detector Channel :2	2	Veh	0	0.0	0
Vehical Detector Channel :3	3	Veh	8	0.0	0
Vehical Detector Channel :4	4	Veh	0	0.0	0
Vehical Detector Channel :5	5	Veh	0	0.0	0
Vehical Detector Channel :6	6	Veh	0	0.0	0
Vehical Detector Channel :7	7	Veh	0	0.0	0
Vehical Detector Channel :8	8	Veh	0	0.0	0

Pedestrian Detector
Default Data

Special Detector Phase Assignment

	Assign Phase	Mode	Switched Phase	Extend	Delay
:					

Default Data

Unit Data

General Control

Startup Time: 5sec Startup State: Flash Red Revert: 4sec
Auto Ped Clear: No Stop Time Reset: No Alternate Sequence: 0
ABC connector Input Modes: 0
ABC connector Output Modes: 0
D connector Input Modes: 0
D connector Output Modes: 0

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash
Test A = Flash

Phase	Flash Entry Phase	Flash Exit Phase

Default Data - No Flash

Channel	Flash Color	Flash Alternat

Default Data - No Flash

aps

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	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
Plus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
1	1	2
2	1	3
3	1	4
4	1	1
5	2	6
6	2	7
7	2	8
8	2	5

Phase(s)

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

Alternate Sequences

Alternate Sequences

Port 1 Data

BIU Addr	Port Status	Message 40

Phase Pair(s)

Default Data

No Alternate Sequences

Channel Assignment

Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set	
Ph.1 Veh	1	1 - Ph.1 RYG	1	Ph.2 Veh	2	2 - Ph.2 RYG	2	Ph.3 Veh	3	3 - Ph.3 RYG	3
Ph.4 Veh	4	4 - Ph.4 RYG	4	Ph.5 Veh	5	5 - Ph.5 RYG	5	Ph.6 Veh	6	6 - Ph.6 RYG	6
Ph.7 Veh	7	7 - Ph.7 RYG	7	Ph.8 Veh	8	8 - Ph.8 RYG	8	Ph.2 Ped	9	10 - Ph.2 DPW	10
Ph.4 Ped	10	12 - Ph.4 DPW	12	Ph.6 Ped	11	14 - Ph.6 DPW	14	Ph.8 Ped	12	16 - Ph.8 DPW	16
Ph.1 OLP	13	17 - Ph.1 RYG	17	Ph.2 OLP	14	18 - Ph.2 RYG	18	Ph.3 OLP	15	19 - Ph.3 RYG	19
Ph.4 OLP	16	20 - Ph.4 RYG	20	Ph.1 Ped	17	9 - Ph.1 DPW	9	Ph.3 Ped	18	11 - Ph.3 DPW	11
Ph.5 Ped	19	13 - Ph.5 DPW	13	Ph.7 Ped	20	15 - Ph.7 DPW	15				

Coordination Data

General Coordination Data

Operation Mode: 1=Auto

Coordination Mode: 1=Yield

Maximun Mode: 0=Inhibit

Correction Mode: 2=Short Way

Offset Mode: 0=Beg Grn

Force Mode: 1=Cycle

Max Dwell Time: 0

Yield Period: 0

Manual Dial: 1

Manual Split: 1

Manual Offset: 1

Dial/Split	Cycle
1/1	100
1/2	110
1/3	120
1/4	140

Split Times and Phase Mode:

Dial 1 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	11	0=Actuated	2	39	1=Coordinate	3	13	0=Actuated	4	37	0=Actuated
5	11	0=Actuated	6	39	1=Coordinate	7	13	0=Actuated	8	37	0=Actuated

Dial 1 / Split 2

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	11	0=Actuated	2	44	1=Coordinate	3	13	0=Actuated	4	42	0=Actuated
5	11	0=Actuated	6	44	1=Coordinate	7	13	0=Actuated	8	42	0=Actuated

Dial 1 / Split 3

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	11	0=Actuated	2	49	1=Coordinate	3	13	0=Actuated	4	47	0=Actuated
5	11	0=Actuated	6	49	1=Coordinate	7	13	0=Actuated	8	47	0=Actuated

Dial 1 / Split 4

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	11	0=Actuated	2	69	1=Coordinate	3	13	0=Actuated	4	47	0=Actuated
5	41	0=Actuated	6	39	1=Coordinate	7	13	0=Actuated	8	47	0=Actuated

Traffic Plan Data

Plan: **1/1/1**	Offset Time: 11	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/2/1**	Offset Time: 17	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/3/1**	Offset Time: 47	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/4/1**	Offset Time: 39	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2

End of Daylight Saving Month: 11 Week: 1

Cycle Zero Reference Hours: 24 Min: 0

Source Day	Equate Days 1	2	3	4	5	6	7
1	7	59	0	0	0	0	0
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	0:1	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	1	8:0	1/2/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	1	20:0	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	2	0:1	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5	2	6:0	1/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6	2	9:0	1/2/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7	2	15:0	1/3/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8	2	19:0	1/2/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
9	2	21:30	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

AUX. Events

Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Event	Month	Day	Year	Special Day	Special Week
1	1	1	0	59	0
2	7	1	0	59	0
3	12	25	0	59	0
4	12	26	0	59	0

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8
Special Function 1	X							
Special Function 2		X						
Special Function 3			X					
Special Function 4				X				
Special Function 5					X			
Special Function 6						X		
Special Function 7							X	
Special Function 8								X

Phase Function

Phase Function Map	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 8 Max2								X								
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Dimming Data

Channel Red	Yellow	Green	Alternate

Default Data - No Dimming Programmed

Preemption Data

General Preemption Data

Ring	Min Grn/Walk Time
1	5
2	5
3	5
4	5

Flash > Preepmt 1 Preepmt 2 = Preempt 3 Preepmt 4 = Preempt 5
Preepmt 1 > Preempt 2 Preepmt 3 = Preempt 4 Preepmt 5 = Preempt 6

Preempt Timers

Preempt	Non-Locking	Link to Preempt	Delay	Extend	Duration	MaxCall	Lock-Out	Select: Ped Clear	Select: Yel	Select: Red	Track: Grn	Track: Ped	Track: Yel	Track: Red	Dwell Green	Return: Ped Clear	Return: Yel	Return: Red
1	No	0	0	0	0	0	0	8	4.0	2.0	0	0	4.0	0.0	10	0	4.0	2.0
2	No	0	0	0	0	0	0	8	4.0	2.0	0	0	4.0	0.0	10	0	4.0	2.0
3	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
4	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
5	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
6	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0

Preempt 1

Phase	Exit Phase	Exit Calls
4	Yes	No
8	Yes	No

Preempt 2

Phase	Exit Phase	Exit Calls
2	Yes	No
6	Yes	No

Preempt 3

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 4

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 5

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 6

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Priority Timers

Priority	Non-Locking	Delay	Extend	Duration	Dwell	Max_Call	Lock-Out	Skip Phases
1	No	0	0	0	0	0	0	0=Do not Skip Phases
2	No	0	0	0	0	0	0	0=Do not Skip Phases
3	No	0	0	0	0	0	0	0=Do not Skip Phases
4	No	0	0	0	0	0	0	0=Do not Skip Phases
5	No	0	0	0	0	0	0	0=Do not Skip Phases
6	No	0	0	0	0	0	0	0=Do not Skip Phases

Priority 1

Phase	Exit Phase	Exit Calls

Priority 2

Phase	Exit Phase	Exit Calls

Priority 3

Phase	Exit Phase	Exit Calls

Priority 4

Phase	Exit Phase	Exit Calls

Priority 5

Phase	Exit Phase	Exit Calls

Priority 6

Phase	Exit Phase	Exit Calls

Preempt 1

Vehical Phases

Ph.	Track	Dwell	Cycle
2	Red	Green	No
6	Red	Green	No

Pedestrian Phases

Ph	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp	Track	Dwell	Cycle

Default Data

Preempt 2

Vehical Phases

Ph.	Track	Dwell	Cycle
4	Red	Green	No
8	Red	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle

Default Data

Preempt 3

Vehical Phases

Ph.	Track	Dwell	Cycle

Default Data

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle

Default Data

Preempt 4

Vehical Phases

Ph.	Track	Dwell	Cycle

Default Data

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle

Default Data

Preempt 5

Vehical Phases
Ph. Track Dwell Cycle

Pedestrian Phases
Ph. Track Dwell Cycle

Overlaps
Ovlp. Track Dwell Cycle

Default Data **Default Data** **Default Data**

Preempt 6

Vehical Phases
Ph. Track Dwell Cycle

Pedestrian Phases
Ph. Track Dwell Cycle

Overlaps
Ovlp. Track Dwell Cycle

Default Data **Default Data** **Default Data**

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15 1st Phone:

Local Free: No Cycle Failure: No Coord Failure: No Conflict Flash: No Remote Flash: No 2nd Phone:

Local Fash: No Cycle Fault: No Coord Fault: No Premption: No Voltage Monitor: No

Special Status 1: No Special Status 2: No Special Status 3: No Special Status 4: No Special Status 5: No Special Status 6: No

Traffic Responsive

System Detector Detector Channel Veh/Hr Average Time(mins) Occupancy Correction/10 Min Volume % Queue 1 Detectors System Detectors Weight Factor Queue 2 Detectors System Detectors Weight Factor

Default Data

Sample Interval:

Default Data **Default Data**

Queue: 1 Input Selection: 0=Average Queue:

Detector Failed Level : 0 Level Enter Leave Dial / Split / Offset

Queue: 2 Input Selection: 0=Average / /

Detector Failed Level : 0 **Default Data**

Vehical Detector
Diagnostic Value 0
Max Detector Presence No Activity Erratic Count

Default Data - Diag 0 Values

Vehical Detector
Diagnostic Value 1
Max Detector Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Special Detector
Diagnostic Value 0
Max Detector Presence No Activity Erratic Count

Default Data - No Diag 0 Vali

Pedestrian Detector
Diagnostic Value 0
Max Detector Presence No Activity Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector
Diagnostic Value 1
Max Detector Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Special Detector
Diagnostic Value 1
Max Detector Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:

Measurement:

Detector 1 Detector_2 Distance :

Dial/Split/Offset Speed Trap Low Treshold Speed Trap High Treshold

//

Default Data

Default Data

Volume Detector Data

Report Interval

Volume Detector Number Controller Detector Channel

Default Data

Programmed EPAC Data IP

9/19/2007
2:43:26PM

Intersection Name: Strathy and Walmart **Intersection Alias: 103**

Access Code: 9999 Channel: 17 Address: 001 Revision: 3.33e
IP: 172.16.16.103 / 24

Access Data
Port 2 Comm :19200 Baud
Port 3 Comm :1200 Baud

Phase Data

Vehical Basic Timings

Phase	Min_Grn	Passage	Max1	Max2	Yellow	All Red
1	6	3.0	25	30	3.0	1.0
2	15	3.0	35	50	4.0	2.0
4	8	3.0	35	50	4.0	2.0
5	6	3.0	25	30	3.0	1.0
6	15	3.0	35	50	4.0	2.0
8	8	3.0	35	50	4.0	2.0

Vehical Density Timings

Added Initial	Max_Initial	Time B4 Reduction	Cars Before	Time To Reduce	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
0.0	0	0	0	0	0.0
0.0	0	0	0	0	0.0

Pedestrian Timing

Phase	Walk	Ped Clear	Flashing Walk	Extended Actuated Ped Clear	Rest in Walk
1	0	0	No	0	No
2	7	18	No	2	No
4	7	18	No	2	No
5	0	0	No	0	No
6	7	18	No	2	No
8	7	18	No	2	No

General Control

Initialize	Non-Act Response	Veh Recall	Ped Recall	Recall Delay
Inactive	None	None	None	6
Yellow	NonActI	Min	Non Act+	0
Inactive	NonActII	None	None	0
Inactive	None	None	None	0
Yellow	NonActI	Min	Non Act+	0
Inactive	NonActII	None	None	6

Miscellaneous

Non Lock	Dual Entry	Last Car Passage	Conditional Service	No Simultaneous Gap Out
Yes	No	No	No	No
Yes	Yes	No	No	No
Yes	Yes	No	No	No
Yes	No	No	No	No
Yes	Yes	No	No	No
Yes	Yes	No	No	No

Special Sequence
Default Data

Vehical Detector Phase Assignment

	Assigned Phase	Mode	Switched Phase	Extend	Delay
Vehical Detector Channel :1	1	Veh	0	0.0	0
Vehical Detector Channel :2	2	Veh	0	0.0	0
Vehical Detector Channel :3	3	Veh	0	0.0	5
Vehical Detector Channel :4	4	Veh	0	0.0	5
Vehical Detector Channel :5	5	Veh	0	0.0	0
Vehical Detector Channel :6	6	Veh	0	0.0	0
Vehical Detector Channel :7	7	Veh	0	0.0	5
Vehical Detector Channel :8	8	Veh	0	0.0	5

Pedestrian Detector
Default Data

Special Detector Phase Assignment

	Assign Phase	Mode	Switched Phase	Extend	Delay
:					

Default Data

Unit Data

General Control

Startup Time: 5sec Startup State: Flash Red Revert: 4sec

Auto Ped Clear: No Stop Time Reset: No Alternate Sequence: 0

ABC connector Input Modes: 0

ABC connector Output Modes: 0

D connector Input Modes: 0

D connector Output Modes: 0

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash

Test A = Flash

Phase	Flash Entry Phase	Flash Exit Phase

Default Data - No Flash

Channel	Flash Color	Flash Alternat

Default Data - No Flash

Overlaps

	Overlaps															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Phase(s)																

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	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
Plus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
1	1	2
2	1	3
4	1	1
5	2	6
6	2	7
8	2	5

Phase(s)

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

Alternate Sequences

Alternate Sequences

Port 1 Data

BIU Addr	Port Status	Message 40

Default Data

Phase Pair(s)

No Alternate Sequences

Channel Assignment

Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set	
Ph.1 Veh	1	1 - Ph.1 RYG	1	Ph.2 Veh	2	2 - Ph.2 RYG	2	Ph.3 Veh	3	3 - Ph.3 RYG	3
Ph.4 Veh	4	4 - Ph.4 RYG	4	Ph.5 Veh	5	5 - Ph.5 RYG	5	Ph.6 Veh	6	6 - Ph.6 RYG	6
Ph.7 Veh	7	7 - Ph.7 RYG	7	Ph.8 Veh	8	8 - Ph.8 RYG	8	Ph.2 Ped	9	10 - Ph.2 DPW	10
Ph.4 Ped	10	12 - Ph.4 DPW	12	Ph.6 Ped	11	14 - Ph.6 DPW	14	Ph.8 Ped	12	16 - Ph.8 DPW	16
Ph.1 OLP	13	17 - Ph.1 RYG	17	Ph.2 OLP	14	18 - Ph.2 RYG	18	Ph.3 OLP	15	19 - Ph.3 RYG	19
Ph.4 OLP	16	20 - Ph.4 RYG	20	Ph.1 Ped	17	9 - Ph.1 DPW	9	Ph.3 Ped	18	11 - Ph.3 DPW	11
Ph.5 Ped	19	13 - Ph.5 DPW	13	Ph.7 Ped	20	15 - Ph.7 DPW	15				

Coordination Data

General Coordination Data

Operation Mode: 1=Auto

Coordination Mode: 1=Yield

Maximun Mode: 0=Inhibit

Correction Mode: 2=Short Way

Offset Mode: 0=Beg Grn

Force Mode: 1=Cycle

Max Dwell Time: 0

Yield Period: 0

Manual Dial: 1

Manual Split: 1

Manual Offset: 1

Dial/Split	Cycle
1/1	50
1/2	55
1/3	60
1/4	70

Split Times and Phase Mode:

Dial 1 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	11	0=Actuated	2	23	1=Coordinate	4	16	0=Actuated	5	11	0=Actuated
6	23	1=Coordinate	8	16	0=Actuated						

Dial 1 / Split 2

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	11	0=Actuated	2	28	1=Coordinate	4	16	0=Actuated	5	11	0=Actuated
6	28	1=Coordinate	8	16	0=Actuated						

Dial 1 / Split 3

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	12	0=Actuated	2	28	1=Coordinate	4	20	0=Actuated	5	12	0=Actuated
6	28	1=Coordinate	8	20	0=Actuated						

Dial 1 / Split 4

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	11	0=Actuated	2	37	1=Coordinate	4	22	0=Actuated	5	11	0=Actuated
6	37	1=Coordinate	8	22	0=Actuated						

Traffic Plan Data

Plan: **1/1/1**	Offset Time: 46	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/2/1**	Offset Time: 2	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/3/1**	Offset Time: 32	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **1/4/1**	Offset Time: 24	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2 Cycle Zero Reference Hours: 24 Min: 0

End of Daylight Saving Month: 11 Week: 1

Source Day	Equate Days 1	2	3	4	5	6	7
1	7	59	0	0	0	0	0
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	0:1	0/0/4																	
2	1	8:0	1/2/1																	
3	1	20:0	0/0/4																	
4	2	0:1	0/0/4																	
5	2	6:0	1/1/1																	
6	2	9:0	1/2/1																	
7	2	15:0	1/3/1																	
8	2	19:0	1/2/1																	
9	2	21:30	0/0/4																	

AUX. Events

Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8

Event	Month	Day	Year	Special Day	Special Week
1	1	1	0	59	0
2	7	1	0	59	0
3	12	25	0	59	0
4	12	26	0	59	0

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8
Special Function 1	X							
Special Function 2		X						
Special Function 3			X					
Special Function 4				X				
Special Function 5					X			
Special Function 6						X		
Special Function 7							X	
Special Function 8								X

Phase Function

Phase Function Map	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
Phase 8 Max2								X								
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Dimming Data

Channel Red	Yellow	Green	Alternate

Default Data - No Dimming Programmed

Preemption Data

General Preemption Data

Ring	Min Grn/Walk Time
1	10
2	10
3	10
4	10

Flash > Preepmt 1 Preepmt 2 = Preempt 3 Preepmt 4 = Preempt 5
Preepmt 1 > Preempt 2 Preepmt 3 = Preempt 4 Preepmt 5 = Preempt 6

Preempt Timers

Preempt	Non-Locking	Link to Preempt	Delay	Extend	Duration	MaxCall	Lock-Out	Select: Ped Clear	Select: Yel	Select: Red	Track: Grn	Track: Ped	Track: Yel	Track: Red	Dwell Green	Return: Ped Clear	Return: Yel	Return: Red
1	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
2	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
3	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
4	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
5	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
6	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0

Preempt 1

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 2

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 3

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 4

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 5

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 6

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Priority Timers

Priority	Non-Locking	Delay	Extend	Duration	Dwell	Max_Call	Lock-Out	Skip Phases
1	No	0	0	0	0	0	0	0=Do not Skip Phases
2	No	0	0	0	0	0	0	0=Do not Skip Phases
3	No	0	0	0	0	0	0	0=Do not Skip Phases
4	No	0	0	0	0	0	0	0=Do not Skip Phases
5	No	0	0	0	0	0	0	0=Do not Skip Phases
6	No	0	0	0	0	0	0	0=Do not Skip Phases

Priority 1

Phase	Exit Phase	Exit Calls

Priority 2

Phase	Exit Phase	Exit Calls

Priority 3

Phase	Exit Phase	Exit Calls

Priority 4

Phase	Exit Phase	Exit Calls

Priority 5

Phase	Exit Phase	Exit Calls

Priority 6

Phase	Exit Phase	Exit Calls

Preempt 1

Vehical Phases

Ph.	Track	Dwell	Cycle

Default Data

Pedestrian Phases

Ph	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp	Track	Dwell	Cycle

Default Data

Preempt 2

Vehical Phases

Ph.	Track	Dwell	Cycle

Default Data

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle

Default Data

Preempt 3

Vehical Phases
Ph. Track Dwell Cycle

Default Data

Pedestrian Phases
Ph. Track Dwell Cycle

Default Data

Overlaps
Ovlp. Track Dwell Cycle

Default Data

Preempt 4

Vehical Phases
Ph. Track Dwell Cycle

Default Data

Pedestrian Phases
Ph. Track Dwell Cycle

Default Data

Overlaps
Ovlp. Track Dwell Cycle

Default Data

Preempt 5

Vehical Phases
Ph. Track Dwell Cycle

Default Data

Pedestrian Phases
Ph. Track Dwell Cycle

Default Data

Overlaps
Ovlp. Track Dwell Cycle

Default Data

Preempt 6

Vehical Phases
Ph. Track Dwell Cycle

Default Data

Pedestrian Phases
Ph. Track Dwell Cycle

Default Data

Overlaps
Ovlp. Track Dwell Cycle

Default Data

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15 1st Phone:

Local Free: No Cycle Failure: No Coord Failure: No Conflict Flash: No Remote Flash: No 2nd Phone:

Local Fash: No Cycle Fault: No Coord Fault: No Premption: No Voltage Monitor: No

Special Status 1: No Special Status 2: No Special Status 3: No Special Status 4: No Special Status 5: No Special Status 6: No

Traffic Responsive

System Detector Detector Channel Veh/Hr Average Time(mins) Occupancy Correction/10 Min Volume % Queue 1 Detectors System Detectors Weight Factor Queue 2 Detectors System Detectors Weight Factor

Default Data

Default Data

Default Data

Sample Interval:

Queue: 1 Input Selection: 0=Average Queue:
Detector Failed Level : 0 Level Enter Leave Dial / Split / Offset
Queue: 2 Input Selection: 0=Average / /
Detector Failed Level : 0 **Default Data**

Vehical Detector
Diagnostic Value 0
Detector Max Presence No Activity Erratic Count

Default Data - Diag 0 Values

Vehical Detector
Diagnostic Value 1
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Special Detector
Diagnostic Value 0
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 0 Val

Pedestrian Detector
Diagnostic Value 0
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector
Diagnostic Value 1
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Special Detector
Diagnostic Value 1
Detector Max Presence No Activity Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:

Measurement:
Detector 1 Detector_2 Distance :

Default Data

Dial/Split/Offset
//

Default Data

Speed Trap Low Treshold Speed Trap High Treshold

Volume Detector Data

Volume Detector Number	Controller Detector Channel	Report Interval

Default Data

Appendix C

2019 Base Year Traffic Operations Reports

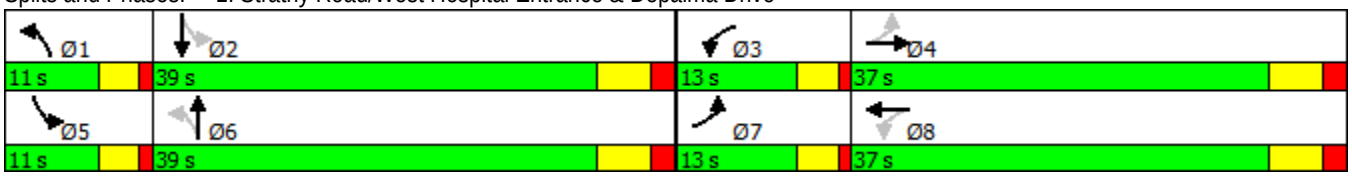
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	93	36	140	123	30	47	5	65	6	6	0
Future Volume (vph)	1	93	36	140	123	30	47	5	65	6	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	50.0		0.0	45.0		0.0	15.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		1.00	1.00		1.00	0.99		1.00		
Frt		0.958			0.971			0.862				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3363	0	1789	3421	0	1825	2920	0	1217	1642	0
Flt Permitted	0.644			0.514			0.667			0.704		
Satd. Flow (perm)	1229	3363	0	967	3421	0	1275	2920	0	901	1642	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			32			72				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		81.0			199.0			243.9			67.7	
Travel Time (s)		5.8			14.3			17.6			4.9	
Confl. Peds. (#/hr)	9		1	1		9	5		1	1		5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	5%	0%	2%	3%	4%	0%	0%	7%	50%	17%	0%
Adj. Flow (vph)	1	103	40	156	137	33	52	6	72	7	7	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	143	0	156	170	0	52	78	0	7	7	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0		10.0	22.0		10.0	22.0		10.0	22.0	
Total Split (s)	13.0	37.0		13.0	37.0		11.0	39.0		11.0	39.0	
Total Split (%)	13.0%	37.0%		13.0%	37.0%		11.0%	39.0%		11.0%	39.0%	
Maximum Green (s)	9.0	31.0		9.0	31.0		7.0	33.0		7.0	33.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		25.0			25.0			23.0			23.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	19.8	18.5		27.4	25.8		23.5	22.3		21.7	18.5	
Actuated g/C Ratio	0.33	0.31		0.46	0.43		0.39	0.37		0.36	0.31	
v/c Ratio	0.00	0.13		0.26	0.11		0.09	0.07		0.02	0.01	
Control Delay	10.0	14.2		11.7	10.5		12.2	5.6		11.7	18.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	10.0	14.2		11.7	10.5		12.2	5.6		11.7	18.3	
LOS	A	B		B	B		B	A		B	B	
Approach Delay		14.1			11.1			8.2			15.0	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 59.8
Natural Cycle: 65
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.26
Intersection Signal Delay: 11.3 — Intersection LOS: B
Intersection Capacity Utilization 46.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Strathy Road/West Hospital Entrance & Depalma Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	1	143	156	170	52	78	7	7
v/c Ratio	0.00	0.13	0.26	0.11	0.09	0.07	0.02	0.01
Control Delay	10.0	14.2	11.7	10.5	12.2	5.6	11.7	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.0	14.2	11.7	10.5	12.2	5.6	11.7	18.3
Queue Length 50th (m)	0.1	4.9	10.8	4.7	3.6	0.2	0.5	0.6
Queue Length 95th (m)	0.8	11.3	21.2	12.8	9.3	4.6	2.5	3.3
Internal Link Dist (m)		57.0		175.0		219.9		43.7
Turn Bay Length (m)	20.0		50.0		45.0		15.0	
Base Capacity (vph)	562	1925	603	1955	567	1785	373	988
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.07	0.26	0.09	0.09	0.04	0.02	0.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	93	36	140	123	30	47	5	65	6	6	0
Future Volume (vph)	1	93	36	140	123	30	47	5	65	6	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.86		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1820	3363		1789	3422		1821	2919		1216	1642	
Flt Permitted	0.64	1.00		0.51	1.00		0.67	1.00		0.70	1.00	
Satd. Flow (perm)	1235	3363		967	3422		1279	2919		901	1642	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	103	40	156	137	33	52	6	72	7	7	0
RTOR Reduction (vph)	0	30	0	0	20	0	0	48	0	0	0	0
Lane Group Flow (vph)	1	113	0	156	150	0	52	30	0	7	7	0
Confl. Peds. (#/hr)	9		1	1		9	5		1	1		5
Heavy Vehicles (%)	0%	5%	0%	2%	3%	4%	0%	0%	7%	50%	17%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	15.0	13.9		28.8	23.7		23.6	20.2		19.0	17.9	
Effective Green, g (s)	15.0	15.9		28.8	25.7		23.6	22.2		19.0	19.9	
Actuated g/C Ratio	0.23	0.24		0.44	0.39		0.36	0.34		0.29	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	289	808		556	1330		484	980		264	494	
v/s Ratio Prot	0.00	0.03		c0.05	0.04		c0.01	0.01		0.00	0.00	
v/s Ratio Perm	0.00			c0.08			c0.03			0.01		
v/c Ratio	0.00	0.14		0.28	0.11		0.11	0.03		0.03	0.01	
Uniform Delay, d1	19.8	19.7		11.7	12.9		14.1	14.7		16.9	16.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.0		0.0	0.0		0.0	0.0	
Delay (s)	19.8	19.8		11.8	13.0		14.1	14.7		16.9	16.2	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		19.8			12.4			14.5			16.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	66.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

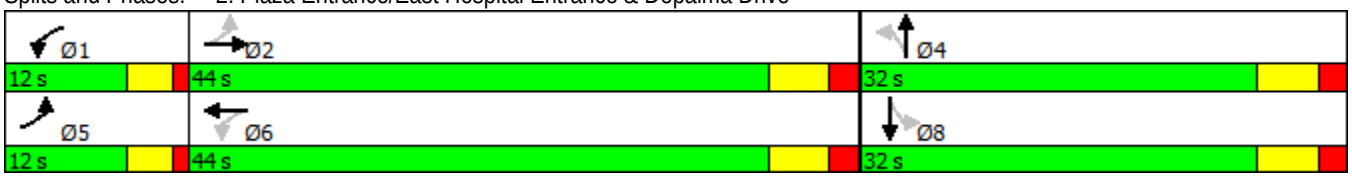
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	148	6	44	281	68	2	6	18	40	2	19
Future Volume (vph)	17	148	6	44	281	68	2	6	18	40	2	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	65.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.971			0.887			0.862	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1534	3399	0	1825	3434	0	1825	1631	0	1738	1569	0
Flt Permitted	0.508			0.563			0.741			0.739		
Satd. Flow (perm)	820	3399	0	1082	3434	0	1424	1631	0	1352	1569	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			44			21			23	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		199.0			195.0			41.1			35.9	
Travel Time (s)		14.3			14.0			3.0			2.6	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	19%	7%	0%	0%	4%	0%	0%	0%	6%	5%	0%	6%
Adj. Flow (vph)	20	176	7	52	335	81	2	7	21	48	2	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	183	0	52	416	0	2	28	0	48	25	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		22.0	22.0		22.0	22.0	
Total Split (s)	12.0	44.0		12.0	44.0		32.0	32.0		32.0	32.0	
Total Split (%)	13.6%	50.0%		13.6%	50.0%		36.4%	36.4%		36.4%	36.4%	
Maximum Green (s)	8.0	38.0		8.0	38.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		15.0			15.0		25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	21.5	18.2		23.0	21.9		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.43	0.36		0.46	0.44		0.36	0.36		0.36	0.36	
v/c Ratio	0.05	0.15		0.09	0.27		0.00	0.05		0.10	0.04	
Control Delay	6.8	12.0		7.0	9.1		12.0	7.6		13.0	6.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.8	12.0		7.0	9.1		12.0	7.6		13.0	6.7	
LOS	A	B		A	A		B	A		B	A	
Approach Delay		11.5			8.9			7.9			10.8	
Approach LOS		B			A			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 88
Actuated Cycle Length: 50
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.27
Intersection Signal Delay: 9.7 — Intersection LOS: A
Intersection Capacity Utilization 41.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Plaza Entrance/East Hospital Entrance & Depalma Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	20	183	52	416	2	28	48	25
v/c Ratio	0.05	0.15	0.09	0.27	0.00	0.05	0.10	0.04
Control Delay	6.8	12.0	7.0	9.1	12.0	7.6	13.0	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	12.0	7.0	9.1	12.0	7.6	13.0	6.7
Queue Length 50th (m)	0.9	6.2	2.3	9.2	0.2	0.5	3.2	0.2
Queue Length 95th (m)	3.0	11.0	5.7	21.1	1.2	4.1	8.2	3.6
Internal Link Dist (m)		175.0		171.0		17.1		11.9
Turn Bay Length (m)	65.0		50.0					
Base Capacity (vph)	486	2870	625	2906	805	931	764	897
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.06	0.08	0.14	0.00	0.03	0.06	0.03

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	148	6	44	281	68	2	6	18	40	2	19
Future Volume (vph)	17	148	6	44	281	68	2	6	18	40	2	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.89		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1534	3400		1825	3433		1825	1632		1738	1569	
Flt Permitted	0.51	1.00		0.56	1.00		0.74	1.00		0.74	1.00	
Satd. Flow (perm)	821	3400		1081	3433		1423	1632		1352	1569	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	20	176	7	52	335	81	2	7	21	48	2	23
RTOR Reduction (vph)	0	4	0	0	26	0	0	14	0	0	15	0
Lane Group Flow (vph)	20	179	0	52	390	0	2	14	0	48	10	0
Heavy Vehicles (%)	19%	7%	0%	0%	4%	0%	0%	0%	6%	5%	0%	6%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	18.7	17.6		23.3	19.9		16.2	16.2		16.2	16.2	
Effective Green, g (s)	18.7	19.6		23.3	21.9		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.35	0.37		0.44	0.41		0.34	0.34		0.34	0.34	
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	303	1252		520	1413		486	558		462	536	
v/s Ratio Prot	0.00	0.05		c0.01	c0.11			0.01			0.01	
v/s Ratio Perm	0.02			0.04			0.00			c0.04		
v/c Ratio	0.07	0.14		0.10	0.28		0.00	0.03		0.10	0.02	
Uniform Delay, d1	11.3	11.2		8.7	10.4		11.5	11.6		11.9	11.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.0	0.1		0.0	0.0		0.1	0.0	
Delay (s)	11.4	11.3		8.7	10.5		11.5	11.6		12.0	11.6	
Level of Service	B	B		A	B		B	B		B	B	
Approach Delay (s)		11.3			10.3			11.6			11.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	53.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	19	41	50	18	86	90	317	90	67	575	270
Future Volume (vph)	92	19	41	50	18	86	90	317	90	67	575	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	40.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99							
Frt		0.897			0.876			0.967			0.952	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1772	3076	0	1674	1650	0	1807	3408	0	1789	3330	0
Flt Permitted	0.517			0.711			0.202			0.483		
Satd. Flow (perm)	963	3076	0	1252	1650	0	384	3408	0	910	3330	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			96			43			93	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		195.0			157.6			247.7			73.6	
Travel Time (s)		14.0			11.3			17.8			5.3	
Confl. Peds. (#/hr)	2		1	1		2						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	0%	8%	9%	0%	1%	1%	4%	2%	2%	5%	3%
Adj. Flow (vph)	102	21	46	56	20	96	100	352	100	74	639	300
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	67	0	56	116	0	100	452	0	74	939	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	8.0		6.0	8.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	14.0		10.0	14.0		10.0	42.0		10.0	42.0	
Total Split (s)	13.0	30.0		13.0	30.0		13.0	44.0		13.0	44.0	
Total Split (%)	13.0%	30.0%		13.0%	30.0%		13.0%	44.0%		13.0%	44.0%	
Maximum Green (s)	9.0	24.0		9.0	24.0		9.0	38.0		9.0	38.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Dont Walk (s)		24.0			24.0			25.0			25.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	17.4	14.7		15.1	11.8		39.3	35.4		37.4	34.5	
Actuated g/C Ratio	0.27	0.23		0.23	0.18		0.60	0.54		0.58	0.53	
v/c Ratio	0.28	0.09		0.17	0.31		0.25	0.24		0.12	0.52	
Control Delay	21.9	14.5		20.9	12.9		8.6	11.6		7.6	15.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.9	14.5		20.9	12.9		8.6	11.6		7.6	15.1	
LOS	C	B		C	B		A	B		A	B	
Approach Delay		19.0			15.5			11.1			14.5	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 65
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.52
Intersection Signal Delay: 14.0 — Intersection LOS: B
Intersection Capacity Utilization 51.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Burnham Street & Depalma Drive/White Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	102	67	56	116	100	452	74	939
v/c Ratio	0.28	0.09	0.17	0.31	0.25	0.24	0.12	0.52
Control Delay	21.9	14.5	20.9	12.9	8.6	11.6	7.6	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	14.5	20.9	12.9	8.6	11.6	7.6	15.1
Queue Length 50th (m)	9.3	1.2	5.0	2.3	5.3	17.4	3.9	45.0
Queue Length 95th (m)	24.1	7.1	15.1	16.9	12.2	29.7	9.6	71.5
Internal Link Dist (m)		171.0		133.6		223.7		49.6
Turn Bay Length (m)	30.0		30.0		40.0		30.0	
Base Capacity (vph)	406	1413	409	797	460	2213	688	2173
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.05	0.14	0.15	0.22	0.20	0.11	0.43

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	19	41	50	18	86	90	317	90	67	575	270
Future Volume (vph)	92	19	41	50	18	86	90	317	90	67	575	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.88		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1771	3077		1674	1651		1807	3408		1789	3330	
Flt Permitted	0.52	1.00		0.71	1.00		0.20	1.00		0.48	1.00	
Satd. Flow (perm)	963	3077		1253	1651		383	3408		910	3330	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	102	21	46	56	20	96	100	352	100	74	639	300
RTOR Reduction (vph)	0	39	0	0	83	0	0	22	0	0	49	0
Lane Group Flow (vph)	102	28	0	56	33	0	100	430	0	74	890	0
Confl. Peds. (#/hr)	2		1	1		2						
Heavy Vehicles (%)	3%	0%	8%	9%	0%	1%	1%	4%	2%	2%	5%	3%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.0	9.2		10.8	7.1		37.1	31.6		35.3	30.7	
Effective Green, g (s)	15.0	11.2		10.8	9.1		37.1	33.6		35.3	32.7	
Actuated g/C Ratio	0.22	0.16		0.16	0.13		0.54	0.49		0.51	0.47	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	276	498		218	217		318	1657		523	1575	
v/s Ratio Prot	c0.03	0.01		0.01	0.02		c0.02	0.13		0.01	c0.27	
v/s Ratio Perm	c0.05			0.03			0.14			0.06		
v/c Ratio	0.37	0.06		0.26	0.15		0.31	0.26		0.14	0.57	
Uniform Delay, d1	22.5	24.5		25.4	26.6		8.8	10.4		8.6	13.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.0		0.2	0.3		0.2	0.1		0.0	0.5	
Delay (s)	22.8	24.5		25.7	26.9		9.0	10.5		8.7	13.6	
Level of Service	C	C		C	C		A	B		A	B	
Approach Delay (s)		23.5			26.5			10.3			13.2	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	69.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

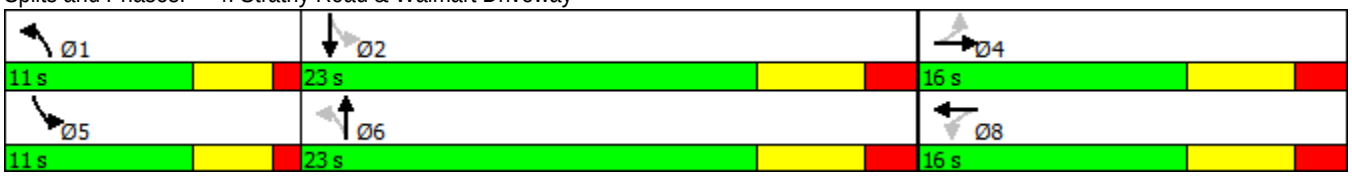
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1	25	16	3	3	91	176	15	6	209	2
Future Volume (vph)	4	1	25	16	3	3	91	176	15	6	209	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	25.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00				0.99			1.00		1.00		
Frt		0.855			0.925			0.988			0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1460	1410	0	1825	1766	0	1789	3484	0	1825	3576	0
Flt Permitted	0.752			0.736			0.455			0.605		
Satd. Flow (perm)	1155	1410	0	1414	1766	0	857	3484	0	1161	3576	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					4			19			2	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.6			59.9			307.9			243.9	
Travel Time (s)		7.4			4.3			22.2			17.6	
Confl. Peds. (#/hr)	1					1			1	1		
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	25%	0%	17%	0%	0%	0%	2%	3%	7%	0%	2%	0%
Adj. Flow (vph)	5	1	31	20	4	4	112	217	19	7	258	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	32	0	20	8	0	112	236	0	7	260	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4		8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		10.0	21.0		10.0	21.0	
Total Split (s)	16.0	16.0		16.0	16.0		11.0	23.0		11.0	23.0	
Total Split (%)	32.0%	32.0%		32.0%	32.0%		22.0%	46.0%		22.0%	46.0%	
Maximum Green (s)	10.0	10.0		10.0	10.0		7.0	17.0		7.0	17.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			18.0			18.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	13.8	15.3		13.8	15.3		21.4	24.9		18.3	19.0	
Actuated g/C Ratio	0.34	0.38		0.34	0.38		0.53	0.61		0.45	0.47	
v/c Ratio	0.01	0.06		0.04	0.01		0.18	0.11		0.01	0.16	
Control Delay	16.0	15.0		16.4	11.8		4.6	5.4		4.0	9.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.0	15.0		16.4	11.8		4.6	5.4		4.0	9.7	
LOS	B	B		B	B		A	A		A	A	
Approach Delay		15.1			15.1			5.2			9.5	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 40.6
Natural Cycle: 45
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.18
Intersection Signal Delay: 7.8 — Intersection LOS: A
Intersection Capacity Utilization 35.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Strathy Road & Walmart Driveway



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	5	32	20	8	112	236	7	260
v/c Ratio	0.01	0.06	0.04	0.01	0.18	0.11	0.01	0.16
Control Delay	16.0	15.0	16.4	11.8	4.6	5.4	4.0	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	15.0	16.4	11.8	4.6	5.4	4.0	9.7
Queue Length 50th (m)	0.4	2.1	1.4	0.3	3.0	3.1	0.3	7.0
Queue Length 95th (m)	2.1	6.3	4.9	2.3	6.3	9.6	1.0	11.6
Internal Link Dist (m)		78.6		35.9		283.9		219.9
Turn Bay Length (m)							25.0	
Base Capacity (vph)	433	577	530	725	644	2223	696	1871
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.06	0.04	0.01	0.17	0.11	0.01	0.14

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1	25	16	3	3	91	176	15	6	209	2
Future Volume (vph)	4	1	25	16	3	3	91	176	15	6	209	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	0.93		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1459	1410		1825	1766		1789	3484		1824	3575	
Flt Permitted	0.75	1.00		0.74	1.00		0.45	1.00		0.60	1.00	
Satd. Flow (perm)	1156	1410		1415	1766		857	3484		1162	3575	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	5	1	31	20	4	4	112	217	19	7	258	2
RTOR Reduction (vph)	0	0	0	0	3	0	0	11	0	0	1	0
Lane Group Flow (vph)	5	32	0	20	5	0	112	225	0	7	259	0
Confl. Peds. (#/hr)	1					1			1	1		
Heavy Vehicles (%)	25%	0%	17%	0%	0%	0%	2%	3%	7%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	11.4	11.4		11.4	11.4		21.3	16.5		13.7	12.7	
Effective Green, g (s)	11.4	13.4		11.4	13.4		21.3	18.5		13.7	14.7	
Actuated g/C Ratio	0.25	0.30		0.25	0.30		0.47	0.41		0.31	0.33	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	420		359	527		506	1435		369	1170	
v/s Ratio Prot		c0.02			0.00		c0.02	0.06		0.00	0.07	
v/s Ratio Perm	0.00			0.01			c0.08			0.01		
v/c Ratio	0.02	0.08		0.06	0.01		0.22	0.16		0.02	0.22	
Uniform Delay, d1	12.6	11.3		12.7	11.1		6.8	8.3		10.9	10.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.0		0.2	0.1		0.0	0.1	
Delay (s)	12.6	11.4		12.7	11.1		7.0	8.3		10.9	11.0	
Level of Service	B	B		B	B		A	A		B	B	
Approach Delay (s)		11.5			12.3			7.9			11.0	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	44.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	3	10	520	677	13
Future Volume (vph)	0	3	10	520	677	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.865				0.997	
Flt Protected				0.999		
Satd. Flow (prot)	1662	0	0	3542	3469	0
Flt Permitted				0.999		
Satd. Flow (perm)	1662	0	0	3542	3469	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	139.6			284.3	247.7	
Travel Time (s)	10.1			20.5	17.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	5%	0%
Adj. Flow (vph)	0	3	11	553	720	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	0	564	734	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	3	10	520	677	13
Future Volume (Veh/h)	0	3	10	520	677	13
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	3	11	553	720	14
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				284	248	
pX, platoon unblocked	0.95	0.95	0.95			
vC, conflicting volume	1026	367	734			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	924	231	617			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	256	739	925			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	3	195	369	480	254
Volume Left	0	11	0	0	0
Volume Right	3	0	0	0	14
cSH	739	925	1700	1700	1700
Volume to Capacity	0.00	0.01	0.22	0.28	0.15
Queue Length 95th (m)	0.1	0.3	0.0	0.0	0.0
Control Delay (s)	9.9	0.6	0.0	0.0	0.0
Lane LOS	A	A			
Approach Delay (s)	9.9	0.2		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		

