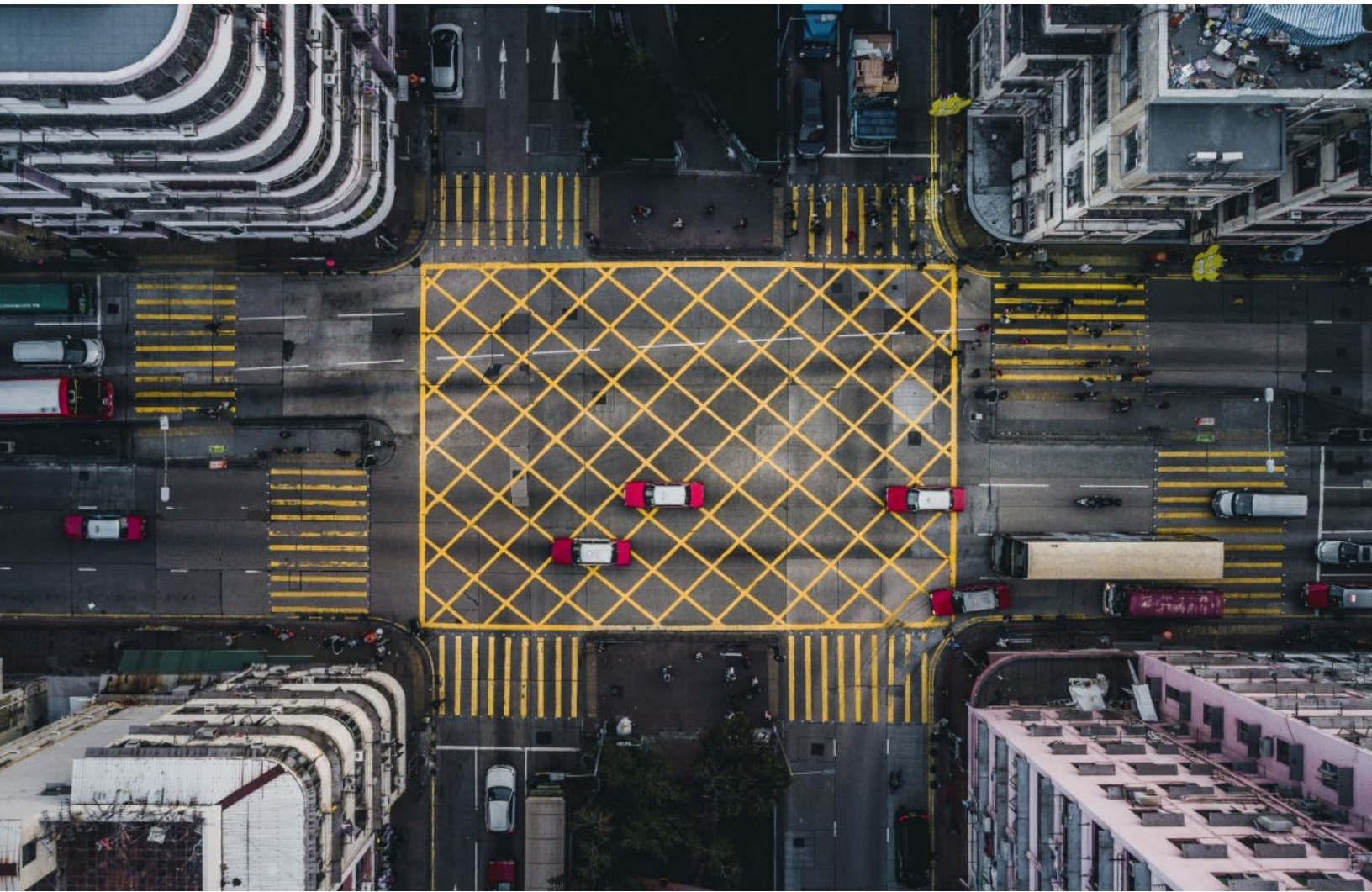
Traffic Impact Study

Joshua Creek Phase 3

Mattamy (Joshua Creek) Limited

18 April 2022

→ The Power of Commitment



Executive summary

GHD Limited was retained by Mattamy (Joshua Creek) Limited to prepare a Traffic Impact Study in support of the Joshua Creek Phase 3 residential development located north of Dundas Street East between Eighth Line and Ninth Line in the North Oakville East Secondary Plan in the Town of Oakville.

This report determines the site related traffic and subsequent traffic related impacts on the adjacent road network during the weekday a.m. and p.m. peak hours. These impacts are based on the projected future background traffic and road network conditions derived for a 2027 future planning horizon year.

The composite plan of Joshua Creek prepared by Korsiak Urban Planning, dated February 2022 includes the Joshua Creek Phase 3 residential development consists of a series of townhouses and single detached homes. The residential units for Joshua Creek Phase 3 are broken down as follows:

- 306 townhouse units
- 709 single detached homes

Under the interim traffic scenario before the complete road network is constructed into Joshua Creek Phase 3 including collector road connections to Burnhamthorpe Road, access to the proposed subdivision will be primarily from Dundas Street via John McKay Boulevard, Meadowridge Drive and William Cutmore Boulevard and from Eighth Line via Wheat Boom Drive.

The proposed subdivision is expected to generate a total of 532 new two-way trips consisting of 143 inbound and 389 outbound trips during weekday a.m. peak hour and 694 new two-way trips consisting of 429 inbound and 265 outbound trips during the weekday p.m. peak hour.

The analysis of the study intersections found that there would be multiple critical or over capacity movements at each intersection along Dundas Road. The signal timings for all signalized intersections along Dundas Street East were optimized as needed to reduce v/c ratios and delays where possible. It was found that the site traffic had minimal effect on the overall intersection operations and is not expected to have a detrimental impact the study intersections.

As requested by Town staff, GHD completed a sensitivity analysis to determine the determine the volume of site trips from Joshua Creek Phase 3 that would travel north of the study area once future connections are established that will provide access to Eighth Line and Burnhamthorpe Road. It was found that approximately 92 two-way trips north to Burnhamthorpe Road and 37 two-way trips east to Eighth Line in the a.m. peak hour and a total of 123 two-way trips will be made north to Burnhamthorpe Road and 49 two-way trips east to Eighth Line in the p.m. peak hour when connections planned in Joshua Creek Phase 5 are completed.

We trust that this satisfies your requirements, but do not hesitate to contact the undersigned if you have any questions.

Sincerely,

GHD

William Maria, P. Eng.

Transportation Planning Lead

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1. Introduction

1.1 Retainer and Objective

GHD Limited was retained by Mattamy (Joshua Creek) Limited to prepare a Transportation Impact Study in support of the Draft Plan of Subdivision and Zoning By-Law Amendment of a proposed subdivision located on part of Lots 8 and 9, Concession 1 within the North Oakville Secondary Plan Area in the Town of Oakville.

The site location is illustrated in **Figure 1**.

The purpose of this study is to:

- Establish baseline traffic conditions for the study area in 2022 and determine future background operating conditions for a future planning horizon in 2027.
- Utilize Institute of Transportation Engineer's (ITE) Trip Generation data and first principles to estimate the site trips generated by the proposed development and distribute the traffic to the adjacent road network.
- Determine future operating traffic conditions for a 2027 future horizon during the weekday peek periods through intersection capacity analysis.
- Conduct a sensitivity analysis to determine the redistribution of site traffic from Joshua Creek Phase 3 under future traffic conditions northerly to Burnhamthorpe Road via Street A (John McKay Boulevard) and Street B and westerly to Eighth Line via Street D.

1.2 Study Team

The GHD team involved in the preparation of the study are:

- William Maria, P. Eng., Transportation Planning Lead
- Rafael Andrenacci, B.Eng., Transportation Planner
- James Emerson, EIT, Engineering Assistant

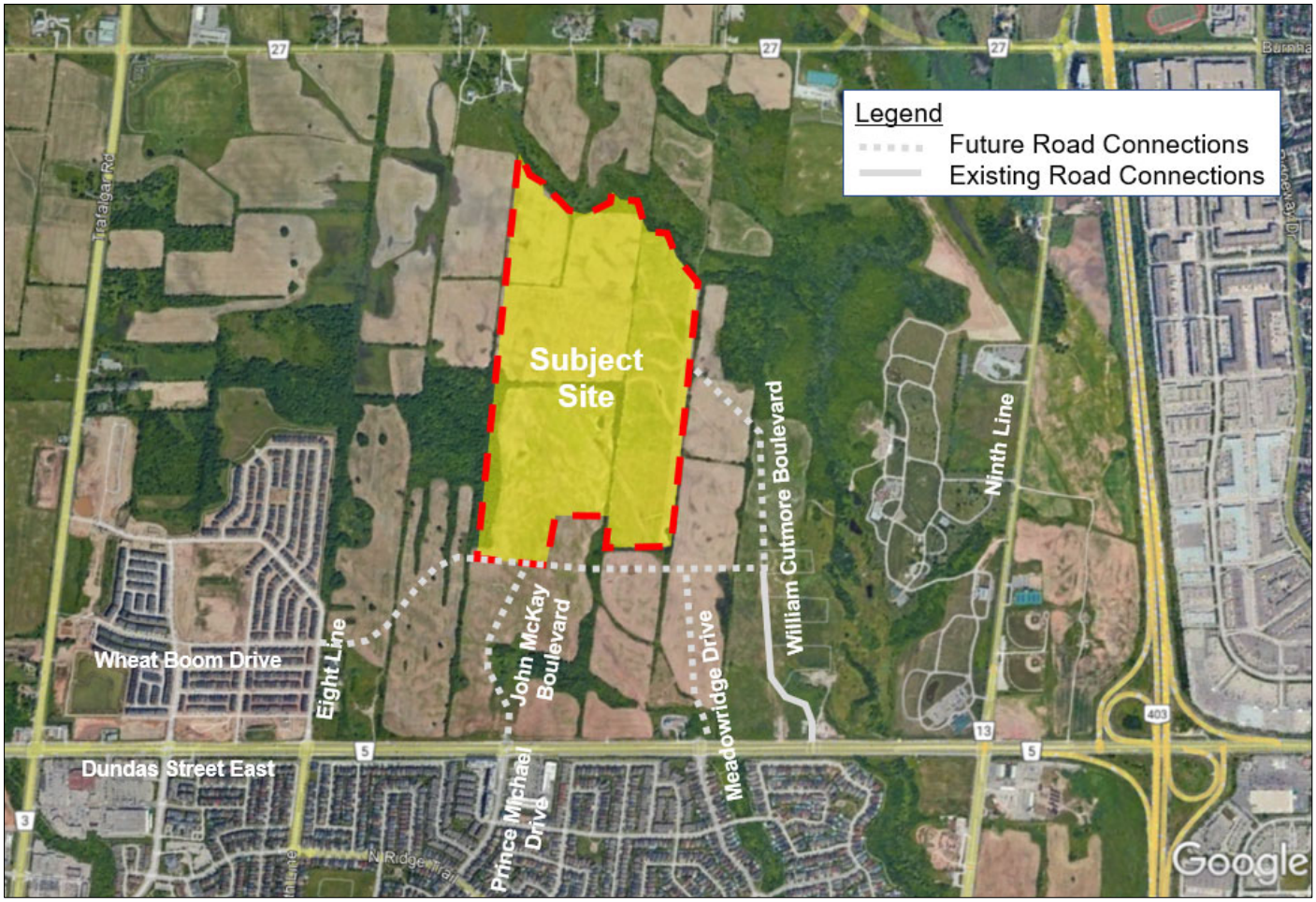

Figure 1 Site Location

2. Site Characteristics

2.1 Study Area

The Site boundary is detailed in **Figure 1.** The numbered Study Intersections are named below.

Based on the approved Terms of Reference for the study provided in **Appendix A**, the following intersections are included in the study area:

- Eighth Line and Wheat Boom Drive
- Dundas Street East and Eighth Line
- Dundas Street East and John McKay Boulevard/Prince Michael Drive
- Dundas Street East and Meadowridge Drive
- Dundas Street East and William Cutmore Boulevard
- Dundas Street East and Ninth Line

2.2 Proposed Development Content

A composite plan for Joshua Creek was prepared by Korsiak Urban Planning dated February 2022. The plan is shown in **Figure 2** with Joshua Creek Phase 3 highlighted by the blue line. The residential development of Joshua Creek Phase 3 consists of the following characteristics:

- 306 Townhouse units
- 709 Single Detached units

Under the interim traffic scenario before the full build-out of the Joshua Creek lands and construction of the ultimate planned road network as per the Secondary Plan, access to the proposed residential development from the surrounding road network is provided via Wheat Boom Drive, John McKay Boulevard, Meadowridge Drive and William Cutmore Boulevard.

Figure 2 Joshua Creek Composite Plan

3. Existing Conditions

3.1 Existing Road Network

Dundas Street East is an east/west major arterial road under the jurisdiction of the Region of Halton. In the study area it has a six-lane urban cross section and a posted speed limit of 70 km/h. All of the study area roads intersecting with Dundas Street East are signalized. Auxiliary left-turn and right-turn lanes are provided in both directions throughout the study area for all existing approaches. At the intersections with John McKay Boulevard and Meadowridge Drive, there are provisional auxiliary eastbound left-turn and westbound right-turn lanes that will be operational once the respective north approaches are established.

Eighth Line is classified as a north/south Connector/Transit Corridor under the North Oakville East Secondary Plan with a four-lane cross-section south of Dundas Street, which is reduced to a two-lane cross-section north of Dundas Street. Its intersection with Dundas Street is signalized, with a northbound right-turn lane and an auxiliary left-turn lane, and a southbound auxiliary left-turn lane. Its intersection with Wheat Boom Drive is unsignalized, with a stop-control only on the Wheat Boom Drive approach. The posted speed limit on Eighth Line is 50 km/h.

Wheat Boom Drive is classified as an east/west Avenue/Transit Corridor under the North Oakville East Secondary Plan and currently exists to the west of Eighth Line. Wheat Boom Drive is planned to have a two-lane cross-section within the study area with a posted speed limit of 50 km/h.

Prince Michael Drive is a north/south major collector road under the jurisdiction of the Town of Oakville and currently exists only to the south of Dundas Street with a two-lane cross-section and a northbound auxiliary left-turn lane at its signalized intersection with Dundas Street. The posted speed limit is 50 km/h.

Meadowridge Drive currently exists only to the south of Dundas Street and is a minor collector road under the jurisdiction of the Town of Oakville. The road has a two-lane cross-section with dual northbound auxiliary left-turn lanes at its signalized intersection with Dundas Street with an assumed posted speed limit of 50 km/h.

William Cutmore Boulevard is a minor collector road under the jurisdiction of the Town of Oakville recently constructed north of Dundas Street. The road has a two-lane cross-section with southbound right and left turn lanes at its signalized intersection with Dundas Street and an assumed posted speed limit of 50 km/h.

Ninth Line is classified as a major arterial road under the jurisdiction of the Region of Halton. Within the study area, Ninth Line has a four-lane cross-section south of Dundas Street and reduced to a two-lane cross-section north of Dundas Street. Auxiliary left-turn and right-turn lanes are provided in both the northbound and southbound directions along Ninth Line. The posted speed limit within the study area is 60 km/h

3.2 Pedestrian and Bicycle Routes

Within the study area, pedestrian sidewalks are only provided along both sides of the road of Eighth Line, Prince Michael Drive, Meadowridge Drive and Ninth Line south of Dundas Street. North of Dundas Street, Eighth Line has sidewalk provisions only along the east side of the road. Sidewalks are currently provided on both sides of Wheat Boom Drive.

There are no sidewalks provided along Dundas Street, however a multi-use trail is provided along the south side of Dundas Street.

Bike Lanes are provided along both sides of the street of Prince Michael Drive. Bike lanes are also provided along Ninth Line south of Dundas Street and begin and end 100 metres on the north side of the intersection.

3.3 Transit Services

Oakville Transit currently offers the following routes within or near the study area:

Route 24 (Trafalgar) operates in the east/west direction along Dundas Street within the study area. The route operates between the Oakville GO Station and South Common Centre.

3.4 Existing Traffic Data

Due to COVID-19 pandemic and local and provincial restrictions, turning movement counts conducted within years 2020-2022 will likely have depressed results. As a result, GHD used 2019 historic traffic counts for the study intersections and applied a 2% per annum growth rate to establish baseline projected 2022 existing traffic volumes, as directed by Town and Region Staff and further described in **Section 4.3**. The Bressa Background Development was completed in 2021, so it was assumed that the site trips for this development were already active for 2022, so the trips were added to the baseline projected 2022 existing traffic volumes.

The projected baseline 2022 traffic volumes for the a.m. and p.m. peak hours are summarized in **Figure 3**.

The historic count data for each intersection are provided in **Appendix B**.

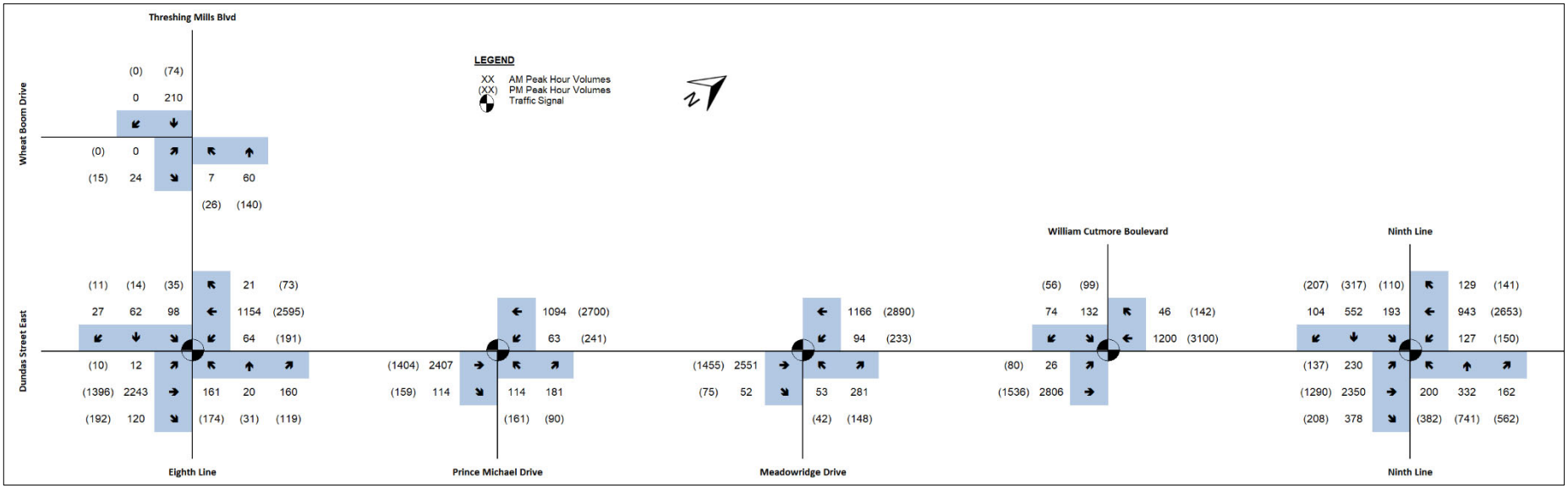

Figure 3 Projected 2022 Existing Traffic Volumes

4. Future Background Traffic

4.1 Study Horizon Year

As agreed with the Region of Halton and Town of Oakville Staff, a future year of 2027 was selected for the analysis of future traffic conditions which corresponds to a period of five-years from the date of the study.

4.2 Future Road Network

The future planned road network north of Dundas Street includes the extension of Wheat Boom Drive to the east of Eighth Line as well as the extension Prince Michael Drive to the north of Dundas Street as John McKay Boulevard and Meadowridge Drive to the north of Dundas Street.

Wheat Boom Drive is classified as an east/west Avenue/Transit Corridor under the North Oakville East Secondary Plan. Wheat Boom Drive is planned to have a two-lane cross-section within the study area with a posted speed limit of 50 km/h.

John McKay Boulevard is classified as a north-south Avenue/Transit corridor under the North Oakville East Secondary Plan. Within the study area, John McKay Boulevard will have a 2-lane cross-section with a 50 km/h posted speed limit. North of Wheat Boom Drive, John McKay Boulevard is classified as a Secondary Transit Corridor under the North Oakville East Secondary Plan.

In addition to extension of the study area roads towards the subject site, the Region of Halton has plans to convert the curbside lane along Dundas Street to an HOV lane.

4.3 Corridor Growth

GHD applied a 2% per annum growth rate to all roads within the study area. This growth rate was agreed to with Region and Town staff. As previously discussed, the corridor growth rate was used to derive the projected base 2022 traffic volumes from 2019 historic turning movements and was also used to account for future corridor growth to the 2027 planning horizon year.

4.4 Background Development Traffic

As directed by Town staff, the following developments were included as background traffic:

- **Traffic Impact Study for ARGO Land Development in the Joshua Creek Residential Subdivision in North Oakville**, prepared by CGH Transportation Inc. in December 2019. This study included an analysis of the 2019 and 2024 horizon years for the following intersections with Dundas Street: Eighth Line, Prince Michael Drive, Meadowridge Drive, Street A (William Cutmore Drive), and Ninth Line.
- **Traffic Impact Study for the Dunoak and Bressa Draft Plans Proposed Residential Developments** prepared by GHD July 2020. This study included an analysis of the 2020 and 2025 planning horizon year for the intersections of Dundas Street with: Eighth Line, Prince Michael Drive, Meadowridge Drive, Street A, and Ninth Line. The Bressa Development site trips were already included in the Existing 2022 volumes detailed in **Section 3** of this report.
- **Traffic Impact Study for the Proposed Redoak/Capoak Residential Development** prepared by GHD and updated in November 2021. This study included an analysis of the 2022 and 2027 planning horizon year for

the intersections of Dundas Street and Eighth Line, Dundas Street and Prince Michael Drive, Eighth Line and Wheat Boom Drive, and John McKay and Wheat Boom.

- **Traffic Impact Study for 1005 Dundas Street East and 3033 Eighth Line** prepared by Paradigm Transportation Solutions Limited. Only the number of site trips generated by the proposed development were used from this report, with trips assigned to the intersections of Dundas Street and Eighth Line as well as Dundas Street and Prince Michael Drive.

The proposed trip generation from each background development is summarized in the table below, with the trip distribution for each site provided in **Appendix D.**

Table 1 Background Development Traffic

Background Development	Peak Hour Trips					
	Weekday AM			Weekday PM		
	In	Out	Total	In	Out	Total
ARGO Land Development - Joshua Creek Residential Subdivision	140	453	593	494	290	784
Dunoak Residential Developments	137	431	568	418	264	682
Redoak/Capoak Residential Development	114	355	469	362	220	582
1005 Dundas Street East and 3033 Eighth Line	19	58	77	60	40	100

The location of each background development relative to the subject site is provided in **Figure 4** while **Figure 5** summarizes the total site trips from all four background developments assigned to the study area intersections**.**

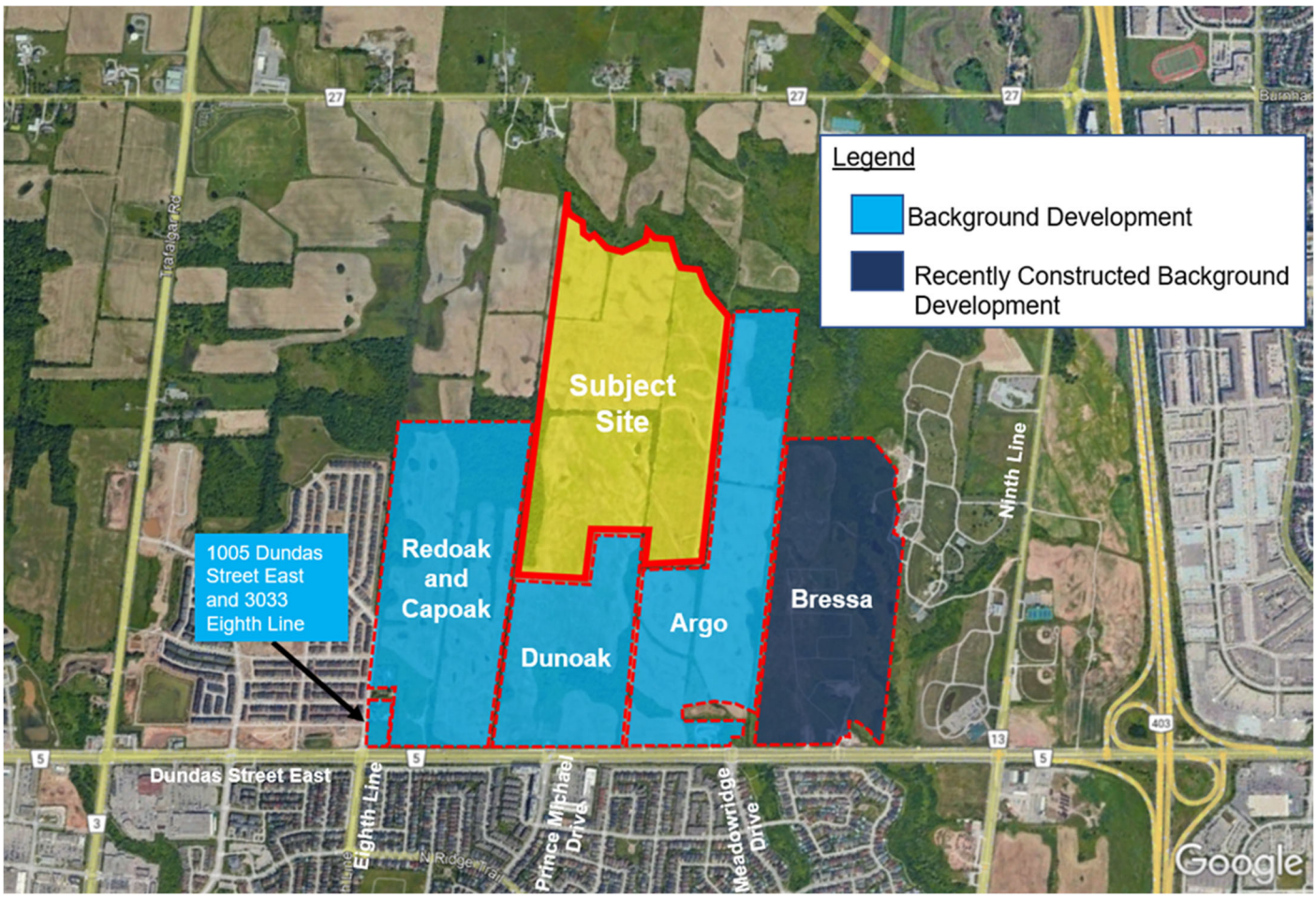

Figure 4 Background Developments Locations

4.5 Future Background Traffic Volumes

The background traffic volumes for the 2027 horizon year was derived by applying the 2% per annum corridor growth rate to the projected 2022 traffic volumes and adding the total background development site traffic from **Figure 5**. The resulting 2027 future background traffic volumes are summarized in **Figure 6**.

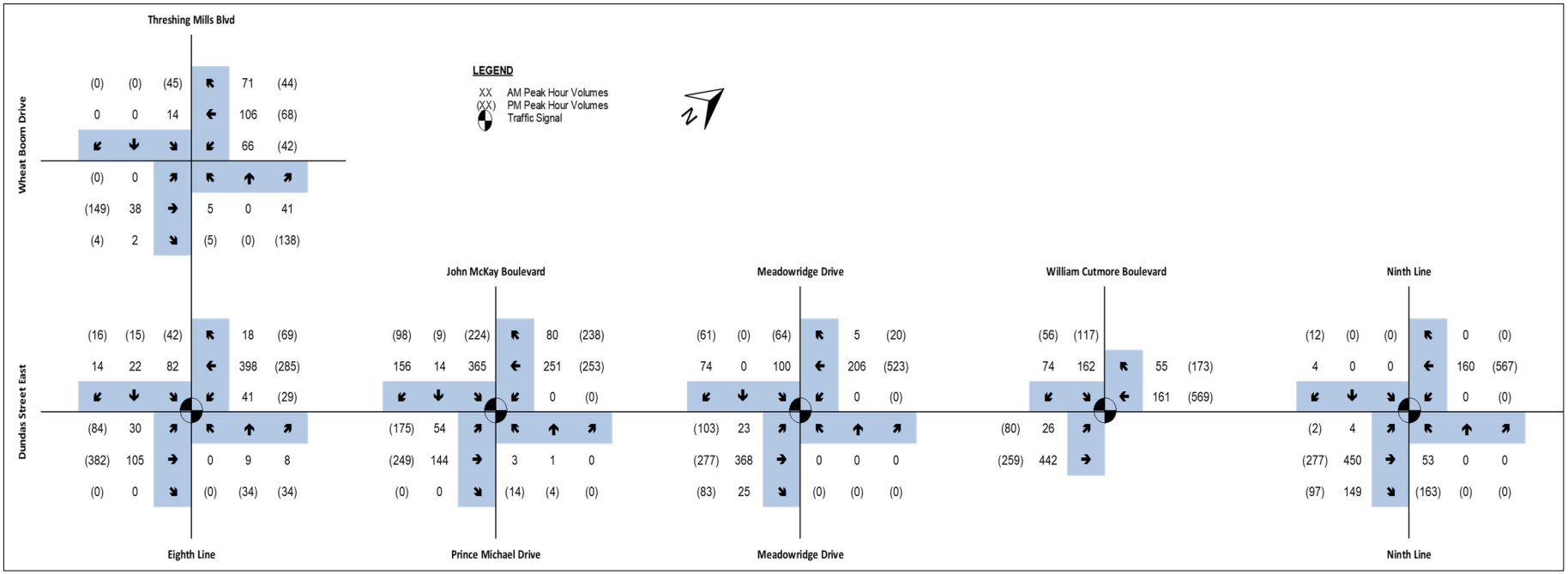

Figure 5 Total Background Development Site Traffic

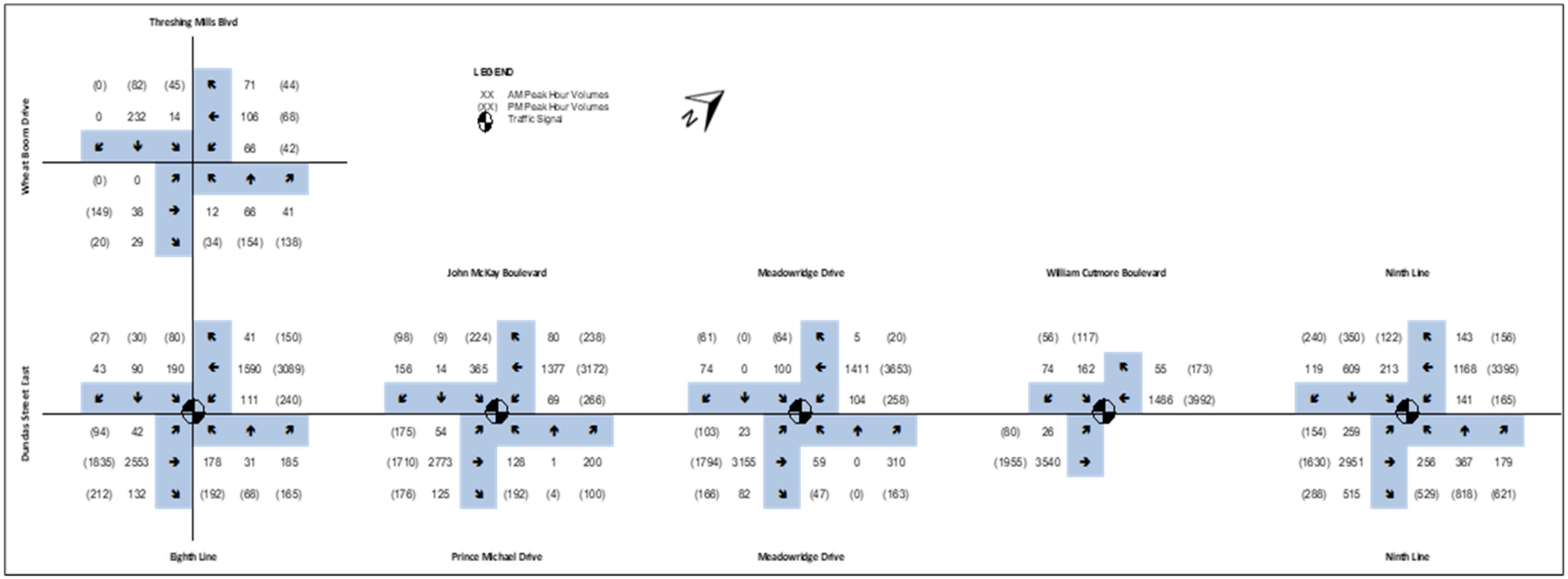

Figure 6 2027 Future Background Traffic Volumes

5. Site Generated Traffic

5.1 Site Traffic Generation

The proposed Joshua Creek Phase 3 residential development consists of a total of 709 Single Detached units and 306 Townhouse units. The development generated traffic was estimated using the rates provided in the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 11th Edition using Land Use Code (LUC) 210 (Single-Family Detached Housing for the Single Detached units and LUC 215 (Single-Family Attached Housing) for the Townhouse units.

Consistent with other traffic studies completed in the areas, Region of Halton staff confirmed that a 10% mode split could be assumed for the transit modal split, 5% for active transportation and 3% for Transportation Demand Management (TDM) in the area for the 2027 planning horizon. As a result, an 18% total mode split reduction was applied to all inbound and outbound site generated traffic during both peak hours from the calculated site trips estimated by the ITE trip rates.

Table 2 below summarizes the estimated trip generation for the subject site.

Table 2 Estimated Joshua Creek Phase 3 Site Trips

Land Uses	GFA (Dwelling Units)	Parameters	Peak Hour					
			Weekday AM			Weekday PM		
			In	Out	Total	In	Out	Total
Single Family Detached (LUC 520)	709 units	Trip Ratio	26%	74%	100%	63%	37%	100%
		Gross Trips	129	367	496	420	246	666
		Total Mode Split Reduction (18%)	23	66	89	76	44	120
		Total New Trips	**106**	**301**	**407**	**344**	**202**	**546**
Single Family Attached (LUC 215)	306 units	Trip Ratio	31	69	100	57	43	100
		Gross Trips	46	107	153	103	77	180
		Total Mode Split Reduction (18%)	9	19	28	18	14	32
		Total New Trips	**37**	**88**	**125**	**85**	**63**	**148**
		Total Primary Trips	***143***	***389***	***532***	***429***	***265***	***694***

The proposed subdivision is expected to generate a total of 532 new two-way trips consisting of 143 inbound and 389 outbound trips during weekday a.m. peak hour and 694 new two-way trips consisting of 429 inbound and 265 outbound trips during the weekday p.m. peak hour.

5.2 Site Traffic Distribution and Assignment

The distribution was completed using information extracted from the 2016 Transportation Tomorrow Survey and first principles based on the assumed route choice available under the 2027 road network. The percentage breakdown of overall directional distribution is summarized in **Table 3**. Taking into consideration that motorists will use the path of least resistance, this distribution assumes an evenly distributed trip assignment onto Dundas Street as a result of the various route options available for site trips from the subject site.

Table 3 Trips Distribution

Origin/Destination	AM Peak Hour		PM Peak Hour	
	Percentage of Inbound Trips	Percentage of Outbound Trips	Percentage of Inbound Trips	Percentage of Outbound Trips
North	25%	25%	25%	25%
South	25%	25%	25%	25%
East	20%	20%	20%	20%
West	30%	30%	30%	30%
Total	**100%**	**100%**	**100%**	**100%**

Using the distribution outlined in the table above, the subject site trips were assigned to the study area intersections using the distribution percentages summarized in **Figure 7.**

The subject site trips assigned to the study area road network for the a.m. and p.m. peak hour is summarized **Figure 8.**

6. Future Total Traffic

The future total traffic condition during the weekday a.m. and p.m. peak hours for the 2027 planning horizon was derived by combining the projected future background traffic with the estimated site generated traffic. The resulting traffic volumes are presented in **Figure 9.**

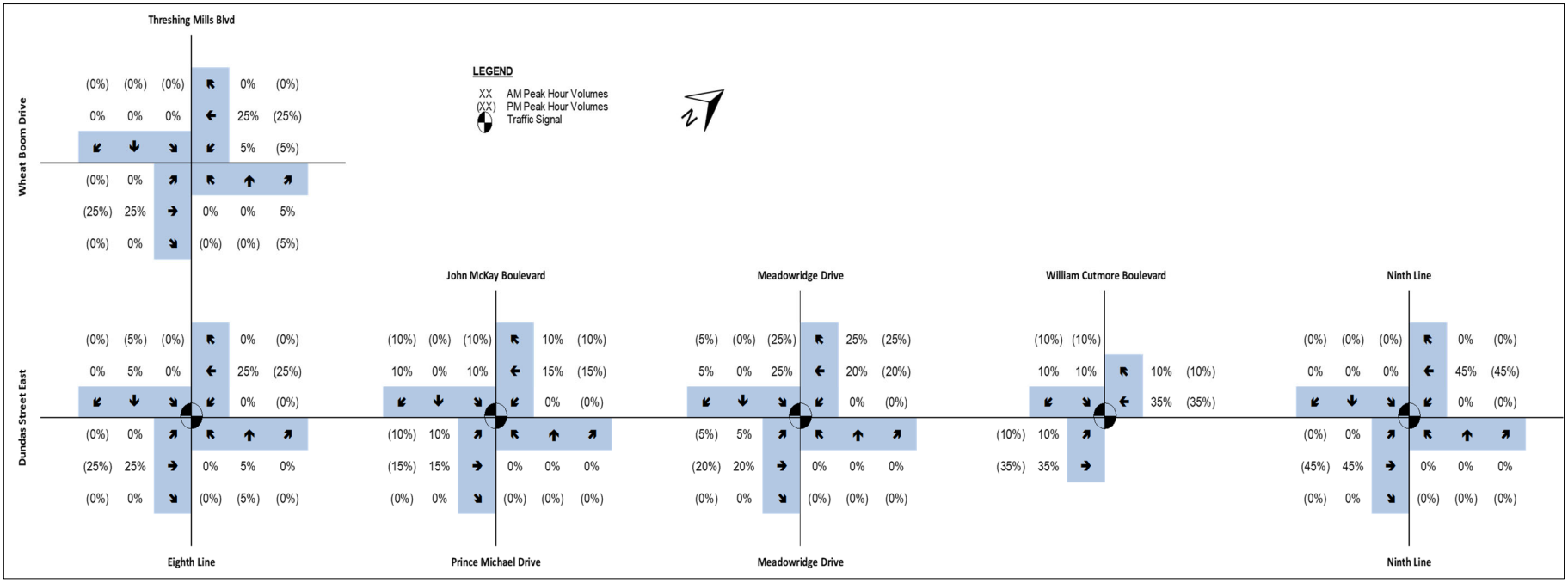

Figure 7 Site Trip Distribution

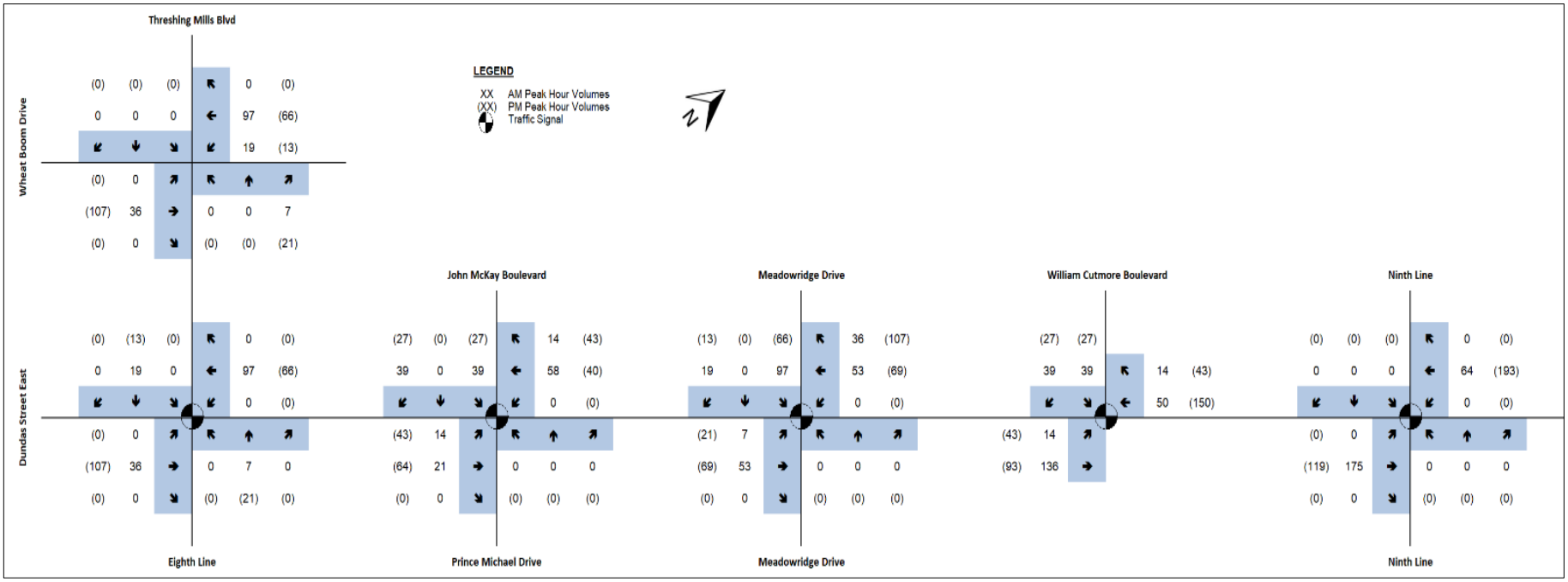

Figure 8 Site Trip Assignment

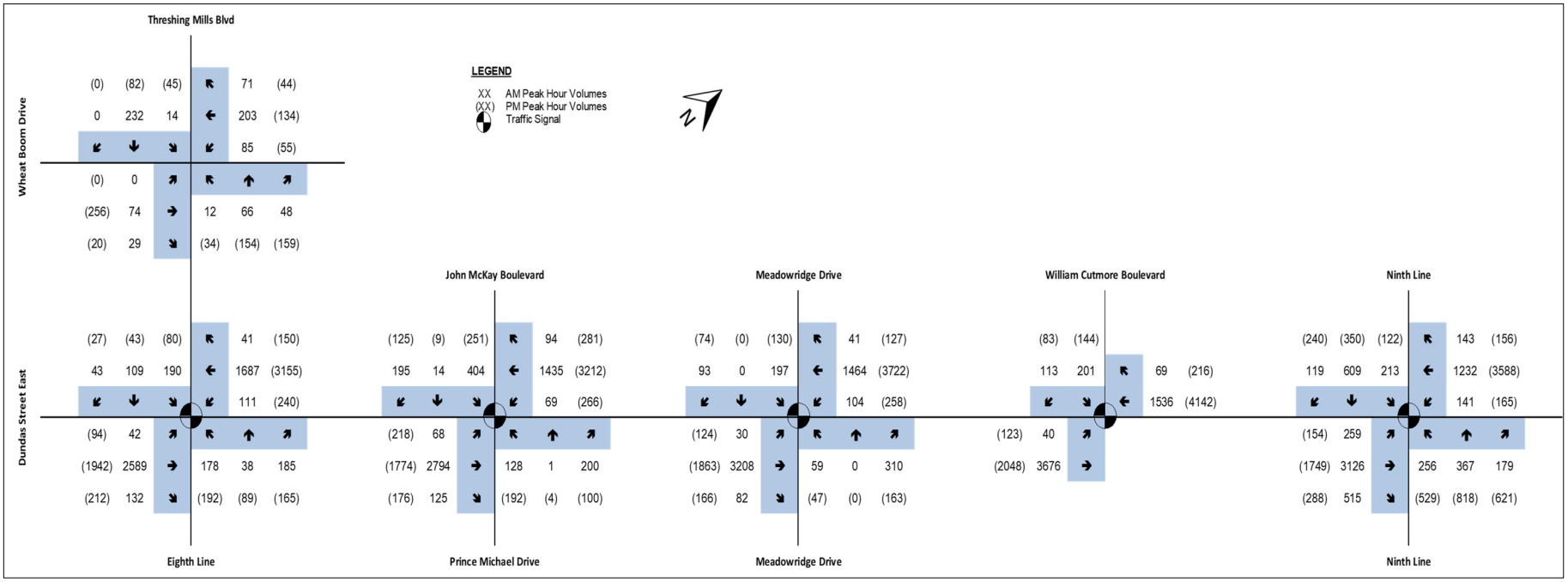

Figure 9 2027 Future Total Traffic Volumes

7. Capacity Analysis

The capacity analysis identifies how well the intersections and driveways are operating. The analysis contained within this report utilized the Highway Capacity Manual (HCM) 2000 procedure within the Synchro Version 10 Software package. The reported intersection volume-to-capacity ratios (v/c) are a measure of the saturation volume for each turning movement, while the levels-of-service (LOS) are a measure of the average delay for each turning movement. Queuing characteristics are reported as the predicted 95th percentile queue for each turning movement. Both pedestrian crossing volumes and heavy vehicle proportions are included in the analyses.

Metrolinx is planning to construct a Bus Rapid Transit Line to run from Kipling Station in Toronto to Brant Street in Burlington. To accommodate the planned BRT service, Halton Region has begun widening Dundas Street from four to six lanes. The additional lane is expected to operate as an HOV lane in the future and then as a BRT lane. To account for the reduction in road capacity from the proposed HOV/BRT lanes during the weekday a.m. and p.m. peak hours, GHD adopted the established methodology of applying a 0.80 lane utilization factor to the through lanes along Dundas Street to consider the estimated volumes of traffic anticipated to utilize the HOV/BRT lanes.

The analysis includes identification and required modifications and improvements (if any) at intersections where the addition of background growth or background growth plus site-generated traffic volumes causes the following:

'Critical' intersections and movements for a signalized intersection include:

- V/C ratios for overall intersections operations, through movements, or shared through/turning movements increase to 0.85 or above;
- V/C ratios for exclusive movements increase to 0.95 or above; or
- 95th percentile queue length for individual movements that are projected to, or exceed, the storage length.

'Critical' intersections and movements for an unsignalized intersection include:

- Level of Services (LOS), based on average delay per vehicle, on individual movements exceeds LOS "D",
- Queue length for individual movements that exceeds the lesser of 5 vehicles or the available queue storage.

The following tables summarize the HCM capacity results for the study intersections during the weekday a.m. and p.m. peak hours under existing (2021), future background (2027) and future total 2027) traffic conditions. The detailed Synchro sheets are provided in **Appendix C**.

7.1 Eighth Line and Wheat Boom Drive

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic condition are summarized in the following table.

Table 4 Capacity analysis of Eighth Line and Wheat Boom Drive

Scenario	Am Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2022	EBLR = 0.03 (A) 10 NBTL = 0.01 (A) 1 SBTR = 0.12 () 0	EBLR = 5 m NBTL = 5 m SBTR = 0 m	EBLR = 0.02 (A) 9 NBTL = 0.02 (A) 1 SBTR = 0.04 () 0	EBLR = 5 m NBTL = 5 m SBTR = 0 m
Future Background 2027	EBL = 0 (A) 0 EBTR = 0.1 (B) 11 WBTLR = 0.4 (B) 15 NBTLR = 0.01 (A) 1 SBTLR = 0.01 (A) 0	EBL = 0 m EBTR = 5 m WBTLR = 15 m NBTLR = 5 m SBTLR = 5 m	EBL = 0 (A) 0 EBTR = 0.37 (C) 17 WBTLR = 0.33 (C) 17 NBTLR = 0.02 (A) 1 SBTLR = 0.04 (A) 3	EBL = 0 m EBTR = 15 m WBTLR = 10 m NBTLR = 5 m SBTLR = 5 m

Scenario	Am Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Total 2027	EBL = 0 (A) 0 EBTR = 0.17 (B) 12 WBTLR = 0.63 (C) 22 NBTLR = 0.01 (A) 1 SBTLR = 0.01 (A) 0	EBL = 0 m EBTR = 5 m WBTLR = 35 m NBTLR = 5 m SBTLR = 5 m	EBL = 0 (A) 0 EBTR = 0.63 (D) 26 WBTLR = 0.62 (D) 29 NBTLR = 0.02 (A) 1 SBTLR = 0.04 (A) 3	EBL = 0 m EBTR = 35 m WBTLR = 30 m NBTLR = 5 m SBTLR = 5 m

Under existing 2022 conditions this unsignalized intersection is expected to operate at satisfactory levels, with ample reserve for all movements and queuing.

With the addition of corridor growth under the 2027 future background traffic scenario which includes the assumed background traffic development traffic, this unsignalized intersection is expected to continue to operate at satisfactory levels, with ample reserve for all movements and acceptable queuing.

Under the 2027 future total traffic condition including the subject site traffic from Joshua Creek Phase 3, this intersection is expected to continue to operate at satisfactory levels, with ample reserve for all movements and queuing. The incremental increase in v/c ratios, delays and queuing due to the addition of the subject site trips is acceptable and there remains no critical movements to report.

No geometric improvements are recommended at this intersection in response to the development of the subject site.

7.2 Dundas Street East and Eighth Line

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background and future total traffic conditions out are summarized in the following table.

Table 5 Capacity analysis of Dundas Street East and Eighth Line

Scenario	Am Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2022	Overall: 0.62 (C) 30 EBL = 0.02 (A) 5 **EBT = 0.85 (C) 32** EBR = 0.11 (B) 17 WBL = 0.13 (C) 32 WBT = 0.45 (B) 19 WBR = 0.01 (B) 16 NBL = 0.64 (D) 54 NBT = 0.06 (D) 44 NBR = 0.21 (D) 46 SBL = 0.37 (D) 47 SBT = 0.18 (D) 45 SBR = 0.02 (D) 44	EBL = 5 m EBT = 200 m EBR = 20 m WBL = 15 m WBT = 60 m WBR = 0 m NBL = 60 m NBT = 10 m NBR = 25 m SBL = 35 m SBT = 25 m SBR = 0 m	Overall: 0.67 (B) 15 EBL = 0.08 (B) 11 EBT = 0.41 (B) 12 EBR = 0.13 (B) 10 WBL = 0.49 (A) 7 WBT = 0.7 (B) 13 WBR = 0.05 (A) 6 NBL = 0.64 (E) 56 NBT = 0.08 (D) 45 NBR = 0.07 (D) 45 SBL = 0.13 (D) 45 SBT = 0.04 (D) 44 SBR = 0.01 (D) 44	EBL = 5 m EBT = 90 m EBR = 15 m WBL = 25 m WBT = 205 m WBR = 10 m NBL = 65 m NBT = 15 m NBR = 15 m SBL = 20 m SBT = 10 m SBR = 0 m
Future Background 2027	Overall: 0.81 (E) 69 EBL = 0.1 (B) 10 **EBT = 1.11 (F) 91** EBR = 0.12 (B) 18 WBL = 0.24 (C) 22 WBT = 0.75 (D) 49 WBR = 0.03 (F) 156 NBL = 0.7 (E) 56 NBT = 0.08 (D) 42 NBR = 0.28 (D) 44	EBL = 10 m EBT = 345 m EBR = 20 m WBL = 35 m WBT = 185 m WBR = 10 m NBL = 65 m NBT = 15 m NBR = 35 m	**Overall: 0.94 (D) 46** EBL = 0.42 (C) 29 EBT = 0.74 (C) 24 EBR = 0.18 (B) 15 WBL = 0.68 (D) 42 **WBT = 1.09 (E) 63** WBR = 0.12 (B) 17 NBL = 0.66 (D) 53 NBT = 0.17 (D) 42 NBR = 0.18 (D) 43	EBL = 25 m EBT = 195 m EBR = 30 m WBL = 50 m WBT = 350 m WBR = 10 m NBL = 65 m NBT = 25 m NBR = 25 m

Scenario	Am Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
	SBL = 0.66 (D) 53 SBT = 0.24 (D) 44 SBR = 0.03 (D) 42	SBL = 65 m SBT = 35 m SBR = 5 m	SBL = 0.28 (D) 44 SBT = 0.07 (D) 41 SBR = 0.02 (D) 41	SBL = 30 m SBT = 15 m SBR = 0 m
Future Total 2027	Overall: 0.83 (E) 59 EBL = 0.1 (B) 12 **EBT = 1.13 (F) 97** EBR = 0.12 (B) 18 WBL = 0.25 (D) 53 WBT = 0.8 (B) 10 WBR = 0.03 (A) 0 NBL = 0.72 (E) 58 NBT = 0.1 (D) 42 NBR = 0.27 (D) 44 SBL = 0.65 (D) 52 SBT = 0.28 (D) 44 SBR = 0.03 (D) 41	 EBL = 10 m EBT = 350 m EBR = 20 m WBL = 30 m WBT = 45 m WBR = 5 m NBL = 65 m NBT = 15 m NBR = 35 m SBL = 65 m SBT = 40 m SBR = 5 m	**Overall: 0.96 (D) 53** EBL = 0.42 (C) 29 EBT = 0.79 (C) 26 EBR = 0.18 (B) 15 WBL = 0.68 (D) 42 **WBT = 1.11 (E) 77** WBR = 0.12 (B) 17 NBL = 0.66 (D) 52 NBT = 0.22 (D) 43 NBR = 0.18 (D) 42 SBL = 0.3 (D) 44 SBT = 0.1 (D) 42 SBR = 0.02 (D) 41	 EBL = 25 m EBT = 215 m EBR = 30 m WBL = 50 m WBT = 330 m WBR = 10 m NBL = 65 m NBT = 30 m NBR = 25 m SBL = 30 m SBT = 20 m SBR = 0 m

Under the projected existing conditions, this intersection is expected to operate at satisfactory levels with an overall v/c ratio of 0.62 LOS C and 0.67 LOS B during the a.m. and p.m. peak hours respectively. Only the eastbound through during the a.m. peak hour has reached a critical level of 0.85 LOS C but remains below the theoretical capacity of 1.00.

