

560 Main Street East, Milton, ON Transportation Impact and Parking Study (2nd Submission)

Paradigm Transportation Solutions Limited



Project Summary



Project Number

200624

August 2022

Client

NEATT Communities

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Signing Licencee

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Version 1.0.0

Executive Summary

Content

Neatt Communities retained Paradigm Transportation Solutions Limited (Paradigm) to conduct this Transportation Impact Study and Parking Study for a proposed mixed-use development at 560 Main Street East in the Town of Milton, Ontario.

This study aims to determine the net impacts of the development traffic on the surrounding road network, document the adequacy of the proposed parking supply and provide options for reducing personal vehicle use through Transportation Demand Management (TDM) policies. If needed, this study will identify any improvements to support the development of the subject site.

Conclusions

This study evaluated the impacts of background traffic growth and projected the impacts of the development with and without traffic mitigation measures associated with the construction of 570 residential units and 960 m² (10,340 sq.ft.) of retail space. Access to the site is proposed via one right in/left out driveway connection to the future Wilson Drive Extension.

Transportation Study

The proposed development is projected to generate approximately 175 new vehicle trips during the weekday AM peak hour and 206 new vehicle trips during the weekday PM peak hour.

Overall, the forecast traffic volumes to be added by full built out of the development to the study area result in relatively small impacts at the study intersections. However, it is acknowledged that deficiencies are projected to occur at certain locations within the study area. They can be expected to persist in the future with anticipated growth in traffic, independent of the development. The following operational deficiencies have been identified:

Main Street East at Thompsons Road: The westbound and northbound left turn movements and the southbound and eastbound through movements are projected to operate in the LOS E-F range during the weekday PM peak hour under the 2031 horizon (independent of the development). Despite the above, the widening of any Town roadway to accommodate vehicular traffic goes against the vision of a people-centric, pedestrian-friendly environment that expects people to use more sustainable modes to travel¹.

Traditionally, intersection operations have focused on increasing the road network's capacity to accommodate more vehicles. Instead, a "balanced needs" approach that encourages alternative modes of transportation must be considered. Improved capacity along these corridors will be through measures supportive of transit, active transportation and transportation demand management to reduce reliance on single-occupant vehicles. By focusing on shifting commuter travel to public transit, intersection operations are expected to maintain the status quo.

Further, this intersection of major arterial and minor arterial roads would be expected to experience capacity constraints only for two to four hours a day on a typical weekday. The other 20 hours of the weekday, weekends and holidays would be expected to exhibit better vehicle traffic conditions.

Parking Study

The parking requirement for the development under the Town of Milton's Zoning By-Law 016-2014 is 1,046 spaces, equating to a parking rate of 1.50 per unit (resident) plus 194 spaces for visitors and retail uses. The proposed site provides for a total of 546 parking spaces (excluding 9 lay-by spaces).

The parking requirements outlined in Zoning By-Law 016-2014 are based on an approach that caters to auto-oriented travel rather than transition to promote residential and visitor travel through sustainable modes. Parking ratios need to recognize empirical evidence that parking demand has many factors and varies according to household size, income, auto ownership, and locational factors such as proximity to other uses and availability of multiple transportation mobility options.

Within the context of being in a Mobility Hub area, the land use lends itself to being less reliant on auto use, where residents and visitors can take advantage of the additional transportation choices such as walking, cycling and transit. It is expected that the land use will generate reduced parking demands due to the locale in combination with the proposed overall design and marketing strategy of the project.

Finding the right balance needed to support the Town's goals is critical, mainly since parking is an expensive resource. Sufficient automobile parking is necessary for the development to be successful. However,

¹ Milton Major Transit Station Area – Area Transportation Plan, April 2020, WSP



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too much parking can encourage traffic congestion, limit the ability to meet trip reduction goals, increase project costs, and impact site design and aesthetics.

Many existing Zoning By-Law parking requirements are antiquated and require updating to conform to and reflect current policies and best practices. Many municipalities recognize the oversupply of parking and are revising the zoning requirement to reflect this. Key municipalities recognized this include Town of Oakville, the City of Burlington, and the City of Kitchener. These municipalities have undertaken a comprehensive review of parking requirements and recognized that changes are required to meet policy objectives.