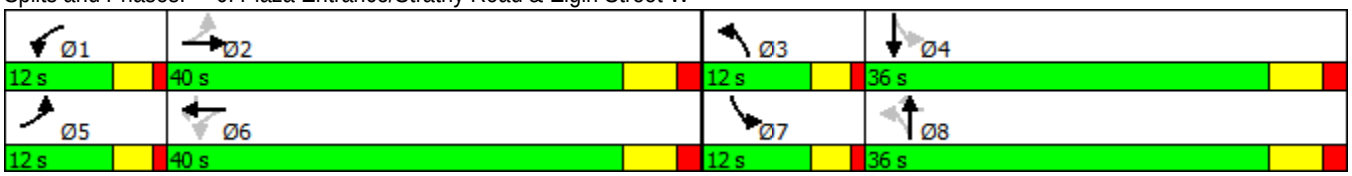
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	152	433	7	14	400	158	16	23	5	90	33	140
Future Volume (vph)	152	433	7	14	400	158	16	23	5	90	33	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		40.0	20.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00		0.99	1.00	1.00		1.00		0.98
Frt		0.998				0.850		0.974				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1807	3503	0	1825	3444	1601	1615	1867	0	1755	1921	1601
Flt Permitted	0.401			0.486			0.734			0.689		
Satd. Flow (perm)	762	3503	0	931	3444	1580	1244	1867	0	1272	1921	1574
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				166		5				147
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		86.1			116.2			44.7			307.9	
Travel Time (s)		6.2			8.4			3.2			22.2	
Confl. Peds. (#/hr)	1		3	3		1	4		1	1		4
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
Heavy Vehicles (%)	1%	4%	0%	0%	6%	2%	13%	0%	0%	4%	0%	2%
Adj. Flow (vph)	160	456	7	15	421	166	17	24	5	95	35	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	160	463	0	15	421	166	17	29	0	95	35	147
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane		Yes									Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Detector Phase	5	2		1	6	8	3	8		7	4	6
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0	12.0	6.0	12.0		6.0	12.0	10.0
Minimum Split (s)	10.0	32.0		10.0	32.0	39.0	10.0	39.0		10.0	39.0	32.0
Total Split (s)	12.0	40.0		12.0	40.0	36.0	12.0	36.0		12.0	36.0	40.0
Total Split (%)	12.0%	40.0%		12.0%	40.0%	36.0%	12.0%	36.0%		12.0%	36.0%	40.0%
Maximum Green (s)	8.0	34.0		8.0	34.0	30.0	8.0	30.0		8.0	30.0	34.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	Min	Min	Min		Min	Min	None
Walk Time (s)		10.0			10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		16.0			16.0	23.0		23.0			23.0	16.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	29.4	25.6		25.7	15.6	14.1	24.2	14.1		26.4	15.1	15.6
Actuated g/C Ratio	0.48	0.42		0.42	0.26	0.23	0.40	0.23		0.43	0.25	0.26
v/c Ratio	0.30	0.31		0.03	0.48	0.34	0.03	0.07		0.15	0.07	0.29
Control Delay	10.4	13.2		8.3	21.0	6.5	11.0	18.3		11.5	19.5	5.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	10.4	13.2		8.3	21.0	6.5	11.0	18.3		11.5	19.5	5.3
LOS	B	B		A	C	A	B	B		B	B	A
Approach Delay		12.5			16.7			15.6			9.2	
Approach LOS		B			B			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 60.8
Natural Cycle: 95
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 13.6 — Intersection LOS: B
Intersection Capacity Utilization 43.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Plaza Entrance/Strathy Road & Elgin Street W



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	160	463	15	421	166	17	29	95	35	147
v/c Ratio	0.30	0.31	0.03	0.48	0.34	0.03	0.07	0.15	0.07	0.29
Control Delay	10.4	13.2	8.3	21.0	6.5	11.0	18.3	11.5	19.5	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	13.2	8.3	21.0	6.5	11.0	18.3	11.5	19.5	5.3
Queue Length 50th (m)	9.5	16.2	0.8	21.1	0.0	1.0	2.1	5.8	3.0	0.0
Queue Length 95th (m)	18.4	33.9	3.2	32.4	13.3	4.3	8.2	14.9	9.6	10.8
Internal Link Dist (m)		62.1		92.2			20.7		283.9	
Turn Bay Length (m)					40.0	20.0				
Base Capacity (vph)	541	2083	571	2047	913	595	988	648	1015	995
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.22	0.03	0.21	0.18	0.03	0.03	0.15	0.03	0.15

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	152	433	7	14	400	158	16	23	5	90	33	140
Future Volume (vph)	152	433	7	14	400	158	16	23	5	90	33	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1807	3503		1823	3444	1581	1613	1867		1754	1921	1577
Flt Permitted	0.40	1.00		0.49	1.00	1.00	0.73	1.00		0.69	1.00	1.00
Satd. Flow (perm)	763	3503		932	3444	1581	1246	1867		1273	1921	1577
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	160	456	7	15	421	166	17	24	5	95	35	147
RTOR Reduction (vph)	0	1	0	0	0	129	0	4	0	0	0	104
Lane Group Flow (vph)	160	462	0	15	421	37	17	25	0	95	35	43
Confl. Peds. (#/hr)	1		3	3		1	4		1	1		4
Heavy Vehicles (%)	1%	4%	0%	0%	6%	2%	13%	0%	0%	4%	0%	2%
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Actuated Green, G (s)	28.7	23.6		18.0	16.9	12.1	18.3	12.1		20.3	13.1	16.9
Effective Green, g (s)	30.7	25.6		22.0	18.9	14.1	22.3	14.1		24.3	15.1	18.9
Actuated g/C Ratio	0.48	0.40		0.34	0.30	0.22	0.35	0.22		0.38	0.24	0.30
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	525	1401		363	1017	348	481	411		552	453	465
v/s Ratio Prot	c0.05	0.13		0.00	c0.12		0.00	0.01		c0.02	0.02	
v/s Ratio Perm	0.10			0.01		0.02	0.01			0.04		0.03
v/c Ratio	0.30	0.33		0.04	0.41	0.11	0.04	0.06		0.17	0.08	0.09
Uniform Delay, d1	9.7	13.3		13.9	18.1	19.9	13.7	19.7		13.0	19.0	16.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1		0.0	0.3	0.1	0.0	0.1		0.1	0.1	0.1
Delay (s)	10.0	13.4		13.9	18.4	20.0	13.8	19.8		13.2	19.1	16.4
Level of Service	B	B		B	B	C	B	B		B	B	B
Approach Delay (s)		12.5			18.7			17.6			15.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	64.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	500	16	58	558	3	1	1	17	5	1	10
Future Volume (vph)	5	500	16	58	558	3	1	1	17	5	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		30.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	0.95	0.95	1.00	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999			0.878			0.916	
Flt Protected					0.995			0.998			0.985	
Satd. Flow (prot)	0	3506	1633	0	4944	0	0	1683	0	0	1733	0
Flt Permitted					0.995			0.998			0.985	
Satd. Flow (perm)	0	3506	1633	0	4944	0	0	1683	0	0	1733	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		116.2			158.6			66.6			220.5	
Travel Time (s)		8.4			11.4			4.8			15.9	
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
Heavy Vehicles (%)	17%	4%	0%	0%	6%	6%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	5	521	17	60	581	3	1	1	18	5	1	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	526	17	0	644	0	0	20	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.3%		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)	5	500	16	58	558	3	1	1	17	5	1	10
Future Volume (Veh/h)	5	500	16	58	558	3	1	1	17	5	1	10
Sign Control		Free			Free			Stop			Stop	
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)	5	521	17	60	581	3	1	1	18	5	1	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		116			312							
pX, platoon unblocked				0.93			0.93	0.93	0.93	0.93	0.93	
vC, conflicting volume	584			538			855	1235	260	992	1250	195
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	584			350			691	1100	51	838	1117	195
tC, single (s)	4.4			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.4			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			95			100	99	98	98	99	99
cM capacity (veh/h)	890			1134			292	187	941	228	183	820

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	179	347	17	205	290	148	20	16
Volume Left	5	0	0	60	0	0	1	5
Volume Right	0	0	17	0	0	3	18	10
cSH	890	1700	1700	1134	1700	1700	717	404
Volume to Capacity	0.01	0.20	0.01	0.05	0.17	0.09	0.03	0.04
Queue Length 95th (m)	0.1	0.0	0.0	1.3	0.0	0.0	0.7	0.9
Control Delay (s)	0.3	0.0	0.0	2.8	0.0	0.0	10.2	14.3
Lane LOS	A			A			B	B
Approach Delay (s)	0.1			0.9			10.2	14.3
Approach LOS							B	B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	39.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2	0	4	2	0	3	5	42	0	2	2
Future Volume (vph)	0	2	0	4	2	0	3	5	42	0	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt								0.885			0.932	
Flt Protected					0.968			0.997				
Satd. Flow (prot)	0	1883	0	0	1823	0	0	1662	0	0	1755	0
Flt Permitted					0.968			0.997				
Satd. Flow (perm)	0	1883	0	0	1823	0	0	1662	0	0	1755	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		220.5			50.5			113.9			38.1	
Travel Time (s)		15.9			3.6			8.2			2.7	
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
Adj. Flow (vph)	0	2	0	4	2	0	3	5	46	0	2	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	6	0	0	54	0	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 15.9%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	2	0	4	2	0	3	5	42	0	2	2
Future Volume (vph)	0	2	0	4	2	0	3	5	42	0	2	2
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)	0	2	0	4	2	0	3	5	46	0	2	2

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	2	6	54	4
Volume Left (vph)	0	4	3	0
Volume Right (vph)	0	0	46	2
Hadj (s)	0.03	0.17	-0.47	-0.27
Departure Headway (s)	4.0	4.2	3.5	3.7
Degree Utilization, x	0.00	0.01	0.05	0.00
Capacity (veh/h)	870	845	1036	964
Control Delay (s)	7.1	7.2	6.6	6.7
Approach Delay (s)	7.1	7.2	6.6	6.7
Approach LOS	A	A	A	A

Intersection Summary			
Delay	6.7		
Level of Service	A		
Intersection Capacity Utilization	15.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	455	5	51	617	38	7	0	15	0	0	7
Future Volume (vph)	6	455	5	51	617	38	7	0	15	0	0	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	40.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.991			0.906			0.865	
Flt Protected	0.950			0.950				0.985				
Satd. Flow (prot)	1825	3535	0	1738	3454	0	0	1572	0	0	1362	0
Flt Permitted	0.950			0.950				0.985				
Satd. Flow (perm)	1825	3535	0	1738	3454	0	0	1572	0	0	1362	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		158.6			152.8			56.6			113.9	
Travel Time (s)		11.4			11.0			4.1			8.2	
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
Heavy Vehicles (%)	0%	3%	7%	5%	5%	0%	0%	0%	13%	20%	0%	22%
Adj. Flow (vph)	6	484	5	54	656	40	7	0	16	0	0	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	489	0	54	696	0	0	23	0	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.4%		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)	6	455	5	51	617	38	7	0	15	0	0	7
Future Volume (Veh/h)	6	455	5	51	617	38	7	0	15	0	0	7
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	484	5	54	656	40	7	0	16	0	0	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)		275			153							
pX, platoon unblocked												
vC, conflicting volume	696			489			942	1302	244	1054	1285	348
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	696			489			942	1302	244	1054	1285	348
tC, single (s)	4.1			4.2			7.5	6.5	7.2	7.9	6.5	7.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.4	3.7	4.0	3.5
p0 queue free %	99			95			97	100	98	100	100	99
cM capacity (veh/h)	909			1050			209	153	723	147	157	593

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	6	323	166	54	437	259	23	7
Volume Left	6	0	0	54	0	0	7	0
Volume Right	0	0	5	0	0	40	16	7
cSH	909	1700	1700	1050	1700	1700	413	593
Volume to Capacity	0.01	0.19	0.10	0.05	0.26	0.15	0.06	0.01
Queue Length 95th (m)	0.2	0.0	0.0	1.2	0.0	0.0	1.3	0.3
Control Delay (s)	9.0	0.0	0.0	8.6	0.0	0.0	14.2	11.1
Lane LOS	A			A			B	B
Approach Delay (s)	0.1			0.6			14.2	11.1
Approach LOS							B	B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		

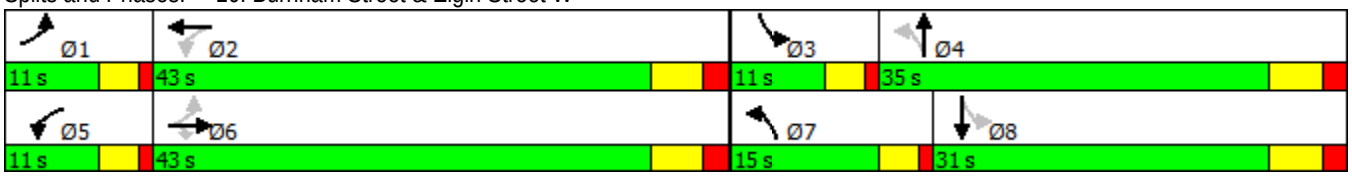
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	252	158	117	324	179	170	243	116	151	284	128
Future Volume (vph)	85	252	158	117	324	179	170	243	116	151	284	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		60.0	60.0		0.0	0.0		0.0	55.0		0.0
Storage Lanes	1		1	1		0	2		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00		0.98	1.00	0.99			0.99		1.00		
Frt			0.850		0.947			0.952			0.953	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1706	3544	1498	1706	3285	0	3340	3322	0	1807	3367	0
Flt Permitted	0.306			0.501			0.403			0.502		
Satd. Flow (perm)	548	3544	1470	895	3285	0	1417	3322	0	951	3367	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			172		124			83			71	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		152.8			145.4			322.3			284.3	
Travel Time (s)		11.0			10.5			23.2			20.5	
Confl. Peds. (#/hr)	5		9	9		5			6	6		
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
Heavy Vehicles (%)	7%	3%	9%	7%	5%	4%	6%	4%	4%	1%	3%	4%
Adj. Flow (vph)	92	274	172	127	352	195	185	264	126	164	309	139
Shared Lane Traffic (%)												
Lane Group Flow (vph)	92	274	172	127	547	0	185	390	0	164	448	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Detector Phase	1	6	6	5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0	16.0	6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0		10.0	34.0		10.0	34.0	
Total Split (s)	11.0	43.0	43.0	11.0	43.0		15.0	35.0		11.0	31.0	
Total Split (%)	11.0%	43.0%	43.0%	11.0%	43.0%		15.0%	35.0%		11.0%	31.0%	
Maximum Green (s)	7.0	37.0	37.0	7.0	37.0		11.0	29.0		7.0	25.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		32.0	32.0		32.0			21.0			21.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	26.8	20.0	20.0	27.9	22.3		40.2	31.6		37.1	30.1	
Actuated g/C Ratio	0.33	0.24	0.24	0.34	0.27		0.49	0.39		0.45	0.37	
v/c Ratio	0.33	0.32	0.35	0.34	0.55		0.21	0.29		0.33	0.35	
Control Delay	20.4	26.4	6.4	20.1	22.6		10.9	14.3		13.1	17.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.4	26.4	6.4	20.1	22.6		10.9	14.3		13.1	17.1	
LOS	C	C	A	C	C		B	B		B	B	
Approach Delay		19.0			22.1			13.2			16.0	
Approach LOS		B			C			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 81.7
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 17.7 — Intersection LOS: B
Intersection Capacity Utilization 61.6% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: Burnham Street & Elgin Street W



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	92	274	172	127	547	185	390	164	448
v/c Ratio	0.33	0.32	0.35	0.34	0.55	0.21	0.29	0.33	0.35
Control Delay	20.4	26.4	6.4	20.1	22.6	10.9	14.3	13.1	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	26.4	6.4	20.1	22.6	10.9	14.3	13.1	17.1
Queue Length 50th (m)	9.1	18.2	0.0	12.9	30.2	6.7	16.0	12.0	20.7
Queue Length 95th (m)	19.1	29.2	14.0	25.2	47.4	13.4	28.9	25.5	37.6
Internal Link Dist (m)		128.8			121.4		298.3		260.3
Turn Bay Length (m)	45.0		60.0	60.0				55.0	
Base Capacity (vph)	280	1696	793	375	1637	999	1350	505	1285
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	0.33	0.16	0.22	0.34	0.33	0.19	0.29	0.32	0.35

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	252	158	117	324	179	170	243	116	151	284	128
Future Volume (vph)	85	252	158	117	324	179	170	243	116	151	284	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1705	3544	1472	1703	3284		3340	3321		1804	3369	
Flt Permitted	0.31	1.00	1.00	0.50	1.00		0.40	1.00		0.50	1.00	
Satd. Flow (perm)	550	3544	1472	898	3284		1418	3321		954	3369	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	92	274	172	127	352	195	185	264	126	164	309	139
RTOR Reduction (vph)	0	0	129	0	90	0	0	51	0	0	45	0
Lane Group Flow (vph)	92	274	43	127	457	0	185	339	0	164	403	0
Confl. Peds. (#/hr)	5		9	9		5			6	6		
Heavy Vehicles (%)	7%	3%	9%	7%	5%	4%	6%	4%	4%	1%	3%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Actuated Green, G (s)	24.3	18.8	18.8	27.3	20.3		38.1	29.6		35.1	28.1	
Effective Green, g (s)	24.3	20.8	20.8	27.3	22.3		38.1	31.6		35.1	30.1	
Actuated g/C Ratio	0.29	0.25	0.25	0.33	0.27		0.46	0.38		0.43	0.37	
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0		4.0	6.0	
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)	239	894	371	365	888		853	1273		478	1230	
v/s Ratio Prot	0.03	0.08		c0.03	c0.14		0.02	0.10		c0.03	c0.12	
v/s Ratio Perm	0.09		0.03	0.09			0.08			0.12		
v/c Ratio	0.38	0.31	0.12	0.35	0.51		0.22	0.27		0.34	0.33	
Uniform Delay, d1	21.9	25.0	23.7	20.0	25.5		12.8	17.4		14.9	18.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.2	0.1	0.6	0.5		0.1	0.1		0.4	0.7	
Delay (s)	22.9	25.2	23.9	20.5	26.0		12.9	17.6		15.4	19.6	
Level of Service	C	C	C	C	C		B	B		B	B	
Approach Delay (s)		24.4			24.9			16.1			18.4	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	82.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		

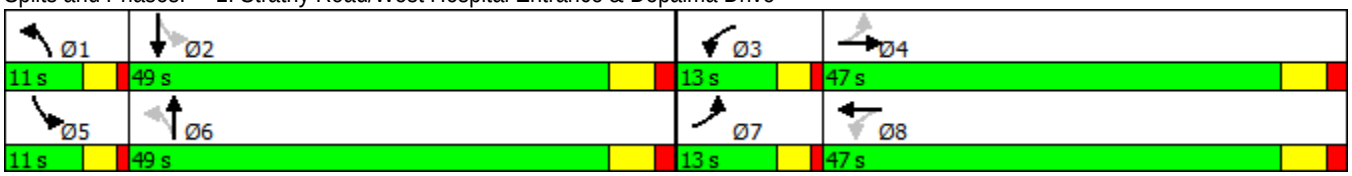
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	227	77	137	157	12	83	10	109	47	29	10
Future Volume (vph)	0	227	77	137	157	12	83	10	109	47	29	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	50.0		0.0	45.0		0.0	15.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00	1.00		0.98	0.99		1.00	0.99	
Frt		0.962			0.989			0.862			0.962	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	1921	3472	0	1789	3504	0	1825	3052	0	1825	1741	0
Flt Permitted				0.399			0.669			0.666		
Satd. Flow (perm)	1921	3472	0	750	3504	0	1258	3052	0	1278	1741	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			8			124			11	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		81.0			199.0			243.9			67.7	
Travel Time (s)		5.8			14.3			17.6			4.9	
Confl. Peds. (#/hr)	20		3	3		20	19		1	1		19
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	1%	0%	2%	3%	0%	0%	0%	2%	0%	7%	0%
Adj. Flow (vph)	0	258	88	156	178	14	94	11	124	53	33	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	346	0	156	192	0	94	135	0	53	44	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0		10.0	22.0		10.0	22.0		10.0	22.0	
Total Split (s)	13.0	47.0		13.0	47.0		11.0	49.0		11.0	49.0	
Total Split (%)	10.8%	39.2%		10.8%	39.2%		9.2%	40.8%		9.2%	40.8%	
Maximum Green (s)	9.0	41.0		9.0	41.0		7.0	43.0		7.0	43.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		25.0			25.0			23.0			23.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)		18.1		29.9	29.9		24.3	20.4		23.0	18.1	
Actuated g/C Ratio		0.28		0.47	0.47		0.38	0.32		0.36	0.28	
v/c Ratio		0.34		0.33	0.12		0.18	0.13		0.10	0.09	
Control Delay		18.0		13.0	10.3		12.7	5.5		12.2	15.8	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		18.0		13.0	10.3		12.7	5.5		12.2	15.8	
LOS		B		B	B		B	A		B	B	
Approach Delay		18.0			11.5			8.4			13.8	
Approach LOS		B			B			A			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 64.3	
Natural Cycle: 65	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.34	
Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 53.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Strathy Road/West Hospital Entrance & Depalma Drive



Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	346	156	192	94	135	53	44
v/c Ratio	0.34	0.33	0.12	0.18	0.13	0.10	0.09
Control Delay	18.0	13.0	10.3	12.7	5.5	12.2	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	13.0	10.3	12.7	5.5	12.2	15.8
Queue Length 50th (m)	15.5	11.0	6.5	6.7	0.5	3.7	3.0
Queue Length 95th (m)	25.7	20.7	11.5	14.3	5.9	9.2	9.5
Internal Link Dist (m)	57.0		175.0		219.9		43.7
Turn Bay Length (m)		50.0		45.0		15.0	
Base Capacity (vph)	2354	495	2364	539	2190	527	1231
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.32	0.08	0.17	0.06	0.10	0.04

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	227	77	137	157	12	83	10	109	47	29	10
Future Volume (vph)	0	227	77	137	157	12	83	10	109	47	29	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00	0.95		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt		0.96		1.00	0.99		1.00	0.86		1.00	0.96	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3473		1789	3506		1811	3055		1824	1746	
Flt Permitted		1.00		0.40	1.00		0.67	1.00		0.67	1.00	
Satd. Flow (perm)		3473		752	3506		1276	3055		1280	1746	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	258	88	156	178	14	94	11	124	53	33	11
RTOR Reduction (vph)	0	32	0	0	4	0	0	86	0	0	8	0
Lane Group Flow (vph)	0	314	0	156	188	0	94	49	0	53	36	0
Confl. Peds. (#/hr)	20		3	3		20	19		1	1		19
Heavy Vehicles (%)	0%	1%	0%	2%	3%	0%	0%	0%	2%	0%	7%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)		16.2		27.9	27.9		23.5	18.4		20.5	16.9	
Effective Green, g (s)		18.2		27.9	29.9		23.5	20.4		20.5	18.9	
Actuated g/C Ratio		0.28		0.42	0.45		0.36	0.31		0.31	0.29	
Clearance Time (s)		6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)		3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)		959		439	1590		496	945		427	500	
v/s Ratio Prot		0.09		c0.04	0.05		c0.01	0.02		0.01	0.02	
v/s Ratio Perm				c0.11			c0.05			0.03		
v/c Ratio		0.33		0.36	0.12		0.19	0.05		0.12	0.07	
Uniform Delay, d1		19.0		12.3	10.4		14.4	16.0		16.1	17.1	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2		0.2	0.0		0.1	0.0		0.0	0.1	
Delay (s)		19.2		12.4	10.4		14.5	16.0		16.2	17.2	
Level of Service		B		B	B		B	B		B	B	
Approach Delay (s)		19.2			11.3			15.4			16.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

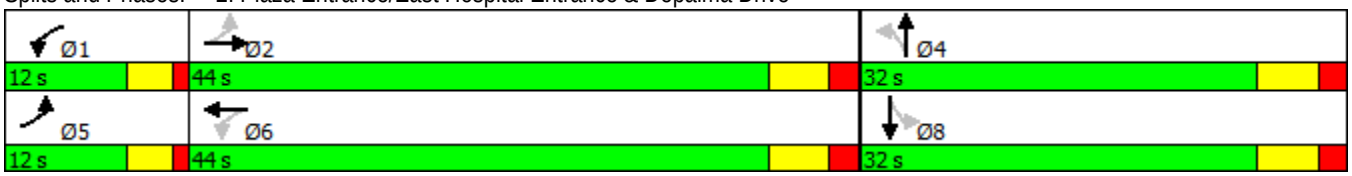
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	360	14	85	307	20	11	6	86	59	3	21
Future Volume (vph)	14	360	14	85	307	20	11	6	86	59	3	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	65.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00			1.00				0.99	
Frt		0.994			0.991			0.859			0.868	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1587	3625	0	1825	3551	0	1825	1635	0	1789	1579	0
Flt Permitted	0.543			0.415			0.741			0.694		
Satd. Flow (perm)	907	3625	0	796	3551	0	1422	1635	0	1307	1579	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			10			91			22	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		199.0			195.0			41.1			35.9	
Travel Time (s)		14.3			14.0			3.0			2.6	
Confl. Peds. (#/hr)			1	1			1					1
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
Heavy Vehicles (%)	15%	0%	0%	0%	2%	0%	0%	0%	1%	2%	0%	5%
Adj. Flow (vph)	15	383	15	90	327	21	12	6	91	63	3	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	398	0	90	348	0	12	97	0	63	25	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		22.0	22.0		22.0	22.0	
Total Split (s)	12.0	44.0		12.0	44.0		32.0	32.0		32.0	32.0	
Total Split (%)	13.6%	50.0%		13.6%	50.0%		36.4%	36.4%		36.4%	36.4%	
Maximum Green (s)	8.0	38.0		8.0	38.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		15.0			15.0		25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	22.8	18.1		25.6	24.2		18.1	18.1		18.1	18.1	
Actuated g/C Ratio	0.44	0.35		0.49	0.46		0.35	0.35		0.35	0.35	
v/c Ratio	0.03	0.32		0.18	0.21		0.02	0.15		0.14	0.04	
Control Delay	6.7	14.0		7.5	9.2		12.7	4.8		14.0	7.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.7	14.0		7.5	9.2		12.7	4.8		14.0	7.0	
LOS	A	B		A	A		B	A		B	A	
Approach Delay		13.7			8.9			5.7			12.0	
Approach LOS		B			A			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 88
Actuated Cycle Length: 52.3
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.32
Intersection Signal Delay: 10.7 — Intersection LOS: B
Intersection Capacity Utilization 42.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Plaza Entrance/East Hospital Entrance & Depalma Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	15	398	90	348	12	97	63	25
v/c Ratio	0.03	0.32	0.18	0.21	0.02	0.15	0.14	0.04
Control Delay	6.7	14.0	7.5	9.2	12.7	4.8	14.0	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	14.0	7.5	9.2	12.7	4.8	14.0	7.0
Queue Length 50th (m)	0.7	14.6	4.0	8.3	0.8	0.4	4.2	0.2
Queue Length 95th (m)	2.6	24.4	9.2	20.6	3.6	8.0	11.3	4.1
Internal Link Dist (m)		175.0		171.0		17.1		11.9
Turn Bay Length (m)	65.0		50.0					
Base Capacity (vph)	526	2860	550	2803	767	923	704	861
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.14	0.16	0.12	0.02	0.11	0.09	0.03

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	360	14	85	307	20	11	6	86	59	3	21
Future Volume (vph)	14	360	14	85	307	20	11	6	86	59	3	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.86		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1587	3627		1825	3550		1824	1635		1789	1580	
Flt Permitted	0.54	1.00		0.41	1.00		0.74	1.00		0.69	1.00	
Satd. Flow (perm)	907	3627		796	3550		1423	1635		1308	1580	
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)	15	383	15	90	327	21	12	6	91	63	3	22
RTOR Reduction (vph)	0	4	0	0	6	0	0	61	0	0	15	0
Lane Group Flow (vph)	15	394	0	90	342	0	12	36	0	63	10	0
Confl. Peds. (#/hr)			1	1			1					1
Heavy Vehicles (%)	15%	0%	0%	0%	2%	0%	0%	0%	1%	2%	0%	5%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	19.5	18.4		27.1	22.2		16.1	16.1		16.1	16.1	
Effective Green, g (s)	19.5	20.4		27.1	24.2		18.1	18.1		18.1	18.1	
Actuated g/C Ratio	0.35	0.37		0.49	0.44		0.33	0.33		0.33	0.33	
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	332	1335		480	1550		464	534		427	516	
v/s Ratio Prot	0.00	c0.11		c0.02	0.10			0.02			0.01	
v/s Ratio Perm	0.01			0.08			0.01			c0.05		
v/c Ratio	0.05	0.30		0.19	0.22		0.03	0.07		0.15	0.02	
Uniform Delay, d1	11.7	12.4		7.8	9.7		12.7	12.8		13.2	12.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.1		0.0	0.1		0.2	0.0	
Delay (s)	11.8	12.5		7.9	9.8		12.7	12.9		13.4	12.7	
Level of Service	B	B		A	A		B	B		B	B	
Approach Delay (s)		12.5			9.4			12.9			13.2	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	55.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

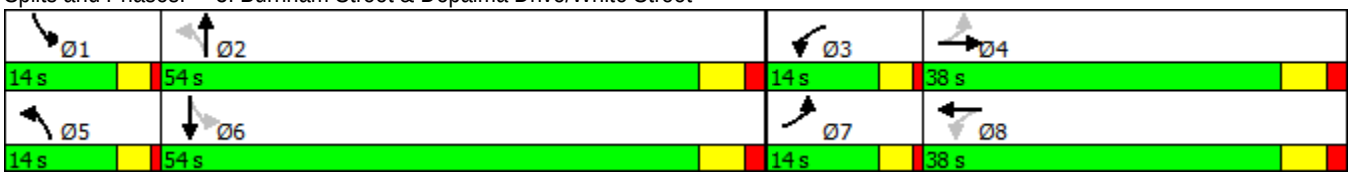
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	315	38	146	79	33	124	101	518	75	54	504	274
Future Volume (vph)	315	38	146	79	33	124	101	518	75	54	504	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	40.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99		1.00								
Frt		0.881			0.882			0.981			0.947	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1807	3152	0	1706	1655	0	1807	3472	0	1825	3379	0
Flt Permitted	0.395			0.633			0.184			0.378		
Satd. Flow (perm)	751	3152	0	1134	1655	0	350	3472	0	726	3379	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		149			127			16			104	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		195.0			157.6			247.7			73.6	
Travel Time (s)		14.0			11.3			17.8			5.3	
Confl. Peds. (#/hr)			3	3								
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	0%	1%	7%	0%	3%	1%	3%	4%	0%	3%	1%
Adj. Flow (vph)	321	39	149	81	34	127	103	529	77	55	514	280
Shared Lane Traffic (%)												
Lane Group Flow (vph)	321	188	0	81	161	0	103	606	0	55	794	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	8.0		6.0	8.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	14.0		10.0	14.0		10.0	42.0		10.0	42.0	
Total Split (s)	14.0	38.0		14.0	38.0		14.0	54.0		14.0	54.0	
Total Split (%)	11.7%	31.7%		11.7%	31.7%		11.7%	45.0%		11.7%	45.0%	
Maximum Green (s)	10.0	32.0		10.0	32.0		10.0	48.0		10.0	48.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Dont Walk (s)		24.0			24.0			25.0			25.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	24.6	17.0		18.3	11.2		31.9	27.3		28.6	23.9	
Actuated g/C Ratio	0.37	0.25		0.27	0.17		0.48	0.41		0.43	0.36	
v/c Ratio	0.73	0.21		0.22	0.42		0.31	0.42		0.13	0.62	
Control Delay	31.6	8.9		18.3	13.0		10.9	15.3		9.2	18.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	31.6	8.9		18.3	13.0		10.9	15.3		9.2	18.1	
LOS	C	A		B	B		B	B		A	B	
Approach Delay		23.2			14.8			14.7			17.6	
Approach LOS		C			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 66.7
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 17.6 — Intersection LOS: B
Intersection Capacity Utilization 68.5% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Burnham Street & Depalma Drive/White Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	321	188	81	161	103	606	55	794
v/c Ratio	0.73	0.21	0.22	0.42	0.31	0.42	0.13	0.62
Control Delay	31.6	8.9	18.3	13.0	10.9	15.3	9.2	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.6	8.9	18.3	13.0	10.9	15.3	9.2	18.1
Queue Length 50th (m)	30.1	2.0	6.6	3.7	6.0	28.5	3.1	36.4
Queue Length 95th (m)	#71.4	11.1	18.1	20.4	13.8	45.4	8.4	60.8
Internal Link Dist (m)		171.0		133.6		223.7		49.6
Turn Bay Length (m)	30.0		30.0		40.0		30.0	
Base Capacity (vph)	439	1722	452	927	396	2679	512	2627
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.11	0.18	0.17	0.26	0.23	0.11	0.30

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	315	38	146	79	33	124	101	518	75	54	504	274
Future Volume (vph)	315	38	146	79	33	124	101	518	75	54	504	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.88		1.00	0.88		1.00	0.98		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1807	3156		1704	1655		1807	3472		1825	3379	
Flt Permitted	0.40	1.00		0.63	1.00		0.18	1.00		0.38	1.00	
Satd. Flow (perm)	752	3156		1136	1655		349	3472		726	3379	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	321	39	149	81	34	127	103	529	77	55	514	280
RTOR Reduction (vph)	0	113	0	0	105	0	0	10	0	0	67	0
Lane Group Flow (vph)	321	75	0	81	56	0	103	596	0	55	727	0
Confl. Peds. (#/hr)			3	3								
Heavy Vehicles (%)	1%	0%	1%	7%	0%	3%	1%	3%	4%	0%	3%	1%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.4	14.9		15.6	10.1		31.2	25.2		26.0	22.6	
Effective Green, g (s)	24.4	16.9		15.6	12.1		31.2	27.2		26.0	24.6	
Actuated g/C Ratio	0.35	0.24		0.23	0.18		0.45	0.39		0.38	0.36	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	423	772		302	290		284	1368		327	1204	
v/s Ratio Prot	c0.11	0.02		0.02	0.03		c0.03	0.17		0.01	c0.22	
v/s Ratio Perm	c0.15			0.04			0.13			0.05		
v/c Ratio	0.76	0.10		0.27	0.19		0.36	0.44		0.17	0.60	
Uniform Delay, d1	17.8	20.2		21.7	24.3		12.2	15.3		13.9	18.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.8	0.1		0.2	0.3		0.3	0.2		0.1	0.9	
Delay (s)	24.6	20.2		21.9	24.6		12.5	15.5		13.9	19.1	
Level of Service	C	C		C	C		B	B		B	B	
Approach Delay (s)		23.0			23.7			15.1			18.7	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	69.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	2	60	57	10	15	114	292	39	16	302	1
Future Volume (vph)	6	2	60	57	10	15	114	292	39	16	302	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	25.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Frt		0.854			0.909			0.982				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	1545	0	1825	1730	0	1825	3513	0	1825	3614	0
Flt Permitted	0.739			0.711			0.442			0.526		
Satd. Flow (perm)	1415	1545	0	1365	1730	0	848	3513	0	1010	3614	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					17			29			1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.6			59.9			307.9			243.9	
Travel Time (s)		7.4			4.3			22.2			17.6	
Confl. Peds. (#/hr)	5		1	1		5	1		1	1		1
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
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	7	2	69	66	11	17	131	336	45	18	347	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	71	0	66	28	0	131	381	0	18	348	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4		8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		10.0	21.0		10.0	21.0	
Total Split (s)	20.0	20.0		20.0	20.0		12.0	28.0		12.0	28.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		20.0%	46.7%		20.0%	46.7%	
Maximum Green (s)	14.0	14.0		14.0	14.0		8.0	22.0		8.0	22.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			18.0			18.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	8.7	10.7		8.7	10.7		25.3	23.9		21.7	17.3	
Actuated g/C Ratio	0.20	0.24		0.20	0.24		0.57	0.54		0.49	0.39	
v/c Ratio	0.03	0.19		0.25	0.07		0.21	0.20		0.03	0.25	
Control Delay	16.0	16.2		19.1	10.0		5.1	6.2		4.5	11.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.0	16.2		19.1	10.0		5.1	6.2		4.5	11.0	
LOS	B	B		B	B		A	A		A	B	
Approach Delay		16.2			16.4			5.9			10.7	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 44.6
Natural Cycle: 45
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.25
Intersection Signal Delay: 9.3 — Intersection LOS: A
Intersection Capacity Utilization 40.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Strathy Road & Walmart Driveway

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	7	71	66	28	131	381	18	348
v/c Ratio	0.03	0.19	0.25	0.07	0.21	0.20	0.03	0.25
Control Delay	16.0	16.2	19.1	10.0	5.1	6.2	4.5	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	16.2	19.1	10.0	5.1	6.2	4.5	11.0
Queue Length 50th (m)	0.5	4.7	4.7	0.7	3.6	5.2	0.5	9.7
Queue Length 95th (m)	2.7	12.0	12.4	4.9	9.0	17.5	2.2	18.3
Internal Link Dist (m)		78.6		35.9		283.9		219.9
Turn Bay Length (m)							25.0	
Base Capacity (vph)	451	562	435	641	659	2108	677	1975
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.13	0.15	0.04	0.20	0.18	0.03	0.18

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	2	60	57	10	15	114	292	39	16	302	1
Future Volume (vph)	6	2	60	57	10	15	114	292	39	16	302	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	0.91		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1820	1546		1824	1730		1825	3515		1825	3612	
Flt Permitted	0.74	1.00		0.71	1.00		0.44	1.00		0.53	1.00	
Satd. Flow (perm)	1416	1546		1365	1730		849	3515		1010	3612	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	7	2	69	66	11	17	131	336	45	18	347	1
RTOR Reduction (vph)	0	0	0	0	13	0	0	15	0	0	1	0
Lane Group Flow (vph)	7	71	0	66	15	0	131	367	0	18	347	0
Confl. Peds. (#/hr)	5		1	1		5	1		1	1		1
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	8.7	8.7		8.7	8.7		26.9	21.8		18.6	17.5	
Effective Green, g (s)	8.7	10.7		8.7	10.7		26.9	23.8		18.6	19.5	
Actuated g/C Ratio	0.18	0.22		0.18	0.22		0.57	0.50		0.39	0.41	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	258	347		249	388		590	1757		413	1479	
v/s Ratio Prot		0.05			0.01		c0.03	c0.10		0.00	0.10	
v/s Ratio Perm	0.00			c0.05			0.10			0.02		
v/c Ratio	0.03	0.20		0.27	0.04		0.22	0.21		0.04	0.23	
Uniform Delay, d1	16.0	15.0		16.7	14.4		5.0	6.6		8.9	9.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.3		0.6	0.0		0.2	0.1		0.0	0.1	
Delay (s)	16.0	15.3		17.3	14.5		5.2	6.7		9.0	9.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		15.4			16.4			6.3			9.2	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	47.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	17	8	721	750	8
Future Volume (vph)	13	17	8	721	750	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.922				0.998	
Flt Protected	0.979			0.999		
Satd. Flow (prot)	1734	0	0	3541	3538	0
Flt Permitted	0.979			0.999		
Satd. Flow (perm)	1734	0	0	3541	3538	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	139.6			284.3	247.7	
Travel Time (s)	10.1			20.5	17.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	3%	3%	0%
Adj. Flow (vph)	13	18	8	743	773	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	0	0	751	781	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 35.6%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	17	8	721	750	8
Future Volume (Veh/h)	13	17	8	721	750	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	13	18	8	743	773	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)				284	248	
pX, platoon unblocked	0.99	0.98	0.98			
vC, conflicting volume	1164	390	781			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1081	343	741			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	97	99			
cM capacity (veh/h)	211	647	860			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	31	256	495	515	266
Volume Left	13	8	0	0	0
Volume Right	18	0	0	0	8
cSH	347	860	1700	1700	1700
Volume to Capacity	0.09	0.01	0.29	0.30	0.16
Queue Length 95th (m)	2.2	0.2	0.0	0.0	0.0
Control Delay (s)	16.4	0.4	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	16.4	0.1		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	35.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	547	16	58	544	193	36	51	31	211	54	262
Future Volume (vph)	204	547	16	58	544	193	36	51	31	211	54	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		40.0	20.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00		0.98	0.99	0.99		1.00		0.98
Frt		0.996				0.850		0.943				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3496	0	1825	3510	1617	1825	1801	0	1807	1847	1601
Flt Permitted	0.284			0.426			0.720			0.616		
Satd. Flow (perm)	534	3496	0	815	3510	1592	1372	1801	0	1168	1847	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				176		26				279
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		86.1			116.2			44.7			307.9	
Travel Time (s)		6.2			8.4			3.2			22.2	
Confl. Peds. (#/hr)	3		5	5		3	8		3	3		8
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
Heavy Vehicles (%)	2%	4%	0%	0%	4%	1%	0%	0%	0%	1%	4%	2%
Adj. Flow (vph)	217	582	17	62	579	205	38	54	33	224	57	279
Shared Lane Traffic (%)												
Lane Group Flow (vph)	217	599	0	62	579	205	38	87	0	224	57	279
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane		Yes									Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Detector Phase	5	2		1	6	8	3	8		7	4	6
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0	12.0	6.0	12.0		6.0	12.0	10.0
Minimum Split (s)	10.0	32.0		10.0	32.0	39.0	10.0	39.0		10.0	39.0	32.0
Total Split (s)	19.0	56.0		12.0	49.0	38.0	12.0	38.0		14.0	40.0	49.0
Total Split (%)	15.8%	46.7%		10.0%	40.8%	31.7%	10.0%	31.7%		11.7%	33.3%	40.8%
Maximum Green (s)	15.0	50.0		8.0	43.0	32.0	8.0	32.0		10.0	34.0	43.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	Min	Min	Min		Min	Min	None
Walk Time (s)		10.0			10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		16.0			16.0	23.0		23.0			23.0	16.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	39.9	29.4		32.8	21.9	14.4	25.2	14.4		30.2	17.5	21.9
Actuated g/C Ratio	0.54	0.40		0.44	0.30	0.19	0.34	0.19		0.41	0.24	0.30
v/c Ratio	0.42	0.43		0.13	0.56	0.45	0.07	0.23		0.39	0.13	0.42
Control Delay	11.3	17.9		9.0	24.4	11.0	16.5	23.0		19.0	26.4	4.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	11.3	17.9		9.0	24.4	11.0	16.5	23.0		19.0	26.4	4.9
LOS	B	B		A	C	B	B	C		B	C	A
Approach Delay		16.1			20.0			21.0			12.7	
Approach LOS		B			C			C			B	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 74.2
Natural Cycle: 95
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 17.0 — Intersection LOS: B
Intersection Capacity Utilization 57.5% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: Plaza Entrance/Strathy Road & Elgin Street W

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	217	599	62	579	205	38	87	224	57	279
v/c Ratio	0.42	0.43	0.13	0.56	0.45	0.07	0.23	0.39	0.13	0.42
Control Delay	11.3	17.9	9.0	24.4	11.0	16.5	23.0	19.0	26.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.3	17.9	9.0	24.4	11.0	16.5	23.0	19.0	26.4	4.9
Queue Length 50th (m)	14.6	32.4	3.8	35.4	3.4	3.1	7.2	20.4	6.2	0.0
Queue Length 95th (m)	25.9	47.8	8.8	53.7	22.3	10.2	21.1	44.3	17.6	15.3
Internal Link Dist (m)		62.1		92.2			20.7		283.9	
Turn Bay Length (m)					40.0	20.0				
Base Capacity (vph)	578	2481	512	2155	833	553	849	580	907	1068
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.24	0.12	0.27	0.25	0.07	0.10	0.39	0.06	0.26