Under the 2027 future background traffic scenario, the overall v/c ratios for the intersection increase to 0.81 LOS E during the a.m. peak hour and a critical v/c ratio 0.94 LOS D during the p.m. peak hour. Signal timings were optimized where possible to reduce delays and queueing. During the a.m. peak hour, the eastbound through is reported to be over capacity with a v/c ratio of 1.11 LOS F. During the p.m. peak hour, the westbound through is reported to operate over capacity with a v/c ratio of 1.09 LOS E. All other movements are reported to operate below critical levels.

With the addition of the subject site traffic under the 2027 future total traffic scenario, the overall intersection v/c ratio increases slightly from 0.81 to 0.83 LOS E during the a.m. peak hour and from 0.94 to 0.96 LOS D during the p.m. peak hour. Signal timings were optimized where possible to reduce delays and queueing. During the a.m. peak hour, the critical eastbound through movement increases from 1.11 to 1.13 LOS F while during the p.m. peak hour, the westbound through increases from 1.09 to 1.11 LOS E.

The volume of east-west traffic along Dundas Street based on the 2019 traffic counts was already quite high and the 2% per annum compounded growth rate will increase the growth of this traffic rapidly leading to significant capacity constraints. It is unlikely that this level of growth will occur along this corridor as the planned completion of the parallel William Halton Parkway is expected to be completed by 2027 and it is expected that some of this east-west traffic will divert away from Dundas Street which should improve intersection operations. Additionally, the conversion of the curbside lane to an HOV/BRT lane also reduces the capacity along Dundas Street. It is expected that along with the introduction of the HOV and future BRT service, that the modal splits will also increase from existing levels which will further improve the operation of intersections along Dundas Street.

No geometric improvements are recommended at this intersection in response to the development of the subject site.

7.3 Dundas Street East and John McKay Boulevard/Prince Michael Drive

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions are summarized in the following table.

Table 6 Capacity analysis of Dundas Street East and John McKay Boulevard/Prince Michael Drive

Scenario	Am Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2022	Overall: 0.58 (A) 6 EBT = 0.62 (A) 2 EBR = 0.08 (A) 1 WBL = 0.32 (A) 9 WBT = 0.26 (A) 3 NBL = 0.47 (D) 54 NBR = 0.17 (D) 53	 EBT = 25 m EBR = 5 m WBL = 15 m WBT = 30 m NBL = 45 m NBR = 25 m	Overall: 0.66 (B) 12 EBT = 0.39 (B) 10 EBR = 0.1 (A) 8 WBL = 0.57 (B) 12 WBT = 0.65 (A) 10 NBL = 0.61 (E) 57 NBR = 0.06 (D) 48	 EBT = 80 m EBR = 10 m WBL = 45 m WBT = 185 m NBL = 60 m NBR = 15 m
Future Background 2027	**Overall: 1.04 (E) 64** EBL = 0.33 (A) 9 **EBT = 1.19 (F) 98** EBR = 0.1 (A) 1 WBL = 0.37 (D) 37 WBT = 0.64 (B) 15 WBR = 0.05 (C) 26 NBL = 0.82 (F) 84 NBTR = 0.64 (E) 68 SBL = 0.81 (D) 46 SBT = 0.02 (C) 29 SBR = 0.14 (C) 30	 EBL = 5 m EBT = 325 m EBR = 0 m WBL = 20 m WBT = 95 m WBR = 15 m NBL = 70 m NBTR = 60 m SBL = 110 m SBT = 10 m SBR = 25 m	**Overall: 1.08 (E) 57** EBL = 0.85 (E) 69 EBT = 0.67 (B) 16 EBR = 0.14 (B) 16 WBL = 0.75 (D) 39 **WBT = 1.13 (F) 84** WBR = 0.2 (B) 19 NBL = 0.7 (E) 57 NBTR = 0.07 (D) 45 SBL = 0.89 (F) 80 SBT = 0.02 (D) 42 SBR = 0.06 (D) 43	 EBL = 60 m EBT = 100 m EBR = 20 m WBL = 55 m WBT = 350 m WBR = 20 m NBL = 75 m NBTR = 20 m SBL = 100 m SBT = 10 m SBR = 15 m
Future Total 2027	**Overall: 1.07 (F) 93** EBL = 0.45 (C) 34 **EBT = 1.2 (F) 144** EBR = 0.1 (D) 50 WBL = 0.38 (D) 54 WBT = 0.68 (C) 28 WBR = 0.06 (D) 35 NBL = 0.84 (F) 88 NBTR = 0.74 (E) 78 SBL = 0.87 (D) 53 SBT = 0.02 (C) 28 SBR = 0.21 (C) 30	 EBL = 15 m EBT = 305 m EBR = 15 m WBL = 25 m WBT = 85 m WBR = 15 m NBL = 70 m NBTR = 70 m SBL = 140 m SBT = 10 m SBR = 35 m	**Overall: 1.14 (E) 74** **EBL = 0.96 (F) 89** EBT = 0.72 (B) 18 EBR = 0.14 (B) 18 WBL = 0.76 (D) 40 **WBT = 1.2 (F) 117** WBR = 0.24 (C) 22 NBL = 0.64 (D) 52 NBTR = 0.07 (D) 43 SBL = 0.92 (F) 84 SBT = 0.02 (D) 41 SBR = 0.08 (D) 41	 EBL = 75 m EBT = 105 m EBR = 20 m WBL = 55 m WBT = 350 m WBR = 25 m NBL = 70 m NBTR = 15 m SBL = 110 m SBT = 5 m SBR = 15 m

Under the projected 2022 conditions, the intersection is expected to operate at satisfactory levels with an overall v/c ratio of 0.58 LOS A and 0.66 LOS B during the a.m. and p.m. peak hours respectively. No individual movements were reported to operate at critical levels.

Under the 2027 future background traffic scenario, with the addition of the north leg of the intersection into the Dunoak residential development, the overall intersection v/c ratio increases during the a.m. peak hour from 0.58 to 1.04 LOS E and from 0.66 to 1.08 LOS E during the p.m. peak hour. Signal timings were optimized where possible to reduce delays and queueing. During the a.m. peak hour, the eastbound through movement is reported to be over capacity with a v/c ratio of 1.19 LOS F. During the p.m. peak hour, the westbound through movement is reported to be over capacity with a v/c ratio of 1.13 LOS F. All other movements are reported to operate below critical levels.

With the addition of the subject site traffic under the 2027 future total traffic scenario, the overall intersection v/c ratio increases from 1.04 to 1.07 LOS F during the a.m. and from 1.08 to 1.14 LOS E during the p.m. peak hour. During the a.m. peak hour, the eastbound v/c ratio increases by 0.01 to 1.20 LOS F. During the p.m. peak hour, the westbound through movement v/c ratio increased by 0.07 to 1.20 LOS D and the eastbound left increases to just over critical levels with a v/c ratio of 0.96 LOS F.

As previously noted, the capacity issues along Dundas Street are prevalent under the 2027 future background traffic scenario given the background development site trips and assumed corridor growth along Dundas Street. It is expected that some of this growth along with existing traffic will redistribute to the future William Halton Parkway (a parallel route) once construction is completed and delays along Dundas Street become excessive for drivers.

No geometric improvements are recommended at this intersection in response to the development of the subject site.

7.4 Dundas Street East and Meadowridge Drive

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions out are summarized in the following table.

Table 7 Capacity analysis of Dundas Street East and Meadowridge Drive

Scenario	Am Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2022	Overall: 0.66 (C) 32		Overall: 0.63 (A) 9	
	EBT = 0.96 (D) 42	EBT = 265 m	EBT = 0.38 (B) 12	EBT = 110 m
	EBR = 0.05 (B) 17	EBR = 10 m	EBR = 0.05 (B) 11	EBR = 10 m
	WBL = 0.15 (B) 19	WBL = 15 m	WBL = 0.53 (A) 4	WBL = 15 m
	WBT = 0.27 (A) 3	WBT = 25 m	WBT = 0.66 (A) 5	WBT = 95 m
	NBL = 0.31 (E) 56	NBL = 25 m	NBL = 0.25 (E) 56	NBL = 25 m
	NBR = 0.17 (D) 55	NBR = 20 m	NBR = 0.05 (D) 54	NBR = 15 m
Future Background 2027	**Overall: 1.01 (E) 63**		**Overall: 1.03 (D) 39**	
	EBL = 0.12 (B) 10	EBL = 5 m	EBL = 0.66 (D) 45	EBL = 30 m
	EBT = 1.11 (F) 90	EBT = 320 m	EBT = 0.59 (A) 9	EBT = 70 m
	EBR = 0.06 (C) 21	EBR = 5 m	EBR = 0.1 (A) 10	EBR = 5 m
	WBL = 0.43 (D) 52	WBL = 35 m	WBL = 0.76 (C) 34	WBL = 40 m
	WBT = 0.5 (B) 11	WBT = 80 m	**WBT = 1.09 (D) 54**	WBT = 140 m
	WBR = 0 (A) 8	WBR = 0 m	WBR = 0.01 (A) 5	WBR = 0 m
	NBL = 0.21 (D) 45	NBL = 25 m	NBL = 0.32 (E) 56	NBL = 25 m
	NBT = 0.00 (A) 0	NBT = 0 m	NBT = 0.00 (A) 0	NBT = 0 m
	NBR = 0.81 (E) 65	NBR = 100 m	NBR = 0.16 (D) 54	NBR = 25 m
	SBL = 0.36 (D) 46	SBL = 40 m	SBL = 0.44 (E) 57	SBL = 30 m
	SBT = 0.00 (A) 0	SBT = 0 m	SBT = 0.00 (A) 0	SBT = 0 m
	SBR = 0.05 (D) 42	SBR = 5 m	SBR = 0.04 (D) 53	SBR = 5 m
Future Total 2027	**Overall: 1.03 (D) 52**		**Overall: 1.1 (D) 48**	
	EBL = 0.16 (B) 10	EBL = 5 m	EBL = 0.87 (E) 71	EBL = 40 m
	EBT = 1.12 (E) 72	EBT = 115 m	EBT = 0.62 (A) 9	EBT = 70 m
	EBR = 0.06 (A) 9	EBR = 5 m	EBR = 0.11 (A) 9	EBR = 5 m
	WBL = 0.44 (D) 51	WBL = 35 m	WBL = 0.8 (C) 30	WBL = 40 m
	WBT = 0.51 (B) 12	WBT = 90 m	**WBT = 1.12 (E) 70**	WBT = 270 m
	WBR = 0.03 (D) 47	WBR = 5 m	WBR = 0.09 (A) 8	WBR = 5 m
	NBL = 0.21 (D) 45	NBL = 25 m	NBL = 0.29 (D) 54	NBL = 25 m
	NBT = 0.00 (A) 0	NBT = 0 m	NBT = 0.00 (A) 0	NBT = 0 m
	NBR = 0.82 (E) 66	NBR = 100 m	NBR = 0.17 (D) 53	NBR = 25 m
	SBL = 0.71 (E) 57	SBL = 75 m	SBL = 0.8 (F) 80	SBL = 65 m
	SBT = 0.00 (A) 0	SBT = 0 m	SBT = 0.00 (A) 0	SBT = 0 m
	SBR = 0.06 (D) 43	SBR = 10 m	SBR = 0.05 (D) 51	SBR = 10 m

Under the projected 2022 conditions, the intersection is expected to operate at satisfactory levels with an overall v/c ratio of 0.66 LOS C and 0.63 LOS A during the a.m. and p.m. peak hours respectively. No individual movements were reported to operate at critical levels with the exception of the eastbound through movement with a reported v/c ratio of 0.96 LOS D.

Under the 2027 future background traffic scenario, with the addition of the north leg of the intersection into the Argo residential development, the overall intersection v/c ratio increases during the a.m. peak hour from 0.66 to 1.01 LOS E and from 0.63 to 1.03 LOS D during the p.m. peak hour. Signal timings were optimized where possible to reduce delays and queueing. During the a.m. peak hour, the eastbound through movement continues to report to be over capacity with a v/c ratio of 1.11 LOS F. During the p.m. peak hour, the westbound through movement increases significantly and is reported to be over capacity with a v/c ratio of 1.09 LOS D. All other movements are reported to operate below critical levels.

With the addition of the subject site traffic under the 2027 future total traffic scenario, the overall intersection v/c ratio increases slightly from 1.01 to 1.03 LOS F during the a.m. and from 1.03 to 1.11 LOS D during the p.m. peak hour. During the a.m. peak hour, the eastbound v/c ratio increases by 0.01 to 1.12 LOS E. During the p.m. peak hour, the westbound through movement v/c ratio increased by 0.03 to 1.12 LOS E. All other movements are reported to operate below critical levels.

As previously noted, the capacity issues along Dundas Street are prevalent under the 2027 future background traffic scenario given the background development site trips and assumed corridor growth along Dundas Street. It is expected that some of this growth along with existing traffic will redistribute to the future William Halton Parkway (a parallel route) once construction is completed and delays along Dundas Street become excessive for drivers.

No geometric improvements are recommended at this intersection in response to the development of the subject site.

7.5 Dundas Street East and William Cutmore Boulevard

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions out are summarized in the following table.

Table 8 Capacity analysis of Dundas Street East and William Cutmore Boulevard

Scenario	Am Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2022	Overall: 0.66 (A) 8 EBL = 0.08 (A) 4 EBT = 0.7 (A) 8 WBT = 0.3 (A) 2 WBR = 0.03 (A) 1 SBL = 0.49 (E) 57 SBR = 0.05 (D) 48	 EBL = 5 m EBT = 120 m WBT = 20 m WBR = 5 m SBL = 55 m SBR = 15 m	**Overall: 0.86 (A) 7** EBL = 0.87 (F) 89 EBT = 0.35 (A) 2 WBT = 0.76 (A) 4 WBR = 0.09 (A) 0 SBL = 0.62 (E) 74 SBR = 0.19 (E) 58	 EBL = 25 m EBT = 30 m WBT = 40 m WBR = 0 m SBL = 50 m SBR = 20 m
Future Background 2027	**Overall: 0.94 (B) 12** EBL = 0.15 (A) 2 **EBT = 1.00 (B) 14** WBT = 0.42 (A) 1 WBR = 0.03 (A) 0 SBL = 0.6 (E) 61 SBR = 0.05 (D) 48	 EBL = 5 m EBT = 50 m WBT = 15 m WBR = 5 m SBL = 65 m SBR = 15 m	**Overall: 1.09 (E) 59** EBL = 0.6 (E) 71 EBT = 0.51 (A) 2 **WBT = 1.15 (F) 88** WBR = 0.12 (A) 0 SBL = 0.77 (E) 79 SBR = 0.03 (D) 55	 EBL = 25 m EBT = 35 m WBT = 50 m WBR = 0 m SBL = 60 m SBR = 15 m
Future Total 2027	**Overall: 0.99 (C) 22** EBL = 0.25 (A) 2 **EBT = 1.04 (C) 28** WBT = 0.44 (A) 1 WBR = 0.04 (A) 0 SBL = 0.75 (E) 70 SBR = 0.19 (D) 50	 EBL = 5 m EBT = 65 m WBT = 15 m WBR = 5 m SBL = 85 m SBR = 25 m	**Overall: 1.16 (E) 71** EBL = 0.92 (F) 118 EBT = 0.54 (A) 2 **WBT = 1.2 (F) 107** WBR = 0.15 (A) 0 SBL = 0.91 (F) 109 SBR = 0.21 (E) 58	 EBL = 55 m EBT = 25 m WBT = 35 m WBR = 0 m SBL = 80 m SBR = 25 m

The Bressa residential subdivision has been constructed since the 2019 traffic counts were conducted and this study intersection is now a three-leg signalized intersection, as a result, the expected trip generation from the Bressa Traffic study was included in the 2022 traffic scenario. Under the projected 2022 conditions, the intersection is expected to

operate at satisfactory levels with an overall v/c ratio of 0.66 LOS A during the a.m. peak hour, but with a critical 0.86 LOS A during the p.m. peak hour. No individual movements were reported to operate at critical levels.

Under the 2027 future background traffic scenario, the overall intersection v/c ratio increases during the a.m. peak hour from 0.66 to 0.94 LOS B and from 0.86 to 1.09 LOS E during the p.m. peak hour. Signal timings were optimized where possible to reduce delays and queueing. During the a.m. peak hour, the eastbound through movement continues to report to be over capacity with a v/c ratio of 1.00 LOS B. During the p.m. peak hour, the westbound through movement also increases and is reported to be over capacity with a v/c ratio of 1.15 LOS F. All other movements are reported to operate below critical levels.

With the addition of the subject site traffic under the 2027 future total traffic scenario, the overall intersection v/c ratio increases slightly from 0.94 to 0.99 LOS C during the a.m. and from 1.09 to 1.16 LOS E during the p.m. peak hour. During the a.m. peak hour, the eastbound through v/c ratio increases by 0.04 to 1.04 LOS E. During the p.m. peak hour, the westbound through movement v/c ratio increased by 0.05 to 1.20 LOS F. All other movements are reported to operate below critical levels.

As previously noted, the capacity issues along Dundas Street are prevalent under the 2027 future background traffic scenario given the background development site trips and assumed corridor growth along Dundas Street. It is expected that some of this growth along with existing traffic will redistribute to the future William Halton Parkway (a parallel route) once construction is completed and delays along Dundas Street become excessive for drivers.

No geometric improvements are recommended at this intersection in response to the development of the subject site.

7.6 Dundas Street East and Ninth Line

Table 9 Capacity analysis of Ernest Dundas Street East and Ninth Line

Scenario	Am Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2022	Overall: 0.78 (C) 29		**Overall: 0.93 (D) 42**	
	EBL = 0.50 (B) 14	EBL = 40 m	EBL = 0.62 (E) 57	EBL = 45 m
	EBT = 0.84 (C) 24	EBT = 125 m	EBT = 0.48 (B) 20	EBT = 85 m
	EBR = 0.29 (B) 17	EBR = 35 m	EBR = 0.11 (B) 13	EBR = 10 m
	WBL = 0.60 (C) 31	WBL = 40 m	WBL = 0.47 (B) 14	WBL = 25 m
	WBT = 0.39 (C) 22	WBT = 75 m	**WBT = 0.98 (D) 45**	WBT = 275 m
	WBR = 0.08 (B) 18	WBR = 15 m	WBR = 0.11 (B) 17	WBR = 20 m
	NBL = 0.76 (D) 48	NBL = 55 m	NBL = 0.91 (E) 66	NBL = 120 m
	NBT = 0.45 (D) 46	NBT = 55 m	NBT = 0.78 (D) 49	NBT = 120 m
	NBR = 0.11 (D) 42	NBR = 20 m	**NBR = 0.95 (E) 78**	NBR = 180 m
	SBL = 0.53 (D) 36	SBL = 55 m	SBL = 0.64 (D) 44	SBL = 35 m
	SBT = 0.74 (D) 52	SBT = 90 m	SBT = 0.38 (D) 42	SBT = 50 m
	SBR = 0.06 (D) 42	SBR = 10 m	SBR = 0.27 (D) 41	SBR = 40 m
Future Background 2027	**Overall: 1.07 (F) 113**		**Overall: 1.27 (F) 160**	
	EBL = 0.71 (C) 32	EBL = 50 m	EBL = 0.69 (D) 44	EBL = 50 m
	EBT = 1.38 (F) 212	EBT = 440 m	EBT = 0.79 (D) 38	EBT = 150 m
	EBR = 0.56 (C) 32	EBR = 70 m	EBR = 0.26 (D) 40	EBR = 45 m
	WBL = 0.6 (C) 32	WBL = 45 m	WBL = 0.75 (D) 45	WBL = 55 m
	WBT = 0.66 (C) 32	WBT = 130 m	**WBT = 1.6 (F) 308**	WBT = 545 m
	WBR = 0.1 (C) 23	WBR = 15 m	WBR = 0.14 (C) 20	WBR = 20 m
	NBL = 0.98 (F) 86	NBL = 85 m	**NBL = 0.98 (E) 71**	NBL = 185 m
	NBT = 0.39 (D) 40	NBT = 50 m	NBT = 0.93 (E) 64	NBT = 160 m
	NBR = 0.15 (D) 37	NBR = 20 m	NBR = 0.92 (E) 74	NBR = 175 m
	SBL = 0.58 (D) 36	SBL = 55 m	SBL = 0.48 (D) 46	SBL = 35 m
	SBT = 0.72 (D) 49	SBT = 90 m	**SBT = 1.15 (F) 157**	SBT = 90 m
	SBR = 0.07 (D) 39	SBR = 15 m	SBR = 0.84 (F) 94	SBR = 80 m

Scenario	Am Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Total 2027	**Overall: 1.11 (F) 129**		**Overall: 1.32 (F) 179**	
	EBL = 0.73 (C) 35	EBL = 50 m	EBL = 0.69 (D) 42	EBL = 45 m
	EBT = 1.46 (F) 244	EBT = 455 m	**EBT = 0.85 (D) 41**	EBT = 200 m
	EBR = 0.56 (C) 31	EBR = 65 m	EBR = 0.27 (D) 38	EBR = 45 m
	WBL = 0.6 (C) 32	WBL = 50 m	WBL = 0.75 (D) 46	WBL = 55 m
	WBT = 0.69 (C) 33	WBT = 140 m	**WBT = 1.69 (F) 349**	WBT = 585 m
	WBR = 0.1 (C) 23	WBR = 15 m	WBR = 0.14 (C) 20	WBR = 20 m
	NBL = 0.98 (F) 86	NBL = 85 m	**NBL = 0.98 (E) 71**	NBL = 185 m
	NBT = 0.39 (D) 40	NBT = 50 m	NBT = 0.93 (E) 64	NBT = 160 m
	NBR = 0.15 (D) 37	NBR = 20 m	NBR = 0.93 (E) 74	NBR = 175 m
	SBL = 0.58 (D) 36	SBL = 55 m	SBL = 0.48 (D) 46	SBL = 35 m
	SBT = 0.72 (D) 49	SBT = 90 m	**SBT = 1.15 (F) 157**	SBT = 90 m
	SBR = 0.07 (D) 39	SBR = 15 m	SBR = 0.84 (F) 94	SBR = 80 m

Under the projected 2022 conditions, the intersection is expected to operate at satisfactory levels with an overall v/c ratio of 0.78 LOS C and 0.93 LOS D during the a.m. and p.m. peak hours respectively. No critical movements were reported during the a.m. peak hour but during the p.m. peak hour, critical movements were reported for the westbound through movement with a v/c ratio of 0.98 LOS D and the northbound right turn movement with a v/c ratio of 0.95 LOS E.

Under the 2027 future background traffic scenario, overall intersection v/c ratio increases during the a.m. peak hour from 0.78 to 1.07 LOS F and from 0.93 to 1.27 LOS F during the p.m. peak hour. Signal timings were optimized where possible to reduce delays and queueing. During the a.m. peak hour, the eastbound through movement is reported to be over capacity with a v/c ratio of 1.38 LOS F as is the northbound left turn with a v/c ratio of 0.98 LOS F. During the p.m. peak hour, the westbound through, northbound left and southbound through movements are all at critical levels. All other movements are reported to operate below critical levels.

With the addition of the subject site traffic under the 2027 future total traffic scenario, the overall intersection v/c ratio increases slightly from 1.07 to 1.11 LOS F during the a.m. and from 1.27 to 1.32 LOS D during the p.m. peak hour. During the a.m. peak hour, the eastbound through and northbound left are operating at critical levels. During the p.m. peak hour, the eastbound through, westbound through, northbound left and southbound through are all operating at critical levels. All other movements are reported to operate below critical levels.

As previously noted, the capacity issues along Dundas Street are prevalent under the 2027 future background traffic scenario given the background development site trips and assumed corridor growth along Dundas Street. It is expected that some of this growth along with existing traffic will redistribute to the future William Halton Parkway (a parallel route) once construction is completed and delays along Dundas Street become excessive for drivers.

No geometric improvements are recommended at this intersection in response to the development of the subject site.

8. Sensitivity Analysis

During the interim traffic conditions for Joshua Creek Phase 3, the residential development can only be accessed by Eighth Line using Wheat Boom Drive or from Dundas Street via John McKay Boulevard, Meadowridge Drive or William Cutmore Boulevard. However, the composite plan for Joshua Creek also shows the future connections to Eighth Line and Burnhamthorpe Road are planned once the Coscorp lands to the west and Joshua Creek Phase 5 to the north are developed. The Town requested a sensitivity analysis to determine the number of site generated trips from Joshua Creek Phase 3 that would access these future road connections once they are constructed.

GHD undertook an exercise to estimate the turning movements at the following internal intersections which will upon full build-out of the surrounding lands will result in connections to Eighth Line and Burnhamthorpe Road to project the expected volume of traffic to the north of the subject site:

- John McKay Boulevard and Street ‘D’; and
- Meadowridge Drive and Street ‘F’

The location of these intersections within the site is illustrated in **Figure 10**, with John McKay Boulevard and Street ‘D’ identified by the blue circle and the intersection of Meadowridge Drive and Street ‘F’ identified by the orange circle.

Figure 10 Location of Internal Intersections for the Sensitivity Analysis

Once the connections to the north and the west of Joshua Creek Phase 3 are established, for the purpose of this exercise, it was assumed that 25% of site generated traffic from Joshua Creek Phase 3 would redistribute to these alternate routes as an alternative to travelling south and using Wheat Boom Drive to travel to Eighth Line or continue south to travel east or west on Dundas Street. The same distribution assumptions used to distribute site traffic to the road network in this report were also used for this exercise.

Of the 25% of trips being reassigned to the north, it was assumed that 15% would be using John McKay Boulevard and 10% would be using Meadowridge Road, this distribution was based on the review of the distribution of residential units along those roads.

The distribution of outbound site traffic at the intersection of John McKay Boulevard and Street ‘D’ assumed that the 15% of traffic assigned to the intersection would be evenly distributed to go west to Eighth Line and north to

Burnhamthorpe Road. An additional 1% of site traffic was assumed to travel east/west along Street ‘D’ to account for the residential units to the east of the John McKay Boulevard and Street ‘D’ that would travel through the intersection. The inbound distribution used the same assumption as the outbound distribution (7% from the east, 8% from the north, 15% towards the south, 1% east/west through the intersection).

The intersection of Meadowridge and Street ‘F’ provided only one connection to Burnhamthorpe Road which requires a bridge over the Natural Heritage System, resulting with all the outbound traffic being assigned to the north towards Burnhamthorpe Road. The distribution of traffic arriving at the intersection consisted of 8% arriving from the south and 1% assigned from the east and west along Street ‘F’ respectively, consistent with the distribution of residential developments surrounding the intersection. The inbound distribution used the same assumption as the outbound distribution (10% from the north, 1% to the east, 1% to the west, 8% to the south).

GHD also assigned site traffic at the intersection of Meadowridge Drive and Street ‘F’ from the nearby residential areas that would use that intersection but would not use the future connections to Burnhamthorpe Road. The projected site trip assignment to both of these internal intersections is shown in **Figure 11**.

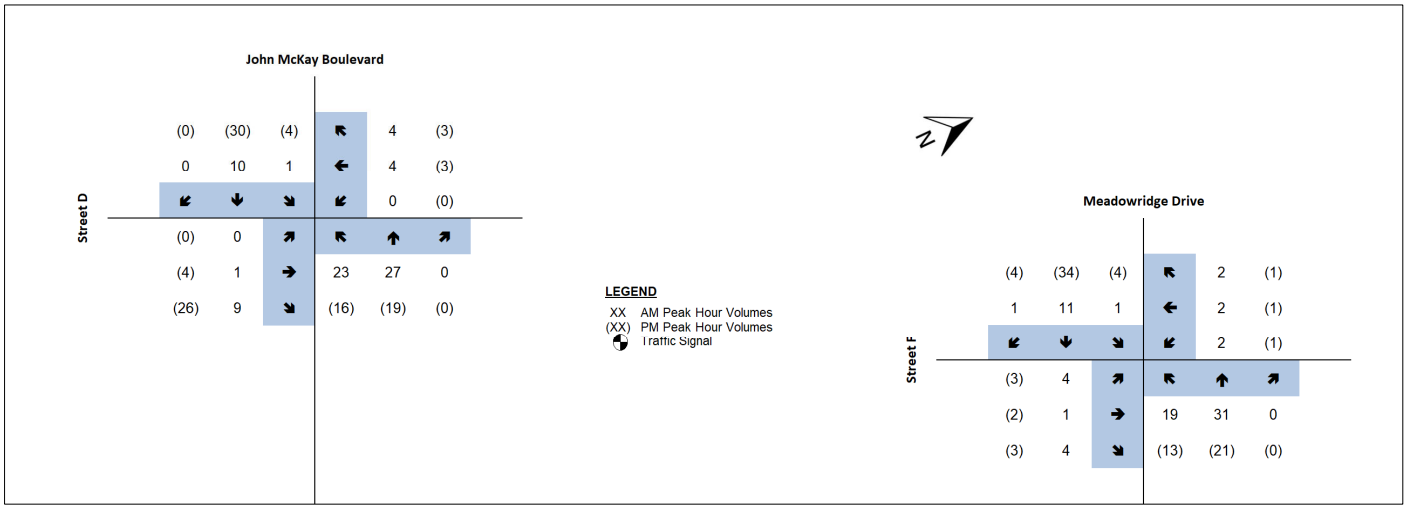

Figure 11 ***Sensitivity Analysis for Internal Intersections***

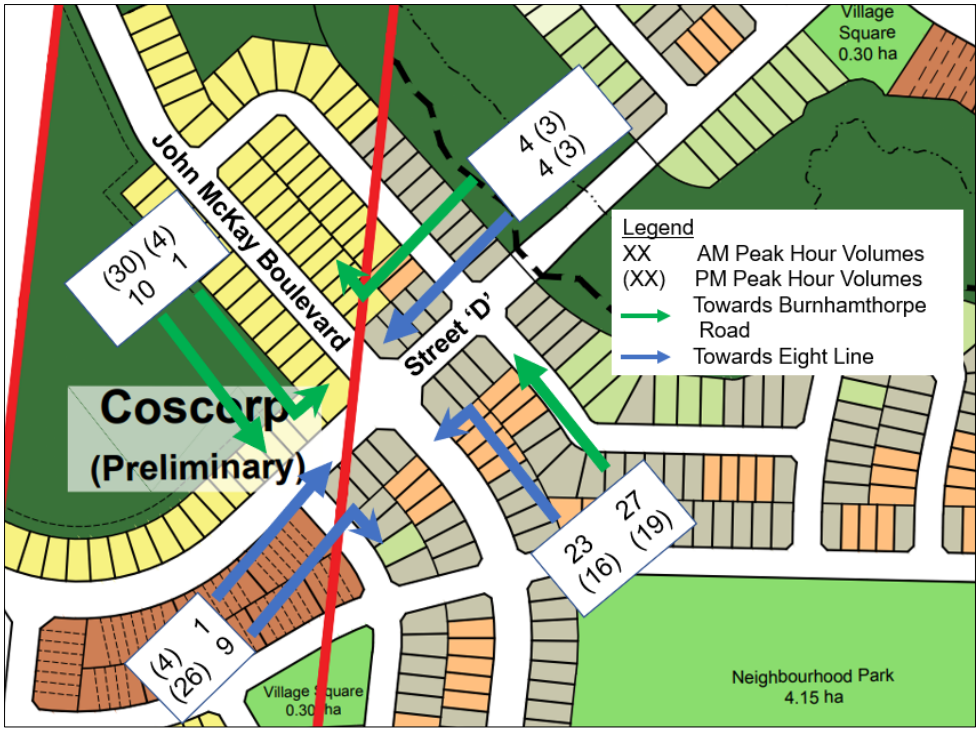

Figure 12 Trip Distribution at John McKay Boulevard and Street 'D'

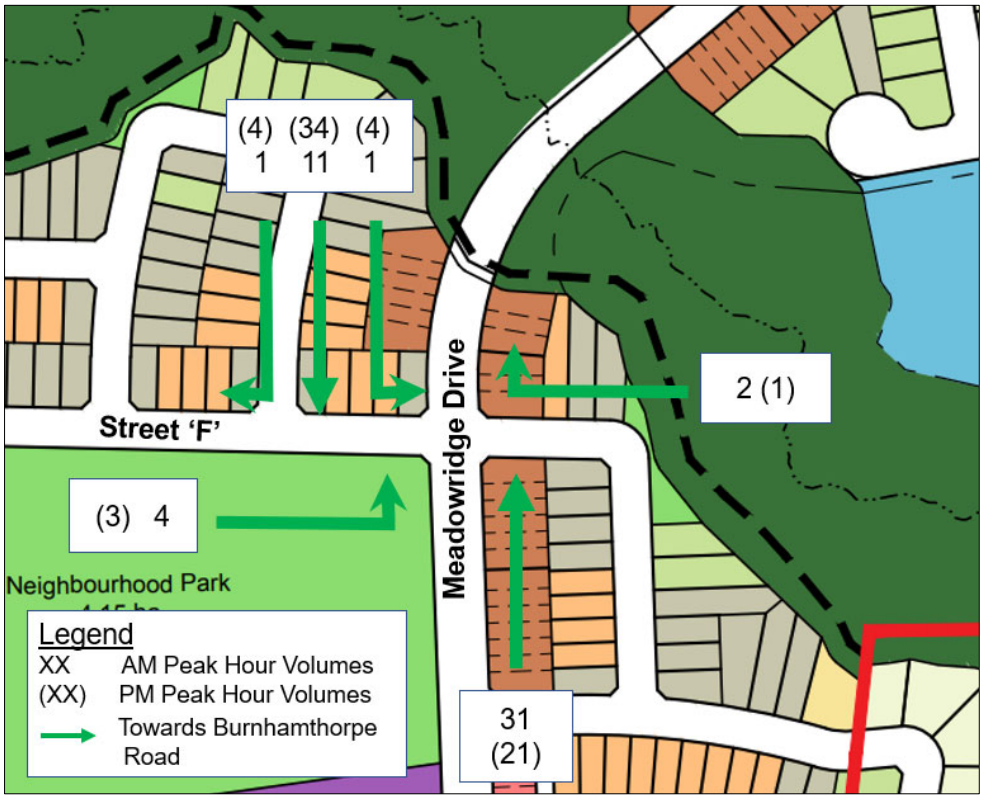

Figure 13 Trip Distribution at Meadowridge Drive and Street 'F'

It is expected that Joshua Creek Phase 3 will produce 92 two-way trips north to Burnhamthorpe Road and 37 two-way trips east to Eighth Line in the a.m. peak hour. A total of 123 two-way trips will be made north to Burnhamthorpe Road and 49 two-way trips east to Eighth Line in the p.m. peak hour when connections planned in Joshua Creek Phase 5 are completed.

9. Trail, Bike and Pedestrian Connectivity

The provision of trail and bicycle connectivity within the Joshua Creek Phase 3 Development area is identified in the North Oakville Trail Map, which shows existing and proposed multi-use paths, trails and cycling provisions.

Figure 14 details the location of the major trails and cycling provisions within the study area.

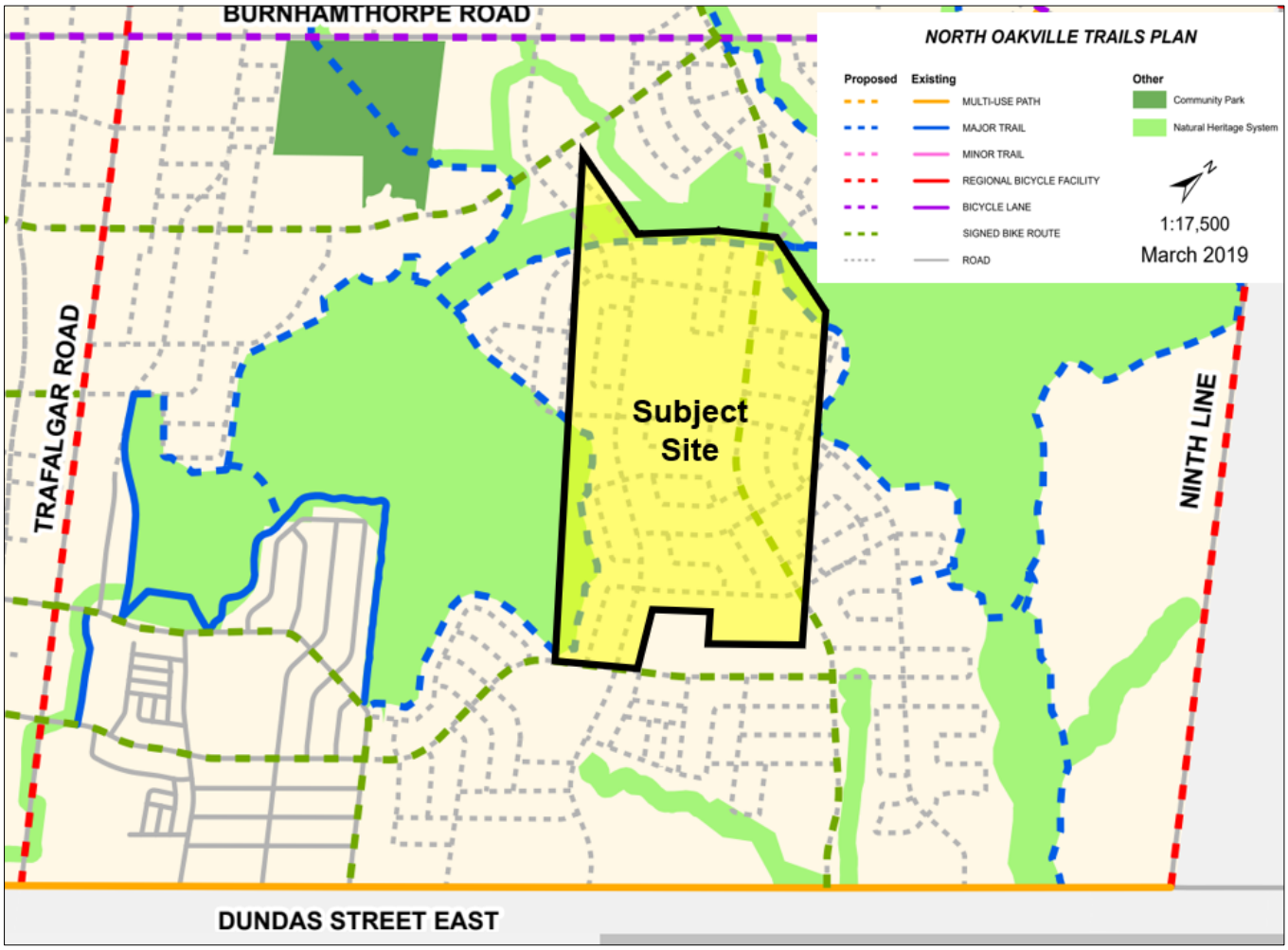

Figure 14 North Oakville Trails Plan

9.1 Trail Connections

Proposed trail connections have been outlined in the North Oakville Trails Plan map, which includes trails along the eastern, northern and western limits of the proposed Joshua Creek Phase 3 developments. The trails will connect to the series of trails provided within the Natural Heritage System Areas that surround the subject site. A multi-use trail is also proposed along the north side of Dundas with the buildout of the adjacent developments.

9.2 Bike Route Connections

Proposed bike routes have been outlined in the North Oakville Trails Plan map and includes signed biked routes along Wheat Boom Drive and Meadowridge Drive within the study area. These cycling provisions will provide connections to the series of surrounding signed bike routes as well as the multi-use path along the north side of Dundas Street East, the bicycle lane along Burnhamthorpe Road and the proposed Regional Bicycle Facilities along Trafalgar Road and Ninth Line.

9.3 Pedestrian Connections

The Joshua Creek Phase 3 development is expected to have full sidewalk connectivity. **Figure 15** details the expected pedestrian connections within the development which includes sidewalks on both sides of all local and collector roads.

Figure 15 Sidewalk Connections

10. Conclusion

The draft plan of subdivision prepared by Korsiak, dated February 2022 includes the Joshua Creek Phase 3 residential development and consists of a series of townhouses and single detached homes. The residential units are broken down as follows:

- 306 townhouse units
- 709 single detached homes

Access to the proposed subdivision from the regional arterial roads is proposed via John McKay Boulevard, Meadowridge Drive and Burnhamthorpe Road.

Due to COVID-19 pandemic and local and provincial restrictions, turning movement counts conducted within years 2020-2022 will likely have depressed results. As a result, GHD used 2019 historic traffic counts for the study intersections and applied a 2% per annum growth rate to establish baseline projected 2022 existing traffic volumes.

Through discussion with Town and Region staff, as well as a review of the Town of Oakville's Development Application portal, it was determined that the Bressa, Argo, Dunoak, Redoak and Capoak residential development as well as the proposed residential site located at 1005 Dundas Street East and 3033 Eighth Line should be considered as background developments. The background development site traffic as well as the 2% per annum growth rate used to account for future corridor growth to the 2027 planning horizon year were used to establish the 2027 future background traffic condition.

The proposed subdivision is expected to generate a total of 532 new two-way trips consisting of 143 inbound and 389 outbound trips during weekday a.m. peak hour and 694 new two-way trips consisting of 429 inbound and 265 outbound trips during the weekday p.m. peak hour.

The analysis of the study intersections found that there would be multiple critical or over capacity movements at each intersection along Dundas Road. The signal timings for all signalized intersections along Dundas Street East were optimized as needed to reduce v/c ratios and delays where possible. It was found that the site traffic had minimal effect on the overall intersection operations and is not expected to have a detrimental impact the study intersections.

A sensitivity analysis was conducted to assess the impacts on site traffic once future connections at the north of the subject site are established that will provide access to Eighth Line and Burnhamthorpe Road. It was found that approximately 92 two-way trips north to Burnhamthorpe Road and 37 two-way trips east to Eighth Line in the a.m. peak hour and a total of 123 two-way trips will be made north to Burnhamthorpe Road and 49 two-way trips east to Eighth Line in the p.m. peak hour when connections planned in Joshua Creek Phase 5 are completed.

The provision of sidewalks within the Joshua Creek Phase 3 Development in addition to the provision of trail and bicycle connectivity within the subject site as identified in the North Oakville Trail Map will provide great connectivity to the series of trail and cycling networks within the surrounding area and the Town of Oakville.

Appendices

Appendix A

Terms of Reference

Raf Andrenacci

From: Will Maria
Sent: Thursday, March 24, 2022 2:47 PM
To: Raf Andrenacci
Subject: FW: Joshua Creek Phase 3 Traffic Study Update TOR

DISABLEFILINGSTA10

Will

William C. Maria, P.Eng.
Transportation Planning Lead

GHD Ltd.
T: 905 814 4397 | C: 647 229 8541 | V: 881397 | F: 905 890 8499 | E: will.maria@ghd.com
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WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

From: Krusto, Matt <Matt.Krusto@halton.ca>
Sent: Friday, February 18, 2022 2:52 PM
To: 'Aquisha Khan' <aquisha.khan@oakville.ca>; Will Maria <William.Maria@ghd.com>
Cc: Leigh Musson <leigh.musson@oakville.ca>
Subject: RE: Joshua Creek Phase 3 Traffic Study Update TOR

Hi Will,

In addition to Aquisha's comments, I have one additional comment:

For the "Analysis Scenarios", these should be year 2022 as "existing", and the 2019 volumes should be factored to year 2022, with analysis to year 2027.

Matt

Matt Krusto
Supervisor, Transportation Development Review
Infrastructure Planning & Policy
Public Works
Halton Region
905-825-6000, ext. 7225 | 1-866-442-5866

From: Aquisha Khan <aquisha.khan@oakville.ca>
Sent: February 18, 2022 11:32 AM
To: 'Will Maria' <William.Maria@ghd.com>
Cc: Krusto, Matt <Matt.Krusto@halton.ca>; Leigh Musson <leigh.musson@oakville.ca>
Subject: RE: Joshua Creek Phase 3 Traffic Study Update TOR

Hi Will;

I do understand that connections to Burnhamthorpe will be in phase 5, it would be beneficial to undertake a sensitivity analysis to illustrate the number of trips anticipated from phase 3 to access Burhamthorpe Road. These are also access points to this part of the subdivision illustrated on the site plan.

I would also like the study intersection of Wheat Boom and Eight Line to be included in the analysis.

Regards;
Aquisha Khan, P. Eng.
Transportation Engineer,
Transportation and Engineering Department,
Town of Oakville | P: 905-845-6601 | www.oakville.ca

From: Will Maria <William.Maria@ghd.com>
Sent: February 18, 2022 9:10 AM
To: Aquisha Khan <aquisha.khan@oakville.ca>
Cc: Matt Krusto (InTouch) <matt.krusto@halton.ca>; Leigh Musson <leigh.musson@oakville.ca>
Subject: RE: Joshua Creek Phase 3 Traffic Study Update TOR

Hi Aquisha, thanks for the comments.
Please be advised that the site will not have any connections to Burnhamthorpe Road, Phase 5 which is north of the NHS including the required crossings of the NHS will not be constructed until Phase 5 proceeds in the future.
Phase 3 will only have access to Dundas Street and Wheat Boom.
That being said, in your comment on study intersections does that mean you would like us to include the intersection of Wheat Boom and Eighth Line in addition to the Dundas Street intersections?

Will

William C. Maria, P.Eng.
Transportation Planning Lead

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WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

From: Aquisha Khan <aquisha.khan@oakville.ca>
Sent: Friday, February 18, 2022 9:02 AM
To: Will Maria <William.Maria@ghd.com>
Cc: Matt Krusto (InTouch) <matt.krusto@halton.ca>; Leigh Musson <leigh.musson@oakville.ca>
Subject: RE: Joshua Creek Phase 3 Traffic Study Update TOR

Hi Will;

Thank you for the clarification. Please see my comments below.

Study Area:

- On the proposed map provided, please identify clearly the area that represents Phase for this study

Study Intersections:

Please include traffic analysis the following intersections in the study:

- All proposed accesses leading towards Burnhamthorpe Road
- All Proposed access leading towards Eight Line

Background Development Traffic

The identified background developments are acceptable

Background Growth Rate

Please use 2% annual growth rate along the major corridors

Warrant Analysis

Please provide any warrant analysis that may require traffic control devices upgrades in the future

Trail, Bike and Pedestrian Connectivity

Please confirm the proposed trail connectivity meets the Town of Oakville Trail Plans. As well as, if there are any proposed bike lanes also identify where the pedestrian walkways would connect in the future. All these can be illustrated in figures with brief summaries.

On-Street Parking

Please include a draft of the anticipated number of on-street parking in this subdivision

If you have any question or require clarification, please feel free to contact me.

Regards

Aquisha

Aquisha Khan, P. Eng.
Transportation Engineer
Transportation and Engineering
Town of Oakville | 905-845-6601, ext.3236 | www.oakville.ca

Vision: To be the most livable town in Canada

From: Will Maria <William.Maria@ghd.com>
Sent: February 17, 2022 10:52 AM
To: Aquisha Khan <aquisha.khan@oakville.ca>
Cc: Matt Krusto (InTouch) <matt.krusto@halton.ca>
Subject: RE: Joshua Creek Phase 2 Traffic Study Update TOR

Please see attached.
Sorry for the error but the subject line should have read Joshua Creek Phase 3 Traffic Study update TOR.
In the attached plan you can see Great Gulf's site which is DunOak, Dunoak which is Phase 2 of Joshua Creek and Bressa which is Phase 1 of Joshua Creek.
Phase 3 is located north of Phase 1 and 2 and south of the NHS.

Will

William C. Maria, P.Eng.
Transportation Planning Lead

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6705 Millcreek Drive Unit 1 Mississauga ON L5N 5M4 | **www.ghd.com**

WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

From: Aquisha Khan <aquisha.khan@oakville.ca>
Sent: Thursday, February 17, 2022 8:30 AM
To: Will Maria <William.Maria@ghd.com>
Cc: Matt Krusto (InTouch) <matt.krusto@halton.ca>
Subject: RE: Joshua Creek Phase 2 Traffic Study Update TOR

HI Will;

Please submit a copy of the proposed location of the study area for review as well.

Thanks

Aquisha

From: Will Maria <William.Maria@ghd.com>
Sent: February 16, 2022 4:30 PM
To: Matt Krusto (InTouch) <matt.krusto@halton.ca>; Aquisha Khan <aquisha.khan@oakville.ca>
Subject: Joshua Creek Phase 2 Traffic Study Update TOR

Hi Matt/Aquisha

In response to comments we received from the Region and Town based on the July 7, 2020 Joshua Creek Phase 3 memo submitted by GHD, we will be completing an updated traffic study for the Joshua Creek Phase 3 development as per the Region's TIS guidelines.

Our proposed scope of work is as follows for your review and comment.

- **Study Intersections:**
  - Dundas and Eighth Line
  - Dundas and Prince Michael Drive
  - Dundas and Meadowridge Drive
  - Dundas and William Cutmore Blvd
  - Dundas and Ninth Line

- **Traffic Data:** Existing Turning Movement Counts (TMC) from 2019 will be used in the analysis (already confirmed with the Region).

- **Traffic Signal Timings:** were also obtained from the Region in 2019 .

- **Study Peak Hours:** Weekday AM and PM.

- **Trips Generation:** Based on latest edition of ITE Trip Generation.

- **Transportation Modes:** Transit mode split assumptions include 10% transit modal split (increase from 6% from the 2016 TTS data), 5% for walk and cycle and 3% for TDM for 2025.

- **Trip Distribution:** Based on first principle of route choice under given road network.

- **Study Horizon Year:** Five year from the date of the study - 2026 as requested by the Region.

- **Analysis Scenarios:** 2020 Existing (2019 volumes factored to 2020), 2025 Future Background and 2025 Future Total as requested by the Region.

- **Background Development Traffic:** GHD will include the following background developments: Dunoak (GHD report), Bressa (GHD report), Redoak (GHD report), 1005 Dundas Street and 3033 Eighth Line development (Paradigm report)

- **Background Growth Rate:** A 1.5 percent annual growth rate will be used to account corridor growth along Dundas Street (this was provided by the Region for the terms of reference for our previous study for Bressa and Dunoak from 2019)

- **Capacity Analysis:** Synchro analysis as per Regions standards.

Your review and comments on the proposed Terms are gently appreciated.
Thanks,

Will

William C. Maria, P.Eng.
Transportation Planning Lead

GHD Ltd.
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Appendix B

Traffic Data

Ontario Traffic Inc.