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	547	16	58	544	193	36	51	31	211	54	262
Future Volume (vph)	204	547	16	58	544	193	36	51	31	211	54	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	3496		1823	3510	1594	1819	1802		1805	1847	1571
Flt Permitted	0.28	1.00		0.43	1.00	1.00	0.72	1.00		0.62	1.00	1.00
Satd. Flow (perm)	534	3496		816	3510	1594	1378	1802		1170	1847	1571
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)	217	582	17	62	579	205	38	54	33	224	57	279
RTOR Reduction (vph)	0	2	0	0	0	142	0	21	0	0	0	194
Lane Group Flow (vph)	217	597	0	62	579	63	38	66	0	224	57	85
Confl. Peds. (#/hr)	3		5	5		3	8		3	3		8
Heavy Vehicles (%)	2%	4%	0%	0%	4%	1%	0%	0%	0%	1%	4%	2%
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Actuated Green, G (s)	36.8	27.4		26.3	20.9	12.5	19.2	12.5		25.2	15.5	20.9
Effective Green, g (s)	38.8	29.4		30.3	22.9	14.5	23.2	14.5		28.2	17.5	22.9
Actuated g/C Ratio	0.52	0.39		0.40	0.31	0.19	0.31	0.19		0.38	0.23	0.31
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	508	1370		429	1071	308	477	348		538	430	479
v/s Ratio Prot	c0.08	0.17		0.01	c0.16		0.01	0.04		c0.06	0.03	
v/s Ratio Perm	0.14			0.04		0.04	0.02			0.09		0.05
v/c Ratio	0.43	0.44		0.14	0.54	0.20	0.08	0.19		0.42	0.13	0.18
Uniform Delay, d1	10.6	16.7		13.8	21.7	25.4	18.3	25.3		16.7	22.7	19.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	0.2		0.2	0.6	0.3	0.1	0.3		0.5	0.1	0.2
Delay (s)	11.2	16.9		13.9	22.2	25.7	18.3	25.6		17.2	22.9	19.3
Level of Service	B	B		B	C	C	B	C		B	C	B
Approach Delay (s)		15.4			22.5			23.4			18.8	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	831	10	48	774	2	4	0	52	19	1	14
Future Volume (vph)	1	831	10	48	774	2	4	0	52	19	1	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		30.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	0.95	0.95	1.00	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850					0.874			0.944	
Flt Protected					0.997			0.997			0.973	
Satd. Flow (prot)	0	3614	1484	0	5178	0	0	1572	0	0	1765	0
Flt Permitted					0.997			0.997			0.973	
Satd. Flow (perm)	0	3614	1484	0	5178	0	0	1572	0	0	1765	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		116.2			158.6			66.6			220.5	
Travel Time (s)		8.4			11.4			4.8			15.9	
Confl. Peds. (#/hr)	3		3	3		3	1		1	1		1
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
Heavy Vehicles (%)	0%	1%	10%	0%	1%	17%	0%	0%	7%	0%	0%	0%
Adj. Flow (vph)	1	866	10	50	806	2	4	0	54	20	1	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	867	10	0	858	0	0	58	0	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 57.6%	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)	1	831	10	48	774	2	4	0	52	19	1	14
Future Volume (Veh/h)	1	831	10	48	774	2	4	0	52	19	1	14
Sign Control		Free			Free			Stop			Stop	
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)	1	866	10	50	806	2	4	0	54	20	1	15
Pedestrians		1			1			3			3	
Lane Width (m)		3.7			3.7			3.7			3.7	
Walking Speed (m/s)		1.0			1.0			1.0			1.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		116			312							
pX, platoon unblocked				0.88			0.88	0.88	0.88	0.88	0.88	
vC, conflicting volume	811			879			1256	1782	437	1400	1791	274
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	811			600			1027	1622	100	1190	1632	274
tC, single (s)	4.1			4.1			7.5	6.5	7.0	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.4	3.5	4.0	3.3
p0 queue free %	100			94			97	100	93	82	99	98
cM capacity (veh/h)	821			869			155	86	810	114	85	727

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	290	577	10	252	403	204	58	36
Volume Left	1	0	0	50	0	0	4	20
Volume Right	0	0	10	0	0	2	54	15
cSH	821	1700	1700	869	1700	1700	628	173
Volume to Capacity	0.00	0.34	0.01	0.06	0.24	0.12	0.09	0.21
Queue Length 95th (m)	0.0	0.0	0.0	1.4	0.0	0.0	2.3	5.7
Control Delay (s)	0.0	0.0	0.0	2.4	0.0	0.0	11.3	31.2
Lane LOS	A			A			B	D
Approach Delay (s)	0.0			0.7			11.3	31.2
Approach LOS							B	D

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	0	19	22	1	3	1	10	0	1	1
Future Volume (vph)	0	1	0	19	22	1	3	1	10	0	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.998			0.901			0.932	
Flt Protected					0.978			0.990				
Satd. Flow (prot)	0	1921	0	0	1827	0	0	1628	0	0	1790	0
Flt Permitted					0.978			0.990				
Satd. Flow (perm)	0	1921	0	0	1827	0	0	1628	0	0	1790	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		220.5			50.5			113.9			38.1	
Travel Time (s)		15.9			3.6			8.2			2.7	
Confl. Peds. (#/hr)			4	4								
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	0%	0%	0%	0%	5%	0%	25%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1	0	27	31	1	4	1	14	0	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	59	0	0	19	0	0	2	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 19.2%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	1	0	19	22	1	3	1	10	0	1	1
Future Volume (vph)	0	1	0	19	22	1	3	1	10	0	1	1
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	0	1	0	27	31	1	4	1	14	0	1	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	1	59	19	2
Volume Left (vph)	0	27	4	0
Volume Right (vph)	0	1	14	1
Hadj (s)	0.00	0.13	-0.31	-0.30
Departure Headway (s)	4.0	4.1	3.7	3.7
Degree Utilization, x	0.00	0.07	0.02	0.00
Capacity (veh/h)	887	876	939	939
Control Delay (s)	7.0	7.4	6.8	6.8
Approach Delay (s)	7.0	7.4	6.8	6.8
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.2		
Level of Service	A		
Intersection Capacity Utilization	19.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	920	11	34	775	13	6	0	49	2	2	58
Future Volume (vph)	1	920	11	34	775	13	6	0	49	2	2	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	40.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.998			0.998			0.879			0.873	
Flt Protected	0.950			0.950				0.995			0.998	
Satd. Flow (prot)	1825	3607	0	1706	3607	0	0	1622	0	0	1467	0
Flt Permitted	0.950			0.950				0.995			0.998	
Satd. Flow (perm)	1825	3607	0	1706	3607	0	0	1622	0	0	1467	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		158.6			152.8			56.6			113.9	
Travel Time (s)		11.4			11.0			4.1			8.2	
Confl. Peds. (#/hr)	3					3						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	1%	0%	7%	1%	0%	0%	0%	4%	0%	0%	15%
Adj. Flow (vph)	1	948	11	35	799	13	6	0	51	2	2	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	959	0	35	812	0	0	57	0	0	64	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 41.0%	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)	1	920	11	34	775	13	6	0	49	2	2	58
Future Volume (Veh/h)	1	920	11	34	775	13	6	0	49	2	2	58
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	1	948	11	35	799	13	6	0	51	2	2	60
Pedestrians											3	
Lane Width (m)											3.7	
Walking Speed (m/s)											1.0	
Percent Blockage											0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		275			153							
pX, platoon unblocked	0.87			0.91			0.92	0.92	0.91	0.92	0.92	0.87
vC, conflicting volume	815			959			1486	1840	480	1406	1840	409
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	496			761			914	1301	235	827	1300	31
tC, single (s)	4.1			4.2			7.5	6.5	7.0	7.5	6.5	7.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			95			97	100	93	99	99	93
cM capacity (veh/h)	938			743			187	141	693	218	142	866

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	1	632	327	35	533	279	57	64
Volume Left	1	0	0	35	0	0	6	2
Volume Right	0	0	11	0	0	13	51	60
cSH	938	1700	1700	743	1700	1700	540	691
Volume to Capacity	0.00	0.37	0.19	0.05	0.31	0.16	0.11	0.09
Queue Length 95th (m)	0.0	0.0	0.0	1.1	0.0	0.0	2.7	2.3
Control Delay (s)	8.8	0.0	0.0	10.1	0.0	0.0	12.5	10.7
Lane LOS	A			B			B	B
Approach Delay (s)	0.0			0.4			12.5	10.7
Approach LOS							B	B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

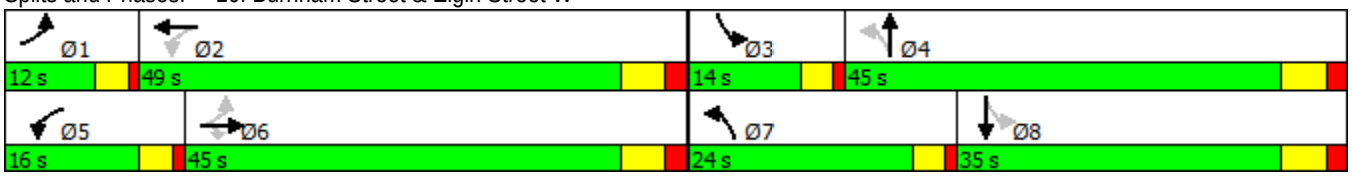
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	482	299	101	444	159	243	345	109	258	302	142
Future Volume (vph)	195	482	299	101	444	159	243	345	109	258	302	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		60.0	60.0		0.0	0.0		0.0	55.0		0.0
Storage Lanes	1		1	1		0	2		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00		0.98	1.00	0.99		0.99	1.00		1.00	0.99	
Frt			0.850		0.960			0.964			0.952	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3579	1570	1755	3422	0	3309	3418	0	1807	3355	0
Flt Permitted	0.218			0.288			0.391			0.396		
Satd. Flow (perm)	409	3579	1539	530	3422	0	1346	3418	0	751	3355	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			315		48			38			62	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		152.8			145.4			322.3			284.3	
Travel Time (s)		11.0			10.5			23.2			20.5	
Confl. Peds. (#/hr)	12		9	9		12	13		4	4		13
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
Heavy Vehicles (%)	2%	2%	4%	4%	1%	4%	7%	3%	1%	1%	2%	4%
Adj. Flow (vph)	205	507	315	106	467	167	256	363	115	272	318	149
Shared Lane Traffic (%)												
Lane Group Flow (vph)	205	507	315	106	634	0	256	478	0	272	467	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Detector Phase	1	6	6	5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0	16.0	6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0		10.0	34.0		10.0	34.0	
Total Split (s)	12.0	45.0	45.0	16.0	49.0		24.0	45.0		14.0	35.0	
Total Split (%)	10.0%	37.5%	37.5%	13.3%	40.8%		20.0%	37.5%		11.7%	29.2%	
Maximum Green (s)	8.0	39.0	39.0	12.0	43.0		20.0	39.0		10.0	29.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		32.0	32.0		32.0			21.0			21.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	31.4	23.4	23.4	33.3	24.3		42.0	31.7		41.1	31.2	
Actuated g/C Ratio	0.35	0.26	0.26	0.37	0.27		0.47	0.35		0.46	0.35	
v/c Ratio	0.77	0.55	0.50	0.33	0.66		0.30	0.39		0.59	0.39	
Control Delay	40.9	31.5	6.3	20.0	30.4		13.8	21.9		21.3	21.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	40.9	31.5	6.3	20.0	30.4		13.8	21.9		21.3	21.4	
LOS	D	C	A	B	C		B	C		C	C	
Approach Delay		25.7			28.9			19.1			21.4	
Approach LOS		C			C			B			C	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 90
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 23.9 — Intersection LOS: C
Intersection Capacity Utilization 77.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 10: Burnham Street & Elgin Street W



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	205	507	315	106	634	256	478	272	467
v/c Ratio	0.77	0.55	0.50	0.33	0.66	0.30	0.39	0.59	0.39
Control Delay	40.9	31.5	6.3	20.0	30.4	13.8	21.9	21.3	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	31.5	6.3	20.0	30.4	13.8	21.9	21.3	21.4
Queue Length 50th (m)	23.1	39.5	0.0	11.3	47.0	11.2	28.7	25.1	26.4
Queue Length 95th (m)	#49.4	59.2	18.9	22.0	66.7	21.7	48.7	50.3	48.1
Internal Link Dist (m)		128.8			121.4		298.3		260.3
Turn Bay Length (m)	45.0		60.0	60.0				55.0	
Base Capacity (vph)	266	1640	876	378	1745	1120	1587	462	1203
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	0.77	0.31	0.36	0.28	0.36	0.23	0.30	0.59	0.39

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	482	299	101	444	159	243	345	109	258	302	142
Future Volume (vph)	195	482	299	101	444	159	243	345	109	258	302	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.96		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1788	3579	1542	1754	3426		3297	3419		1806	3360	
Flt Permitted	0.22	1.00	1.00	0.29	1.00		0.39	1.00		0.40	1.00	
Satd. Flow (perm)	411	3579	1542	532	3426		1358	3419		753	3360	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	205	507	315	106	467	167	256	363	115	272	318	149
RTOR Reduction (vph)	0	0	233	0	35	0	0	25	0	0	40	0
Lane Group Flow (vph)	205	507	82	106	599	0	256	453	0	272	427	0
Confl. Peds. (#/hr)	12		9	9		12	13		4	4		13
Heavy Vehicles (%)	2%	2%	4%	4%	1%	4%	7%	3%	1%	1%	2%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Actuated Green, G (s)	29.5	21.4	21.4	31.3	22.3		40.0	29.7		39.2	29.3	
Effective Green, g (s)	29.5	23.4	23.4	31.3	24.3		40.0	31.7		39.2	31.3	
Actuated g/C Ratio	0.33	0.26	0.26	0.35	0.27		0.44	0.35		0.44	0.35	
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0		4.0	6.0	
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)	258	930	400	307	925		825	1204		443	1168	
v/s Ratio Prot	c0.07	0.14		0.03	0.17		0.04	0.13		c0.07	0.13	
v/s Ratio Perm	c0.19		0.05	0.09			0.10			c0.20		
v/c Ratio	0.79	0.55	0.20	0.35	0.65		0.31	0.38		0.61	0.37	
Uniform Delay, d1	23.7	28.7	26.0	20.8	29.1		15.3	21.8		17.1	21.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.4	0.7	0.3	0.7	1.6		0.2	0.2		2.5	0.9	
Delay (s)	39.1	29.4	26.3	21.5	30.6		15.5	22.0		19.6	22.8	
Level of Service	D	C	C	C	C		B	C		B	C	
Approach Delay (s)		30.4			29.3			19.7			21.6	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Appendix D

2026 Background Traffic Operations Reports

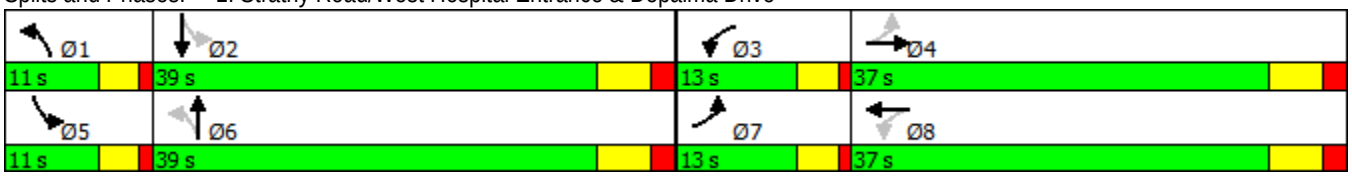
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	107	41	161	141	34	54	6	74	7	7	0
Future Volume (vph)	1	107	41	161	141	34	54	6	74	7	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	50.0		0.0	45.0		0.0	15.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		1.00	1.00		1.00	0.99		1.00		
Frt		0.958			0.971			0.862				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3363	0	1789	3421	0	1825	2920	0	1217	1642	0
Flt Permitted	0.629			0.537			0.659			0.696		
Satd. Flow (perm)	1201	3363	0	1011	3421	0	1260	2920	0	891	1642	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			31			82				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		81.0			199.0			243.9			67.7	
Travel Time (s)		5.8			14.3			17.6			4.9	
Confl. Peds. (#/hr)	9		1	1		9	5		1	1		5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	5%	0%	2%	3%	4%	0%	0%	7%	50%	17%	0%
Adj. Flow (vph)	1	119	46	179	157	38	60	7	82	8	8	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	165	0	179	195	0	60	89	0	8	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0		10.0	22.0		10.0	22.0		10.0	22.0	
Total Split (s)	13.0	37.0		13.0	37.0		11.0	39.0		11.0	39.0	
Total Split (%)	13.0%	37.0%		13.0%	37.0%		11.0%	39.0%		11.0%	39.0%	
Maximum Green (s)	9.0	31.0		9.0	31.0		7.0	33.0		7.0	33.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		25.0			25.0			23.0			23.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	24.3	18.2		29.8	28.2		23.4	22.2		21.5	18.2	
Actuated g/C Ratio	0.39	0.29		0.48	0.45		0.38	0.36		0.35	0.29	
v/c Ratio	0.00	0.16		0.31	0.12		0.11	0.08		0.02	0.02	
Control Delay	10.0	13.9		12.0	10.6		12.4	5.4		11.7	18.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	10.0	13.9		12.0	10.6		12.4	5.4		11.7	18.6	
LOS	A	B		B	B		B	A		B	B	
Approach Delay		13.9			11.3			8.2			15.1	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 62.1
Natural Cycle: 65
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.31
Intersection Signal Delay: 11.3 — Intersection LOS: B
Intersection Capacity Utilization 47.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Strathy Road/West Hospital Entrance & Depalma Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	1	165	179	195	60	89	8	8
v/c Ratio	0.00	0.16	0.31	0.12	0.11	0.08	0.02	0.02
Control Delay	10.0	13.9	12.0	10.6	12.4	5.4	11.7	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.0	13.9	12.0	10.6	12.4	5.4	11.7	18.6
Queue Length 50th (m)	0.1	5.8	12.6	5.7	4.3	0.3	0.6	0.7
Queue Length 95th (m)	0.8	12.6	24.1	14.6	10.4	4.9	2.7	3.6
Internal Link Dist (m)		57.0		175.0		219.9		43.7
Turn Bay Length (m)	20.0		50.0		45.0		15.0	
Base Capacity (vph)	619	1828	599	1853	539	1699	354	936
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.09	0.30	0.11	0.11	0.05	0.02	0.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	107	41	161	141	34	54	6	74	7	7	0
Future Volume (vph)	1	107	41	161	141	34	54	6	74	7	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.86		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1820	3364		1789	3422		1821	2921		1216	1642	
Flt Permitted	0.63	1.00		0.54	1.00		0.66	1.00		0.70	1.00	
Satd. Flow (perm)	1205	3364		1012	3422		1263	2921		891	1642	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	119	46	179	157	38	60	7	82	8	8	0
RTOR Reduction (vph)	0	32	0	0	18	0	0	56	0	0	0	0
Lane Group Flow (vph)	1	133	0	179	177	0	60	33	0	8	8	0
Confl. Peds. (#/hr)	9		1	1		9	5		1	1		5
Heavy Vehicles (%)	0%	5%	0%	2%	3%	4%	0%	0%	7%	50%	17%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	20.6	19.5		31.3	26.2		23.7	20.1		18.7	17.6	
Effective Green, g (s)	20.6	21.5		31.3	28.2		23.7	22.1		18.7	19.6	
Actuated g/C Ratio	0.30	0.31		0.46	0.41		0.35	0.32		0.27	0.29	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	372	1055		550	1408		466	942		248	469	
v/s Ratio Prot	0.00	0.04		c0.04	0.05		c0.01	0.01		0.00	0.00	
v/s Ratio Perm	0.00			c0.11			c0.04			0.01		
v/c Ratio	0.00	0.13		0.33	0.13		0.13	0.04		0.03	0.02	
Uniform Delay, d1	16.8	16.8		11.4	12.5		15.2	15.9		18.2	17.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.0		0.0	0.0		0.0	0.0	
Delay (s)	16.8	16.8		11.5	12.5		15.2	15.9		18.2	17.6	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		16.8			12.0			15.6			17.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	68.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

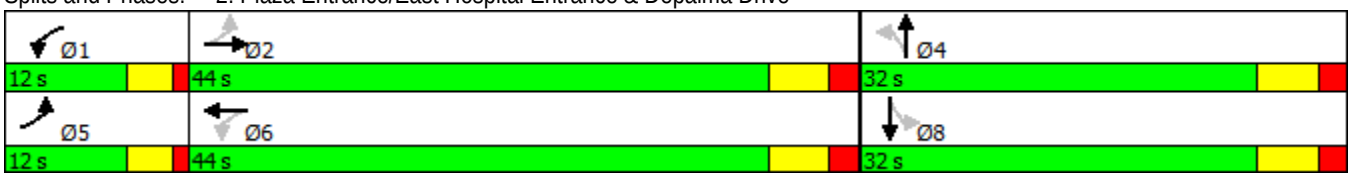
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	169	7	50	323	78	2	7	21	46	2	22
Future Volume (vph)	20	169	7	50	323	78	2	7	21	46	2	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	65.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.971			0.886			0.861	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1534	3399	0	1825	3434	0	1825	1628	0	1738	1567	0
Flt Permitted	0.479			0.549			0.739			0.736		
Satd. Flow (perm)	773	3399	0	1055	3434	0	1420	1628	0	1347	1567	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			44			25			26	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		199.0			195.0			41.1			35.9	
Travel Time (s)		14.3			14.0			3.0			2.6	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	19%	7%	0%	0%	4%	0%	0%	0%	6%	5%	0%	6%
Adj. Flow (vph)	24	201	8	60	385	93	2	8	25	55	2	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	209	0	60	478	0	2	33	0	55	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		22.0	22.0		22.0	22.0	
Total Split (s)	12.0	44.0		12.0	44.0		32.0	32.0		32.0	32.0	
Total Split (%)	13.6%	50.0%		13.6%	50.0%		36.4%	36.4%		36.4%	36.4%	
Maximum Green (s)	8.0	38.0		8.0	38.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		15.0			15.0		25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	21.5	18.2		23.1	22.0		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.43	0.36		0.46	0.44		0.36	0.36		0.36	0.36	
v/c Ratio	0.06	0.17		0.10	0.31		0.00	0.05		0.11	0.05	
Control Delay	6.9	12.2		7.1	9.5		12.0	7.4		13.2	6.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.9	12.2		7.1	9.5		12.0	7.4		13.2	6.5	
LOS	A	B		A	A		B	A		B	A	
Approach Delay		11.7			9.2			7.6			10.9	
Approach LOS		B			A			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 88
Actuated Cycle Length: 50.1
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.31
Intersection Signal Delay: 10.0 — Intersection LOS: A
Intersection Capacity Utilization 41.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Plaza Entrance/East Hospital Entrance & Depalma Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	24	209	60	478	2	33	55	28
v/c Ratio	0.06	0.17	0.10	0.31	0.00	0.05	0.11	0.05
Control Delay	6.9	12.2	7.1	9.5	12.0	7.4	13.2	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	12.2	7.1	9.5	12.0	7.4	13.2	6.5
Queue Length 50th (m)	1.0	7.2	2.6	11.0	0.2	0.5	3.7	0.2
Queue Length 95th (m)	3.4	12.4	6.3	24.4	1.2	4.5	9.2	3.8
Internal Link Dist (m)		175.0		171.0		17.1		11.9
Turn Bay Length (m)	65.0		50.0					
Base Capacity (vph)	472	2867	618	2903	802	930	761	896
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.07	0.10	0.16	0.00	0.04	0.07	0.03

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	169	7	50	323	78	2	7	21	46	2	22
Future Volume (vph)	20	169	7	50	323	78	2	7	21	46	2	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.89		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1534	3400		1825	3433		1825	1629		1738	1566	
Flt Permitted	0.48	1.00		0.55	1.00		0.74	1.00		0.74	1.00	
Satd. Flow (perm)	773	3400		1055	3433		1420	1629		1346	1566	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	24	201	8	60	385	93	2	8	25	55	2	26
RTOR Reduction (vph)	0	4	0	0	26	0	0	16	0	0	17	0
Lane Group Flow (vph)	24	205	0	60	452	0	2	17	0	55	11	0
Heavy Vehicles (%)	19%	7%	0%	0%	4%	0%	0%	0%	6%	5%	0%	6%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	18.7	17.6		23.3	19.9		16.2	16.2		16.2	16.2	
Effective Green, g (s)	18.7	19.6		23.3	21.9		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.35	0.37		0.44	0.41		0.34	0.34		0.34	0.34	
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	287	1252		511	1413		485	557		460	535	
v/s Ratio Prot	0.00	0.06		c0.01	c0.13			0.01			0.01	
v/s Ratio Perm	0.03			0.04			0.00			c0.04		
v/c Ratio	0.08	0.16		0.12	0.32		0.00	0.03		0.12	0.02	
Uniform Delay, d1	11.4	11.3		8.7	10.6		11.5	11.6		12.0	11.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.0	0.1		0.0	0.0		0.1	0.0	
Delay (s)	11.4	11.4		8.8	10.7		11.5	11.7		12.1	11.6	
Level of Service	B	B		A	B		B	B		B	B	
Approach Delay (s)		11.4			10.5			11.6			11.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	53.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	22	48	57	21	99	104	364	104	77	661	310
Future Volume (vph)	106	22	48	57	21	99	104	364	104	77	661	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	40.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99							
Frt		0.897			0.876			0.967			0.952	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1772	3076	0	1674	1650	0	1807	3409	0	1789	3330	0
Flt Permitted	0.555			0.704			0.139			0.433		
Satd. Flow (perm)	1034	3076	0	1240	1650	0	264	3409	0	816	3330	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		53			110			44			93	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		195.0			157.6			247.7			73.6	
Travel Time (s)		14.0			11.3			17.8			5.3	
Confl. Peds. (#/hr)	2		1	1		2						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	0%	8%	9%	0%	1%	1%	4%	2%	2%	5%	3%
Adj. Flow (vph)	118	24	53	63	23	110	116	404	116	86	734	344
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	77	0	63	133	0	116	520	0	86	1078	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	8.0		6.0	8.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	14.0		10.0	14.0		10.0	42.0		10.0	42.0	
Total Split (s)	13.0	30.0		13.0	30.0		13.0	44.0		13.0	44.0	
Total Split (%)	13.0%	30.0%		13.0%	30.0%		13.0%	44.0%		13.0%	44.0%	
Maximum Green (s)	9.0	24.0		9.0	24.0		9.0	38.0		9.0	38.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Dont Walk (s)		24.0			24.0			25.0			25.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	18.6	12.4		16.7	11.5		40.2	34.2		37.8	33.1	
Actuated g/C Ratio	0.26	0.17		0.23	0.16		0.57	0.48		0.53	0.47	
v/c Ratio	0.33	0.13		0.19	0.37		0.36	0.31		0.16	0.67	
Control Delay	24.5	14.9		22.8	13.7		10.2	12.1		7.8	17.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.5	14.9		22.8	13.7		10.2	12.1		7.8	17.6	
LOS	C	B		C	B		B	B		A	B	
Approach Delay		20.7			16.6			11.8			16.9	
Approach LOS		C			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 71.1
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 15.7 — Intersection LOS: B
Intersection Capacity Utilization 57.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Burnham Street & Depalma Drive/White Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	118	77	63	133	116	520	86	1078
v/c Ratio	0.33	0.13	0.19	0.37	0.36	0.31	0.16	0.67
Control Delay	24.5	14.9	22.8	13.7	10.2	12.1	7.8	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	14.9	22.8	13.7	10.2	12.1	7.8	17.6
Queue Length 50th (m)	12.6	1.5	6.5	3.0	6.5	21.4	4.8	59.2
Queue Length 95th (m)	27.7	7.8	16.7	18.6	14.1	35.5	11.1	88.4
Internal Link Dist (m)		171.0		133.6		223.7		49.6
Turn Bay Length (m)	30.0		30.0		40.0		30.0	
Base Capacity (vph)	376	1244	373	716	361	2098	587	2055
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.06	0.17	0.19	0.32	0.25	0.15	0.52

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	22	48	57	21	99	104	364	104	77	661	310
Future Volume (vph)	106	22	48	57	21	99	104	364	104	77	661	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.88		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1771	3075		1674	1651		1807	3407		1789	3330	
Flt Permitted	0.55	1.00		0.70	1.00		0.14	1.00		0.43	1.00	
Satd. Flow (perm)	1035	3075		1241	1651		265	3407		816	3330	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	118	24	53	63	23	110	116	404	116	86	734	344
RTOR Reduction (vph)	0	44	0	0	93	0	0	23	0	0	51	0
Lane Group Flow (vph)	118	33	0	63	40	0	116	497	0	86	1027	0
Confl. Peds. (#/hr)	2		1	1		2						
Heavy Vehicles (%)	3%	0%	8%	9%	0%	1%	1%	4%	2%	2%	5%	3%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	16.4	10.2		14.6	9.3		38.0	32.1		35.8	31.0	
Effective Green, g (s)	16.4	12.2		14.6	11.3		38.0	34.1		35.8	33.0	
Actuated g/C Ratio	0.23	0.17		0.20	0.16		0.52	0.47		0.49	0.46	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	297	518		281	257		264	1604		468	1517	
v/s Ratio Prot	c0.03	0.01		0.02	0.02		c0.04	0.15		0.01	c0.31	
v/s Ratio Perm	c0.06			0.03			0.19			0.08		
v/c Ratio	0.40	0.06		0.22	0.16		0.44	0.31		0.18	0.68	
Uniform Delay, d1	23.2	25.3		24.0	26.4		10.8	11.9		9.7	15.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.1		0.1	0.3		0.4	0.1		0.1	1.2	
Delay (s)	23.5	25.4		24.1	26.7		11.2	12.0		9.8	16.7	
Level of Service	C	C		C	C		B	B		A	B	
Approach Delay (s)		24.3			25.9			11.8			16.2	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	72.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

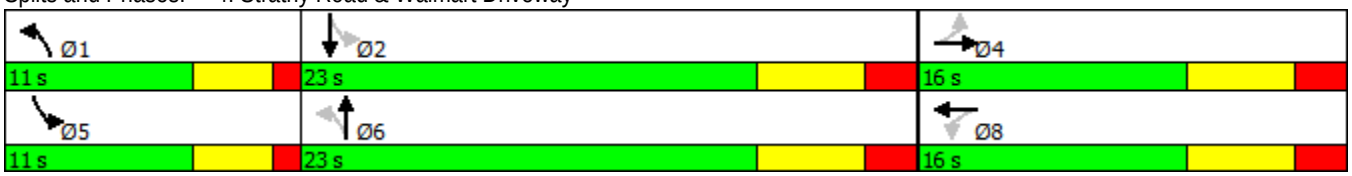
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	29	18	4	4	105	202	17	7	240	2
Future Volume (vph)	5	1	29	18	4	4	105	202	17	7	240	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	25.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00				0.99			1.00		1.00		
Frt		0.854			0.925			0.988			0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1460	1408	0	1825	1766	0	1789	3485	0	1825	3575	0
Flt Permitted	0.751			0.733			0.440			0.585		
Satd. Flow (perm)	1154	1408	0	1408	1766	0	829	3485	0	1123	3575	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					5			20			1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.6			59.9			307.9			243.9	
Travel Time (s)		7.4			4.3			22.2			17.6	
Confl. Peds. (#/hr)	1					1			1	1		
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	25%	0%	17%	0%	0%	0%	2%	3%	7%	0%	2%	0%
Adj. Flow (vph)	6	1	36	22	5	5	130	249	21	9	296	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	37	0	22	10	0	130	270	0	9	298	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4		8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		10.0	21.0		10.0	21.0	
Total Split (s)	16.0	16.0		16.0	16.0		11.0	23.0		11.0	23.0	
Total Split (%)	32.0%	32.0%		32.0%	32.0%		22.0%	46.0%		22.0%	46.0%	
Maximum Green (s)	10.0	10.0		10.0	10.0		7.0	17.0		7.0	17.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			18.0			18.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	13.6	15.0		13.6	15.0		21.6	25.6		18.5	19.8	
Actuated g/C Ratio	0.34	0.38		0.34	0.38		0.54	0.64		0.46	0.50	
v/c Ratio	0.02	0.07		0.05	0.01		0.21	0.12		0.01	0.17	
Control Delay	16.0	15.0		16.4	11.6		4.8	5.5		4.0	9.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.0	15.0		16.4	11.6		4.8	5.5		4.0	9.8	
LOS	B	B		B	B		A	A		A	A	
Approach Delay		15.2			14.9			5.3			9.7	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 39.9
Natural Cycle: 45
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.21
Intersection Signal Delay: 7.9 — Intersection LOS: A
Intersection Capacity Utilization 36.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Strathy Road & Walmart Driveway



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	6	37	22	10	130	270	9	298
v/c Ratio	0.02	0.07	0.05	0.01	0.21	0.12	0.01	0.17
Control Delay	16.0	15.0	16.4	11.6	4.8	5.5	4.0	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	15.0	16.4	11.6	4.8	5.5	4.0	9.8
Queue Length 50th (m)	0.4	2.4	1.5	0.3	3.6	3.5	0.3	8.2
Queue Length 95th (m)	2.3	6.9	5.2	2.6	7.4	11.0	1.2	13.2
Internal Link Dist (m)		78.6		35.9		283.9		219.9
Turn Bay Length (m)							25.0	
Base Capacity (vph)	346	508	423	640	666	2256	716	1898
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.07	0.05	0.02	0.20	0.12	0.01	0.16

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	29	18	4	4	105	202	17	7	240	2
Future Volume (vph)	5	1	29	18	4	4	105	202	17	7	240	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	0.93		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1459	1408		1825	1766		1789	3486		1824	3575	
Flt Permitted	0.75	1.00		0.73	1.00		0.44	1.00		0.59	1.00	
Satd. Flow (perm)	1154	1408		1408	1766		828	3486		1124	3575	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	6	1	36	22	5	5	130	249	21	9	296	2
RTOR Reduction (vph)	0	0	0	0	4	0	0	12	0	0	1	0
Lane Group Flow (vph)	6	37	0	22	6	0	130	258	0	9	297	0
Confl. Peds. (#/hr)	1					1			1	1		
Heavy Vehicles (%)	25%	0%	17%	0%	0%	0%	2%	3%	7%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	10.6	10.6		10.6	10.6		20.9	16.2		13.5	12.5	
Effective Green, g (s)	10.6	12.6		10.6	12.6		20.9	18.2		13.5	14.5	
Actuated g/C Ratio	0.24	0.29		0.24	0.29		0.48	0.42		0.31	0.33	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	279	405		340	508		498	1448		362	1183	
v/s Ratio Prot		c0.03			0.00		c0.03	0.07		0.00	0.08	
v/s Ratio Perm	0.01			0.02			c0.10			0.01		
v/c Ratio	0.02	0.09		0.06	0.01		0.26	0.18		0.02	0.25	
Uniform Delay, d1	12.6	11.4		12.8	11.2		6.6	8.1		10.5	10.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.0		0.3	0.1		0.0	0.1	
Delay (s)	12.7	11.5		12.9	11.2		6.9	8.1		10.6	10.8	
Level of Service	B	B		B	B		A	A		B	B	
Approach Delay (s)		11.7			12.3			7.7			10.8	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	43.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	3	10	597	778	13
Future Volume (vph)	0	3	10	597	778	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.865				0.998	
Flt Protected				0.999		
Satd. Flow (prot)	1662	0	0	3542	3472	0
Flt Permitted				0.999		
Satd. Flow (perm)	1662	0	0	3542	3472	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	139.6			284.3	247.7	
Travel Time (s)	10.1			20.5	17.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	5%	0%
Adj. Flow (vph)	0	3	11	635	828	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	0	646	842	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.6%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	3	10	597	778	13
Future Volume (Veh/h)	0	3	10	597	778	13
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	3	11	635	828	14
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				284	248	
pX, platoon unblocked	0.89	0.89	0.89			
vC, conflicting volume	1174	421	842			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	938	87	563			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	233	850	902			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	3	223	423	552	290
Volume Left	0	11	0	0	0
Volume Right	3	0	0	0	14
cSH	850	902	1700	1700	1700
Volume to Capacity	0.00	0.01	0.25	0.32	0.17
Queue Length 95th (m)	0.1	0.3	0.0	0.0	0.0
Control Delay (s)	9.2	0.6	0.0	0.0	0.0
Lane LOS	A	A			
Approach Delay (s)	9.2	0.2		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		

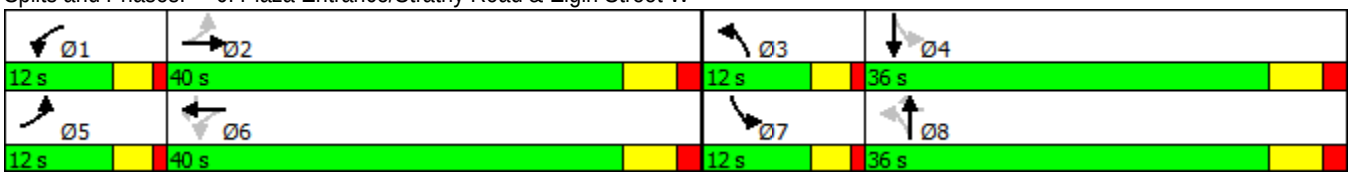
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	497	9	16	460	182	18	27	6	104	38	161
Future Volume (vph)	174	497	9	16	460	182	18	27	6	104	38	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		40.0	20.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00		0.99	1.00	1.00		1.00		0.98
Frt		0.997				0.850		0.974				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1807	3500	0	1825	3444	1601	1615	1867	0	1755	1921	1601
Flt Permitted	0.360			0.454			0.731			0.677		
Satd. Flow (perm)	684	3500	0	870	3444	1580	1238	1867	0	1249	1921	1574
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				192		6				169
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		86.1			116.2			44.7			307.9	
Travel Time (s)		6.2			8.4			3.2			22.2	
Confl. Peds. (#/hr)	1		3	3		1	4		1	1		4
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
Heavy Vehicles (%)	1%	4%	0%	0%	6%	2%	13%	0%	0%	4%	0%	2%
Adj. Flow (vph)	183	523	9	17	484	192	19	28	6	109	40	169
Shared Lane Traffic (%)												
Lane Group Flow (vph)	183	532	0	17	484	192	19	34	0	109	40	169
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane		Yes									Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Detector Phase	5	2		1	6	8	3	8		7	4	6
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0	12.0	6.0	12.0		6.0	12.0	10.0
Minimum Split (s)	10.0	32.0		10.0	32.0	39.0	10.0	39.0		10.0	39.0	32.0
Total Split (s)	12.0	40.0		12.0	40.0	36.0	12.0	36.0		12.0	36.0	40.0
Total Split (%)	12.0%	40.0%		12.0%	40.0%	36.0%	12.0%	36.0%		12.0%	36.0%	40.0%
Maximum Green (s)	8.0	34.0		8.0	34.0	30.0	8.0	30.0		8.0	30.0	34.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	Min	Min	Min		Min	Min	None
Walk Time (s)		10.0			10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		16.0			16.0	23.0		23.0			23.0	16.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	31.2	27.4		27.4	17.3	14.1	24.3	14.1		26.7	15.2	17.3
Actuated g/C Ratio	0.50	0.44		0.44	0.28	0.22	0.39	0.22		0.43	0.24	0.28
v/c Ratio	0.35	0.35		0.03	0.51	0.38	0.04	0.08		0.18	0.09	0.30
Control Delay	10.8	13.2		8.1	21.1	6.7	11.9	19.2		12.7	20.7	4.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	10.8	13.2		8.1	21.1	6.7	11.9	19.2		12.7	20.7	4.9
LOS	B	B		A	C	A	B	B		B	C	A
Approach Delay		12.6			16.8			16.6			9.5	
Approach LOS		B			B			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 62.8
Natural Cycle: 95
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 13.8 — Intersection LOS: B
Intersection Capacity Utilization 47.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Plaza Entrance/Strathy Road & Elgin Street W



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	183	532	17	484	192	19	34	109	40	169
v/c Ratio	0.35	0.35	0.03	0.51	0.38	0.04	0.08	0.18	0.09	0.30
Control Delay	10.8	13.2	8.1	21.1	6.7	11.9	19.2	12.7	20.7	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.8	13.2	8.1	21.1	6.7	11.9	19.2	12.7	20.7	4.9
Queue Length 50th (m)	11.2	19.4	0.9	25.0	0.0	1.2	2.6	7.3	3.6	0.0
Queue Length 95th (m)	20.5	38.7	3.4	37.1	14.5	5.0	9.5	17.8	11.2	11.2
Internal Link Dist (m)		62.1		92.2			20.7		283.9	
Turn Bay Length (m)					40.0	20.0				
Base Capacity (vph)	519	2016	559	1983	902	575	958	623	983	978
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.26	0.03	0.24	0.21	0.03	0.04	0.17	0.04	0.17

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	497	9	16	460	182	18	27	6	104	38	161
Future Volume (vph)	174	497	9	16	460	182	18	27	6	104	38	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1807	3502		1824	3444	1581	1612	1866		1754	1921	1577
Flt Permitted	0.36	1.00		0.45	1.00	1.00	0.73	1.00		0.68	1.00	1.00
Satd. Flow (perm)	686	3502		872	3444	1581	1241	1866		1251	1921	1577
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	183	523	9	17	484	192	19	28	6	109	40	169
RTOR Reduction (vph)	0	1	0	0	0	151	0	5	0	0	0	116
Lane Group Flow (vph)	183	531	0	17	484	41	19	29	0	109	40	53
Confl. Peds. (#/hr)	1		3	3		1	4		1	1		4
Heavy Vehicles (%)	1%	4%	0%	0%	6%	2%	13%	0%	0%	4%	0%	2%
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Actuated Green, G (s)	30.5	25.4		19.7	18.6	12.1	18.3	12.1		20.7	13.3	18.6
Effective Green, g (s)	32.5	27.4		23.7	20.6	14.1	22.3	14.1		24.7	15.3	20.6
Actuated g/C Ratio	0.49	0.42		0.36	0.31	0.21	0.34	0.21		0.37	0.23	0.31
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	505	1453		357	1074	337	465	398		539	445	492
v/s Ratio Prot	c0.05	0.15		0.00	c0.14		0.01	0.02		c0.03	0.02	
v/s Ratio Perm	0.12			0.01		0.03	0.01			0.05		0.03
v/c Ratio	0.36	0.37		0.05	0.45	0.12	0.04	0.07		0.20	0.09	0.11
Uniform Delay, d1	9.7	13.3		13.7	18.2	21.0	14.6	20.7		13.8	19.9	16.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	0.2		0.1	0.3	0.2	0.0	0.1		0.2	0.1	0.1
Delay (s)	10.2	13.5		13.7	18.5	21.1	14.7	20.8		14.0	20.0	16.3
Level of Service	B	B		B	B	C	B	C		B	B	B
Approach Delay (s)		12.6			19.1			18.6			15.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	574	18	67	641	4	1	1	20	6	1	11
Future Volume (vph)	6	574	18	67	641	4	1	1	20	6	1	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		30.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	0.95	0.95	1.00	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999			0.877			0.917	
Flt Protected					0.995			0.998			0.984	
Satd. Flow (prot)	0	3505	1633	0	4945	0	0	1681	0	0	1733	0
Flt Permitted					0.995			0.998			0.984	
Satd. Flow (perm)	0	3505	1633	0	4945	0	0	1681	0	0	1733	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		116.2			158.6			66.6			220.5	
Travel Time (s)		8.4			11.4			4.8			15.9	
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
Heavy Vehicles (%)	17%	4%	0%	0%	6%	6%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	6	598	19	70	668	4	1	1	21	6	1	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	604	19	0	742	0	0	23	0	0	18	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.5%		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)	6	574	18	67	641	4	1	1	20	6	1	11
Future Volume (Veh/h)	6	574	18	67	641	4	1	1	20	6	1	11
Sign Control		Free			Free			Stop			Stop	
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)	6	598	19	70	668	4	1	1	21	6	1	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)		116			312							
pX, platoon unblocked				0.91			0.91	0.91	0.91	0.91	0.91	
vC, conflicting volume	672			617			984	1422	299	1142	1439	225
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	672			389			791	1271	40	965	1290	225
tC, single (s)	4.4			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.4			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			94			100	99	98	97	99	99
cM capacity (veh/h)	821			1078			240	143	939	178	140	785