Morning Peak Diagram

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

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

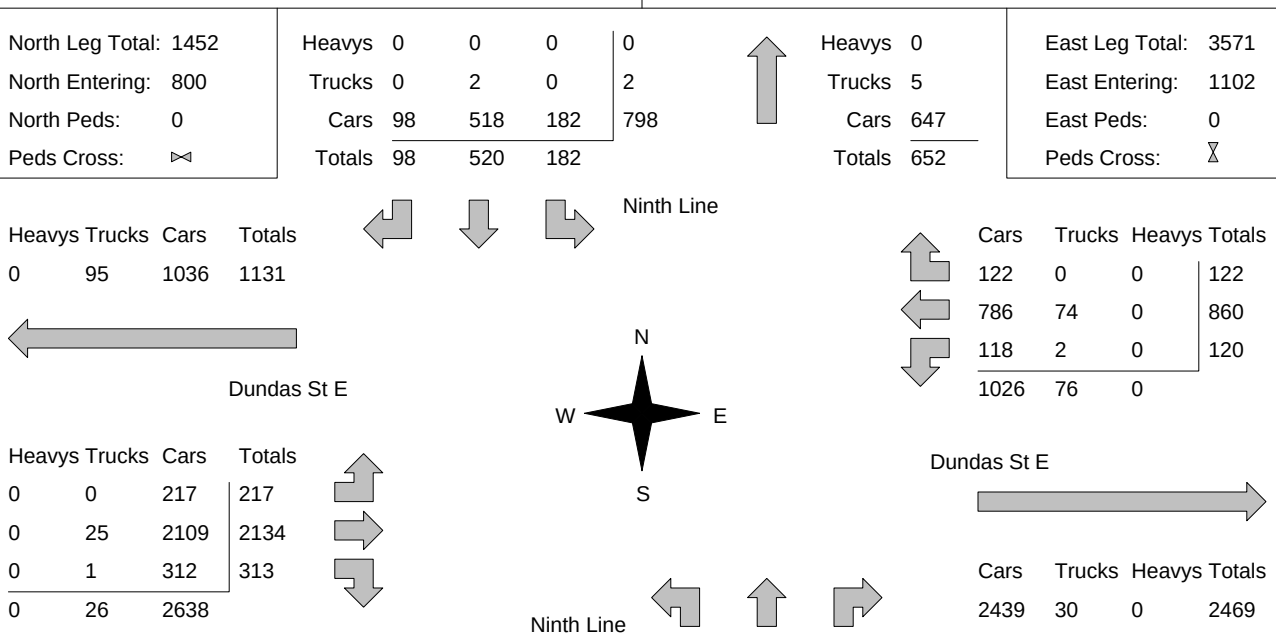
Municipality: Oakville
Site #: 1902900001
Intersection: Dundas St E & Ninth Line
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E



Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

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

One Hour Peak
From: 16:45:00
To: 17:45:00

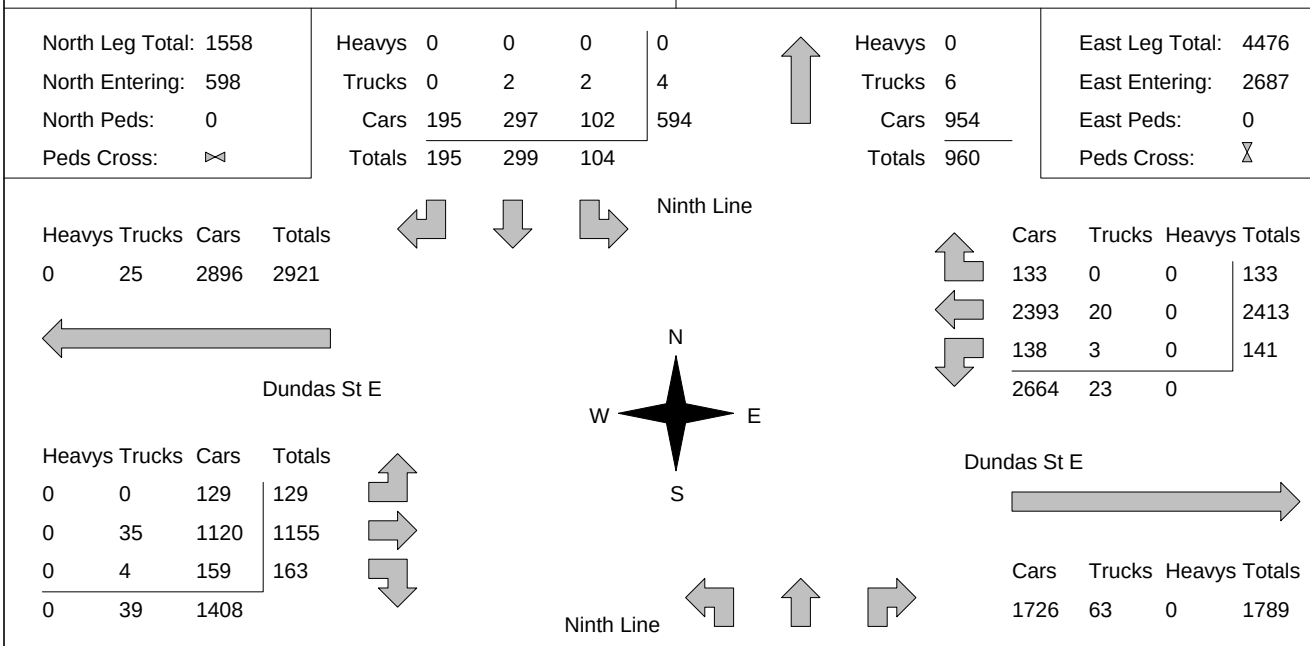
Municipality: Oakville
Site #: 1902900001
Intersection: Dundas St E & Ninth Line
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E



Comments

Ontario Traffic Inc.

Total Count Diagram

Municipality: Oakville
Site #: 1902900001
Intersection: Dundas St E & Ninth Line
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

North Leg Total:	5571			
North Entering:	2631			
North Peds:	1			
Peds Cross:	⋈			

Heavys	0	0	0	0
Trucks	1	9	5	15
Cars	548	1505	563	2616
Totals	549	1514	568	

Heavys	0			
Trucks	24			
Cars	2916			
Totals	2940			

East Leg Total:	15364			
East Entering:	7140			
East Peds:	0			
Peds Cross:	⧖			

Ninth Line

Heavys	Trucks	Cars	Totals
0	262	7476	7738

Dundas St E

Heavys	Trucks	Cars	Totals
0	1	610	611
0	145	6276	6421
0	20	830	850
0	166	7716	

Cars	Trucks	Heavys	Totals
440	2	0	442
6020	205	0	6225
463	10	0	473
6923	217	0	

N
W E
S

Dundas St E

Cars	Trucks	Heavys	Totals
8016	208	0	8224

Ninth Line

Peds Cross:	⧖			
West Peds:	0			
West Entering:	7882			
West Leg Total:	15620			

Cars	2798			
Trucks	39			
Heavys	0			
Totals	2837			

Cars	908	1866	1177	3951
Trucks	56	21	58	135
Heavys	0	0	0	0
Totals	964	1887	1235	

Peds Cross:	⋈			
South Peds:	1			
South Entering:	4086			
South Leg Total:	6923			

Comments

Ontario Traffic Inc.
Traffic Count Summary

Intersection: Dundas St E & Ninth Line | **Count Date:** 19-Feb-19 | **Municipality:** Oakville

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	194	414	43	651	1	1193
9:00:00	177	510	107	794	0	1413
16:00:00	0	0	0	0	0	0
17:00:00	82	283	207	572	0	1982
18:00:00	115	307	192	614	0	2129
Totals:	568	1514	549	2631	1	6717

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	136	268	138	542	0
9:00:00	188	289	142	619	0
16:00:00	0	0	0	0	0
17:00:00	305	654	451	1410	1
18:00:00	335	676	504	1515	0
Totals:	964	1887	1235	4086	1

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	94	718	86	898	0	3452
9:00:00	103	817	106	1026	0	3527
16:00:00	0	0	0	0	0	0
17:00:00	134	2350	111	2595	0	3998
18:00:00	142	2340	139	2621	0	4045
Totals:	473	6225	442	7140	0	15022

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	181	2131	242	2554	0
9:00:00	204	2007	290	2501	0
16:00:00	0	0	0	0	0
17:00:00	99	1147	157	1403	0
18:00:00	127	1136	161	1424	0
Totals:	611	6421	850	7882	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	16:00	17:00	18:00	18:00	18:00
Crossing Values:	0	744	875	0	1041	2609	1126	2609

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900001

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	39	39	77	77	5	5	0	0	1	1	0	0	0	0	0	0	0	0	1	1
7:30:00	85	46	162	85	18	13	0	0	1	0	1	1	0	0	0	0	0	0	1	0
7:45:00	146	61	279	117	25	7	0	0	2	1	1	0	0	0	0	0	0	0	1	0
8:00:00	194	48	412	133	42	17	0	0	2	0	1	0	0	0	0	0	0	0	1	0
8:15:00	240	46	544	132	64	22	0	0	2	0	1	0	0	0	0	0	0	0	1	0
8:30:00	277	37	672	128	95	31	0	0	4	2	1	0	0	0	0	0	0	0	1	0
8:45:00	328	51	797	125	123	28	0	0	4	0	1	0	0	0	0	0	0	0	1	0
9:00:00	370	42	918	121	149	26	1	1	6	2	1	0	0	0	0	0	0	0	1	0
9:02:05	370	0	918	0	149	0	1	0	6	0	1	0	0	0	0	0	0	0	1	0
16:00:00	370	0	918	0	149	0	1	0	6	0	1	0	0	0	0	0	0	0	1	0
16:15:00	396	26	988	70	204	55	1	0	7	1	1	0	0	0	0	0	0	0	1	0
16:30:00	414	18	1051	63	264	60	1	0	7	0	1	0	0	0	0	0	0	0	1	0
16:45:00	437	23	1130	79	316	52	2	1	7	0	1	0	0	0	0	0	0	0	1	0
17:00:00	451	14	1200	70	356	40	2	0	7	0	1	0	0	0	0	0	0	0	1	0
17:15:00	486	35	1290	90	402	46	2	0	8	1	1	0	0	0	0	0	0	0	1	0
17:30:00	511	25	1352	62	456	54	3	1	9	1	1	0	0	0	0	0	0	0	1	0
17:45:00	539	28	1427	75	511	55	4	1	9	0	1	0	0	0	0	0	0	0	1	0
18:00:00	563	24	1505	78	548	37	5	1	9	0	1	0	0	0	0	0	0	0	1	0
18:15:00	563	0	1505	0	548	0	5	0	9	0	1	0	0	0	0	0	0	0	1	0
18:16:59	563	0	1505	0	548	0	5	0	9	0	1	0	0	0	0	0	0	0	1	0

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900001

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	11	11	122	122	8	8	0	0	15	15	0	0	0	0	0	0	0	0	0	0
7:30:00	20	9	284	162	27	19	0	0	36	21	0	0	0	0	0	0	0	0	0	0
7:45:00	52	32	422	138	49	22	0	0	55	19	0	0	0	0	0	0	0	0	0	0
8:00:00	94	42	642	220	86	37	0	0	76	21	0	0	0	0	0	0	0	0	0	0
8:15:00	123	29	782	140	113	27	2	2	93	17	0	0	0	0	0	0	0	0	0	0
8:30:00	150	27	985	203	152	39	2	0	118	25	0	0	0	0	0	0	0	0	0	0
8:45:00	170	20	1208	223	171	19	2	0	129	11	0	0	0	0	0	0	0	0	0	0
9:00:00	193	23	1388	180	191	20	4	2	147	18	1	1	0	0	0	0	0	0	0	0
9:02:05	193	0	1388	0	191	0	4	0	147	0	1	0	0	0	0	0	0	0	0	0
16:00:00	193	0	1388	0	191	0	4	0	147	0	1	0	0	0	0	0	0	0	0	0
16:15:00	219	26	1937	549	224	33	5	1	166	19	1	0	0	0	0	0	0	0	0	0
16:30:00	247	28	2544	607	250	26	7	2	179	13	1	0	0	0	0	0	0	0	0	0
16:45:00	284	37	3056	512	274	24	7	0	184	5	2	1	0	0	0	0	0	0	0	0
17:00:00	323	39	3699	643	301	27	8	1	186	2	2	0	0	0	0	0	0	0	0	0
17:15:00	355	32	4273	574	331	30	9	1	189	3	2	0	0	0	0	0	0	0	0	0
17:30:00	391	36	4860	587	366	35	9	0	197	8	2	0	0	0	0	0	0	0	0	0
17:45:00	422	31	5449	589	407	41	10	1	204	7	2	0	0	0	0	0	0	0	0	0
18:00:00	463	41	6020	571	440	33	10	0	205	1	2	0	0	0	0	0	0	0	0	0
18:15:00	463	0	6020	0	440	0	10	0	205	0	2	0	0	0	0	0	0	0	0	0
18:16:59	463	0	6020	0	440	0	10	0	205	0	2	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900001

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	26	26	50	50	18	18	2	2	0	0	1	1	0	0	0	0	0	0	0	0
7:30:00	55	29	104	54	55	37	11	9	1	1	1	0	0	0	0	0	0	0	0	0
7:45:00	89	34	187	83	96	41	17	6	1	0	5	4	0	0	0	0	0	0	0	0
8:00:00	113	24	266	79	132	36	23	6	2	1	6	1	0	0	0	0	0	0	0	0
8:15:00	148	35	349	83	159	27	30	7	2	0	6	0	0	0	0	0	0	0	0	0
8:30:00	193	45	444	95	199	40	34	4	4	2	6	0	0	0	0	0	0	0	0	0
8:45:00	241	48	495	51	244	45	38	4	6	2	10	4	0	0	0	0	0	0	0	0
9:00:00	282	41	547	52	267	23	42	4	10	4	13	3	0	0	0	0	0	0	0	0
9:02:05	282	0	547	0	267	0	42	0	10	0	13	0	0	0	0	0	0	0	0	0
16:00:00	282	0	547	0	267	0	42	0	10	0	13	0	0	0	0	0	0	0	0	0
16:15:00	369	87	696	149	356	89	43	1	12	2	17	4	0	0	0	0	0	0	1	1
16:30:00	442	73	852	156	458	102	45	2	14	2	22	5	0	0	0	0	0	0	1	0
16:45:00	516	74	1036	184	563	105	49	4	14	0	26	4	0	0	0	0	0	0	1	0
17:00:00	580	64	1196	160	699	136	49	0	15	1	32	6	0	0	0	0	0	0	1	0
17:15:00	661	81	1373	177	803	104	52	3	15	0	39	7	0	0	0	0	0	0	1	0
17:30:00	743	82	1563	190	923	120	53	1	17	2	42	3	0	0	0	0	0	0	1	0
17:45:00	824	81	1728	165	1067	144	54	1	20	3	52	10	0	0	0	0	0	0	1	0
18:00:00	908	84	1866	138	1177	110	56	2	21	1	58	6	0	0	0	0	0	0	1	0
18:15:00	908	0	1866	0	1177	0	56	0	21	0	58	0	0	0	0	0	0	0	1	0
18:16:59	908	0	1866	0	1177	0	56	0	21	0	58	0	0	0	0	0	0	0	1	0

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900001

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	22	22	439	439	42	42	0	0	6	6	0	0	0	0	0	0	0	0	0	0
7:30:00	59	37	1026	587	96	54	1	1	13	7	2	2	0	0	0	0	0	0	0	0
7:45:00	126	67	1526	500	157	61	1	0	19	6	5	3	0	0	0	0	0	0	0	0
8:00:00	180	54	2108	582	237	80	1	0	23	4	5	0	0	0	0	0	0	0	0	0
8:15:00	235	55	2588	480	312	75	1	0	31	8	5	0	0	0	0	0	0	0	0	0
8:30:00	299	64	3127	539	393	81	1	0	34	3	5	0	0	0	0	0	0	0	0	0
8:45:00	343	44	3635	508	469	76	1	0	44	10	6	1	0	0	0	0	0	0	0	0
9:00:00	384	41	4084	449	524	55	1	0	54	10	8	2	0	0	0	0	0	0	0	0
9:02:05	384	0	4084	0	524	0	1	0	54	0	8	0	0	0	0	0	0	0	0	0
16:00:00	384	0	4084	0	524	0	1	0	54	0	8	0	0	0	0	0	0	0	0	0
16:15:00	407	23	4342	258	552	28	1	0	77	23	11	3	0	0	0	0	0	0	0	0
16:30:00	433	26	4605	263	590	38	1	0	93	16	12	1	0	0	0	0	0	0	0	0
16:45:00	459	26	4877	272	631	41	1	0	105	12	14	2	0	0	0	0	0	0	0	0
17:00:00	483	24	5171	294	675	44	1	0	114	9	14	0	0	0	0	0	0	0	0	0
17:15:00	518	35	5463	292	714	39	1	0	125	11	16	2	0	0	0	0	0	0	0	0
17:30:00	558	40	5737	274	753	39	1	0	134	9	16	0	0	0	0	0	0	0	0	0
17:45:00	588	30	5997	260	790	37	1	0	140	6	18	2	0	0	0	0	0	0	0	0
18:00:00	610	22	6276	279	830	40	1	0	145	5	20	2	0	0	0	0	0	0	0	0
18:15:00	610	0	6276	0	830	0	1	0	145	0	20	0	0	0	0	0	0	0	0	0
18:16:59	610	0	6276	0	830	0	1	0	145	0	20	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Morning Peak Diagram

Specified Period	One Hour Peak
From: 7:00:00	**From:** 7:45:00
To: 9:00:00	**To:** 8:45:00

Municipality: Oakville
Site #: 1902900002
Intersection: Dundas St E & Meadowridge Dr
TFR File #: 1
Count date: 19-Feb-19

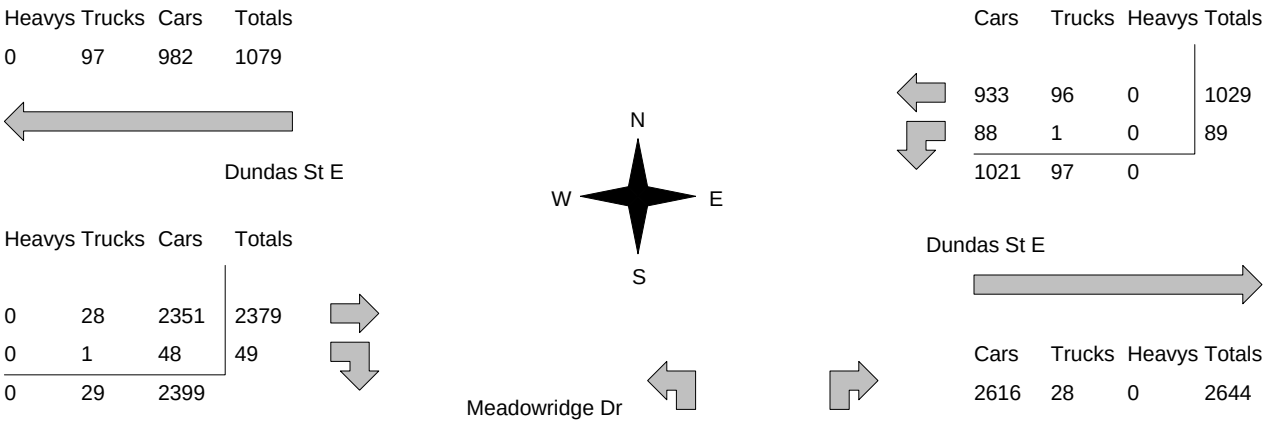
Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

East Leg Total: 3762
East Entering: 1118
East Peds: 0
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 0
West Entering: 2428
West Leg Total: 3507

Cars 136
Trucks 2
Heavys 0
Totals 138

Cars 49 265 314
Trucks 1 0 1
Heavys 0 0 0
Totals 50 265

Peds Cross: ⋈
South Peds: 0
South Entering: 315
South Leg Total: 453

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

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

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

Municipality: Oakville
Site #: 1902900002
Intersection: Dundas St E & Meadowridge Dr
TFR File #: 1
Count date: 19-Feb-19

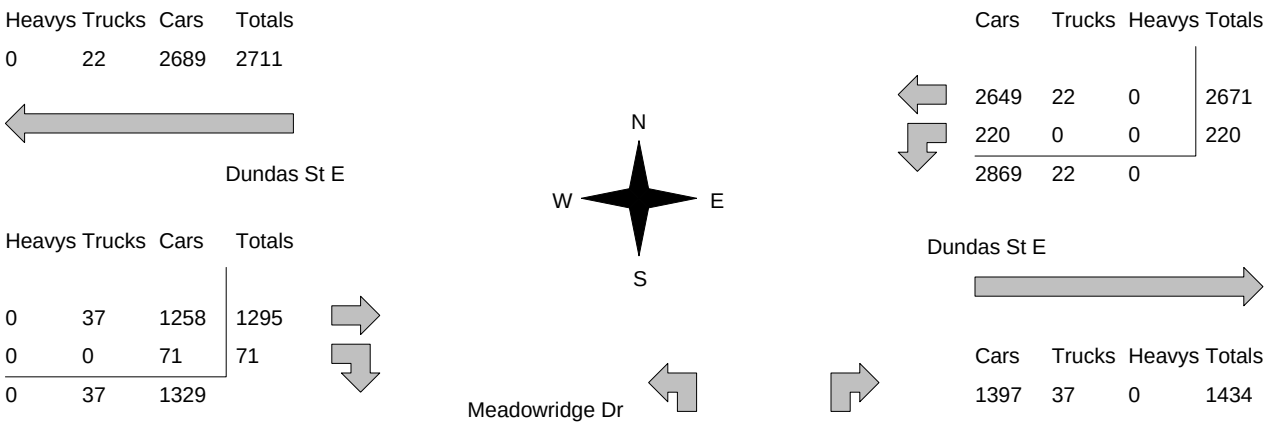
Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

East Leg Total: 4325
East Entering: 2891
East Peds: 0
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 0
West Entering: 1366
West Leg Total: 4077

Cars 291
Trucks 0
Heavys 0
Totals 291

Cars 40 139 179
Trucks 0 0 0
Heavys 0 0 0
Totals 40 139

Peds Cross: ⋈
South Peds: 0
South Entering: 179
South Leg Total: 470

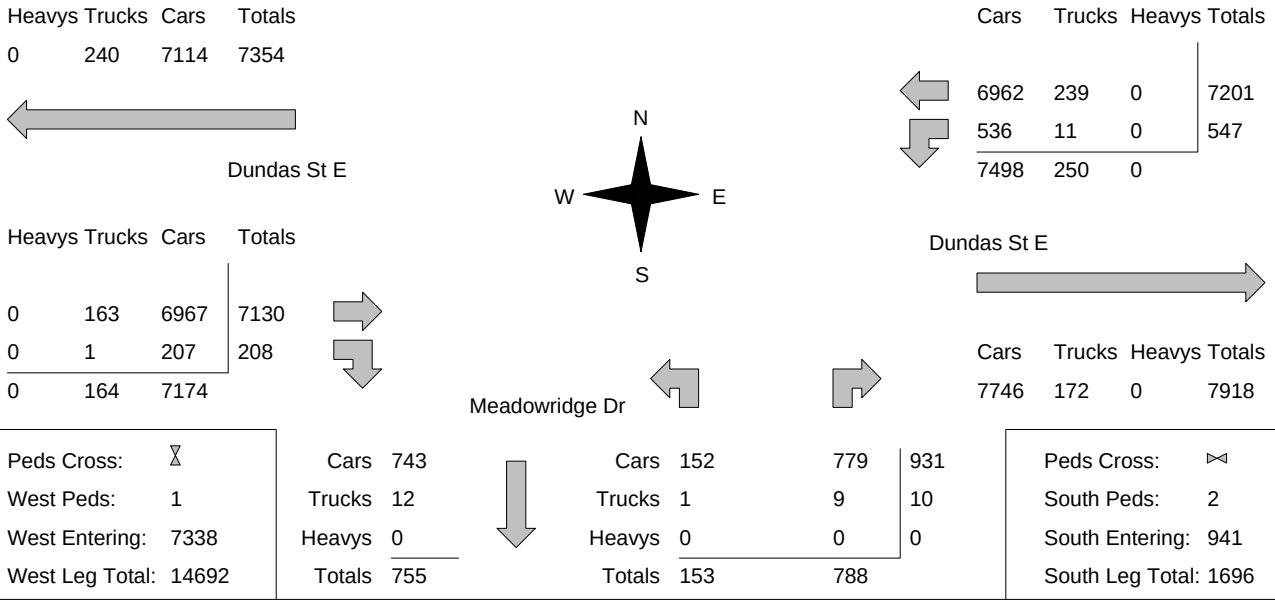
Comments

Ontario Traffic Inc.

Total Count Diagram

Municipality: Oakville	**Weather conditions:**
Site #: 1902900002	
Intersection: Dundas St E & Meadowridge Dr	**Person(s) who counted:**
TFR File #: 1	
Count date: 19-Feb-19	
**** Signalized Intersection ****	**Major Road:** Dundas St E runs W/E

East Leg Total: 15666
East Entering: 7748
East Peds: 1
Peds Cross: ⧖



Peds Cross:	⧖		Cars	743		Cars	152	779	931	Peds Cross:	⋈
West Peds:	1		Trucks	12		Trucks	1	9	10	South Peds:	2
West Entering:	7338		Heavys	0		Heavys	0	0	0	South Entering:	941
West Leg Total:	14692		Totals	755		Totals	153	788		South Leg Total:	1696

Comments

Ontario Traffic Inc.
Traffic Count Summary

Intersection: Dundas St E & Meadowridge Dr | **Count Date:** 19-Feb-19 | **Municipality:** Oakville

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	0	0	0	0	0	245
9:00:00	0	0	0	0	0	345
16:00:00	0	0	0	0	0	0
17:00:00	0	0	0	0	0	172
18:00:00	0	0	0	0	0	179
Totals:	0	0	0	0	0	941

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	18	0	227	245	0
9:00:00	58	0	287	345	0
16:00:00	0	0	0	0	0
17:00:00	37	0	135	172	2
18:00:00	40	0	139	179	0
Totals:	153	0	788	941	2

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	43	841	0	884	1	3207
9:00:00	91	1059	0	1150	0	3463
16:00:00	0	0	0	0	0	0
17:00:00	193	2630	0	2823	0	4159
18:00:00	220	2671	0	2891	0	4257
Totals:	547	7201	0	7748	1	15086

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	0	2304	19	2323	1
9:00:00	0	2261	52	2313	0
16:00:00	0	0	0	0	0
17:00:00	0	1270	66	1336	0
18:00:00	0	1295	71	1366	0
Totals:	0	7130	208	7338	1

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	16:00	17:00	17:00	18:00	18:00
Crossing Values:	0	20	58	0	37	37	40	40

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900002

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:02:19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900002

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	13	13	143	143	0	0	1	1	16	16	0	0	0	0	0	0	0	0	0	0
7:30:00	18	5	345	202	0	0	3	2	44	28	0	0	0	0	0	0	0	0	0	0
7:45:00	24	6	525	180	0	0	4	1	70	26	0	0	0	0	0	0	0	0	1	1
8:00:00	39	15	747	222	0	0	4	0	94	24	0	0	0	0	0	0	0	0	1	0
8:15:00	56	17	954	207	0	0	4	0	118	24	0	0	0	0	0	0	0	0	1	0
8:30:00	89	33	1192	238	0	0	5	1	150	32	0	0	0	0	0	0	0	0	1	0
8:45:00	112	23	1458	266	0	0	5	0	166	16	0	0	0	0	0	0	0	0	1	0
9:00:00	129	17	1714	256	0	0	5	0	186	20	0	0	0	0	0	0	0	0	1	0
9:02:19	129	0	1714	0	0	0	5	0	186	0	0	0	0	0	0	0	0	0	1	0
16:00:00	129	0	1714	0	0	0	5	0	186	0	0	0	0	0	0	0	0	0	1	0
16:15:00	194	65	2338	624	0	0	5	0	194	8	0	0	0	0	0	0	0	0	1	0
16:30:00	228	34	3015	677	0	0	11	6	204	10	0	0	0	0	0	0	0	0	1	0
16:45:00	272	44	3653	638	0	0	11	0	213	9	0	0	0	0	0	0	0	0	1	0
17:00:00	316	44	4313	660	0	0	11	0	217	4	0	0	0	0	0	0	0	0	1	0
17:15:00	374	58	4987	674	0	0	11	0	222	5	0	0	0	0	0	0	0	0	1	0
17:30:00	415	41	5636	649	0	0	11	0	229	7	0	0	0	0	0	0	0	0	1	0
17:45:00	468	53	6320	684	0	0	11	0	235	6	0	0	0	0	0	0	0	0	1	0
18:00:00	536	68	6962	642	0	0	11	0	239	4	0	0	0	0	0	0	0	0	1	0
18:15:00	536	0	6962	0	0	0	11	0	239	0	0	0	0	0	0	0	0	0	1	0
18:15:36	536	0	6962	0	0	0	11	0	239	0	0	0	0	0	0	0	0	0	1	0

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900002

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	6	6	0	0	44	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	7	1	0	0	100	56	0	0	0	0	1	1	0	0	0	0	0	0	0	0
7:45:00	11	4	0	0	166	66	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:00:00	18	7	0	0	226	60	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:15:00	35	17	0	0	281	55	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:30:00	48	13	0	0	360	79	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:45:00	60	12	0	0	431	71	1	1	0	0	1	0	0	0	0	0	0	0	0	0
9:00:00	75	15	0	0	513	82	1	0	0	0	1	0	0	0	0	0	0	0	0	0
9:02:19	75	0	0	0	513	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
16:00:00	75	0	0	0	513	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
16:15:00	84	9	0	0	541	28	1	0	0	0	3	2	0	0	0	0	0	0	0	0
16:30:00	94	10	0	0	569	28	1	0	0	0	6	3	0	0	0	0	0	0	2	2
16:45:00	100	6	0	0	605	36	1	0	0	0	9	3	0	0	0	0	0	0	2	0
17:00:00	112	12	0	0	640	35	1	0	0	0	9	0	0	0	0	0	0	0	2	0
17:15:00	117	5	0	0	672	32	1	0	0	0	9	0	0	0	0	0	0	0	2	0
17:30:00	127	10	0	0	708	36	1	0	0	0	9	0	0	0	0	0	0	0	2	0
17:45:00	136	9	0	0	747	39	1	0	0	0	9	0	0	0	0	0	0	0	2	0
18:00:00	152	16	0	0	779	32	1	0	0	0	9	0	0	0	0	0	0	0	2	0
18:15:00	152	0	0	0	779	0	1	0	0	0	9	0	0	0	0	0	0	0	2	0
18:15:36	152	0	0	0	779	0	1	0	0	0	9	0	0	0	0	0	0	0	2	0

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900002

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	501	501	2	2	0	0	5	5	0	0	0	0	0	0	0	0	1	1
7:30:00	0	0	1097	596	6	4	0	0	15	10	0	0	0	0	0	0	0	0	1	0
7:45:00	0	0	1675	578	9	3	0	0	24	9	0	0	0	0	0	0	0	0	1	0
8:00:00	0	0	2277	602	18	9	0	0	27	3	1	1	0	0	0	0	0	0	1	0
8:15:00	0	0	2912	635	26	8	0	0	35	8	1	0	0	0	0	0	0	0	1	0
8:30:00	0	0	3494	582	43	17	0	0	42	7	1	0	0	0	0	0	0	0	1	0
8:45:00	0	0	4026	532	57	14	0	0	52	10	1	0	0	0	0	0	0	0	1	0
9:00:00	0	0	4499	473	70	13	0	0	66	14	1	0	0	0	0	0	0	0	1	0
9:02:19	0	0	4499	0	70	0	0	0	66	0	1	0	0	0	0	0	0	0	1	0
16:00:00	0	0	4499	0	70	0	0	0	66	0	1	0	0	0	0	0	0	0	1	0
16:15:00	0	0	4781	282	90	20	0	0	90	24	1	0	0	0	0	0	0	0	1	0
16:30:00	0	0	5084	303	103	13	0	0	104	14	1	0	0	0	0	0	0	0	1	0
16:45:00	0	0	5389	305	115	12	0	0	114	10	1	0	0	0	0	0	0	0	1	0
17:00:00	0	0	5709	320	136	21	0	0	126	12	1	0	0	0	0	0	0	0	1	0
17:15:00	0	0	6054	345	146	10	0	0	136	10	1	0	0	0	0	0	0	0	1	0
17:30:00	0	0	6368	314	164	18	0	0	148	12	1	0	0	0	0	0	0	0	1	0
17:45:00	0	0	6649	281	183	19	0	0	157	9	1	0	0	0	0	0	0	0	1	0
18:00:00	0	0	6967	318	207	24	0	0	163	6	1	0	0	0	0	0	0	0	1	0
18:15:00	0	0	6967	0	207	0	0	0	163	0	1	0	0	0	0	0	0	0	1	0
18:15:36	0	0	6967	0	207	0	0	0	163	0	1	0	0	0	0	0	0	0	1	0

Ontario Traffic Inc.

Morning Peak Diagram

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

One Hour Peak
From: 7:30:00
To: 8:30:00

Municipality: Oakville
Site #: 1902900003
Intersection: Dundas St E & Prince Michael Dr
TFR File #: 1
Count date: 19-Feb-19

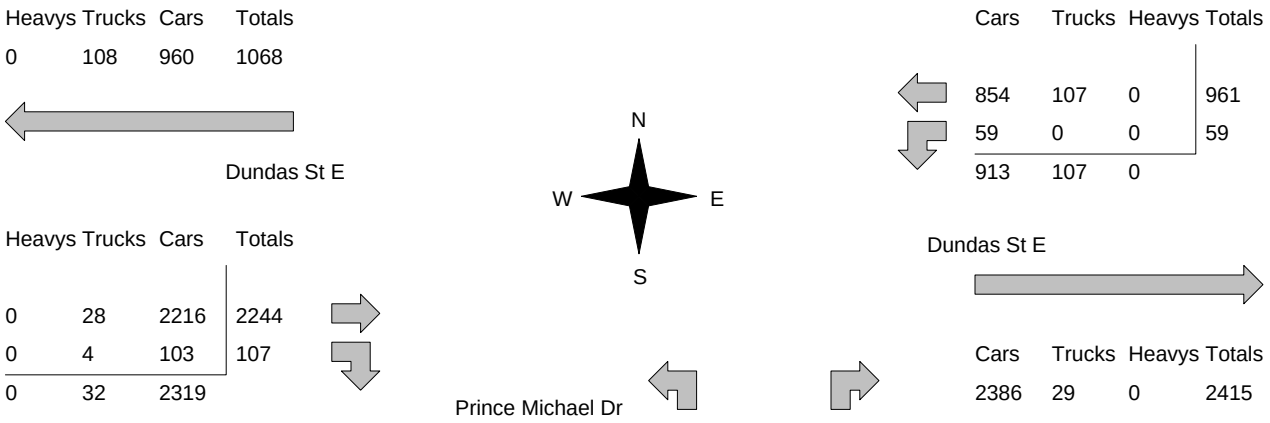
Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

East Leg Total: 3435
East Entering: 1020
East Peds: 2
Peds Cross:



Peds Cross:
West Peds: 2
West Entering: 2351
West Leg Total: 3419

Cars	162	106	170	276
Trucks	4	1	1	2
Heavys	0	0	0	0
Totals	166	107	171	

Peds Cross:
South Peds: 1
South Entering: 278
South Leg Total: 444

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

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

One Hour Peak
From: 16:45:00
To: 17:45:00

Municipality: Oakville
Site #: 1902900003
Intersection: Dundas St E & Prince Michael Dr
TFR File #: 1
Count date: 19-Feb-19

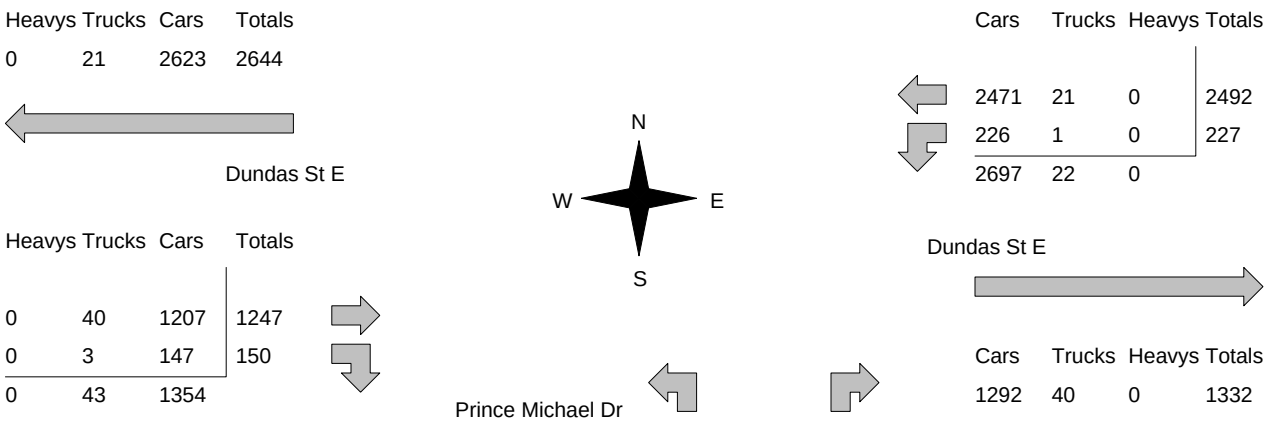
Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

East Leg Total: 4051
East Entering: 2719
East Peds: 0
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 0
West Entering: 1397
West Leg Total: 4041

Cars 373
Trucks 4
Heavys 0
Totals 377

Cars 152 85 237
Trucks 0 0 0
Heavys 0 0 0
Totals 152 85

Peds Cross: ⋈
South Peds: 5
South Entering: 237
South Leg Total: 614

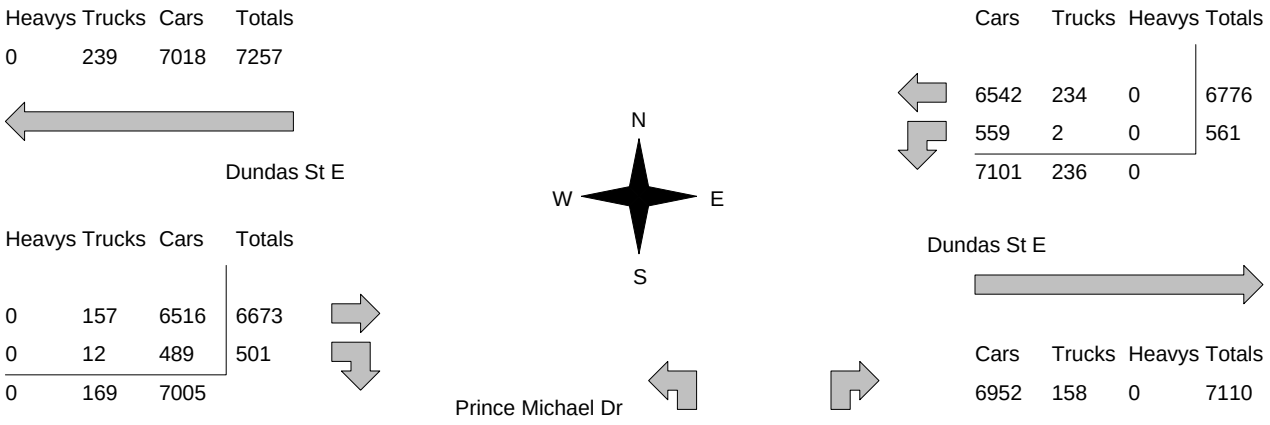
Comments

Ontario Traffic Inc.

Total Count Diagram

Municipality: Oakville	**Weather conditions:**
Site #: 1902900003	
Intersection: Dundas St E & Prince Michael Dr	**Person(s) who counted:**
TFR File #: 1	
Count date: 19-Feb-19	
**** Signalized Intersection ****	**Major Road:** Dundas St E runs W/E

East Leg Total: 14447
East Entering: 7337
East Peds: 3
Peds Cross: ⧖



Peds Cross:	⧖		Cars	1048		Cars	476	436	912	Peds Cross:	⋈
West Peds:	8		Trucks	14		Trucks	5	1	6	South Peds:	14
West Entering:	7174		Heavys	0		Heavys	0	0	0	South Entering:	918
West Leg Total:	14431		Totals	1062		Totals	481	437		South Leg Total:	1980

Comments

Ontario Traffic Inc.
Traffic Count Summary

Intersection: Dundas St E & Prince Michael Dr | **Count Date:** 19-Feb-19 | **Municipality:** Oakville

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	0	0	0	0	0	215
9:00:00	0	0	0	0	0	249
16:00:00	0	0	0	0	0	0
17:00:00	0	0	0	0	0	229
18:00:00	0	0	0	0	0	225
Totals:	0	0	0	0	0	918

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	69	0	146	215	3
9:00:00	108	0	141	249	1
16:00:00	0	0	0	0	0
17:00:00	156	0	73	229	8
18:00:00	148	0	77	225	2
Totals:	481	0	437	918	14

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	46	820	0	866	0	3106
9:00:00	67	1041	0	1108	2	3328
16:00:00	0	0	0	0	0	0
17:00:00	211	2444	0	2655	1	3989
18:00:00	237	2471	0	2708	0	4088
Totals:	561	6776	0	7337	3	14511

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	0	2168	72	2240	1
9:00:00	0	2074	146	2220	2
16:00:00	0	0	0	0	0
17:00:00	0	1200	134	1334	3
18:00:00	0	1231	149	1380	2
Totals:	0	6673	501	7174	8

Calculated Values for Traffic Crossing Major Street

Hours Ending:	0:00	0:00	7:00	8:00	9:00	16:00	17:00	18:00
Crossing Values:	0	0	0	70	112	0	160	150

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900003

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:16:06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900003

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	7	7	150	150	0	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0
7:30:00	19	12	322	172	0	0	0	0	42	26	0	0	0	0	0	0	0	0	0	0
7:45:00	32	13	511	189	0	0	0	0	69	27	0	0	0	0	0	0	0	0	0	0
8:00:00	46	14	725	214	0	0	0	0	95	26	0	0	0	0	0	0	0	0	0	0
8:15:00	54	8	939	214	0	0	0	0	116	21	0	0	0	0	0	0	0	0	0	0
8:30:00	78	24	1176	237	0	0	0	0	149	33	0	0	0	0	0	0	0	0	2	2
8:45:00	97	19	1423	247	0	0	0	0	165	16	0	0	0	0	0	0	0	0	2	0
9:00:00	113	16	1677	254	0	0	0	0	184	19	0	0	0	0	0	0	0	0	2	0
9:00:38	113	0	1677	0	0	0	0	0	184	0	0	0	0	0	0	0	0	0	2	0
16:00:00	113	0	1677	0	0	0	0	0	184	0	0	0	0	0	0	0	0	0	2	0
16:15:00	166	53	2253	576	0	0	0	0	190	6	0	0	0	0	0	0	0	0	3	1
16:30:00	207	41	2871	618	0	0	0	0	201	11	0	0	0	0	0	0	0	0	3	0
16:45:00	269	62	3475	604	0	0	1	1	209	8	0	0	0	0	0	0	0	0	3	0
17:00:00	323	54	4092	617	0	0	1	0	213	4	0	0	0	0	0	0	0	0	3	0
17:15:00	375	52	4699	607	0	0	1	0	218	5	0	0	0	0	0	0	0	0	3	0
17:30:00	434	59	5306	607	0	0	1	0	225	7	0	0	0	0	0	0	0	0	3	0
17:45:00	495	61	5946	640	0	0	2	1	230	5	0	0	0	0	0	0	0	0	3	0
18:00:00	559	64	6542	596	0	0	2	0	234	4	0	0	0	0	0	0	0	0	3	0
18:15:00	559	0	6542	0	0	0	2	0	234	0	0	0	0	0	0	0	0	0	3	0
18:16:06	559	0	6542	0	0	0	2	0	234	0	0	0	0	0	0	0	0	0	3	0

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900003

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	8	8	0	0	28	28	0	0	0	0	0	0	0	0	0	0	0	0	3	3
7:30:00	21	13	0	0	59	31	0	0	0	0	0	0	0	0	0	0	0	0	3	0
7:45:00	47	26	0	0	107	48	0	0	0	0	0	0	0	0	0	0	0	0	3	0
8:00:00	68	21	0	0	146	39	1	1	0	0	0	0	0	0	0	0	0	0	3	0
8:15:00	90	22	0	0	185	39	1	0	0	0	1	1	0	0	0	0	0	0	4	1
8:30:00	127	37	0	0	229	44	1	0	0	0	1	0	0	0	0	0	0	0	4	0
8:45:00	149	22	0	0	257	28	1	0	0	0	1	0	0	0	0	0	0	0	4	0
9:00:00	176	27	0	0	286	29	1	0	0	0	1	0	0	0	0	0	0	0	4	0
9:00:38	176	0	0	0	286	0	1	0	0	0	1	0	0	0	0	0	0	0	4	0
16:00:00	176	0	0	0	286	0	1	0	0	0	1	0	0	0	0	0	0	0	4	0
16:15:00	214	38	0	0	302	16	3	2	0	0	1	0	0	0	0	0	0	0	6	2
16:30:00	258	44	0	0	320	18	3	0	0	0	1	0	0	0	0	0	0	0	8	2
16:45:00	292	34	0	0	335	15	3	0	0	0	1	0	0	0	0	0	0	0	9	1
17:00:00	330	38	0	0	359	24	3	0	0	0	1	0	0	0	0	0	0	0	12	3
17:15:00	366	36	0	0	378	19	3	0	0	0	1	0	0	0	0	0	0	0	12	0
17:30:00	411	45	0	0	396	18	3	0	0	0	1	0	0	0	0	0	0	0	13	1
17:45:00	444	33	0	0	420	24	3	0	0	0	1	0	0	0	0	0	0	0	14	1
18:00:00	476	32	0	0	436	16	5	2	0	0	1	0	0	0	0	0	0	0	14	0
18:15:00	476	0	0	0	436	0	5	0	0	0	1	0	0	0	0	0	0	0	14	0
18:16:06	476	0	0	0	436	0	5	0	0	0	1	0	0	0	0	0	0	0	14	0

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900003

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	489	489	12	12	0	0	6	6	1	1	0	0	0	0	0	0	0	0
7:30:00	0	0	1036	547	28	16	0	0	14	8	1	0	0	0	0	0	0	0	1	1
7:45:00	0	0	1579	543	52	24	0	0	24	10	1	0	0	0	0	0	0	0	1	0
8:00:00	0	0	2141	562	71	19	0	0	27	3	1	0	0	0	0	0	0	0	1	0
8:15:00	0	0	2713	572	104	33	0	0	36	9	3	2	0	0	0	0	0	0	2	1
8:30:00	0	0	3252	539	131	27	0	0	42	6	5	2	0	0	0	0	0	0	3	1
8:45:00	0	0	3741	489	176	45	0	0	52	10	5	0	0	0	0	0	0	0	3	0
9:00:00	0	0	4176	435	212	36	0	0	66	14	6	1	0	0	0	0	0	0	3	0
9:00:38	0	0	4176	0	212	0	0	0	66	0	6	0	0	0	0	0	0	0	3	0
16:00:00	0	0	4176	0	212	0	0	0	66	0	6	0	0	0	0	0	0	0	3	0
16:15:00	0	0	4441	265	245	33	0	0	91	25	8	2	0	0	0	0	0	0	5	2
16:30:00	0	0	4722	281	275	30	0	0	102	11	9	1	0	0	0	0	0	0	6	1
16:45:00	0	0	4995	273	305	30	0	0	111	9	9	0	0	0	0	0	0	0	6	0
17:00:00	0	0	5317	322	343	38	0	0	125	14	9	0	0	0	0	0	0	0	6	0
17:15:00	0	0	5633	316	377	34	0	0	133	8	9	0	0	0	0	0	0	0	6	0
17:30:00	0	0	5923	290	411	34	0	0	143	10	10	1	0	0	0	0	0	0	6	0
17:45:00	0	0	6202	279	452	41	0	0	151	8	12	2	0	0	0	0	0	0	6	0
18:00:00	0	0	6516	314	489	37	0	0	157	6	12	0	0	0	0	0	0	0	8	2
18:15:00	0	0	6516	0	489	0	0	0	157	0	12	0	0	0	0	0	0	0	8	0
18:16:06	0	0	6516	0	489	0	0	0	157	0	12	0	0	0	0	0	0	0	8	0

Ontario Traffic Inc.

Morning Peak Diagram

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

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

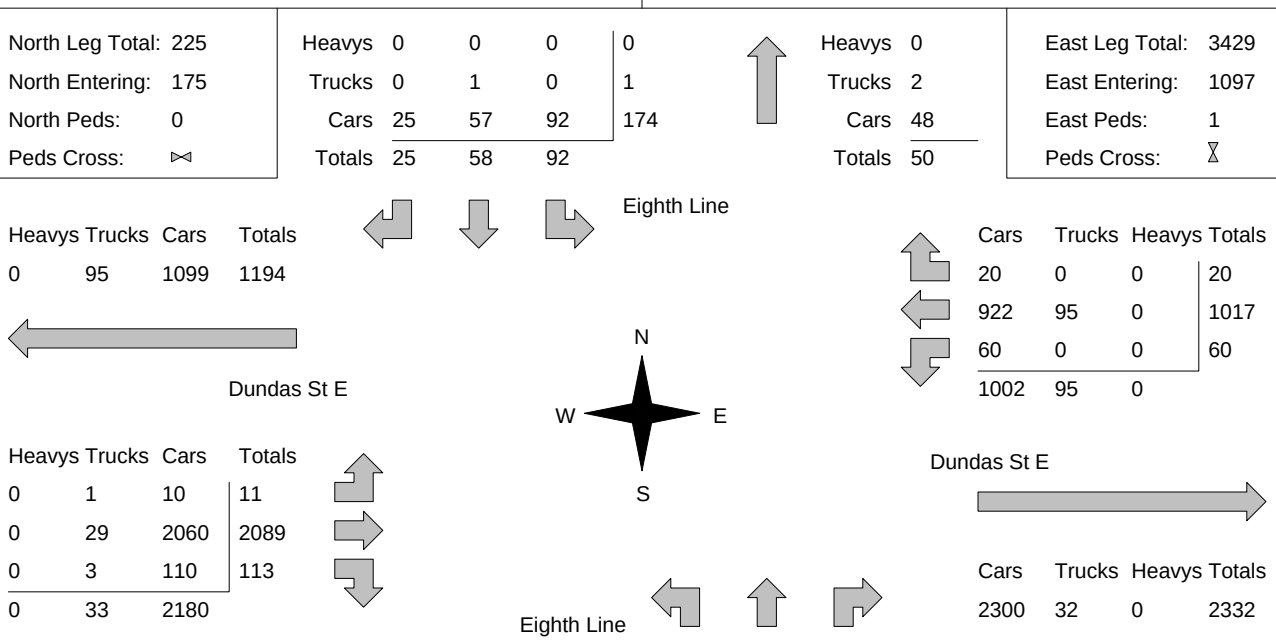
Municipality: Oakville
Site #: 1902900004
Intersection: Dundas St E & Eighth Line
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E



Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

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

One Hour Peak
From: 16:45:00
To: 17:45:00

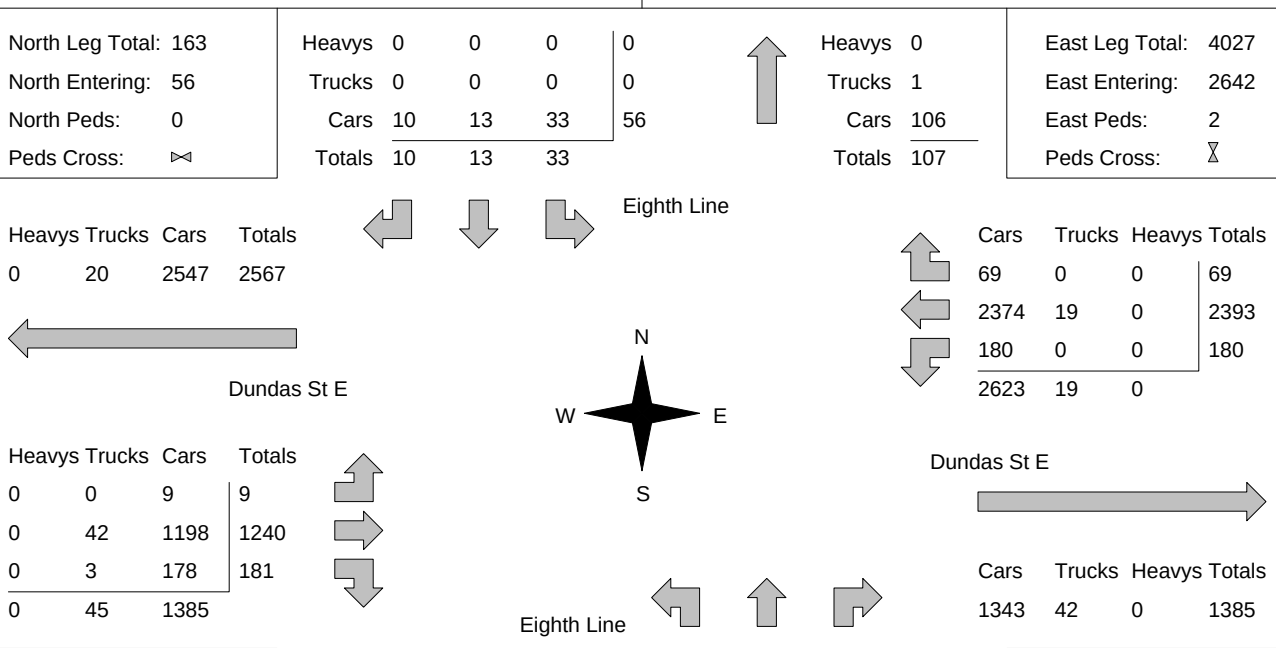
Municipality: Oakville
Site #: 1902900004
Intersection: Dundas St E & Eighth Line
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E



Comments

Ontario Traffic Inc.

Total Count Diagram

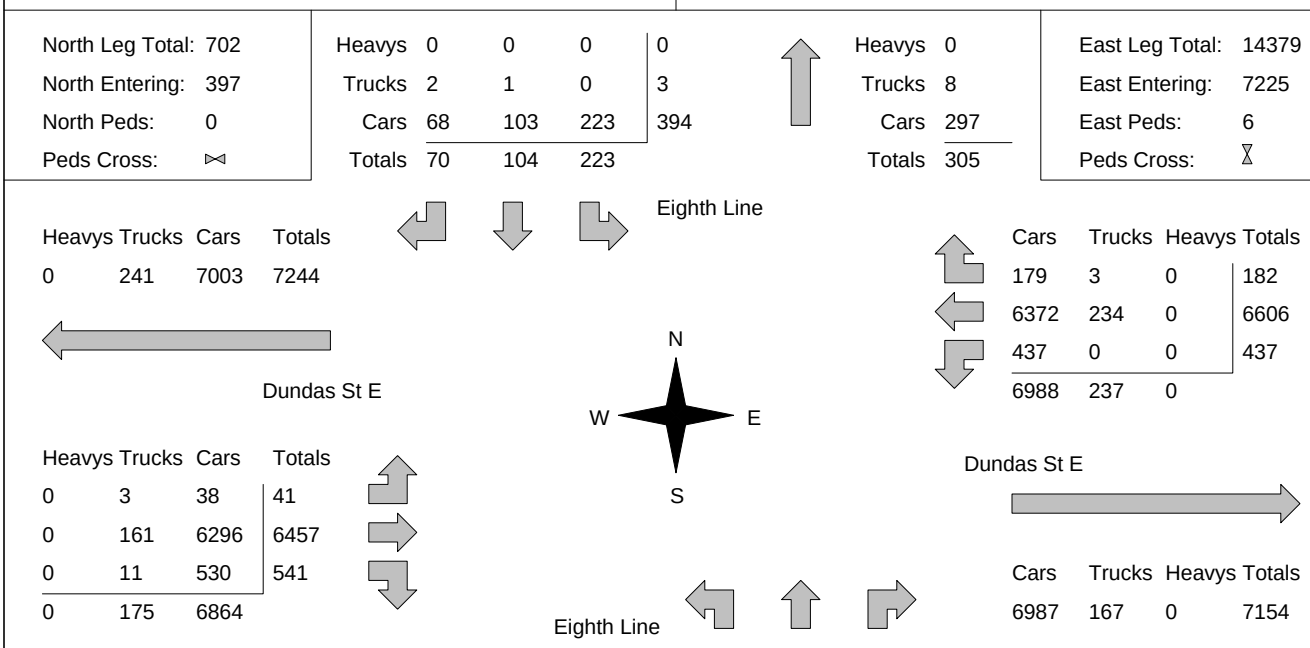
Municipality: Oakville
Site #: 1902900004
Intersection: Dundas St E & Eighth Line
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E



Comments

Ontario Traffic Inc.
Traffic Count Summary

Intersection: Dundas St E & Eighth Line | **Count Date:** 19-Feb-19 | **Municipality:** Oakville

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	71	27	28	126	0	345
9:00:00	86	47	17	150	0	472
16:00:00	0	0	0	0	0	0
17:00:00	24	19	11	54	0	326
18:00:00	42	11	14	67	0	378
Totals:	223	104	70	397	0	1521

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	83	6	130	219	1
9:00:00	164	20	138	322	1
16:00:00	0	0	0	0	0
17:00:00	153	24	95	272	2
18:00:00	168	32	111	311	0
Totals:	568	82	474	1124	4

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	30	840	16	886	1	2991
9:00:00	66	1029	26	1121	1	3251
16:00:00	0	0	0	0	0	0
17:00:00	172	2388	70	2630	1	4022
18:00:00	169	2349	70	2588	3	4000
Totals:	437	6606	182	7225	6	14264

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	4	2013	88	2105	1
9:00:00	15	2003	112	2130	0
16:00:00	0	0	0	0	0
17:00:00	12	1220	160	1392	1
18:00:00	10	1221	181	1412	2
Totals:	41	6457	541	7039	4

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	16:00	17:00	17:00	18:00	18:00
Crossing Values:	0	183	298	0	203	203	247	247

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900004

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	13	13	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	24	11	4	2	9	8	0	0	0	0	1	1	0	0	0	0	0	0	0	0
7:45:00	47	23	15	11	16	7	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:00:00	71	24	27	12	27	11	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:15:00	95	24	52	25	33	6	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:30:00	119	24	65	13	37	4	0	0	1	1	1	0	0	0	0	0	0	0	0	0
8:45:00	139	20	72	7	41	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0
9:00:00	157	18	73	1	44	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0
9:01:01	157	0	73	0	44	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
16:00:00	157	0	73	0	44	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
16:15:00	160	3	77	4	50	6	0	0	1	0	1	0	0	0	0	0	0	0	0	0
16:30:00	166	6	82	5	51	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0
16:45:00	174	8	89	7	55	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0
17:00:00	181	7	92	3	55	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
17:15:00	187	6	96	4	56	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0
17:30:00	200	13	98	2	60	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0
17:45:00	207	7	102	4	65	5	0	0	1	0	1	0	0	0	0	0	0	0	0	0
18:00:00	223	16	103	1	68	3	0	0	1	0	2	1	0	0	0	0	0	0	0	0
18:15:00	223	0	103	0	68	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0
18:16:41	223	0	103	0	68	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900004

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	7	7	152	152	4	4	0	0	14	14	0	0	0	0	0	0	0	0	1	1
7:30:00	11	4	319	167	8	4	0	0	42	28	0	0	0	0	0	0	0	0	1	0
7:45:00	17	6	525	206	13	5	0	0	66	24	0	0	0	0	0	0	0	0	1	0
8:00:00	30	13	748	223	16	3	0	0	92	26	0	0	0	0	0	0	0	0	1	0
8:15:00	46	16	951	203	20	4	0	0	114	22	0	0	0	0	0	0	0	0	1	0
8:30:00	63	17	1189	238	27	7	0	0	144	30	0	0	0	0	0	0	0	0	2	1
8:45:00	77	14	1447	258	33	6	0	0	161	17	0	0	0	0	0	0	0	0	2	0
9:00:00	96	19	1688	241	41	8	0	0	181	20	1	1	0	0	0	0	0	0	2	0
9:01:01	96	0	1688	0	41	0	0	0	181	0	1	0	0	0	0	0	0	0	2	0
16:00:00	96	0	1688	0	41	0	0	0	181	0	1	0	0	0	0	0	0	0	2	0
16:15:00	135	39	2230	542	57	16	0	0	189	8	2	1	0	0	0	0	0	0	3	1
16:30:00	178	43	2846	616	76	19	0	0	202	13	2	0	0	0	0	0	0	0	3	0
16:45:00	222	44	3440	594	92	16	0	0	209	7	3	1	0	0	0	0	0	0	3	0
17:00:00	268	46	4044	604	109	17	0	0	213	4	3	0	0	0	0	0	0	0	3	0
17:15:00	313	45	4613	569	129	20	0	0	218	5	3	0	0	0	0	0	0	0	4	1
17:30:00	352	39	5229	616	144	15	0	0	222	4	3	0	0	0	0	0	0	0	4	0
17:45:00	402	50	5814	585	161	17	0	0	228	6	3	0	0	0	0	0	0	0	5	1
18:00:00	437	35	6372	558	179	18	0	0	234	6	3	0	0	0	0	0	0	0	6	1
18:15:00	437	0	6372	0	179	0	0	0	234	0	3	0	0	0	0	0	0	0	6	0
18:16:41	437	0	6372	0	179	0	0	0	234	0	3	0	0	0	0	0	0	0	6	0

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900004

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	18	18	0	0	18	18	0	0	0	0	0	0	0	0	0	0	0	0	1	1
7:30:00	40	22	3	3	50	32	1	1	0	0	0	0	0	0	0	0	0	0	1	0
7:45:00	60	20	4	1	88	38	1	0	0	0	0	0	0	0	0	0	0	0	1	0
8:00:00	82	22	6	2	129	41	1	0	0	0	1	1	0	0	0	0	0	0	1	0
8:15:00	120	38	11	5	171	42	1	0	1	1	3	2	0	0	0	0	0	0	1	0
8:30:00	169	49	19	8	210	39	1	0	1	0	3	0	0	0	0	0	0	0	2	1
8:45:00	212	43	22	3	236	26	1	0	1	0	3	0	0	0	0	0	0	0	2	0
9:00:00	246	34	25	3	264	28	1	0	1	0	4	1	0	0	0	0	0	0	2	0
9:01:01	246	0	25	0	264	0	1	0	1	0	4	0	0	0	0	0	0	0	2	0
16:00:00	246	0	25	0	264	0	1	0	1	0	4	0	0	0	0	0	0	0	2	0
16:15:00	287	41	35	10	283	19	2	1	1	0	5	1	0	0	0	0	0	0	3	1
16:30:00	329	42	38	3	298	15	4	2	1	0	6	1	0	0	0	0	0	0	3	0
16:45:00	363	34	42	4	329	31	4	0	1	0	6	0	0	0	0	0	0	0	4	1
17:00:00	396	33	49	7	357	28	4	0	1	0	6	0	0	0	0	0	0	0	4	0
17:15:00	437	41	56	7	387	30	4	0	1	0	6	0	0	0	0	0	0	0	4	0
17:30:00	486	49	64	8	405	18	5	1	1	0	6	0	0	0	0	0	0	0	4	0
17:45:00	526	40	70	6	441	36	5	0	2	1	6	0	0	0	0	0	0	0	4	0
18:00:00	563	37	80	10	468	27	5	0	2	0	6	0	0	0	0	0	0	0	4	0
18:15:00	563	0	80	0	468	0	5	0	2	0	6	0	0	0	0	0	0	0	4	0
18:16:41	563	0	80	0	468	0	5	0	2	0	6	0	0	0	0	0	0	0	4	0

Ontario Traffic Inc.

Count Date: 19-Feb-19 Site #: 1902900004

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	453	453	16	16	1	1	6	6	2	2	0	0	0	0	0	0	1	1
7:30:00	1	0	968	515	36	20	1	0	14	8	5	3	0	0	0	0	0	0	1	0
7:45:00	2	1	1458	490	52	16	1	0	24	10	5	0	0	0	0	0	0	0	1	0
8:00:00	2	0	1986	528	82	30	2	1	27	3	6	1	0	0	0	0	0	0	1	0
8:15:00	4	2	2502	516	114	32	2	0	35	8	6	0	0	0	0	0	0	0	1	0
8:30:00	5	1	3054	552	138	24	2	0	44	9	7	1	0	0	0	0	0	0	1	0
8:45:00	12	7	3518	464	162	24	2	0	53	9	8	1	0	0	0	0	0	0	1	0
9:00:00	17	5	3949	431	192	30	2	0	67	14	8	0	0	0	0	0	0	0	1	0
9:01:01	17	0	3949	0	192	0	2	0	67	0	8	0	0	0	0	0	0	0	1	0
16:00:00	17	0	3949	0	192	0	2	0	67	0	8	0	0	0	0	0	0	0	1	0
16:15:00	19	2	4209	260	226	34	3	1	92	25	8	0	0	0	0	0	0	0	1	0
16:30:00	23	4	4506	297	271	45	3	0	104	12	8	0	0	0	0	0	0	0	1	0
16:45:00	25	2	4787	281	308	37	3	0	113	9	8	0	0	0	0	0	0	0	2	1
17:00:00	28	3	5109	322	350	42	3	0	127	14	10	2	0	0	0	0	0	0	2	0
17:15:00	31	3	5420	311	389	39	3	0	134	7	10	0	0	0	0	0	0	0	3	1
17:30:00	32	1	5719	299	441	52	3	0	145	11	10	0	0	0	0	0	0	0	3	0
17:45:00	34	2	5985	266	486	45	3	0	155	10	11	1	0	0	0	0	0	0	3	0
18:00:00	38	4	6296	311	530	44	3	0	161	6	11	0	0	0	0	0	0	0	4	1
18:15:00	38	0	6296	0	530	0	3	0	161	0	11	0	0	0	0	0	0	0	4	0
18:16:41	38	0	6296	0	530	0	3	0	161	0	11	0	0	0	0	0	0	0	4	0

18. APPENDIX D: PROGRAM REFERENCE CARD

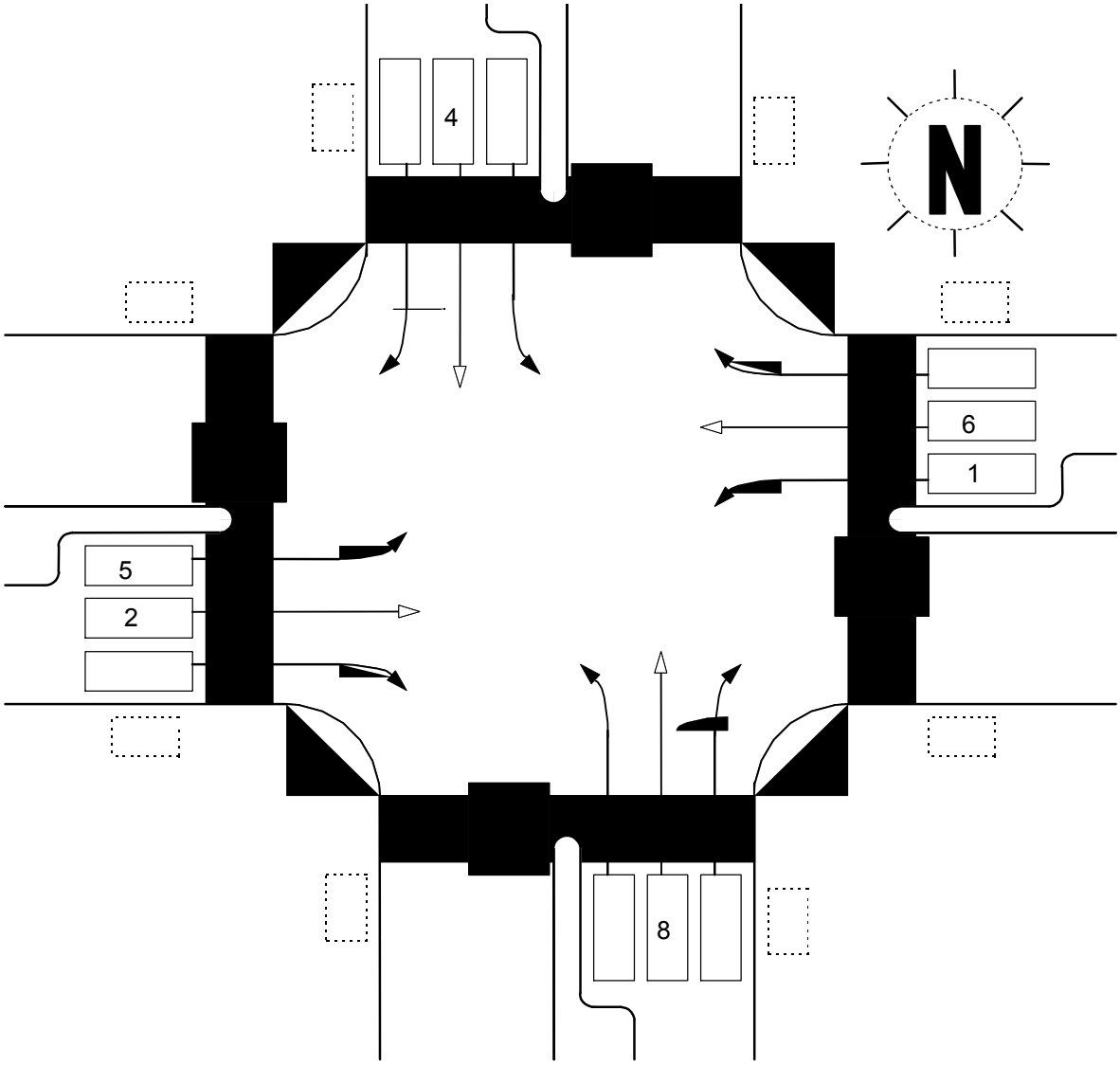
ASC/3

PROGRAM REFERENCE CARD

INTERSECTION ___Dundas Street & Eighth Line_____

CONTROLLER NUMBER_____ ENTERED BY:_____ DATE 03 / 27 / 17_

BOOT: _____ MAIN: _____ HELP: _____ DATA BASE_____



1-1-1. PHASE RING ASSIGNMENT

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

1-1-2. PHASE COMPATIBILITY

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

1-2. PHASES IN USE / EXCLUSIVE PED

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASES IN USE																
EXCLUSIVE PED																

1-1-4. BACKUP PREVENT PHASES

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

1-1-5 SIMULTANEOUS GAP

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

1-1-3. PHASE RING SEQUENCE

CONTROLLER 1			SEQUENCE 1														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 2														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 3														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 4														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 5														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 6														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 7														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 8														
RING 1																	
RING 2																	
RING 3																	
RING 4																	

1-1-3. PHASE RING SEQUENCE (CONT)

CONTROLLER 1			SEQUENCE 9														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 10														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 11														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 12														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 13														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 14														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 15														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 16														
RING 1																	
RING 2																	
RING 3																	
RING 4																	

1-3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH	PHASE / OVERLAP	TYPE	DIMMING				AUTO FLASH	
			RED	YELLOW	GREEN	PHASE	COLOR	TOGE – THER
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

1-4-1. SDLC OPTIONS

	BIU NUMBER							
TERM & FACIL	1	2	3	4	5	6	7	8
ENABLE								
PEER–PEER EN								
DETECTOR RACK	1	2	3	4	5	6	7	8
ENABLE								
PEER–PEER EN								

MMU ENABLE	
MMU STOP TIME	
DIAGNOSTIC ENABLE (TEST FIXTURE)	
CONTROLLER PEER TO PEER ENABLE	
DISABLE 3 CRITICAL RFEs LOCKUP	

1-4-2. MMU PROGRAM

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

1-4-3. COLOR CHECK DISABLE

DISABLE ALL COLOR CHECKS	

MMU CHANNEL	1	2	3	4	5	6	7	8
GREEN / WALK								
YELLOW / PC								
RED / DW								
MMU CHANNEL	9	10	11	12	13	14	15	16
GREEN / WALK								
YELLOW / PC								
RED / DW								

1-5-1 GLOBAL PORT PARAMETERS

NTCIP BACKUP TIME (SECONDS)	
PORT 2 PRIORITY	
PORT 3A PRIORITY	
PORT 3B PRIORITY	
ETHERNET PRIORITY	

1-5-1 PORT 2 (TERMINAL)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
OMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-3 PORT 3A (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
ELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-7-1 ADMINISTRATION

SUPERVISOR ACCESS CODE	
ENABLE CRC CHECK OF DATA BASE	
CRC OF PROGRAM DATA BASE	
REQUEST DOWNLOAD OF PROGRAMMED DATA	

1-7-2 DISPLAY OPTIONS

KEY CLICK ENABLE	
BACKLIGHT ENABLE	

1-5-4. PORT 3B (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-5 ETHERNET PORT CONFIGURATION

IP ADDRESS					
ADDRESS MASK					
FTP SERVER ADDRESS					
DEFAULT GATEWAY ADDRESS					

1-6-1 ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/TE)	
3 CRITICAL RFE ERRORS IN 24 HOURS	
NON-CRITICAL RFE'S (DET/TEST)	
DETECTOR ERRORS	
COORDINATION ERRORS	
MMU FLASH FAULTS	
LOCAL FLASH FAULTS	
PREEMPT	
POWER ON/OFF	
LOW BATTERY	
ACCESS	
DATA CHANGE	
CONTROLLER DOWNLOAD	
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

1-8-1 LOGIC STATEMENT CONTROL

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-10										

1-8-1 LOGIC STATEMENT CONTROL

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR STATEMENTS

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				

LOGIC GATE NUMBER				
IF				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER	

IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER				
IF				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

2-1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN	7	20	7	10	7	20	7	10								
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN																
DELAYED GREEN																
WALK		7		7		7		7								
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE		24		32		24		32								
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION	3.5	5.5	3.5	3.5	3.5	5.5	3.5	3.5								
VEHICLE EXTENSION 2																
MAX1	15	46		25	15	46		25								
MAX2	20	60		30	20	60		30								
MAX3																
DYNAMIC MAX																
DYNAMIC MAX STEP																
YELLOW CHANGE	3.0	4.2		3.3	3.0	4.2		3.3								
RED CLRANCE	1.0	2.5		3.7	1.0	2.5		3.7								
RED MAX																
RED REVERT																
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN																
TIME BEFORE GAP REDUCTION																
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM																
MININIMUM GAP																

2-2 VEHICLE OVERLAP

OVERLAP A PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP C PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP B PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP D PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP E PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP G PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP F PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP H PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP I PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP K PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW		TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP J PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP L PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW		TRAILING RED	

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

ADVANCE GREEN		

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

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP M PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP O PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP N PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP P PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

2-3 PEDESTRIAN OVERLAP

PEDESTRIAN OVERLAP CONSISTS OF PHASES																
PEDESTRIAN OVERLAP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

2-4 GUARANTEED MINIMUM TIMES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN																
WALK																
PEDESTRIAN CLEARANCE																
YELLOW CHANGE																
RED CLEARANCE																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
MINIMUM GREEN																

2-5 START / FLASH DATA

POWER START																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
OVERLAP																
POWER START RED									FLASH TIME							

REMOTE (AUTOMATIC) FLASH																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ENTRY																
EXIT																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
EXIT																
EXIT REMOTE FLASH									MINIMUM AUTOMATIC FLASH							
MINIMUM RECALL									CYCLE THROUGH PHASES							

2-6-1 CONTROLLER OPTIONS

PEDESTRIAN CLEARANCE PROTECT	
UNIT RED REVERT	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
GUARANTEED PASSAGE																
NON-ACT I																
NON ACT II																
DUAL ENTRY																
PED RESERVICE																
REST IN WALK																
FLASHING WALK																
PED CLEAR > YELLOW																
PED CLEAR > ALL RED																
INIT GREEN + VEHICLE EXIT																

2-7 ACTUATED / PRE-TIMED MODE PHASES

ENABLE PRE-TIMED OPERATION	
FREE INPUT DISABLED PRE-TIMED	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PRE - TIMED																

COORDINATOR SUBMENU

3-1 COORDINATOR OPTIONS

MANUAL PATTERN	Auto		
INTERCONNECT SOURCE	TBC	INTERCONNECT FORMAT	
TRANSITION	Smooth	ECPI COORDINATION	Yes
OFFSET REFERENCE	Lead	DWELL / ADD TIME	
DELAY COORD WALK TO LOCAL ZERO	No	FORCE OFF	Float
FORCE OFF ADDED INITIAL GREEN	No	USE PED TIME FOR SMOOTH TRANSITION	No
PEDESTRIAN RECALL	No	PEDESTRIAN RESERVICE	Yes
ENABLE MANUAL SYNC INPUT		LOCAL ZERO OVERRIDE	No
RE-SYNC COUNT	No	MAX SELECT	MaxInh
MULTISYNC	No		

3-2 COORDINATOR PATTERN

COORDINATOR PATTERN	1		
CYCLE LENGTH (SECONDS)	130	SPLIT PATTERN	
OFFSET VALUE	23	SEQUENCE	
SPLITS IN	Per	OFFSETS IN . . .	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	1
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

	1	2	3	4	5			8
SPECIAL FUNCTION								

COORDINATOR PATTERN	2		
CYCLE LENGTH (SECONDS)	120	SPLIT PATTERN	
OFFSET VALUE	37	SEQUENCE	
SPLITS IN	Per	OFFSETS IN	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	2
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN	3		
CYCLE LENGTH (SECONDS)	130	SPLIT PATTERN	
OFFSET VALUE	1	SEQUENCE	
SPLITS IN	Per	OFFSETS IN	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	3
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN	4		
CYCLE LENGTH (SECONDS)	100	SPLIT PATTERN	
OFFSET VALUE	44		
SPLITS IN	Per	OFFSETS IN	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	4
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN	5		
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	5
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

Per
Per

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 SPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

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

3-3 SPLIT PATTERN

SPLIT PATTERN NUMBER	1															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	9		54		0		37		9		54		0		37	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER	2															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	10		50		0		40		10		50		0		40	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER	3															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	12		51		0		37		9		54		0		37	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER	4															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	11		42		0		47		11		42		0		47	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

3-3 SPLIT PATTERN (CONTINUED)

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

3-3 SPLIT PATTERN (CONTINUED

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

3-4 AUTO PERMISSIVE MINIMUM GREEN TIME

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

3-5 SPLIT DEMAND

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

DEMAND	1	2
DETECTOR		
CALL TIME (SECONDS)		
CYCLE COUNT		

PREEMPTOR SUBMENU

4-1 PREEMPTOR

PREEMPTOR NUMBER	1		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PED CLEAR THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			
PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	2		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PED CLEAR THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/EXIT YELLOW/RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			
PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-2 LOW PRIORITY PREEMPTOR SELECTION

FILTERED INPUT	SOLID	PULSING
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	3		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	4		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	5		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	6		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	7		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	8		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	9		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	10		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

TIME BASE SUBMENU

5-1 CLOCK/CALENDAR DATA

DATE SET:	
TIME SET:	
MANUAL ACTION PLAN	
SYNC REFERENCE TIME	
SYNC REFERENCE	
DAYLIGHT SAVINGS	
TIME RESET INPUT TIME SET	
STANDARD TIME FROM GMT	

5-2 SCHEDULE

SCHEDULE NUMBER	1
DAY PLAN NUMBER	1

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		X	X	X	X	X	

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	1
DAY PLAN NUMBER	2

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X						X

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

5-3 DAY PLAN

DAY PLAN EVENT	1	DAY PLAN	1
ACTION PLAN	1	START TIME	06:00
DAY PLAN EVENT	2	DAY PLAN	1
ACTION PLAN	2	START TIME	10:00
DAY PLAN EVENT	3	DAY PLAN	1
ACTION PLAN	3	START TIME	15:15
DAY PLAN EVENT	4	DAY PLAN	1
ACTION PLAN	4	START TIME	19:00
DAY PLAN EVENT	5	DAY PLAN	1
ACTION PLAN	5	START TIME	22:00
DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	4	START TIME	07:00
DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	2	START TIME	10:00
DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	4	START TIME	19:00
DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	5	START TIME	22:00
DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	
DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	
DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	
DAY PLAN EVENT		DAY PLAN	
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DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	
DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

5-4 ACTION PLAN

ACTION PLAN EVENT	1

PATTERN	1	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	2

PATTERN	2	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	3

PATTERN	3	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	4

PATTERN	4	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	5															
PATTERN				5			SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN																
PATTERN							SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN																
PATTERN							SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN																
PATTERN							SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

5-5 EXCEPTION DAY PROGRAM

EXECEPTION DAY	FLOAT / FIXED	MON / MON	DOW / DOM	WOM / YEAR	DAY PLAN
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
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31					
32					
33					
34					
35					
36					

6-1. DETECTOR TYPE AND TS SELECT

DET	TYPE	TS1 DETECTOR
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
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18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		

DET	TYPE	TS1 DETECTOR
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
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61		
62		
63		
64		

6-2 VEHICLE DETECTOR SETUP

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

6-3 PHASE DETECTOR OPTIONS

PHASE DETECTOR OPTION PLAN NUMBER	1															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER	2															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER	3															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER	4															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

6-4 PEDESTRIAN AND SYSTEM DETECTOR OPTIONS

	PHASE PEDESTRIAN DETECTOR							
	1	2	3	4	5	6	7	8
PED DET INPUT								
	9	10	11	12	13	14	15	16
PED DET INPUT								

	LOCAL SYSTEM DETECTOR							
	1	2	3	4	5	6	7	8
VEH DET INPUT								
	9	10	11	12	13	14	15	16
VEH DET INPUT								

6-5 LOG – SPEED DETECTOR SET UP

NTCIP LOG PERIOD								
ECPI LOG PERIOD								
LENGTH UNIT								
SPEED DETECTOR	1	2	3	4	5	6	7	8
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								
SPEED DETECTOR	9	10	11	12	13	14	15	16
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								

6-6 VEHICLE DETECTOR DIAGNOSTICS

VEHICLE DIAGNOSTIC PLAN NUMBER 1

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

DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
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51				
52				
53				
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55				
56				
57				
58				
59				
60				
61				
62				
63				
64				

VEHICLE DIAGNOSTIC PLAN NUMBER 2

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

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

6-6 VEHICLE DETECTOR DIAGNOSTICS (CONTINUED)

VEHICLE DIAGNOSTIC PLAN NUMBER 3

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

VEHICLE DIAGNOSTIC PLAN NUMBER 4

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

6-7 PEDESTRIAN DETECTOR DIAGNOSTICS

PED DIAGNOSTIC PLAN NUMBER				1
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PED DIAGNOSTIC PLAN NUMBER				2
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PED DIAGNOSTIC PLAN NUMBER				3
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PED DIAGNOSTIC PLAN NUMBER				4
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

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18. APPENDIX D: PROGRAM REFERENCE CARD

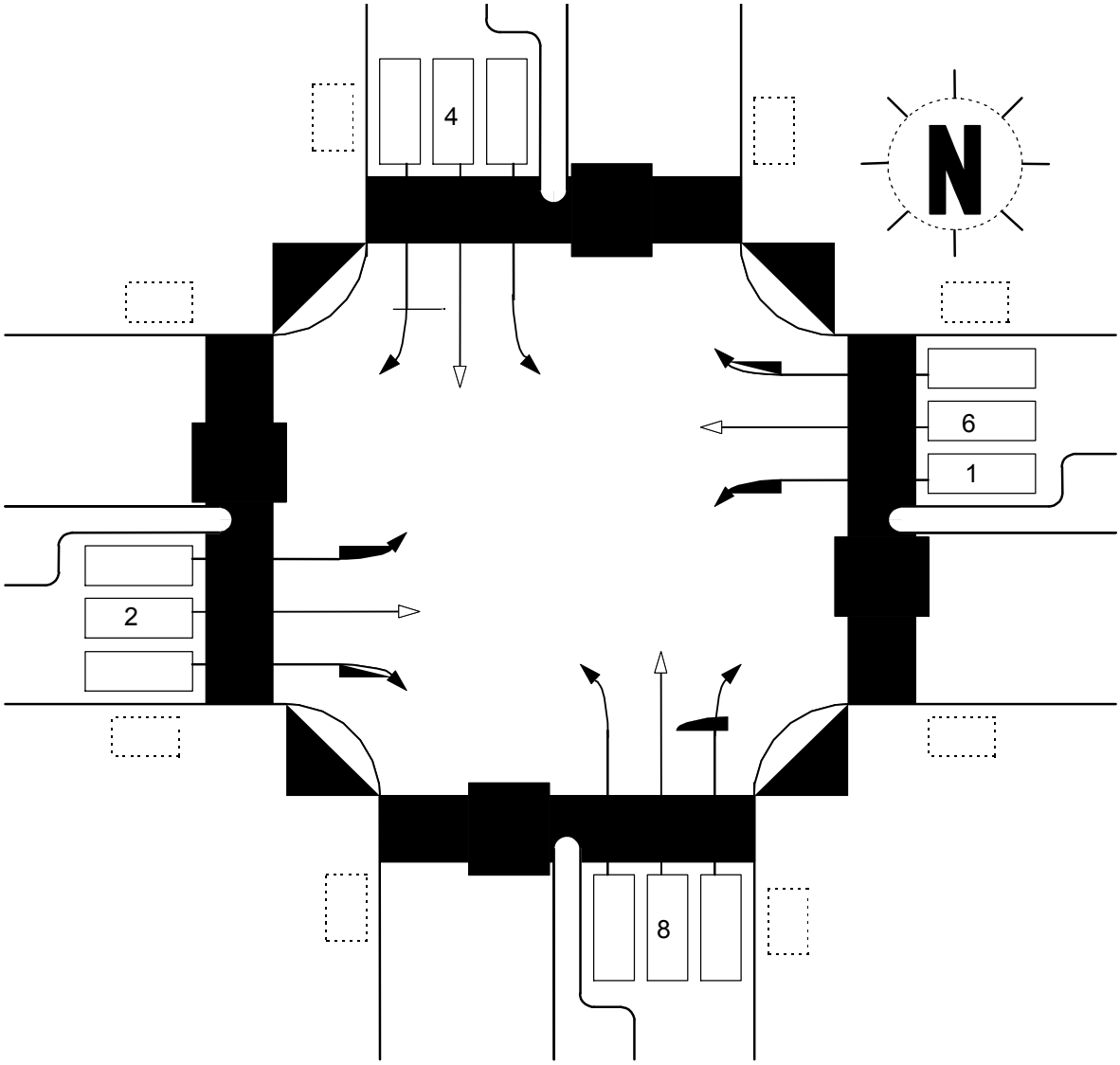
ASC/3

PROGRAM REFERENCE CARD

INTERSECTION ___Dundas Street & Meadowridge Drive_____

CONTROLLER NUMBER_____ ENTERED BY:_____ DATE 03 / 27 / 17_

BOOT: _____ MAIN: _____ HELP: _____ DATA BASE_____



1-1-1. PHASE RING ASSIGNMENT

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

1-1-2. PHASE COMPATIBILITY

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

1-2. PHASES IN USE / EXCLUSIVE PED

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASES IN USE																
EXCLUSIVE PED																

1-1-4. BACKUP PREVENT PHASES

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

1-1-5 SIMULTANEOUS GAP

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

1-1-3. PHASE RING SEQUENCE

CONTROLLER 1			SEQUENCE 1														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 2														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 3														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 4														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 5														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 6														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 7														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 8														
RING 1																	
RING 2																	
RING 3																	
RING 4																	

1-1-3. PHASE RING SEQUENCE (CONT)

CONTROLLER 1			SEQUENCE 9														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 10														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 11														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 12														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 13														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 14														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 15														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 16														
RING 1																	
RING 2																	
RING 3																	
RING 4																	

1-3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH	PHASE / OVERLAP	TYPE	DIMMING				AUTO FLASH	
			RED	YELLOW	GREEN	PHASE	COLOR	TOGE – THER
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

1-4-1. SDLC OPTIONS

	BIU NUMBER							
TERM & FACIL	1	2	3	4	5	6	7	8
ENABLE								
PEER–PEER EN								
DETECTOR RACK	1	2	3	4	5	6	7	8
ENABLE								
PEER–PEER EN								

MMU ENABLE	
MMU STOP TIME	
DIAGNOSTIC ENABLE (TEST FIXTURE)	
CONTROLLER PEER TO PEER ENABLE	
DISABLE 3 CRITICAL RFEs LOCKUP	

1-4-2. MMU PROGRAM

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

1-4-3. COLOR CHECK DISABLE

DISABLE ALL COLOR CHECKS	

MMU CHANNEL	1	2	3	4	5	6	7	8
GREEN / WALK								
YELLOW / PC								
RED / DW								
MMU CHANNEL	9	10	11	12	13	14	15	16
GREEN / WALK								
YELLOW / PC								
RED / DW								

1-5-1 GLOBAL PORT PARAMETERS

NTCIP BACKUP TIME (SECONDS)	
PORT 2 PRIORITY	
PORT 3A PRIORITY	
PORT 3B PRIORITY	
ETHERNET PRIORITY	

1-5-1 PORT 2 (TERMINAL)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
OMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-3 PORT 3A (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
ELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-7-1 ADMINISTRATION

SUPERVISOR ACCESS CODE	
ENABLE CRC CHECK OF DATA BASE	
CRC OF PROGRAM DATA BASE	
REQUEST DOWNLOAD OF PROGRAMMED DATA	

1-7-2 DISPLAY OPTIONS

KEY CLICK ENABLE	
BACKLIGHT ENABLE	

1-5-4. PORT 3B (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-5 ETHERNET PORT CONFIGURATION

IP ADDRESS					
ADDRESS MASK					
FTP SERVER ADDRESS					
DEFAULT GATEWAY ADDRESS					

1-6-1 ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/TE)	
3 CRITICAL RFE ERRORS IN 24 HOURS	
NON-CRITICAL RFE'S (DET/TEST)	
DETECTOR ERRORS	
COORDINATION ERRORS	
MMU FLASH FAULTS	
LOCAL FLASH FAULTS	
PREEMPT	
POWER ON/OFF	
LOW BATTERY	
ACCESS	
DATA CHANGE	
CONTROLLER DOWNLOAD	
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

1-8-1 LOGIC STATEMENT CONTROL

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-10										

1-8-1 LOGIC STATEMENT CONTROL

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR STATEMENTS

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				

LOGIC GATE NUMBER				
IF				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
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LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER	

IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
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LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER				
IF				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

2-1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN	7	20	7	10	7	20	7	10								
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN																
DELAYED GREEN																
WALK		7		7		7		7								
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE		23		30		23		30								
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION	3.5	5.5	3.5	3.5	3.5	5.5	3.5	3.5								
VEHICLE EXTENSION 2																
MAX1	20	55		30		55		30								
MAX2	20	60		30		60		30								
MAX3																
DYNAMIC MAX																
DYNAMIC MAX STEP																
YELLOW CHANGE	3.0	4.2		3.3		4.2		3.3								
RED CLRANCE	1.0	2.5		3.6		2.5		3.6								
RED MAX																
RED REVERT																
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN																
TIME BEFORE GAP REDUCTION																
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM																
MININIMUM GAP																

2-2 VEHICLE OVERLAP

OVERLAP A PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP C PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP B PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP D PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP E PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP G PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP F PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP H PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP I PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP K PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW		TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP J PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP L PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW		TRAILING RED	

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

ADVANCE GREEN		

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

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP M PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP O PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP N PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP P PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

2-3 PEDESTRIAN OVERLAP

PEDESTRIAN OVERLAP CONSISTS OF PHASES																
PEDESTRIAN OVERLAP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

2-4 GUARANTEED MINIMUM TIMES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN																
WALK																
PEDESTRIAN CLEARANCE																
YELLOW CHANGE																
RED CLEARANCE																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
MINIMUM GREEN																

2-5 START / FLASH DATA

POWER START																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
OVERLAP																
POWER START RED									FLASH TIME							

REMOTE (AUTOMATIC) FLASH																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ENTRY																
EXIT																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
EXIT																
EXIT REMOTE FLASH									MINIMUM AUTOMATIC FLASH							
MINIMUM RECALL									CYCLE THROUGH PHASES							

2-6-1 CONTROLLER OPTIONS

PEDESTRIAN CLEARANCE PROTECT	
UNIT RED REVERT	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
GUARANTEED PASSAGE																
NON-ACT I																
NON ACT II																
DUAL ENTRY																
PED RESERVICE																
REST IN WALK																
FLASHING WALK																
PED CLEAR > YELLOW																
PED CLEAR > ALL RED																
INIT GREEN + VEHICLE EXIT																

2-7 ACTUATED / PRE-TIMED MODE PHASES

ENABLE PRE-TIMED OPERATION	
FREE INPUT DISABLED PRE-TIMED	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PRE - TIMED																

COORDINATOR SUBMENU

3-1 COORDINATOR OPTIONS

MANUAL PATTERN	Auto		
INTERCONNECT SOURCE	TBC	INTERCONNECT FORMAT	
TRANSITION	Smooth	ECPI COORDINATION	Yes
OFFSET REFERENCE	Lead	DWELL / ADD TIME	
DELAY COORD WALK TO LOCAL ZERO	No	FORCE OFF	Float
FORCE OFF ADDED INITIAL GREEN	No	USE PED TIME FOR SMOOTH TRANSITION	No
PEDESTRIAN RECALL	No	PEDESTRIAN RESERVICE	Yes
ENABLE MANUAL SYNC INPUT		LOCAL ZERO OVERRIDE	No
RE-SYNC COUNT	No	MAX SELECT	MaxInh
MULTISYNC	No		

3-2 COORDINATOR PATTERN

COORDINATOR PATTERN	1		
CYCLE LENGTH (SECONDS)	130	SPLIT PATTERN	
OFFSET VALUE	70	SEQUENCE	
SPLITS IN	Per	OFFSETS IN . . .	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	1
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

	1	2	3	4	5			8
SPECIAL FUNCTION								

COORDINATOR PATTERN	2		
CYCLE LENGTH (SECONDS)	120	SPLIT PATTERN	
OFFSET VALUE	7	SEQUENCE	
SPLITS IN	Per	OFFSETS IN	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	2
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN	3		
CYCLE LENGTH (SECONDS)	130	SPLIT PATTERN	
OFFSET VALUE	75	SEQUENCE	
SPLITS IN	Per	OFFSETS IN	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	3
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN	4		
CYCLE LENGTH (SECONDS)	100	SPLIT PATTERN	
OFFSET VALUE	8		
SPLITS IN	Per	OFFSETS IN	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	4
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN	5		
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	5
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

Per
Per

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 SPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

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

3-3 SPLIT PATTERN

SPLIT PATTERN NUMBER	1															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	11		54		0		35		0		65		0		35	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER	2															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	10		52		0		38		0		62		0		38	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER	3															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	16		49		0		35		0		65		0		35	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER	4															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	11		44		0		45		0		55		0		45	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

3-3 SPLIT PATTERN (CONTINUED)

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

3-3 SPLIT PATTERN (CONTINUED

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

3-4 AUTO PERMISSIVE MINIMUM GREEN TIME

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

3-5 SPLIT DEMAND

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

DEMAND	1	2
DETECTOR		
CALL TIME (SECONDS)		
CYCLE COUNT		

PREEMPTOR SUBMENU

4-1 PREEMPTOR

PREEMPTOR NUMBER	1		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PED CLEAR THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			
PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	2		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PED CLEAR THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/EXIT YELLOW/RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			
PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-2 LOW PRIORITY PREEMPTOR SELECTION

FILTERED INPUT	SOLID	PULSING
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	3		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	4		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	5		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	6		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	7		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	8		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	9		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	10		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

TIME BASE SUBMENU

5-1 CLOCK/CALENDAR DATA

DATE SET:	
TIME SET:	
MANUAL ACTION PLAN	
SYNC REFERENCE TIME	
SYNC REFERENCE	
DAYLIGHT SAVINGS	
TIME RESET INPUT TIME SET	
STANDARD TIME FROM GMT	

5-2 SCHEDULE

SCHEDULE NUMBER	1
DAY PLAN NUMBER	1

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		x	x	x	x	x	

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	1
DAY PLAN NUMBER	2

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	x						x

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

5-3 DAY PLAN

DAY PLAN EVENT	1	DAY PLAN	1
ACTION PLAN	1	START TIME	06:00

DAY PLAN EVENT	2	DAY PLAN	1
ACTION PLAN	2	START TIME	10:00

DAY PLAN EVENT	3	DAY PLAN	1
ACTION PLAN	3	START TIME	15:15

DAY PLAN EVENT	4	DAY PLAN	1
ACTION PLAN	4	START TIME	19:00

DAY PLAN EVENT	5	DAY PLAN	1
ACTION PLAN	5	START TIME	22:00

DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	4	START TIME	07:00

DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	2	START TIME	10:00

DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	4	START TIME	19:00

DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	5	START TIME	22:00

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

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ACTION PLAN		START TIME	

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DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

5-4 ACTION PLAN

ACTION PLAN EVENT	1

PATTERN	1	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	2

PATTERN	2	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	3

PATTERN	3	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	4

PATTERN	4	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	5															
PATTERN				5			SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN																
PATTERN							SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN																
PATTERN							SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN																
PATTERN							SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

5-5 EXCEPTION DAY PROGRAM

EXECEPTION DAY	FLOAT / FIXED	MON / MON	DOW / DOM	WOM / YEAR	DAY PLAN
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
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16					
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32					
33					
34					
35					
36					

6-1. DETECTOR TYPE AND TS SELECT

DET	TYPE	TS1 DETECTOR
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
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19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		

DET	TYPE	TS1 DETECTOR
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
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61		
62		
63		
64		

6-2 VEHICLE DETECTOR SETUP

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

6-3 PHASE DETECTOR OPTIONS

PHASE DETECTOR OPTION PLAN NUMBER	1															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER	2															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER	3															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER	4															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

6-4 PEDESTRIAN AND SYSTEM DETECTOR OPTIONS

	PHASE PEDESTRIAN DETECTOR							
	1	2	3	4	5	6	7	8
PED DET INPUT								
	9	10	11	12	13	14	15	16
PED DET INPUT								

	LOCAL SYSTEM DETECTOR							
	1	2	3	4	5	6	7	8
VEH DET INPUT								
	9	10	11	12	13	14	15	16
VEH DET INPUT								

6-5 LOG – SPEED DETECTOR SET UP

NTCIP LOG PERIOD								
ECPI LOG PERIOD								
LENGTH UNIT								
SPEED DETECTOR	1	2	3	4	5	6	7	8
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								
SPEED DETECTOR	9	10	11	12	13	14	15	16
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								

6-6 VEHICLE DETECTOR DIAGNOSTICS

VEHICLE DIAGNOSTIC PLAN NUMBER 1

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

DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
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51				
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56				
57				
58				
59				
60				
61				
62				
63				
64				

VEHICLE DIAGNOSTIC PLAN NUMBER 2

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

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

6-6 VEHICLE DETECTOR DIAGNOSTICS (CONTINUED)

VEHICLE DIAGNOSTIC PLAN NUMBER 3

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

VEHICLE DIAGNOSTIC PLAN NUMBER 4

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

6-7 PEDESTRIAN DETECTOR DIAGNOSTICS

PED DIAGNOSTIC PLAN NUMBER				1
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PED DIAGNOSTIC PLAN NUMBER				2
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PED DIAGNOSTIC PLAN NUMBER				3
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PED DIAGNOSTIC PLAN NUMBER				4
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

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18. APPENDIX D: PROGRAM REFERENCE CARD

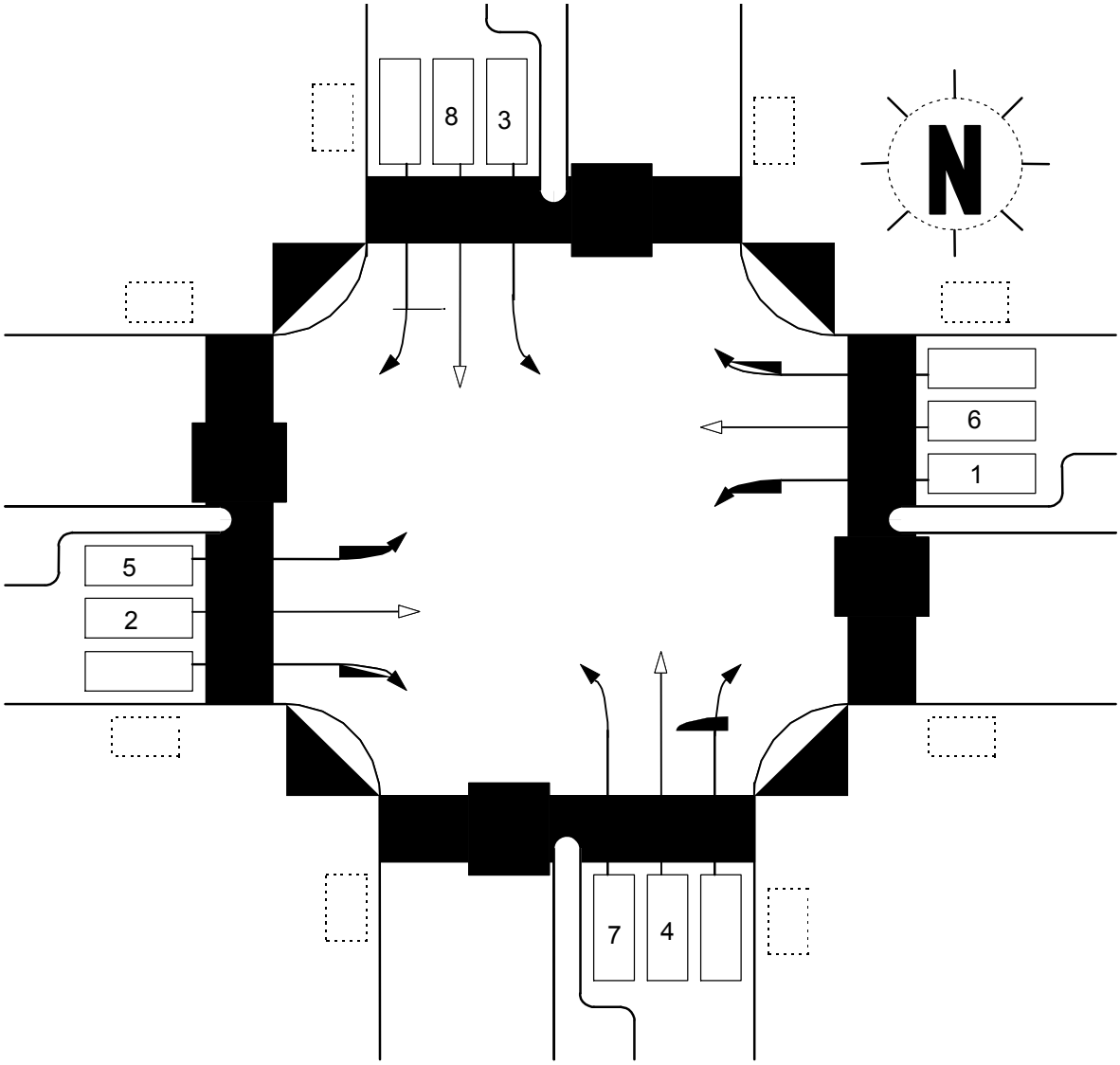
ASC/3

PROGRAM REFERENCE CARD

INTERSECTION ___Dundas Street & Ninth Line_____

CONTROLLER NUMBER_____ ENTERED BY:_____ DATE 03 / 13 / 17_

BOOT: _____ MAIN: _____ HELP: _____ DATA BASE_____



1-1-1. PHASE RING ASSIGNMENT

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

1-1-2. PHASE COMPATIBILITY

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

1-2. PHASES IN USE / EXCLUSIVE PED

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASES IN USE																
EXCLUSIVE PED																

1-1-4. BACKUP PREVENT PHASES

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

1-1-5 SIMULTANEOUS GAP

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

1-1-3. PHASE RING SEQUENCE

CONTROLLER 1			SEQUENCE 1														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 2														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 3														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 4														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 5														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 6														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 7														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 8														
RING 1																	
RING 2																	
RING 3																	
RING 4																	

1-1-3. PHASE RING SEQUENCE (CONT)

CONTROLLER 1			SEQUENCE 9														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 10														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 11														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 12														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 13														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 14														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 15														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 16														
RING 1																	
RING 2																	
RING 3																	
RING 4																	

1-3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH	PHASE / OVERLAP	TYPE	DIMMING				AUTO FLASH	
			RED	YELLOW	GREEN	PHASE	COLOR	TOGE – THER
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

1-4-1. SDLC OPTIONS

	BIU NUMBER							
TERM & FACIL	1	2	3	4	5	6	7	8
ENABLE								
PEER–PEER EN								
DETECTOR RACK	1	2	3	4	5	6	7	8
ENABLE								
PEER–PEER EN								

MMU ENABLE	
MMU STOP TIME	
DIAGNOSTIC ENABLE (TEST FIXTURE)	
CONTROLLER PEER TO PEER ENABLE	
DISABLE 3 CRITICAL RFEs LOCKUP	

1-4-2. MMU PROGRAM

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

1-4-3. COLOR CHECK DISABLE

DISABLE ALL COLOR CHECKS	

MMU CHANNEL	1	2	3	4	5	6	7	8
GREEN / WALK								
YELLOW / PC								
RED / DW								
MMU CHANNEL	9	10	11	12	13	14	15	16
GREEN / WALK								
YELLOW / PC								
RED / DW								

1-5-1 GLOBAL PORT PARAMETERS

NTCIP BACKUP TIME (SECONDS)	
PORT 2 PRIORITY	
PORT 3A PRIORITY	
PORT 3B PRIORITY	
ETHERNET PRIORITY	

1-5-1 PORT 2 (TERMINAL)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
OMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-3 PORT 3A (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
ELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-7-1 ADMINISTRATION

SUPERVISOR ACCESS CODE	
ENABLE CRC CHECK OF DATA BASE	
CRC OF PROGRAM DATA BASE	
REQUEST DOWNLOAD OF PROGRAMMED DATA	

1-7-2 DISPLAY OPTIONS

KEY CLICK ENABLE	
BACKLIGHT ENABLE	

1-5-4. PORT 3B (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-5 ETHERNET PORT CONFIGURATION

IP ADDRESS					
ADDRESS MASK					
FTP SERVER ADDRESS					
DEFAULT GATEWAY ADDRESS					

1-6-1 ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/TE)	
3 CRITICAL RFE ERRORS IN 24 HOURS	
NON-CRITICAL RFE'S (DET/TEST)	
DETECTOR ERRORS	
COORDINATION ERRORS	
MMU FLASH FAULTS	
LOCAL FLASH FAULTS	
PREEMPT	
POWER ON/OFF	
LOW BATTERY	
ACCESS	
DATA CHANGE	
CONTROLLER DOWNLOAD	
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

1-8-1 LOGIC STATEMENT CONTROL

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-10										

1-8-1 LOGIC STATEMENT CONTROL

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR STATEMENTS

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				

LOGIC GATE NUMBER				
IF				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER	

IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER				
IF				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