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	205	399	19	237	334	171	23	18
Volume Left	6	0	0	70	0	0	1	6
Volume Right	0	0	19	0	0	4	21	11
cSH	821	1700	1700	1078	1700	1700	686	328
Volume to Capacity	0.01	0.23	0.01	0.06	0.20	0.10	0.03	0.05
Queue Length 95th (m)	0.2	0.0	0.0	1.6	0.0	0.0	0.8	1.3
Control Delay (s)	0.4	0.0	0.0	3.0	0.0	0.0	10.4	16.6
Lane LOS	A			A			B	C
Approach Delay (s)	0.1			0.9			10.4	16.6
Approach LOS							B	C

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2	0	5	2	0	4	6	49	0	2	2
Future Volume (vph)	0	2	0	5	2	0	4	6	49	0	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt								0.888			0.932	
Flt Protected					0.966			0.997				
Satd. Flow (prot)	0	1883	0	0	1819	0	0	1667	0	0	1755	0
Flt Permitted					0.966			0.997				
Satd. Flow (perm)	0	1883	0	0	1819	0	0	1667	0	0	1755	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		220.5			50.5			113.9			38.1	
Travel Time (s)		15.9			3.6			8.2			2.7	
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
Adj. Flow (vph)	0	2	0	5	2	0	4	7	53	0	2	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	7	0	0	64	0	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.2%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	2	0	5	2	0	4	6	49	0	2	2
Future Volume (vph)	0	2	0	5	2	0	4	6	49	0	2	2
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)	0	2	0	5	2	0	4	7	53	0	2	2

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	2	7	64	4
Volume Left (vph)	0	5	4	0
Volume Right (vph)	0	0	53	2
Hadj (s)	0.03	0.18	-0.45	-0.27
Departure Headway (s)	4.1	4.2	3.5	3.7
Degree Utilization, x	0.00	0.01	0.06	0.00
Capacity (veh/h)	864	838	1030	961
Control Delay (s)	7.1	7.2	6.7	6.7
Approach Delay (s)	7.1	7.2	6.7	6.7
Approach LOS	A	A	A	A

Intersection Summary			
Delay	6.8		
Level of Service	A		
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	523	6	59	708	44	9	0	17	0	0	9
Future Volume (vph)	7	523	6	59	708	44	9	0	17	0	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	40.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.991			0.913			0.865	
Flt Protected	0.950			0.950				0.982				
Satd. Flow (prot)	1825	3535	0	1738	3455	0	0	1590	0	0	1362	0
Flt Permitted	0.950			0.950				0.982				
Satd. Flow (perm)	1825	3535	0	1738	3455	0	0	1590	0	0	1362	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		158.6			152.8			56.6			113.9	
Travel Time (s)		11.4			11.0			4.1			8.2	
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
Heavy Vehicles (%)	0%	3%	7%	5%	5%	0%	0%	0%	13%	20%	0%	22%
Adj. Flow (vph)	7	556	6	63	753	47	10	0	18	0	0	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	562	0	63	800	0	0	28	0	0	10	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.5%		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)	7	523	6	59	708	44	9	0	17	0	0	9
Future Volume (Veh/h)	7	523	6	59	708	44	9	0	17	0	0	9
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)	7	556	6	63	753	47	10	0	18	0	0	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		275			153							
pX, platoon unblocked	0.99			0.99			0.99	0.99	0.99	0.99	0.99	0.99
vC, conflicting volume	800			562			1086	1499	281	1212	1478	400
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	789			542			1052	1468	259	1180	1447	387
tC, single (s)	4.1			4.2			7.5	6.5	7.2	7.9	6.5	7.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.4	3.7	4.0	3.5
p0 queue free %	99			94			94	100	97	100	100	98
cM capacity (veh/h)	836			994			170	119	702	116	123	555

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	7	371	191	63	502	298	28	10
Volume Left	7	0	0	63	0	0	10	0
Volume Right	0	0	6	0	0	47	18	10
cSH	836	1700	1700	994	1700	1700	331	555
Volume to Capacity	0.01	0.22	0.11	0.06	0.30	0.18	0.08	0.02
Queue Length 95th (m)	0.2	0.0	0.0	1.5	0.0	0.0	2.1	0.4
Control Delay (s)	9.3	0.0	0.0	8.9	0.0	0.0	16.9	11.6
Lane LOS	A			A			C	B
Approach Delay (s)	0.1			0.6			16.9	11.6
Approach LOS							C	B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

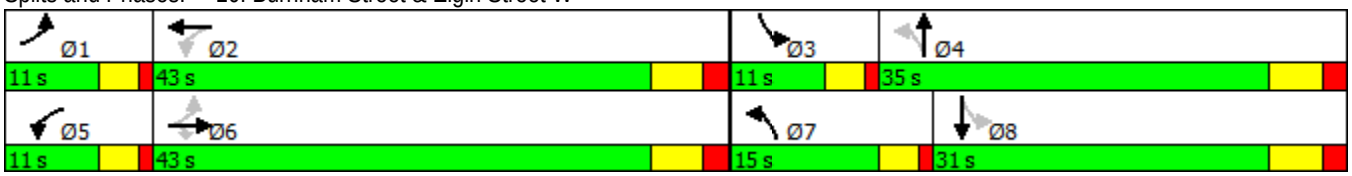
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	289	182	134	372	206	195	279	133	173	327	147
Future Volume (vph)	98	289	182	134	372	206	195	279	133	173	327	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		60.0	60.0		0.0	0.0		0.0	55.0		0.0
Storage Lanes	1		1	1		0	2		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00		0.98	1.00	0.99			0.99		1.00		
Frt			0.850		0.946			0.951			0.953	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1706	3544	1498	1706	3281	0	3340	3318	0	1807	3367	0
Flt Permitted	0.253			0.467			0.343			0.458		
Satd. Flow (perm)	454	3544	1470	835	3281	0	1206	3318	0	868	3367	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			198		124			83			71	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		152.8			145.4			322.3			284.3	
Travel Time (s)		11.0			10.5			23.2			20.5	
Confl. Peds. (#/hr)	5		9	9		5			6	6		
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
Heavy Vehicles (%)	7%	3%	9%	7%	5%	4%	6%	4%	4%	1%	3%	4%
Adj. Flow (vph)	107	314	198	146	404	224	212	303	145	188	355	160
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	314	198	146	628	0	212	448	0	188	515	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Detector Phase	1	6	6	5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0	16.0	6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0		10.0	34.0		10.0	34.0	
Total Split (s)	11.0	43.0	43.0	11.0	43.0		15.0	35.0		11.0	31.0	
Total Split (%)	11.0%	43.0%	43.0%	11.0%	43.0%		15.0%	35.0%		11.0%	31.0%	
Maximum Green (s)	7.0	37.0	37.0	7.0	37.0		11.0	29.0		7.0	25.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		32.0	32.0		32.0			21.0			21.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	29.0	22.1	22.1	30.0	24.5		41.2	32.1		37.2	30.1	
Actuated g/C Ratio	0.34	0.26	0.26	0.36	0.29		0.49	0.38		0.44	0.36	
v/c Ratio	0.42	0.34	0.37	0.40	0.60		0.26	0.34		0.41	0.41	
Control Delay	21.8	26.2	5.9	20.7	23.8		12.3	16.3		15.9	19.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.8	26.2	5.9	20.7	23.8		12.3	16.3		15.9	19.5	
LOS	C	C	A	C	C		B	B		B	B	
Approach Delay		18.9			23.2			15.0			18.6	
Approach LOS		B			C			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 84.4
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 19.1 — Intersection LOS: B
Intersection Capacity Utilization 63.8% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: Burnham Street & Elgin Street W



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	107	314	198	146	628	212	448	188	515
v/c Ratio	0.42	0.34	0.37	0.40	0.60	0.26	0.34	0.41	0.41
Control Delay	21.8	26.2	5.9	20.7	23.8	12.3	16.3	15.9	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.8	26.2	5.9	20.7	23.8	12.3	16.3	15.9	19.5
Queue Length 50th (m)	10.9	21.4	0.0	15.2	37.7	8.3	20.4	15.0	26.7
Queue Length 95th (m)	21.3	32.8	14.4	28.0	56.1	16.7	36.8	31.8	47.4
Internal Link Dist (m)		128.8			121.4		298.3		260.3
Turn Bay Length (m)	45.0		60.0	60.0				55.0	
Base Capacity (vph)	261	1645	788	369	1589	896	1322	460	1247
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.19	0.25	0.40	0.40	0.24	0.34	0.41	0.41

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	289	182	134	372	206	195	279	133	173	327	147
Future Volume (vph)	98	289	182	134	372	206	195	279	133	173	327	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1705	3544	1471	1703	3284		3340	3321		1805	3368	
Flt Permitted	0.25	1.00	1.00	0.47	1.00		0.34	1.00		0.46	1.00	
Satd. Flow (perm)	455	3544	1471	837	3284		1206	3321		870	3368	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	314	198	146	404	224	212	303	145	188	355	160
RTOR Reduction (vph)	0	0	144	0	88	0	0	52	0	0	46	0
Lane Group Flow (vph)	107	314	54	146	540	0	212	396	0	188	469	0
Confl. Peds. (#/hr)	5		9	9		5			6	6		
Heavy Vehicles (%)	7%	3%	9%	7%	5%	4%	6%	4%	4%	1%	3%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Actuated Green, G (s)	26.5	21.0	21.0	29.5	22.5		39.1	30.1		35.1	28.1	
Effective Green, g (s)	26.5	23.0	23.0	29.5	24.5		39.1	32.1		35.1	30.1	
Actuated g/C Ratio	0.31	0.27	0.27	0.35	0.29		0.46	0.38		0.41	0.35	
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0		4.0	6.0	
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)	222	957	397	361	945		779	1252		435	1191	
v/s Ratio Prot	0.03	0.09		c0.03	c0.16		c0.03	0.12		c0.04	0.14	
v/s Ratio Perm	0.12		0.04	0.11			0.10			c0.14		
v/c Ratio	0.48	0.33	0.13	0.40	0.57		0.27	0.32		0.43	0.39	
Uniform Delay, d1	22.0	24.9	23.5	20.0	25.8		13.7	18.7		16.4	20.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.2	0.2	0.7	0.8		0.2	0.1		0.7	1.0	
Delay (s)	23.6	25.1	23.7	20.7	26.7		13.9	18.9		17.1	21.6	
Level of Service	C	C	C	C	C		B	B		B	C	
Approach Delay (s)		24.4			25.5			17.3			20.4	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	85.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		

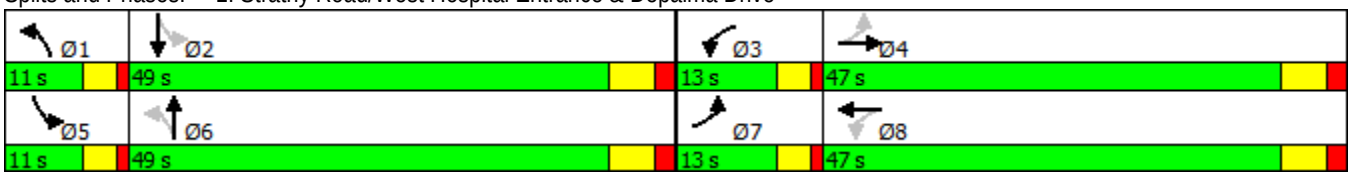
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	261	89	157	180	13	95	11	126	54	33	11
Future Volume (vph)	0	261	89	157	180	13	95	11	126	54	33	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	50.0		0.0	45.0		0.0	15.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00	1.00		0.98	0.99		1.00	0.99	
Frt		0.962			0.990			0.862			0.962	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	1921	3472	0	1789	3507	0	1825	3052	0	1825	1741	0
Flt Permitted				0.354			0.665			0.653		
Satd. Flow (perm)	1921	3472	0	666	3507	0	1250	3052	0	1253	1741	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			7			143			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		81.0			199.0			243.9			67.7	
Travel Time (s)		5.8			14.3			17.6			4.9	
Confl. Peds. (#/hr)	20		3	3		20	19		1	1		19
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	1%	0%	2%	3%	0%	0%	0%	2%	0%	7%	0%
Adj. Flow (vph)	0	297	101	178	205	15	108	13	143	61	38	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	398	0	178	220	0	108	156	0	61	51	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0		10.0	22.0		10.0	22.0		10.0	22.0	
Total Split (s)	13.0	47.0		13.0	47.0		11.0	49.0		11.0	49.0	
Total Split (%)	10.8%	39.2%		10.8%	39.2%		9.2%	40.8%		9.2%	40.8%	
Maximum Green (s)	9.0	41.0		9.0	41.0		7.0	43.0		7.0	43.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		25.0			25.0			23.0			23.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)		18.1		30.1	30.1		24.4	20.4		23.0	18.1	
Actuated g/C Ratio		0.28		0.47	0.47		0.38	0.32		0.36	0.28	
v/c Ratio		0.40		0.40	0.13		0.20	0.15		0.12	0.10	
Control Delay		18.9		13.9	10.5		13.1	5.3		12.4	15.9	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		18.9		13.9	10.5		13.1	5.3		12.4	15.9	
LOS		B		B	B		B	A		B	B	
Approach Delay		18.9			12.0			8.5			14.0	
Approach LOS		B			B			A			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 64.6	
Natural Cycle: 65	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 62.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Strathy Road/West Hospital Entrance & Depalma Drive



Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	398	178	220	108	156	61	51
v/c Ratio	0.40	0.40	0.13	0.20	0.15	0.12	0.10
Control Delay	18.9	13.9	10.5	13.1	5.3	12.4	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	13.9	10.5	13.1	5.3	12.4	15.9
Queue Length 50th (m)	19.0	12.9	7.7	7.9	0.6	4.3	3.6
Queue Length 95th (m)	29.8	23.3	13.1	16.1	6.3	10.2	10.6
Internal Link Dist (m)	57.0		175.0		219.9		43.7
Turn Bay Length (m)		50.0		45.0		15.0	
Base Capacity (vph)	2343	468	2355	535	2185	518	1226
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.38	0.09	0.20	0.07	0.12	0.04

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	261	89	157	180	13	95	11	126	54	33	11
Future Volume (vph)	0	261	89	157	180	13	95	11	126	54	33	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00	0.95		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt		0.96		1.00	0.99		1.00	0.86		1.00	0.96	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3473		1789	3509		1812	3056		1824	1745	
Flt Permitted		1.00		0.35	1.00		0.66	1.00		0.65	1.00	
Satd. Flow (perm)		3473		667	3509		1268	3056		1254	1745	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	297	101	178	205	15	108	12	143	61	38	12
RTOR Reduction (vph)	0	32	0	0	4	0	0	99	0	0	9	0
Lane Group Flow (vph)	0	366	0	178	216	0	108	57	0	61	42	0
Confl. Peds. (#/hr)	20		3	3		20	19		1	1		19
Heavy Vehicles (%)	0%	1%	0%	2%	3%	0%	0%	0%	2%	0%	7%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)		16.1		28.1	28.1		23.6	18.4		20.6	16.9	
Effective Green, g (s)		18.1		28.1	30.1		23.6	20.4		20.6	18.9	
Actuated g/C Ratio		0.27		0.42	0.45		0.36	0.31		0.31	0.29	
Clearance Time (s)		6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)		3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)		949		418	1595		494	941		422	498	
v/s Ratio Prot		0.11		c0.05	0.06		c0.02	0.02		0.01	0.02	
v/s Ratio Perm				c0.13			c0.06			0.04		
v/c Ratio		0.39		0.43	0.14		0.22	0.06		0.14	0.08	
Uniform Delay, d1		19.5		12.5	10.5		14.6	16.1		16.2	17.3	
Progression Factor		1.00		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		0.1	0.1	
Delay (s)		19.8		12.8	10.5		14.7	16.2		16.3	17.4	
Level of Service		B		B	B		B	B		B	B	
Approach Delay (s)		19.8			11.5			15.6			16.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	66.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

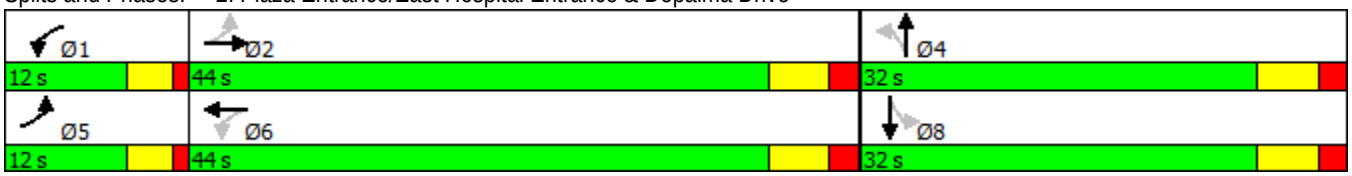
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	413	16	98	352	23	12	7	99	68	4	24
Future Volume (vph)	16	413	16	98	352	23	12	7	99	68	4	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	65.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00			1.00				0.99	
Frt		0.994			0.991			0.859			0.870	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1587	3625	0	1825	3551	0	1825	1635	0	1789	1584	0
Flt Permitted	0.517			0.373			0.738			0.685		
Satd. Flow (perm)	864	3625	0	716	3551	0	1417	1635	0	1290	1584	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			10			105			26	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		199.0			195.0			41.1			35.9	
Travel Time (s)		14.3			14.0			3.0			2.6	
Confl. Peds. (#/hr)			1	1			1					1
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
Heavy Vehicles (%)	15%	0%	0%	0%	2%	0%	0%	0%	1%	2%	0%	5%
Adj. Flow (vph)	17	439	17	104	374	24	13	7	105	72	4	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	456	0	104	398	0	13	112	0	72	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		22.0	22.0		22.0	22.0	
Total Split (s)	12.0	44.0		12.0	44.0		32.0	32.0		32.0	32.0	
Total Split (%)	13.6%	50.0%		13.6%	50.0%		36.4%	36.4%		36.4%	36.4%	
Maximum Green (s)	8.0	38.0		8.0	38.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		15.0			15.0		25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	22.7	18.1		25.7	24.3		18.1	18.1		18.1	18.1	
Actuated g/C Ratio	0.43	0.35		0.49	0.46		0.35	0.35		0.35	0.35	
v/c Ratio	0.04	0.36		0.21	0.24		0.03	0.18		0.16	0.05	
Control Delay	6.7	14.5		7.8	9.4		12.8	4.8		14.4	6.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.7	14.5		7.8	9.4		12.8	4.8		14.4	6.9	
LOS	A	B		A	A		B	A		B	A	
Approach Delay		14.2			9.1			5.6			12.2	
Approach LOS		B			A			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 88
Actuated Cycle Length: 52.4
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 11.0 — Intersection LOS: B
Intersection Capacity Utilization 42.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Plaza Entrance/East Hospital Entrance & Depalma Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	17	456	104	398	13	112	72	30
v/c Ratio	0.04	0.36	0.21	0.24	0.03	0.18	0.16	0.05
Control Delay	6.7	14.5	7.8	9.4	12.8	4.8	14.4	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	14.5	7.8	9.4	12.8	4.8	14.4	6.9
Queue Length 50th (m)	0.7	17.1	4.7	9.6	0.8	0.4	4.9	0.3
Queue Length 95th (m)	2.9	28.1	10.3	23.4	3.8	8.8	12.7	4.7
Internal Link Dist (m)		175.0		171.0		17.1		11.9
Turn Bay Length (m)	65.0		50.0					
Base Capacity (vph)	511	2854	523	2797	762	928	694	864
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.16	0.20	0.14	0.02	0.12	0.10	0.03

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	413	16	98	352	23	12	7	99	68	4	24
Future Volume (vph)	16	413	16	98	352	23	12	7	99	68	4	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.86		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1587	3627		1825	3550		1824	1636		1789	1585	
Flt Permitted	0.52	1.00		0.37	1.00		0.74	1.00		0.68	1.00	
Satd. Flow (perm)	864	3627		716	3550		1416	1636		1290	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)	17	439	17	104	374	24	13	7	105	72	4	26
RTOR Reduction (vph)	0	4	0	0	6	0	0	71	0	0	18	0
Lane Group Flow (vph)	17	452	0	104	392	0	13	41	0	72	12	0
Confl. Peds. (#/hr)			1	1			1					1
Heavy Vehicles (%)	15%	0%	0%	0%	2%	0%	0%	0%	1%	2%	0%	5%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	19.5	18.4		27.3	22.3		16.1	16.1		16.1	16.1	
Effective Green, g (s)	19.5	20.4		27.3	24.3		18.1	18.1		18.1	18.1	
Actuated g/C Ratio	0.35	0.37		0.49	0.44		0.33	0.33		0.33	0.33	
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	317	1333		452	1554		461	533		420	516	
v/s Ratio Prot	0.00	c0.12		c0.02	0.11			0.03			0.01	
v/s Ratio Perm	0.02			0.09			0.01			c0.06		
v/c Ratio	0.05	0.34		0.23	0.25		0.03	0.08		0.17	0.02	
Uniform Delay, d1	11.8	12.7		7.9	9.9		12.7	12.9		13.3	12.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.2		0.1	0.1		0.0	0.1		0.2	0.0	
Delay (s)	11.8	12.8		8.0	9.9		12.7	13.0		13.5	12.7	
Level of Service	B	B		A	A		B	B		B	B	
Approach Delay (s)		12.8			9.5			13.0			13.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	55.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

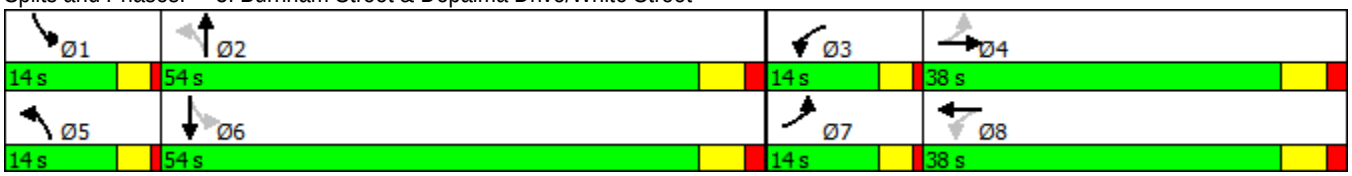
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	44	168	90	38	143	116	595	87	62	579	315
Future Volume (vph)	362	44	168	90	38	143	116	595	87	62	579	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	40.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99		1.00								
Frt		0.881			0.882			0.981			0.947	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1807	3152	0	1706	1655	0	1807	3472	0	1825	3379	0
Flt Permitted	0.321			0.617			0.145			0.327		
Satd. Flow (perm)	611	3152	0	1105	1655	0	276	3472	0	628	3379	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		171			146			17			104	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		195.0			157.6			247.7			73.6	
Travel Time (s)		14.0			11.3			17.8			5.3	
Confl. Peds. (#/hr)			3	3								
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	0%	1%	7%	0%	3%	1%	3%	4%	0%	3%	1%
Adj. Flow (vph)	369	45	171	92	39	146	118	607	89	63	591	321
Shared Lane Traffic (%)												
Lane Group Flow (vph)	369	216	0	92	185	0	118	696	0	63	912	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	8.0		6.0	8.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	14.0		10.0	14.0		10.0	42.0		10.0	42.0	
Total Split (s)	14.0	38.0		14.0	38.0		14.0	54.0		14.0	54.0	
Total Split (%)	11.7%	31.7%		11.7%	31.7%		11.7%	45.0%		11.7%	45.0%	
Maximum Green (s)	10.0	32.0		10.0	32.0		10.0	48.0		10.0	48.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Dont Walk (s)		24.0			24.0			25.0			25.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	24.4	16.6		19.0	11.5		38.3	31.7		34.1	27.8	
Actuated g/C Ratio	0.33	0.23		0.26	0.16		0.52	0.43		0.46	0.38	
v/c Ratio	1.01	0.26		0.27	0.49		0.38	0.46		0.16	0.68	
Control Delay	75.3	9.4		21.3	14.1		11.9	16.2		9.2	19.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	75.3	9.4		21.3	14.1		11.9	16.2		9.2	19.8	
LOS	E	A		C	B		B	B		A	B	
Approach Delay		51.0			16.5			15.6			19.1	
Approach LOS		D			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 73.7
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 24.8 — Intersection LOS: C
Intersection Capacity Utilization 76.7% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Burnham Street & Depalma Drive/White Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	369	216	92	185	118	696	63	912
v/c Ratio	1.01	0.26	0.27	0.49	0.38	0.46	0.16	0.68
Control Delay	75.3	9.4	21.3	14.1	11.9	16.2	9.2	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.3	9.4	21.3	14.1	11.9	16.2	9.2	19.8
Queue Length 50th (m)	39.5	2.6	8.3	4.6	7.0	33.8	3.6	45.5
Queue Length 95th (m)	#110.6	12.9	22.2	23.8	15.9	54.6	9.6	74.8
Internal Link Dist (m)		171.0		133.6		223.7		49.6
Turn Bay Length (m)	30.0		30.0		40.0		30.0	
Base Capacity (vph)	367	1572	408	855	359	2405	488	2368
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.14	0.23	0.22	0.33	0.29	0.13	0.39

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	44	168	90	38	143	116	595	87	62	579	315
Future Volume (vph)	362	44	168	90	38	143	116	595	87	62	579	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.88		1.00	0.88		1.00	0.98		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1807	3156		1704	1655		1807	3472		1825	3380	
Flt Permitted	0.32	1.00		0.62	1.00		0.15	1.00		0.33	1.00	
Satd. Flow (perm)	610	3156		1106	1655		276	3472		629	3380	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	369	45	171	92	39	146	118	607	89	63	591	321
RTOR Reduction (vph)	0	133	0	0	122	0	0	10	0	0	64	0
Lane Group Flow (vph)	369	83	0	92	63	0	118	686	0	63	848	0
Confl. Peds. (#/hr)			3	3								
Heavy Vehicles (%)	1%	0%	1%	7%	0%	3%	1%	3%	4%	0%	3%	1%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.6	14.6		16.4	10.4		37.6	29.7		31.6	26.7	
Effective Green, g (s)	24.6	16.6		16.4	12.4		37.6	31.7		31.6	28.7	
Actuated g/C Ratio	0.33	0.22		0.22	0.16		0.50	0.42		0.42	0.38	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	361	696		288	272		298	1463		342	1289	
v/s Ratio Prot	c0.14	0.03		0.03	0.04		c0.04	0.20		0.01	c0.25	
v/s Ratio Perm	c0.20			0.04			0.16			0.07		
v/c Ratio	1.02	0.12		0.32	0.23		0.40	0.47		0.18	0.66	
Uniform Delay, d1	23.2	23.4		24.3	27.3		12.2	15.7		13.2	19.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	53.1	0.1		0.2	0.4		0.3	0.2		0.1	1.2	
Delay (s)	76.3	23.5		24.5	27.7		12.5	15.9		13.3	20.4	
Level of Service	E	C		C	C		B	B		B	C	
Approach Delay (s)		56.8			26.7			15.4			20.0	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	75.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	2	69	66	11	17	130	335	45	18	347	1
Future Volume (vph)	7	2	69	66	11	17	130	335	45	18	347	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	25.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Frt		0.854			0.909			0.982				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	1545	0	1825	1730	0	1825	3513	0	1825	3614	0
Flt Permitted	0.736			0.704			0.420			0.498		
Satd. Flow (perm)	1409	1545	0	1352	1730	0	806	3513	0	956	3614	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					20			29				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.6			59.9			307.9			243.9	
Travel Time (s)		7.4			4.3			22.2			17.6	
Confl. Peds. (#/hr)	5		1	1		5	1		1	1		1
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
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	8	2	79	76	13	20	149	385	52	21	399	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	81	0	76	33	0	149	437	0	21	400	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4		8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		10.0	21.0		10.0	21.0	
Total Split (s)	20.0	20.0		20.0	20.0		12.0	28.0		12.0	28.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		20.0%	46.7%		20.0%	46.7%	
Maximum Green (s)	14.0	14.0		14.0	14.0		8.0	22.0		8.0	22.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			18.0			18.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	8.9	11.0		8.9	11.0		25.5	24.1		21.7	17.3	
Actuated g/C Ratio	0.20	0.24		0.20	0.24		0.57	0.54		0.48	0.38	
v/c Ratio	0.03	0.22		0.28	0.08		0.24	0.23		0.04	0.29	
Control Delay	16.0	16.5		19.7	9.8		5.5	6.5		4.7	11.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.0	16.5		19.7	9.8		5.5	6.5		4.7	11.5	
LOS	B	B		B	A		A	A		A	B	
Approach Delay		16.5			16.7			6.3			11.2	
Approach LOS		B			B			A			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 45	
Natural Cycle: 45	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.29	
Intersection Signal Delay: 9.7	Intersection LOS: A
Intersection Capacity Utilization 41.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Strathy Road & Walmart Driveway

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	8	81	76	33	149	437	21	400
v/c Ratio	0.03	0.22	0.28	0.08	0.24	0.23	0.04	0.29
Control Delay	16.0	16.5	19.7	9.8	5.5	6.5	4.7	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	16.5	19.7	9.8	5.5	6.5	4.7	11.5
Queue Length 50th (m)	0.6	5.4	5.5	0.8	4.1	6.1	0.6	11.5
Queue Length 95th (m)	2.9	13.3	13.7	5.3	10.5	20.6	2.5	21.2
Internal Link Dist (m)		78.6		35.9		283.9		219.9
Turn Bay Length (m)							25.0	
Base Capacity (vph)	445	558	427	638	641	2105	653	1960
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.15	0.18	0.05	0.23	0.21	0.03	0.20

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	2	69	66	11	17	130	335	45	18	347	1
Future Volume (vph)	7	2	69	66	11	17	130	335	45	18	347	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	0.91		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1820	1545		1824	1731		1825	3514		1825	3613	
Flt Permitted	0.74	1.00		0.70	1.00		0.42	1.00		0.50	1.00	
Satd. Flow (perm)	1409	1545		1352	1731		807	3514		957	3613	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	8	2	79	76	13	20	149	385	52	21	399	1
RTOR Reduction (vph)	0	0	0	0	15	0	0	15	0	0	0	0
Lane Group Flow (vph)	8	81	0	76	18	0	149	423	0	21	400	0
Confl. Peds. (#/hr)	5		1	1		5	1		1	1		1
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	8.9	8.9		8.9	8.9		27.1	22.0		18.6	17.5	
Effective Green, g (s)	8.9	10.9		8.9	10.9		27.1	24.0		18.6	19.5	
Actuated g/C Ratio	0.19	0.23		0.19	0.23		0.56	0.50		0.39	0.41	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	261	350		250	393		574	1757		390	1467	
v/s Ratio Prot		0.05			0.01		c0.03	0.12		0.00	c0.11	
v/s Ratio Perm	0.01			c0.06			0.12			0.02		
v/c Ratio	0.03	0.23		0.30	0.04		0.26	0.24		0.05	0.27	
Uniform Delay, d1	16.0	15.1		16.9	14.5		5.2	6.8		9.1	9.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.3		0.7	0.0		0.2	0.1		0.1	0.1	
Delay (s)	16.1	15.5		17.6	14.5		5.4	6.9		9.2	9.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		15.5			16.6			6.5			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	17	8	828	862	8
Future Volume (vph)	13	17	8	828	862	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.922				0.999	
Flt Protected	0.979					
Satd. Flow (prot)	1734	0	0	3545	3541	0
Flt Permitted	0.979					
Satd. Flow (perm)	1734	0	0	3545	3541	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	139.6			284.3	247.7	
Travel Time (s)	10.1			20.5	17.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	3%	3%	0%
Adj. Flow (vph)	13	18	8	854	889	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	0	0	862	897	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	17	8	828	862	8
Future Volume (Veh/h)	13	17	8	828	862	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	13	18	8	854	889	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)				284	248	
pX, platoon unblocked	0.95	0.93	0.93			
vC, conflicting volume	1336	448	897			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1045	262	743			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	97	99			
cM capacity (veh/h)	215	692	814			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	31	293	569	593	304
Volume Left	13	8	0	0	0
Volume Right	18	0	0	0	8
cSH	359	814	1700	1700	1700
Volume to Capacity	0.09	0.01	0.33	0.35	0.18
Queue Length 95th (m)	2.1	0.2	0.0	0.0	0.0
Control Delay (s)	16.0	0.4	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	16.0	0.1		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	628	18	67	625	222	41	59	35	243	62	301
Future Volume (vph)	234	628	18	67	625	222	41	59	35	243	62	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		40.0	20.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00		0.98	0.99	0.99		1.00		0.98
Frt		0.996				0.850		0.944				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3496	0	1825	3510	1617	1825	1803	0	1807	1847	1601
Flt Permitted	0.244			0.387			0.714			0.612		
Satd. Flow (perm)	459	3496	0	741	3510	1592	1361	1803	0	1161	1847	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				177		25				320
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		86.1			116.2			44.7			307.9	
Travel Time (s)		6.2			8.4			3.2			22.2	
Confl. Peds. (#/hr)	3		5	5		3	8		3	3		8
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
Heavy Vehicles (%)	2%	4%	0%	0%	4%	1%	0%	0%	0%	1%	4%	2%
Adj. Flow (vph)	249	668	19	71	665	236	44	63	37	259	66	320
Shared Lane Traffic (%)												
Lane Group Flow (vph)	249	687	0	71	665	236	44	100	0	259	66	320
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane		Yes									Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Detector Phase	5	2		1	6	8	3	8		7	4	6
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0	12.0	6.0	12.0		6.0	12.0	10.0
Minimum Split (s)	10.0	32.0		10.0	32.0	39.0	10.0	39.0		10.0	39.0	32.0
Total Split (s)	19.0	56.0		12.0	49.0	38.0	12.0	38.0		14.0	40.0	49.0
Total Split (%)	15.8%	46.7%		10.0%	40.8%	31.7%	10.0%	31.7%		11.7%	33.3%	40.8%
Maximum Green (s)	15.0	50.0		8.0	43.0	32.0	8.0	32.0		10.0	34.0	43.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	Min	Min	Min		Min	Min	None
Walk Time (s)		10.0			10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		16.0			16.0	23.0		23.0			23.0	16.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	44.7	34.1		36.6	25.7	15.2	26.1	15.2		31.3	18.4	25.7
Actuated g/C Ratio	0.56	0.43		0.46	0.32	0.19	0.33	0.19		0.39	0.23	0.32
v/c Ratio	0.49	0.46		0.15	0.59	0.53	0.09	0.28		0.47	0.16	0.45
Control Delay	12.5	18.1		9.3	25.2	14.5	18.5	25.8		22.4	28.8	4.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	12.5	18.1		9.3	25.2	14.5	18.5	25.8		22.4	28.8	4.7
LOS	B	B		A	C	B	B	C		C	C	A
Approach Delay		16.6			21.4			23.6			14.3	
Approach LOS		B			C			C			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 80.1	
Natural Cycle: 95	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 18.2	Intersection LOS: B
Intersection Capacity Utilization 62.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Plaza Entrance/Strathy Road & Elgin Street W

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	249	687	71	665	236	44	100	259	66	320
v/c Ratio	0.49	0.46	0.15	0.59	0.53	0.09	0.28	0.47	0.16	0.45
Control Delay	12.5	18.1	9.3	25.2	14.5	18.5	25.8	22.4	28.8	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	18.1	9.3	25.2	14.5	18.5	25.8	22.4	28.8	4.7
Queue Length 50th (m)	17.1	38.5	4.4	43.2	7.6	4.1	9.7	27.2	8.0	0.0
Queue Length 95th (m)	33.0	60.0	10.9	66.6	30.8	12.3	25.6	55.9	20.8	16.3
Internal Link Dist (m)		62.1		92.2			20.7		283.9	
Turn Bay Length (m)					40.0	20.0				
Base Capacity (vph)	543	2306	487	2002	787	524	791	552	843	1029
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.30	0.15	0.33	0.30	0.08	0.13	0.47	0.08	0.31

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	628	18	67	625	222	41	59	35	243	62	301
Future Volume (vph)	234	628	18	67	625	222	41	59	35	243	62	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	3496		1823	3510	1594	1818	1805		1805	1847	1570
Flt Permitted	0.24	1.00		0.39	1.00	1.00	0.71	1.00		0.61	1.00	1.00
Satd. Flow (perm)	459	3496		742	3510	1594	1367	1805		1162	1847	1570
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)	249	668	19	71	665	236	44	63	37	259	66	320
RTOR Reduction (vph)	0	2	0	0	0	144	0	20	0	0	0	215
Lane Group Flow (vph)	249	685	0	71	665	92	44	80	0	259	66	105
Confl. Peds. (#/hr)	3		5	5		3	8		3	3		8
Heavy Vehicles (%)	2%	4%	0%	0%	4%	1%	0%	0%	0%	1%	4%	2%
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Actuated Green, G (s)	41.5	32.0		30.0	24.5	13.2	20.1	13.2		26.3	16.3	24.5
Effective Green, g (s)	43.5	34.0		34.0	26.5	15.2	24.1	15.2		29.2	18.3	26.5
Actuated g/C Ratio	0.54	0.42		0.42	0.33	0.19	0.30	0.19		0.36	0.23	0.33
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	494	1472		413	1152	300	457	339		516	418	515
v/s Ratio Prot	c0.09	0.20		0.02	c0.19		0.01	0.04		c0.07	0.04	
v/s Ratio Perm	0.18			0.06		0.06	0.02			0.11		0.07
v/c Ratio	0.50	0.47		0.17	0.58	0.31	0.10	0.24		0.50	0.16	0.20
Uniform Delay, d1	11.1	16.8		14.1	22.5	28.2	20.3	27.8		19.2	25.0	19.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	0.2		0.2	0.7	0.6	0.1	0.4		0.8	0.2	0.2
Delay (s)	11.9	17.0		14.3	23.2	28.8	20.4	28.2		20.0	25.2	19.7
Level of Service	B	B		B	C	C	C	C		B	C	B
Approach Delay (s)		15.7			23.9			25.8			20.4	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	954	11	55	889	2	5	0	60	22	1	16
Future Volume (vph)	1	954	11	55	889	2	5	0	60	22	1	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		30.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	0.95	0.95	1.00	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850					0.875			0.944	
Flt Protected					0.997			0.996			0.973	
Satd. Flow (prot)	0	3614	1484	0	5178	0	0	1572	0	0	1765	0
Flt Permitted					0.997			0.996			0.973	
Satd. Flow (perm)	0	3614	1484	0	5178	0	0	1572	0	0	1765	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		116.2			158.6			66.6			220.5	
Travel Time (s)		8.4			11.4			4.8			15.9	
Confl. Peds. (#/hr)	3		3	3		3	1		1	1		1
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
Heavy Vehicles (%)	0%	1%	10%	0%	1%	17%	0%	0%	7%	0%	0%	0%
Adj. Flow (vph)	1	994	11	57	926	2	5	0	63	23	1	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	995	11	0	985	0	0	68	0	0	41	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 63.8%	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)	1	954	11	55	889	2	5	0	60	22	1	16
Future Volume (Veh/h)	1	954	11	55	889	2	5	0	60	22	1	16
Sign Control		Free			Free			Stop			Stop	
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)	1	994	11	57	926	2	5	0	63	23	1	17
Pedestrians		1			1			3			3	
Lane Width (m)		3.7			3.7			3.7			3.7	
Walking Speed (m/s)		1.0			1.0			1.0			1.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		116			312							
pX, platoon unblocked				0.87			0.87	0.87	0.87	0.87	0.87	
vC, conflicting volume	931			1008			1440	2044	501	1607	2054	314
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	931			699			1198	1896	113	1391	1907	314
tC, single (s)	4.1			4.1			7.5	6.5	7.0	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.4	3.5	4.0	3.3
p0 queue free %	100			93			96	100	92	70	98	98
cM capacity (veh/h)	741			783			112	56	778	77	55	685

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	332	663	11	288	463	234	68	41
Volume Left	1	0	0	57	0	0	5	23
Volume Right	0	0	11	0	0	2	63	17
cSH	741	1700	1700	783	1700	1700	541	120
Volume to Capacity	0.00	0.39	0.01	0.07	0.27	0.14	0.13	0.34
Queue Length 95th (m)	0.0	0.0	0.0	1.8	0.0	0.0	3.3	10.4
Control Delay (s)	0.0	0.0	0.0	2.6	0.0	0.0	12.6	49.8
Lane LOS	A			A			B	E
Approach Delay (s)	0.0			0.8			12.6	49.8
Approach LOS							B	E

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	0	22	26	1	4	1	11	0	1	1
Future Volume (vph)	0	1	0	22	26	1	4	1	11	0	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.998			0.908			0.932	
Flt Protected					0.978			0.987				
Satd. Flow (prot)	0	1921	0	0	1826	0	0	1612	0	0	1790	0
Flt Permitted					0.978			0.987				
Satd. Flow (perm)	0	1921	0	0	1826	0	0	1612	0	0	1790	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		220.5			50.5			113.9			38.1	
Travel Time (s)		15.9			3.6			8.2			2.7	
Confl. Peds. (#/hr)			4	4								
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	0%	0%	0%	0%	5%	0%	25%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1	0	31	37	1	6	1	15	0	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	69	0	0	22	0	0	2	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
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												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	1	0	22	26	1	4	1	11	0	1	1
Future Volume (vph)	0	1	0	22	26	1	4	1	11	0	1	1
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	0	1	0	31	37	1	6	1	15	0	1	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	1	69	22	2
Volume Left (vph)	0	31	6	0
Volume Right (vph)	0	1	15	1
Hadj (s)	0.00	0.13	-0.24	-0.30
Departure Headway (s)	4.0	4.1	3.8	3.8
Degree Utilization, x	0.00	0.08	0.02	0.00
Capacity (veh/h)	882	873	915	931
Control Delay (s)	7.0	7.4	6.9	6.8
Approach Delay (s)	7.0	7.4	6.9	6.8
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.3		
Level of Service	A		
Intersection Capacity Utilization	20.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1057	12	39	890	15	7	0	56	2	2	67
Future Volume (vph)	1	1057	12	39	890	15	7	0	56	2	2	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	40.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.998			0.998			0.880			0.872	
Flt Protected	0.950			0.950				0.995			0.999	
Satd. Flow (prot)	1825	3607	0	1706	3607	0	0	1624	0	0	1466	0
Flt Permitted	0.950			0.950				0.995			0.999	
Satd. Flow (perm)	1825	3607	0	1706	3607	0	0	1624	0	0	1466	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		158.6			152.8			56.6			113.9	
Travel Time (s)		11.4			11.0			4.1			8.2	
Confl. Peds. (#/hr)	3					3						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	1%	0%	7%	1%	0%	0%	0%	4%	0%	0%	15%
Adj. Flow (vph)	1	1090	12	40	918	15	7	0	58	2	2	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	1102	0	40	933	0	0	65	0	0	73	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 46.3%	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)	1	1057	12	39	890	15	7	0	56	2	2	67
Future Volume (Veh/h)	1	1057	12	39	890	15	7	0	56	2	2	67
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	1	1090	12	40	918	15	7	0	58	2	2	69
Pedestrians											3	
Lane Width (m)											3.7	
Walking Speed (m/s)											1.0	
Percent Blockage											0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		275			153							
pX, platoon unblocked	0.83			0.89			0.89	0.89	0.89	0.89	0.89	0.83
vC, conflicting volume	936			1102			1707	2114	551	1614	2112	470
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	512			856			961	1419	234	855	1418	0
tC, single (s)	4.1			4.2			7.5	6.5	7.0	7.5	6.5	7.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			94			96	100	91	99	98	92
cM capacity (veh/h)	880			663			164	114	675	196	115	863

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	1	727	375	40	612	321	65	73
Volume Left	1	0	0	40	0	0	7	2
Volume Right	0	0	12	0	0	15	58	69
cSH	880	1700	1700	663	1700	1700	505	679
Volume to Capacity	0.00	0.43	0.22	0.06	0.36	0.19	0.13	0.11
Queue Length 95th (m)	0.0	0.0	0.0	1.5	0.0	0.0	3.3	2.7
Control Delay (s)	9.1	0.0	0.0	10.8	0.0	0.0	13.2	10.9
Lane LOS	A			B			B	B
Approach Delay (s)	0.0			0.4			13.2	10.9
Approach LOS							B	B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		

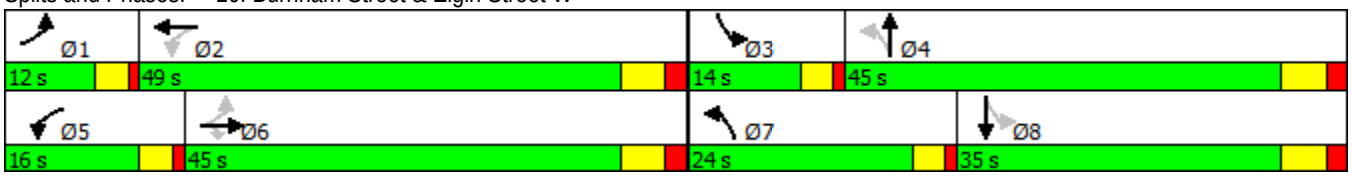
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	553	344	116	510	183	279	396	126	296	347	163
Future Volume (vph)	224	553	344	116	510	183	279	396	126	296	347	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		60.0	60.0		0.0	0.0		0.0	55.0		0.0
Storage Lanes	1		1	1		0	2		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00		0.98	1.00	0.99		0.99	1.00		1.00	0.99	
Frt			0.850		0.960			0.964			0.952	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3579	1570	1755	3422	0	3309	3418	0	1807	3355	0
Flt Permitted	0.181			0.244			0.317			0.345		
Satd. Flow (perm)	340	3579	1539	449	3422	0	1094	3418	0	655	3355	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			362		49			39			63	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		152.8			145.4			322.3			284.3	
Travel Time (s)		11.0			10.5			23.2			20.5	
Confl. Peds. (#/hr)	12		9	9		12	13		4	4		13
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
Heavy Vehicles (%)	2%	2%	4%	4%	1%	4%	7%	3%	1%	1%	2%	4%
Adj. Flow (vph)	236	582	362	122	537	193	294	417	133	312	365	172
Shared Lane Traffic (%)												
Lane Group Flow (vph)	236	582	362	122	730	0	294	550	0	312	537	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Detector Phase	1	6	6	5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0	16.0	6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0		10.0	34.0		10.0	34.0	
Total Split (s)	12.0	45.0	45.0	16.0	49.0		24.0	45.0		14.0	35.0	
Total Split (%)	10.0%	37.5%	37.5%	13.3%	40.8%		20.0%	37.5%		11.7%	29.2%	
Maximum Green (s)	8.0	39.0	39.0	12.0	43.0		20.0	39.0		10.0	29.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		32.0	32.0		32.0			21.0			21.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	34.8	26.8	26.8	37.6	28.2		43.9	32.6		41.4	31.3	
Actuated g/C Ratio	0.37	0.28	0.28	0.40	0.30		0.46	0.34		0.44	0.33	
v/c Ratio	0.96	0.58	0.52	0.40	0.70		0.38	0.46		0.77	0.47	
Control Delay	71.5	32.1	5.9	20.9	31.3		16.1	24.8		33.4	25.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	71.5	32.1	5.9	20.9	31.3		16.1	24.8		33.4	25.2	
LOS	E	C	A	C	C		B	C		C	C	
Approach Delay		31.9			29.8			21.7			28.2	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 95.1
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 28.3 — Intersection LOS: C
Intersection Capacity Utilization 82.6% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 10: Burnham Street & Elgin Street W



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	236	582	362	122	730	294	550	312	537
v/c Ratio	0.96	0.58	0.52	0.40	0.70	0.38	0.46	0.77	0.47
Control Delay	71.5	32.1	5.9	20.9	31.3	16.1	24.8	33.4	25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.5	32.1	5.9	20.9	31.3	16.1	24.8	33.4	25.2
Queue Length 50th (m)	27.8	47.8	0.0	13.4	57.6	14.4	37.0	32.8	35.0
Queue Length 95th (m)	#74.5	69.2	19.8	25.2	80.0	27.0	61.1	#85.0	61.5
Internal Link Dist (m)		128.8			121.4		298.3		260.3
Turn Bay Length (m)	45.0		60.0	60.0				55.0	
Base Capacity (vph)	247	1556	874	356	1659	1007	1508	407	1145
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	0.96	0.37	0.41	0.34	0.44	0.29	0.36	0.77	0.47

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	553	344	116	510	183	279	396	126	296	347	163
Future Volume (vph)	224	553	344	116	510	183	279	396	126	296	347	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.96		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1789	3579	1541	1754	3425		3301	3418		1806	3358	
Flt Permitted	0.18	1.00	1.00	0.24	1.00		0.32	1.00		0.35	1.00	
Satd. Flow (perm)	342	3579	1541	450	3425		1101	3418		656	3358	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	236	582	362	122	537	193	294	417	133	312	365	172
RTOR Reduction (vph)	0	0	260	0	34	0	0	26	0	0	42	0
Lane Group Flow (vph)	236	582	102	122	696	0	294	524	0	312	495	0
Confl. Peds. (#/hr)	12		9	9		12	13		4	4		13
Heavy Vehicles (%)	2%	2%	4%	4%	1%	4%	7%	3%	1%	1%	2%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Actuated Green, G (s)	32.8	24.7	24.7	35.6	26.1		42.0	30.6		39.4	29.3	
Effective Green, g (s)	32.8	26.7	26.7	35.6	28.1		42.0	32.6		39.4	31.3	
Actuated g/C Ratio	0.35	0.28	0.28	0.38	0.30		0.44	0.34		0.42	0.33	
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0		4.0	6.0	
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)	241	1006	433	299	1014		751	1174		394	1107	
v/s Ratio Prot	c0.08	0.16		0.04	0.20		0.05	0.15		c0.08	0.15	
v/s Ratio Perm	c0.25		0.07	0.11			0.13			c0.24		
v/c Ratio	0.98	0.58	0.24	0.41	0.69		0.39	0.45		0.79	0.45	
Uniform Delay, d1	26.6	29.3	26.2	20.7	29.5		16.7	24.2		20.9	25.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	51.5	0.8	0.3	0.9	1.9		0.3	0.3		10.4	1.3	
Delay (s)	78.1	30.1	26.5	21.6	31.4		17.1	24.4		31.3	26.3	
Level of Service	E	C	C	C	C		B	C		C	C	
Approach Delay (s)		38.6			30.0			21.9			28.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	94.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Appendix E

2026 Total Traffic Operations Reports – Scenario A

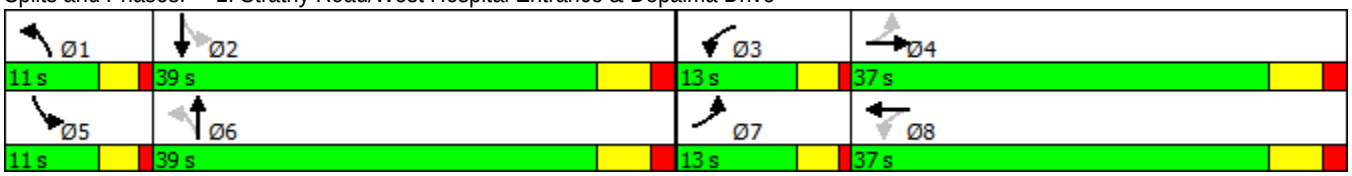
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	107	41	161	141	34	54	6	74	7	7	0
Future Volume (vph)	1	107	41	161	141	34	54	6	74	7	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	50.0		0.0	45.0		0.0	15.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		1.00	1.00		1.00	0.99		1.00		
Frt		0.958			0.971			0.862				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3363	0	1789	3421	0	1825	2920	0	1217	1642	0
Flt Permitted	0.629			0.537			0.659			0.696		
Satd. Flow (perm)	1201	3363	0	1011	3421	0	1260	2920	0	891	1642	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			31			82				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		81.0			199.0			243.9			67.7	
Travel Time (s)		5.8			14.3			17.6			4.9	
Confl. Peds. (#/hr)	9		1	1		9	5		1	1		5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	5%	0%	2%	3%	4%	0%	0%	7%	50%	17%	0%
Adj. Flow (vph)	1	119	46	179	157	38	60	7	82	8	8	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	165	0	179	195	0	60	89	0	8	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0		10.0	22.0		10.0	22.0		10.0	22.0	
Total Split (s)	13.0	37.0		13.0	37.0		11.0	39.0		11.0	39.0	
Total Split (%)	13.0%	37.0%		13.0%	37.0%		11.0%	39.0%		11.0%	39.0%	
Maximum Green (s)	9.0	31.0		9.0	31.0		7.0	33.0		7.0	33.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		25.0			25.0			23.0			23.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	24.3	18.2		29.8	28.2		23.4	22.2		21.5	18.2	
Actuated g/C Ratio	0.39	0.29		0.48	0.45		0.38	0.36		0.35	0.29	
v/c Ratio	0.00	0.16		0.31	0.12		0.11	0.08		0.02	0.02	
Control Delay	10.0	13.9		12.0	10.6		12.4	5.4		11.7	18.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	10.0	13.9		12.0	10.6		12.4	5.4		11.7	18.6	
LOS	A	B		B	B		B	A		B	B	
Approach Delay		13.9			11.3			8.2			15.1	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 62.1
Natural Cycle: 65
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.31
Intersection Signal Delay: 11.3 — Intersection LOS: B
Intersection Capacity Utilization 47.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Strathy Road/West Hospital Entrance & Depalma Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	1	165	179	195	60	89	8	8
v/c Ratio	0.00	0.16	0.31	0.12	0.11	0.08	0.02	0.02
Control Delay	10.0	13.9	12.0	10.6	12.4	5.4	11.7	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.0	13.9	12.0	10.6	12.4	5.4	11.7	18.6
Queue Length 50th (m)	0.1	5.8	12.6	5.7	4.3	0.3	0.6	0.7
Queue Length 95th (m)	0.8	12.6	24.1	14.6	10.4	4.9	2.7	3.6
Internal Link Dist (m)		57.0		175.0		219.9		43.7
Turn Bay Length (m)	20.0		50.0		45.0		15.0	
Base Capacity (vph)	619	1828	599	1853	539	1699	354	936
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.09	0.30	0.11	0.11	0.05	0.02	0.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	107	41	161	141	34	54	6	74	7	7	0
Future Volume (vph)	1	107	41	161	141	34	54	6	74	7	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.86		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1820	3364		1789	3422		1821	2921		1216	1642	
Flt Permitted	0.63	1.00		0.54	1.00		0.66	1.00		0.70	1.00	
Satd. Flow (perm)	1205	3364		1012	3422		1263	2921		891	1642	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	119	46	179	157	38	60	7	82	8	8	0
RTOR Reduction (vph)	0	32	0	0	18	0	0	56	0	0	0	0
Lane Group Flow (vph)	1	133	0	179	177	0	60	33	0	8	8	0
Confl. Peds. (#/hr)	9		1	1		9	5		1	1		5
Heavy Vehicles (%)	0%	5%	0%	2%	3%	4%	0%	0%	7%	50%	17%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	20.6	19.5		31.3	26.2		23.7	20.1		18.7	17.6	
Effective Green, g (s)	20.6	21.5		31.3	28.2		23.7	22.1		18.7	19.6	
Actuated g/C Ratio	0.30	0.31		0.46	0.41		0.35	0.32		0.27	0.29	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	372	1055		550	1408		466	942		248	469	
v/s Ratio Prot	0.00	0.04		c0.04	0.05		c0.01	0.01		0.00	0.00	
v/s Ratio Perm	0.00			c0.11			c0.04			0.01		
v/c Ratio	0.00	0.13		0.33	0.13		0.13	0.04		0.03	0.02	
Uniform Delay, d1	16.8	16.8		11.4	12.5		15.2	15.9		18.2	17.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.0		0.0	0.0		0.0	0.0	
Delay (s)	16.8	16.8		11.5	12.5		15.2	15.9		18.2	17.6	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		16.8			12.0			15.6			17.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	68.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

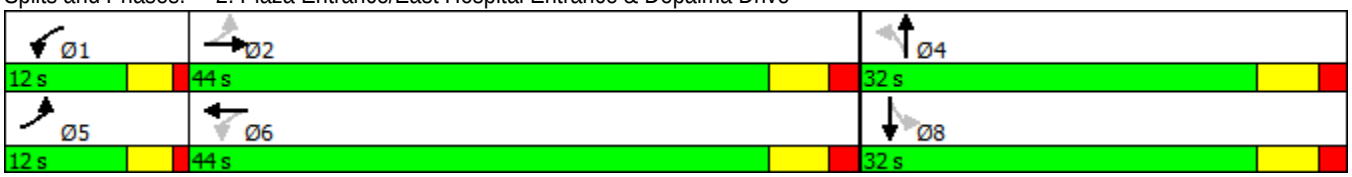
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	169	7	50	323	78	2	7	21	46	2	22
Future Volume (vph)	20	169	7	50	323	78	2	7	21	46	2	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	65.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.971			0.886			0.861	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1534	3399	0	1825	3434	0	1825	1628	0	1738	1567	0
Flt Permitted	0.479			0.549			0.739			0.736		
Satd. Flow (perm)	773	3399	0	1055	3434	0	1420	1628	0	1347	1567	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			44			25			26	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		199.0			195.0			41.1			35.9	
Travel Time (s)		14.3			14.0			3.0			2.6	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	19%	7%	0%	0%	4%	0%	0%	0%	6%	5%	0%	6%
Adj. Flow (vph)	24	201	8	60	385	93	2	8	25	55	2	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	209	0	60	478	0	2	33	0	55	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		22.0	22.0		22.0	22.0	
Total Split (s)	12.0	44.0		12.0	44.0		32.0	32.0		32.0	32.0	
Total Split (%)	13.6%	50.0%		13.6%	50.0%		36.4%	36.4%		36.4%	36.4%	
Maximum Green (s)	8.0	38.0		8.0	38.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		15.0			15.0		25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	21.5	18.2		23.1	22.0		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.43	0.36		0.46	0.44		0.36	0.36		0.36	0.36	
v/c Ratio	0.06	0.17		0.10	0.31		0.00	0.05		0.11	0.05	
Control Delay	6.9	12.2		7.1	9.5		12.0	7.4		13.2	6.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.9	12.2		7.1	9.5		12.0	7.4		13.2	6.5	
LOS	A	B		A	A		B	A		B	A	
Approach Delay		11.7			9.2			7.6			10.9	
Approach LOS		B			A			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 88
Actuated Cycle Length: 50.1
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.31
Intersection Signal Delay: 10.0 — Intersection LOS: A
Intersection Capacity Utilization 41.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Plaza Entrance/East Hospital Entrance & Depalma Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	24	209	60	478	2	33	55	28
v/c Ratio	0.06	0.17	0.10	0.31	0.00	0.05	0.11	0.05
Control Delay	6.9	12.2	7.1	9.5	12.0	7.4	13.2	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	12.2	7.1	9.5	12.0	7.4	13.2	6.5
Queue Length 50th (m)	1.0	7.2	2.6	11.0	0.2	0.5	3.7	0.2
Queue Length 95th (m)	3.4	12.4	6.3	24.4	1.2	4.5	9.2	3.8
Internal Link Dist (m)		175.0		171.0		17.1		11.9
Turn Bay Length (m)	65.0		50.0					
Base Capacity (vph)	472	2867	618	2903	802	930	761	896
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.07	0.10	0.16	0.00	0.04	0.07	0.03

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	169	7	50	323	78	2	7	21	46	2	22
Future Volume (vph)	20	169	7	50	323	78	2	7	21	46	2	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.89		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1534	3400		1825	3433		1825	1629		1738	1566	
Flt Permitted	0.48	1.00		0.55	1.00		0.74	1.00		0.74	1.00	
Satd. Flow (perm)	773	3400		1055	3433		1420	1629		1346	1566	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	24	201	8	60	385	93	2	8	25	55	2	26
RTOR Reduction (vph)	0	4	0	0	26	0	0	16	0	0	17	0
Lane Group Flow (vph)	24	205	0	60	452	0	2	17	0	55	11	0
Heavy Vehicles (%)	19%	7%	0%	0%	4%	0%	0%	0%	6%	5%	0%	6%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	18.7	17.6		23.3	19.9		16.2	16.2		16.2	16.2	
Effective Green, g (s)	18.7	19.6		23.3	21.9		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.35	0.37		0.44	0.41		0.34	0.34		0.34	0.34	
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	287	1252		511	1413		485	557		460	535	
v/s Ratio Prot	0.00	0.06		c0.01	c0.13			0.01			0.01	
v/s Ratio Perm	0.03			0.04			0.00			c0.04		
v/c Ratio	0.08	0.16		0.12	0.32		0.00	0.03		0.12	0.02	
Uniform Delay, d1	11.4	11.3		8.7	10.6		11.5	11.6		12.0	11.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.0	0.1		0.0	0.0		0.1	0.0	
Delay (s)	11.4	11.4		8.8	10.7		11.5	11.7		12.1	11.6	
Level of Service	B	B		A	B		B	B		B	B	
Approach Delay (s)		11.4			10.5			11.6			11.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	53.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	22	48	57	21	99	104	367	104	77	684	310
Future Volume (vph)	106	22	48	57	21	99	104	367	104	77	684	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	40.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99							
Frt		0.897			0.876			0.967			0.953	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1772	3076	0	1674	1650	0	1807	3408	0	1789	3333	0
Flt Permitted	0.551			0.704			0.132			0.433		
Satd. Flow (perm)	1026	3076	0	1240	1650	0	251	3408	0	816	3333	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		53			110			44			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		195.0			157.6			247.7			73.6	
Travel Time (s)		14.0			11.3			17.8			5.3	
Confl. Peds. (#/hr)	2		1	1		2						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	0%	8%	9%	0%	1%	1%	4%	2%	2%	5%	3%
Adj. Flow (vph)	118	24	53	63	23	110	116	408	116	86	760	344
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	77	0	63	133	0	116	524	0	86	1104	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	8.0		6.0	8.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	14.0		10.0	14.0		10.0	42.0		10.0	42.0	
Total Split (s)	13.0	30.0		13.0	30.0		13.0	44.0		13.0	44.0	
Total Split (%)	13.0%	30.0%		13.0%	30.0%		13.0%	44.0%		13.0%	44.0%	
Maximum Green (s)	9.0	24.0		9.0	24.0		9.0	38.0		9.0	38.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Dont Walk (s)		24.0			24.0			25.0			25.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	18.6	12.4		16.7	11.5		41.0	35.0		38.6	33.8	
Actuated g/C Ratio	0.26	0.17		0.23	0.16		0.57	0.49		0.54	0.47	
v/c Ratio	0.34	0.13		0.19	0.37		0.37	0.31		0.16	0.68	
Control Delay	25.0	15.0		23.2	13.9		10.3	12.0		7.7	17.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.0	15.0		23.2	13.9		10.3	12.0		7.7	17.8	
LOS	C	B		C	B		B	B		A	B	
Approach Delay		21.0			16.9			11.7			17.1	
Approach LOS		C			B			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 71.9	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Burnham Street & Depalma Drive/White Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	118	77	63	133	116	524	86	1104
v/c Ratio	0.34	0.13	0.19	0.37	0.37	0.31	0.16	0.68
Control Delay	25.0	15.0	23.2	13.9	10.3	12.0	7.7	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.0	15.0	23.2	13.9	10.3	12.0	7.7	17.8
Queue Length 50th (m)	12.8	1.5	6.7	3.0	6.5	21.6	4.8	61.8
Queue Length 95th (m)	27.7	7.8	16.7	18.6	14.1	36.0	11.1	92.2
Internal Link Dist (m)		171.0		133.6		223.7		49.6
Turn Bay Length (m)	30.0		30.0		40.0		30.0	
Base Capacity (vph)	370	1229	369	709	354	2086	589	2030
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.06	0.17	0.19	0.33	0.25	0.15	0.54

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	22	48	57	21	99	104	367	104	77	684	310
Future Volume (vph)	106	22	48	57	21	99	104	367	104	77	684	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.88		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1771	3075		1674	1651		1807	3408		1789	3334	
Flt Permitted	0.55	1.00		0.70	1.00		0.13	1.00		0.43	1.00	
Satd. Flow (perm)	1027	3075		1241	1651		252	3408		815	3334	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	118	24	53	63	23	110	116	408	116	86	760	344
RTOR Reduction (vph)	0	44	0	0	93	0	0	23	0	0	47	0
Lane Group Flow (vph)	118	33	0	63	40	0	116	501	0	86	1057	0
Confl. Peds. (#/hr)	2		1	1		2						
Heavy Vehicles (%)	3%	0%	8%	9%	0%	1%	1%	4%	2%	2%	5%	3%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	16.4	10.2		14.6	9.3		38.9	32.9		36.5	31.7	
Effective Green, g (s)	16.4	12.2		14.6	11.3		38.9	34.9		36.5	33.7	
Actuated g/C Ratio	0.22	0.17		0.20	0.15		0.53	0.48		0.50	0.46	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	293	512		278	254		261	1624		470	1534	
v/s Ratio Prot	c0.03	0.01		0.02	0.02		c0.04	0.15		0.01	c0.32	
v/s Ratio Perm	c0.06			0.03			0.20			0.08		
v/c Ratio	0.40	0.06		0.23	0.16		0.44	0.31		0.18	0.69	
Uniform Delay, d1	23.6	25.7		24.4	26.8		10.9	11.7		9.7	15.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.1		0.2	0.3		0.4	0.1		0.1	1.3	
Delay (s)	24.0	25.7		24.5	27.1		11.3	11.9		9.8	16.9	
Level of Service	C	C		C	C		B	B		A	B	
Approach Delay (s)		24.7			26.3			11.8			16.4	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	73.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

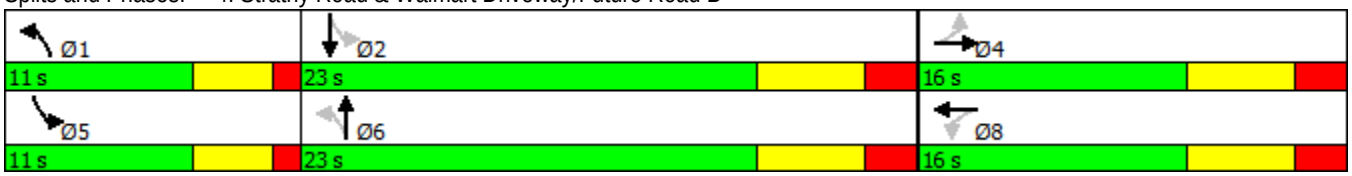
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	29	21	4	4	105	202	36	7	240	2
Future Volume (vph)	5	1	29	21	4	4	105	202	36	7	240	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	25.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00				0.99			1.00		1.00		
Frt		0.854			0.925			0.977			0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1460	1408	0	1825	1766	0	1789	3431	0	1825	3575	0
Flt Permitted	0.751			0.733			0.440			0.573		
Satd. Flow (perm)	1154	1408	0	1408	1766	0	829	3431	0	1100	3575	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					5			44			1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.6			86.8			309.2			243.9	
Travel Time (s)		7.4			6.2			22.3			17.6	
Confl. Peds. (#/hr)	1					1			1	1		
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	25%	0%	17%	0%	0%	0%	2%	3%	7%	0%	2%	0%
Adj. Flow (vph)	6	1	36	26	5	5	130	249	44	9	296	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	37	0	26	10	0	130	293	0	9	298	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4		8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		10.0	21.0		10.0	21.0	
Total Split (s)	16.0	16.0		16.0	16.0		11.0	23.0		11.0	23.0	
Total Split (%)	32.0%	32.0%		32.0%	32.0%		22.0%	46.0%		22.0%	46.0%	
Maximum Green (s)	10.0	10.0		10.0	10.0		7.0	17.0		7.0	17.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			18.0			18.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	13.6	15.0		13.6	15.0		21.7	25.5		18.6	19.7	
Actuated g/C Ratio	0.34	0.38		0.34	0.38		0.55	0.64		0.47	0.50	
v/c Ratio	0.02	0.07		0.05	0.01		0.20	0.13		0.01	0.17	
Control Delay	16.0	15.0		16.5	11.6		4.8	5.1		4.0	9.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.0	15.0		16.5	11.6		4.8	5.1		4.0	9.8	
LOS	B	B		B	B		A	A		A	A	
Approach Delay		15.2			15.1			5.0			9.7	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 39.7
Natural Cycle: 45
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.20
Intersection Signal Delay: 7.8 — Intersection LOS: A
Intersection Capacity Utilization 36.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Strathy Road & Walmart Driveway/Future Road B



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	6	37	26	10	130	293	9	298
v/c Ratio	0.02	0.07	0.05	0.01	0.20	0.13	0.01	0.17
Control Delay	16.0	15.0	16.5	11.6	4.8	5.1	4.0	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	15.0	16.5	11.6	4.8	5.1	4.0	9.8
Queue Length 50th (m)	0.4	2.4	1.8	0.3	3.6	3.5	0.3	8.2
Queue Length 95th (m)	2.3	6.9	5.8	2.6	7.4	11.1	1.2	13.2
Internal Link Dist (m)		78.6		62.8		285.2		219.9
Turn Bay Length (m)			30.0				25.0	
Base Capacity (vph)	355	520	434	656	675	2229	719	1898
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.07	0.06	0.02	0.19	0.13	0.01	0.16

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	29	21	4	4	105	202	36	7	240	2
Future Volume (vph)	5	1	29	21	4	4	105	202	36	7	240	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	0.93		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1459	1408		1825	1766		1789	3433		1824	3575	
Flt Permitted	0.75	1.00		0.73	1.00		0.44	1.00		0.57	1.00	
Satd. Flow (perm)	1154	1408		1408	1766		828	3433		1100	3575	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	6	1	36	26	5	5	130	249	44	9	296	2
RTOR Reduction (vph)	0	0	0	0	4	0	0	26	0	0	1	0
Lane Group Flow (vph)	6	37	0	26	6	0	130	267	0	9	297	0
Confl. Peds. (#/hr)	1					1			1	1		
Heavy Vehicles (%)	25%	0%	17%	0%	0%	0%	2%	3%	7%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	10.4	10.4		10.4	10.4		20.9	16.2		13.5	12.5	
Effective Green, g (s)	10.4	12.4		10.4	12.4		20.9	18.2		13.5	14.5	
Actuated g/C Ratio	0.24	0.28		0.24	0.28		0.48	0.42		0.31	0.33	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	275	400		335	502		500	1433		357	1188	
v/s Ratio Prot		c0.03			0.00		c0.03	0.08		0.00	0.08	
v/s Ratio Perm	0.01			0.02			c0.10			0.01		
v/c Ratio	0.02	0.09		0.08	0.01		0.26	0.19		0.03	0.25	
Uniform Delay, d1	12.7	11.5		12.9	11.2		6.6	8.0		10.4	10.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.0		0.3	0.1		0.0	0.1	
Delay (s)	12.7	11.6		13.0	11.2		6.8	8.1		10.5	10.7	
Level of Service	B	B		B	B		A	A		B	B	
Approach Delay (s)		11.7			12.5			7.7			10.7	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	43.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	19	58	0	3	8
Future Volume (vph)	0	19	58	0	3	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865				0.899	
Flt Protected				0.950	0.988	
Satd. Flow (prot)	1629	0	0	1789	1673	0
Flt Permitted				0.950	0.988	
Satd. Flow (perm)	1629	0	0	1789	1673	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	86.8			170.5	197.9	
Travel Time (s)	6.2			12.3	14.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	21	63	0	3	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	63	12	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	19	58	0	3	8
Future Volume (Veh/h)	0	19	58	0	3	8
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)	0	21	63	0	3	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)	87					
pX, platoon unblocked						
vC, conflicting volume			21		136	10
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			21		136	10
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		100	99
cM capacity (veh/h)			1595		823	1071

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	21	63	12
Volume Left	0	63	3
Volume Right	21	0	9
cSH	1700	1595	996
Volume to Capacity	0.01	0.04	0.01
Queue Length 95th (m)	0.0	0.9	0.3
Control Delay (s)	0.0	7.4	8.7
Lane LOS		A	A
Approach Delay (s)	0.0	7.4	8.7
Approach LOS			A

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	19.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	8	0	0	58	0	6
Future Volume (vph)	8	0	0	58	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected						
Satd. Flow (prot)	1883	0	0	1883	1629	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1629	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	170.5			126.9	227.3	
Travel Time (s)	12.3			9.1	16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	0	0	63	0	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	9	0	0	63	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Yield			Yield	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Right Turn Channelized						
Traffic Volume (veh/h)	8	0	0	58	0	6
Future Volume (veh/h)	8	0	0	58	0	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	0	0	63	0	7
Approach Volume (veh/h)	9			63	7	
Crossing Volume (veh/h)	0			0	9	
High Capacity (veh/h)	1385			1385	1375	
High v/c (veh/h)	0.01			0.05	0.01	
Low Capacity (veh/h)	1161			1161	1152	
Low v/c (veh/h)	0.01			0.05	0.01	

Intersection Summary			
Maximum v/c High	0.05		
Maximum v/c Low	0.05		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	11	35	597	778	23
Future Volume (vph)	4	11	35	597	778	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	15.0	0.0	0.0			0.0
Storage Lanes	1	1	0			0
Taper Length (m)	30.0		30.0			
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt		0.850			0.996	
Flt Protected	0.950			0.997		
Satd. Flow (prot)	1789	1601	0	3568	3564	0
Flt Permitted	0.950			0.997		
Satd. Flow (perm)	1789	1601	0	3568	3564	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	126.9			284.3	247.7	
Travel Time (s)	9.1			20.5	17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	12	38	649	846	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	12	0	687	871	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	11	35	597	778	23
Future Volume (Veh/h)	4	11	35	597	778	23
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)	4	12	38	649	846	25
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				284	248	
pX, platoon unblocked	0.87	0.87	0.87			
vC, conflicting volume	1259	436	871			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	991	41	543			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	96			
cM capacity (veh/h)	202	885	885			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	4	12	254	433	564	307
Volume Left	4	0	38	0	0	0
Volume Right	0	12	0	0	0	25
cSH	202	885	885	1700	1700	1700
Volume to Capacity	0.02	0.01	0.04	0.25	0.33	0.18
Queue Length 95th (m)	0.5	0.3	1.0	0.0	0.0	0.0
Control Delay (s)	23.2	9.1	1.8	0.0	0.0	0.0
Lane LOS	C	A	A			
Approach Delay (s)	12.6		0.7		0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	1	0
Future Volume (vph)	0	0	0	0	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	124.0			57.0	227.3	
Travel Time (s)	8.9			4.1	16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	1	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	1	0
Future Volume (Veh/h)	0	0	0	0	1	0
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	0	0	0	1	0
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	1	1	1			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1	1	1			
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	100	100			
cM capacity (veh/h)	1022	1084	1622			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	0	1
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		

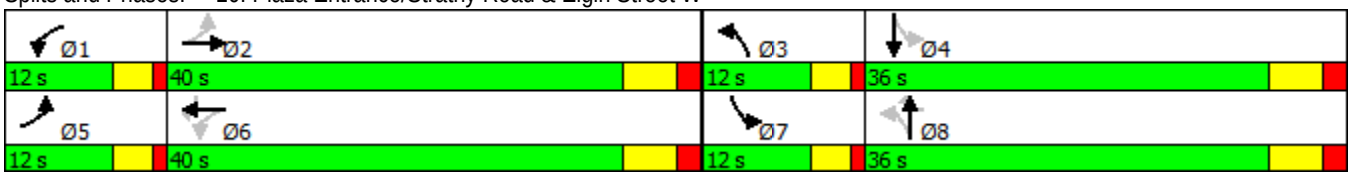
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	193	497	9	16	461	182	18	27	6	104	38	164
Future Volume (vph)	193	497	9	16	461	182	18	27	6	104	38	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		40.0	20.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00		0.99	1.00	1.00		1.00		0.98
Frt		0.997				0.850		0.974				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1807	3500	0	1825	3444	1601	1615	1867	0	1755	1921	1601
Flt Permitted	0.359			0.454			0.731			0.677		
Satd. Flow (perm)	682	3500	0	870	3444	1580	1238	1867	0	1249	1921	1574
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				192		6				173
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		86.1			116.2			44.7			309.2	
Travel Time (s)		6.2			8.4			3.2			22.3	
Confl. Peds. (#/hr)	1		3	3		1	4		1	1		4
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
Heavy Vehicles (%)	1%	4%	0%	0%	6%	2%	13%	0%	0%	4%	0%	2%
Adj. Flow (vph)	203	523	9	17	485	192	19	28	6	109	40	173
Shared Lane Traffic (%)												
Lane Group Flow (vph)	203	532	0	17	485	192	19	34	0	109	40	173
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane		Yes									Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Detector Phase	5	2		1	6	8	3	8		7	4	6
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0	12.0	6.0	12.0		6.0	12.0	10.0
Minimum Split (s)	10.0	32.0		10.0	32.0	39.0	10.0	39.0		10.0	39.0	32.0
Total Split (s)	12.0	40.0		12.0	40.0	36.0	12.0	36.0		12.0	36.0	40.0
Total Split (%)	12.0%	40.0%		12.0%	40.0%	36.0%	12.0%	36.0%		12.0%	36.0%	40.0%
Maximum Green (s)	8.0	34.0		8.0	34.0	30.0	8.0	30.0		8.0	30.0	34.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	Min	Min	Min		Min	Min	None
Walk Time (s)		10.0			10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		16.0			16.0	23.0		23.0			23.0	16.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	31.3	27.5		27.5	17.4	14.1	24.3	14.1		26.7	15.2	17.4
Actuated g/C Ratio	0.50	0.44		0.44	0.28	0.22	0.39	0.22		0.42	0.24	0.28
v/c Ratio	0.39	0.35		0.03	0.51	0.38	0.04	0.08		0.18	0.09	0.31
Control Delay	11.2	13.2		8.1	21.1	6.7	11.9	19.2		12.7	20.7	4.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	11.2	13.2		8.1	21.1	6.7	11.9	19.2		12.7	20.7	4.8
LOS	B	B		A	C	A	B	B		B	C	A
Approach Delay		12.7			16.8			16.6			9.5	
Approach LOS		B			B			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 62.9
Natural Cycle: 95
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 13.8 — Intersection LOS: B
Intersection Capacity Utilization 48.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 10: Plaza Entrance/Strathy Road & Elgin Street W



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	203	532	17	485	192	19	34	109	40	173
v/c Ratio	0.39	0.35	0.03	0.51	0.38	0.04	0.08	0.18	0.09	0.31
Control Delay	11.2	13.2	8.1	21.1	6.7	11.9	19.2	12.7	20.7	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	13.2	8.1	21.1	6.7	11.9	19.2	12.7	20.7	4.8
Queue Length 50th (m)	12.6	19.4	0.9	25.1	0.0	1.2	2.6	7.3	3.6	0.0
Queue Length 95th (m)	22.6	38.7	3.4	37.1	14.5	5.0	9.5	17.8	11.2	11.3
Internal Link Dist (m)		62.1		92.2			20.7		285.2	
Turn Bay Length (m)					40.0	20.0				
Base Capacity (vph)	519	2012	559	1979	901	574	956	622	981	978
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.26	0.03	0.25	0.21	0.03	0.04	0.18	0.04	0.18

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	193	497	9	16	461	182	18	27	6	104	38	164
Future Volume (vph)	193	497	9	16	461	182	18	27	6	104	38	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1807	3502		1824	3444	1581	1612	1866		1754	1921	1577
Flt Permitted	0.36	1.00		0.45	1.00	1.00	0.73	1.00		0.68	1.00	1.00
Satd. Flow (perm)	684	3502		872	3444	1581	1241	1866		1251	1921	1577
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	203	523	9	17	485	192	19	28	6	109	40	173
RTOR Reduction (vph)	0	1	0	0	0	151	0	5	0	0	0	119
Lane Group Flow (vph)	203	531	0	17	485	41	19	29	0	109	40	54
Confl. Peds. (#/hr)	1		3	3		1	4		1	1		4
Heavy Vehicles (%)	1%	4%	0%	0%	6%	2%	13%	0%	0%	4%	0%	2%
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Actuated Green, G (s)	30.6	25.5		19.7	18.6	12.1	18.3	12.1		20.7	13.3	18.6
Effective Green, g (s)	32.6	27.5		23.7	20.6	14.1	22.3	14.1		24.7	15.3	20.6
Actuated g/C Ratio	0.49	0.42		0.36	0.31	0.21	0.34	0.21		0.37	0.23	0.31
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	507	1456		357	1073	337	464	398		539	444	491
v/s Ratio Prot	c0.06	0.15		0.00	c0.14		0.01	0.02		c0.03	0.02	
v/s Ratio Perm	0.14			0.01		0.03	0.01			0.05		0.03
v/c Ratio	0.40	0.36		0.05	0.45	0.12	0.04	0.07		0.20	0.09	0.11
Uniform Delay, d1	9.9	13.3		13.7	18.2	21.0	14.7	20.8		13.8	19.9	16.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	0.2		0.1	0.3	0.2	0.0	0.1		0.2	0.1	0.1
Delay (s)	10.4	13.4		13.8	18.5	21.2	14.7	20.9		14.0	20.0	16.3
Level of Service	B	B		B	B	C	B	C		B	C	B
Approach Delay (s)		12.6			19.1			18.7			16.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	66.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	574	18	67	653	1	20
Future Volume (vph)	574	18	67	653	1	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		30.0	50.0		0.0	0.0
Storage Lanes		1	1		1	0
Taper Length (m)			30.0		30.0	
Lane Util. Factor	0.95	1.00	0.91	0.91	1.00	1.00
Frt		0.850			0.871	
Flt Protected				0.995	0.998	
Satd. Flow (prot)	3510	1633	0	4949	1670	0
Flt Permitted				0.995	0.998	
Satd. Flow (perm)	3510	1633	0	4949	1670	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	116.2			158.6	66.6	
Travel Time (s)	8.4			11.4	4.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	0%	0%	6%	0%	0%
Adj. Flow (vph)	598	19	70	680	1	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	598	19	0	750	22	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.2%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	574	18	67	653	1	20
Future Volume (Veh/h)	574	18	67	653	1	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	598	19	70	680	1	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)	116			312		
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			617		965	299
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			393		773	45
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		100	98
cM capacity (veh/h)			1076		290	934

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	299	299	19	206	272	272	22
Volume Left	0	0	0	70	0	0	1
Volume Right	0	0	19	0	0	0	21
cSH	1700	1700	1700	1076	1700	1700	849
Volume to Capacity	0.18	0.18	0.01	0.07	0.16	0.16	0.03
Queue Length 95th (m)	0.0	0.0	0.0	1.6	0.0	0.0	0.6
Control Delay (s)	0.0	0.0	0.0	3.3	0.0	0.0	9.4
Lane LOS				A			A
Approach Delay (s)	0.0			0.9			9.4
Approach LOS							A

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	523	6	59	708	48	9	0	17	0	0	21
Future Volume (vph)	13	523	6	59	708	48	9	0	17	0	0	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	40.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.990			0.913			0.865	
Flt Protected	0.950			0.950				0.982				
Satd. Flow (prot)	1825	3535	0	1738	3452	0	0	1590	0	0	1362	0
Flt Permitted	0.950			0.950				0.982				
Satd. Flow (perm)	1825	3535	0	1738	3452	0	0	1590	0	0	1362	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		158.6			152.8			56.6			57.0	
Travel Time (s)		11.4			11.0			4.1			4.1	
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
Heavy Vehicles (%)	0%	3%	7%	5%	5%	0%	0%	0%	13%	20%	0%	22%
Adj. Flow (vph)	14	556	6	63	753	51	10	0	18	0	0	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	562	0	63	804	0	0	28	0	0	22	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.6%		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)	13	523	6	59	708	48	9	0	17	0	0	21
Future Volume (Veh/h)	13	523	6	59	708	48	9	0	17	0	0	21
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)	14	556	6	63	753	51	10	0	18	0	0	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)		275			153							
pX, platoon unblocked	0.99			0.99			0.99	0.99	0.99	0.99	0.99	0.99
vC, conflicting volume	804			562			1112	1517	281	1228	1494	402
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	792			535			1071	1480	251	1189	1457	388
tC, single (s)	4.1			4.2			7.5	6.5	7.2	7.9	6.5	7.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.4	3.7	4.0	3.5
p0 queue free %	98			94			94	100	97	100	100	96
cM capacity (veh/h)	833			997			159	116	709	113	119	554

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	14	371	191	63	502	302	28	22
Volume Left	14	0	0	63	0	0	10	0
Volume Right	0	0	6	0	0	51	18	22
cSH	833	1700	1700	997	1700	1700	317	554
Volume to Capacity	0.02	0.22	0.11	0.06	0.30	0.18	0.09	0.04
Queue Length 95th (m)	0.4	0.0	0.0	1.5	0.0	0.0	2.2	0.9
Control Delay (s)	9.4	0.0	0.0	8.9	0.0	0.0	17.4	11.8
Lane LOS	A			A			C	B
Approach Delay (s)	0.2			0.6			17.4	11.8
Approach LOS							C	B

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	42.6%	ICU Level of Service	A	
Analysis Period (min)	15			

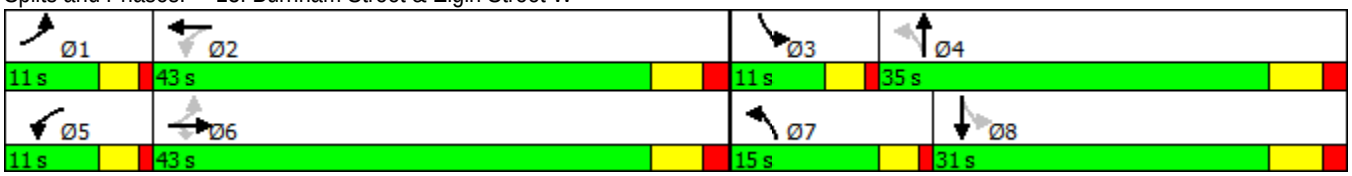
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	289	182	134	372	225	195	294	133	182	329	147
Future Volume (vph)	98	289	182	134	372	225	195	294	133	182	329	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		60.0	60.0		0.0	0.0		0.0	55.0		0.0
Storage Lanes	1		1	1		0	2		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00		0.98	1.00	0.99			0.99		1.00		
Frt			0.850		0.943			0.953			0.954	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1706	3544	1498	1706	3270	0	3340	3326	0	1807	3371	0
Flt Permitted	0.240			0.468			0.340			0.444		
Satd. Flow (perm)	430	3544	1470	837	3270	0	1195	3326	0	842	3371	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			198		149			76			70	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		152.8			145.4			322.3			284.3	
Travel Time (s)		11.0			10.5			23.2			20.5	
Confl. Peds. (#/hr)	5		9	9		5			6	6		
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
Heavy Vehicles (%)	7%	3%	9%	7%	5%	4%	6%	4%	4%	1%	3%	4%
Adj. Flow (vph)	107	314	198	146	404	245	212	320	145	198	358	160
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	314	198	146	649	0	212	465	0	198	518	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Detector Phase	1	6	6	5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0	16.0	6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0		10.0	34.0		10.0	34.0	
Total Split (s)	11.0	43.0	43.0	11.0	43.0		15.0	35.0		11.0	31.0	
Total Split (%)	11.0%	43.0%	43.0%	11.0%	43.0%		15.0%	35.0%		11.0%	31.0%	
Maximum Green (s)	7.0	37.0	37.0	7.0	37.0		11.0	29.0		7.0	25.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		32.0	32.0		32.0			21.0			21.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	29.3	22.4	22.4	30.3	24.8		41.2	32.1		37.2	30.1	
Actuated g/C Ratio	0.35	0.26	0.26	0.36	0.29		0.49	0.38		0.44	0.36	
v/c Ratio	0.43	0.33	0.37	0.39	0.61		0.26	0.36		0.44	0.42	
Control Delay	22.0	26.0	5.8	20.6	23.0		12.5	17.0		16.8	19.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	22.0	26.0	5.8	20.6	23.0		12.5	17.0		16.8	19.8	
LOS	C	C	A	C	C		B	B		B	B	
Approach Delay		18.9			22.5			15.6			19.0	
Approach LOS		B			C			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 84.7
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 19.1 — Intersection LOS: B
Intersection Capacity Utilization 64.3% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 13: Burnham Street & Elgin Street W