2-1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN	7	20	7	10	7	20	7	10								
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN																
DELAYED GREEN																
WALK		7		7		7		7								
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE		32		34		32		34								
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION	3.5	5.5	3.5	3.5	3.5	5.5	3.5	3.5								
VEHICLE EXTENSION 2																
MAX1	20	55	20	35	20	55	20	35								
MAX2	20	60	20	40	20	60	20	40								
MAX3																
DYNAMIC MAX																
DYNAMIC MAX STEP																
YELLOW CHANGE	3.0	3.7	3.0	3.7	3.0	3.7	3.0	3.7								
RED CLRANCE	1.0	2.6	1.0	2.8	2.0	2.6	1.0	2.8								
RED MAX																
RED REVERT																
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN																
TIME BEFORE GAP REDUCTION																
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM																
MININIMUM GAP																

2-2 VEHICLE OVERLAP

OVERLAP A PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP C PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP B PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP D PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP E PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP G PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP F PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP H PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP I PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP K PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW		TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP J PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP L PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW		TRAILING RED	

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

ADVANCE GREEN		

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

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP M PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP O PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP N PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP P PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

2-3 PEDESTRIAN OVERLAP

PEDESTRIAN OVERLAP CONSISTS OF PHASES																
PEDESTRIAN OVERLAP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

2-4 GUARANTEED MINIMUM TIMES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN																
WALK																
PEDESTRIAN CLEARANCE																
YELLOW CHANGE																
RED CLEARANCE																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
MINIMUM GREEN																

2-5 START / FLASH DATA

POWER START																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
OVERLAP																
POWER START RED									FLASH TIME							

REMOTE (AUTOMATIC) FLASH																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ENTRY																
EXIT																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
EXIT																
EXIT REMOTE FLASH									MINIMUM AUTOMATIC FLASH							
MINIMUM RECALL									CYCLE THROUGH PHASES							

2-6-1 CONTROLLER OPTIONS

PEDESTRIAN CLEARANCE PROTECT	
UNIT RED REVERT	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
GUARANTEED PASSAGE																
NON-ACT I																
NON ACT II																
DUAL ENTRY																
PED RESERVICE																
REST IN WALK																
FLASHING WALK																
PED CLEAR > YELLOW																
PED CLEAR > ALL RED																
INIT GREEN + VEHICLE EXIT																

2-7 ACTUATED / PRE-TIMED MODE PHASES

ENABLE PRE-TIMED OPERATION	
FREE INPUT DISABLED PRE-TIMED	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PRE - TIMED																

COORDINATOR SUBMENU

3-1 COORDINATOR OPTIONS

MANUAL PATTERN	Auto		
INTERCONNECT SOURCE	TBC	INTERCONNECT FORMAT	
TRANSITION	Smooth	ECPI COORDINATION	Yes
OFFSET REFERENCE	Lead	DWELL / ADD TIME	
DELAY COORD WALK TO LOCAL ZERO	No	FORCE OFF	Float
FORCE OFF ADDED INITIAL GREEN	No	USE PED TIME FOR SMOOTH TRANSITION	No
PEDESTRIAN RECALL	No	PEDESTRIAN RESERVICE	Yes
ENABLE MANUAL SYNC INPUT		LOCAL ZERO OVERRIDE	Yes
RE-SYNC COUNT	No	MAX SELECT	MaxInh
MULTISYNC	No		

3-2 COORDINATOR PATTERN

COORDINATOR PATTERN	1		
CYCLE LENGTH (SECONDS)	130	SPLIT PATTERN	
OFFSET VALUE	12	SEQUENCE	
SPLITS IN	Per	OFFSETS IN . . .	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	1
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

	1	2	3	4	5			8
SPECIAL FUNCTION								

COORDINATOR PATTERN	2		
CYCLE LENGTH (SECONDS)	120	SPLIT PATTERN	
OFFSET VALUE	49	SEQUENCE	
SPLITS IN	Per	OFFSETS IN	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	2
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN	3		
CYCLE LENGTH (SECONDS)	130	SPLIT PATTERN	
OFFSET VALUE	12	SEQUENCE	
SPLITS IN	Per	OFFSETS IN	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	3
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN	4		
CYCLE LENGTH (SECONDS)	100	SPLIT PATTERN	
OFFSET VALUE	59		
SPLITS IN	Per	OFFSETS IN	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	4
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN	5		
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	5
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

Per
Per

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 SPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

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

3-3 SPLIT PATTERN

SPLIT PATTERN NUMBER	1															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	9		53		11		27		15		47		11		27	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER	2															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	12		51		12		25		12		51		12		25	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER	3															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	10		53		17		20		10		53		10		27	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER	4															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	12		48		12		28		12		48		12		28	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

3-3 SPLIT PATTERN (CONTINUED)

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

3-3 SPLIT PATTERN (CONTINUED

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

3-4 AUTO PERMISSIVE MINIMUM GREEN TIME

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

3-5 SPLIT DEMAND

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

DEMAND	1	2
DETECTOR		
CALL TIME (SECONDS)		
CYCLE COUNT		

PREEMPTOR SUBMENU

4-1 PREEMPTOR

PREEMPTOR NUMBER	1		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PED CLEAR THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			
PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	2		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PED CLEAR THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/EXIT YELLOW/RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			
PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-2 LOW PRIORITY PREEMPTOR SELECTION

FILTERED INPUT	SOLID	PULSING
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	3		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	4		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	5		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	6		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	7		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	8		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	9		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	10		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

5-1 CLOCK/CALENDAR DATA

DATE SET:	
TIME SET:	
MANUAL ACTION PLAN	
SYNC REFERENCE TIME	
SYNC REFERENCE	
DAYLIGHT SAVINGS	
TIME RESET INPUT TIME SET	
STANDARD TIME FROM GMT	

5-2 SCHEDULE

SCHEDULE NUMBER	1
DAY PLAN NUMBER	1

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		x	x	x	x	x	

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	1
DAY PLAN NUMBER	2

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	x						x

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

5-3 DAY PLAN

DAY PLAN EVENT	1	DAY PLAN	1
ACTION PLAN	1	START TIME	06:00

DAY PLAN EVENT	2	DAY PLAN	1
ACTION PLAN	2	START TIME	10:00

DAY PLAN EVENT	3	DAY PLAN	1
ACTION PLAN	3	START TIME	15:15

DAY PLAN EVENT	4	DAY PLAN	1
ACTION PLAN	4	START TIME	19:00

DAY PLAN EVENT	5	DAY PLAN	1
ACTION PLAN	5	START TIME	22:00

DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	4	START TIME	07:00

DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	2	START TIME	10:00

DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	4	START TIME	19:00

DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	5	START TIME	22:00

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
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ACTION PLAN		START TIME	

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ACTION PLAN		START TIME	

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DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

5-4 ACTION PLAN

ACTION PLAN EVENT	1

PATTERN	1	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	2

PATTERN	2	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	3

PATTERN	3	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	4

PATTERN	4	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	5															
PATTERN				5			SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN																
PATTERN							SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN																
PATTERN							SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN																
PATTERN							SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

5-5 EXCEPTION DAY PROGRAM

EXECEPTION DAY	FLOAT / FIXED	MON / MON	DOW / DOM	WOM / YEAR	DAY PLAN
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
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16					
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31					
32					
33					
34					
35					
36					

6-1. DETECTOR TYPE AND TS SELECT

DET	TYPE	TS1 DETECTOR
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
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27		
28		
29		
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31		
32		

DET	TYPE	TS1 DETECTOR
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
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46		
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61		
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63		
64		

6-2 VEHICLE DETECTOR SETUP

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

6-3 PHASE DETECTOR OPTIONS

PHASE DETECTOR OPTION PLAN NUMBER	1															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER	2															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER	3															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER	4															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

6-4 PEDESTRIAN AND SYSTEM DETECTOR OPTIONS

	PHASE PEDESTRIAN DETECTOR							
	1	2	3	4	5	6	7	8
PED DET INPUT								
	9	10	11	12	13	14	15	16
PED DET INPUT								

	LOCAL SYSTEM DETECTOR							
	1	2	3	4	5	6	7	8
VEH DET INPUT								
	9	10	11	12	13	14	15	16
VEH DET INPUT								

6-5 LOG – SPEED DETECTOR SET UP

NTCIP LOG PERIOD								
ECPI LOG PERIOD								
LENGTH UNIT								
SPEED DETECTOR	1	2	3	4	5	6	7	8
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								
SPEED DETECTOR	9	10	11	12	13	14	15	16
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								

6-6 VEHICLE DETECTOR DIAGNOSTICS

VEHICLE DIAGNOSTIC PLAN NUMBER 1

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

DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
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57				
58				
59				
60				
61				
62				
63				
64				

VEHICLE DIAGNOSTIC PLAN NUMBER 2

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

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

6-6 VEHICLE DETECTOR DIAGNOSTICS (CONTINUED)

VEHICLE DIAGNOSTIC PLAN NUMBER 3

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

VEHICLE DIAGNOSTIC PLAN NUMBER 4

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

6-7 PEDESTRIAN DETECTOR DIAGNOSTICS

PED DIAGNOSTIC PLAN NUMBER				1
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PED DIAGNOSTIC PLAN NUMBER				2
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PED DIAGNOSTIC PLAN NUMBER				3
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PED DIAGNOSTIC PLAN NUMBER				4
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

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18. APPENDIX D: PROGRAM REFERENCE CARD

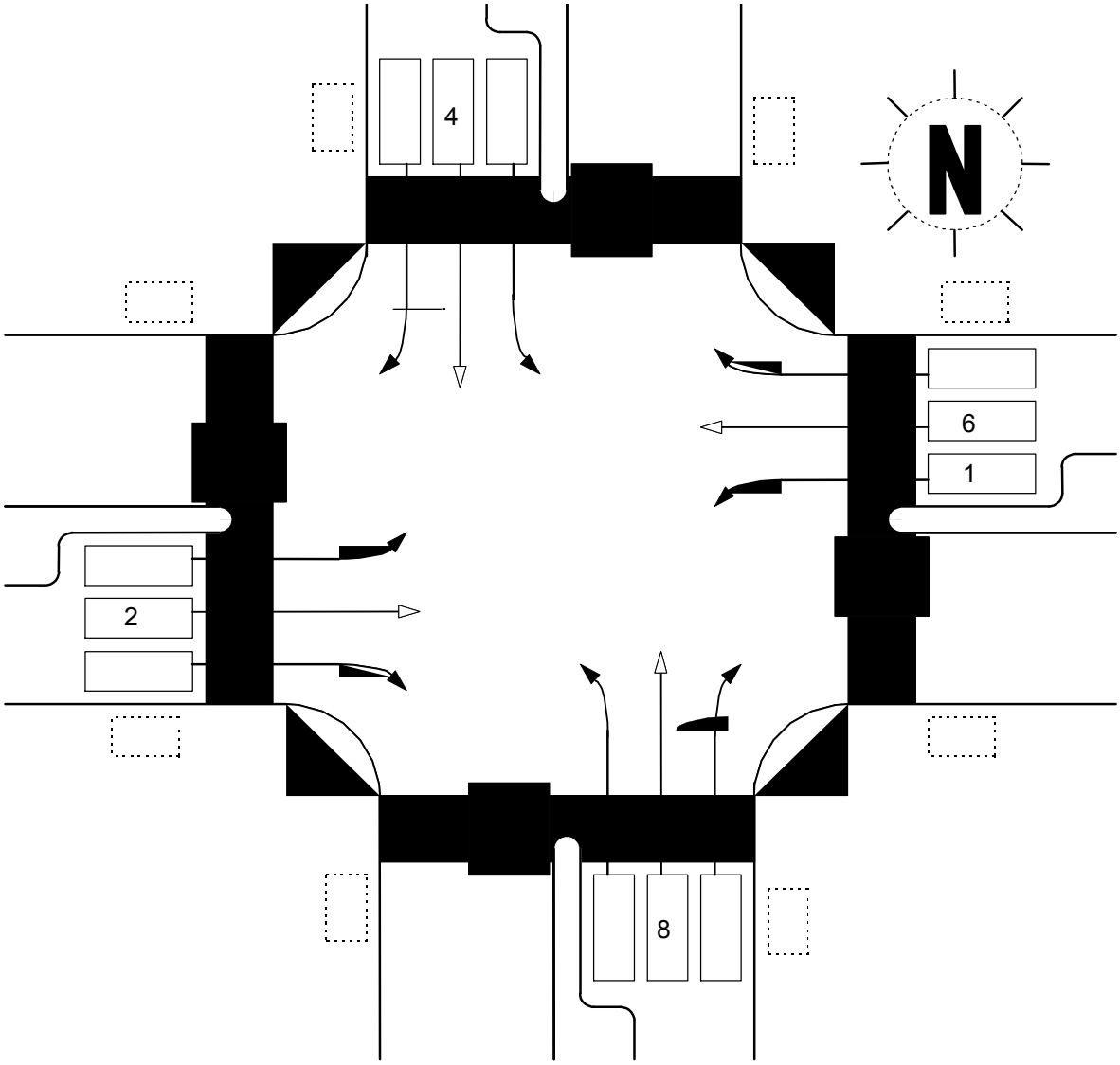
ASC/3

PROGRAM REFERENCE CARD

INTERSECTION ___Dundas Street & Prince Michael Drive_____

CONTROLLER NUMBER_____ ENTERED BY:_____ DATE 03 / 13 / 17_

BOOT: _____ MAIN: _____ HELP: _____ DATA BASE_____



1-1-1. PHASE RING ASSIGNMENT

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

1-1-2. PHASE COMPATIBILITY

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

1-2. PHASES IN USE / EXCLUSIVE PED

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASES IN USE																
EXCLUSIVE PED																

1-1-4. BACKUP PREVENT PHASES

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

1-1-5 SIMULTANEOUS GAP

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

1-1-3. PHASE RING SEQUENCE

CONTROLLER 1			SEQUENCE 1														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 2														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 3														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 4														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 5														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 6														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 7														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 8														
RING 1																	
RING 2																	
RING 3																	
RING 4																	

1-1-3. PHASE RING SEQUENCE (CONT)

CONTROLLER 1			SEQUENCE 9														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 10														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 11														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 12														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 13														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 14														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 15														
RING 1																	
RING 2																	
RING 3																	
RING 4																	
CONTROLLER 1			SEQUENCE 16														
RING 1																	
RING 2																	
RING 3																	
RING 4																	

1-3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH	PHASE / OVERLAP	TYPE	DIMMING				AUTO FLASH	
			RED	YELLOW	GREEN	PHASE	COLOR	TOGE – THER
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

1-4-1. SDLC OPTIONS

	BIU NUMBER							
TERM & FACIL	1	2	3	4	5	6	7	8
ENABLE								
PEER–PEER EN								
DETECTOR RACK	1	2	3	4	5	6	7	8
ENABLE								
PEER–PEER EN								

MMU ENABLE	
MMU STOP TIME	
DIAGNOSTIC ENABLE (TEST FIXTURE)	
CONTROLLER PEER TO PEER ENABLE	
DISABLE 3 CRITICAL RFEs LOCKUP	

1-4-2. MMU PROGRAM

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

1-4-3. COLOR CHECK DISABLE

DISABLE ALL COLOR CHECKS	

MMU CHANNEL	1	2	3	4	5	6	7	8
GREEN / WALK								
YELLOW / PC								
RED / DW								
MMU CHANNEL	9	10	11	12	13	14	15	16
GREEN / WALK								
YELLOW / PC								
RED / DW								

1-5-1 GLOBAL PORT PARAMETERS

NTCIP BACKUP TIME (SECONDS)	
PORT 2 PRIORITY	
PORT 3A PRIORITY	
PORT 3B PRIORITY	
ETHERNET PRIORITY	

1-5-1 PORT 2 (TERMINAL)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
OMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-3 PORT 3A (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
ELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-7-1 ADMINISTRATION

SUPERVISOR ACCESS CODE	
ENABLE CRC CHECK OF DATA BASE	
CRC OF PROGRAM DATA BASE	
REQUEST DOWNLOAD OF PROGRAMMED DATA	

1-7-2 DISPLAY OPTIONS

KEY CLICK ENABLE	
BACKLIGHT ENABLE	

1-5-4. PORT 3B (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-5 ETHERNET PORT CONFIGURATION

IP ADDRESS					
ADDRESS MASK					
FTP SERVER ADDRESS					
DEFAULT GATEWAY ADDRESS					

1-6-1 ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/TE)	
3 CRITICAL RFE ERRORS IN 24 HOURS	
NON-CRITICAL RFE'S (DET/TEST)	
DETECTOR ERRORS	
COORDINATION ERRORS	
MMU FLASH FAULTS	
LOCAL FLASH FAULTS	
PREEMPT	
POWER ON/OFF	
LOW BATTERY	
ACCESS	
DATA CHANGE	
CONTROLLER DOWNLOAD	
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

1-8-1 LOGIC STATEMENT CONTROL

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-10										

1-8-1 LOGIC STATEMENT CONTROL

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR STATEMENTS

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				

LOGIC GATE NUMBER				
IF				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER	

IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER				
IF				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

2-1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN	7	20	7	10	7	20	7	10								
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN																
DELAYED GREEN																
WALK		7		7		7		7								
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE		25		30		25		30								
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION	3.5	5.5	3.5	3.5	3.5	5.5	3.5	3.5								
VEHICLE EXTENSION 2																
MAX1	20	55		35		55		35								
MAX2	20	60		40		60		40								
MAX3																
DYNAMIC MAX																
DYNAMIC MAX STEP																
YELLOW CHANGE	3.0	4.2		3.3		4.2		3.3								
RED CLRANCE	1.0	2.6		3.4		2.6		3.4								
RED MAX																
RED REVERT																
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN																
TIME BEFORE GAP REDUCTION																
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM																
MININIMUM GAP																

2-2 VEHICLE OVERLAP

OVERLAP A PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP C PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP B PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP D PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW				TRAILING RED		

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

ADVANCE GREEN		

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

OVERLAP E PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP G PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP F PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP H PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP I PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP K PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW		TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP J PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP L PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN		TRAILING YELLOW		TRAILING RED	

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

ADVANCE GREEN		

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

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP M PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP O PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP N PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

OVERLAP P PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																

TRAILING GREEN			TRAILING YELLOW			TRAILING RED	

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

ADVANCE GREEN		

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

2-3 PEDESTRIAN OVERLAP

PEDESTRIAN OVERLAP CONSISTS OF PHASES																
PEDESTRIAN OVERLAP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

2-4 GUARANTEED MINIMUM TIMES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN																
WALK																
PEDESTRIAN CLEARANCE																
YELLOW CHANGE																
RED CLEARANCE																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
MINIMUM GREEN																

2-5 START / FLASH DATA

POWER START																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
OVERLAP																
POWER START RED									FLASH TIME							

REMOTE (AUTOMATIC) FLASH																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ENTRY																
EXIT																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
EXIT																
EXIT REMOTE FLASH									MINIMUM AUTOMATIC FLASH							
MINIMUM RECALL									CYCLE THROUGH PHASES							

2-6-1 CONTROLLER OPTIONS

PEDESTRIAN CLEARANCE PROTECT	
UNIT RED REVERT	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
GUARANTEED PASSAGE																
NON-ACT I																
NON ACT II																
DUAL ENTRY																
PED RESERVICE																
REST IN WALK																
FLASHING WALK																
PED CLEAR > YELLOW																
PED CLEAR > ALL RED																
INIT GREEN + VEHICLE EXIT																

2-7 ACTUATED / PRE-TIMED MODE PHASES

ENABLE PRE-TIMED OPERATION	
FREE INPUT DISABLED PRE-TIMED	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PRE - TIMED																

COORDINATOR SUBMENU

3-1 COORDINATOR OPTIONS

MANUAL PATTERN	Auto		
INTERCONNECT SOURCE	TBC	INTERCONNECT FORMAT	
TRANSITION	Smooth	ECPI COORDINATION	Yes
OFFSET REFERENCE	Lead	DWELL / ADD TIME	
DELAY COORD WALK TO LOCAL ZERO	No	FORCE OFF	Float
FORCE OFF ADDED INITIAL GREEN	No	USE PED TIME FOR SMOOTH TRANSITION	No
PEDESTRIAN RECALL	No	PEDESTRIAN RESERVICE	Yes
ENABLE MANUAL SYNC INPUT		LOCAL ZERO OVERRIDE	No
RE-SYNC COUNT	No	MAX SELECT	MaxInh
MULTISYNC	No		

3-2 COORDINATOR PATTERN

COORDINATOR PATTERN	1		
CYCLE LENGTH (SECONDS)	130	SPLIT PATTERN	
OFFSET VALUE	60	SEQUENCE	
SPLITS IN	Per	OFFSETS IN . . .	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	1
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

	1	2	3	4	5			8
SPECIAL FUNCTION								

COORDINATOR PATTERN	2		
CYCLE LENGTH (SECONDS)	120	SPLIT PATTERN	
OFFSET VALUE	66	SEQUENCE	
SPLITS IN	Per	OFFSETS IN	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	2
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN	3		
CYCLE LENGTH (SECONDS)	130	SPLIT PATTERN	
OFFSET VALUE	75	SEQUENCE	
SPLITS IN	Per	OFFSETS IN	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	3
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN	4		
CYCLE LENGTH (SECONDS)	100	SPLIT PATTERN	
OFFSET VALUE	79		
SPLITS IN	Per	OFFSETS IN	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	4
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN	5		
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	5
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

Per
Per

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 SPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

	1	2	3	4	5			8	9	10	11		13		15	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	

	1	2	3	4
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				

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

3-3 SPLIT PATTERN

SPLIT PATTERN NUMBER	1															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	9		56		0		35		0		65		0		35	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER	2															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	10		52		0		38		0		62		0		38	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER	3															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	12		53		0		35		0		65		0		35	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER	4															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)		X				X										
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE	11		44		0		45		0		44		0		45	
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

3-3 SPLIT PATTERN (CONTINUED)

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

3-3 SPLIT PATTERN (CONTINUED

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORDINATED PHASE(S)																
PHASE	1		2		3		4		5		6		7		8	
SPLIT VALUE																
MODE																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
MODE																

3-4 AUTO PERMISSIVE MINIMUM GREEN TIME

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

3-5 SPLIT DEMAND

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

DEMAND	1	2
DETECTOR		
CALL TIME (SECONDS)		
CYCLE COUNT		

PREEMPTOR SUBMENU

4-1 PREEMPTOR

PREEMPTOR NUMBER	1		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PED CLEAR THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			
PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	2		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PED CLEAR THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/EXIT YELLOW/RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			
PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-2 LOW PRIORITY PREEMPTOR SELECTION

FILTERED INPUT	SOLID	PULSING
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	3		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	4		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	5		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	6		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	7		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	8		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER	9		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	10		
ACTIVE		NON-LOCK INPUT	
PREEMPTION OVERRIDE		INTERLOCK ENABLE	
DELAY TIME (SECONDS)		INHIBIT TIME (SECONDS)	
EXTEND INPUT (SECONDS)		MAX PRESENCE TIME (SECONDS)	
DURATION TIME (SECONDS)		TRACK CLEARANCE RESERVICE	
PED DARK		RESERVICE TIME	
AUTOMATIC FLASH HAS PRIORITY		RED CLEAR GOES GREEN	
TERMINATE OVERLAPS ASAP		PC THROUGH YELLOW	

RING	1	2	3	4
FREE DURING PREEMPTION				

	WALK	PED CLEAR	GREEN	YELLOW	RED
ENTERING MINIMUM TIME					
TRACK CLEARANCE TIME					
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED					

DWELL FLASH		FLASH EXIT COLOR	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																

PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			

PREEMPTOR ACTIVE OUTPUTS			
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL	
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT	

OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

TIME BASE SUBMENU

5-1 CLOCK/CALENDAR DATA

DATE SET:	
TIME SET:	
MANUAL ACTION PLAN	
SYNC REFERENCE TIME	
SYNC REFERENCE	
DAYLIGHT SAVINGS	
TIME RESET INPUT TIME SET	
STANDARD TIME FROM GMT	

5-2 SCHEDULE

SCHEDULE NUMBER	1
DAY PLAN NUMBER	1

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		x	x	x	x	x	

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	1
DAY PLAN NUMBER	2

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	x						x

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	1`9	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH						
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	

DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

DAY OF MONTH (DOM)										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	1`9	20	
21	22	23	24	25	26	27	28	29	30	
31										

5-3 DAY PLAN

DAY PLAN EVENT	1	DAY PLAN	1
ACTION PLAN	1	START TIME	06:00
DAY PLAN EVENT	2	DAY PLAN	1
ACTION PLAN	2	START TIME	10:00
DAY PLAN EVENT	3	DAY PLAN	1
ACTION PLAN	3	START TIME	15:15
DAY PLAN EVENT	4	DAY PLAN	1
ACTION PLAN	4	START TIME	19:00
DAY PLAN EVENT	5	DAY PLAN	1
ACTION PLAN	5	START TIME	22:00
DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	4	START TIME	07:00
DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	2	START TIME	10:00
DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	4	START TIME	19:00
DAY PLAN EVENT	1	DAY PLAN	2
ACTION PLAN	5	START TIME	22:00
DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	
DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	
DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	
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ACTION PLAN		START TIME	
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ACTION PLAN		START TIME	
DAY PLAN EVENT		DAY PLAN	
ACTION PLAN		START TIME	

5-4 ACTION PLAN

ACTION PLAN EVENT	1

PATTERN	1	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	2

PATTERN	2	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	3

PATTERN	3	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	4

PATTERN	4	SYSTEM OVERRIDE	
VEHICLE DETECTOR PLAN		DETECTOR LOG	
FLASH			
RED REST		VEHICLE DET DIAGNOSTIC PLAN	
CONTROLLER SEQUENCE		PED DET DIAGNOSTIC PLAN	
TIMING PLAN		DIMMING ENABLE	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN	5															
PATTERN				5			SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN																
PATTERN							SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN																
PATTERN							SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

ACTION PLAN																
PATTERN							SYSTEM OVERRIDE									
VEHICLE DETECTOR PLAN							DETECTOR LOG									
FLASH																
RED REST							VEHICLE DET DIAGNOSTIC PLAN									
CONTROLLER SEQUENCE							PED DET DIAGNOSTIC PLAN									
TIMING PLAN							DIMMING ENABLE									

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION									(1-8)							
AUX FUNCTION				(1-3)												

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 91-100										

5-5 EXCEPTION DAY PROGRAM

EXECEPTION DAY	FLOAT / FIXED	MON / MON	DOW / DOM	WOM / YEAR	DAY PLAN
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
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30					
31					
32					
33					
34					
35					
36					

6-1. DETECTOR TYPE AND TS SELECT

DET	TYPE	TS1 DETECTOR
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
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14		
15		
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27		
28		
29		
30		
31		
32		

DET	TYPE	TS1 DETECTOR
33		
34		
35		
36		
37		
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46		
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63		
64		

6-2 VEHICLE DETECTOR SETUP

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

VEHICLE PLAN NUMBER			
DETECTOR NUMBER			
ASSIGNED PHASE		ADDED INITIAL OPTION	
SWITCH PHASE		CALL DETECTOR OPTION	
EXTEND TIME		PASSAGE DETECTOR OPTION	
DELAY TIME		QUEUE DETECTOR OPTION	
QUEUE LIMIT		NTCIP OCCUPANCY LOG	
FAIL TIME		NTCIP VOLUME LOG	
FAIL CALL DELAY		ECPI LOG	
YELLOW LOCK		RED LOCK	

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

6-3 PHASE DETECTOR OPTIONS

PHASE DETECTOR OPTION PLAN NUMBER	1															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER	2															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER	3															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER	4															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

6-4 PEDESTRIAN AND SYSTEM DETECTOR OPTIONS

	PHASE PEDESTRIAN DETECTOR							
	1	2	3	4	5	6	7	8
PED DET INPUT								
	9	10	11	12	13	14	15	16
PED DET INPUT								

	LOCAL SYSTEM DETECTOR							
	1	2	3	4	5	6	7	8
VEH DET INPUT								
	9	10	11	12	13	14	15	16
VEH DET INPUT								

6-5 LOG – SPEED DETECTOR SET UP

NTCIP LOG PERIOD								
ECPI LOG PERIOD								
LENGTH UNIT								
SPEED DETECTOR	1	2	3	4	5	6	7	8
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								
SPEED DETECTOR	9	10	11	12	13	14	15	16
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								

6-6 VEHICLE DETECTOR DIAGNOSTICS

VEHICLE DIAGNOSTIC PLAN NUMBER 1

DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
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23				
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25				
26				
27				
28				
29				
30				
31				
32				

DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
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59				
60				
61				
62				
63				
64				

VEHICLE DIAGNOSTIC PLAN NUMBER 2

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

DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
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51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				

6-6 VEHICLE DETECTOR DIAGNOSTICS (CONTINUED)

VEHICLE DIAGNOSTIC PLAN NUMBER 3

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

VEHICLE DIAGNOSTIC PLAN NUMBER 4

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

6-7 PEDESTRIAN DETECTOR DIAGNOSTICS

PED DIAGNOSTIC PLAN NUMBER				1
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PED DIAGNOSTIC PLAN NUMBER				2
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PED DIAGNOSTIC PLAN NUMBER				3
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PED DIAGNOSTIC PLAN NUMBER				4
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
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11				
12				
13				
14				
15				
16				

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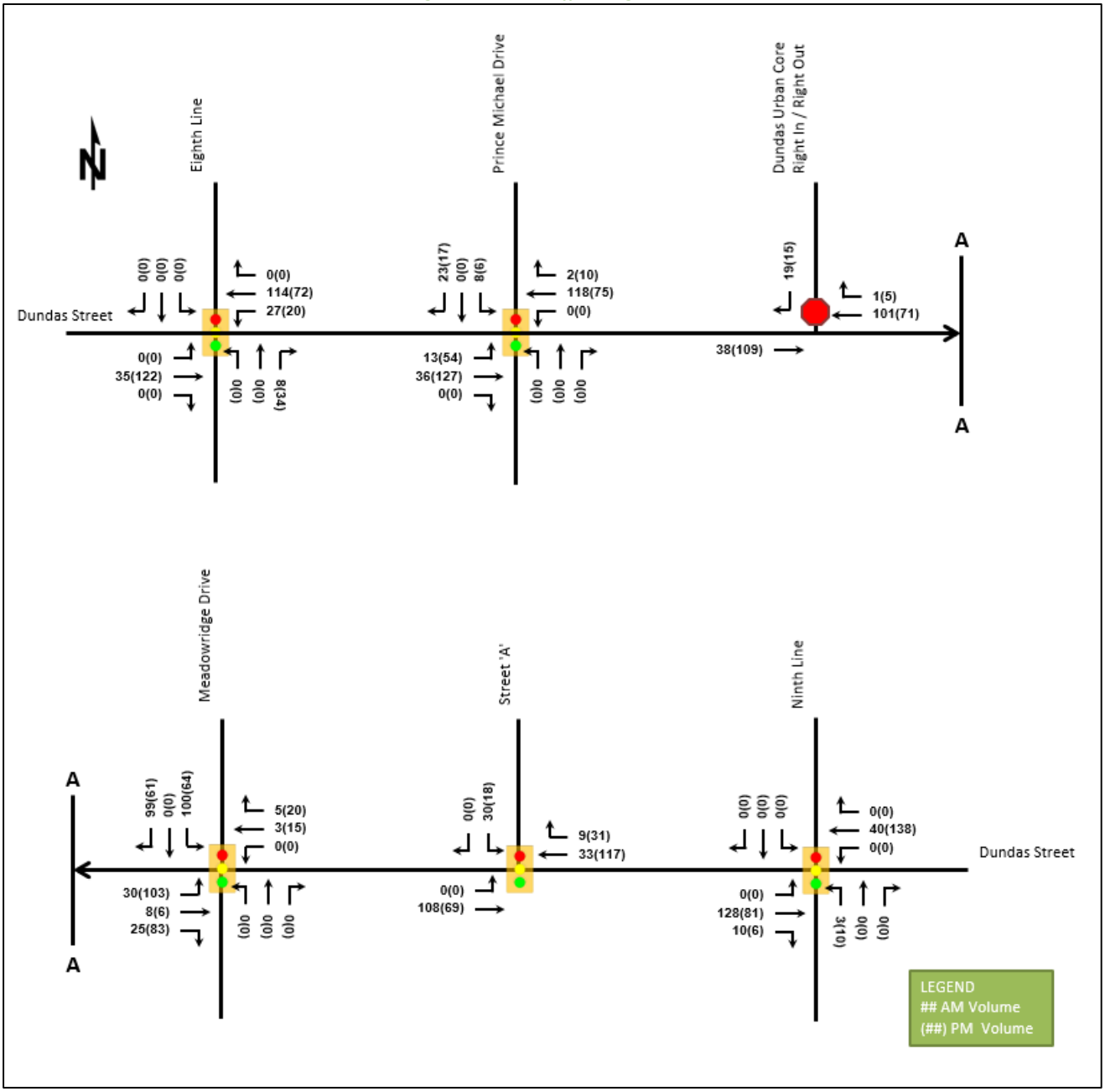
Appendix C

Background Development Details

Figure 17: 2024 Traffic Assignment



Capoak Inc. and Redoak G & A Inc.
Proposed Residential Development

Traffic Impact Study

GHD | 6705 Millcreek Drive Mississauga Ontario L5N 5M4 Canada

11148755 | 800 | Report No 1 | February 16, 2018

Table 2 Site Trip Distribution

Trip Orientation	Trip Distribution
North	25%
South	10%
East	45%
West	20%
Total	**100%**

5.3 Site Trips Volumes

The estimated site trips generated by the proposed development for the 2% transit modal split scenario and the 10% transit modal split scenario, as assigned to the nearby road network for the weekday peak hours, is shown in **Figure 5** and **Figure 6,** respectively.

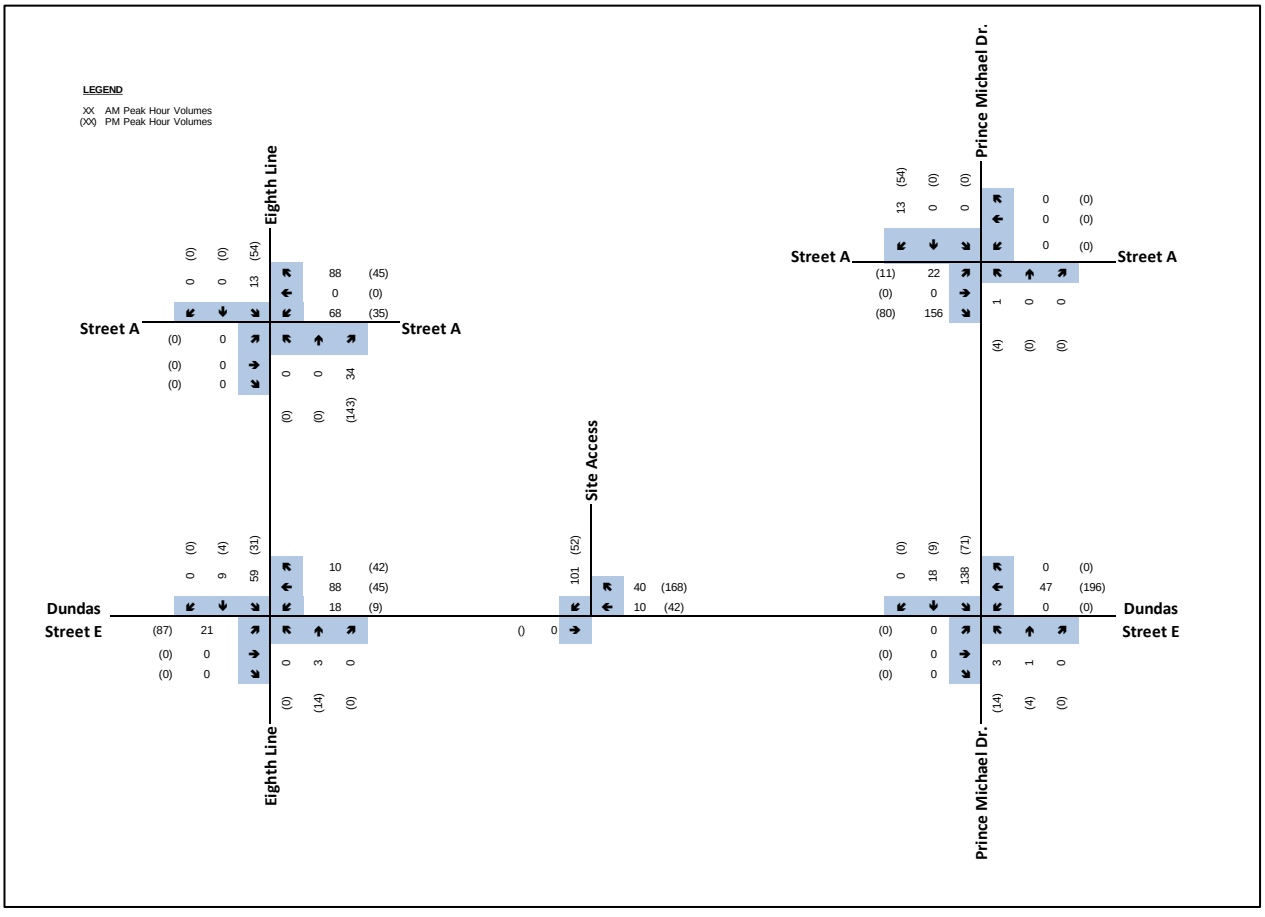


Figure 5 Site Trips with 2% Transit Modal Split

Dunoak and Bressa Draft Plans
Proposed Residential Developments

Traffic Impact Study

GHD | 6705 Millcreek Drive Mississauga Ontario L5N 5M4 Canada

11194035 | 800 | Report No 2 | July 2020

Table 3 Site Trip Distribution

To/From	Road	Distribution	Inbound Route	Outbound Route
South	Ninth Line	20%	Northbound left-turn from Ninth Line onto Dundas Street E	Eastbound right-turn from Dundas Street E onto Ninth Line
East	Dundas Street East	37%	Westbound right-turn into given street from Dundas Street E	Southbound left-turn from given street onto Dundas Street E
West	Dundas Street East	43%	Eastbound left-turn into given street from Dundas Street E	Southbound right-turn from given street onto Dundas Street E
Total		**100%**		

The estimated site trips generated by the proposed development assigned to the adjacent road network for the weekday a.m. and p.m. peak hours are shown below in **Figure 8**.

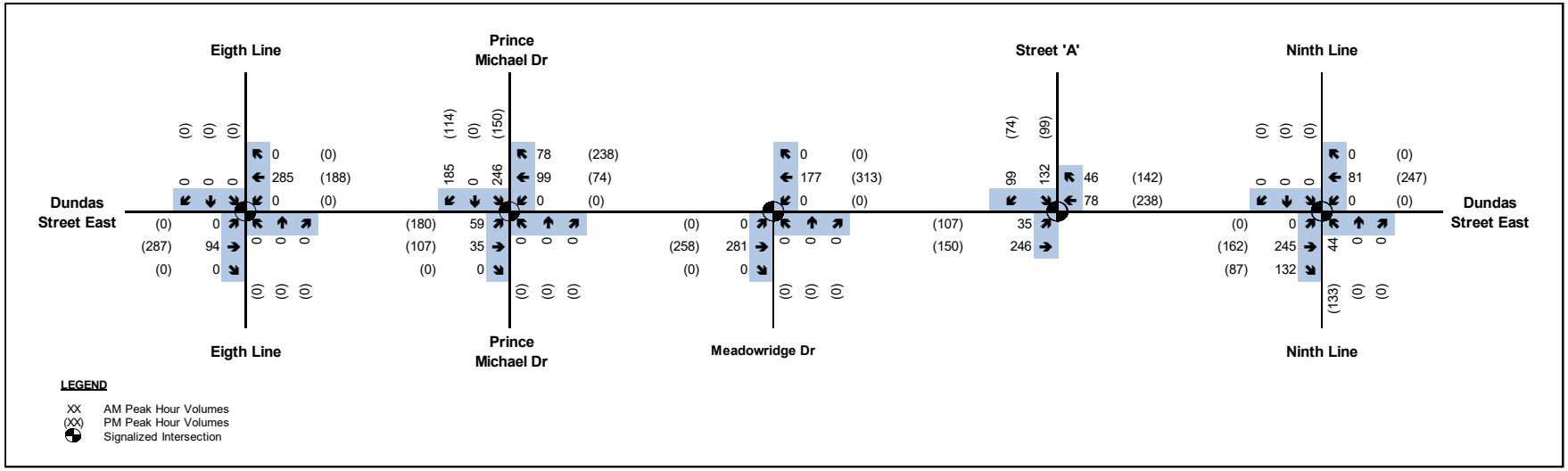
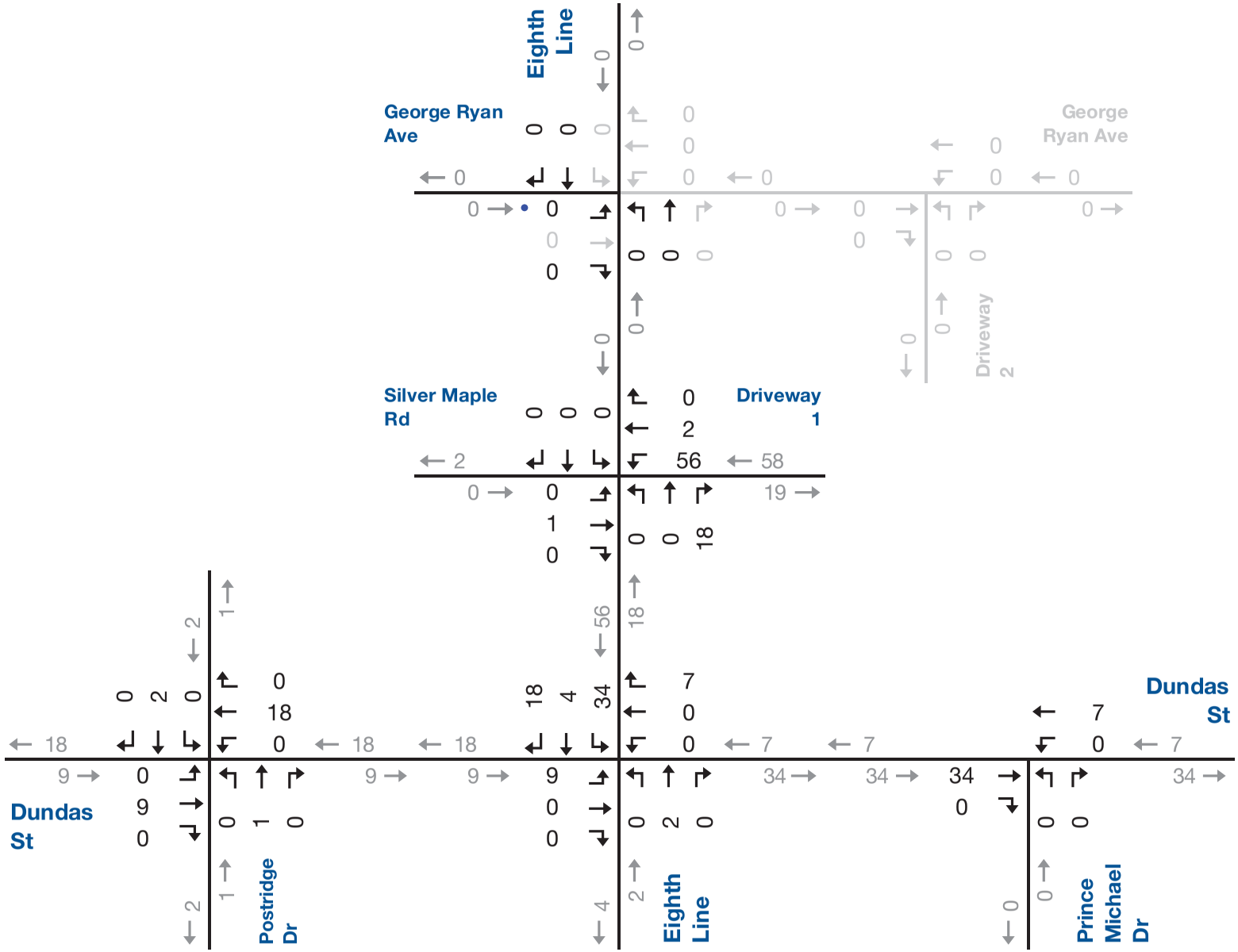
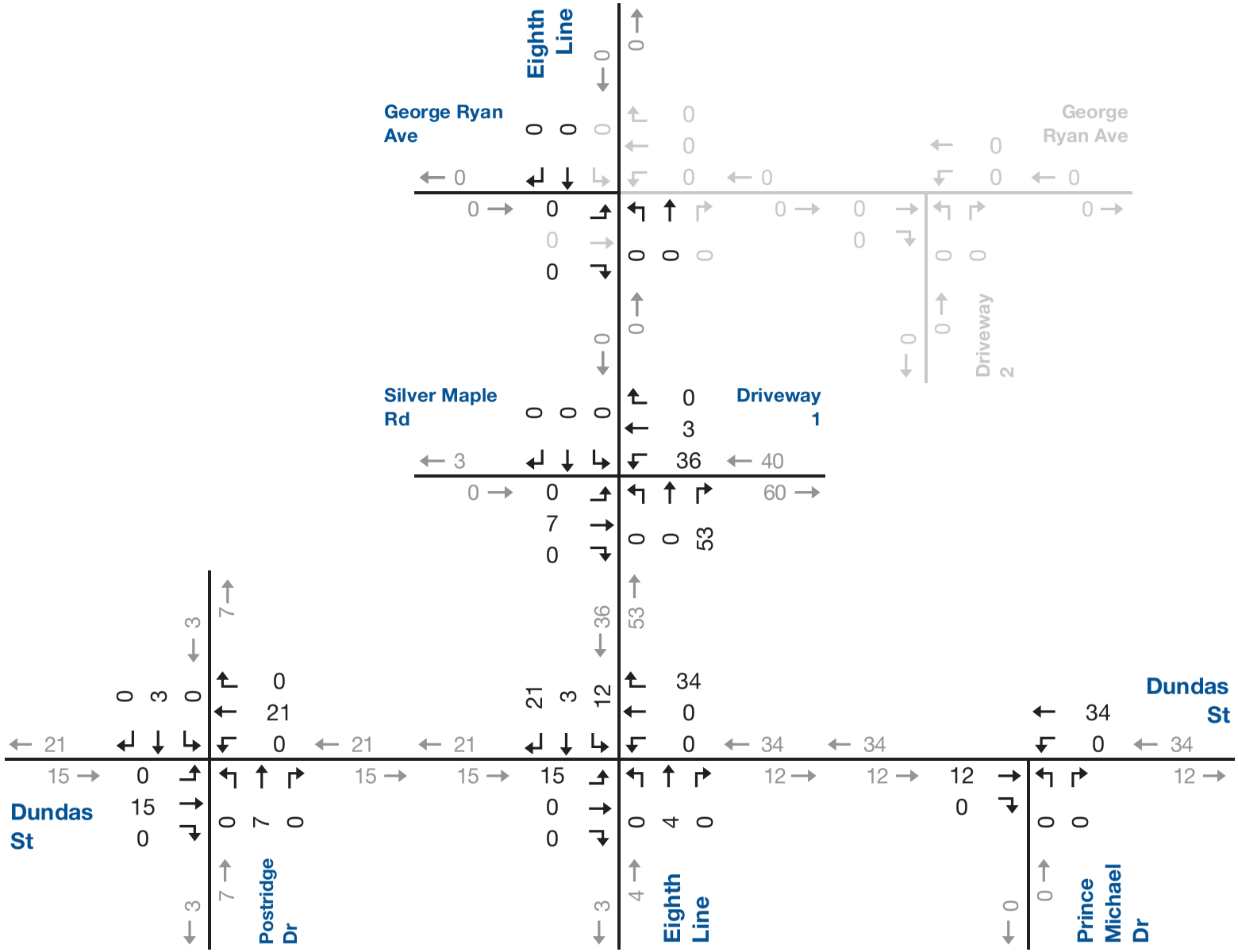


Figure 8 Site Traffic



paradigm TRANSPORTATION SOLUTIONS LIMITED

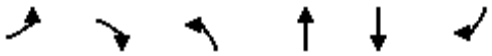
Scenario 2 AM Peak Hour Site Generated Trip Assignment



Scenario 2 PM Peak Hour Site Generated Trip Assignment

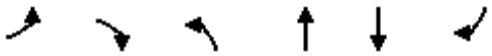
Appendix D

Synchro Reports



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	24	7	60	209	0
Future Volume (vph)	0	24	7	60	209	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	0.865					
Flt Protected				0.995		
Satd. Flow (prot)	1629	0	0	1874	1883	0
Flt Permitted				0.995		
Satd. Flow (perm)	1629	0	0	1874	1883	0
Link Speed (k/h)	48			48	50	
Link Distance (m)	206.1			292.3	126.9	
Travel Time (s)	15.5			21.9	9.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	24	7	60	209	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	0	67	209	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	

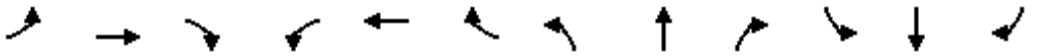
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	24	7	60	209	0
Future Volume (Veh/h)	0	24	7	60	209	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	24	7	60	209	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)				292		
pX, platoon unblocked						
vC, conflicting volume	283	209	209			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	283	209	209			
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	97	99			
cM capacity (veh/h)	703	831	1362			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	24	67	209
Volume Left	0	7	0
Volume Right	24	0	0
cSH	831	1362	1700
Volume to Capacity	0.03	0.01	0.12
Queue Length 95th (m)	0.7	0.1	0.0
Control Delay (s)	9.5	0.8	0.0
Lane LOS	A	A	
Approach Delay (s)	9.5	0.8	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		

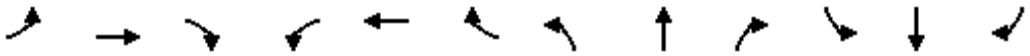


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	2242	119	63	1153	21	161	20	160	97	61	26
Future Volume (vph)	11	2242	119	63	1153	21	161	20	160	97	61	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	97.0		52.0	150.0		75.0	26.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	5193	1585	1825	4812	1633	1825	1830	1601	1825	1883	1633
Flt Permitted	0.181			0.060			0.717			0.744		
Satd. Flow (perm)	319	5193	1585	115	4812	1633	1377	1830	1601	1429	1883	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67			67			120			67
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		651.2			600.6			206.2			292.3	
Travel Time (s)		33.5			30.9			14.8			21.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	1%	3%	0%	9%	0%	0%	5%	2%	0%	2%	0%
Adj. Flow (vph)	11	2242	119	63	1153	21	161	20	160	97	61	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	2242	119	63	1153	21	161	20	160	97	61	26
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	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	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	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	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	25.0	25.0	11.5	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	11.7	70.2	70.2	11.7	70.2	70.2	48.1	48.1	48.1	48.1	48.1	48.1
Total Split (%)	9.0%	54.0%	54.0%	9.0%	54.0%	54.0%	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%
Maximum Green (s)	7.7	63.2	63.2	7.7	63.2	63.2	41.1	41.1	41.1	41.1	41.1	41.1
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	3.7	3.7	1.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-2.0	-2.0	-3.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	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	3.0	3.0
Recall Mode	Max	C-Min	C-Min	Max	C-Min	C-Min	Min	Min	Min	Min	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	100.2	65.2	65.2	100.2	65.2	65.2	23.8	23.8	23.8	23.8	23.8	23.8
Actuated g/C Ratio	0.77	0.50	0.50	0.77	0.50	0.50	0.18	0.18	0.18	0.18	0.18	0.18
v/c Ratio	0.02	0.86	0.14	0.13	0.48	0.02	0.64	0.06	0.41	0.37	0.18	0.07
Control Delay	4.6	32.8	8.5	10.9	19.3	0.0	59.8	40.9	15.9	48.9	43.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.6	32.8	8.5	10.9	19.3	0.0	59.8	40.9	15.9	48.9	43.6	0.4
LOS	A	C	A	B	B	A	E	D	B	D	D	A
Approach Delay		31.4			18.5			38.1			40.3	
Approach LOS		C			B			D			D	

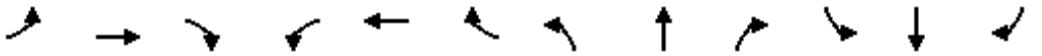
Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 23 (18%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 28.5		Intersection LOS: C	
Intersection Capacity Utilization 75.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Eighth Line & Dundas St E



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	11	2242	119	63	1153	21	161	20	160	97	61	26
v/c Ratio	0.02	0.86	0.14	0.13	0.48	0.02	0.64	0.06	0.41	0.37	0.18	0.07
Control Delay	4.6	32.8	8.5	10.9	19.3	0.0	59.8	40.9	15.9	48.9	43.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.6	32.8	8.5	10.9	19.3	0.0	59.8	40.9	15.9	48.9	43.6	0.4
Queue Length 50th (m)	0.5	179.5	6.7	2.9	57.8	0.0	38.6	4.3	8.7	22.1	13.4	0.0
Queue Length 95th (m)	2.5	201.0	16.9	12.8	65.6	0.0	57.2	10.5	25.9	35.8	23.9	0.0
Internal Link Dist (m)		627.2			576.6			182.2			268.3	
Turn Bay Length (m)	97.0		52.0	150.0		75.0	26.0			15.0		15.0
Base Capacity (vph)	568	2604	828	495	2413	852	467	620	622	484	638	598
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.86	0.14	0.13	0.48	0.02	0.34	0.03	0.26	0.20	0.10	0.04