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	107	314	198	146	649	212	465	198	518
v/c Ratio	0.43	0.33	0.37	0.39	0.61	0.26	0.36	0.44	0.42
Control Delay	22.0	26.0	5.8	20.6	23.0	12.5	17.0	16.8	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	26.0	5.8	20.6	23.0	12.5	17.0	16.8	19.8
Queue Length 50th (m)	10.9	21.4	0.0	15.2	37.6	8.6	22.5	16.5	27.6
Queue Length 95th (m)	21.3	32.7	14.4	28.0	56.1	16.8	39.2	33.6	48.1
Internal Link Dist (m)		128.8			121.4		298.3		260.3
Turn Bay Length (m)	45.0		60.0	60.0				55.0	
Base Capacity (vph)	255	1638	786	371	1592	888	1317	449	1244
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	0.42	0.19	0.25	0.39	0.41	0.24	0.35	0.44	0.42

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	289	182	134	372	225	195	294	133	182	329	147
Future Volume (vph)	98	289	182	134	372	225	195	294	133	182	329	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1705	3544	1471	1703	3272		3340	3327		1805	3370	
Flt Permitted	0.24	1.00	1.00	0.47	1.00		0.34	1.00		0.44	1.00	
Satd. Flow (perm)	431	3544	1471	839	3272		1196	3327		843	3370	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	314	198	146	404	245	212	320	145	198	358	160
RTOR Reduction (vph)	0	0	144	0	106	0	0	47	0	0	45	0
Lane Group Flow (vph)	107	314	54	146	543	0	212	418	0	198	473	0
Confl. Peds. (#/hr)	5		9	9		5			6	6		
Heavy Vehicles (%)	7%	3%	9%	7%	5%	4%	6%	4%	4%	1%	3%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Actuated Green, G (s)	26.8	21.3	21.3	29.8	22.8		39.1	30.1		35.1	28.1	
Effective Green, g (s)	26.8	23.3	23.3	29.8	24.8		39.1	32.1		35.1	30.1	
Actuated g/C Ratio	0.31	0.27	0.27	0.35	0.29		0.46	0.38		0.41	0.35	
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0		4.0	6.0	
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)	217	966	401	363	950		773	1250		425	1187	
v/s Ratio Prot	0.03	0.09		c0.03	c0.17		c0.03	0.13		c0.04	0.14	
v/s Ratio Perm	0.12		0.04	0.11			0.10			c0.15		
v/c Ratio	0.49	0.33	0.13	0.40	0.57		0.27	0.33		0.47	0.40	
Uniform Delay, d1	22.0	24.8	23.4	19.9	25.8		13.8	19.0		16.7	20.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	0.2	0.2	0.7	0.8		0.2	0.2		0.8	1.0	
Delay (s)	23.7	25.0	23.6	20.6	26.6		14.0	19.2		17.5	21.8	
Level of Service	C	C	C	C	C		B	B		B	C	
Approach Delay (s)		24.3			25.5			17.6			20.6	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	85.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

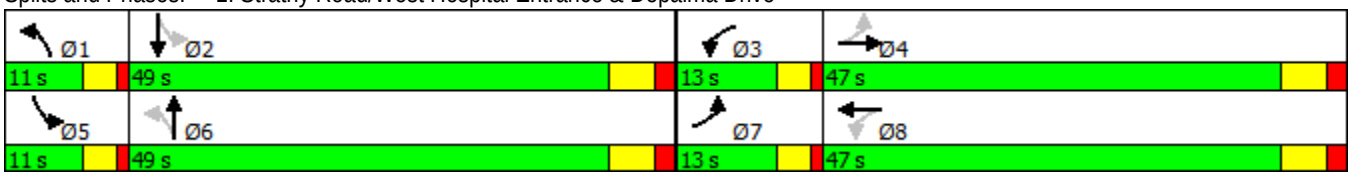
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	261	89	157	180	13	95	11	126	54	33	11
Future Volume (vph)	0	261	89	157	180	13	95	11	126	54	33	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	50.0		0.0	45.0		0.0	15.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00	1.00		0.98	0.99		1.00	0.99	
Frt		0.962			0.990			0.862			0.962	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	1921	3472	0	1789	3507	0	1825	3052	0	1825	1741	0
Flt Permitted				0.354			0.665			0.653		
Satd. Flow (perm)	1921	3472	0	666	3507	0	1250	3052	0	1253	1741	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			7			143			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		81.0			199.0			243.9			67.7	
Travel Time (s)		5.8			14.3			17.6			4.9	
Confl. Peds. (#/hr)	20		3	3		20	19		1	1		19
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	1%	0%	2%	3%	0%	0%	0%	2%	0%	7%	0%
Adj. Flow (vph)	0	297	101	178	205	15	108	13	143	61	38	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	398	0	178	220	0	108	156	0	61	51	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0		10.0	22.0		10.0	22.0		10.0	22.0	
Total Split (s)	13.0	47.0		13.0	47.0		11.0	49.0		11.0	49.0	
Total Split (%)	10.8%	39.2%		10.8%	39.2%		9.2%	40.8%		9.2%	40.8%	
Maximum Green (s)	9.0	41.0		9.0	41.0		7.0	43.0		7.0	43.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		25.0			25.0			23.0			23.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)		18.1		30.1	30.1		24.4	20.4		23.0	18.1	
Actuated g/C Ratio		0.28		0.47	0.47		0.38	0.32		0.36	0.28	
v/c Ratio		0.40		0.40	0.13		0.20	0.15		0.12	0.10	
Control Delay		18.9		13.9	10.5		13.1	5.3		12.4	15.9	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		18.9		13.9	10.5		13.1	5.3		12.4	15.9	
LOS		B		B	B		B	A		B	B	
Approach Delay		18.9			12.0			8.5			14.0	
Approach LOS		B			B			A			B	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 64.6	
Natural Cycle: 65	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 62.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Strathy Road/West Hospital Entrance & Depalma Drive



Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	398	178	220	108	156	61	51
v/c Ratio	0.40	0.40	0.13	0.20	0.15	0.12	0.10
Control Delay	18.9	13.9	10.5	13.1	5.3	12.4	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	13.9	10.5	13.1	5.3	12.4	15.9
Queue Length 50th (m)	19.0	12.9	7.7	7.9	0.6	4.3	3.6
Queue Length 95th (m)	29.8	23.3	13.1	16.1	6.3	10.2	10.6
Internal Link Dist (m)	57.0		175.0		219.9		43.7
Turn Bay Length (m)		50.0		45.0		15.0	
Base Capacity (vph)	2343	468	2355	535	2185	518	1226
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.38	0.09	0.20	0.07	0.12	0.04

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	261	89	157	180	13	95	11	126	54	33	11
Future Volume (vph)	0	261	89	157	180	13	95	11	126	54	33	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00	0.95		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt		0.96		1.00	0.99		1.00	0.86		1.00	0.96	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3473		1789	3509		1812	3056		1824	1745	
Flt Permitted		1.00		0.35	1.00		0.66	1.00		0.65	1.00	
Satd. Flow (perm)		3473		667	3509		1268	3056		1254	1745	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	297	101	178	205	15	108	12	143	61	38	12
RTOR Reduction (vph)	0	32	0	0	4	0	0	99	0	0	9	0
Lane Group Flow (vph)	0	366	0	178	216	0	108	57	0	61	42	0
Confl. Peds. (#/hr)	20		3	3		20	19		1	1		19
Heavy Vehicles (%)	0%	1%	0%	2%	3%	0%	0%	0%	2%	0%	7%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)		16.1		28.1	28.1		23.6	18.4		20.6	16.9	
Effective Green, g (s)		18.1		28.1	30.1		23.6	20.4		20.6	18.9	
Actuated g/C Ratio		0.27		0.42	0.45		0.36	0.31		0.31	0.29	
Clearance Time (s)		6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)		3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)		949		418	1595		494	941		422	498	
v/s Ratio Prot		0.11		c0.05	0.06		c0.02	0.02		0.01	0.02	
v/s Ratio Perm				c0.13			c0.06			0.04		
v/c Ratio		0.39		0.43	0.14		0.22	0.06		0.14	0.08	
Uniform Delay, d1		19.5		12.5	10.5		14.6	16.1		16.2	17.3	
Progression Factor		1.00		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		0.1	0.1	
Delay (s)		19.8		12.8	10.5		14.7	16.2		16.3	17.4	
Level of Service		B		B	B		B	B		B	B	
Approach Delay (s)		19.8			11.5			15.6			16.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	66.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

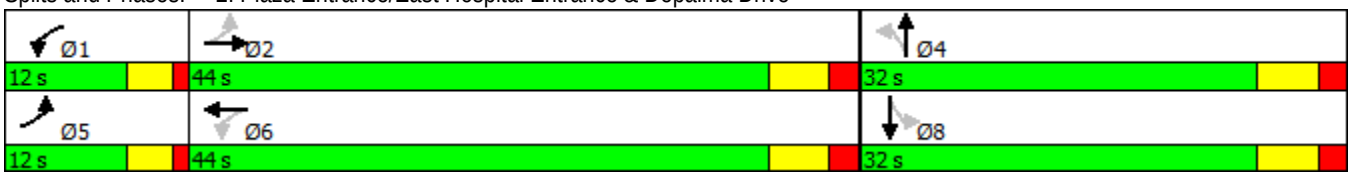
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	413	16	98	352	23	12	7	99	68	4	24
Future Volume (vph)	16	413	16	98	352	23	12	7	99	68	4	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	65.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00			1.00				0.99	
Frt		0.994			0.991			0.859			0.870	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1587	3625	0	1825	3551	0	1825	1635	0	1789	1584	0
Flt Permitted	0.517			0.373			0.738			0.685		
Satd. Flow (perm)	864	3625	0	716	3551	0	1417	1635	0	1290	1584	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			10			105			26	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		199.0			195.0			41.1			35.9	
Travel Time (s)		14.3			14.0			3.0			2.6	
Confl. Peds. (#/hr)			1	1			1					1
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
Heavy Vehicles (%)	15%	0%	0%	0%	2%	0%	0%	0%	1%	2%	0%	5%
Adj. Flow (vph)	17	439	17	104	374	24	13	7	105	72	4	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	456	0	104	398	0	13	112	0	72	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		22.0	22.0		22.0	22.0	
Total Split (s)	12.0	44.0		12.0	44.0		32.0	32.0		32.0	32.0	
Total Split (%)	13.6%	50.0%		13.6%	50.0%		36.4%	36.4%		36.4%	36.4%	
Maximum Green (s)	8.0	38.0		8.0	38.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		15.0			15.0		25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	22.7	18.1		25.7	24.3		18.1	18.1		18.1	18.1	
Actuated g/C Ratio	0.43	0.35		0.49	0.46		0.35	0.35		0.35	0.35	
v/c Ratio	0.04	0.36		0.21	0.24		0.03	0.18		0.16	0.05	
Control Delay	6.7	14.5		7.8	9.4		12.8	4.8		14.4	6.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.7	14.5		7.8	9.4		12.8	4.8		14.4	6.9	
LOS	A	B		A	A		B	A		B	A	
Approach Delay		14.2			9.1			5.6			12.2	
Approach LOS		B			A			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 88
Actuated Cycle Length: 52.4
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 11.0 — Intersection LOS: B
Intersection Capacity Utilization 42.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Plaza Entrance/East Hospital Entrance & Depalma Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	17	456	104	398	13	112	72	30
v/c Ratio	0.04	0.36	0.21	0.24	0.03	0.18	0.16	0.05
Control Delay	6.7	14.5	7.8	9.4	12.8	4.8	14.4	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	14.5	7.8	9.4	12.8	4.8	14.4	6.9
Queue Length 50th (m)	0.7	17.1	4.7	9.6	0.8	0.4	4.9	0.3
Queue Length 95th (m)	2.9	28.1	10.3	23.4	3.8	8.8	12.7	4.7
Internal Link Dist (m)		175.0		171.0		17.1		11.9
Turn Bay Length (m)	65.0		50.0					
Base Capacity (vph)	511	2854	523	2797	762	928	694	864
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.16	0.20	0.14	0.02	0.12	0.10	0.03

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	413	16	98	352	23	12	7	99	68	4	24
Future Volume (vph)	16	413	16	98	352	23	12	7	99	68	4	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.86		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1587	3627		1825	3550		1824	1636		1789	1585	
Flt Permitted	0.52	1.00		0.37	1.00		0.74	1.00		0.68	1.00	
Satd. Flow (perm)	864	3627		716	3550		1416	1636		1290	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)	17	439	17	104	374	24	13	7	105	72	4	26
RTOR Reduction (vph)	0	4	0	0	6	0	0	71	0	0	18	0
Lane Group Flow (vph)	17	452	0	104	392	0	13	41	0	72	12	0
Confl. Peds. (#/hr)			1	1			1					1
Heavy Vehicles (%)	15%	0%	0%	0%	2%	0%	0%	0%	1%	2%	0%	5%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	19.5	18.4		27.3	22.3		16.1	16.1		16.1	16.1	
Effective Green, g (s)	19.5	20.4		27.3	24.3		18.1	18.1		18.1	18.1	
Actuated g/C Ratio	0.35	0.37		0.49	0.44		0.33	0.33		0.33	0.33	
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	317	1333		452	1554		461	533		420	516	
v/s Ratio Prot	0.00	c0.12		c0.02	0.11			0.03			0.01	
v/s Ratio Perm	0.02			0.09			0.01			c0.06		
v/c Ratio	0.05	0.34		0.23	0.25		0.03	0.08		0.17	0.02	
Uniform Delay, d1	11.8	12.7		7.9	9.9		12.7	12.9		13.3	12.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.2		0.1	0.1		0.0	0.1		0.2	0.0	
Delay (s)	11.8	12.8		8.0	9.9		12.7	13.0		13.5	12.7	
Level of Service	B	B		A	A		B	B		B	B	
Approach Delay (s)		12.8			9.5			13.0			13.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	55.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

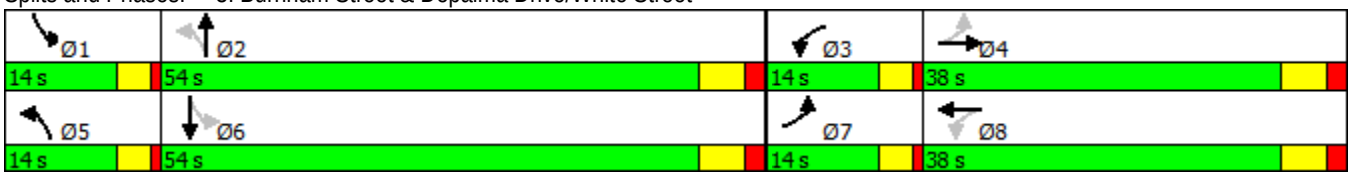
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	44	168	90	38	143	116	620	87	62	588	315
Future Volume (vph)	362	44	168	90	38	143	116	620	87	62	588	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	40.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99		1.00								
Frt		0.881			0.882			0.982			0.948	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1807	3152	0	1706	1655	0	1807	3476	0	1825	3382	0
Flt Permitted	0.318			0.617			0.144			0.313		
Satd. Flow (perm)	605	3152	0	1105	1655	0	274	3476	0	601	3382	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		171			146			16			101	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		195.0			157.6			241.3			73.6	
Travel Time (s)		14.0			11.3			17.4			5.3	
Confl. Peds. (#/hr)			3	3								
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	0%	1%	7%	0%	3%	1%	3%	4%	0%	3%	1%
Adj. Flow (vph)	369	45	171	92	39	146	118	633	89	63	600	321
Shared Lane Traffic (%)												
Lane Group Flow (vph)	369	216	0	92	185	0	118	722	0	63	921	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	8.0		6.0	8.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	14.0		10.0	14.0		10.0	42.0		10.0	42.0	
Total Split (s)	14.0	38.0		14.0	38.0		14.0	54.0		14.0	54.0	
Total Split (%)	11.7%	31.7%		11.7%	31.7%		11.7%	45.0%		11.7%	45.0%	
Maximum Green (s)	10.0	32.0		10.0	32.0		10.0	48.0		10.0	48.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Dont Walk (s)		24.0			24.0			25.0			25.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	24.4	16.6		19.0	11.5		38.8	32.3		34.6	28.3	
Actuated g/C Ratio	0.33	0.22		0.26	0.15		0.52	0.44		0.47	0.38	
v/c Ratio	1.01	0.26		0.27	0.49		0.38	0.47		0.16	0.68	
Control Delay	78.3	9.5		21.6	14.2		11.9	16.3		9.2	19.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	78.3	9.5		21.6	14.2		11.9	16.3		9.2	19.8	
LOS	E	A		C	B		B	B		A	B	
Approach Delay		52.9			16.7			15.7			19.1	
Approach LOS		D			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 74.2
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 25.2 — Intersection LOS: C
Intersection Capacity Utilization 77.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Burnham Street & Depalma Drive/White Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	369	216	92	185	118	722	63	921
v/c Ratio	1.01	0.26	0.27	0.49	0.38	0.47	0.16	0.68
Control Delay	78.3	9.5	21.6	14.2	11.9	16.3	9.2	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.3	9.5	21.6	14.2	11.9	16.3	9.2	19.8
Queue Length 50th (m)	~42.2	2.6	8.6	4.7	7.0	35.5	3.6	46.5
Queue Length 95th (m)	#111.7	12.9	22.5	24.0	15.9	57.0	9.6	76.0
Internal Link Dist (m)		171.0		133.6		217.3		49.6
Turn Bay Length (m)	30.0		30.0		40.0		30.0	
Base Capacity (vph)	364	1562	405	850	358	2391	479	2353
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.14	0.23	0.22	0.33	0.30	0.13	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	44	168	90	38	143	116	620	87	62	588	315
Future Volume (vph)	362	44	168	90	38	143	116	620	87	62	588	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.88		1.00	0.88		1.00	0.98		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1807	3156		1704	1655		1807	3474		1825	3381	
Flt Permitted	0.32	1.00		0.62	1.00		0.14	1.00		0.31	1.00	
Satd. Flow (perm)	605	3156		1106	1655		275	3474		601	3381	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	369	45	171	92	39	146	118	633	89	63	600	321
RTOR Reduction (vph)	0	134	0	0	122	0	0	9	0	0	62	0
Lane Group Flow (vph)	369	82	0	92	63	0	118	713	0	63	859	0
Confl. Peds. (#/hr)			3	3								
Heavy Vehicles (%)	1%	0%	1%	7%	0%	3%	1%	3%	4%	0%	3%	1%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.6	14.6		16.4	10.4		38.1	30.2		32.1	27.2	
Effective Green, g (s)	24.6	16.6		16.4	12.4		38.1	32.2		32.1	29.2	
Actuated g/C Ratio	0.32	0.22		0.22	0.16		0.50	0.43		0.42	0.39	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	358	692		287	271		298	1477		334	1304	
v/s Ratio Prot	c0.14	0.03		0.03	0.04		c0.04	0.21		0.01	c0.25	
v/s Ratio Perm	c0.20			0.04			0.16			0.07		
v/c Ratio	1.03	0.12		0.32	0.23		0.40	0.48		0.19	0.66	
Uniform Delay, d1	23.4	23.7		24.6	27.5		12.1	15.7		13.2	19.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	55.7	0.1		0.2	0.4		0.3	0.2		0.1	1.2	
Delay (s)	79.1	23.8		24.8	28.0		12.5	16.0		13.3	20.4	
Level of Service	E	C		C	C		B	B		B	C	
Approach Delay (s)		58.7			26.9			15.5			19.9	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	75.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

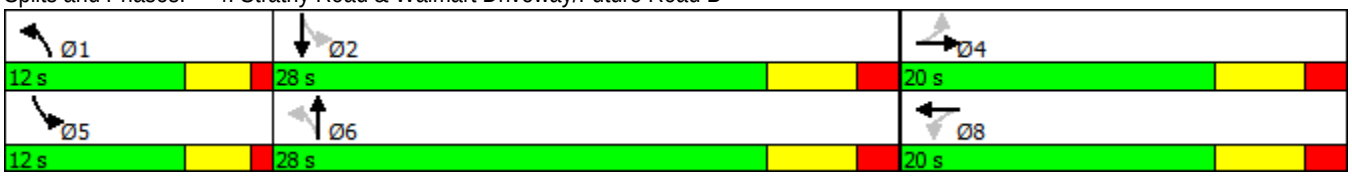
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	2	69	86	11	17	130	335	53	18	347	1
Future Volume (vph)	7	2	69	86	11	17	130	335	53	18	347	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	25.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Frt		0.854			0.909			0.979				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	1545	0	1825	1730	0	1825	3503	0	1825	3614	0
Flt Permitted	0.736			0.704			0.421			0.494		
Satd. Flow (perm)	1409	1545	0	1352	1730	0	808	3503	0	948	3614	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					20			35				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.6			89.2			307.9			243.9	
Travel Time (s)		7.4			6.4			22.2			17.6	
Confl. Peds. (#/hr)	5		1	1		5	1		1	1		1
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
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	8	2	79	99	13	20	149	385	61	21	399	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	81	0	99	33	0	149	446	0	21	400	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4		8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		10.0	21.0		10.0	21.0	
Total Split (s)	20.0	20.0		20.0	20.0		12.0	28.0		12.0	28.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		20.0%	46.7%		20.0%	46.7%	
Maximum Green (s)	14.0	14.0		14.0	14.0		8.0	22.0		8.0	22.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			18.0			18.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	9.5	11.5		9.5	11.5		25.5	24.1		21.7	17.3	
Actuated g/C Ratio	0.21	0.25		0.21	0.25		0.56	0.53		0.48	0.38	
v/c Ratio	0.03	0.21		0.35	0.07		0.24	0.24		0.04	0.29	
Control Delay	15.6	16.1		20.5	9.5		5.9	6.9		5.1	12.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.6	16.1		20.5	9.5		5.9	6.9		5.1	12.0	
LOS	B	B		C	A		A	A		A	B	
Approach Delay		16.0			17.8			6.6			11.7	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 45.6
Natural Cycle: 45
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.35
Intersection Signal Delay: 10.2 — Intersection LOS: B
Intersection Capacity Utilization 42.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Strathy Road & Walmart Driveway/Future Road B



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	8	81	99	33	149	446	21	400
v/c Ratio	0.03	0.21	0.35	0.07	0.24	0.24	0.04	0.29
Control Delay	15.6	16.1	20.5	9.5	5.9	6.9	5.1	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.6	16.1	20.5	9.5	5.9	6.9	5.1	12.0
Queue Length 50th (m)	0.6	5.5	7.3	0.8	4.4	6.5	0.6	12.0
Queue Length 95th (m)	2.9	13.2	16.9	5.3	11.5	21.9	2.7	22.3
Internal Link Dist (m)		78.6		65.2		283.9		219.9
Turn Bay Length (m)			30.0				25.0	
Base Capacity (vph)	440	551	422	630	633	2078	642	1935
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.15	0.23	0.05	0.24	0.21	0.03	0.21

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	2	69	86	11	17	130	335	53	18	347	1
Future Volume (vph)	7	2	69	86	11	17	130	335	53	18	347	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	0.91		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1820	1545		1824	1731		1825	3504		1825	3613	
Flt Permitted	0.74	1.00		0.70	1.00		0.42	1.00		0.49	1.00	
Satd. Flow (perm)	1409	1545		1352	1731		808	3504		949	3613	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	8	2	79	99	13	20	149	385	61	21	399	1
RTOR Reduction (vph)	0	0	0	0	15	0	0	18	0	0	0	0
Lane Group Flow (vph)	8	81	0	99	18	0	149	428	0	21	400	0
Confl. Peds. (#/hr)	5		1	1		5	1		1	1		1
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	9.5	9.5		9.5	9.5		27.2	22.1		18.7	17.6	
Effective Green, g (s)	9.5	11.5		9.5	11.5		27.2	24.1		18.7	19.6	
Actuated g/C Ratio	0.20	0.24		0.20	0.24		0.56	0.49		0.38	0.40	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	274	364		263	408		568	1734		384	1454	
v/s Ratio Prot		0.05			0.01		c0.03	c0.12		0.00	0.11	
v/s Ratio Perm	0.01			c0.07			0.12			0.02		
v/c Ratio	0.03	0.22		0.38	0.04		0.26	0.25		0.05	0.28	
Uniform Delay, d1	15.9	15.0		17.0	14.4		5.4	7.1		9.3	9.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.3		0.9	0.0		0.2	0.1		0.1	0.1	
Delay (s)	15.9	15.3		17.9	14.4		5.6	7.2		9.4	9.9	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		15.4			17.0			6.8			9.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	48.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	8	23	0	20	62
Future Volume (vph)	0	8	23	0	20	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865				0.898	
Flt Protected				0.950	0.988	
Satd. Flow (prot)	1629	0	0	1789	1671	0
Flt Permitted				0.950	0.988	
Satd. Flow (perm)	1629	0	0	1789	1671	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	89.2			135.3	203.0	
Travel Time (s)	6.4			9.7	14.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	9	25	0	22	67
Shared Lane Traffic (%)						
Lane Group Flow (vph)	9	0	0	25	89	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	8	23	0	20	62
Future Volume (Veh/h)	0	8	23	0	20	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)	0	9	25	0	22	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)	89					
pX, platoon unblocked						
vC, conflicting volume			9		54	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			9		54	4
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		98	94
cM capacity (veh/h)			1611		939	1079

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	9	25	89
Volume Left	0	25	22
Volume Right	9	0	67
cSH	1700	1611	1040
Volume to Capacity	0.01	0.02	0.09
Queue Length 95th (m)	0.0	0.4	2.1
Control Delay (s)	0.0	7.3	8.8
Lane LOS		A	A
Approach Delay (s)	0.0	7.3	8.8
Approach LOS			A

Intersection Summary			
Average Delay	7.8		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	62	0	0	23	0	22
Future Volume (vph)	62	0	0	23	0	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected						
Satd. Flow (prot)	1883	0	0	1883	1629	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1629	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	135.3			158.2	184.7	
Travel Time (s)	9.7			11.4	13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	0	0	25	0	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	0	0	25	24	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Yield			Yield	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Right Turn Channelized						
Traffic Volume (veh/h)	62	0	0	23	0	22
Future Volume (veh/h)	62	0	0	23	0	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	67	0	0	25	0	24
Approach Volume (veh/h)	67			25	24	
Crossing Volume (veh/h)	0			0	67	
High Capacity (veh/h)	1385			1385	1314	
High v/c (veh/h)	0.05			0.02	0.02	
Low Capacity (veh/h)	1161			1161	1097	
Low v/c (veh/h)	0.06			0.02	0.02	

Intersection Summary			
Maximum v/c High	0.05		
Maximum v/c Low	0.06		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	25	59	14	828	862	9
Future Volume (vph)	25	59	14	828	862	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	15.0	0.0	0.0			0.0
Storage Lanes	1	1	0			0
Taper Length (m)	30.0		30.0			
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt		0.850			0.998	
Flt Protected	0.950			0.999		
Satd. Flow (prot)	1789	1601	0	3575	3571	0
Flt Permitted	0.950			0.999		
Satd. Flow (perm)	1789	1601	0	3575	3571	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	158.2			290.8	241.3	
Travel Time (s)	11.4			20.9	17.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	64	15	900	937	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	64	0	915	947	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	59	14	828	862	9
Future Volume (Veh/h)	25	59	14	828	862	9
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)	27	64	15	900	937	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				291	241	
pX, platoon unblocked	0.94	0.92	0.92			
vC, conflicting volume	1422	474	947			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1108	257	771			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	86	91	98			
cM capacity (veh/h)	189	683	773			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	27	64	315	600	625	322
Volume Left	27	0	15	0	0	0
Volume Right	0	64	0	0	0	10
cSH	189	683	773	1700	1700	1700
Volume to Capacity	0.14	0.09	0.02	0.35	0.37	0.19
Queue Length 95th (m)	3.7	2.3	0.5	0.0	0.0	0.0
Control Delay (s)	27.2	10.8	0.7	0.0	0.0	0.0
Lane LOS	D	B	A			
Approach Delay (s)	15.7		0.2		0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	91.1			108.9	184.7	
Travel Time (s)	6.6			7.8	13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
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	0	0	0	0	0
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	0	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0	0	0			
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	100	100			
cM capacity (veh/h)	1023	1085	1623			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	0	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	628	18	67	625	222	41	59	35	243	62	321
Future Volume (vph)	242	628	18	67	625	222	41	59	35	243	62	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		40.0	20.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00		0.98	0.99	0.99		1.00		0.98
Frt		0.996				0.850		0.944				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3496	0	1825	3510	1617	1825	1803	0	1807	1847	1601
Flt Permitted	0.245			0.388			0.714			0.612		
Satd. Flow (perm)	461	3496	0	742	3510	1592	1361	1803	0	1161	1847	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				177		25				341
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		86.1			116.2			44.7			307.9	
Travel Time (s)		6.2			8.4			3.2			22.2	
Confl. Peds. (#/hr)	3		5	5		3	8		3	3		8
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
Heavy Vehicles (%)	2%	4%	0%	0%	4%	1%	0%	0%	0%	1%	4%	2%
Adj. Flow (vph)	257	668	19	71	665	236	44	63	37	259	66	341
Shared Lane Traffic (%)												
Lane Group Flow (vph)	257	687	0	71	665	236	44	100	0	259	66	341
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane		Yes									Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Detector Phase	5	2		1	6	8	3	8		7	4	6
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0	12.0	6.0	12.0		6.0	12.0	10.0
Minimum Split (s)	10.0	32.0		10.0	32.0	39.0	10.0	39.0		10.0	39.0	32.0
Total Split (s)	19.0	56.0		12.0	49.0	38.0	12.0	38.0		14.0	40.0	49.0
Total Split (%)	15.8%	46.7%		10.0%	40.8%	31.7%	10.0%	31.7%		11.7%	33.3%	40.8%
Maximum Green (s)	15.0	50.0		8.0	43.0	32.0	8.0	32.0		10.0	34.0	43.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	Min	Min	Min		Min	Min	None
Walk Time (s)		10.0			10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		16.0			16.0	23.0		23.0			23.0	16.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	45.1	34.5		36.8	25.9	15.2	26.1	15.2		31.3	18.4	25.9
Actuated g/C Ratio	0.56	0.43		0.46	0.32	0.19	0.32	0.19		0.39	0.23	0.32
v/c Ratio	0.51	0.46		0.15	0.59	0.53	0.09	0.28		0.47	0.16	0.46
Control Delay	12.7	18.0		9.3	25.2	14.6	18.7	25.9		22.7	29.0	4.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	12.7	18.0		9.3	25.2	14.6	18.7	25.9		22.7	29.0	4.7
LOS	B	B		A	C	B	B	C		C	C	A
Approach Delay		16.6			21.5			23.7			14.1	
Approach LOS		B			C			C			B	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 80.5
Natural Cycle: 95
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 18.1 — Intersection LOS: B
Intersection Capacity Utilization 63.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: Plaza Entrance/Strathy Road & Elgin Street W

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	257	687	71	665	236	44	100	259	66	341
v/c Ratio	0.51	0.46	0.15	0.59	0.53	0.09	0.28	0.47	0.16	0.46
Control Delay	12.7	18.0	9.3	25.2	14.6	18.7	25.9	22.7	29.0	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.7	18.0	9.3	25.2	14.6	18.7	25.9	22.7	29.0	4.7
Queue Length 50th (m)	17.8	38.5	4.4	43.5	7.7	4.1	9.8	27.4	8.1	0.0
Queue Length 95th (m)	34.1	60.0	10.9	66.6	30.8	12.3	25.6	55.9	20.8	16.7
Internal Link Dist (m)		62.1		92.2			20.7		283.9	
Turn Bay Length (m)					40.0	20.0				
Base Capacity (vph)	543	2293	487	1992	783	521	787	549	838	1035
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.30	0.15	0.33	0.30	0.08	0.13	0.47	0.08	0.33

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	628	18	67	625	222	41	59	35	243	62	321
Future Volume (vph)	242	628	18	67	625	222	41	59	35	243	62	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	3496		1823	3510	1594	1818	1805		1805	1847	1570
Flt Permitted	0.24	1.00		0.39	1.00	1.00	0.71	1.00		0.61	1.00	1.00
Satd. Flow (perm)	461	3496		745	3510	1594	1366	1805		1163	1847	1570
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)	257	668	19	71	665	236	44	63	37	259	66	341
RTOR Reduction (vph)	0	2	0	0	0	144	0	20	0	0	0	228
Lane Group Flow (vph)	257	685	0	71	665	92	44	80	0	259	66	113
Confl. Peds. (#/hr)	3		5	5		3	8		3	3		8
Heavy Vehicles (%)	2%	4%	0%	0%	4%	1%	0%	0%	0%	1%	4%	2%
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Actuated Green, G (s)	41.9	32.4		30.3	24.8	13.3	20.2	13.3		26.4	16.4	24.8
Effective Green, g (s)	43.9	34.4		34.3	26.8	15.3	24.2	15.3		29.3	18.4	26.8
Actuated g/C Ratio	0.54	0.42		0.42	0.33	0.19	0.30	0.19		0.36	0.23	0.33
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	496	1481		414	1158	300	456	340		514	418	518
v/s Ratio Prot	c0.10	0.20		0.02	c0.19		0.01	0.04		c0.07	0.04	
v/s Ratio Perm	0.18			0.06		0.06	0.02			0.11		0.07
v/c Ratio	0.52	0.46		0.17	0.57	0.31	0.10	0.23		0.50	0.16	0.22
Uniform Delay, d1	11.2	16.8		14.1	22.5	28.4	20.5	28.0		19.4	25.2	19.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	0.2		0.2	0.7	0.6	0.1	0.4		0.8	0.2	0.2
Delay (s)	12.1	17.0		14.3	23.2	29.0	20.6	28.3		20.2	25.4	19.8
Level of Service	B	B		B	C	C	C	C		C	C	B
Approach Delay (s)		15.7			23.9			26.0			20.5	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	81.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	954	11	55	889	5	60
Future Volume (vph)	954	11	55	889	5	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		30.0	50.0		0.0	0.0
Storage Lanes		1	1		1	0
Taper Length (m)			30.0		30.0	
Lane Util. Factor	0.95	1.00	0.91	0.91	1.00	1.00
Ped Bike Factor						
Frt		0.850			0.875	
Flt Protected				0.997	0.996	
Satd. Flow (prot)	3614	1484	0	5180	1572	0
Flt Permitted				0.997	0.996	
Satd. Flow (perm)	3614	1484	0	5180	1572	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	116.2			158.6	66.6	
Travel Time (s)	8.4			11.4	4.8	
Confl. Peds. (#/hr)		3	3		1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	10%	0%	1%	0%	7%
Adj. Flow (vph)	994	11	57	926	5	63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	994	11	0	983	68	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.1%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	954	11	55	889	5	60
Future Volume (Veh/h)	954	11	55	889	5	60
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	994	11	57	926	5	63
Pedestrians	1			1	3	
Lane Width (m)	3.7			3.7	3.7	
Walking Speed (m/s)	1.0			1.0	1.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	116			312		
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			1008		1421	501
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			700		1177	115
tC, single (s)			4.1		6.8	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.4
p0 queue free %			93		97	92
cM capacity (veh/h)			782		150	776

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	497	497	11	242	370	370	68
Volume Left	0	0	0	57	0	0	5
Volume Right	0	0	11	0	0	0	63
cSH	1700	1700	1700	782	1700	1700	594
Volume to Capacity	0.29	0.29	0.01	0.07	0.22	0.22	0.11
Queue Length 95th (m)	0.0	0.0	0.0	1.8	0.0	0.0	2.9
Control Delay (s)	0.0	0.0	0.0	3.0	0.0	0.0	11.8
Lane LOS				A			B
Approach Delay (s)	0.0			0.7			11.8
Approach LOS							B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1057	12	39	890	17	7	0	56	0	2	83
Future Volume (vph)	2	1057	12	39	890	17	7	0	56	0	2	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	40.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.998			0.997			0.880			0.868	
Flt Protected	0.950			0.950				0.995				
Satd. Flow (prot)	1825	3607	0	1706	3604	0	0	1624	0	0	1454	0
Flt Permitted	0.950			0.950				0.995				
Satd. Flow (perm)	1825	3607	0	1706	3604	0	0	1624	0	0	1454	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		158.6			152.8			56.6			108.9	
Travel Time (s)		11.4			11.0			4.1			7.8	
Confl. Peds. (#/hr)	3					3						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	1%	0%	7%	1%	0%	0%	0%	4%	0%	0%	15%
Adj. Flow (vph)	2	1090	12	40	918	18	7	0	58	0	2	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	1102	0	40	936	0	0	65	0	0	88	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 49.3%	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)	2	1057	12	39	890	17	7	0	56	0	2	83
Future Volume (Veh/h)	2	1057	12	39	890	17	7	0	56	0	2	83
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	2	1090	12	40	918	18	7	0	58	0	2	86
Pedestrians											3	
Lane Width (m)											3.7	
Walking Speed (m/s)											1.0	
Percent Blockage											0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		275			153							
pX, platoon unblocked	0.83			0.89			0.89	0.89	0.89	0.89	0.89	0.83
vC, conflicting volume	939			1102			1726	2119	551	1617	2116	471
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	513			857			981	1425	235	858	1421	0
tC, single (s)	4.1			4.2			7.5	6.5	7.0	7.5	6.5	7.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			94			95	100	91	100	98	90
cM capacity (veh/h)	878			663			155	113	674	195	114	862

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	2	727	375	40	612	324	65	88
Volume Left	2	0	0	40	0	0	7	0
Volume Right	0	0	12	0	0	18	58	86
cSH	878	1700	1700	663	1700	1700	495	750
Volume to Capacity	0.00	0.43	0.22	0.06	0.36	0.19	0.13	0.12
Queue Length 95th (m)	0.1	0.0	0.0	1.5	0.0	0.0	3.4	3.0
Control Delay (s)	9.1	0.0	0.0	10.8	0.0	0.0	13.4	10.4
Lane LOS	A			B			B	B
Approach Delay (s)	0.0			0.4			13.4	10.4
Approach LOS							B	B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

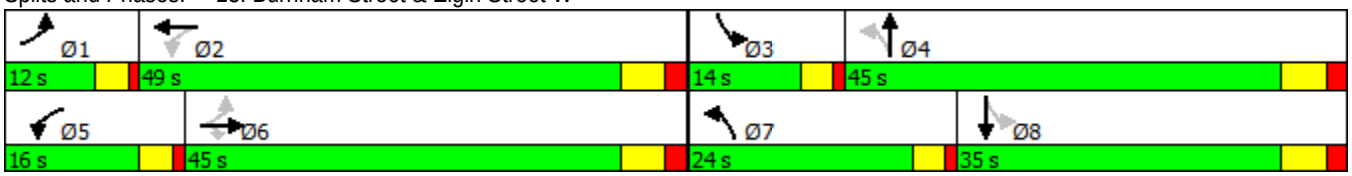
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	553	344	116	510	191	279	402	126	338	364	163
Future Volume (vph)	224	553	344	116	510	191	279	402	126	338	364	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		60.0	60.0		0.0	0.0		0.0	55.0		0.0
Storage Lanes	1		1	1		0	2		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00		0.98	1.00	0.99		0.99	1.00		1.00	0.99	
Frt			0.850		0.959			0.964			0.954	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3579	1570	1755	3417	0	3309	3418	0	1807	3363	0
Flt Permitted	0.178			0.245			0.304			0.340		
Satd. Flow (perm)	334	3579	1539	451	3417	0	1049	3418	0	645	3363	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			362		52			38			58	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		152.8			145.4			322.3			290.8	
Travel Time (s)		11.0			10.5			23.2			20.9	
Confl. Peds. (#/hr)	12		9	9		12	13		4	4		13
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
Heavy Vehicles (%)	2%	2%	4%	4%	1%	4%	7%	3%	1%	1%	2%	4%
Adj. Flow (vph)	236	582	362	122	537	201	294	423	133	356	383	172
Shared Lane Traffic (%)												
Lane Group Flow (vph)	236	582	362	122	738	0	294	556	0	356	555	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Detector Phase	1	6	6	5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0	16.0	6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0		10.0	34.0		10.0	34.0	
Total Split (s)	12.0	45.0	45.0	16.0	49.0		24.0	45.0		14.0	35.0	
Total Split (%)	10.0%	37.5%	37.5%	13.3%	40.8%		20.0%	37.5%		11.7%	29.2%	
Maximum Green (s)	8.0	39.0	39.0	12.0	43.0		20.0	39.0		10.0	29.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		32.0	32.0		32.0			21.0			21.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	34.9	26.9	26.9	37.7	28.3		43.8	32.6		41.3	31.2	
Actuated g/C Ratio	0.37	0.28	0.28	0.40	0.30		0.46	0.34		0.43	0.33	
v/c Ratio	0.96	0.58	0.52	0.40	0.70		0.39	0.47		0.88	0.49	
Control Delay	73.0	32.0	5.9	20.8	31.2		16.2	25.0		45.9	25.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	73.0	32.0	5.9	20.8	31.2		16.2	25.0		45.9	25.8	
LOS	E	C	A	C	C		B	C		D	C	
Approach Delay		32.2			29.8			21.9			33.6	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 95.1
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 29.7 — Intersection LOS: C
Intersection Capacity Utilization 85.2% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 13: Burnham Street & Elgin Street W



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	236	582	362	122	738	294	556	356	555
v/c Ratio	0.96	0.58	0.52	0.40	0.70	0.39	0.47	0.88	0.49
Control Delay	73.0	32.0	5.9	20.8	31.2	16.2	25.0	45.9	25.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.0	32.0	5.9	20.8	31.2	16.2	25.0	45.9	25.8
Queue Length 50th (m)	27.7	47.7	0.0	13.4	58.2	14.5	37.7	38.7	36.9
Queue Length 95th (m)	#75.3	69.1	19.8	25.1	80.8	27.0	61.8	#110.7	64.4
Internal Link Dist (m)		128.8			121.4		298.3		266.8
Turn Bay Length (m)	45.0		60.0	60.0				55.0	
Base Capacity (vph)	245	1555	873	357	1656	993	1506	403	1143
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	0.96	0.37	0.41	0.34	0.45	0.30	0.37	0.88	0.49

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	553	344	116	510	191	279	402	126	338	364	163
Future Volume (vph)	224	553	344	116	510	191	279	402	126	338	364	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.96		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1789	3579	1541	1754	3419		3302	3419		1806	3365	
Flt Permitted	0.18	1.00	1.00	0.25	1.00		0.30	1.00		0.34	1.00	
Satd. Flow (perm)	335	3579	1541	453	3419		1056	3419		647	3365	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	236	582	362	122	537	201	294	423	133	356	383	172
RTOR Reduction (vph)	0	0	260	0	37	0	0	25	0	0	39	0
Lane Group Flow (vph)	236	582	102	122	701	0	294	531	0	356	516	0
Confl. Peds. (#/hr)	12		9	9		12	13		4	4		13
Heavy Vehicles (%)	2%	2%	4%	4%	1%	4%	7%	3%	1%	1%	2%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Actuated Green, G (s)	33.0	24.9	24.9	35.8	26.3		42.0	30.6		39.4	29.3	
Effective Green, g (s)	33.0	26.9	26.9	35.8	28.3		42.0	32.6		39.4	31.3	
Actuated g/C Ratio	0.35	0.28	0.28	0.38	0.30		0.44	0.34		0.41	0.33	
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0		4.0	6.0	
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)	240	1012	435	300	1017		735	1172		391	1107	
v/s Ratio Prot	c0.08	0.16		0.04	0.21		0.05	0.16		c0.10	0.15	
v/s Ratio Perm	c0.26		0.07	0.11			0.13			c0.28		
v/c Ratio	0.98	0.58	0.24	0.41	0.69		0.40	0.45		0.91	0.47	
Uniform Delay, d1	26.7	29.2	26.2	20.7	29.5		16.9	24.3		23.1	25.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	53.1	0.8	0.3	0.9	2.0		0.4	0.3		24.8	1.4	
Delay (s)	79.7	30.0	26.5	21.6	31.5		17.2	24.6		47.9	26.7	
Level of Service	E	C	C	C	C		B	C		D	C	
Approach Delay (s)		38.9			30.1			22.0			35.0	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	95.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Appendix F

2026 Total Traffic Operations Reports – Scenario B

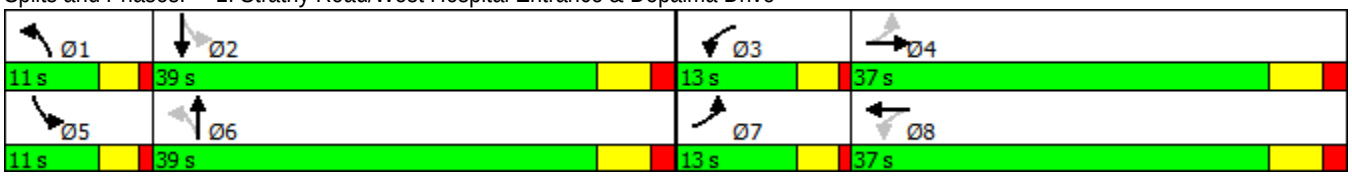
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	107	41	161	141	34	54	6	77	7	7	0
Future Volume (vph)	1	107	41	161	141	34	54	6	77	7	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	50.0		0.0	45.0		0.0	15.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		1.00	1.00		1.00	0.99		1.00		
Frt		0.958			0.971			0.861				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3363	0	1789	3421	0	1825	2916	0	1217	1642	0
Flt Permitted	0.629			0.537			0.659			0.694		
Satd. Flow (perm)	1201	3363	0	1011	3421	0	1260	2916	0	888	1642	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			31			86				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		81.0			199.0			243.9			67.7	
Travel Time (s)		5.8			14.3			17.6			4.9	
Confl. Peds. (#/hr)	9		1	1		9	5		1	1		5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	5%	0%	2%	3%	4%	0%	0%	7%	50%	17%	0%
Adj. Flow (vph)	1	119	46	179	157	38	60	7	86	8	8	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	165	0	179	195	0	60	93	0	8	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0		10.0	22.0		10.0	22.0		10.0	22.0	
Total Split (s)	13.0	37.0		13.0	37.0		11.0	39.0		11.0	39.0	
Total Split (%)	13.0%	37.0%		13.0%	37.0%		11.0%	39.0%		11.0%	39.0%	
Maximum Green (s)	9.0	31.0		9.0	31.0		7.0	33.0		7.0	33.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		25.0			25.0			23.0			23.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	24.3	18.2		29.8	28.2		23.4	22.2		21.5	18.2	
Actuated g/C Ratio	0.39	0.29		0.48	0.45		0.38	0.36		0.35	0.29	
v/c Ratio	0.00	0.16		0.31	0.12		0.11	0.08		0.02	0.02	
Control Delay	10.0	13.9		12.0	10.6		12.4	5.3		11.7	18.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	10.0	13.9		12.0	10.6		12.4	5.3		11.7	18.6	
LOS	A	B		B	B		B	A		B	B	
Approach Delay		13.9			11.3			8.1			15.1	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 62.1
Natural Cycle: 65
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.31
Intersection Signal Delay: 11.3 — Intersection LOS: B
Intersection Capacity Utilization 47.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Strathy Road/West Hospital Entrance & Depalma Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	1	165	179	195	60	93	8	8
v/c Ratio	0.00	0.16	0.31	0.12	0.11	0.08	0.02	0.02
Control Delay	10.0	13.9	12.0	10.6	12.4	5.3	11.7	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.0	13.9	12.0	10.6	12.4	5.3	11.7	18.6
Queue Length 50th (m)	0.1	5.8	12.6	5.7	4.3	0.3	0.6	0.7
Queue Length 95th (m)	0.8	12.6	24.1	14.6	10.4	5.0	2.7	3.6
Internal Link Dist (m)		57.0		175.0		219.9		43.7
Turn Bay Length (m)	20.0		50.0		45.0		15.0	
Base Capacity (vph)	619	1828	599	1853	539	1699	353	936
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.09	0.30	0.11	0.11	0.05	0.02	0.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	107	41	161	141	34	54	6	77	7	7	0
Future Volume (vph)	1	107	41	161	141	34	54	6	77	7	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.86		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1820	3364		1789	3422		1821	2918		1216	1642	
Flt Permitted	0.63	1.00		0.54	1.00		0.66	1.00		0.69	1.00	
Satd. Flow (perm)	1205	3364		1012	3422		1263	2918		888	1642	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	119	46	179	157	38	60	7	86	8	8	0
RTOR Reduction (vph)	0	32	0	0	18	0	0	58	0	0	0	0
Lane Group Flow (vph)	1	133	0	179	177	0	60	35	0	8	8	0
Confl. Peds. (#/hr)	9		1	1		9	5		1	1		5
Heavy Vehicles (%)	0%	5%	0%	2%	3%	4%	0%	0%	7%	50%	17%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	20.6	19.5		31.3	26.2		23.7	20.1		18.7	17.6	
Effective Green, g (s)	20.6	21.5		31.3	28.2		23.7	22.1		18.7	19.6	
Actuated g/C Ratio	0.30	0.31		0.46	0.41		0.35	0.32		0.27	0.29	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	372	1055		550	1408		466	941		247	469	
v/s Ratio Prot	0.00	0.04		c0.04	0.05		c0.01	0.01		0.00	0.00	
v/s Ratio Perm	0.00			c0.11			c0.04			0.01		
v/c Ratio	0.00	0.13		0.33	0.13		0.13	0.04		0.03	0.02	
Uniform Delay, d1	16.8	16.8		11.4	12.5		15.2	15.9		18.2	17.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.0		0.0	0.0		0.0	0.0	
Delay (s)	16.8	16.8		11.5	12.5		15.2	15.9		18.2	17.6	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		16.8			12.0			15.7			17.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	68.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

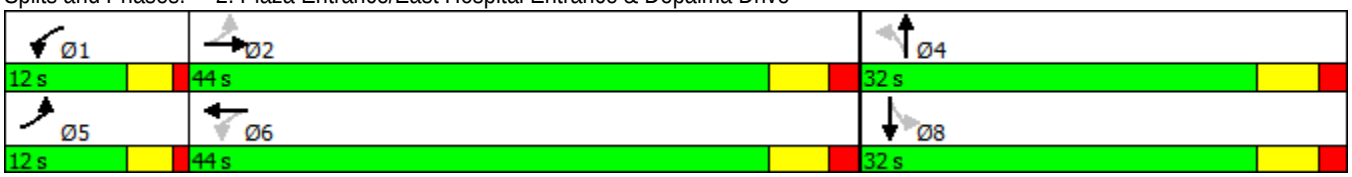
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	172	7	50	323	78	2	7	21	46	2	22
Future Volume (vph)	20	172	7	50	323	78	2	7	21	46	2	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	65.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.971			0.886			0.861	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1534	3399	0	1825	3434	0	1825	1628	0	1738	1567	0
Flt Permitted	0.479			0.547			0.739			0.736		
Satd. Flow (perm)	773	3399	0	1051	3434	0	1420	1628	0	1347	1567	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			44			25			26	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		199.0			195.0			41.1			35.9	
Travel Time (s)		14.3			14.0			3.0			2.6	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	19%	7%	0%	0%	4%	0%	0%	0%	6%	5%	0%	6%
Adj. Flow (vph)	24	205	8	60	385	93	2	8	25	55	2	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	213	0	60	478	0	2	33	0	55	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		22.0	22.0		22.0	22.0	
Total Split (s)	12.0	44.0		12.0	44.0		32.0	32.0		32.0	32.0	
Total Split (%)	13.6%	50.0%		13.6%	50.0%		36.4%	36.4%		36.4%	36.4%	
Maximum Green (s)	8.0	38.0		8.0	38.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		15.0			15.0		25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	21.5	18.2		23.1	22.0		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.43	0.36		0.46	0.44		0.36	0.36		0.36	0.36	
v/c Ratio	0.06	0.17		0.10	0.31		0.00	0.05		0.11	0.05	
Control Delay	6.9	12.2		7.1	9.5		12.0	7.4		13.2	6.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.9	12.2		7.1	9.5		12.0	7.4		13.2	6.5	
LOS	A	B		A	A		B	A		B	A	
Approach Delay		11.7			9.2			7.6			10.9	
Approach LOS		B			A			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 88
Actuated Cycle Length: 50.1
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.31
Intersection Signal Delay: 10.0 — Intersection LOS: A
Intersection Capacity Utilization 41.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Plaza Entrance/East Hospital Entrance & Depalma Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	24	213	60	478	2	33	55	28
v/c Ratio	0.06	0.17	0.10	0.31	0.00	0.05	0.11	0.05
Control Delay	6.9	12.2	7.1	9.5	12.0	7.4	13.2	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	12.2	7.1	9.5	12.0	7.4	13.2	6.5
Queue Length 50th (m)	1.0	7.3	2.6	11.0	0.2	0.5	3.7	0.2
Queue Length 95th (m)	3.4	12.6	6.3	24.4	1.2	4.5	9.2	3.8
Internal Link Dist (m)		175.0		171.0		17.1		11.9
Turn Bay Length (m)	65.0		50.0					
Base Capacity (vph)	472	2867	616	2903	802	930	761	896
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.07	0.10	0.16	0.00	0.04	0.07	0.03

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	172	7	50	323	78	2	7	21	46	2	22
Future Volume (vph)	20	172	7	50	323	78	2	7	21	46	2	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.89		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1534	3400		1825	3433		1825	1629		1738	1566	
Flt Permitted	0.48	1.00		0.55	1.00		0.74	1.00		0.74	1.00	
Satd. Flow (perm)	773	3400		1051	3433		1420	1629		1346	1566	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	24	205	8	60	385	93	2	8	25	55	2	26
RTOR Reduction (vph)	0	4	0	0	26	0	0	16	0	0	17	0
Lane Group Flow (vph)	24	209	0	60	452	0	2	17	0	55	11	0
Heavy Vehicles (%)	19%	7%	0%	0%	4%	0%	0%	0%	6%	5%	0%	6%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	18.7	17.6		23.3	19.9		16.2	16.2		16.2	16.2	
Effective Green, g (s)	18.7	19.6		23.3	21.9		18.2	18.2		18.2	18.2	
Actuated g/C Ratio	0.35	0.37		0.44	0.41		0.34	0.34		0.34	0.34	
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	287	1252		509	1413		485	557		460	535	
v/s Ratio Prot	0.00	0.06		c0.01	c0.13			0.01			0.01	
v/s Ratio Perm	0.03			0.04			0.00			c0.04		
v/c Ratio	0.08	0.17		0.12	0.32		0.00	0.03		0.12	0.02	
Uniform Delay, d1	11.4	11.3		8.7	10.6		11.5	11.6		12.0	11.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.0	0.1		0.0	0.0		0.1	0.0	
Delay (s)	11.4	11.4		8.8	10.7		11.5	11.7		12.1	11.6	
Level of Service	B	B		A	B		B	B		B	B	
Approach Delay (s)		11.4			10.5			11.6			11.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	53.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	22	48	57	21	99	104	364	104	77	684	310
Future Volume (vph)	109	22	48	57	21	99	104	364	104	77	684	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	40.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99							
Frt		0.897			0.876			0.967			0.953	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1772	3076	0	1674	1650	0	1807	3409	0	1789	3333	0
Flt Permitted	0.551			0.704			0.132			0.435		
Satd. Flow (perm)	1026	3076	0	1240	1650	0	251	3409	0	819	3333	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		53			110			44			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		195.0			157.6			247.7			73.6	
Travel Time (s)		14.0			11.3			17.8			5.3	
Confl. Peds. (#/hr)	2		1	1		2						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	0%	8%	9%	0%	1%	1%	4%	2%	2%	5%	3%
Adj. Flow (vph)	121	24	53	63	23	110	116	404	116	86	760	344
Shared Lane Traffic (%)												
Lane Group Flow (vph)	121	77	0	63	133	0	116	520	0	86	1104	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	8.0		6.0	8.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	14.0		10.0	14.0		10.0	42.0		10.0	42.0	
Total Split (s)	13.0	30.0		13.0	30.0		13.0	44.0		13.0	44.0	
Total Split (%)	13.0%	30.0%		13.0%	30.0%		13.0%	44.0%		13.0%	44.0%	
Maximum Green (s)	9.0	24.0		9.0	24.0		9.0	38.0		9.0	38.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Dont Walk (s)		24.0			24.0			25.0			25.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	18.6	12.4		16.7	11.5		41.0	35.0		38.6	33.8	
Actuated g/C Ratio	0.26	0.17		0.23	0.16		0.57	0.49		0.54	0.47	
v/c Ratio	0.34	0.13		0.19	0.37		0.37	0.31		0.16	0.68	
Control Delay	25.1	15.0		23.2	13.9		10.3	12.0		7.7	17.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.1	15.0		23.2	13.9		10.3	12.0		7.7	17.8	
LOS	C	B		C	B		B	B		A	B	
Approach Delay		21.2			16.9			11.7			17.1	
Approach LOS		C			B			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 71.9	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Burnham Street & Depalma Drive/White Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	121	77	63	133	116	520	86	1104
v/c Ratio	0.34	0.13	0.19	0.37	0.37	0.31	0.16	0.68
Control Delay	25.1	15.0	23.2	13.9	10.3	12.0	7.7	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	15.0	23.2	13.9	10.3	12.0	7.7	17.8
Queue Length 50th (m)	13.2	1.5	6.7	3.0	6.6	21.4	4.8	62.1
Queue Length 95th (m)	28.1	7.8	16.7	18.6	14.1	35.5	11.1	92.2
Internal Link Dist (m)		171.0		133.6		223.7		49.6
Turn Bay Length (m)	30.0		30.0		40.0		30.0	
Base Capacity (vph)	370	1229	369	709	354	2086	590	2029
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.06	0.17	0.19	0.33	0.25	0.15	0.54

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	22	48	57	21	99	104	364	104	77	684	310
Future Volume (vph)	109	22	48	57	21	99	104	364	104	77	684	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.88		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1771	3075		1674	1651		1807	3407		1789	3334	
Flt Permitted	0.55	1.00		0.70	1.00		0.13	1.00		0.44	1.00	
Satd. Flow (perm)	1027	3075		1241	1651		252	3407		820	3334	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	121	24	53	63	23	110	116	404	116	86	760	344
RTOR Reduction (vph)	0	44	0	0	93	0	0	23	0	0	47	0
Lane Group Flow (vph)	121	33	0	63	40	0	116	497	0	86	1057	0
Confl. Peds. (#/hr)	2		1	1		2						
Heavy Vehicles (%)	3%	0%	8%	9%	0%	1%	1%	4%	2%	2%	5%	3%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	16.4	10.2		14.6	9.3		38.9	32.9		36.5	31.7	
Effective Green, g (s)	16.4	12.2		14.6	11.3		38.9	34.9		36.5	33.7	
Actuated g/C Ratio	0.22	0.17		0.20	0.15		0.53	0.48		0.50	0.46	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	293	512		278	254		261	1624		472	1534	
v/s Ratio Prot	c0.03	0.01		0.02	0.02		c0.04	0.15		0.01	c0.32	
v/s Ratio Perm	c0.06			0.03			0.20			0.08		
v/c Ratio	0.41	0.06		0.23	0.16		0.44	0.31		0.18	0.69	
Uniform Delay, d1	23.7	25.7		24.4	26.8		10.9	11.7		9.7	15.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.1		0.2	0.3		0.4	0.1		0.1	1.3	
Delay (s)	24.0	25.7		24.5	27.1		11.3	11.8		9.8	16.9	
Level of Service	C	C		C	C		B	B		A	B	
Approach Delay (s)		24.7			26.3			11.7			16.4	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	73.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

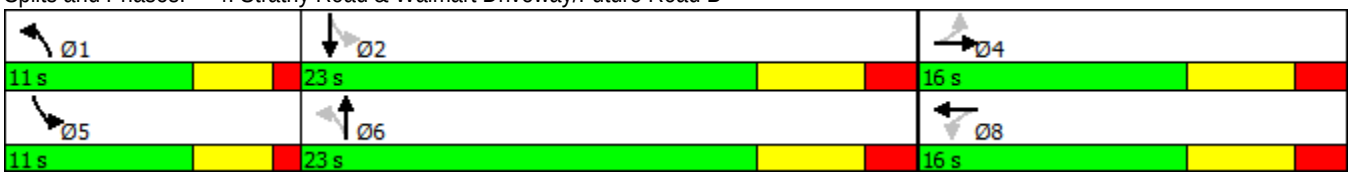
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	29	21	4	7	105	202	36	7	240	2
Future Volume (vph)	5	1	29	21	4	7	105	202	36	7	240	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	25.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00				0.99			1.00		1.00		
Frt		0.854			0.904			0.977			0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1460	1408	0	1825	1723	0	1789	3431	0	1825	3575	0
Flt Permitted	0.748			0.733			0.440			0.573		
Satd. Flow (perm)	1149	1408	0	1408	1723	0	829	3431	0	1100	3575	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					9			44			1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.6			86.8			309.2			243.9	
Travel Time (s)		7.4			6.2			22.3			17.6	
Confl. Peds. (#/hr)	1					1			1	1		
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	25%	0%	17%	0%	0%	0%	2%	3%	7%	0%	2%	0%
Adj. Flow (vph)	6	1	36	26	5	9	130	249	44	9	296	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	37	0	26	14	0	130	293	0	9	298	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4		8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		10.0	21.0		10.0	21.0	
Total Split (s)	16.0	16.0		16.0	16.0		11.0	23.0		11.0	23.0	
Total Split (%)	32.0%	32.0%		32.0%	32.0%		22.0%	46.0%		22.0%	46.0%	
Maximum Green (s)	10.0	10.0		10.0	10.0		7.0	17.0		7.0	17.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			18.0			18.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	13.6	15.0		13.6	15.0		21.7	25.5		18.6	19.7	
Actuated g/C Ratio	0.34	0.38		0.34	0.38		0.55	0.64		0.47	0.50	
v/c Ratio	0.02	0.07		0.05	0.02		0.20	0.13		0.01	0.17	
Control Delay	16.0	15.0		16.5	10.5		4.8	5.1		4.0	9.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.0	15.0		16.5	10.5		4.8	5.1		4.0	9.8	
LOS	B	B		B	B		A	A		A	A	
Approach Delay		15.2			14.4			5.0			9.7	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 39.7
Natural Cycle: 45
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.20
Intersection Signal Delay: 7.8 — Intersection LOS: A
Intersection Capacity Utilization 36.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Strathy Road & Walmart Driveway/Future Road B



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	6	37	26	14	130	293	9	298
v/c Ratio	0.02	0.07	0.05	0.02	0.20	0.13	0.01	0.17
Control Delay	16.0	15.0	16.5	10.5	4.8	5.1	4.0	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	15.0	16.5	10.5	4.8	5.1	4.0	9.8
Queue Length 50th (m)	0.4	2.4	1.8	0.3	3.6	3.5	0.3	8.2
Queue Length 95th (m)	2.3	6.9	5.8	3.0	7.4	11.1	1.2	13.2
Internal Link Dist (m)		78.6		62.8		285.2		219.9
Turn Bay Length (m)			30.0				25.0	
Base Capacity (vph)	354	520	434	643	675	2229	719	1898
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.07	0.06	0.02	0.19	0.13	0.01	0.16

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	29	21	4	7	105	202	36	7	240	2
Future Volume (vph)	5	1	29	21	4	7	105	202	36	7	240	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	0.90		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1459	1408		1825	1722		1789	3433		1824	3575	
Flt Permitted	0.75	1.00		0.73	1.00		0.44	1.00		0.57	1.00	
Satd. Flow (perm)	1150	1408		1408	1722		828	3433		1100	3575	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	6	1	36	26	5	9	130	249	44	9	296	2
RTOR Reduction (vph)	0	0	0	0	6	0	0	26	0	0	1	0
Lane Group Flow (vph)	6	37	0	26	8	0	130	267	0	9	297	0
Confl. Peds. (#/hr)	1					1			1	1		
Heavy Vehicles (%)	25%	0%	17%	0%	0%	0%	2%	3%	7%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	10.4	10.4		10.4	10.4		20.9	16.2		13.5	12.5	
Effective Green, g (s)	10.4	12.4		10.4	12.4		20.9	18.2		13.5	14.5	
Actuated g/C Ratio	0.24	0.28		0.24	0.28		0.48	0.42		0.31	0.33	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	274	400		335	489		500	1433		357	1188	
v/s Ratio Prot		c0.03			0.00		c0.03	0.08		0.00	0.08	
v/s Ratio Perm	0.01			0.02			c0.10			0.01		
v/c Ratio	0.02	0.09		0.08	0.02		0.26	0.19		0.03	0.25	
Uniform Delay, d1	12.7	11.5		12.9	11.2		6.6	8.0		10.4	10.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.0		0.3	0.1		0.0	0.1	
Delay (s)	12.7	11.6		13.0	11.2		6.8	8.1		10.5	10.7	
Level of Service	B	B		B	B		A	A		B	B	
Approach Delay (s)		11.7			12.4			7.7			10.7	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	43.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	19	58	0	6	5
Future Volume (vph)	0	19	58	0	6	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865				0.944	
Flt Protected				0.950	0.972	
Satd. Flow (prot)	1629	0	0	1789	1728	0
Flt Permitted				0.950	0.972	
Satd. Flow (perm)	1629	0	0	1789	1728	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	86.8			170.5	197.9	
Travel Time (s)	6.2			12.3	14.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	21	63	0	7	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	63	12	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	19	58	0	6	5
Future Volume (Veh/h)	0	19	58	0	6	5
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)	0	21	63	0	7	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)	87					
pX, platoon unblocked						
vC, conflicting volume			21		136	10
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			21		136	10
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		99	100
cM capacity (veh/h)			1595		823	1071

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	21	63	12
Volume Left	0	63	7
Volume Right	21	0	5
cSH	1700	1595	911
Volume to Capacity	0.01	0.04	0.01
Queue Length 95th (m)	0.0	0.9	0.3
Control Delay (s)	0.0	7.4	9.0
Lane LOS		A	A
Approach Delay (s)	0.0	7.4	9.0
Approach LOS			A

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	19.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	5	0	0	23	35	6
Future Volume (vph)	5	0	0	23	35	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.979	
Flt Protected					0.959	
Satd. Flow (prot)	1883	0	0	1883	1768	0
Flt Permitted					0.959	
Satd. Flow (perm)	1883	0	0	1883	1768	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	170.5			126.9	227.3	
Travel Time (s)	12.3			9.1	16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	0	0	25	38	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	0	25	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Yield			Yield	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Right Turn Channelized						
Traffic Volume (veh/h)	5	0	0	23	35	6
Future Volume (veh/h)	5	0	0	23	35	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	0	0	25	38	7
Approach Volume (veh/h)	5			25	45	
Crossing Volume (veh/h)	0			38	5	
High Capacity (veh/h)	1385			1344	1379	
High v/c (veh/h)	0.00			0.02	0.03	
Low Capacity (veh/h)	1161			1124	1156	
Low v/c (veh/h)	0.00			0.02	0.04	

Intersection Summary			
Maximum v/c High	0.03		
Maximum v/c Low	0.04		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	11	0	597	778	23
Future Volume (vph)	0	11	0	597	778	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	15.0	0.0	0.0			0.0
Storage Lanes	0	1	0			0
Taper Length (m)	30.0		30.0			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.865			0.996	
Flt Protected						
Satd. Flow (prot)	0	1629	0	3579	3564	0
Flt Permitted						
Satd. Flow (perm)	0	1629	0	3579	3564	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	126.9			284.3	247.7	
Travel Time (s)	9.1			20.5	17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	12	0	649	846	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	12	0	649	871	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Yield			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.2%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	11	0	597	778	23
Future Volume (Veh/h)	0	11	0	597	778	23
Sign Control	Yield			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	12	0	649	846	25
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				284	248	
pX, platoon unblocked	0.87	0.87	0.87			
vC, conflicting volume	1183	436	846			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	903	41	514			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	100			
cM capacity (veh/h)	240	885	908			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	12	324	324	564	307
Volume Left	0	0	0	0	0
Volume Right	12	0	0	0	25
cSH	885	1700	1700	1700	1700
Volume to Capacity	0.01	0.19	0.19	0.33	0.18
Queue Length 95th (m)	0.3	0.0	0.0	0.0	0.0
Control Delay (s)	9.1	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.1	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	32.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	35	0	0
Future Volume (vph)	0	0	0	35	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	124.0			57.0	227.3	
Travel Time (s)	8.9			4.1	16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	38	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	38	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	35	0	0
Future Volume (Veh/h)	0	0	0	35	0	0
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	0	0	38	0	0
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	38	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	38	0	0			
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	100	100			
cM capacity (veh/h)	974	1085	1623			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	38	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1623	1700
Volume to Capacity	0.00	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		

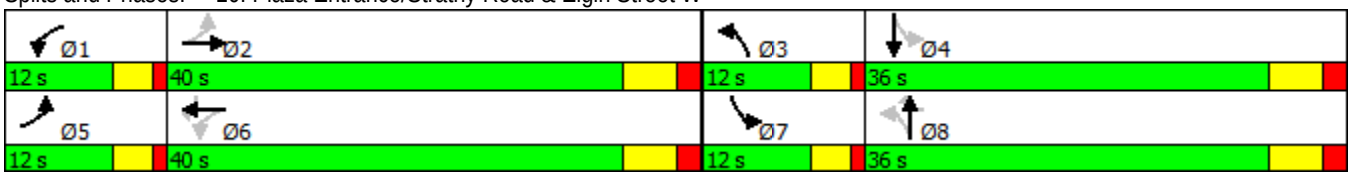
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	193	497	9	16	460	182	18	27	6	104	38	164
Future Volume (vph)	193	497	9	16	460	182	18	27	6	104	38	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		40.0	20.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00		0.99	1.00	1.00		1.00		0.98
Frt		0.997				0.850		0.974				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1807	3500	0	1825	3444	1601	1615	1867	0	1755	1921	1601
Flt Permitted	0.360			0.454			0.731			0.677		
Satd. Flow (perm)	684	3500	0	870	3444	1580	1238	1867	0	1249	1921	1574
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				192		6				173
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		86.1			116.2			44.7			309.2	
Travel Time (s)		6.2			8.4			3.2			22.3	
Confl. Peds. (#/hr)	1		3	3		1	4		1	1		4
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
Heavy Vehicles (%)	1%	4%	0%	0%	6%	2%	13%	0%	0%	4%	0%	2%
Adj. Flow (vph)	203	523	9	17	484	192	19	28	6	109	40	173
Shared Lane Traffic (%)												
Lane Group Flow (vph)	203	532	0	17	484	192	19	34	0	109	40	173
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane		Yes									Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Detector Phase	5	2		1	6	8	3	8		7	4	6
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0	12.0	6.0	12.0		6.0	12.0	10.0
Minimum Split (s)	10.0	32.0		10.0	32.0	39.0	10.0	39.0		10.0	39.0	32.0
Total Split (s)	12.0	40.0		12.0	40.0	36.0	12.0	36.0		12.0	36.0	40.0
Total Split (%)	12.0%	40.0%		12.0%	40.0%	36.0%	12.0%	36.0%		12.0%	36.0%	40.0%
Maximum Green (s)	8.0	34.0		8.0	34.0	30.0	8.0	30.0		8.0	30.0	34.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	Min	Min	Min		Min	Min	None
Walk Time (s)		10.0			10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		16.0			16.0	23.0		23.0			23.0	16.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	31.3	27.5		27.4	17.3	14.1	24.3	14.1		26.7	15.2	17.3
Actuated g/C Ratio	0.50	0.44		0.44	0.28	0.22	0.39	0.22		0.42	0.24	0.28
v/c Ratio	0.39	0.35		0.03	0.51	0.38	0.04	0.08		0.18	0.09	0.31
Control Delay	11.2	13.2		8.1	21.1	6.7	11.9	19.2		12.7	20.7	4.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	11.2	13.2		8.1	21.1	6.7	11.9	19.2		12.7	20.7	4.8
LOS	B	B		A	C	A	B	B		B	C	A
Approach Delay		12.7			16.8			16.6			9.5	
Approach LOS		B			B			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 62.9
Natural Cycle: 95
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 13.8 — Intersection LOS: B
Intersection Capacity Utilization 48.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 10: Plaza Entrance/Strathy Road & Elgin Street W



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	203	532	17	484	192	19	34	109	40	173
v/c Ratio	0.39	0.35	0.03	0.51	0.38	0.04	0.08	0.18	0.09	0.31
Control Delay	11.2	13.2	8.1	21.1	6.7	11.9	19.2	12.7	20.7	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	13.2	8.1	21.1	6.7	11.9	19.2	12.7	20.7	4.8
Queue Length 50th (m)	12.6	19.4	0.9	25.0	0.0	1.2	2.6	7.3	3.6	0.0
Queue Length 95th (m)	22.6	38.7	3.4	37.1	14.5	5.0	9.5	17.8	11.2	11.3
Internal Link Dist (m)		62.1		92.2			20.7		285.2	
Turn Bay Length (m)					40.0	20.0				
Base Capacity (vph)	520	2013	559	1980	901	574	957	622	982	978
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.26	0.03	0.24	0.21	0.03	0.04	0.18	0.04	0.18

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	193	497	9	16	460	182	18	27	6	104	38	164
Future Volume (vph)	193	497	9	16	460	182	18	27	6	104	38	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1807	3502		1824	3444	1581	1612	1866		1754	1921	1577
Flt Permitted	0.36	1.00		0.45	1.00	1.00	0.73	1.00		0.68	1.00	1.00
Satd. Flow (perm)	685	3502		872	3444	1581	1241	1866		1251	1921	1577
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	203	523	9	17	484	192	19	28	6	109	40	173
RTOR Reduction (vph)	0	1	0	0	0	151	0	5	0	0	0	119
Lane Group Flow (vph)	203	531	0	17	484	41	19	29	0	109	40	54
Confl. Peds. (#/hr)	1		3	3		1	4		1	1		4
Heavy Vehicles (%)	1%	4%	0%	0%	6%	2%	13%	0%	0%	4%	0%	2%
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Actuated Green, G (s)	30.6	25.5		19.7	18.6	12.1	18.3	12.1		20.7	13.3	18.6
Effective Green, g (s)	32.6	27.5		23.7	20.6	14.1	22.3	14.1		24.7	15.3	20.6
Actuated g/C Ratio	0.49	0.42		0.36	0.31	0.21	0.34	0.21		0.37	0.23	0.31
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	507	1456		357	1073	337	464	398		539	444	491
v/s Ratio Prot	c0.06	0.15		0.00	c0.14		0.01	0.02		c0.03	0.02	
v/s Ratio Perm	0.14			0.01		0.03	0.01			0.05		0.03
v/c Ratio	0.40	0.36		0.05	0.45	0.12	0.04	0.07		0.20	0.09	0.11
Uniform Delay, d1	9.9	13.3		13.7	18.2	21.0	14.7	20.8		13.8	19.9	16.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	0.2		0.1	0.3	0.2	0.0	0.1		0.2	0.1	0.1
Delay (s)	10.4	13.4		13.8	18.5	21.2	14.7	20.9		14.0	20.0	16.3
Level of Service	B	B		B	B	C	B	C		B	C	B
Approach Delay (s)		12.6			19.1			18.7			16.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	66.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	574	18	67	641	1	20
Future Volume (vph)	574	18	67	641	1	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		30.0	50.0		0.0	0.0
Storage Lanes		1	1		1	0
Taper Length (m)			30.0		30.0	
Lane Util. Factor	0.95	1.00	0.91	0.91	1.00	1.00
Frt		0.850			0.871	
Flt Protected				0.995	0.998	
Satd. Flow (prot)	3510	1633	0	4950	1670	0
Flt Permitted				0.995	0.998	
Satd. Flow (perm)	3510	1633	0	4950	1670	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	116.2			158.6	66.6	
Travel Time (s)	8.4			11.4	4.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	0%	0%	6%	0%	0%
Adj. Flow (vph)	598	19	70	668	1	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	598	19	0	738	22	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	574	18	67	641	1	20
Future Volume (Veh/h)	574	18	67	641	1	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	598	19	70	668	1	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)	116			312		
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			617		961	299
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			393		769	45
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		100	98
cM capacity (veh/h)			1076		292	934

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	299	299	19	204	267	267	22
Volume Left	0	0	0	70	0	0	1
Volume Right	0	0	19	0	0	0	21
cSH	1700	1700	1700	1076	1700	1700	849
Volume to Capacity	0.18	0.18	0.01	0.07	0.16	0.16	0.03
Queue Length 95th (m)	0.0	0.0	0.0	1.6	0.0	0.0	0.6
Control Delay (s)	0.0	0.0	0.0	3.3	0.0	0.0	9.4
Lane LOS				A			A
Approach Delay (s)	0.0			0.9			9.4
Approach LOS							A

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	523	0	59	708	83	9	0	17	0	0	20
Future Volume (vph)	13	523	0	59	708	83	9	0	17	0	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	40.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.984			0.913			0.865	
Flt Protected	0.950			0.950				0.982				
Satd. Flow (prot)	1825	3544	0	1738	3438	0	0	1590	0	0	1362	0
Flt Permitted	0.950			0.950				0.982				
Satd. Flow (perm)	1825	3544	0	1738	3438	0	0	1590	0	0	1362	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		158.6			152.8			56.6			57.0	
Travel Time (s)		11.4			11.0			4.1			4.1	
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
Heavy Vehicles (%)	0%	3%	7%	5%	5%	0%	0%	0%	13%	20%	0%	22%
Adj. Flow (vph)	14	556	0	63	753	88	10	0	18	0	0	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	556	0	63	841	0	0	28	0	0	21	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 43.8%	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)	13	523	0	59	708	83	9	0	17	0	0	20
Future Volume (Veh/h)	13	523	0	59	708	83	9	0	17	0	0	20
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)	14	556	0	63	753	88	10	0	18	0	0	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)		275			153							
pX, platoon unblocked	0.99			0.99			0.99	0.99	0.99	0.99	0.99	0.99
vC, conflicting volume	841			556			1108	1551	278	1247	1507	420
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	815			537			1057	1504	257	1197	1460	389
tC, single (s)	4.1			4.2			7.5	6.5	7.2	7.9	6.5	7.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.4	3.7	4.0	3.5
p0 queue free %	98			94			94	100	97	100	100	96
cM capacity (veh/h)	811			999			163	112	705	111	119	549

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	14	371	185	63	502	339	28	21
Volume Left	14	0	0	63	0	0	10	0
Volume Right	0	0	0	0	0	88	18	21
cSH	811	1700	1700	999	1700	1700	322	549
Volume to Capacity	0.02	0.22	0.11	0.06	0.30	0.20	0.09	0.04
Queue Length 95th (m)	0.4	0.0	0.0	1.5	0.0	0.0	2.2	0.9
Control Delay (s)	9.5	0.0	0.0	8.8	0.0	0.0	17.2	11.8
Lane LOS	A			A			C	B
Approach Delay (s)	0.2			0.6			17.2	11.8
Approach LOS							C	B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		

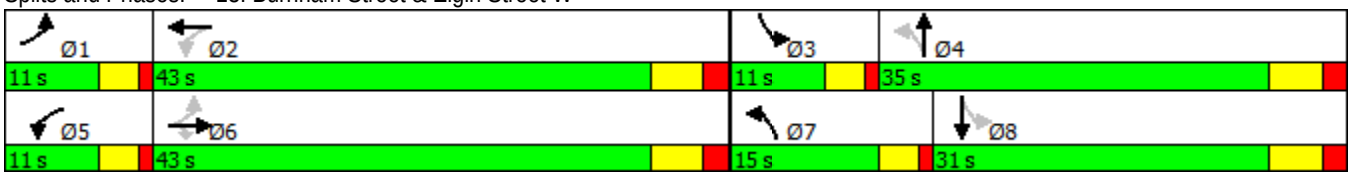
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	289	182	134	391	206	210	279	133	182	329	147
Future Volume (vph)	98	289	182	134	391	206	210	279	133	182	329	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		60.0	60.0		0.0	0.0		0.0	55.0		0.0
Storage Lanes	1		1	1		0	2		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00		0.98	1.00	0.99			0.99		1.00		
Frt			0.850		0.948			0.951			0.954	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1706	3544	1498	1706	3288	0	3340	3318	0	1807	3371	0
Flt Permitted	0.245			0.471			0.334			0.460		
Satd. Flow (perm)	439	3544	1470	842	3288	0	1174	3318	0	872	3371	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			198		112			83			70	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		152.8			145.4			322.3			284.3	
Travel Time (s)		11.0			10.5			23.2			20.5	
Confl. Peds. (#/hr)	5		9	9		5			6	6		
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
Heavy Vehicles (%)	7%	3%	9%	7%	5%	4%	6%	4%	4%	1%	3%	4%
Adj. Flow (vph)	107	314	198	146	425	224	228	303	145	198	358	160
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	314	198	146	649	0	228	448	0	198	518	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Detector Phase	1	6	6	5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0	16.0	6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0		10.0	34.0		10.0	34.0	
Total Split (s)	11.0	43.0	43.0	11.0	43.0		15.0	35.0		11.0	31.0	
Total Split (%)	11.0%	43.0%	43.0%	11.0%	43.0%		15.0%	35.0%		11.0%	31.0%	
Maximum Green (s)	7.0	37.0	37.0	7.0	37.0		11.0	29.0		7.0	25.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		32.0	32.0		32.0			21.0			21.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	30.0	23.2	23.2	31.1	25.6		41.7	32.4		37.2	30.1	
Actuated g/C Ratio	0.35	0.27	0.27	0.36	0.30		0.49	0.38		0.43	0.35	
v/c Ratio	0.42	0.33	0.37	0.39	0.61		0.28	0.34		0.44	0.42	
Control Delay	21.8	25.9	5.7	20.4	24.6		12.9	16.7		17.0	20.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.8	25.9	5.7	20.4	24.6		12.9	16.7		17.0	20.3	
LOS	C	C	A	C	C		B	B		B	C	
Approach Delay		18.7			23.8			15.5			19.4	
Approach LOS		B			C			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 85.7
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 19.5 — Intersection LOS: B
Intersection Capacity Utilization 64.3% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 13: Burnham Street & Elgin Street W



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	107	314	198	146	649	228	448	198	518
v/c Ratio	0.42	0.33	0.37	0.39	0.61	0.28	0.34	0.44	0.42
Control Delay	21.8	25.9	5.7	20.4	24.6	12.9	16.7	17.0	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.8	25.9	5.7	20.4	24.6	12.9	16.7	17.0	20.3
Queue Length 50th (m)	11.0	21.6	0.0	15.3	41.1	9.5	21.4	16.9	28.4
Queue Length 95th (m)	21.3	32.7	14.3	27.9	59.3	18.2	37.5	34.2	48.8
Internal Link Dist (m)		128.8			121.4		298.3		260.3
Turn Bay Length (m)	45.0		60.0	60.0				55.0	
Base Capacity (vph)	258	1620	779	376	1563	874	1313	454	1230
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.19	0.25	0.39	0.42	0.26	0.34	0.44	0.42

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	289	182	134	391	206	210	279	133	182	329	147
Future Volume (vph)	98	289	182	134	391	206	210	279	133	182	329	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1705	3544	1471	1703	3290		3340	3320		1805	3370	
Flt Permitted	0.24	1.00	1.00	0.47	1.00		0.33	1.00		0.46	1.00	
Satd. Flow (perm)	439	3544	1471	844	3290		1173	3320		875	3370	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	314	198	146	425	224	228	303	145	198	358	160
RTOR Reduction (vph)	0	0	143	0	79	0	0	52	0	0	46	0
Lane Group Flow (vph)	107	314	55	146	570	0	228	396	0	198	472	0
Confl. Peds. (#/hr)	5		9	9		5			6	6		
Heavy Vehicles (%)	7%	3%	9%	7%	5%	4%	6%	4%	4%	1%	3%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Actuated Green, G (s)	27.6	22.1	22.1	30.6	23.6		39.7	30.4		35.1	28.1	
Effective Green, g (s)	27.6	24.1	24.1	30.6	25.6		39.7	32.4		35.1	30.1	
Actuated g/C Ratio	0.32	0.28	0.28	0.35	0.30		0.46	0.37		0.41	0.35	
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0		4.0	6.0	
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)	220	987	409	368	973		771	1243		430	1172	
v/s Ratio Prot	0.03	0.09		c0.03	c0.17		c0.03	0.12		c0.04	0.14	
v/s Ratio Perm	0.12		0.04	0.11			0.10			c0.15		
v/c Ratio	0.49	0.32	0.13	0.40	0.59		0.30	0.32		0.46	0.40	
Uniform Delay, d1	21.9	24.7	23.4	19.9	25.9		14.1	19.2		17.2	21.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.2	0.2	0.7	0.9		0.2	0.1		0.8	1.0	
Delay (s)	23.6	24.9	23.5	20.6	26.8		14.3	19.4		18.0	22.4	
Level of Service	C	C	C	C	C		B	B		B	C	
Approach Delay (s)		24.2			25.7			17.6			21.2	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	86.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

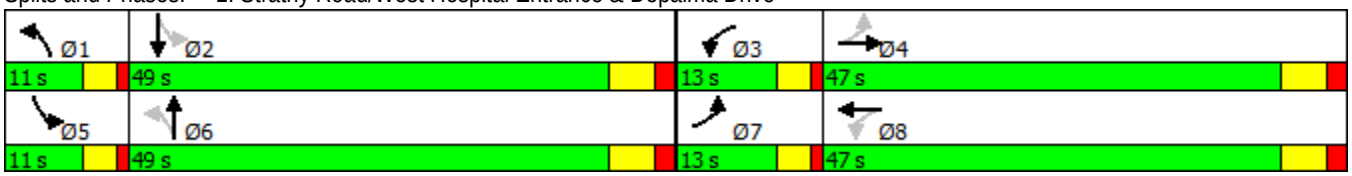
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	261	89	157	180	13	95	11	151	54	33	11
Future Volume (vph)	0	261	89	157	180	13	95	11	151	54	33	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	50.0		0.0	45.0		0.0	15.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00	1.00		0.98	0.99		1.00	0.99	
Frt		0.962			0.990			0.861			0.962	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	1921	3472	0	1789	3507	0	1825	3048	0	1825	1741	0
Flt Permitted				0.354			0.665			0.635		
Satd. Flow (perm)	1921	3472	0	666	3507	0	1250	3048	0	1219	1741	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			7			172			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		81.0			199.0			243.9			67.7	
Travel Time (s)		5.8			14.3			17.6			4.9	
Confl. Peds. (#/hr)	20		3	3		20	19		1	1		19
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	1%	0%	2%	3%	0%	0%	0%	2%	0%	7%	0%
Adj. Flow (vph)	0	297	101	178	205	15	108	13	172	61	38	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	398	0	178	220	0	108	185	0	61	51	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0		10.0	22.0		10.0	22.0		10.0	22.0	
Total Split (s)	13.0	47.0		13.0	47.0		11.0	49.0		11.0	49.0	
Total Split (%)	10.8%	39.2%		10.8%	39.2%		9.2%	40.8%		9.2%	40.8%	
Maximum Green (s)	9.0	41.0		9.0	41.0		7.0	43.0		7.0	43.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		25.0			25.0			23.0			23.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)		18.1		30.1	30.1		24.4	20.4		23.0	18.1	
Actuated g/C Ratio		0.28		0.47	0.47		0.38	0.32		0.36	0.28	
v/c Ratio		0.40		0.40	0.13		0.20	0.17		0.12	0.10	
Control Delay		18.9		13.9	10.5		13.1	4.9		12.4	15.9	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		18.9		13.9	10.5		13.1	4.9		12.4	15.9	
LOS		B		B	B		B	A		B	B	
Approach Delay		18.9			12.0			7.9			14.0	
Approach LOS		B			B			A			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 64.6	
Natural Cycle: 65	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 13.5	Intersection LOS: B
Intersection Capacity Utilization 62.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Strathy Road/West Hospital Entrance & Depalma Drive



Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	398	178	220	108	185	61	51
v/c Ratio	0.40	0.40	0.13	0.20	0.17	0.12	0.10
Control Delay	18.9	13.9	10.5	13.1	4.9	12.4	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	13.9	10.5	13.1	4.9	12.4	15.9
Queue Length 50th (m)	19.0	12.9	7.7	7.9	0.6	4.3	3.6
Queue Length 95th (m)	29.8	23.3	13.1	16.1	6.8	10.2	10.6
Internal Link Dist (m)	57.0		175.0		219.9		43.7
Turn Bay Length (m)		50.0		45.0		15.0	
Base Capacity (vph)	2343	468	2355	535	2191	510	1226
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.38	0.09	0.20	0.08	0.12	0.04

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	261	89	157	180	13	95	11	151	54	33	11
Future Volume (vph)	0	261	89	157	180	13	95	11	151	54	33	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00	0.95		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt		0.96		1.00	0.99		1.00	0.86		1.00	0.96	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3473		1789	3509		1812	3047		1824	1745	
Flt Permitted		1.00		0.35	1.00		0.66	1.00		0.64	1.00	
Satd. Flow (perm)		3473		667	3509		1268	3047		1220	1745	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	297	101	178	205	15	108	12	172	61	38	12
RTOR Reduction (vph)	0	32	0	0	4	0	0	119	0	0	9	0
Lane Group Flow (vph)	0	366	0	178	216	0	108	66	0	61	42	0
Confl. Peds. (#/hr)	20		3	3		20	19		1	1		19
Heavy Vehicles (%)	0%	1%	0%	2%	3%	0%	0%	0%	2%	0%	7%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)		16.1		28.1	28.1		23.6	18.4		20.6	16.9	
Effective Green, g (s)		18.1		28.1	30.1		23.6	20.4		20.6	18.9	
Actuated g/C Ratio		0.27		0.42	0.45		0.36	0.31		0.31	0.29	
Clearance Time (s)		6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)		3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)		949		418	1595		494	938		413	498	
v/s Ratio Prot		0.11		c0.05	0.06		c0.02	0.02		0.01	0.02	
v/s Ratio Perm				c0.13			c0.06			0.04		
v/c Ratio		0.39		0.43	0.14		0.22	0.07		0.15	0.08	
Uniform Delay, d1		19.5		12.5	10.5		14.6	16.2		16.2	17.3	
Progression Factor		1.00		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		0.1	0.1	
Delay (s)		19.8		12.8	10.5		14.7	16.2		16.3	17.4	
Level of Service		B		B	B		B	B		B	B	
Approach Delay (s)		19.8			11.5			15.7			16.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	66.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

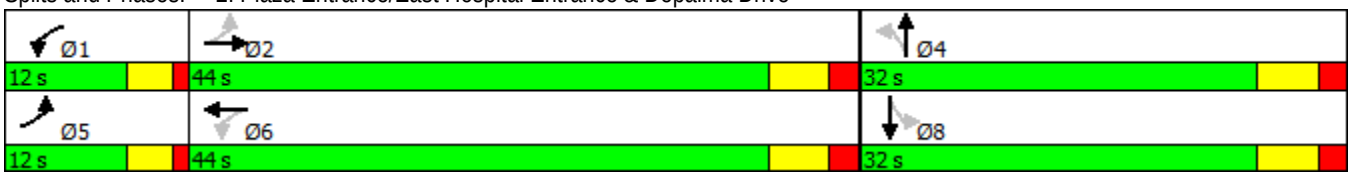
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	438	16	98	352	23	12	7	99	68	4	24
Future Volume (vph)	16	438	16	98	352	23	12	7	99	68	4	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	65.0		0.0	50.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00			1.00				0.99	
Frt		0.995			0.991			0.859			0.870	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1587	3629	0	1825	3551	0	1825	1635	0	1789	1584	0
Flt Permitted	0.517			0.356			0.738			0.685		
Satd. Flow (perm)	864	3629	0	683	3551	0	1417	1635	0	1290	1584	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			10			105			26	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		199.0			195.0			41.1			35.9	
Travel Time (s)		14.3			14.0			3.0			2.6	
Confl. Peds. (#/hr)			1	1			1					1
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
Heavy Vehicles (%)	15%	0%	0%	0%	2%	0%	0%	0%	1%	2%	0%	5%
Adj. Flow (vph)	17	466	17	104	374	24	13	7	105	72	4	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	483	0	104	398	0	13	112	0	72	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0		6.0	16.0		16.0	16.0		16.0	16.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		22.0	22.0		22.0	22.0	
Total Split (s)	12.0	44.0		12.0	44.0		32.0	32.0		32.0	32.0	
Total Split (%)	13.6%	50.0%		13.6%	50.0%		36.4%	36.4%		36.4%	36.4%	
Maximum Green (s)	8.0	38.0		8.0	38.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		15.0			15.0		25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	22.9	18.3		25.9	24.5		18.1	18.1		18.1	18.1	
Actuated g/C Ratio	0.44	0.35		0.49	0.47		0.34	0.34		0.34	0.34	
v/c Ratio	0.04	0.38		0.22	0.24		0.03	0.18		0.16	0.05	
Control Delay	6.6	14.6		7.8	9.3		13.1	4.9		14.5	7.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.6	14.6		7.8	9.3		13.1	4.9		14.5	7.0	
LOS	A	B		A	A		B	A		B	A	
Approach Delay		14.3			9.0			5.7			12.3	
Approach LOS		B			A			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 88
Actuated Cycle Length: 52.6
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.38
Intersection Signal Delay: 11.1 — Intersection LOS: B
Intersection Capacity Utilization 42.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Plaza Entrance/East Hospital Entrance & Depalma Drive



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	17	483	104	398	13	112	72	30
v/c Ratio	0.04	0.38	0.22	0.24	0.03	0.18	0.16	0.05
Control Delay	6.6	14.6	7.8	9.3	13.1	4.9	14.5	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.6	14.6	7.8	9.3	13.1	4.9	14.5	7.0
Queue Length 50th (m)	0.7	18.3	4.7	9.6	0.8	0.4	4.9	0.3
Queue Length 95th (m)	2.8	29.7	10.2	23.3	3.8	8.9	13.0	4.7
Internal Link Dist (m)		175.0		171.0		17.1		11.9
Turn Bay Length (m)	65.0		50.0					
Base Capacity (vph)	512	2849	513	2789	760	926	692	861
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.17	0.20	0.14	0.02	0.12	0.10	0.03

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	438	16	98	352	23	12	7	99	68	4	24
Future Volume (vph)	16	438	16	98	352	23	12	7	99	68	4	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.86		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1587	3628		1825	3550		1824	1636		1789	1585	
Flt Permitted	0.52	1.00		0.36	1.00		0.74	1.00		0.68	1.00	
Satd. Flow (perm)	864	3628		684	3550		1416	1636		1290	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)	17	466	17	104	374	24	13	7	105	72	4	26
RTOR Reduction (vph)	0	3	0	0	6	0	0	71	0	0	18	0
Lane Group Flow (vph)	17	480	0	104	392	0	13	41	0	72	12	0
Confl. Peds. (#/hr)			1	1			1					1
Heavy Vehicles (%)	15%	0%	0%	0%	2%	0%	0%	0%	1%	2%	0%	5%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	19.7	18.6		27.5	22.5		16.1	16.1		16.1	16.1	
Effective Green, g (s)	19.7	20.6		27.5	24.5		18.1	18.1		18.1	18.1	
Actuated g/C Ratio	0.35	0.37		0.49	0.44		0.32	0.32		0.32	0.32	
Clearance Time (s)	4.0	6.0		4.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	319	1341		440	1561		460	531		419	515	
v/s Ratio Prot	0.00	c0.13		c0.02	0.11			0.03			0.01	
v/s Ratio Perm	0.02			0.10			0.01			c0.06		
v/c Ratio	0.05	0.36		0.24	0.25		0.03	0.08		0.17	0.02	
Uniform Delay, d1	11.8	12.7		7.9	9.8		12.8	13.0		13.4	12.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.2		0.1	0.1		0.0	0.1		0.2	0.0	
Delay (s)	11.8	12.9		8.0	9.9		12.8	13.1		13.6	12.8	
Level of Service	B	B		A	A		B	B		B	B	
Approach Delay (s)		12.9			9.5			13.1			13.4	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	55.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

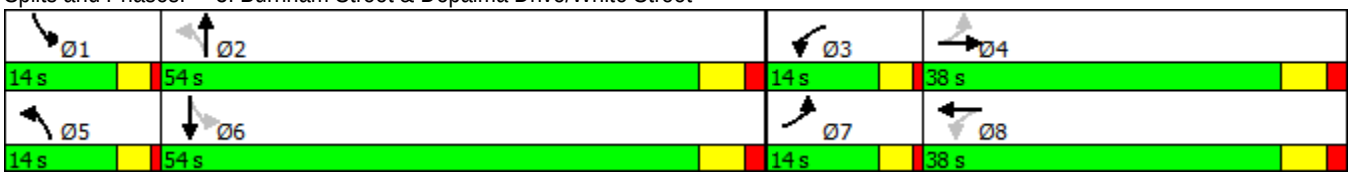
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	387	44	168	90	38	143	116	595	87	62	588	315
Future Volume (vph)	387	44	168	90	38	143	116	595	87	62	588	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	30.0		0.0	40.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99		1.00								
Frt		0.881			0.882			0.981			0.948	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1807	3152	0	1706	1655	0	1807	3472	0	1825	3382	0
Flt Permitted	0.318			0.617			0.143			0.330		
Satd. Flow (perm)	605	3152	0	1105	1655	0	272	3472	0	634	3382	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		171			146			17			101	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		195.0			157.6			241.3			73.6	
Travel Time (s)		14.0			11.3			17.4			5.3	
Confl. Peds. (#/hr)			3	3								
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	0%	1%	7%	0%	3%	1%	3%	4%	0%	3%	1%
Adj. Flow (vph)	395	45	171	92	39	146	118	607	89	63	600	321
Shared Lane Traffic (%)												
Lane Group Flow (vph)	395	216	0	92	185	0	118	696	0	63	921	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	8.0		6.0	8.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	14.0		10.0	14.0		10.0	42.0		10.0	42.0	
Total Split (s)	14.0	38.0		14.0	38.0		14.0	54.0		14.0	54.0	
Total Split (%)	11.7%	31.7%		11.7%	31.7%		11.7%	45.0%		11.7%	45.0%	
Maximum Green (s)	10.0	32.0		10.0	32.0		10.0	48.0		10.0	48.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Dont Walk (s)		24.0			24.0			25.0			25.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	24.4	16.6		19.0	11.5		38.8	32.3		34.6	28.2	
Actuated g/C Ratio	0.33	0.22		0.26	0.15		0.52	0.44		0.47	0.38	
v/c Ratio	1.09	0.26		0.27	0.49		0.39	0.46		0.16	0.68	
Control Delay	98.9	9.5		21.6	14.2		11.9	16.0		9.1	19.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	98.9	9.5		21.6	14.2		11.9	16.0		9.1	19.8	
LOS	F	A		C	B		B	B		A	B	
Approach Delay		67.3			16.7			15.4			19.1	
Approach LOS		E			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 74.2
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.09
Intersection Signal Delay: 28.7 — Intersection LOS: C
Intersection Capacity Utilization 78.3% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Burnham Street & Depalma Drive/White Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	395	216	92	185	118	696	63	921
v/c Ratio	1.09	0.26	0.27	0.49	0.39	0.46	0.16	0.68
Control Delay	98.9	9.5	21.6	14.2	11.9	16.0	9.1	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.9	9.5	21.6	14.2	11.9	16.0	9.1	19.8
Queue Length 50th (m)	~45.3	2.6	8.6	4.7	7.0	33.8	3.6	46.5
Queue Length 95th (m)	#122.6	12.9	22.5	24.0	15.9	54.5	9.6	76.0
Internal Link Dist (m)		171.0		133.6		217.3		49.6
Turn Bay Length (m)	30.0		30.0		40.0		30.0	
Base Capacity (vph)	364	1562	405	850	357	2388	491	2353
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.14	0.23	0.22	0.33	0.29	0.13	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	387	44	168	90	38	143	116	595	87	62	588	315
Future Volume (vph)	387	44	168	90	38	143	116	595	87	62	588	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.88		1.00	0.88		1.00	0.98		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1807	3156		1704	1655		1807	3472		1825	3381	
Flt Permitted	0.32	1.00		0.62	1.00		0.14	1.00		0.33	1.00	
Satd. Flow (perm)	605	3156		1106	1655		272	3472		633	3381	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	395	45	171	92	39	146	118	607	89	63	600	321
RTOR Reduction (vph)	0	134	0	0	122	0	0	10	0	0	62	0
Lane Group Flow (vph)	395	82	0	92	63	0	118	686	0	63	859	0
Confl. Peds. (#/hr)			3	3								
Heavy Vehicles (%)	1%	0%	1%	7%	0%	3%	1%	3%	4%	0%	3%	1%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.6	14.6		16.4	10.4		38.2	30.2		32.0	27.1	
Effective Green, g (s)	24.6	16.6		16.4	12.4		38.2	32.2		32.0	29.1	
Actuated g/C Ratio	0.32	0.22		0.22	0.16		0.50	0.43		0.42	0.38	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)	358	692		287	271		299	1476		344	1299	
v/s Ratio Prot	c0.15	0.03		0.03	0.04		c0.04	0.20		0.01	c0.25	
v/s Ratio Perm	c0.21			0.04			0.16			0.07		
v/c Ratio	1.10	0.12		0.32	0.23		0.39	0.46		0.18	0.66	
Uniform Delay, d1	23.4	23.7		24.6	27.5		12.1	15.6		13.2	19.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	78.4	0.1		0.2	0.4		0.3	0.2		0.1	1.3	
Delay (s)	101.8	23.8		24.8	28.0		12.4	15.8		13.3	20.5	
Level of Service	F	C		C	C		B	B		B	C	
Approach Delay (s)		74.2			26.9			15.3			20.0	
Approach LOS		E			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	75.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

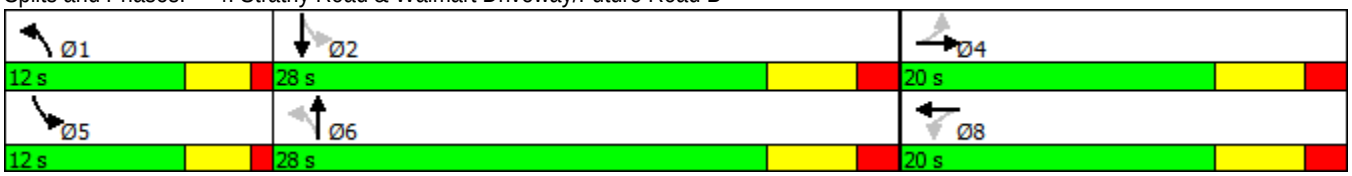
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	2	69	87	11	42	130	335	53	18	347	1
Future Volume (vph)	7	2	69	87	11	42	130	335	53	18	347	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	30.0		0.0	0.0		0.0	25.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Frt		0.854			0.882			0.979				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	1545	0	1825	1674	0	1825	3503	0	1825	3614	0
Flt Permitted	0.717			0.704			0.421			0.494		
Satd. Flow (perm)	1373	1545	0	1352	1674	0	808	3503	0	948	3614	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					48			35				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.6			89.2			307.9			243.9	
Travel Time (s)		7.4			6.4			22.2			17.6	
Confl. Peds. (#/hr)	5		1	1		5	1		1	1		1
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
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	8	2	79	100	13	48	149	385	61	21	399	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	81	0	100	61	0	149	446	0	21	400	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane								Yes				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4		8	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		10.0	21.0		10.0	21.0	
Total Split (s)	20.0	20.0		20.0	20.0		12.0	28.0		12.0	28.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		20.0%	46.7%		20.0%	46.7%	
Maximum Green (s)	14.0	14.0		14.0	14.0		8.0	22.0		8.0	22.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0		0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			18.0			18.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	9.5	11.6		9.5	11.6		25.5	24.1		21.8	17.3	
Actuated g/C Ratio	0.21	0.25		0.21	0.25		0.56	0.53		0.48	0.38	
v/c Ratio	0.03	0.21		0.35	0.13		0.24	0.24		0.04	0.29	
Control Delay	15.6	16.1		20.6	7.4		5.9	6.9		5.1	12.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.6	16.1		20.6	7.4		5.9	6.9		5.1	12.0	
LOS	B	B		C	A		A	A		A	B	
Approach Delay		16.0			15.6			6.6			11.7	
Approach LOS		B			B			A			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 45.7	
Natural Cycle: 45	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 10.1	Intersection LOS: B
Intersection Capacity Utilization 42.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Strathy Road & Walmart Driveway/Future Road B



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	8	81	100	61	149	446	21	400
v/c Ratio	0.03	0.21	0.35	0.13	0.24	0.24	0.04	0.29
Control Delay	15.6	16.1	20.6	7.4	5.9	6.9	5.1	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.6	16.1	20.6	7.4	5.9	6.9	5.1	12.0
Queue Length 50th (m)	0.6	5.5	7.3	0.8	4.4	6.5	0.6	12.0
Queue Length 95th (m)	3.0	13.2	16.9	6.8	11.5	21.9	2.7	22.3
Internal Link Dist (m)		78.6		65.2		283.9		219.9
Turn Bay Length (m)			30.0				25.0	
Base Capacity (vph)	428	551	422	628	633	2077	641	1934
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.15	0.24	0.10	0.24	0.21	0.03	0.21

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	2	69	87	11	42	130	335	53	18	347	1
Future Volume (vph)	7	2	69	87	11	42	130	335	53	18	347	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.0		6.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	0.88		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1820	1545		1824	1675		1825	3504		1825	3613	
Flt Permitted	0.72	1.00		0.70	1.00		0.42	1.00		0.49	1.00	
Satd. Flow (perm)	1374	1545		1352	1675		808	3504		949	3613	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	8	2	79	100	13	48	149	385	61	21	399	1
RTOR Reduction (vph)	0	0	0	0	37	0	0	18	0	0	0	0
Lane Group Flow (vph)	8	81	0	100	24	0	149	428	0	21	400	0
Confl. Peds. (#/hr)	5		1	1		5	1		1	1		1
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	9.5	9.5		9.5	9.5		27.2	22.1		18.7	17.6	
Effective Green, g (s)	9.5	11.5		9.5	11.5		27.2	24.1		18.7	19.6	
Actuated g/C Ratio	0.20	0.24		0.20	0.24		0.56	0.49		0.38	0.40	
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	268	364		263	395		568	1734		384	1454	
v/s Ratio Prot		0.05			0.01		c0.03	c0.12		0.00	0.11	
v/s Ratio Perm	0.01			c0.07			0.12			0.02		
v/c Ratio	0.03	0.22		0.38	0.06		0.26	0.25		0.05	0.28	
Uniform Delay, d1	15.9	15.0		17.0	14.4		5.4	7.1		9.3	9.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.3		0.9	0.1		0.2	0.1		0.1	0.1	
Delay (s)	15.9	15.3		18.0	14.5		5.6	7.2		9.4	9.9	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		15.4			16.6			6.8			9.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	48.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	8	23	0	46	37
Future Volume (vph)	0	8	23	0	46	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865				0.940	
Flt Protected				0.950	0.973	
Satd. Flow (prot)	1629	0	0	1789	1723	0
Flt Permitted				0.950	0.973	
Satd. Flow (perm)	1629	0	0	1789	1723	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	89.2			135.3	203.0	
Travel Time (s)	6.4			9.7	14.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	9	25	0	50	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	9	0	0	25	90	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.4%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	8	23	0	46	37
Future Volume (Veh/h)	0	8	23	0	46	37
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)	0	9	25	0	50	40
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	89					
pX, platoon unblocked						
vC, conflicting volume			9		54	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			9		54	4
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		95	96
cM capacity (veh/h)			1611		939	1079

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	9	25	90
Volume Left	0	25	50
Volume Right	9	0	40
cSH	1700	1611	996
Volume to Capacity	0.01	0.02	0.09
Queue Length 95th (m)	0.0	0.4	2.3
Control Delay (s)	0.0	7.3	9.0
Lane LOS		A	A
Approach Delay (s)	0.0	7.3	9.0
Approach LOS			A

Intersection Summary			
Average Delay	8.0		
Intersection Capacity Utilization	19.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	37	0	0	9	14	22
Future Volume (vph)	37	0	0	9	14	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.917	
Flt Protected					0.981	
Satd. Flow (prot)	1883	0	0	1883	1694	0
Flt Permitted					0.981	
Satd. Flow (perm)	1883	0	0	1883	1694	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	135.3			158.2	184.7	
Travel Time (s)	9.7			11.4	13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	0	0	10	15	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	0	10	39	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Yield			Yield	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Right Turn Channelized						
Traffic Volume (veh/h)	37	0	0	9	14	22
Future Volume (veh/h)	37	0	0	9	14	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	0	0	10	15	24
Approach Volume (veh/h)	40			10	39	
Crossing Volume (veh/h)	0			15	40	
High Capacity (veh/h)	1385			1369	1342	
High v/c (veh/h)	0.03			0.01	0.03	
Low Capacity (veh/h)	1161			1147	1123	
Low v/c (veh/h)	0.03			0.01	0.03	

Intersection Summary			
Maximum v/c High	0.03		
Maximum v/c Low	0.03		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	59	0	828	862	9
Future Volume (vph)	0	59	0	828	862	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	15.0	0.0	0.0			0.0
Storage Lanes	0	1	0			0
Taper Length (m)	30.0		30.0			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.865			0.998	
Flt Protected						
Satd. Flow (prot)	0	1629	0	3579	3571	0
Flt Permitted						
Satd. Flow (perm)	0	1629	0	3579	3571	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	158.2			290.8	241.3	
Travel Time (s)	11.4			20.9	17.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	64	0	900	937	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	64	0	900	947	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Yield			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.4%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	59	0	828	862	9
Future Volume (Veh/h)	0	59	0	828	862	9
Sign Control	Yield			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	64	0	900	937	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				291	241	
pX, platoon unblocked	0.94	0.92	0.92			
vC, conflicting volume	1392	474	937			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1087	256	759			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	91	100			
cM capacity (veh/h)	199	684	781			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	64	450	450	625	322
Volume Left	0	0	0	0	0
Volume Right	64	0	0	0	10
cSH	684	1700	1700	1700	1700
Volume to Capacity	0.09	0.26	0.26	0.37	0.19
Queue Length 95th (m)	2.3	0.0	0.0	0.0	0.0
Control Delay (s)	10.8	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.8	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	14	0	0
Future Volume (vph)	0	0	0	14	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	91.1			108.9	184.7	
Travel Time (s)	6.6			7.8	13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	15	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	15	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	14	0	0
Future Volume (Veh/h)	0	0	0	14	0	0
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	0	0	15	0	0
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	15	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	15	0	0			
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	100	100			
cM capacity (veh/h)	1004	1085	1623			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	15	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1623	1700
Volume to Capacity	0.00	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	628	18	67	625	222	41	59	35	243	62	322
Future Volume (vph)	242	628	18	67	625	222	41	59	35	243	62	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		40.0	20.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00		0.98	0.99	0.99		1.00		0.98
Frt		0.996				0.850		0.944				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3496	0	1825	3510	1617	1825	1803	0	1807	1847	1601
Flt Permitted	0.245			0.388			0.714			0.612		
Satd. Flow (perm)	461	3496	0	742	3510	1592	1361	1803	0	1161	1847	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				177		25				343
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		86.1			116.2			44.7			307.9	
Travel Time (s)		6.2			8.4			3.2			22.2	
Confl. Peds. (#/hr)	3		5	5		3	8		3	3		8
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
Heavy Vehicles (%)	2%	4%	0%	0%	4%	1%	0%	0%	0%	1%	4%	2%
Adj. Flow (vph)	257	668	19	71	665	236	44	63	37	259	66	343
Shared Lane Traffic (%)												
Lane Group Flow (vph)	257	687	0	71	665	236	44	100	0	259	66	343
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane		Yes									Yes	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Detector Phase	5	2		1	6	8	3	8		7	4	6
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0	12.0	6.0	12.0		6.0	12.0	10.0
Minimum Split (s)	10.0	32.0		10.0	32.0	39.0	10.0	39.0		10.0	39.0	32.0
Total Split (s)	19.0	56.0		12.0	49.0	38.0	12.0	38.0		14.0	40.0	49.0
Total Split (%)	15.8%	46.7%		10.0%	40.8%	31.7%	10.0%	31.7%		11.7%	33.3%	40.8%
Maximum Green (s)	15.0	50.0		8.0	43.0	32.0	8.0	32.0		10.0	34.0	43.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	Min	Min	Min		Min	Min	None
Walk Time (s)		10.0			10.0	10.0		10.0			10.0	10.0
Flash Dont Walk (s)		16.0			16.0	23.0		23.0			23.0	16.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	45.1	34.5		36.8	25.9	15.2	26.1	15.2		31.3	18.4	25.9
Actuated g/C Ratio	0.56	0.43		0.46	0.32	0.19	0.32	0.19		0.39	0.23	0.32
v/c Ratio	0.51	0.46		0.15	0.59	0.53	0.09	0.28		0.47	0.16	0.47
Control Delay	12.7	18.0		9.3	25.2	14.6	18.7	25.9		22.7	29.0	4.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	12.7	18.0		9.3	25.2	14.6	18.7	25.9		22.7	29.0	4.7
LOS	B	B		A	C	B	B	C		C	C	A
Approach Delay		16.6			21.5			23.7			14.1	
Approach LOS		B			C			C			B	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 80.5
Natural Cycle: 95
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 18.1 — Intersection LOS: B
Intersection Capacity Utilization 63.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: Plaza Entrance/Strathy Road & Elgin Street W

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	257	687	71	665	236	44	100	259	66	343
v/c Ratio	0.51	0.46	0.15	0.59	0.53	0.09	0.28	0.47	0.16	0.47
Control Delay	12.7	18.0	9.3	25.2	14.6	18.7	25.9	22.7	29.0	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.7	18.0	9.3	25.2	14.6	18.7	25.9	22.7	29.0	4.7
Queue Length 50th (m)	17.8	38.5	4.4	43.5	7.7	4.1	9.8	27.4	8.1	0.0
Queue Length 95th (m)	34.1	60.0	10.9	66.6	30.8	12.3	25.6	55.9	20.8	16.7
Internal Link Dist (m)		62.1		92.2			20.7		283.9	
Turn Bay Length (m)					40.0	20.0				
Base Capacity (vph)	543	2293	487	1992	783	521	787	549	838	1036
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.30	0.15	0.33	0.30	0.08	0.13	0.47	0.08	0.33

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	628	18	67	625	222	41	59	35	243	62	322
Future Volume (vph)	242	628	18	67	625	222	41	59	35	243	62	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0		2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	3496		1823	3510	1594	1818	1805		1805	1847	1570
Flt Permitted	0.24	1.00		0.39	1.00	1.00	0.71	1.00		0.61	1.00	1.00
Satd. Flow (perm)	461	3496		745	3510	1594	1366	1805		1163	1847	1570
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)	257	668	19	71	665	236	44	63	37	259	66	343
RTOR Reduction (vph)	0	2	0	0	0	144	0	20	0	0	0	230
Lane Group Flow (vph)	257	685	0	71	665	92	44	80	0	259	66	113
Confl. Peds. (#/hr)	3		5	5		3	8		3	3		8
Heavy Vehicles (%)	2%	4%	0%	0%	4%	1%	0%	0%	0%	1%	4%	2%
Turn Type	pm+pt	NA		pm+pt	NA	custom	pm+pt	NA		pm+pt	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		8	8			4		6
Actuated Green, G (s)	41.9	32.4		30.3	24.8	13.3	20.2	13.3		26.4	16.4	24.8
Effective Green, g (s)	43.9	34.4		34.3	26.8	15.3	24.2	15.3		29.3	18.4	26.8
Actuated g/C Ratio	0.54	0.42		0.42	0.33	0.19	0.30	0.19		0.36	0.23	0.33
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	496	1481		414	1158	300	456	340		514	418	518
v/s Ratio Prot	c0.10	0.20		0.02	c0.19		0.01	0.04		c0.07	0.04	
v/s Ratio Perm	0.18			0.06		0.06	0.02			0.11		0.07
v/c Ratio	0.52	0.46		0.17	0.57	0.31	0.10	0.23		0.50	0.16	0.22
Uniform Delay, d1	11.2	16.8		14.1	22.5	28.4	20.5	28.0		19.4	25.2	19.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	0.2		0.2	0.7	0.6	0.1	0.4		0.8	0.2	0.2
Delay (s)	12.1	17.0		14.3	23.2	29.0	20.6	28.3		20.2	25.4	19.9
Level of Service	B	B		B	C	C	C	C		C	C	B
Approach Delay (s)		15.7			23.9			26.0			20.5	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	81.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	954	11	55	889	5	60
Future Volume (vph)	954	11	55	889	5	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		30.0	50.0		0.0	0.0
Storage Lanes		1	1		1	0
Taper Length (m)			30.0		30.0	
Lane Util. Factor	0.95	1.00	0.91	0.91	1.00	1.00
Ped Bike Factor						
Frt		0.850			0.875	
Flt Protected				0.997	0.996	
Satd. Flow (prot)	3614	1484	0	5180	1572	0
Flt Permitted				0.997	0.996	
Satd. Flow (perm)	3614	1484	0	5180	1572	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	116.2			158.6	66.6	
Travel Time (s)	8.4			11.4	4.8	
Confl. Peds. (#/hr)		3	3		1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	10%	0%	1%	0%	7%
Adj. Flow (vph)	994	11	57	926	5	63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	994	11	0	983	68	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.1%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	954	11	55	889	5	60
Future Volume (Veh/h)	954	11	55	889	5	60
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	994	11	57	926	5	63
Pedestrians	1			1	3	
Lane Width (m)	3.7			3.7	3.7	
Walking Speed (m/s)	1.0			1.0	1.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	116			312		
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			1008		1421	501
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			700		1177	115
tC, single (s)			4.1		6.8	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.4
p0 queue free %			93		97	92
cM capacity (veh/h)			782		150	776

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	497	497	11	242	370	370	68
Volume Left	0	0	0	57	0	0	5
Volume Right	0	0	11	0	0	0	63
cSH	1700	1700	1700	782	1700	1700	594
Volume to Capacity	0.29	0.29	0.01	0.07	0.22	0.22	0.11
Queue Length 95th (m)	0.0	0.0	0.0	1.8	0.0	0.0	2.9
Control Delay (s)	0.0	0.0	0.0	3.0	0.0	0.0	11.8
Lane LOS				A			B
Approach Delay (s)	0.0			0.7			11.8
Approach LOS							B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1057	0	39	890	31	7	0	56	0	2	83
Future Volume (vph)	2	1057	0	39	890	31	7	0	56	0	2	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		0.0	40.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.995			0.880			0.868	
Flt Protected	0.950			0.950				0.995				
Satd. Flow (prot)	1825	3614	0	1706	3597	0	0	1624	0	0	1454	0
Flt Permitted	0.950			0.950				0.995				
Satd. Flow (perm)	1825	3614	0	1706	3597	0	0	1624	0	0	1454	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		158.6			152.8			56.6			108.9	
Travel Time (s)		11.4			11.0			4.1			7.8	
Confl. Peds. (#/hr)	3					3						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	1%	0%	7%	1%	0%	0%	0%	4%	0%	0%	15%
Adj. Flow (vph)	2	1090	0	40	918	32	7	0	58	0	2	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	1090	0	40	950	0	0	65	0	0	88	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 49.3%	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)	2	1057	0	39	890	31	7	0	56	0	2	83
Future Volume (Veh/h)	2	1057	0	39	890	31	7	0	56	0	2	83
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	2	1090	0	40	918	32	7	0	58	0	2	86
Pedestrians											3	
Lane Width (m)											3.7	
Walking Speed (m/s)											1.0	
Percent Blockage											0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		275			153							
pX, platoon unblocked	0.82			0.89			0.88	0.88	0.89	0.88	0.88	0.82
vC, conflicting volume	953			1090			1720	2127	545	1624	2111	478
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	512			843			961	1423	228	851	1405	0
tC, single (s)	4.1			4.2			7.5	6.5	7.0	7.5	6.5	7.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			94			96	100	91	100	98	90
cM capacity (veh/h)	872			671			159	113	681	196	116	856

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	2	727	363	40	612	338	65	88
Volume Left	2	0	0	40	0	0	7	0
Volume Right	0	0	0	0	0	32	58	86
cSH	872	1700	1700	671	1700	1700	503	747
Volume to Capacity	0.00	0.43	0.21	0.06	0.36	0.20	0.13	0.12
Queue Length 95th (m)	0.1	0.0	0.0	1.4	0.0	0.0	3.4	3.0
Control Delay (s)	9.1	0.0	0.0	10.7	0.0	0.0	13.2	10.5
Lane LOS	A			B			B	B
Approach Delay (s)	0.0			0.4			13.2	10.5
Approach LOS							B	B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

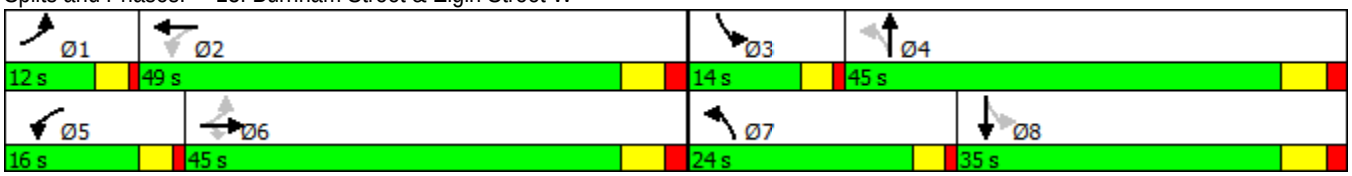
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	553	344	116	518	183	285	396	126	338	363	163
Future Volume (vph)	224	553	344	116	518	183	285	396	126	338	363	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		60.0	60.0		0.0	0.0		0.0	55.0		0.0
Storage Lanes	1		1	1		0	2		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00		0.98	1.00	0.99		0.99	1.00		1.00	0.99	
Frt			0.850		0.961			0.964			0.953	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3579	1570	1755	3426	0	3309	3418	0	1807	3360	0
Flt Permitted	0.177			0.245			0.302			0.347		
Satd. Flow (perm)	332	3579	1539	451	3426	0	1043	3418	0	658	3360	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			362		48			39			58	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		152.8			145.4			322.3			290.8	
Travel Time (s)		11.0			10.5			23.2			20.9	
Confl. Peds. (#/hr)	12		9	9		12	13		4	4		13
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
Heavy Vehicles (%)	2%	2%	4%	4%	1%	4%	7%	3%	1%	1%	2%	4%
Adj. Flow (vph)	236	582	362	122	545	193	300	417	133	356	382	172
Shared Lane Traffic (%)												
Lane Group Flow (vph)	236	582	362	122	738	0	300	550	0	356	554	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Detector Phase	1	6	6	5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	6.0	16.0	16.0	6.0	16.0		6.0	16.0		6.0	16.0	
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0		10.0	34.0		10.0	34.0	
Total Split (s)	12.0	45.0	45.0	16.0	49.0		24.0	45.0		14.0	35.0	
Total Split (%)	10.0%	37.5%	37.5%	13.3%	40.8%		20.0%	37.5%		11.7%	29.2%	
Maximum Green (s)	8.0	39.0	39.0	12.0	43.0		20.0	39.0		10.0	29.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0		0.0	-2.0		0.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		32.0	32.0		32.0			21.0			21.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	35.0	26.9	26.9	37.8	28.3		44.2	32.8		41.4	31.3	
Actuated g/C Ratio	0.37	0.28	0.28	0.40	0.30		0.46	0.34		0.43	0.33	
v/c Ratio	0.97	0.58	0.52	0.40	0.70		0.40	0.46		0.88	0.49	
Control Delay	74.2	32.1	5.9	20.9	31.6		16.2	24.8		44.9	25.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	74.2	32.1	5.9	20.9	31.6		16.2	24.8		44.9	25.9	
LOS	E	C	A	C	C		B	C		D	C	
Approach Delay		32.5			30.0			21.8			33.3	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 95.4
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 29.7 — Intersection LOS: C
Intersection Capacity Utilization 85.0% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 13: Burnham Street & Elgin Street W



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	236	582	362	122	738	300	550	356	554
v/c Ratio	0.97	0.58	0.52	0.40	0.70	0.40	0.46	0.88	0.49
Control Delay	74.2	32.1	5.9	20.9	31.6	16.2	24.8	44.9	25.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.2	32.1	5.9	20.9	31.6	16.2	24.8	44.9	25.9
Queue Length 50th (m)	27.9	47.9	0.0	13.4	58.7	14.8	37.2	38.8	37.1
Queue Length 95th (m)	#76.0	69.3	19.9	25.3	81.3	27.6	60.9	#110.0	64.4
Internal Link Dist (m)		128.8			121.4		298.3		266.8
Turn Bay Length (m)	45.0		60.0	60.0				55.0	
Base Capacity (vph)	244	1551	872	356	1655	991	1503	406	1140
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	0.97	0.38	0.42	0.34	0.45	0.30	0.37	0.88	0.49

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	553	344	116	518	183	285	396	126	338	363	163
Future Volume (vph)	224	553	344	116	518	183	285	396	126	338	363	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.96		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1789	3579	1541	1754	3427		3302	3418		1806	3365	
Flt Permitted	0.18	1.00	1.00	0.25	1.00		0.30	1.00		0.35	1.00	
Satd. Flow (perm)	334	3579	1541	452	3427		1048	3418		660	3365	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	236	582	362	122	545	193	300	417	133	356	382	172
RTOR Reduction (vph)	0	0	260	0	34	0	0	26	0	0	39	0
Lane Group Flow (vph)	236	582	102	122	704	0	300	524	0	356	515	0
Confl. Peds. (#/hr)	12		9	9		12	13		4	4		13
Heavy Vehicles (%)	2%	2%	4%	4%	1%	4%	7%	3%	1%	1%	2%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Actuated Green, G (s)	33.0	24.9	24.9	35.8	26.3		42.3	30.7		39.3	29.2	
Effective Green, g (s)	33.0	26.9	26.9	35.8	28.3		42.3	32.7		39.3	31.2	
Actuated g/C Ratio	0.35	0.28	0.28	0.38	0.30		0.44	0.34		0.41	0.33	
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0		4.0	6.0	
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)	239	1011	435	299	1018		740	1174		394	1102	
v/s Ratio Prot	c0.08	0.16		0.04	0.21		0.05	0.15		c0.10	0.15	
v/s Ratio Perm	c0.26		0.07	0.11			0.13			c0.28		
v/c Ratio	0.99	0.58	0.24	0.41	0.69		0.41	0.45		0.90	0.47	
Uniform Delay, d1	26.7	29.3	26.2	20.7	29.6		16.8	24.2		23.1	25.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	54.2	0.8	0.3	0.9	2.0		0.4	0.3		23.4	1.4	
Delay (s)	80.9	30.1	26.5	21.6	31.6		17.2	24.5		46.5	26.8	
Level of Service	F	C	C	C	C		B	C		D	C	
Approach Delay (s)		39.1			30.2			21.9			34.5	
Approach LOS		D			C			C			C	

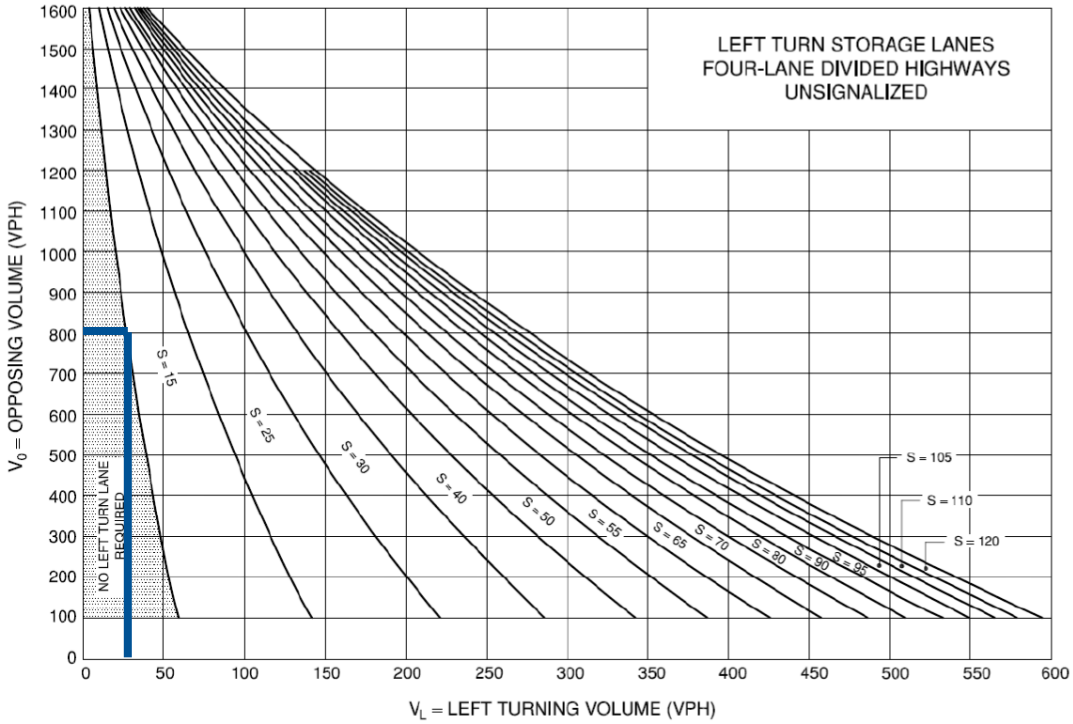
Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	95.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

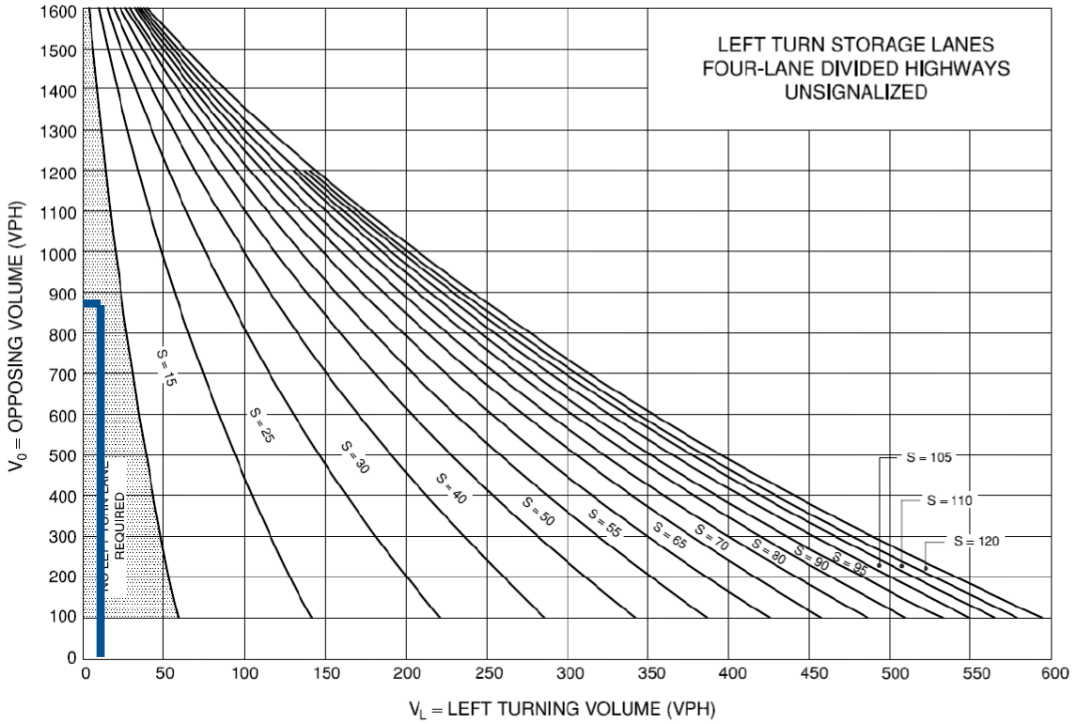
Appendix G

Left-Turn Warrants

AM Peak Hour



PM Peak Hour



Left Turn Warrant – Scenario A
Burnham Street & Future Street B