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	2242	119	63	1153	21	161	20	160	97	61	26
Future Volume (vph)	11	2242	119	63	1153	21	161	20	160	97	61	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1674	5193	1585	1825	4812	1633	1825	1830	1601	1825	1883	1633
Flt Permitted	0.18	1.00	1.00	0.06	1.00	1.00	0.72	1.00	1.00	0.74	1.00	1.00
Satd. Flow (perm)	320	5193	1585	116	4812	1633	1378	1830	1601	1430	1883	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	11	2242	119	63	1153	21	161	20	160	97	61	26
RTOR Reduction (vph)	0	0	33	0	0	10	0	0	98	0	0	21
Lane Group Flow (vph)	11	2242	86	63	1153	11	161	20	62	97	61	5
Heavy Vehicles (%)	9%	1%	3%	0%	9%	0%	0%	5%	2%	0%	2%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	91.2	63.2	63.2	91.2	63.2	63.2	20.8	20.8	20.8	20.8	20.8	20.8
Effective Green, g (s)	97.2	65.2	65.2	97.2	65.2	65.2	23.8	23.8	23.8	23.8	23.8	23.8
Actuated g/C Ratio	0.75	0.50	0.50	0.75	0.50	0.50	0.18	0.18	0.18	0.18	0.18	0.18
Clearance Time (s)	4.0	7.0	7.0	4.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	562	2604	794	494	2413	819	252	335	293	261	344	298
v/s Ratio Prot	0.00	c0.43		c0.03	0.24			0.01			0.03	
v/s Ratio Perm	0.01		0.05	0.06		0.01	c0.12		0.04	0.07		0.00
v/c Ratio	0.02	0.86	0.11	0.13	0.48	0.01	0.64	0.06	0.21	0.37	0.18	0.02
Uniform Delay, d1	5.0	28.4	17.1	15.2	21.2	16.3	49.1	43.9	45.1	46.5	44.8	43.5
Progression Factor	1.00	1.00	1.00	2.13	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	4.0	0.3	0.5	0.7	0.0	5.2	0.1	0.4	0.9	0.2	0.0
Delay (s)	5.1	32.4	17.3	32.8	19.1	16.3	54.4	43.9	45.5	47.4	45.1	43.5
Level of Service	A	C	B	C	B	B	D	D	D	D	D	D
Approach Delay (s)		31.6			19.8			49.6			46.1	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2407	113	62	1094	113	181
Future Volume (vph)	2407	113	62	1094	113	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		55.0	125.0		50.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			2.5		2.5	
Lane Util. Factor	0.91	1.00	1.00	0.91	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	5193	1570	1825	4725	1807	1617
Flt Permitted			0.044		0.950	
Satd. Flow (perm)	5193	1570	85	4725	1807	1617
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		57				169
Link Speed (k/h)	70			70	50	
Link Distance (m)	600.6			587.4	203.4	
Travel Time (s)	30.9			30.2	14.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	4%	0%	11%	1%	1%
Adj. Flow (vph)	2407	113	62	1094	113	181
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2407	113	62	1094	113	181
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
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	30.5	6.1	6.1	30.5	6.1	6.1
Trailing Detector (m)	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
Detector 1 Size(m)	1.8	6.1	6.1	1.8	6.1	6.1
Detector 1 Type	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
Detector 1 Queue (s)	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
Detector 2 Position(m)	28.7			28.7		
Detector 2 Size(m)	1.8			1.8		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		2	6		8	8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	25.2	25.2	11.5	25.2	22.5	22.5
Total Split (s)	68.9	68.9	15.6	84.5	45.5	45.5
Total Split (%)	53.0%	53.0%	12.0%	65.0%	35.0%	35.0%
Maximum Green (s)	63.7	63.7	11.6	79.3	41.2	41.2
Yellow Time (s)	4.2	4.2	3.0	4.2	3.3	3.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.2	-0.2	-3.0	-0.2	-3.3	0.0
Total Lost Time (s)	5.0	5.0	1.0	5.0	1.0	4.3
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	5.5	5.5	3.5	5.5	3.5	3.5
Recall Mode	C-Max	C-Max	None	C-Max	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	97.3	97.3	110.5	106.5	17.5	14.2
Actuated g/C Ratio	0.75	0.75	0.85	0.82	0.13	0.11
v/c Ratio	0.62	0.10	0.30	0.28	0.47	0.55
Control Delay	2.4	0.4	10.6	3.2	57.5	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.4	0.4	10.6	3.2	57.5	15.9
LOS	A	A	B	A	E	B
Approach Delay	2.3			3.6	31.9	
Approach LOS	A			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 60 (46%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 4.9		Intersection LOS: A	
Intersection Capacity Utilization 67.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Prince Michael Dr & Dundas St E

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2407	113	62	1094	113	181
v/c Ratio	0.62	0.10	0.30	0.28	0.47	0.55
Control Delay	2.4	0.4	10.6	3.2	57.5	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.4	0.4	10.6	3.2	57.5	15.9
Queue Length 50th (m)	16.5	0.3	1.8	19.0	27.2	2.8
Queue Length 95th (m)	21.3	m0.7	11.7	29.3	44.2	23.4
Internal Link Dist (m)	576.6			563.4	179.4	
Turn Bay Length (m)		55.0	125.0		50.0	
Base Capacity (vph)	3886	1189	267	3869	618	627
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.10	0.23	0.28	0.18	0.29

Intersection Summary

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2407	113	62	1094	113	181
Future Volume (vph)	2407	113	62	1094	113	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	1.0	5.0	1.0	4.3
Lane Util. Factor	0.91	1.00	1.00	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5193	1570	1825	4725	1807	1617
Flt Permitted	1.00	1.00	0.04	1.00	0.95	1.00
Satd. Flow (perm)	5193	1570	84	4725	1807	1617
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2407	113	62	1094	113	181
RTOR Reduction (vph)	0	15	0	0	0	151
Lane Group Flow (vph)	2407	98	62	1094	113	30
Heavy Vehicles (%)	1%	4%	0%	11%	1%	1%
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		
Permitted Phases		2	6		8	8
Actuated Green, G (s)	96.3	96.3	106.3	106.3	14.2	14.2
Effective Green, g (s)	96.5	96.5	109.3	106.5	17.5	14.2
Actuated g/C Ratio	0.74	0.74	0.84	0.82	0.13	0.11
Clearance Time (s)	5.2	5.2	4.0	5.2	4.3	4.3
Vehicle Extension (s)	5.5	5.5	3.5	5.5	3.5	3.5
Lane Grp Cap (vph)	3854	1165	191	3870	243	176
v/s Ratio Prot	c0.46		c0.02	0.23		
v/s Ratio Perm		0.06	0.25		c0.06	0.02
v/c Ratio	0.62	0.08	0.32	0.28	0.47	0.17
Uniform Delay, d1	8.0	4.6	8.2	2.8	51.9	52.6
Progression Factor	0.23	0.11	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	1.2	0.2	1.7	0.6
Delay (s)	2.3	0.6	9.4	2.9	53.6	53.1
Level of Service	A	A	A	A	D	D
Approach Delay (s)	2.2			3.3	53.3	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.3
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2550	51	94	1166	53	281
Future Volume (vph)	2550	51	94	1166	53	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		60.0	135.0		25.0	0.0
Storage Lanes		1	1		1	2
Taper Length (m)			2.5		2.5	
Lane Util. Factor	0.91	1.00	1.00	0.91	1.00	0.88
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	5193	1601	1807	4812	1789	2874
Flt Permitted			0.059		0.950	
Satd. Flow (perm)	5193	1601	112	4812	1789	2874
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		27				260
Link Speed (k/h)	70			70	50	
Link Distance (m)	587.4			404.7	240.3	
Travel Time (s)	30.2			20.8	17.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	2%	1%	9%	2%	0%
Adj. Flow (vph)	2550	51	94	1166	53	281
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2550	51	94	1166	53	281
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
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	30.5	6.1	6.1	30.5	6.1	6.1
Trailing Detector (m)	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
Detector 1 Size(m)	1.8	6.1	6.1	1.8	6.1	6.1
Detector 1 Type	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
Detector 1 Queue (s)	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
Detector 2 Position(m)	28.7			28.7		
Detector 2 Size(m)	1.8			1.8		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		2	6		8	8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	26.7	26.7	11.0	26.7	25.0	25.0
Total Split (s)	70.0	70.0	14.0	85.0	46.0	46.0
Total Split (%)	53.4%	53.4%	10.7%	64.9%	35.1%	35.1%
Maximum Green (s)	63.3	63.3	10.0	78.3	39.1	39.1
Yellow Time (s)	4.2	4.2	3.0	4.2	3.3	3.3
All-Red Time (s)	2.5	2.5	1.0	2.5	3.6	3.6
Lost Time Adjust (s)	-1.7	-1.7	-3.0	-1.7	-1.9	-1.9
Total Lost Time (s)	5.0	5.0	1.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	Max	C-Max	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	66.0	66.0	112.4	108.4	12.6	12.6
Actuated g/C Ratio	0.50	0.50	0.86	0.83	0.10	0.10
v/c Ratio	0.97	0.06	0.15	0.29	0.31	0.55
Control Delay	44.4	9.6	5.8	2.8	59.9	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.4	9.6	5.8	2.8	59.9	12.8
LOS	D	A	A	A	E	B
Approach Delay	43.8			3.0	20.3	
Approach LOS	D			A	C	

Intersection Summary	
Area Type:	Other
Cycle Length: 131	
Actuated Cycle Length: 131	
Offset: 70 (53%), Referenced to phase 2:EBT and 6:WBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 29.7	Intersection LOS: C
Intersection Capacity Utilization 75.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 4: Meadowridge Dr & Dundas St E

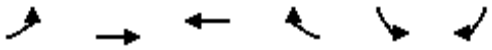
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2550	51	94	1166	53	281
v/c Ratio	0.97	0.06	0.15	0.29	0.31	0.55
Control Delay	44.4	9.6	5.8	2.8	59.9	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.4	9.6	5.8	2.8	59.9	12.8
Queue Length 50th (m)	228.8	3.0	2.5	18.9	13.1	2.8
Queue Length 95th (m)	#270.9	9.8	13.3	26.1	25.7	16.9
Internal Link Dist (m)	563.4			380.7	216.3	
Turn Bay Length (m)		60.0	135.0		25.0	
Base Capacity (vph)	2616	820	631	3981	559	1078
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.06	0.15	0.29	0.09	0.26

Intersection Summary

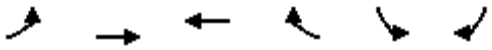
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2550	51	94	1166	53	281
Future Volume (vph)	2550	51	94	1166	53	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	1.0	5.0	5.0	5.0
Lane Util. Factor	0.91	1.00	1.00	0.91	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5193	1601	1807	4812	1789	2874
Flt Permitted	1.00	1.00	0.06	1.00	0.95	1.00
Satd. Flow (perm)	5193	1601	111	4812	1789	2874
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2550	51	94	1166	53	281
RTOR Reduction (vph)	0	13	0	0	0	235
Lane Group Flow (vph)	2550	38	94	1166	53	46
Heavy Vehicles (%)	1%	2%	1%	9%	2%	0%
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		
Permitted Phases		2	6		8	8
Actuated Green, G (s)	64.3	64.3	106.7	106.7	10.7	10.7
Effective Green, g (s)	66.0	66.0	109.7	108.4	12.6	12.6
Actuated g/C Ratio	0.50	0.50	0.84	0.83	0.10	0.10
Clearance Time (s)	6.7	6.7	4.0	6.7	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2616	806	628	3981	172	276
v/s Ratio Prot	c0.49		0.05	c0.24		
v/s Ratio Perm		0.02	0.08		c0.03	0.02
v/c Ratio	0.97	0.05	0.15	0.29	0.31	0.17
Uniform Delay, d1	31.7	16.5	18.4	2.6	55.1	54.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.6	0.1	0.5	0.2	1.0	0.3
Delay (s)	44.3	16.6	18.9	2.8	56.2	54.7
Level of Service	D	B	B	A	E	D
Approach Delay (s)	43.7			4.0	54.9	
Approach LOS	D			A	D	

Intersection Summary			
HCM 2000 Control Delay	32.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	131.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



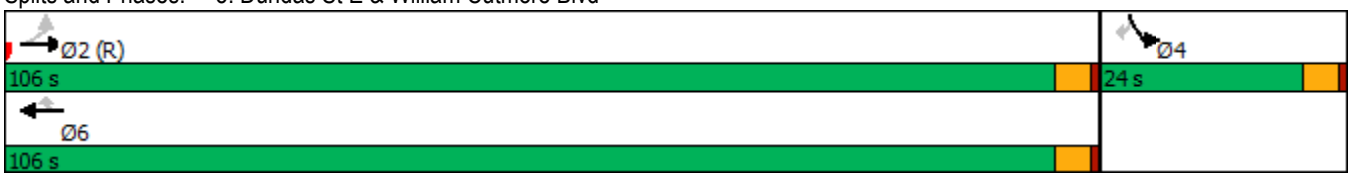
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	26	2805	1200	46	131	74
Future Volume (vph)	26	2805	1200	46	131	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	80.0			70.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	75.0				2.5	
Lane Util. Factor	1.00	0.91	0.91	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1789	5142	5142	1601	1789	1601
Flt Permitted	0.212				0.950	
Satd. Flow (perm)	399	5142	5142	1601	1789	1601
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				46		74
Link Speed (k/h)		70	70		50	
Link Distance (m)		404.7	451.7		165.6	
Travel Time (s)		20.8	23.2		11.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	2805	1200	46	131	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	26	2805	1200	46	131	74
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	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
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1
Trailing Detector (m)	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
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1
Detector 1 Type	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
Detector 1 Queue (s)	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
Detector 2 Position(m)		28.7	28.7			
Detector 2 Size(m)		1.8	1.8			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4

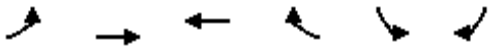


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	106.0	106.0	106.0	106.0	24.0	24.0
Total Split (%)	81.5%	81.5%	81.5%	81.5%	18.5%	18.5%
Maximum Green (s)	101.5	101.5	101.5	101.5	19.5	19.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	101.5	101.5	101.5	101.5	19.5	19.5
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.15	0.15
v/c Ratio	0.08	0.70	0.30	0.04	0.49	0.24
Control Delay	4.0	8.0	2.4	0.4	57.6	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.0	8.0	2.4	0.4	57.6	12.6
LOS	A	A	A	A	E	B
Approach Delay		8.0	2.3		41.4	
Approach LOS		A	A		D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 8.0		Intersection LOS: A	
Intersection Capacity Utilization 69.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 5: Dundas St E & William Cutmore Blvd

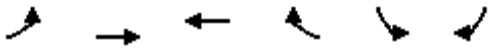




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	26	2805	1200	46	131	74
v/c Ratio	0.08	0.70	0.30	0.04	0.49	0.24
Control Delay	4.0	8.0	2.4	0.4	57.6	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.0	8.0	2.4	0.4	57.6	12.6
Queue Length 50th (m)	1.3	107.4	12.6	0.3	31.2	0.0
Queue Length 95th (m)	3.6	119.3	16.7	m0.2	51.6	13.5
Internal Link Dist (m)		380.7	427.7		141.6	
Turn Bay Length (m)	80.0			70.0		
Base Capacity (vph)	311	4014	4014	1260	268	303
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.70	0.30	0.04	0.49	0.24

Intersection Summary

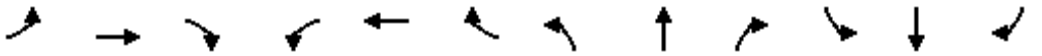
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	26	2805	1200	46	131	74
Future Volume (vph)	26	2805	1200	46	131	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.91	0.91	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1789	5142	5142	1601	1789	1601
Flt Permitted	0.21	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	400	5142	5142	1601	1789	1601
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	2805	1200	46	131	74
RTOR Reduction (vph)	0	0	0	10	0	63
Lane Group Flow (vph)	26	2805	1200	36	131	11
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	101.5	101.5	101.5	101.5	19.5	19.5
Effective Green, g (s)	101.5	101.5	101.5	101.5	19.5	19.5
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.15	0.15
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	312	4014	4014	1250	268	240
v/s Ratio Prot		c0.55	0.23		c0.07	
v/s Ratio Perm	0.07			0.02		0.01
v/c Ratio	0.08	0.70	0.30	0.03	0.49	0.05
Uniform Delay, d1	3.3	6.9	4.1	3.2	50.7	47.3
Progression Factor	1.00	1.00	0.55	0.44	1.00	1.00
Incremental Delay, d2	0.5	1.0	0.2	0.0	6.3	0.4
Delay (s)	3.9	7.9	2.4	1.4	56.9	47.7
Level of Service	A	A	A	A	E	D
Approach Delay (s)		7.9	2.4		53.6	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

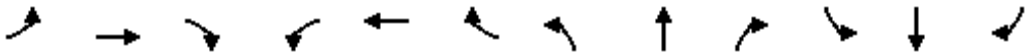


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	2350	378	127	942	129	199	332	162	193	551	103
Future Volume (vph)	230	2350	378	127	942	129	199	332	162	193	551	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	222.0		55.0	230.0		65.0	130.0		90.0	115.0		65.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	5193	1633	1789	4812	1633	1630	3579	1585	1825	3650	1633
Flt Permitted	0.239			0.062			0.211			0.432		
Satd. Flow (perm)	459	5193	1633	117	4812	1633	362	3579	1585	830	3650	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			197			130			160			128
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		451.7			295.5			522.7			348.2	
Travel Time (s)		23.2			15.2			37.6			25.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	1%	0%	2%	9%	0%	12%	2%	3%	0%	0%	0%
Adj. Flow (vph)	230	2350	378	127	942	129	199	332	162	193	551	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	230	2350	378	127	942	129	199	332	162	193	551	103
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	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	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	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	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	12.0	45.3	45.3	11.0	45.3	45.3	11.0	47.5	47.5	11.0	47.5	47.5
Total Split (s)	20.0	69.0	69.0	12.0	61.0	61.0	14.0	35.0	35.0	14.0	35.0	35.0
Total Split (%)	15.4%	53.1%	53.1%	9.2%	46.9%	46.9%	10.8%	26.9%	26.9%	10.8%	26.9%	26.9%
Maximum Green (s)	16.0	62.7	62.7	8.0	54.7	54.7	10.0	28.5	28.5	10.0	28.5	28.5
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	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	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0		34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	83.3	67.1	67.1	78.2	62.9	62.9	43.7	26.7	26.7	43.7	26.7	26.7
Actuated g/C Ratio	0.64	0.52	0.52	0.60	0.48	0.48	0.34	0.21	0.21	0.34	0.21	0.21
v/c Ratio	0.51	0.88	0.40	0.59	0.40	0.15	0.80	0.45	0.36	0.51	0.73	0.24
Control Delay	13.8	26.0	8.5	35.2	23.0	3.9	56.2	46.8	8.6	35.8	54.4	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.8	26.0	8.5	35.2	23.0	3.9	56.2	46.8	8.6	35.8	54.4	4.8
LOS	B	C	A	D	C	A	E	D	A	D	D	A
Approach Delay		22.9			22.3			40.6			44.1	
Approach LOS		C			C			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 12 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 28.0		Intersection LOS: C	
Intersection Capacity Utilization 93.7%		ICU Level of Service F	
Analysis Period (min) 15			

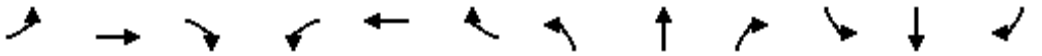
Splits and Phases: 6: Ninth Line & Dundas St E



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	230	2350	378	127	942	129	199	332	162	193	551	103
v/c Ratio	0.51	0.88	0.40	0.59	0.40	0.15	0.80	0.45	0.36	0.51	0.73	0.24
Control Delay	13.8	26.0	8.5	35.2	23.0	3.9	56.2	46.8	8.6	35.8	54.4	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.8	26.0	8.5	35.2	23.0	3.9	56.2	46.8	8.6	35.8	54.4	4.8
Queue Length 50th (m)	22.1	140.9	19.7	14.6	56.4	0.0	37.4	39.1	0.4	35.6	69.2	0.0
Queue Length 95th (m)	37.5	162.3	33.3	37.9	73.8	11.1	#59.4	52.5	17.8	53.6	87.1	9.0
Internal Link Dist (m)		427.7			271.5			498.7			324.2	
Turn Bay Length (m)	222.0		55.0	230.0		65.0	130.0		90.0	115.0		65.0
Base Capacity (vph)	493	2678	937	217	2329	857	248	825	488	378	842	475
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.88	0.40	0.59	0.40	0.15	0.80	0.40	0.33	0.51	0.65	0.22

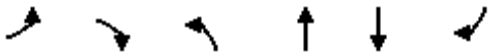
Intersection Summary

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



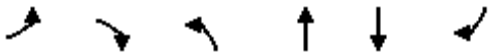
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	2350	378	127	942	129	199	332	162	193	551	103
Future Volume (vph)	230	2350	378	127	942	129	199	332	162	193	551	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	5193	1633	1789	4812	1633	1630	3579	1585	1825	3650	1633
Flt Permitted	0.24	1.00	1.00	0.06	1.00	1.00	0.21	1.00	1.00	0.43	1.00	1.00
Satd. Flow (perm)	458	5193	1633	116	4812	1633	362	3579	1585	830	3650	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	230	2350	378	127	942	129	199	332	162	193	551	103
RTOR Reduction (vph)	0	0	95	0	0	66	0	0	127	0	0	82
Lane Group Flow (vph)	230	2350	283	127	942	63	199	332	35	193	551	21
Heavy Vehicles (%)	0%	1%	0%	2%	9%	0%	12%	2%	3%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Actuated Green, G (s)	78.0	65.8	65.8	69.9	61.7	61.7	35.2	25.2	25.2	35.2	25.2	25.2
Effective Green, g (s)	81.0	67.1	67.1	75.9	63.0	63.0	41.2	26.7	26.7	41.2	26.7	26.7
Actuated g/C Ratio	0.62	0.52	0.52	0.58	0.48	0.48	0.32	0.21	0.21	0.32	0.21	0.21
Clearance Time (s)	4.0	6.3	6.3	4.0	6.3	6.3	4.0	6.5	6.5	4.0	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	446	2680	842	211	2331	791	241	735	325	362	749	335
v/s Ratio Prot	c0.06	c0.45		c0.05	0.20		c0.08	0.09		0.05	c0.15	
v/s Ratio Perm	0.26		0.17	0.30		0.04	0.18		0.02	0.12		0.01
v/c Ratio	0.52	0.88	0.34	0.60	0.40	0.08	0.83	0.45	0.11	0.53	0.74	0.06
Uniform Delay, d1	11.5	27.8	18.4	27.0	21.5	18.0	35.7	45.2	42.0	34.1	48.3	41.6
Progression Factor	1.06	0.79	0.82	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	3.2	0.8	4.8	0.5	0.2	20.1	0.4	0.1	1.5	3.8	0.1
Delay (s)	13.0	25.1	15.9	31.7	22.0	18.1	55.8	45.7	42.1	35.6	52.1	41.7
Level of Service	B	C	B	C	C	B	E	D	D	D	D	D
Approach Delay (s)		23.0			22.6			47.7			47.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	15	26	139	74	0
Future Volume (vph)	0	15	26	139	74	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	0.865					
Flt Protected				0.992		
Satd. Flow (prot)	1629	0	0	1868	1883	0
Flt Permitted				0.992		
Satd. Flow (perm)	1629	0	0	1868	1883	0
Link Speed (k/h)	48			48	50	
Link Distance (m)	195.4			292.3	127.0	
Travel Time (s)	14.7			21.9	9.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	15	26	139	74	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	0	165	74	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	

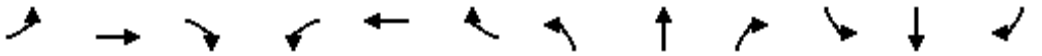
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	15	26	139	74	0
Future Volume (Veh/h)	0	15	26	139	74	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	15	26	139	74	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)				292		
pX, platoon unblocked						
vC, conflicting volume	265	74	74			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	265	74	74			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	98			
cM capacity (veh/h)	712	988	1526			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	15	165	74
Volume Left	0	26	0
Volume Right	15	0	0
cSH	988	1526	1700
Volume to Capacity	0.02	0.02	0.04
Queue Length 95th (m)	0.4	0.4	0.0
Control Delay (s)	8.7	1.3	0.0
Lane LOS	A	A	
Approach Delay (s)	8.7	1.3	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	25.4%	ICU Level of Service	A
Analysis Period (min)	15		

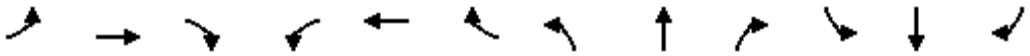


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	1396	192	191	2595	73	174	30	118	35	13	10
Future Volume (vph)	9	1396	192	191	2595	73	174	30	118	35	13	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	97.0		52.0	150.0		75.0	26.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	5092	1601	1825	5193	1633	1807	1865	1633	1825	1921	1633
Flt Permitted	0.047			0.148			0.749			0.738		
Satd. Flow (perm)	90	5092	1601	284	5193	1633	1425	1865	1633	1418	1921	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			154			65			118			63
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		651.2			600.6			206.2			292.3	
Travel Time (s)		33.5			30.9			14.8			21.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	3%	2%	0%	1%	0%	1%	3%	0%	0%	0%	0%
Adj. Flow (vph)	9	1396	192	191	2595	73	174	30	118	35	13	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1396	192	191	2595	73	174	30	118	35	13	10
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	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	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	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	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.5	37.7	37.7	11.5	37.7	37.7	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (s)	12.0	70.0	70.0	16.0	74.0	74.0	48.0	48.0	48.0	48.0	48.0	48.0
Total Split (%)	9.0%	52.2%	52.2%	11.9%	55.2%	55.2%	35.8%	35.8%	35.8%	35.8%	35.8%	35.8%
Maximum Green (s)	8.0	63.3	63.3	12.0	67.3	67.3	41.0	41.0	41.0	41.0	41.0	41.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-1.7	-1.7	-3.0	-1.7	-1.7	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.5	5.5	5.5	3.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		24.0	24.0		24.0	24.0	32.0	32.0	32.0	32.0	32.0	32.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	98.4	84.4	84.4	103.6	97.4	97.4	25.4	25.4	25.4	25.4	25.4	25.4
Actuated g/C Ratio	0.73	0.63	0.63	0.77	0.73	0.73	0.19	0.19	0.19	0.19	0.19	0.19
v/c Ratio	0.05	0.44	0.18	0.50	0.69	0.06	0.64	0.08	0.29	0.13	0.04	0.03
Control Delay	5.8	14.5	4.0	9.2	12.9	2.7	60.4	42.1	8.7	43.3	40.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	14.5	4.0	9.2	12.9	2.7	60.4	42.1	8.7	43.3	40.7	0.1
LOS	A	B	A	A	B	A	E	D	A	D	D	A
Approach Delay		13.2			12.4			39.8			35.3	
Approach LOS		B			B			D			D	

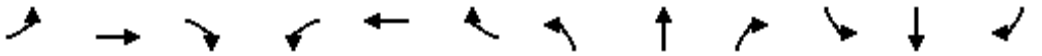
Intersection Summary			
Area Type:	Other		
Cycle Length: 134			
Actuated Cycle Length: 134			
Offset: 3 (2%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 83.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: Eighth Line & Dundas St E



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	9	1396	192	191	2595	73	174	30	118	35	13	10
v/c Ratio	0.05	0.44	0.18	0.50	0.69	0.06	0.64	0.08	0.29	0.13	0.04	0.03
Control Delay	5.8	14.5	4.0	9.2	12.9	2.7	60.4	42.1	8.7	43.3	40.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	14.5	4.0	9.2	12.9	2.7	60.4	42.1	8.7	43.3	40.7	0.1
Queue Length 50th (m)	0.5	63.7	3.5	11.0	113.6	0.5	43.0	6.6	0.0	7.8	2.9	0.0
Queue Length 95th (m)	2.3	99.7	16.7	23.1	214.7	7.0	62.0	14.2	14.9	16.1	8.1	0.0
Internal Link Dist (m)		627.2			576.6			182.2			268.3	
Turn Bay Length (m)	97.0		52.0	150.0		75.0	26.0			15.0		15.0
Base Capacity (vph)	209	3205	1065	406	3774	1204	467	612	615	465	630	578
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.44	0.18	0.47	0.69	0.06	0.37	0.05	0.19	0.08	0.02	0.02

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	1396	192	191	2595	73	174	30	118	35	13	10
Future Volume (vph)	9	1396	192	191	2595	73	174	30	118	35	13	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	5092	1601	1825	5193	1633	1807	1865	1633	1825	1921	1633
Flt Permitted	0.05	1.00	1.00	0.15	1.00	1.00	0.75	1.00	1.00	0.74	1.00	1.00
Satd. Flow (perm)	90	5092	1601	285	5193	1633	1425	1865	1633	1417	1921	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	9	1396	192	191	2595	73	174	30	118	35	13	10
RTOR Reduction (vph)	0	0	57	0	0	19	0	0	96	0	0	8
Lane Group Flow (vph)	9	1396	135	191	2595	54	174	30	22	35	13	2
Heavy Vehicles (%)	0%	3%	2%	0%	1%	0%	1%	3%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	84.1	82.7	82.7	97.9	92.5	92.5	22.4	22.4	22.4	22.4	22.4	22.4
Effective Green, g (s)	90.1	84.4	84.4	100.9	94.2	94.2	25.4	25.4	25.4	25.4	25.4	25.4
Actuated g/C Ratio	0.67	0.63	0.63	0.75	0.70	0.70	0.19	0.19	0.19	0.19	0.19	0.19
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.5	5.5	5.5	3.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5
Lane Grp Cap (vph)	117	3207	1008	377	3650	1147	270	353	309	268	364	309
v/s Ratio Prot	0.00	0.27		c0.05	c0.50			0.02			0.01	
v/s Ratio Perm	0.05		0.08	0.33		0.03	c0.12		0.01	0.02		0.00
v/c Ratio	0.08	0.44	0.13	0.51	0.71	0.05	0.64	0.08	0.07	0.13	0.04	0.01
Uniform Delay, d1	10.8	12.6	10.0	6.6	11.8	6.1	50.1	44.7	44.6	45.1	44.3	44.1
Progression 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
Incremental Delay, d2	0.3	0.4	0.3	1.3	1.2	0.1	5.4	0.1	0.1	0.3	0.0	0.0
Delay (s)	11.1	13.1	10.3	7.9	13.0	6.2	55.6	44.9	44.7	45.4	44.4	44.1
Level of Service	B	B	B	A	B	A	E	D	D	D	D	D
Approach Delay (s)		12.7			12.5			50.6			44.9	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	134.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1403	159	240	2700	161	90
Future Volume (vph)	1403	159	240	2700	161	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		55.0	125.0		50.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			2.5		2.5	
Lane Util. Factor	0.91	1.00	1.00	0.91	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	5092	1601	1825	5193	1825	1633
Flt Permitted			0.151		0.950	
Satd. Flow (perm)	5092	1601	290	5193	1825	1633
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		137				90
Link Speed (k/h)	70			70	50	
Link Distance (m)	600.6			587.4	203.4	
Travel Time (s)	30.9			30.2	14.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	2%	0%	1%	0%	0%
Adj. Flow (vph)	1403	159	240	2700	161	90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1403	159	240	2700	161	90
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
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	30.5	6.1	6.1	30.5	6.1	6.1
Trailing Detector (m)	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
Detector 1 Size(m)	1.8	6.1	6.1	1.8	6.1	6.1
Detector 1 Type	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
Detector 1 Queue (s)	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
Detector 2 Position(m)	28.7			28.7		
Detector 2 Size(m)	1.8			1.8		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		2	6		8	8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	26.8	26.8	11.5	26.8	24.9	24.9
Total Split (s)	69.0	69.0	16.0	85.0	46.0	46.0
Total Split (%)	52.7%	52.7%	12.2%	64.9%	35.1%	35.1%
Maximum Green (s)	62.2	62.2	12.0	78.2	39.1	39.1
Yellow Time (s)	4.2	4.2	3.0	4.2	3.5	3.5
All-Red Time (s)	2.6	2.6	1.0	2.6	3.4	3.4
Lost Time Adjust (s)	-1.8	-1.8	-3.0	-1.8	-1.9	-1.9
Total Lost Time (s)	5.0	5.0	1.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	85.6	85.6	106.1	102.1	18.9	18.9
Actuated g/C Ratio	0.65	0.65	0.81	0.78	0.14	0.14
v/c Ratio	0.42	0.15	0.58	0.67	0.61	0.29
Control Delay	12.4	3.1	13.3	10.8	62.1	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	3.1	13.3	10.8	62.1	11.4
LOS	B	A	B	B	E	B
Approach Delay	11.4			11.0	43.9	
Approach LOS	B			B	D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 131			
Actuated Cycle Length: 131			
Offset: 11.8 (9%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 12.9		Intersection LOS: B	
Intersection Capacity Utilization 69.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Prince Michael Dr & Dundas St E

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1403	159	240	2700	161	90
v/c Ratio	0.42	0.15	0.58	0.67	0.61	0.29
Control Delay	12.4	3.1	13.3	10.8	62.1	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	3.1	13.3	10.8	62.1	11.4
Queue Length 50th (m)	58.5	1.8	20.2	119.5	39.6	0.0
Queue Length 95th (m)	90.0	12.2	44.0	192.0	59.2	14.3
Internal Link Dist (m)	576.6			563.4	179.4	
Turn Bay Length (m)		55.0	125.0		50.0	
Base Capacity (vph)	3327	1093	434	4049	571	572
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.15	0.55	0.67	0.28	0.16

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1403	159	240	2700	161	90
Future Volume (vph)	1403	159	240	2700	161	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	1.0	5.0	5.0	5.0
Lane Util. Factor	0.91	1.00	1.00	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5092	1601	1825	5193	1825	1633
Flt Permitted	1.00	1.00	0.15	1.00	0.95	1.00
Satd. Flow (perm)	5092	1601	290	5193	1825	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1403	159	240	2700	161	90
RTOR Reduction (vph)	0	47	0	0	0	77
Lane Group Flow (vph)	1403	112	240	2700	161	13
Heavy Vehicles (%)	3%	2%	0%	1%	0%	0%
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		
Permitted Phases		2	6		8	8
Actuated Green, G (s)	83.8	83.8	100.3	100.3	17.0	17.0
Effective Green, g (s)	85.6	85.6	103.3	102.1	18.9	18.9
Actuated g/C Ratio	0.65	0.65	0.79	0.78	0.14	0.14
Clearance Time (s)	6.8	6.8	4.0	6.8	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3327	1046	410	4047	263	235
v/s Ratio Prot	0.28		0.07	c0.52		
v/s Ratio Perm		0.07	0.39		c0.09	0.01
v/c Ratio	0.42	0.11	0.59	0.67	0.61	0.06
Uniform Delay, d1	10.9	8.5	5.9	6.6	52.6	48.3
Progression Factor	1.00	1.00	1.71	1.40	1.00	1.00
Incremental Delay, d2	0.4	0.2	1.6	0.7	4.2	0.1
Delay (s)	11.3	8.7	11.6	10.0	56.8	48.4
Level of Service	B	A	B	A	E	D
Approach Delay (s)	11.0			10.1	53.8	
Approach LOS	B			B	D	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	131.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1454	75	233	2890	42	147
Future Volume (vph)	1454	75	233	2890	42	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		60.0	135.0		25.0	0.0
Storage Lanes		1	1		1	2
Taper Length (m)			2.5		2.5	
Lane Util. Factor	0.91	1.00	1.00	0.91	1.00	0.88
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	5092	1633	1825	5193	1825	2874
Flt Permitted			0.147		0.950	
Satd. Flow (perm)	5092	1633	282	5193	1825	2874
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		63				147
Link Speed (k/h)	70			70	50	
Link Distance (m)	587.4			404.7	240.3	
Travel Time (s)	30.2			20.8	17.3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	0%	0%	1%	0%	0%
Adj. Flow (vph)	1454	75	233	2890	42	147
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1454	75	233	2890	42	147
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
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	30.5	6.1	6.1	30.5	6.1	6.1
Trailing Detector (m)	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
Detector 1 Size(m)	1.8	6.1	6.1	1.8	6.1	6.1
Detector 1 Type	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
Detector 1 Queue (s)	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
Detector 2 Position(m)	28.7			28.7		
Detector 2 Size(m)	1.8			1.8		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		2	6		8	8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	36.7	36.7	11.5	36.7	43.9	43.9
Total Split (s)	64.0	64.0	21.0	85.0	46.0	46.0
Total Split (%)	48.9%	48.9%	16.0%	64.9%	35.1%	35.1%
Maximum Green (s)	57.3	57.3	17.0	78.3	39.1	39.1
Yellow Time (s)	4.2	4.2	3.0	4.2	3.3	3.3
All-Red Time (s)	2.5	2.5	1.0	2.5	3.6	3.6
Lost Time Adjust (s)	-1.7	-1.7	-3.0	-1.7	-1.9	-1.9
Total Lost Time (s)	5.0	5.0	1.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	23.0	23.0		23.0	30.0	30.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	91.3	91.3	112.8	108.8	12.2	12.2
Actuated g/C Ratio	0.70	0.70	0.86	0.83	0.09	0.09
v/c Ratio	0.41	0.06	0.53	0.67	0.25	0.37
Control Delay	13.1	4.2	8.3	5.2	58.9	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	4.2	8.3	5.2	58.9	11.0
LOS	B	A	A	A	E	B
Approach Delay	12.7			5.5	21.7	
Approach LOS	B			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 131			
Actuated Cycle Length: 131			
Offset: 75 (57%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 8.4		Intersection LOS: A	
Intersection Capacity Utilization 72.5%		ICU Level of Service C	
Analysis Period (min) 15			

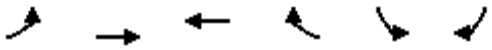
Splits and Phases: 4: Meadowridge Dr & Dundas St E

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1454	75	233	2890	42	147
v/c Ratio	0.41	0.06	0.53	0.67	0.25	0.37
Control Delay	13.1	4.2	8.3	5.2	58.9	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	4.2	8.3	5.2	58.9	11.0
Queue Length 50th (m)	92.7	7.0	6.7	80.3	10.3	0.0
Queue Length 95th (m)	119.5	10.1	22.1	97.9	21.8	11.0
Internal Link Dist (m)	563.4			380.7	216.3	
Turn Bay Length (m)		60.0	135.0		25.0	
Base Capacity (vph)	3550	1157	486	4311	571	1000
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.06	0.48	0.67	0.07	0.15

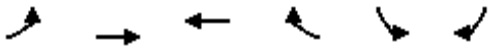
Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1454	75	233	2890	42	147
Future Volume (vph)	1454	75	233	2890	42	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	1.0	5.0	5.0	5.0
Lane Util. Factor	0.91	1.00	1.00	0.91	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5092	1633	1825	5193	1825	2874
Flt Permitted	1.00	1.00	0.15	1.00	0.95	1.00
Satd. Flow (perm)	5092	1633	283	5193	1825	2874
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1454	75	233	2890	42	147
RTOR Reduction (vph)	0	19	0	0	0	133
Lane Group Flow (vph)	1454	56	233	2890	42	14
Heavy Vehicles (%)	3%	0%	0%	1%	0%	0%
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	2		1	6		
Permitted Phases		2	6		8	8
Actuated Green, G (s)	89.7	89.7	107.1	107.1	10.3	10.3
Effective Green, g (s)	91.4	91.4	110.1	108.8	12.2	12.2
Actuated g/C Ratio	0.70	0.70	0.84	0.83	0.09	0.09
Clearance Time (s)	6.7	6.7	4.0	6.7	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3552	1139	430	4312	169	267
v/s Ratio Prot	0.29		0.07	c0.56		
v/s Ratio Perm		0.03	0.39		c0.02	0.00
v/c Ratio	0.41	0.05	0.54	0.67	0.25	0.05
Uniform Delay, d1	8.4	6.2	4.0	4.2	55.1	54.1
Progression Factor	1.42	1.61	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	1.4	0.8	0.8	0.1
Delay (s)	12.2	10.0	5.4	5.1	55.9	54.2
Level of Service	B	B	A	A	E	D
Approach Delay (s)	12.1			5.1	54.6	
Approach LOS	B			A	D	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	131.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



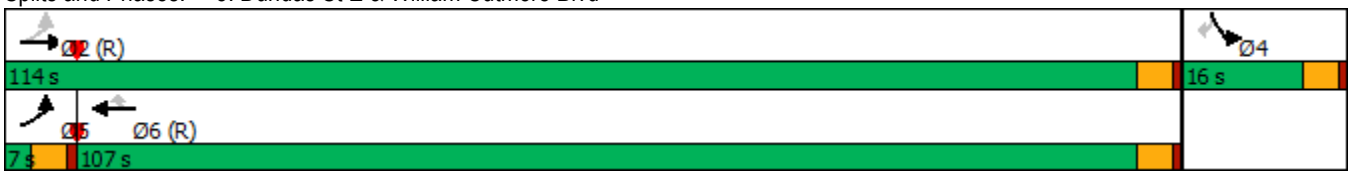
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	80	1535	3099	141	98	55
Future Volume (vph)	80	1535	3099	141	98	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	80.0			70.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	75.0				2.5	
Lane Util. Factor	1.00	0.91	0.91	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1789	5142	5142	1601	1789	1601
Flt Permitted	0.037				0.950	
Satd. Flow (perm)	70	5142	5142	1601	1789	1601
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				141		31
Link Speed (k/h)		70	70		48	
Link Distance (m)		404.7	451.7		199.7	
Travel Time (s)		20.8	23.2		15.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	1535	3099	141	98	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	1535	3099	141	98	55
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	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
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2	2	6	6		4
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	7.0	114.0	107.0	107.0	16.0	16.0
Total Split (%)	5.4%	87.7%	82.3%	82.3%	12.3%	12.3%
Maximum Green (s)	2.5	109.5	102.5	102.5	11.5	11.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	109.5	109.5	102.5	102.5	11.5	11.5
Actuated g/C Ratio	0.84	0.84	0.79	0.79	0.09	0.09
v/c Ratio	0.87	0.35	0.76	0.11	0.62	0.33

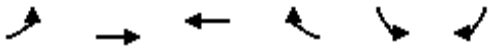


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Control Delay	81.9	2.5	4.4	0.0	74.7	34.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.9	2.5	4.4	0.0	74.7	34.8
LOS	F	A	A	A	E	C
Approach Delay		6.5	4.2		60.4	
Approach LOS		A	A		E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green			
Natural Cycle: 90			
Control Type: Pretimed			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 6.7		Intersection LOS: A	
Intersection Capacity Utilization 79.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 5: Dundas St E & William Cutmore Blvd



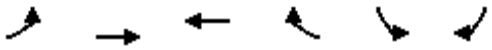


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	80	1535	3099	141	98	55
v/c Ratio	0.87	0.35	0.76	0.11	0.62	0.33
Control Delay	81.9	2.5	4.4	0.0	74.7	34.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.9	2.5	4.4	0.0	74.7	34.8
Queue Length 50th (m)	4.9	24.6	34.1	0.0	24.6	5.8
Queue Length 95th (m)	#25.9	28.2	m37.2	m0.0	#46.2	19.0
Internal Link Dist (m)		380.7	427.7		175.7	
Turn Bay Length (m)	80.0			70.0		
Base Capacity (vph)	92	4331	4054	1292	158	169
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.35	0.76	0.11	0.62	0.33

Intersection Summary

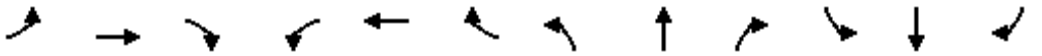
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	80	1535	3099	141	98	55
Future Volume (vph)	80	1535	3099	141	98	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.91	0.91	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1789	5142	5142	1601	1789	1601
Flt Permitted	0.04	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	70	5142	5142	1601	1789	1601
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	1535	3099	141	98	55
RTOR Reduction (vph)	0	0	0	30	0	28
Lane Group Flow (vph)	80	1535	3099	111	98	27
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2	2	6	6		4
Actuated Green, G (s)	109.5	109.5	102.5	102.5	11.5	11.5
Effective Green, g (s)	109.5	109.5	102.5	102.5	11.5	11.5
Actuated g/C Ratio	0.84	0.84	0.79	0.79	0.09	0.09
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Grp Cap (vph)	92	4331	4054	1262	158	141
v/s Ratio Prot	c0.02	0.30	0.60		c0.05	
v/s Ratio Perm	c0.71			0.07		0.02
v/c Ratio	0.87	0.35	0.76	0.09	0.62	0.19
Uniform Delay, d1	26.1	2.3	7.3	3.1	57.1	54.9
Progression Factor	1.00	1.00	0.54	0.00	1.00	1.00
Incremental Delay, d2	62.9	0.2	0.4	0.0	16.9	3.0
Delay (s)	89.1	2.5	4.3	0.0	74.1	57.9
Level of Service	F	A	A	A	E	E
Approach Delay (s)		6.8	4.1		68.3	
Approach LOS		A	A		E	

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



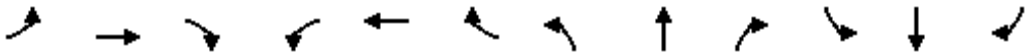
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	1289	207	149	2652	141	381	740	562	110	317	206
Future Volume (vph)	136	1289	207	149	2652	141	381	740	562	110	317	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	222.0		55.0	230.0		65.0	130.0		90.0	115.0		65.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			*0.950			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	5092	1601	1789	5193	1633	1789	3614	1738	1789	3614	1633
Flt Permitted	0.060			0.148			0.453			0.165		
Satd. Flow (perm)	115	5092	1601	279	5193	1633	853	3614	1738	311	3614	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200			97			169			134
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		451.7			295.5			522.7			348.2	
Travel Time (s)		23.2			15.2			31.4			20.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	3%	2%	2%	1%	0%	2%	1%	5%	2%	1%	0%
Adj. Flow (vph)	136	1289	207	149	2652	141	381	740	562	110	317	206
Shared Lane Traffic (%)												
Lane Group Flow (vph)	136	1289	207	149	2652	141	381	740	562	110	317	206
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	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	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	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	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	11.0	45.3	45.3	11.0	45.3	45.3	45.5	47.5	47.5	14.5	47.5	47.5
Total Split (s)	13.0	70.0	70.0	13.0	70.0	70.0	12.0	39.0	39.0	8.0	35.0	35.0
Total Split (%)	10.0%	53.8%	53.8%	10.0%	53.8%	53.8%	9.2%	30.0%	30.0%	6.2%	26.9%	26.9%
Maximum Green (s)	9.0	63.7	63.7	9.0	63.7	63.7	8.0	32.5	32.5	4.0	28.5	28.5
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	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	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0	34.0	34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	0
Act Effct Green (s)	80.9	65.4	65.4	81.1	65.5	65.5	46.0	34.0	34.0	41.0	30.0	30.0
Actuated g/C Ratio	0.62	0.50	0.50	0.62	0.50	0.50	0.35	0.26	0.26	0.32	0.23	0.23
v/c Ratio	0.61	0.50	0.23	0.48	1.01	0.16	1.00	0.78	0.97	0.62	0.38	0.43
Control Delay	44.0	20.3	2.2	15.1	53.2	6.7	85.1	51.4	64.2	46.2	43.8	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	20.3	2.2	15.1	53.2	6.7	85.1	51.4	64.2	46.2	43.8	18.5
LOS	D	C	A	B	D	A	F	D	E	D	D	B
Approach Delay		20.0			49.1			63.3			36.0	
Approach LOS		B			D			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 12 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 44.4		Intersection LOS: D	
Intersection Capacity Utilization 103.6%		ICU Level of Service G	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 6: Ninth Line & Dundas St E

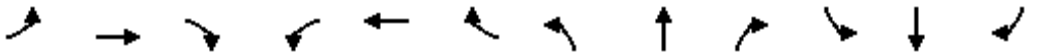


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	136	1289	207	149	2652	141	381	740	562	110	317	206
v/c Ratio	0.61	0.50	0.23	0.48	1.01	0.16	1.00	0.78	0.97	0.62	0.38	0.43
Control Delay	44.0	20.3	2.2	15.1	53.2	6.7	85.1	51.4	64.2	46.2	43.8	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	20.3	2.2	15.1	53.2	6.7	85.1	51.4	64.2	46.2	43.8	18.5
Queue Length 50th (m)	19.4	82.7	0.1	14.4	~263.9	5.7	79.8	93.1	107.2	19.3	36.3	15.0
Queue Length 95th (m)	40.2	95.8	7.7	23.4	#290.4	16.6	#152.8	116.0	#179.7	#34.1	50.1	37.5
Internal Link Dist (m)		427.7			271.5			498.7			324.2	
Turn Bay Length (m)	222.0		55.0	230.0		65.0	130.0		90.0	115.0		65.0
Base Capacity (vph)	229	2561	904	314	2617	871	381	945	579	177	834	479
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.50	0.23	0.47	1.01	0.16	1.00	0.78	0.97	0.62	0.38	0.43

Intersection Summary

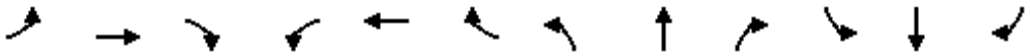
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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



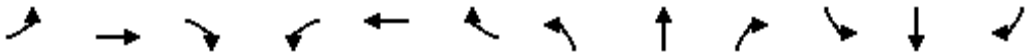
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	1289	207	149	2652	141	381	740	562	110	317	206
Future Volume (vph)	136	1289	207	149	2652	141	381	740	562	110	317	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.95	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	5092	1601	1789	5193	1633	1789	3614	1738	1789	3614	1633
Flt Permitted	0.06	1.00	1.00	0.15	1.00	1.00	0.45	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	115	5092	1601	279	5193	1633	852	3614	1738	310	3614	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	136	1289	207	149	2652	141	381	740	562	110	317	206
RTOR Reduction (vph)	0	0	99	0	0	48	0	0	125	0	0	103
Lane Group Flow (vph)	136	1289	108	149	2652	93	381	740	437	110	317	103
Heavy Vehicles (%)	0%	3%	2%	2%	1%	0%	2%	1%	5%	2%	1%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Actuated Green, G (s)	72.6	64.1	64.1	72.8	64.2	64.2	40.5	32.5	32.5	32.5	28.5	28.5
Effective Green, g (s)	78.6	65.4	65.4	78.8	65.5	65.5	43.5	34.0	34.0	38.5	30.0	30.0
Actuated g/C Ratio	0.60	0.50	0.50	0.61	0.50	0.50	0.33	0.26	0.26	0.30	0.23	0.23
Clearance Time (s)	4.0	6.3	6.3	4.0	6.3	6.3	4.0	6.5	6.5	4.0	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	220	2561	805	303	2616	822	364	945	454	171	834	376
v/s Ratio Prot	c0.05	0.25		c0.04	c0.51		c0.09	0.20		0.03	0.09	
v/s Ratio Perm	0.32		0.07	0.25		0.06	0.26		c0.25	0.16		0.06
v/c Ratio	0.62	0.50	0.13	0.49	1.01	0.11	1.05	0.78	0.96	0.64	0.38	0.27
Uniform Delay, d1	32.0	21.5	17.2	13.1	32.2	17.0	41.5	44.6	47.4	35.7	42.2	41.1
Progression Factor	1.44	0.90	0.61	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.8	0.7	0.3	1.3	21.1	0.3	59.9	4.3	32.6	8.0	0.3	0.4
Delay (s)	50.9	20.1	10.8	14.3	53.3	17.2	101.4	48.9	80.0	43.7	42.5	41.5
Level of Service	D	C	B	B	D	B	F	D	F	D	D	D
Approach Delay (s)		21.5			49.6			71.2			42.3	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	47.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.6%	ICU Level of Service	G
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	37	28	66	106	71	12	66	40	14	231	0
Future Volume (vph)	0	37	28	66	106	71	12	66	40	14	231	0
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		0.935			0.961			0.954				
Flt Protected					0.987			0.995			0.997	
Satd. Flow (prot)	1883	1761	0	0	1786	0	0	1788	0	0	1878	0
Flt Permitted					0.987			0.995			0.997	
Satd. Flow (perm)	1883	1761	0	0	1786	0	0	1788	0	0	1878	0
Link Speed (k/h)		48			48			48			50	
Link Distance (m)		206.1			164.0			292.3			126.9	
Travel Time (s)		15.5			12.3			21.9			9.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	37	28	66	106	71	12	66	40	14	231	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	0	0	243	0	0	118	0	0	245	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
Sign Control		Stop			Stop			Free			Free	

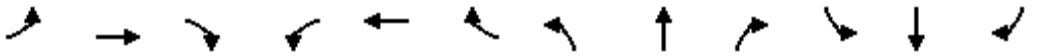
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	37	28	66	106	71	12	66	40	14	231	0
Future Volume (Veh/h)	0	37	28	66	106	71	12	66	40	14	231	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	37	28	66	106	71	12	66	40	14	231	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)								292				
pX, platoon unblocked												
vC, conflicting volume	493	389	231	416	369	86	231			106		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	493	389	231	416	369	86	231			106		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	93	97	87	81	93	99			99		
cM capacity (veh/h)	379	536	808	494	550	973	1337			1485		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1
Volume Total	0	65	243	118	245
Volume Left	0	0	66	12	14
Volume Right	0	28	71	40	0
cSH	1700	627	608	1337	1485
Volume to Capacity	0.00	0.10	0.40	0.01	0.01
Queue Length 95th (m)	0.0	2.6	14.6	0.2	0.2
Control Delay (s)	0.0	11.4	14.8	0.9	0.5
Lane LOS	A	B	B	A	A
Approach Delay (s)	11.4		14.8	0.9	0.5
Approach LOS	B		B		

Intersection Summary				
Average Delay	6.8			
Intersection Capacity Utilization	42.0%	ICU Level of Service	A	
Analysis Period (min)	15			



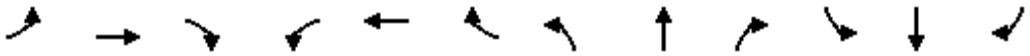
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	2552	132	111	1590	41	178	31	184	189	90	42
Future Volume (vph)	42	2552	132	111	1590	41	178	31	184	189	90	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	97.0		52.0	150.0		75.0	26.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	4565	1585	1825	4230	1633	1825	1830	1601	1825	1883	1633
Flt Permitted	0.060			0.060			0.660			0.737		
Satd. Flow (perm)	106	4565	1585	115	4230	1633	1268	1830	1601	1416	1883	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67			67			119			67
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		651.2			600.6			206.2			292.3	
Travel Time (s)		33.5			30.9			14.8			21.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	1%	3%	0%	9%	0%	0%	5%	2%	0%	2%	0%
Adj. Flow (vph)	42	2552	132	111	1590	41	178	31	184	189	90	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	2552	132	111	1590	41	178	31	184	189	90	42
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	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	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	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	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	25.0	25.0	11.5	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	11.7	70.2	70.2	11.7	70.2	70.2	48.1	48.1	48.1	48.1	48.1	48.1
Total Split (%)	9.0%	54.0%	54.0%	9.0%	54.0%	54.0%	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%
Maximum Green (s)	7.7	63.2	63.2	7.7	63.2	63.2	41.1	41.1	41.1	41.1	41.1	41.1
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	3.7	3.7	1.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-2.0	-2.0	-3.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	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	3.0	3.0
Recall Mode	Max	C-Min	C-Min	Max	C-Min	C-Min	Min	Min	Min	Min	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	97.7	65.2	65.2	97.7	65.2	65.2	26.3	26.3	26.3	26.3	26.3	26.3
Actuated g/C Ratio	0.75	0.50	0.50	0.75	0.50	0.50	0.20	0.20	0.20	0.20	0.20	0.20
v/c Ratio	0.10	1.11	0.16	0.24	0.75	0.05	0.70	0.08	0.44	0.66	0.24	0.11
Control Delay	5.7	90.0	9.3	13.7	49.9	12.9	61.6	39.3	18.9	58.1	42.9	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.7	90.0	9.3	13.7	49.9	12.9	61.6	39.3	18.9	58.1	42.9	3.7
LOS	A	F	A	B	D	B	E	D	B	E	D	A
Approach Delay		84.8			46.7			39.8			46.7	
Approach LOS		F			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 23 (18%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 66.2		Intersection LOS: E	
Intersection Capacity Utilization 83.4%		ICU Level of Service E	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 2: Eighth Line & Dundas St E



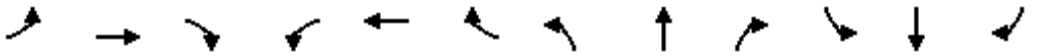
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	42	2552	132	111	1590	41	178	31	184	189	90	42
v/c Ratio	0.10	1.11	0.16	0.24	0.75	0.05	0.70	0.08	0.44	0.66	0.24	0.11
Control Delay	5.7	90.0	9.3	13.7	49.9	12.9	61.6	39.3	18.9	58.1	42.9	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.7	90.0	9.3	13.7	49.9	12.9	61.6	39.3	18.9	58.1	42.9	3.7
Queue Length 50th (m)	2.3	~312.0	8.4	13.8	163.7	1.5	42.8	6.5	14.0	45.2	19.6	0.0
Queue Length 95th (m)	6.8	#342.6	19.2	m32.9	182.0	m6.9	62.3	13.8	32.4	64.4	31.6	4.0
Internal Link Dist (m)		627.2			576.6			182.2			268.3	
Turn Bay Length (m)	97.0		52.0	150.0		75.0	26.0			15.0		15.0
Base Capacity (vph)	423	2289	828	461	2121	852	430	620	621	480	638	598
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	1.11	0.16	0.24	0.75	0.05	0.41	0.05	0.30	0.39	0.14	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

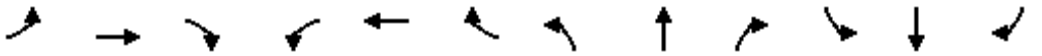
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	2552	132	111	1590	41	178	31	184	189	90	42
Future Volume (vph)	42	2552	132	111	1590	41	178	31	184	189	90	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1674	4565	1585	1825	4230	1633	1825	1830	1601	1825	1883	1633
Flt Permitted	0.06	1.00	1.00	0.06	1.00	1.00	0.66	1.00	1.00	0.74	1.00	1.00
Satd. Flow (perm)	106	4565	1585	116	4230	1633	1268	1830	1601	1416	1883	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	2552	132	111	1590	41	178	31	184	189	90	42
RTOR Reduction (vph)	0	0	33	0	0	20	0	0	95	0	0	34
Lane Group Flow (vph)	42	2552	99	111	1590	21	178	31	89	189	90	8
Heavy Vehicles (%)	9%	1%	3%	0%	9%	0%	0%	5%	2%	0%	2%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	88.7	63.2	63.2	88.7	63.2	63.2	23.3	23.3	23.3	23.3	23.3	23.3
Effective Green, g (s)	94.7	65.2	65.2	94.7	65.2	65.2	26.3	26.3	26.3	26.3	26.3	26.3
Actuated g/C Ratio	0.73	0.50	0.50	0.73	0.50	0.50	0.20	0.20	0.20	0.20	0.20	0.20
Clearance Time (s)	4.0	7.0	7.0	4.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	420	2289	794	459	2121	819	256	370	323	286	380	330
v/s Ratio Prot	0.02	c0.56		c0.05	0.38			0.02			0.05	
v/s Ratio Perm	0.05		0.06	0.12		0.01	c0.14		0.06	0.13		0.01
v/c Ratio	0.10	1.11	0.12	0.24	0.75	0.03	0.70	0.08	0.28	0.66	0.24	0.03
Uniform Delay, d1	10.1	32.4	17.2	20.9	25.9	16.4	48.1	42.1	43.8	47.7	43.4	41.6
Progression Factor	1.00	1.00	1.00	1.02	1.83	9.55	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	58.5	0.3	1.0	2.0	0.0	7.9	0.1	0.5	5.6	0.3	0.0
Delay (s)	10.5	90.9	17.5	22.3	49.3	156.2	56.1	42.2	44.3	53.4	43.8	41.6
Level of Service	B	F	B	C	D	F	E	D	D	D	D	D
Approach Delay (s)		86.1			50.1			49.5			49.1	
Approach LOS		F			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	68.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
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)	53	2773	125	69	1376	80	128	1	200	365	14	156
Future Volume (vph)	53	2773	125	69	1376	80	128	1	200	365	14	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		55.0	125.0		70.0	50.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.851				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4565	1570	1825	4154	1601	1807	1619	0	1789	1883	1601
Flt Permitted	0.096			0.057			0.748			0.260		
Satd. Flow (perm)	181	4565	1570	110	4154	1601	1423	1619	0	490	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			88			88		123				121
Link Speed (k/h)		70			70			50			48	
Link Distance (m)		600.6			587.4			203.4			224.2	
Travel Time (s)		30.9			30.2			14.6			16.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	1%	4%	0%	11%	2%	1%	2%	1%	2%	2%	2%
Adj. Flow (vph)	53	2773	125	69	1376	80	128	1	200	365	14	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	2773	125	69	1376	80	128	201	0	365	14	156
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	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	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	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	0.0
Detector 1 Size(m)	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6			8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	8	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		5.0	5.0	5.0
Minimum Split (s)	9.5	25.2	25.2	11.5	25.2	25.2	22.5	22.5		9.5	22.5	22.5
Total Split (s)	10.8	69.0	69.0	11.5	69.7	69.7	14.5	14.5		35.0	49.5	49.5
Total Split (%)	8.3%	53.1%	53.1%	8.8%	53.6%	53.6%	11.2%	11.2%		26.9%	38.1%	38.1%
Maximum Green (s)	6.3	63.8	63.8	7.5	64.5	64.5	10.2	10.2		30.5	45.0	45.0
Yellow Time (s)	3.5	4.2	4.2	3.0	4.2	4.2	3.3	3.3		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-0.2	-0.2	-3.0	-0.2	0.0	-3.3	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	1.0	5.0	5.2	1.0	4.3		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	5.5	5.5	3.5	5.5	5.5	3.5	3.5		3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Min	Min		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0			0	0
Act Effct Green (s)	72.8	67.3	67.3	80.2	67.8	67.6	14.4	11.1		44.1	44.1	44.1
Actuated g/C Ratio	0.56	0.52	0.52	0.62	0.52	0.52	0.11	0.09		0.34	0.34	0.34
v/c Ratio	0.30	1.17	0.15	0.34	0.64	0.09	0.82	0.80		0.81	0.02	0.25
Control Delay	6.8	96.2	0.4	19.9	15.0	4.9	92.8	47.3		50.4	28.2	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	6.8	96.2	0.4	19.9	15.0	4.9	92.8	47.3		50.4	28.2	9.5
LOS	A	F	A	B	B	A	F	D		D	C	A
Approach Delay		90.5			14.7			65.0			37.9	
Approach LOS		F			B			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 60 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.17			
Intersection Signal Delay: 62.0		Intersection LOS: E	
Intersection Capacity Utilization 101.5%		ICU Level of Service G	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 3: Prince Michael Dr/John McKay Blvd & Dundas St E

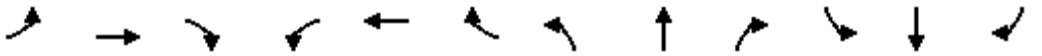
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	53	2773	125	69	1376	80	128	201	365	14	156
v/c Ratio	0.30	1.17	0.15	0.34	0.64	0.09	0.82	0.80	0.81	0.02	0.25
Control Delay	6.8	96.2	0.4	19.9	15.0	4.9	92.8	47.3	50.4	28.2	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	96.2	0.4	19.9	15.0	4.9	92.8	47.3	50.4	28.2	9.5
Queue Length 50th (m)	1.4	~377.1	0.1	6.0	57.1	1.9	32.8	19.7	76.5	2.4	6.0
Queue Length 95th (m)	m1.6	m#324.7	m0.0	18.2	95.9	13.1	#68.7	#60.8	#108.9	7.0	21.1
Internal Link Dist (m)		576.6			563.4			179.4		200.2	
Turn Bay Length (m)	115.0		55.0	125.0		70.0	50.0		15.0		15.0
Base Capacity (vph)	179	2362	854	206	2166	874	157	250	470	651	633
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	1.17	0.15	0.33	0.64	0.09	0.82	0.80	0.78	0.02	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

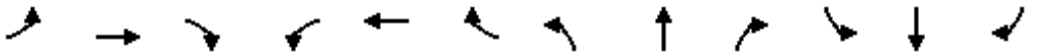
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	2773	125	69	1376	80	128	1	200	365	14	156
Future Volume (vph)	53	2773	125	69	1376	80	128	1	200	365	14	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	1.0	5.0	5.2	1.0	4.3		4.5	4.5	4.5
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4565	1570	1825	4154	1601	1807	1618		1789	1883	1601
Flt Permitted	0.10	1.00	1.00	0.06	1.00	1.00	0.75	1.00		0.26	1.00	1.00
Satd. Flow (perm)	182	4565	1570	110	4154	1601	1423	1618		489	1883	1601
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	53	2773	125	69	1376	80	128	1	200	365	14	156
RTOR Reduction (vph)	0	0	43	0	0	39	0	112	0	0	0	80
Lane Group Flow (vph)	53	2773	82	69	1376	41	128	89	0	365	14	76
Heavy Vehicles (%)	2%	1%	4%	0%	11%	2%	1%	2%	1%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	71.2	66.2	66.2	72.7	66.7	66.7	11.1	11.1		44.1	44.1	44.1
Effective Green, g (s)	71.2	66.4	66.4	78.7	66.9	66.7	14.4	11.1		44.1	44.1	44.1
Actuated g/C Ratio	0.55	0.51	0.51	0.61	0.51	0.51	0.11	0.09		0.34	0.34	0.34
Clearance Time (s)	4.5	5.2	5.2	4.0	5.2	5.2	4.3	4.3		4.5	4.5	4.5
Vehicle Extension (s)	3.0	5.5	5.5	3.5	5.5	5.5	3.5	3.5		3.0	3.0	3.0
Lane Grp Cap (vph)	161	2331	801	185	2137	821	157	138		452	638	543
v/s Ratio Prot	0.01	c0.61		c0.03	0.33			0.05		c0.18	0.01	
v/s Ratio Perm	0.17		0.05	0.20		0.03	0.09			c0.10		0.05
v/c Ratio	0.33	1.19	0.10	0.37	0.64	0.05	0.82	0.64		0.81	0.02	0.14
Uniform Delay, d1	16.4	31.8	16.4	27.7	22.9	15.8	56.5	57.5		36.3	28.6	29.8
Progression Factor	0.54	0.40	0.06	1.28	0.59	1.61	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	85.8	0.0	1.4	1.4	0.1	27.3	10.2		10.2	0.0	0.1
Delay (s)	9.1	98.3	1.0	36.8	14.8	25.5	83.8	67.7		46.4	28.6	29.9
Level of Service	A	F	A	D	B	C	F	E		D	C	C
Approach Delay (s)		92.6			16.4			74.0			41.2	
Approach LOS		F			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	64.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.3
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



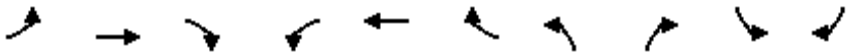
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	3155	82	104	1411	5	58	0	310	100	0	74
Future Volume (vph)	22	3155	82	104	1411	5	58	0	310	100	0	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		60.0	135.0		70.0	25.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4565	1601	1807	4230	1601	1789	1883	1633	1789	1883	1601
Flt Permitted	0.128			0.048			0.757			0.757		
Satd. Flow (perm)	241	4565	1601	91	4230	1601	1426	1883	1633	1426	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			70			70			69			117
Link Speed (k/h)		70			70			50			48	
Link Distance (m)		587.4			404.7			240.3			182.1	
Travel Time (s)		30.2			20.8			17.3			13.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	1%	2%	1%	9%	2%	2%	2%	0%	2%	2%	2%
Adj. Flow (vph)	22	3155	82	104	1411	5	58	0	310	100	0	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	3155	82	104	1411	5	58	0	310	100	0	74
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	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	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	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	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	Perm		Perm	Perm		Perm
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.7	26.7	11.0	26.7	26.7	25.0	25.0	25.0	22.5	22.5	22.5
Total Split (s)	9.5	86.0	86.0	11.0	87.5	87.5	33.0	33.0	33.0	33.0	33.0	33.0
Total Split (%)	7.3%	66.2%	66.2%	8.5%	67.3%	67.3%	25.4%	25.4%	25.4%	25.4%	25.4%	25.4%
Maximum Green (s)	5.0	79.3	79.3	7.0	80.8	80.8	26.1	26.1	26.1	28.5	28.5	28.5
Yellow Time (s)	3.5	4.2	4.2	3.0	4.2	4.2	3.3	3.3	3.3	3.5	3.5	3.5
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	3.6	3.6	3.6	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-1.7	-1.7	-3.0	-1.7	0.0	-1.9	0.0	-1.9	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	1.0	5.0	6.7	5.0	6.9	5.0	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	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	3.0	3.0
Recall Mode	None	C-Max	C-Max	Max	C-Max	C-Max	Min	Min	Min	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	86.8	81.0	81.0	99.1	89.2	87.5	24.9		24.9	25.4		25.4
Actuated g/C Ratio	0.67	0.62	0.62	0.76	0.69	0.67	0.19		0.19	0.20		0.20
v/c Ratio	0.10	1.11	0.08	0.43	0.49	0.00	0.21		0.84	0.36		0.18
Control Delay	6.1	87.5	6.4	31.3	11.6	0.0	44.9		59.1	48.1		2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	6.1	87.5	6.4	31.3	11.6	0.0	44.9		59.1	48.1		2.6
LOS	A	F	A	C	B	A	D		E	D		A
Approach Delay		84.9			12.9			56.9			28.8	
Approach LOS		F			B			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 60.5		Intersection LOS: E	
Intersection Capacity Utilization 97.8%		ICU Level of Service F	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 4: Meadowridge Dr & Dundas St E



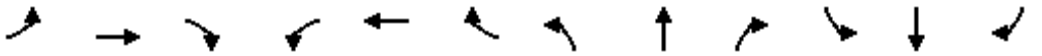
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR
Lane Group Flow (vph)	22	3155	82	104	1411	5	58	310	100	74
v/c Ratio	0.10	1.11	0.08	0.43	0.49	0.00	0.21	0.84	0.36	0.18
Control Delay	6.1	87.5	6.4	31.3	11.6	0.0	44.9	59.1	48.1	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	87.5	6.4	31.3	11.6	0.0	44.9	59.1	48.1	2.6
Queue Length 50th (m)	1.9	~395.9	5.3	17.8	44.3	0.0	12.3	59.6	21.8	0.0
Queue Length 95th (m)	m1.8	m316.5	m4.5	35.3	80.1	m0.0	24.6	#98.6	38.4	3.3
Internal Link Dist (m)		563.4			380.7					
Turn Bay Length (m)	115.0		60.0	135.0		70.0	25.0		15.0	15.0
Base Capacity (vph)	224	2844	1023	241	2903	1100	307	405	312	442
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	1.11	0.08	0.43	0.49	0.00	0.19	0.77	0.32	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

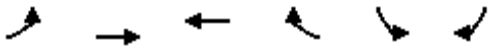
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

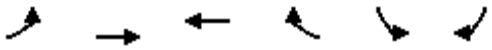


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	3155	82	104	1411	5	58	0	310	100	0	74
Future Volume (vph)	22	3155	82	104	1411	5	58	0	310	100	0	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	1.0	5.0	6.7	5.0		5.0	4.5		4.5
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00		1.00	1.00		1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00
Satd. Flow (prot)	1789	4565	1601	1807	4230	1601	1789		1633	1789		1601
Flt Permitted	0.13	1.00	1.00	0.05	1.00	1.00	0.76		1.00	0.76		1.00
Satd. Flow (perm)	242	4565	1601	91	4230	1601	1426		1633	1426		1601
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	22	3155	82	104	1411	5	58	0	310	100	0	74
RTOR Reduction (vph)	0	0	26	0	0	2	0	0	56	0	0	60
Lane Group Flow (vph)	22	3155	56	104	1411	3	58	0	254	100	0	14
Heavy Vehicles (%)	2%	1%	2%	1%	9%	2%	2%	2%	0%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm		Perm	Perm		Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	82.4	79.3	79.3	93.4	85.8	85.8	23.0		23.0	25.4		25.4
Effective Green, g (s)	82.4	81.0	81.0	96.4	87.5	85.8	24.9		24.9	25.4		25.4
Actuated g/C Ratio	0.63	0.62	0.62	0.74	0.67	0.66	0.19		0.19	0.20		0.20
Clearance Time (s)	4.5	6.7	6.7	4.0	6.7	6.7	6.9		6.9	4.5		4.5
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)	190	2844	997	240	2847	1056	273		312	278		312
v/s Ratio Prot	0.00	c0.69		c0.04	0.33							
v/s Ratio Perm	0.07		0.03	0.28		0.00	0.04		c0.16	0.07		0.01
v/c Ratio	0.12	1.11	0.06	0.43	0.50	0.00	0.21		0.81	0.36		0.05
Uniform Delay, d1	9.2	24.5	9.6	33.0	10.4	7.5	44.3		50.3	45.3		42.5
Progression Factor	1.09	1.63	2.24	1.41	1.03	1.00	1.00		1.00	1.00		1.00
Incremental Delay, d2	0.0	49.8	0.0	5.2	0.6	0.0	0.4		15.0	0.8		0.1
Delay (s)	10.0	89.8	21.4	51.7	11.3	7.5	44.7		65.3	46.1		42.5
Level of Service	B	F	C	D	B	A	D		E	D		D
Approach Delay (s)		87.6			14.1			62.1			44.6	
Approach LOS		F			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	63.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



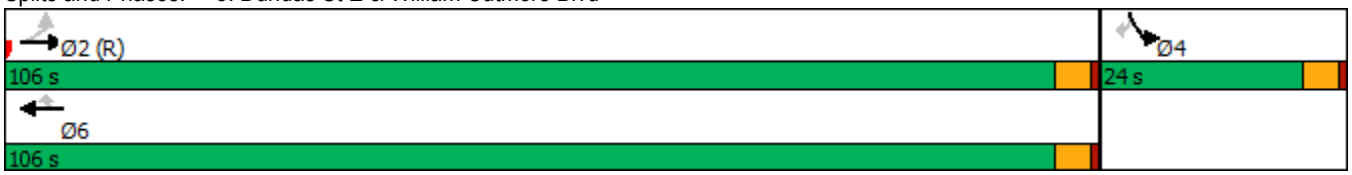
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	26	3539	1486	55	161	74
Future Volume (vph)	26	3539	1486	55	161	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	80.0			70.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	75.0				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1789	4520	4520	1601	1789	1601
Flt Permitted	0.119				0.950	
Satd. Flow (perm)	224	4520	4520	1601	1789	1601
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				55		74
Link Speed (k/h)		70	70		48	
Link Distance (m)		404.7	451.7		142.5	
Travel Time (s)		20.8	23.2		10.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	3539	1486	55	161	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	26	3539	1486	55	161	74
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	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
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1
Trailing Detector (m)	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
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1
Detector 1 Type	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
Detector 1 Queue (s)	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
Detector 2 Position(m)		28.7	28.7			
Detector 2 Size(m)		1.8	1.8			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4

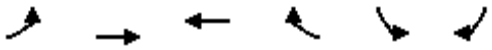


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	106.0	106.0	106.0	106.0	24.0	24.0
Total Split (%)	81.5%	81.5%	81.5%	81.5%	18.5%	18.5%
Maximum Green (s)	101.5	101.5	101.5	101.5	19.5	19.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	101.5	101.5	101.5	101.5	19.5	19.5
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.15	0.15
v/c Ratio	0.15	1.00	0.42	0.04	0.60	0.24
Control Delay	1.7	15.4	1.4	0.1	61.9	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.7	15.4	1.4	0.1	61.9	12.6
LOS	A	B	A	A	E	B
Approach Delay		15.3	1.3		46.4	
Approach LOS		B	A		D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 12.6		Intersection LOS: B	
Intersection Capacity Utilization 84.8%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 5: Dundas St E & William Cutmore Blvd

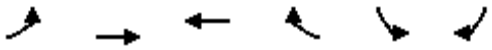




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	26	3539	1486	55	161	74
v/c Ratio	0.15	1.00	0.42	0.04	0.60	0.24
Control Delay	1.7	15.4	1.4	0.1	61.9	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.7	15.4	1.4	0.1	61.9	12.6
Queue Length 50th (m)	0.7	~85.1	9.0	0.0	39.0	0.0
Queue Length 95th (m)	m0.5	m49.6	m13.3	m0.1	62.4	13.5
Internal Link Dist (m)		380.7	427.7		118.5	
Turn Bay Length (m)	80.0			70.0		
Base Capacity (vph)	174	3529	3529	1262	268	303
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.15	1.00	0.42	0.04	0.60	0.24

Intersection Summary

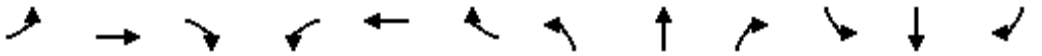
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	26	3539	1486	55	161	74
Future Volume (vph)	26	3539	1486	55	161	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1789	4520	4520	1601	1789	1601
Flt Permitted	0.12	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	224	4520	4520	1601	1789	1601
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	3539	1486	55	161	74
RTOR Reduction (vph)	0	0	0	12	0	63
Lane Group Flow (vph)	26	3539	1486	43	161	11
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	101.5	101.5	101.5	101.5	19.5	19.5
Effective Green, g (s)	101.5	101.5	101.5	101.5	19.5	19.5
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.15	0.15
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	174	3529	3529	1250	268	240
v/s Ratio Prot		c0.78	0.33		c0.09	
v/s Ratio Perm	0.12			0.03		0.01
v/c Ratio	0.15	1.00	0.42	0.03	0.60	0.05
Uniform Delay, d1	3.5	14.2	4.7	3.2	51.6	47.3
Progression Factor	0.39	0.64	0.23	0.02	1.00	1.00
Incremental Delay, d2	0.2	5.2	0.3	0.0	9.6	0.4
Delay (s)	1.5	14.4	1.3	0.1	61.2	47.7
Level of Service	A	B	A	A	E	D
Approach Delay (s)		14.3	1.3		56.9	
Approach LOS		B	A		E	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



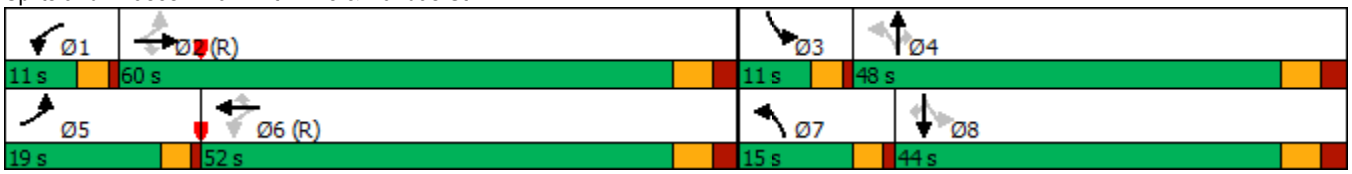
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	2950	515	140	1167	142	255	366	179	213	609	118
Future Volume (vph)	258	2950	515	140	1167	142	255	366	179	213	609	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	222.0		55.0	230.0		65.0	130.0		90.0	115.0		65.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4565	1633	1789	4230	1633	1630	3579	1585	1825	3650	1633
Flt Permitted	0.114			0.071			0.194			0.492		
Satd. Flow (perm)	219	4565	1633	134	4230	1633	333	3579	1585	945	3650	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			166			130			159			128
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		451.7			295.5			522.7			348.2	
Travel Time (s)		23.2			15.2			37.6			25.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	1%	0%	2%	9%	0%	12%	2%	3%	0%	0%	0%
Adj. Flow (vph)	258	2950	515	140	1167	142	255	366	179	213	609	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	258	2950	515	140	1167	142	255	366	179	213	609	118
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	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	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	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	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

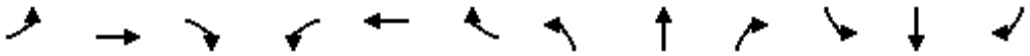
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	12.0	45.3	45.3	11.0	45.3	45.3	11.0	47.5	47.5	11.0	47.5	47.5
Total Split (s)	19.0	60.0	60.0	11.0	52.0	52.0	15.0	48.0	48.0	11.0	44.0	44.0
Total Split (%)	14.6%	46.2%	46.2%	8.5%	40.0%	40.0%	11.5%	36.9%	36.9%	8.5%	33.8%	33.8%
Maximum Green (s)	15.0	53.7	53.7	7.0	45.7	45.7	11.0	41.5	41.5	7.0	37.5	37.5
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	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	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0		34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	78.8	60.9	60.9	71.5	54.7	54.7	49.2	34.2	34.2	44.2	30.2	30.2
Actuated g/C Ratio	0.61	0.47	0.47	0.55	0.42	0.42	0.38	0.26	0.26	0.34	0.23	0.23
v/c Ratio	0.70	1.38	0.60	0.59	0.66	0.19	0.96	0.39	0.34	0.55	0.72	0.25
Control Delay	30.2	204.5	23.9	35.4	33.7	6.3	78.2	39.8	8.7	34.2	50.6	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.2	204.5	23.9	35.4	33.7	6.3	78.2	39.8	8.7	34.2	50.6	6.2
LOS	C	F	C	D	C	A	E	D	A	C	D	A
Approach Delay		167.4			31.2			45.1			41.3	
Approach LOS		F			C			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 12 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.38			
Intersection Signal Delay: 107.6		Intersection LOS: F	
Intersection Capacity Utilization 110.7%		ICU Level of Service H	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 6: Ninth Line & Dundas St E





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	258	2950	515	140	1167	142	255	366	179	213	609	118
v/c Ratio	0.70	1.38	0.60	0.59	0.66	0.19	0.96	0.39	0.34	0.55	0.72	0.25
Control Delay	30.2	204.5	23.9	35.4	33.7	6.3	78.2	39.8	8.7	34.2	50.6	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.2	204.5	23.9	35.4	33.7	6.3	78.2	39.8	8.7	34.2	50.6	6.2
Queue Length 50th (m)	46.2	~423.7	69.7	17.8	101.1	1.8	47.8	40.6	3.9	38.1	76.1	0.0
Queue Length 95th (m)	m50.4	m#440.8	m68.5	#43.4	129.5	15.7	#83.9	50.8	20.1	52.4	89.6	12.0
Internal Link Dist (m)		427.7			271.5			498.7			324.2	
Turn Bay Length (m)	222.0		55.0	230.0		65.0	130.0		90.0	115.0		65.0
Base Capacity (vph)	381	2138	853	237	1778	761	265	1183	630	389	1095	579
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	1.38	0.60	0.59	0.66	0.19	0.96	0.31	0.28	0.55	0.56	0.20

Intersection Summary

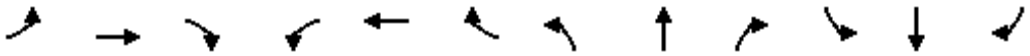
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

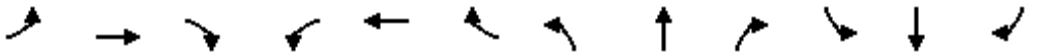
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	2950	515	140	1167	142	255	366	179	213	609	118
Future Volume (vph)	258	2950	515	140	1167	142	255	366	179	213	609	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	4565	1633	1789	4230	1633	1630	3579	1585	1825	3650	1633
Flt Permitted	0.11	1.00	1.00	0.07	1.00	1.00	0.19	1.00	1.00	0.49	1.00	1.00
Satd. Flow (perm)	218	4565	1633	134	4230	1633	333	3579	1585	945	3650	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	258	2950	515	140	1167	142	255	366	179	213	609	118
RTOR Reduction (vph)	0	0	88	0	0	75	0	0	117	0	0	91
Lane Group Flow (vph)	258	2950	427	140	1167	67	255	366	62	213	609	27
Heavy Vehicles (%)	0%	1%	0%	2%	9%	0%	12%	2%	3%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Actuated Green, G (s)	73.5	59.6	59.6	63.3	53.4	53.4	43.7	32.7	32.7	35.7	28.7	28.7
Effective Green, g (s)	76.5	60.9	60.9	69.3	54.7	54.7	46.7	34.2	34.2	41.7	30.2	30.2
Actuated g/C Ratio	0.59	0.47	0.47	0.53	0.42	0.42	0.36	0.26	0.26	0.32	0.23	0.23
Clearance Time (s)	4.0	6.3	6.3	4.0	6.3	6.3	4.0	6.5	6.5	4.0	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	364	2138	764	235	1779	687	259	941	416	370	847	379
v/s Ratio Prot	c0.10	c0.65		0.06	0.28		c0.11	0.10		0.04	c0.17	
v/s Ratio Perm	0.31		0.26	0.26		0.04	0.25		0.04	0.14		0.02
v/c Ratio	0.71	1.38	0.56	0.60	0.66	0.10	0.98	0.39	0.15	0.58	0.72	0.07
Uniform Delay, d1	23.5	34.5	24.9	28.1	30.1	22.7	35.2	39.3	36.7	34.4	46.0	39.0
Progression Factor	1.30	1.16	1.28	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	171.7	0.8	4.0	1.9	0.3	51.2	0.3	0.2	2.2	2.9	0.1
Delay (s)	32.2	211.7	32.5	32.1	32.0	23.0	86.4	39.6	36.9	36.5	48.9	39.0
Level of Service	C	F	C	C	C	C	F	D	D	D	D	D
Approach Delay (s)		174.4			31.2			53.9			44.9	
Approach LOS		F			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	112.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	110.7%	ICU Level of Service	H
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	149	20	41	67	44	33	154	137	45	82	0
Future Volume (vph)	0	149	20	41	67	44	33	154	137	45	82	0
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		0.982			0.961			0.943				
Flt Protected					0.987			0.995			0.983	
Satd. Flow (prot)	1883	1850	0	0	1786	0	0	1767	0	0	1851	0
Flt Permitted					0.987			0.995			0.983	
Satd. Flow (perm)	1883	1850	0	0	1786	0	0	1767	0	0	1851	0
Link Speed (k/h)		48			48			48			50	
Link Distance (m)		195.4			224.6			292.3			127.0	
Travel Time (s)		14.7			16.8			21.9			9.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	149	20	41	67	44	33	154	137	45	82	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	169	0	0	152	0	0	324	0	0	127	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
Sign Control		Stop			Stop			Free			Free	

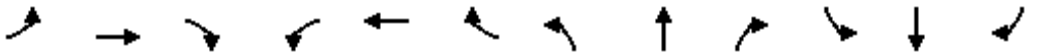
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	149	20	41	67	44	33	154	137	45	82	0
Future Volume (Veh/h)	0	149	20	41	67	44	33	154	137	45	82	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	149	20	41	67	44	33	154	137	45	82	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)								292				
pX, platoon unblocked												
vC, conflicting volume	538	529	82	555	460	222	82			291		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	538	529	82	555	460	222	82			291		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	65	98	87	86	95	98			96		
cM capacity (veh/h)	366	429	978	304	470	817	1515			1271		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1
Volume Total	0	169	152	324	127
Volume Left	0	0	41	33	45
Volume Right	0	20	44	137	0
cSH	1700	460	459	1515	1271
Volume to Capacity	0.00	0.37	0.33	0.02	0.04
Queue Length 95th (m)	0.0	12.7	10.9	0.5	0.8
Control Delay (s)	0.0	17.3	16.7	0.9	3.0
Lane LOS	A	C	C	A	A
Approach Delay (s)	17.3		16.7	0.9	3.0
Approach LOS	C		C		

Intersection Summary				
Average Delay	8.0			
Intersection Capacity Utilization	46.7%	ICU Level of Service		A
Analysis Period (min)	15			



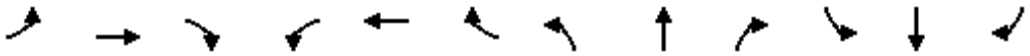
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	1834	212	239	3089	150	192	67	165	80	29	27
Future Volume (vph)	94	1834	212	239	3089	150	192	67	165	80	29	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	97.0		52.0	150.0		75.0	26.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1601	1825	4565	1633	1807	1865	1633	1825	1921	1633
Flt Permitted	0.055			0.054			0.738			0.713		
Satd. Flow (perm)	106	4476	1601	104	4565	1633	1404	1865	1633	1370	1921	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115			71			132			65
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		651.2			600.6			206.2			292.3	
Travel Time (s)		33.5			30.9			14.8			21.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	3%	2%	0%	1%	0%	1%	3%	0%	0%	0%	0%
Adj. Flow (vph)	94	1834	212	239	3089	150	192	67	165	80	29	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	94	1834	212	239	3089	150	192	67	165	80	29	27
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	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	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	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	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.5	37.7	37.7	11.5	37.7	37.7	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (s)	12.0	67.0	67.0	16.0	71.0	71.0	47.0	47.0	47.0	47.0	47.0	47.0
Total Split (%)	9.2%	51.5%	51.5%	12.3%	54.6%	54.6%	36.2%	36.2%	36.2%	36.2%	36.2%	36.2%
Maximum Green (s)	8.0	60.3	60.3	12.0	64.3	64.3	40.0	40.0	40.0	40.0	40.0	40.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-1.7	-1.7	-3.0	-1.7	-1.7	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.5	5.5	5.5	3.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		24.0	24.0		24.0	24.0	32.0	32.0	32.0	32.0	32.0	32.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	87.8	72.0	72.0	97.9	81.1	81.1	27.1	27.1	27.1	27.1	27.1	27.1
Actuated g/C Ratio	0.68	0.55	0.55	0.75	0.62	0.62	0.21	0.21	0.21	0.21	0.21	0.21
v/c Ratio	0.41	0.74	0.23	0.67	1.09	0.14	0.66	0.17	0.37	0.28	0.07	0.07
Control Delay	23.0	25.9	8.6	36.3	64.2	11.4	57.0	40.8	12.6	43.7	38.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.0	25.9	8.6	36.3	64.2	11.4	57.0	40.8	12.6	43.7	38.3	0.3
LOS	C	C	A	D	E	B	E	D	B	D	D	A
Approach Delay		24.1			60.0			37.2			33.9	
Approach LOS		C			E			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay: 45.4		Intersection LOS: D	
Intersection Capacity Utilization 93.7%		ICU Level of Service F	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 2: Eighth Line & Dundas St E



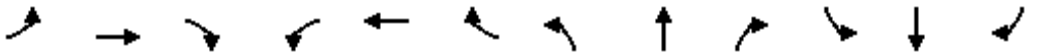
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	94	1834	212	239	3089	150	192	67	165	80	29	27
v/c Ratio	0.41	0.74	0.23	0.67	1.09	0.14	0.66	0.17	0.37	0.28	0.07	0.07
Control Delay	23.0	25.9	8.6	36.3	64.2	11.4	57.0	40.8	12.6	43.7	38.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.0	25.9	8.6	36.3	64.2	11.4	57.0	40.8	12.6	43.7	38.3	0.3
Queue Length 50th (m)	6.0	146.2	11.7	51.8	~358.0	12.0	45.7	14.3	6.9	17.5	6.1	0.0
Queue Length 95th (m)	23.9	194.5	28.8	m49.0	m#348.7	m10.8	64.8	24.5	23.3	29.0	13.0	0.0
Internal Link Dist (m)		627.2			576.6			182.2			268.3	
Turn Bay Length (m)	97.0		52.0	150.0		75.0	26.0			15.0		15.0
Base Capacity (vph)	234	2478	937	355	2847	1045	464	616	628	453	635	583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.74	0.23	0.67	1.09	0.14	0.41	0.11	0.26	0.18	0.05	0.05

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.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	1834	212	239	3089	150	192	67	165	80	29	27
Future Volume (vph)	94	1834	212	239	3089	150	192	67	165	80	29	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	4476	1601	1825	4565	1633	1807	1865	1633	1825	1921	1633
Flt Permitted	0.05	1.00	1.00	0.05	1.00	1.00	0.74	1.00	1.00	0.71	1.00	1.00
Satd. Flow (perm)	105	4476	1601	103	4565	1633	1404	1865	1633	1370	1921	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	94	1834	212	239	3089	150	192	67	165	80	29	27
RTOR Reduction (vph)	0	0	51	0	0	27	0	0	104	0	0	21
Lane Group Flow (vph)	94	1834	161	239	3089	123	192	67	61	80	29	6
Heavy Vehicles (%)	0%	3%	2%	0%	1%	0%	1%	3%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	79.1	70.3	70.3	92.2	79.4	79.4	24.1	24.1	24.1	24.1	24.1	24.1
Effective Green, g (s)	85.1	72.0	72.0	95.2	81.1	81.1	27.1	27.1	27.1	27.1	27.1	27.1
Actuated g/C Ratio	0.65	0.55	0.55	0.73	0.62	0.62	0.21	0.21	0.21	0.21	0.21	0.21
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.5	5.5	5.5	3.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5
Lane Grp Cap (vph)	224	2479	886	352	2847	1018	292	388	340	285	400	340
v/s Ratio Prot	0.04	0.41		c0.11	c0.68			0.04			0.02	
v/s Ratio Perm	0.24		0.10	0.39		0.08	c0.14		0.04	0.06		0.00
v/c Ratio	0.42	0.74	0.18	0.68	1.09	0.12	0.66	0.17	0.18	0.28	0.07	0.02
Uniform Delay, d1	27.6	21.9	14.4	36.2	24.5	9.9	47.2	42.2	42.3	43.3	41.3	40.9
Progression Factor	1.00	1.00	1.00	1.13	1.00	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.5	2.0	0.4	0.5	39.0	0.0	5.5	0.3	0.3	0.6	0.1	0.0
Delay (s)	29.1	23.9	14.8	41.6	63.4	16.6	52.7	42.5	42.6	43.9	41.4	40.9
Level of Service	C	C	B	D	E	B	D	D	D	D	D	D
Approach Delay (s)		23.3			59.9			47.1			42.8	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	46.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
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)	175	1710	175	265	3172	238	192	4	99	224	8	97
Future Volume (vph)	175	1710	175	265	3172	238	192	4	99	224	8	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		55.0	125.0		70.0	50.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.856				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4476	1601	1825	4565	1601	1825	1643	0	1789	1883	1601
Flt Permitted	0.056			0.057			0.752			0.690		
Satd. Flow (perm)	105	4476	1601	110	4565	1601	1445	1643	0	1300	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117			121		99				103
Link Speed (k/h)		70			70			50			48	
Link Distance (m)		600.6			587.4			203.4			180.8	
Travel Time (s)		30.9			30.2			14.6			13.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	3%	2%	0%	1%	2%	0%	2%	0%	2%	2%	2%
Adj. Flow (vph)	175	1710	175	265	3172	238	192	4	99	224	8	97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	175	1710	175	265	3172	238	192	103	0	224	8	97
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	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	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	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	0.0
Detector 1 Size(m)	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		5.0	5.0	5.0
Minimum Split (s)	9.5	26.8	26.8	11.5	26.8	26.8	24.9	24.9		22.5	22.5	22.5
Total Split (s)	16.0	73.0	73.0	25.0	82.0	82.0	32.0	32.0		32.0	32.0	32.0
Total Split (%)	12.3%	56.2%	56.2%	19.2%	63.1%	63.1%	24.6%	24.6%		24.6%	24.6%	24.6%
Maximum Green (s)	11.5	66.2	66.2	21.0	75.2	75.2	25.1	25.1		27.5	27.5	27.5
Yellow Time (s)	3.5	4.2	4.2	3.0	4.2	4.2	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	3.4	3.4		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-1.8	-1.8	-3.0	-1.8	0.0	-1.9	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	1.0	5.0	6.8	5.0	6.9		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	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	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	0
Act Effct Green (s)	84.8	73.6	73.6	99.3	80.0	78.2	24.7	22.8		25.2	25.2	25.2
Actuated g/C Ratio	0.65	0.57	0.57	0.76	0.62	0.60	0.19	0.18		0.19	0.19	0.19
v/c Ratio	0.85	0.68	0.18	0.74	1.13	0.24	0.70	0.28		0.89	0.02	0.25
Control Delay	64.2	16.9	6.9	34.3	84.4	10.3	63.0	11.1		84.8	41.0	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	64.2	16.9	6.9	34.3	84.4	10.3	63.0	11.1		84.8	41.0	8.5
LOS	E	B	A	C	F	B	E	B		F	D	A
Approach Delay		20.1			76.0			44.9			61.2	
Approach LOS		C			E			D			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay: 55.7		Intersection LOS: E	
Intersection Capacity Utilization 102.0%		ICU Level of Service G	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 3: Prince Michael Dr/John McKay Blvd & Dundas St E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	175	1710	175	265	3172	238	192	103	224	8	97
v/c Ratio	0.85	0.68	0.18	0.74	1.13	0.24	0.70	0.28	0.89	0.02	0.25
Control Delay	64.2	16.9	6.9	34.3	84.4	10.3	63.0	11.1	84.8	41.0	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.2	16.9	6.9	34.3	84.4	10.3	63.0	11.1	84.8	41.0	8.5
Queue Length 50th (m)	36.5	50.2	2.0	58.4	~401.5	20.8	45.3	0.8	55.2	1.7	0.0
Queue Length 95th (m)	m#57.8	96.5	m17.2	m52.6	m#347.0	m18.6	71.5	16.0	#96.6	6.0	12.9
Internal Link Dist (m)		576.6			563.4			179.4		156.8	
Turn Bay Length (m)	115.0		55.0	125.0		70.0	50.0		15.0		15.0
Base Capacity (vph)	218	2533	957	400	2809	1011	300	397	275	398	419
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.68	0.18	0.66	1.13	0.24	0.64	0.26	0.81	0.02	0.23

Intersection Summary

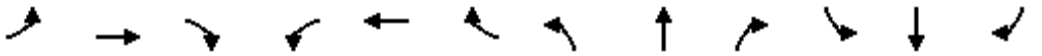
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	1710	175	265	3172	238	192	4	99	224	8	97
Future Volume (vph)	175	1710	175	265	3172	238	192	4	99	224	8	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	1.0	5.0	6.8	5.0	6.9		4.5	4.5	4.5
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.86		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4476	1601	1825	4565	1601	1825	1643		1789	1883	1601
Flt Permitted	0.06	1.00	1.00	0.06	1.00	1.00	0.75	1.00		0.69	1.00	1.00
Satd. Flow (perm)	105	4476	1601	109	4565	1601	1446	1643		1300	1883	1601
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	175	1710	175	265	3172	238	192	4	99	224	8	97
RTOR Reduction (vph)	0	0	51	0	0	48	0	82	0	0	0	78
Lane Group Flow (vph)	175	1710	124	265	3172	190	192	21	0	224	8	19
Heavy Vehicles (%)	2%	3%	2%	0%	1%	2%	0%	2%	0%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	82.6	71.8	71.8	93.5	78.2	78.2	22.8	22.8		25.2	25.2	25.2
Effective Green, g (s)	82.6	73.6	73.6	96.5	80.0	78.2	24.7	22.8		25.2	25.2	25.2
Actuated g/C Ratio	0.64	0.57	0.57	0.74	0.62	0.60	0.19	0.18		0.19	0.19	0.19
Clearance Time (s)	4.5	6.8	6.8	4.0	6.8	6.8	6.9	6.9		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	206	2534	906	354	2809	963	274	288		252	365	310
v/s Ratio Prot	0.07	0.38		c0.12	c0.69			0.01			0.00	
v/s Ratio Perm	0.47		0.08	0.44		0.12	0.13			c0.17		0.01
v/c Ratio	0.85	0.67	0.14	0.75	1.13	0.20	0.70	0.07		0.89	0.02	0.06
Uniform Delay, d1	40.7	19.8	13.3	36.7	25.0	11.7	49.2	44.8		51.0	42.4	42.7
Progression Factor	1.20	0.75	1.16	1.03	1.00	1.64	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	20.4	1.1	0.2	0.8	58.7	0.0	7.8	0.1		29.2	0.0	0.1
Delay (s)	69.2	15.9	15.6	38.6	83.8	19.3	57.0	44.9		80.2	42.4	42.8
Level of Service	E	B	B	D	F	B	E	D		F	D	D
Approach Delay (s)		20.4			76.3			52.8			68.3	
Approach LOS		C			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	56.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	102.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



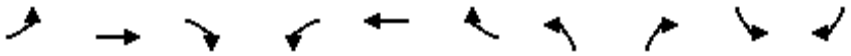
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	1794	166	257	3652	20	46	0	162	64	0	61
Future Volume (vph)	103	1794	166	257	3652	20	46	0	162	64	0	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		60.0	135.0		70.0	25.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4476	1633	1825	4565	1601	1825	1883	1633	1789	1883	1601
Flt Permitted	0.046			0.065			0.757			0.757		
Satd. Flow (perm)	87	4476	1633	125	4565	1601	1454	1883	1633	1426	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159			70			152			102
Link Speed (k/h)		70			70			50			48	
Link Distance (m)		587.4			404.7			240.3			103.1	
Travel Time (s)		30.2			20.8			17.3			7.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	3%	0%	0%	1%	2%	0%	2%	0%	2%	2%	2%
Adj. Flow (vph)	103	1794	166	257	3652	20	46	0	162	64	0	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	1794	166	257	3652	20	46	0	162	64	0	61
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	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	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	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	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	Perm		Perm	Perm		Perm
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.7	36.7	11.5	36.7	36.7	43.9	43.9	43.9	22.5	22.5	22.5
Total Split (s)	10.0	90.4	90.4	19.6	100.0	100.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	7.7%	69.5%	69.5%	15.1%	76.9%	76.9%	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%
Maximum Green (s)	5.5	83.7	83.7	15.6	93.3	93.3	13.1	13.1	13.1	15.5	15.5	15.5
Yellow Time (s)	3.5	4.2	4.2	3.0	4.2	4.2	3.3	3.3	3.3	3.5	3.5	3.5
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	3.6	3.6	3.6	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-1.7	-1.7	-3.0	-1.7	0.0	-1.9	0.0	-1.9	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	1.0	5.0	6.7	5.0	6.9	5.0	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	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	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		23.0	23.0		23.0	23.0	30.0	30.0	30.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	95.9	88.3	88.3	111.3	95.7	94.0	12.7		12.7	13.2		13.2
Actuated g/C Ratio	0.74	0.68	0.68	0.86	0.74	0.72	0.10		0.10	0.10		0.10
v/c Ratio	0.66	0.59	0.14	0.75	1.09	0.02	0.32		0.55	0.44		0.24
Control Delay	40.4	9.3	2.0	31.4	55.3	0.0	60.7		17.2	64.6		4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	40.4	9.3	2.0	31.4	55.3	0.0	60.7		17.2	64.6		4.2
LOS	D	A	A	C	E	A	E		B	E		A
Approach Delay		10.3			53.5			26.8			35.1	
Approach LOS		B			D			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay: 38.2		Intersection LOS: D	
Intersection Capacity Utilization 99.2%		ICU Level of Service F	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 4: Meadowridge Dr & Dundas St E



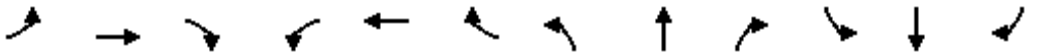
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR
Lane Group Flow (vph)	103	1794	166	257	3652	20	46	162	64	61
v/c Ratio	0.66	0.59	0.14	0.75	1.09	0.02	0.32	0.55	0.44	0.24
Control Delay	40.4	9.3	2.0	31.4	55.3	0.0	60.7	17.2	64.6	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.4	9.3	2.0	31.4	55.3	0.0	60.7	17.2	64.6	4.2
Queue Length 50th (m)	14.1	57.6	0.9	47.4	~437.3	0.0	11.2	2.4	15.8	0.0
Queue Length 95th (m)	m#29.2	67.2	m3.9	m40.0	m129.7	m0.0	23.4	23.0	30.0	3.2
Internal Link Dist (m)		563.4			380.7					
Turn Bay Length (m)	115.0		60.0	135.0		70.0	25.0		15.0	15.0
Base Capacity (vph)	157	3041	1160	360	3358	1176	167	322	170	280
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	0.66	0.59	0.14	0.71	1.09	0.02	0.28	0.50	0.38	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

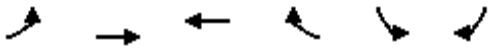
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

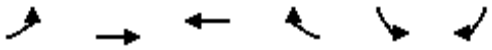


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	1794	166	257	3652	20	46	0	162	64	0	61
Future Volume (vph)	103	1794	166	257	3652	20	46	0	162	64	0	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	1.0	5.0	6.7	5.0		5.0	4.5		4.5
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00		1.00	1.00		1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00
Satd. Flow (prot)	1789	4476	1633	1825	4565	1601	1825		1633	1789		1601
Flt Permitted	0.05	1.00	1.00	0.07	1.00	1.00	0.76		1.00	0.76		1.00
Satd. Flow (perm)	87	4476	1633	125	4565	1601	1455		1633	1426		1601
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	103	1794	166	257	3652	20	46	0	162	64	0	61
RTOR Reduction (vph)	0	0	51	0	0	6	0	0	137	0	0	55
Lane Group Flow (vph)	103	1794	115	257	3652	14	46	0	25	64	0	6
Heavy Vehicles (%)	2%	3%	0%	0%	1%	2%	0%	2%	0%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm		Perm	Perm		Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	93.8	86.7	86.7	105.6	94.0	94.0	10.8		10.8	13.2		13.2
Effective Green, g (s)	93.8	88.4	88.4	108.6	95.7	94.0	12.7		12.7	13.2		13.2
Actuated g/C Ratio	0.72	0.68	0.68	0.84	0.74	0.72	0.10		0.10	0.10		0.10
Clearance Time (s)	4.5	6.7	6.7	4.0	6.7	6.7	6.9		6.9	4.5		4.5
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)	155	3043	1110	338	3360	1157	142		159	144		162
v/s Ratio Prot	0.04	0.40		c0.10	c0.80							
v/s Ratio Perm	0.44		0.07	0.53		0.01	0.03		0.02	c0.04		0.00
v/c Ratio	0.66	0.59	0.10	0.76	1.09	0.01	0.32		0.16	0.44		0.04
Uniform Delay, d1	37.2	11.1	7.2	32.9	17.1	5.0	54.6		53.7	54.9		52.7
Progression Factor	1.01	0.75	1.32	1.06	0.75	1.00	1.00		1.00	1.00		1.00
Incremental Delay, d2	7.8	0.6	0.1	0.9	39.7	0.0	1.3		0.5	2.2		0.1
Delay (s)	45.2	8.9	9.6	35.8	52.5	5.0	56.0		54.2	57.1		52.8
Level of Service	D	A	A	D	D	A	E		D	E		D
Approach Delay (s)		10.8			51.2			54.6			55.0	
Approach LOS		B			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	38.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



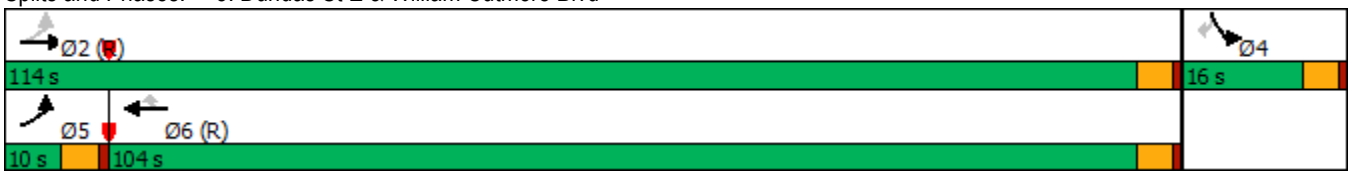
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	80	1954	3991	172	116	55
Future Volume (vph)	80	1954	3991	172	116	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	80.0			70.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	75.0				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1789	4520	4520	1601	1789	1601
Flt Permitted	0.038				0.950	
Satd. Flow (perm)	72	4520	4520	1601	1789	1601
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				125		55
Link Speed (k/h)		70	70		48	
Link Distance (m)		404.7	451.7		199.7	
Travel Time (s)		20.8	23.2		15.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	1954	3991	172	116	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	1954	3991	172	116	55
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	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
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1
Trailing Detector (m)	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
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1
Detector 1 Type	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
Detector 1 Queue (s)	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
Detector 2 Position(m)		28.7	28.7			
Detector 2 Size(m)		1.8	1.8			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2	2	6	6		4

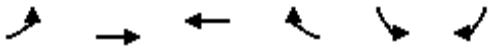


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	10.0	114.0	104.0	104.0	16.0	16.0
Total Split (%)	7.7%	87.7%	80.0%	80.0%	12.3%	12.3%
Maximum Green (s)	5.5	109.5	99.5	99.5	11.5	11.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max	None	None
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	110.0	110.0	99.9	99.9	11.0	11.0
Actuated g/C Ratio	0.85	0.85	0.77	0.77	0.08	0.08
v/c Ratio	0.60	0.51	1.15	0.14	0.77	0.30
Control Delay	41.5	2.3	89.9	0.0	88.6	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	2.3	89.9	0.0	88.6	18.2
LOS	D	A	F	A	F	B
Approach Delay		3.9	86.2		66.0	
Approach LOS		A	F		E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.15			
Intersection Signal Delay: 59.3		Intersection LOS: E	
Intersection Capacity Utilization 91.0%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 5: Dundas St E & William Cutmore Blvd





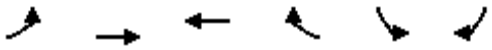
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	80	1954	3991	172	116	55
v/c Ratio	0.60	0.51	1.15	0.14	0.77	0.30
Control Delay	41.5	2.3	89.9	0.0	88.6	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	2.3	89.9	0.0	88.6	18.2
Queue Length 50th (m)	9.4	30.5	~278.6	0.0	29.5	0.0
Queue Length 95th (m)	m#25.6	34.6	m47.0	m0.0	#57.9	12.8
Internal Link Dist (m)		380.7	427.7		175.7	
Turn Bay Length (m)	80.0			70.0		
Base Capacity (vph)	134	3824	3474	1259	158	191
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.51	1.15	0.14	0.73	0.29

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.

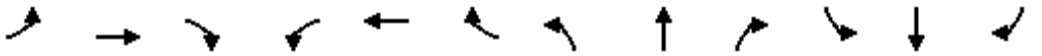
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	80	1954	3991	172	116	55
Future Volume (vph)	80	1954	3991	172	116	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1789	4520	4520	1601	1789	1601
Flt Permitted	0.04	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	72	4520	4520	1601	1789	1601
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	1954	3991	172	116	55
RTOR Reduction (vph)	0	0	0	29	0	50
Lane Group Flow (vph)	80	1954	3991	143	116	5
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2	2	6	6		4
Actuated Green, G (s)	110.0	110.0	99.9	99.9	11.0	11.0
Effective Green, g (s)	110.0	110.0	99.9	99.9	11.0	11.0
Actuated g/C Ratio	0.85	0.85	0.77	0.77	0.08	0.08
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	134	3824	3473	1230	151	135
v/s Ratio Prot	0.03	c0.43	c0.88		c0.06	
v/s Ratio Perm	0.48			0.09		0.00
v/c Ratio	0.60	0.51	1.15	0.12	0.77	0.03
Uniform Delay, d1	43.7	2.7	15.0	3.8	58.3	54.6
Progression Factor	1.48	0.69	1.38	0.00	1.00	1.00
Incremental Delay, d2	5.8	0.4	67.5	0.0	20.6	0.1
Delay (s)	70.6	2.3	88.3	0.0	78.8	54.7
Level of Service	E	A	F	A	E	D
Approach Delay (s)		5.0	84.6		71.1	
Approach LOS		A	F		E	

Intersection Summary			
HCM 2000 Control Delay	58.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



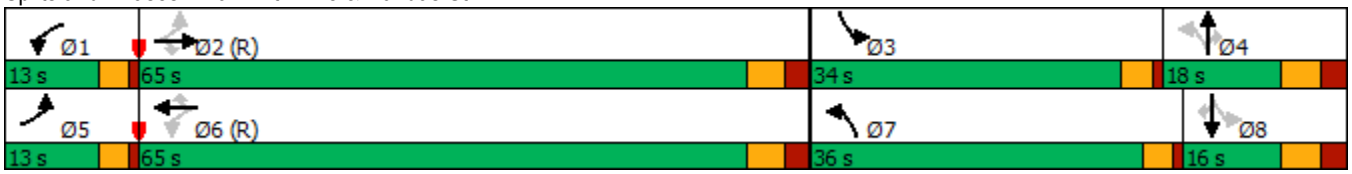
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	1630	287	165	3394	155	529	817	620	121	350	240
Future Volume (vph)	153	1630	287	165	3394	155	529	817	620	121	350	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	222.0		55.0	230.0		65.0	130.0		90.0	115.0		65.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			*0.950			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4476	1601	1789	4565	1633	1789	3614	1738	1789	3614	1633
Flt Permitted	0.065			0.065			0.296			0.320		
Satd. Flow (perm)	125	4476	1601	122	4565	1633	557	3614	1738	603	3614	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			179			97			303			135
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		451.7			295.5			522.7			348.2	
Travel Time (s)		23.2			15.2			31.4			20.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	3%	2%	2%	1%	0%	2%	1%	5%	2%	1%	0%
Adj. Flow (vph)	153	1630	287	165	3394	155	529	817	620	121	350	240
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	1630	287	165	3394	155	529	817	620	121	350	240
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	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	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	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	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

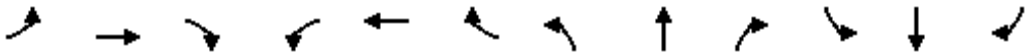
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	11.0	45.3	45.3	11.0	45.3	45.3	45.5	47.5	47.5	14.5	47.5	47.5
Total Split (s)	13.0	65.0	65.0	13.0	65.0	65.0	36.0	18.0	18.0	34.0	16.0	16.0
Total Split (%)	10.0%	50.0%	50.0%	10.0%	50.0%	50.0%	27.7%	13.8%	13.8%	26.2%	12.3%	12.3%
Maximum Green (s)	9.0	58.7	58.7	9.0	58.7	58.7	32.0	11.5	11.5	30.0	9.5	9.5
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	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	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0	34.0	34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0		0	0
Act Effct Green (s)	75.9	60.1	60.1	76.1	60.3	60.3	51.0	31.7	31.7	29.3	11.0	11.0
Actuated g/C Ratio	0.58	0.46	0.46	0.59	0.46	0.46	0.39	0.24	0.24	0.23	0.08	0.08
v/c Ratio	0.68	0.79	0.34	0.74	1.60	0.19	0.96	0.93	0.95	0.46	1.15	0.92
Control Delay	41.5	38.6	15.3	46.8	301.9	8.8	65.2	65.3	49.9	33.8	149.3	64.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	38.6	15.3	46.8	301.9	8.8	65.2	65.3	49.9	33.8	149.3	64.1
LOS	D	D	B	D	F	A	E	E	D	C	F	E
Approach Delay		35.6			278.4			60.4			100.9	
Approach LOS		D			F			E			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 12 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.60			
Intersection Signal Delay: 153.4		Intersection LOS: F	
Intersection Capacity Utilization 128.0%		ICU Level of Service H	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 6: Ninth Line & Dundas St E





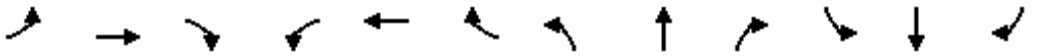
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	153	1630	287	165	3394	155	529	817	620	121	350	240
v/c Ratio	0.68	0.79	0.34	0.74	1.60	0.19	0.96	0.93	0.95	0.46	1.15	0.92
Control Delay	41.5	38.6	15.3	46.8	301.9	8.8	65.2	65.3	49.9	33.8	149.3	64.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	38.6	15.3	46.8	301.9	8.8	65.2	65.3	49.9	33.8	149.3	64.1
Queue Length 50th (m)	25.5	138.1	23.5	24.8	~519.0	8.1	115.8	108.1	90.0	20.0	~55.2	27.4
Queue Length 95th (m)	m#47.5	149.1	40.1	#55.8	#544.2	20.7	#184.3	#159.7	#173.5	33.6	#86.3	#76.4
Internal Link Dist (m)		427.7			271.5			498.7			324.2	
Turn Bay Length (m)	222.0		55.0	230.0		65.0	130.0		90.0	115.0		65.0
Base Capacity (vph)	230	2069	836	225	2115	808	550	882	653	523	305	261
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.79	0.34	0.73	1.60	0.19	0.96	0.93	0.95	0.23	1.15	0.92

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

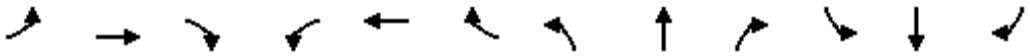
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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



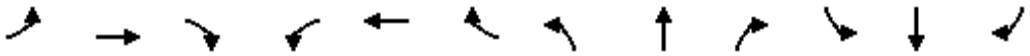
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	1630	287	165	3394	155	529	817	620	121	350	240
Future Volume (vph)	153	1630	287	165	3394	155	529	817	620	121	350	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.95	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	4476	1601	1789	4565	1633	1789	3614	1738	1789	3614	1633
Flt Permitted	0.06	1.00	1.00	0.06	1.00	1.00	0.30	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)	124	4476	1601	122	4565	1633	558	3614	1738	603	3614	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	153	1630	287	165	3394	155	529	817	620	121	350	240
RTOR Reduction (vph)	0	0	96	0	0	52	0	0	229	0	0	124
Lane Group Flow (vph)	153	1630	191	165	3394	103	529	817	391	121	350	116
Heavy Vehicles (%)	0%	3%	2%	2%	1%	0%	2%	1%	5%	2%	1%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Actuated Green, G (s)	67.5	58.8	58.8	67.9	59.0	59.0	45.5	30.2	30.2	20.8	9.5	9.5
Effective Green, g (s)	73.5	60.1	60.1	73.9	60.3	60.3	48.5	31.7	31.7	26.8	11.0	11.0
Actuated g/C Ratio	0.57	0.46	0.46	0.57	0.46	0.46	0.37	0.24	0.24	0.21	0.08	0.08
Clearance Time (s)	4.0	6.3	6.3	4.0	6.3	6.3	4.0	6.5	6.5	4.0	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	223	2069	740	221	2117	757	539	881	423	254	305	138
v/s Ratio Prot	0.06	0.36		c0.07	c0.74		c0.26	0.23		0.05	c0.10	
v/s Ratio Perm	0.32		0.12	0.36		0.06	0.10		0.22	0.05		0.07
v/c Ratio	0.69	0.79	0.26	0.75	1.60	0.14	0.98	0.93	0.92	0.48	1.15	0.84
Uniform Delay, d1	32.9	29.6	21.3	31.7	34.9	19.9	36.8	48.0	48.0	44.0	59.5	58.7
Progression Factor	1.15	1.20	1.77	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.4	2.7	0.7	12.9	273.7	0.4	33.8	15.4	25.8	1.4	97.6	35.0
Delay (s)	45.1	38.2	38.5	44.6	308.5	20.3	70.6	63.5	73.7	45.5	157.1	93.6
Level of Service	D	D	D	D	F	C	E	E	E	D	F	F
Approach Delay (s)		38.7			284.8			68.6			116.7	
Approach LOS		D			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	160.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	128.0%	ICU Level of Service	H
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	73	28	85	203	71	12	66	47	14	231	0
Future Volume (vph)	0	73	28	85	203	71	12	66	47	14	231	0
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		0.958			0.973			0.949				
Flt Protected					0.988			0.995			0.997	
Satd. Flow (prot)	1883	1804	0	0	1811	0	0	1778	0	0	1878	0
Flt Permitted					0.988			0.995			0.997	
Satd. Flow (perm)	1883	1804	0	0	1811	0	0	1778	0	0	1878	0
Link Speed (k/h)		48			48			48			50	
Link Distance (m)		206.1			164.0			292.3			126.9	
Travel Time (s)		15.5			12.3			21.9			9.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	73	28	85	203	71	12	66	47	14	231	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	101	0	0	359	0	0	125	0	0	245	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
Sign Control		Stop			Stop			Free			Free	

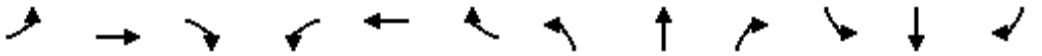
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	73	28	85	203	71	12	66	47	14	231	0
Future Volume (Veh/h)	0	73	28	85	203	71	12	66	47	14	231	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	73	28	85	203	71	12	66	47	14	231	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)								292				
pX, platoon unblocked												
vC, conflicting volume	545	396	231	437	372	90	231			113		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	545	396	231	437	372	90	231			113		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	86	97	81	63	93	99			99		
cM capacity (veh/h)	292	531	808	451	548	968	1337			1476		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1
Volume Total	0	101	359	125	245
Volume Left	0	0	85	12	14
Volume Right	0	28	71	47	0
cSH	1700	587	568	1337	1476
Volume to Capacity	0.00	0.17	0.63	0.01	0.01
Queue Length 95th (m)	0.0	4.7	33.6	0.2	0.2
Control Delay (s)	0.0	12.4	21.6	0.8	0.5
Lane LOS	A	B	C	A	A
Approach Delay (s)	12.4		21.6	0.8	0.5
Approach LOS	B		C		

Intersection Summary				
Average Delay	11.1			
Intersection Capacity Utilization	48.3%	ICU Level of Service		A
Analysis Period (min)	15			



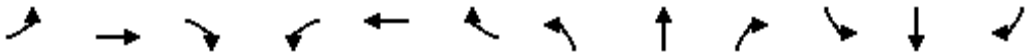
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	2588	132	111	1687	41	178	38	184	189	109	42
Future Volume (vph)	42	2588	132	111	1687	41	178	38	184	189	109	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	97.0		52.0	150.0		75.0	26.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	4565	1585	1825	4230	1633	1825	1830	1601	1825	1883	1633
Flt Permitted	0.060			0.060			0.619			0.732		
Satd. Flow (perm)	106	4565	1585	115	4230	1633	1189	1830	1601	1406	1883	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67			67			119			67
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		651.2			600.6			206.2			292.3	
Travel Time (s)		33.5			30.9			14.8			21.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	1%	3%	0%	9%	0%	0%	5%	2%	0%	2%	0%
Adj. Flow (vph)	42	2588	132	111	1687	41	178	38	184	189	109	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	2588	132	111	1687	41	178	38	184	189	109	42
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	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	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	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	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	25.0	25.0	11.5	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	11.7	70.2	70.2	11.7	70.2	70.2	48.1	48.1	48.1	48.1	48.1	48.1
Total Split (%)	9.0%	54.0%	54.0%	9.0%	54.0%	54.0%	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%
Maximum Green (s)	7.7	63.2	63.2	7.7	63.2	63.2	41.1	41.1	41.1	41.1	41.1	41.1
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	3.7	3.7	1.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-2.0	-2.0	-3.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	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	3.0	3.0
Recall Mode	Max	C-Min	C-Min	Max	C-Min	C-Min	Min	Min	Min	Min	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	97.1	65.2	65.2	97.1	65.2	65.2	26.9	26.9	26.9	26.9	26.9	26.9
Actuated g/C Ratio	0.75	0.50	0.50	0.75	0.50	0.50	0.21	0.21	0.21	0.21	0.21	0.21
v/c Ratio	0.10	1.13	0.16	0.25	0.80	0.05	0.72	0.10	0.43	0.65	0.28	0.11
Control Delay	6.0	96.4	9.3	32.8	10.6	0.1	63.8	39.0	18.5	56.7	43.3	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.0	96.4	9.3	32.8	10.6	0.1	63.8	39.0	18.5	56.7	43.3	3.6
LOS	A	F	A	C	B	A	E	D	B	E	D	A
Approach Delay		90.9			11.7			40.6			45.9	
Approach LOS		F			B			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 23 (18%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay: 57.0		Intersection LOS: E	
Intersection Capacity Utilization 84.1%		ICU Level of Service E	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 2: Eighth Line & Dundas St E



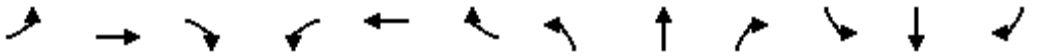
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	42	2588	132	111	1687	41	178	38	184	189	109	42
v/c Ratio	0.10	1.13	0.16	0.25	0.80	0.05	0.72	0.10	0.43	0.65	0.28	0.11
Control Delay	6.0	96.4	9.3	32.8	10.6	0.1	63.8	39.0	18.5	56.7	43.3	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.0	96.4	9.3	32.8	10.6	0.1	63.8	39.0	18.5	56.7	43.3	3.6
Queue Length 50th (m)	2.4	~320.0	8.4	12.1	34.0	0.0	43.0	8.0	13.9	44.9	23.8	0.0
Queue Length 95th (m)	7.0	#350.4	19.2	m26.3	42.1	m0.1	62.7	15.9	32.0	63.7	36.6	3.9
Internal Link Dist (m)		627.2			576.6			182.2			268.3	
Turn Bay Length (m)	97.0		52.0	150.0		75.0	26.0			15.0		15.0
Base Capacity (vph)	415	2289	828	452	2121	852	403	620	621	476	638	598
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	1.13	0.16	0.25	0.80	0.05	0.44	0.06	0.30	0.40	0.17	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

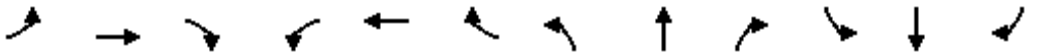
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	2588	132	111	1687	41	178	38	184	189	109	42
Future Volume (vph)	42	2588	132	111	1687	41	178	38	184	189	109	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1674	4565	1585	1825	4230	1633	1825	1830	1601	1825	1883	1633
Flt Permitted	0.06	1.00	1.00	0.06	1.00	1.00	0.62	1.00	1.00	0.73	1.00	1.00
Satd. Flow (perm)	106	4565	1585	116	4230	1633	1189	1830	1601	1407	1883	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	2588	132	111	1687	41	178	38	184	189	109	42
RTOR Reduction (vph)	0	0	33	0	0	20	0	0	94	0	0	33
Lane Group Flow (vph)	42	2588	99	111	1687	21	178	38	90	189	109	9
Heavy Vehicles (%)	9%	1%	3%	0%	9%	0%	0%	5%	2%	0%	2%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	88.1	63.2	63.2	88.1	63.2	63.2	23.9	23.9	23.9	23.9	23.9	23.9
Effective Green, g (s)	94.1	65.2	65.2	94.1	65.2	65.2	26.9	26.9	26.9	26.9	26.9	26.9
Actuated g/C Ratio	0.72	0.50	0.50	0.72	0.50	0.50	0.21	0.21	0.21	0.21	0.21	0.21
Clearance Time (s)	4.0	7.0	7.0	4.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	413	2289	794	450	2121	819	246	378	331	291	389	337
v/s Ratio Prot	0.02	c0.57		c0.05	0.40			0.02			0.06	
v/s Ratio Perm	0.05		0.06	0.13		0.01	c0.15		0.06	0.13		0.01
v/c Ratio	0.10	1.13	0.12	0.25	0.80	0.03	0.72	0.10	0.27	0.65	0.28	0.03
Uniform Delay, d1	11.3	32.4	17.2	21.1	26.9	16.4	48.1	41.8	43.3	47.2	43.4	41.1
Progression Factor	1.00	1.00	1.00	2.48	0.29	0.01	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	64.9	0.3	1.0	2.5	0.0	10.1	0.1	0.4	4.9	0.4	0.0
Delay (s)	11.8	97.3	17.5	53.2	10.5	0.2	58.1	41.9	43.8	52.2	43.8	41.1
Level of Service	B	F	B	D	B	A	E	D	D	D	D	D
Approach Delay (s)		92.2			12.8			50.0			48.1	
Approach LOS		F			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	58.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
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)	67	2794	125	69	1434	94	128	1	200	404	14	195
Future Volume (vph)	67	2794	125	69	1434	94	128	1	200	404	14	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		55.0	125.0		70.0	50.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.851				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4565	1570	1825	4154	1601	1807	1619	0	1789	1883	1601
Flt Permitted	0.085			0.058			0.748			0.267		
Satd. Flow (perm)	160	4565	1570	111	4154	1601	1423	1619	0	503	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			88			89		112				118
Link Speed (k/h)		70			70			50			48	
Link Distance (m)		600.6			587.4			203.4			224.2	
Travel Time (s)		30.9			30.2			14.6			16.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	1%	4%	0%	11%	2%	1%	2%	1%	2%	2%	2%
Adj. Flow (vph)	67	2794	125	69	1434	94	128	1	200	404	14	195
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	2794	125	69	1434	94	128	201	0	404	14	195
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	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	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	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	0.0
Detector 1 Size(m)	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6			8		7	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	8	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		5.0	5.0	5.0
Minimum Split (s)	9.5	25.2	25.2	11.5	25.2	25.2	22.5	22.5		9.5	22.5	22.5
Total Split (s)	10.8	69.3	69.3	11.5	70.0	70.0	14.5	14.5		34.7	49.2	49.2
Total Split (%)	8.3%	53.3%	53.3%	8.8%	53.8%	53.8%	11.2%	11.2%		26.7%	37.8%	37.8%
Maximum Green (s)	6.3	64.1	64.1	7.5	64.8	64.8	10.2	10.2		30.2	44.7	44.7
Yellow Time (s)	3.5	4.2	4.2	3.0	4.2	4.2	3.3	3.3		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-0.2	-0.2	-3.0	-0.2	0.0	-3.3	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	1.0	5.0	5.2	1.0	4.3		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	5.5	5.5	3.5	5.5	5.5	3.5	3.5		3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Min	Min		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0			0	0
Act Effct Green (s)	72.4	66.9	66.9	79.7	67.4	67.2	14.0	10.7		44.5	44.5	44.5
Actuated g/C Ratio	0.56	0.51	0.51	0.61	0.52	0.52	0.11	0.08		0.34	0.34	0.34
v/c Ratio	0.40	1.19	0.15	0.34	0.67	0.11	0.84	0.85		0.87	0.02	0.31
Control Delay	23.6	129.5	18.8	27.3	27.7	8.7	96.6	56.7		57.0	28.5	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	23.6	129.5	18.8	27.3	27.7	8.7	96.6	56.7		57.0	28.5	13.9
LOS	C	F	B	C	C	A	F	E		E	C	B
Approach Delay		122.5			26.5			72.3			42.6	
Approach LOS		F			C			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.19			
Intersection Signal Delay: 82.9		Intersection LOS: F	
Intersection Capacity Utilization 103.7%		ICU Level of Service G	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 3: Prince Michael Dr/John McKay Blvd & Dundas St E

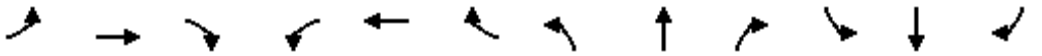
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	67	2794	125	69	1434	94	128	201	404	14	195
v/c Ratio	0.40	1.19	0.15	0.34	0.67	0.11	0.84	0.85	0.87	0.02	0.31
Control Delay	23.6	129.5	18.8	27.3	27.7	8.7	96.6	56.7	57.0	28.5	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	129.5	18.8	27.3	27.7	8.7	96.6	56.7	57.0	28.5	13.9
Queue Length 50th (m)	13.0	~363.8	15.1	10.7	102.5	7.5	32.8	22.8	87.4	2.4	13.6
Queue Length 95th (m)	m13.1	m#305.7	m14.5	23.8	85.5	11.0	#68.7	#66.3	#136.2	7.0	32.0
Internal Link Dist (m)		576.6			563.4			179.4		200.2	
Turn Bay Length (m)	115.0		55.0	125.0		70.0	50.0		15.0		15.0
Base Capacity (vph)	168	2347	850	206	2152	869	153	236	470	647	627
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	1.19	0.15	0.33	0.67	0.11	0.84	0.85	0.86	0.02	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

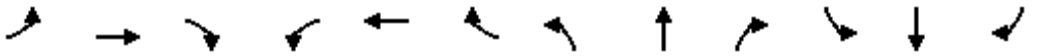
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	2794	125	69	1434	94	128	1	200	404	14	195
Future Volume (vph)	67	2794	125	69	1434	94	128	1	200	404	14	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	1.0	5.0	5.2	1.0	4.3		4.5	4.5	4.5
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4565	1570	1825	4154	1601	1807	1618		1789	1883	1601
Flt Permitted	0.09	1.00	1.00	0.06	1.00	1.00	0.75	1.00		0.27	1.00	1.00
Satd. Flow (perm)	160	4565	1570	111	4154	1601	1423	1618		502	1883	1601
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	67	2794	125	69	1434	94	128	1	200	404	14	195
RTOR Reduction (vph)	0	0	43	0	0	44	0	103	0	0	0	78
Lane Group Flow (vph)	67	2794	82	69	1434	50	128	98	0	404	14	117
Heavy Vehicles (%)	2%	1%	4%	0%	11%	2%	1%	2%	1%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	70.9	65.9	65.9	72.2	66.3	66.3	10.7	10.7		44.5	44.5	44.5
Effective Green, g (s)	70.9	66.1	66.1	78.2	66.5	66.3	14.0	10.7		44.5	44.5	44.5
Actuated g/C Ratio	0.55	0.51	0.51	0.60	0.51	0.51	0.11	0.08		0.34	0.34	0.34
Clearance Time (s)	4.5	5.2	5.2	4.0	5.2	5.2	4.3	4.3		4.5	4.5	4.5
Vehicle Extension (s)	3.0	5.5	5.5	3.5	5.5	5.5	3.5	3.5		3.0	3.0	3.0
Lane Grp Cap (vph)	149	2321	798	184	2124	816	153	133		463	644	548
v/s Ratio Prot	0.02	c0.61		c0.03	0.35			0.06		c0.20	0.01	
v/s Ratio Perm	0.23		0.05	0.20		0.03	0.09			c0.10		0.07
v/c Ratio	0.45	1.20	0.10	0.38	0.68	0.06	0.84	0.74		0.87	0.02	0.21
Uniform Delay, d1	17.5	32.0	16.6	27.7	23.7	16.1	56.9	58.3		36.9	28.3	30.3
Progression Factor	1.92	1.62	2.99	1.92	1.10	2.18	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.2	92.1	0.0	1.4	1.6	0.1	31.5	19.7		16.4	0.0	0.2
Delay (s)	33.8	143.8	49.6	54.5	27.5	35.3	88.4	78.0		53.3	28.3	30.5
Level of Service	C	F	D	D	C	D	F	E		D	C	C
Approach Delay (s)		137.4			29.2			82.0			45.5	
Approach LOS		F			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	92.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.3
Intersection Capacity Utilization	103.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



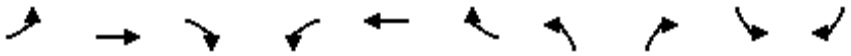
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	3208	82	104	1464	41	58	0	310	197	0	93
Future Volume (vph)	29	3208	82	104	1464	41	58	0	310	197	0	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		60.0	135.0		70.0	25.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4565	1601	1807	4230	1601	1789	1883	1633	1789	1883	1601
Flt Permitted	0.118			0.048			0.757			0.757		
Satd. Flow (perm)	222	4565	1601	91	4230	1601	1426	1883	1633	1426	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			70			70			69			112
Link Speed (k/h)		70			70			50			48	
Link Distance (m)		587.4			404.7			240.3			182.1	
Travel Time (s)		30.2			20.8			17.3			13.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	1%	2%	1%	9%	2%	2%	2%	0%	2%	2%	2%
Adj. Flow (vph)	29	3208	82	104	1464	41	58	0	310	197	0	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	3208	82	104	1464	41	58	0	310	197	0	93
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	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	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	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	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	Perm		Perm	Perm		Perm
Protected Phases	5	2		1	6			8			4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.7	26.7	11.0	26.7	26.7	25.0	25.0	25.0	22.5	22.5	22.5
Total Split (s)	9.5	86.5	86.5	11.0	88.0	88.0	32.5	32.5	32.5	32.5	32.5	32.5
Total Split (%)	7.3%	66.5%	66.5%	8.5%	67.7%	67.7%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Maximum Green (s)	5.0	79.8	79.8	7.0	81.3	81.3	25.6	25.6	25.6	28.0	28.0	28.0
Yellow Time (s)	3.5	4.2	4.2	3.0	4.2	4.2	3.3	3.3	3.3	3.5	3.5	3.5
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	3.6	3.6	3.6	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-1.7	-1.7	-3.0	-1.7	0.0	-1.9	0.0	-1.9	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	1.0	5.0	6.7	5.0	6.9	5.0	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	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	3.0	3.0
Recall Mode	None	C-Max	C-Max	Max	C-Max	C-Max	Min	Min	Min	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	87.2	81.5	81.5	99.2	89.5	87.8	24.8		24.8	25.3		25.3
Actuated g/C Ratio	0.67	0.63	0.63	0.76	0.69	0.68	0.19		0.19	0.19		0.19
v/c Ratio	0.14	1.12	0.08	0.44	0.50	0.04	0.21		0.84	0.71		0.23
Control Delay	6.1	73.9	2.7	30.6	12.2	3.9	45.2		59.6	63.1		6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	6.1	73.9	2.7	30.6	12.2	3.9	45.2		59.6	63.1		6.1
LOS	A	E	A	C	B	A	D		E	E		A
Approach Delay		71.6			13.2			57.3			44.8	
Approach LOS		E			B			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.12			
Intersection Signal Delay: 52.4		Intersection LOS: D	
Intersection Capacity Utilization 104.2%		ICU Level of Service G	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 4: Meadowridge Dr & Dundas St E



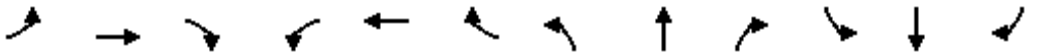
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR
Lane Group Flow (vph)	29	3208	82	104	1464	41	58	310	197	93
v/c Ratio	0.14	1.12	0.08	0.44	0.50	0.04	0.21	0.84	0.71	0.23
Control Delay	6.1	73.9	2.7	30.6	12.2	3.9	45.2	59.6	63.1	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	73.9	2.7	30.6	12.2	3.9	45.2	59.6	63.1	6.1
Queue Length 50th (m)	1.8	~388.0	1.1	17.5	52.2	0.3	12.3	59.5	46.4	0.0
Queue Length 95th (m)	m1.6	m114.7	m0.9	34.4	86.7	3.6	24.8	#100.2	72.9	9.6
Internal Link Dist (m)		563.4			380.7					
Turn Bay Length (m)	115.0		60.0	135.0		70.0	25.0		15.0	15.0
Base Capacity (vph)	211	2861	1029	236	2910	1103	301	399	307	432
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	0.14	1.12	0.08	0.44	0.50	0.04	0.19	0.78	0.64	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

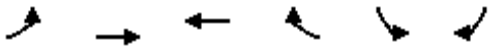
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

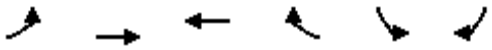


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	3208	82	104	1464	41	58	0	310	197	0	93
Future Volume (vph)	29	3208	82	104	1464	41	58	0	310	197	0	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	1.0	5.0	6.7	5.0		5.0	4.5		4.5
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00		1.00	1.00		1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00
Satd. Flow (prot)	1789	4565	1601	1807	4230	1601	1789		1633	1789		1601
Flt Permitted	0.12	1.00	1.00	0.05	1.00	1.00	0.76		1.00	0.76		1.00
Satd. Flow (perm)	222	4565	1601	91	4230	1601	1426		1633	1426		1601
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	29	3208	82	104	1464	41	58	0	310	197	0	93
RTOR Reduction (vph)	0	0	26	0	0	14	0	0	56	0	0	75
Lane Group Flow (vph)	29	3208	56	104	1464	27	58	0	254	197	0	18
Heavy Vehicles (%)	2%	1%	2%	1%	9%	2%	2%	2%	0%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm		Perm	Perm		Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Actuated Green, G (s)	82.8	79.8	79.8	93.5	86.0	86.0	22.9		22.9	25.3		25.3
Effective Green, g (s)	82.8	81.5	81.5	96.5	87.7	86.0	24.8		24.8	25.3		25.3
Actuated g/C Ratio	0.64	0.63	0.63	0.74	0.67	0.66	0.19		0.19	0.19		0.19
Clearance Time (s)	4.5	6.7	6.7	4.0	6.7	6.7	6.9		6.9	4.5		4.5
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)	177	2861	1003	235	2853	1059	272		311	277		311
v/s Ratio Prot	0.00	c0.70		c0.04	0.35							
v/s Ratio Perm	0.10		0.03	0.29		0.02	0.04		c0.16	0.14		0.01
v/c Ratio	0.16	1.12	0.06	0.44	0.51	0.03	0.21		0.82	0.71		0.06
Uniform Delay, d1	9.2	24.2	9.4	33.4	10.5	7.6	44.4		50.4	48.9		42.6
Progression Factor	1.08	0.68	0.97	1.36	1.08	6.18	1.00		1.00	1.00		1.00
Incremental Delay, d2	0.0	55.1	0.0	5.5	0.6	0.0	0.4		15.2	8.3		0.1
Delay (s)	10.0	71.5	9.1	50.9	12.0	46.9	44.8		65.6	57.3		42.7
Level of Service	B	E	A	D	B	D	D		E	E		D
Approach Delay (s)		69.4			15.4			62.3			52.6	
Approach LOS		E			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	52.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	104.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



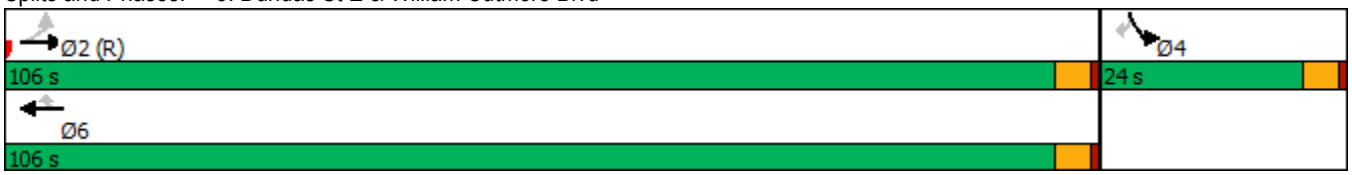
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	40	3675	1536	69	200	113
Future Volume (vph)	40	3675	1536	69	200	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	80.0			70.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	75.0				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1789	4520	4520	1601	1789	1601
Flt Permitted	0.111				0.950	
Satd. Flow (perm)	209	4520	4520	1601	1789	1601
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				69		80
Link Speed (k/h)		70	70		48	
Link Distance (m)		404.7	451.7		142.5	
Travel Time (s)		20.8	23.2		10.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	3675	1536	69	200	113
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	3675	1536	69	200	113
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	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
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1
Trailing Detector (m)	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
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1
Detector 1 Type	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
Detector 1 Queue (s)	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
Detector 2 Position(m)		28.7	28.7			
Detector 2 Size(m)		1.8	1.8			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4

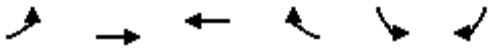


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	106.0	106.0	106.0	106.0	24.0	24.0
Total Split (%)	81.5%	81.5%	81.5%	81.5%	18.5%	18.5%
Maximum Green (s)	101.5	101.5	101.5	101.5	19.5	19.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	101.5	101.5	101.5	101.5	19.5	19.5
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.15	0.15
v/c Ratio	0.25	1.04	0.44	0.05	0.75	0.37
Control Delay	2.3	30.0	1.3	0.1	70.7	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.3	30.0	1.3	0.1	70.7	21.2
LOS	A	C	A	A	E	C
Approach Delay		29.7	1.3		52.8	
Approach LOS		C	A		D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 22.9		Intersection LOS: C	
Intersection Capacity Utilization 89.6%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 5: Dundas St E & William Cutmore Blvd





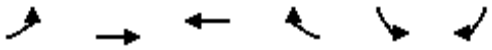
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	40	3675	1536	69	200	113
v/c Ratio	0.25	1.04	0.44	0.05	0.75	0.37
Control Delay	2.3	30.0	1.3	0.1	70.7	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.3	30.0	1.3	0.1	70.7	21.2
Queue Length 50th (m)	1.4	~116.0	9.2	0.0	49.7	7.4
Queue Length 95th (m)	m1.0	m61.3	m13.4	m0.1	#82.9	25.0
Internal Link Dist (m)		380.7	427.7		118.5	
Turn Bay Length (m)	80.0			70.0		
Base Capacity (vph)	163	3529	3529	1265	268	308
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	1.04	0.44	0.05	0.75	0.37

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.

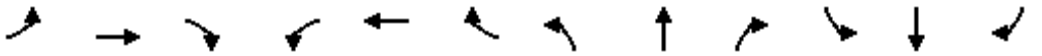
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	40	3675	1536	69	200	113
Future Volume (vph)	40	3675	1536	69	200	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1789	4520	4520	1601	1789	1601
Flt Permitted	0.11	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	209	4520	4520	1601	1789	1601
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	3675	1536	69	200	113
RTOR Reduction (vph)	0	0	0	15	0	68
Lane Group Flow (vph)	40	3675	1536	54	200	45
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	101.5	101.5	101.5	101.5	19.5	19.5
Effective Green, g (s)	101.5	101.5	101.5	101.5	19.5	19.5
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.15	0.15
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	163	3529	3529	1250	268	240
v/s Ratio Prot		c0.81	0.34		c0.11	
v/s Ratio Perm	0.19			0.03		0.03
v/c Ratio	0.25	1.04	0.44	0.04	0.75	0.19
Uniform Delay, d1	3.9	14.2	4.7	3.2	52.9	48.3
Progression Factor	0.44	0.58	0.22	0.02	1.00	1.00
Incremental Delay, d2	0.3	19.7	0.3	0.0	17.2	1.7
Delay (s)	2.0	27.9	1.3	0.1	70.1	50.0
Level of Service	A	C	A	A	E	D
Approach Delay (s)		27.6	1.3		62.8	
Approach LOS		C	A		E	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



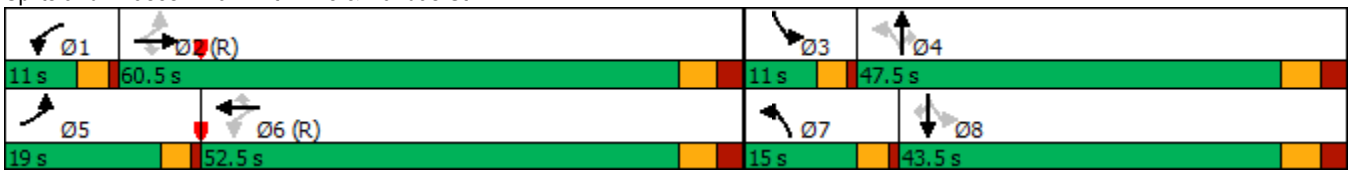
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	3125	515	140	1231	142	255	366	179	213	609	118
Future Volume (vph)	258	3125	515	140	1231	142	255	366	179	213	609	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	222.0		55.0	230.0		65.0	130.0		90.0	115.0		65.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4565	1633	1789	4230	1633	1630	3579	1585	1825	3650	1633
Flt Permitted	0.098			0.071			0.194			0.492		
Satd. Flow (perm)	188	4565	1633	134	4230	1633	333	3579	1585	945	3650	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			157			130			158			128
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		451.7			295.5			522.7			348.2	
Travel Time (s)		23.2			15.2			37.6			25.1	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	1%	0%	2%	9%	0%	12%	2%	3%	0%	0%	0%
Adj. Flow (vph)	258	3125	515	140	1231	142	255	366	179	213	609	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	258	3125	515	140	1231	142	255	366	179	213	609	118
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	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	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	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	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	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	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	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	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	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	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

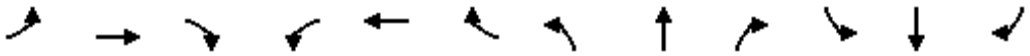
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	12.0	45.3	45.3	11.0	45.3	45.3	11.0	47.5	47.5	11.0	47.5	47.5
Total Split (s)	19.0	60.5	60.5	11.0	52.5	52.5	15.0	47.5	47.5	11.0	43.5	43.5
Total Split (%)	14.6%	46.5%	46.5%	8.5%	40.4%	40.4%	11.5%	36.5%	36.5%	8.5%	33.5%	33.5%
Maximum Green (s)	15.0	54.2	54.2	7.0	46.2	46.2	11.0	41.0	41.0	7.0	37.0	37.0
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	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	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0		34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	78.8	61.1	61.1	71.2	54.5	54.5	49.2	34.2	34.2	44.2	30.2	30.2
Actuated g/C Ratio	0.61	0.47	0.47	0.55	0.42	0.42	0.38	0.26	0.26	0.34	0.23	0.23
v/c Ratio	0.72	1.46	0.61	0.60	0.69	0.19	0.96	0.39	0.34	0.55	0.72	0.25
Control Delay	30.9	236.9	23.1	36.0	34.8	6.3	78.2	39.8	8.8	34.3	50.7	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.9	236.9	23.1	36.0	34.8	6.3	78.2	39.8	8.8	34.3	50.7	6.2
LOS	C	F	C	D	C	A	E	D	A	C	D	A
Approach Delay		195.0			32.3			45.1			41.4	
Approach LOS		F			C			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 12 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.46			
Intersection Signal Delay: 123.6		Intersection LOS: F	
Intersection Capacity Utilization 114.1%		ICU Level of Service H	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 6: Ninth Line & Dundas St E





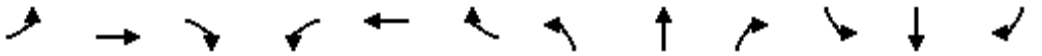
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	258	3125	515	140	1231	142	255	366	179	213	609	118
v/c Ratio	0.72	1.46	0.61	0.60	0.69	0.19	0.96	0.39	0.34	0.55	0.72	0.25
Control Delay	30.9	236.9	23.1	36.0	34.8	6.3	78.2	39.8	8.8	34.3	50.7	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.9	236.9	23.1	36.0	34.8	6.3	78.2	39.8	8.8	34.3	50.7	6.2
Queue Length 50th (m)	49.0	~463.2	69.5	18.0	110.1	1.8	47.8	40.6	4.1	38.1	76.1	0.0
Queue Length 95th (m)	m50.0	m#454.0	m65.6	#46.0	138.1	15.6	#83.9	50.8	20.3	52.4	89.6	12.0
Internal Link Dist (m)		427.7			271.5			498.7			324.2	
Turn Bay Length (m)	222.0		55.0	230.0		65.0	130.0		90.0	115.0		65.0
Base Capacity (vph)	368	2145	850	234	1772	759	265	1170	624	388	1080	573
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	1.46	0.61	0.60	0.69	0.19	0.96	0.31	0.29	0.55	0.56	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

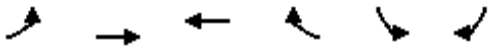
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	3125	515	140	1231	142	255	366	179	213	609	118
Future Volume (vph)	258	3125	515	140	1231	142	255	366	179	213	609	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	4565	1633	1789	4230	1633	1630	3579	1585	1825	3650	1633
Flt Permitted	0.10	1.00	1.00	0.07	1.00	1.00	0.19	1.00	1.00	0.49	1.00	1.00
Satd. Flow (perm)	188	4565	1633	134	4230	1633	333	3579	1585	945	3650	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	258	3125	515	140	1231	142	255	366	179	213	609	118
RTOR Reduction (vph)	0	0	83	0	0	76	0	0	116	0	0	91
Lane Group Flow (vph)	258	3125	432	140	1231	67	255	366	63	213	609	27
Heavy Vehicles (%)	0%	1%	0%	2%	9%	0%	12%	2%	3%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Actuated Green, G (s)	73.5	59.8	59.8	62.9	53.2	53.2	43.7	32.7	32.7	35.7	28.7	28.7
Effective Green, g (s)	76.5	61.1	61.1	68.9	54.5	54.5	46.7	34.2	34.2	41.7	30.2	30.2
Actuated g/C Ratio	0.59	0.47	0.47	0.53	0.42	0.42	0.36	0.26	0.26	0.32	0.23	0.23
Clearance Time (s)	4.0	6.3	6.3	4.0	6.3	6.3	4.0	6.5	6.5	4.0	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	353	2145	767	232	1773	684	259	941	416	370	847	379
v/s Ratio Prot	c0.11	c0.68		0.06	0.29		c0.11	0.10		0.04	c0.17	
v/s Ratio Perm	0.32		0.26	0.26		0.04	0.25		0.04	0.14		0.02
v/c Ratio	0.73	1.46	0.56	0.60	0.69	0.10	0.98	0.39	0.15	0.58	0.72	0.07
Uniform Delay, d1	28.0	34.5	24.8	28.1	30.9	22.9	35.2	39.3	36.8	34.4	46.0	39.0
Progression Factor	1.21	1.12	1.23	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	205.8	0.3	4.4	2.3	0.3	51.2	0.3	0.2	2.2	2.9	0.1
Delay (s)	34.6	244.5	30.9	32.5	33.2	23.1	86.4	39.6	36.9	36.5	48.9	39.0
Level of Service	C	F	C	C	C	C	F	D	D	D	D	D
Approach Delay (s)		202.4			32.2			53.9			44.9	
Approach LOS		F			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	129.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

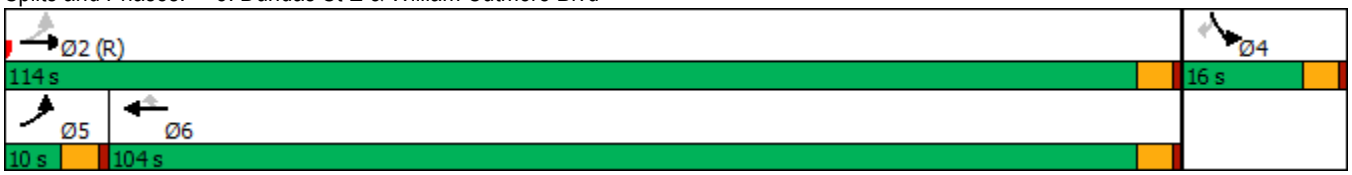


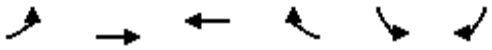
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	123	2047	4141	215	143	82
Future Volume (vph)	123	2047	4141	215	143	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	80.0			70.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	75.0				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1789	4520	4520	1601	1789	1601
Flt Permitted	0.038				0.950	
Satd. Flow (perm)	72	4520	4520	1601	1789	1601
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				150		58
Link Speed (k/h)		70	70		48	
Link Distance (m)		404.7	451.7		199.7	
Travel Time (s)		20.8	23.2		15.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	123	2047	4141	215	143	82
Shared Lane Traffic (%)						
Lane Group Flow (vph)	123	2047	4141	215	143	82
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	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
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1
Trailing Detector (m)	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
Detector 1 Size(m)	6.1	1.8	1.8	6.1	6.1	6.1
Detector 1 Type	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
Detector 1 Queue (s)	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
Detector 2 Position(m)		28.7	28.7			
Detector 2 Size(m)		1.8	1.8			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2	2	6	6		4

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	2.5	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	7.0	22.5	22.5	22.5	22.5	22.5
Total Split (s)	10.0	114.0	104.0	104.0	16.0	16.0
Total Split (%)	7.7%	87.7%	80.0%	80.0%	12.3%	12.3%
Maximum Green (s)	5.5	109.5	99.5	99.5	11.5	11.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	Max	Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	109.5	109.5	99.5	99.5	11.5	11.5
Actuated g/C Ratio	0.84	0.84	0.77	0.77	0.09	0.09
v/c Ratio	0.92	0.54	1.20	0.17	0.91	0.42
Control Delay	89.1	1.7	109.8	0.0	108.7	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.1	1.7	109.8	0.0	108.7	28.3
LOS	F	A	F	A	F	C
Approach Delay		6.7	104.4		79.4	
Approach LOS		A	F		E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.20			
Intersection Signal Delay: 72.1		Intersection LOS: E	
Intersection Capacity Utilization 106.0%		ICU Level of Service G	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 5: Dundas St E & William Cutmore Blvd





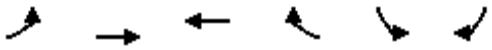
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	123	2047	4141	215	143	82
v/c Ratio	0.92	0.54	1.20	0.17	0.91	0.42
Control Delay	89.1	1.7	109.8	0.0	108.7	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.1	1.7	109.8	0.0	108.7	28.3
Queue Length 50th (m)	19.8	18.0	~545.5	0.0	36.9	5.8
Queue Length 95th (m)	m#54.5	24.6	m34.0	m0.0	#76.1	21.6
Internal Link Dist (m)		380.7	427.7		175.7	
Turn Bay Length (m)	80.0			70.0		
Base Capacity (vph)	133	3807	3459	1260	158	194
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.54	1.20	0.17	0.91	0.42

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.

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	123	2047	4141	215	143	82
Future Volume (vph)	123	2047	4141	215	143	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1789	4520	4520	1601	1789	1601
Flt Permitted	0.04	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	72	4520	4520	1601	1789	1601
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	123	2047	4141	215	143	82
RTOR Reduction (vph)	0	0	0	35	0	53
Lane Group Flow (vph)	123	2047	4141	180	143	29
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2	2	6	6		4
Actuated Green, G (s)	109.5	109.5	99.5	99.5	11.5	11.5
Effective Green, g (s)	109.5	109.5	99.5	99.5	11.5	11.5
Actuated g/C Ratio	0.84	0.84	0.77	0.77	0.09	0.09
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	133	3807	3459	1225	158	141
v/s Ratio Prot	c0.04	0.45	c0.92		c0.08	
v/s Ratio Perm	0.73			0.11		0.02
v/c Ratio	0.92	0.54	1.20	0.15	0.91	0.21
Uniform Delay, d1	50.2	3.0	15.2	4.0	58.7	55.0
Progression Factor	1.41	0.43	1.18	0.00	1.00	1.00
Incremental Delay, d2	47.5	0.4	89.0	0.0	50.0	3.3
Delay (s)	118.3	1.7	107.0	0.0	108.7	58.3
Level of Service	F	A	F	A	F	E
Approach Delay (s)		8.3	101.7		90.4	
Approach LOS		A	F		F	

Intersection Summary			
HCM 2000 Control Delay	71.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	106.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group


GHD