On average, the Town of Milton requires 32% more parking to be provided for this development than would be needed for the City of Burlington, Town of Oakville and City of Kitchener, which has adopted new parking requirements.

The transition from an automobile-dependent environment to one that is transit-supportive will require strategies to assist in shifting modal split and enabling the emergence of a more pedestrian-friendly transit-supportive environment. The over-provision of free or low-cost parking creates areas dominated by parking infrastructure that can negatively impact ridership and the pedestrian environment and provide an incentive for single-occupant vehicle use.

The Town of Milton and Applicant recognized this. As part of early discussions in establishing the terms of reference for the enclosed study, an alternative residential parking requirement of 0.80 spaces per unit plus 0.20 parking spaces for visitor parking was deemed appropriate, subject to a minimum bicycle parking supply of 1.00 long-term spaces per unit and 0.05 short-term space per unit.

Reasonable proxy parking demand data conducted at small format retail developments were compiled. These surveys observed a parking rate of no lower than 1 parking space per 36 square metres. The surveyed results are considered to be the most appropriate and applicable for the retail component as opposed to the generic rate outlined within the Zoning By-law. It is also recognized the Town of Milton Zoning By-law requirements for retail uses of 1 spacer per 20 square meters are reflective of demand typically seen at more prominent format retail outlets and standalone centres rather than smaller retail located within a mixed-use development.

Utilizing the alternative rates supplied by the Town of Milton and the parking rates observed at small retail developments, the actual parking demand for the proposed development is projected to be 597 vehicles

based on a simplistic approach. The rates are expected to be marginally less, around 586 spaces with time-of-day shared parking demand incorporated. The development will also implement a suite of Transportation Demand Management (TDM) Measures to reduce the dependency on vehicular travel further. These measures include:

- Active uses at grade along street frontages
- Provision of 570 long-term and 29 short-term bicycle spaces
- ► The building owner will allow residents to opt-out of a parking space, providing a discounted purchase price.
- ▶ A minimum of 75% of parking is underground or in a structure.
- Welcome Packets

As documented within the City of Kitchener and Region of Waterloo checklists, the proposed TDM measures result in a parking reduction of 51 spaces, equating to a total parking supply of 535, consistent with the proposed supply. As the TDM plan will be adopted and implemented, these additional parking reduction credits are warranted as they encourage residents to explore alternative sustainable travel modes made more enticing, given parking will be at a premium cost.

The TDM plan and the developments transportation context will provide residents with a range of mobility choices other than a privately-owned vehicle and supports the provision of an appropriate parking supply in the building.

As the development promotes using other modes of transportation through limited on-site parking to meet the projected demand, the development plays a significant role in setting an example for residents and visitors to consider non-automotive travel. This points to the importance of ongoing parking management and demand reduction strategies for this area, given the significant development plays within a Mobility Hub to ensure that an oversupply of parking is not provided that could hinder the ability to attract a substantial portion of the population to transit mode choice.

Based on the imperial data collected as part of this study, it is evident that the oversupply of parking can undermine the incentive for residents to use transit. Per the current development plan, 546 parking spaces are provided, whereas the Zoning by-law requires 1,046 parking spaces. Through the alternative rates offered by the Town of Milton, a review of proxy surveys collected at small retail establishments, and the incorporation of shared parking and transportation demand management measures, the proposed parking supply of 546 spaces is sufficient for the development. **Table E1** outlines the proposed parking supply.

TABLE E1: PROPOSED PARKING SUPPLY

Land Use	Town of Milton Alternative Rates	TDM Credit* Unbundled Parking	Proposed Parking Supply
Apartment - Resident	0.80	10%	0.72
Shared Parking Visitor/Retail	0.20	0%	0.21

^{*} As agreed upon with Town of Milton during Pre-Consultation

Recommendations

- ▶ The Town of Milton recognizes the conclusions drawn above;
- ► The Town of Milton supports the proposed parking supply of 0.93 spaces per unit.

[&]quot;The total TDM parking reduction achieved would only need to be equal to any proposed reduction in parking beyond the folloing minimum parking rates of 0.80 residential space and 0.20 visitor spaces."

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1 Introduction

1.1 Overview

Paradigm Transportation Solutions Limited (Paradigm) has been retained to conduct this Transportation Impact Study (TIS) and Parking Study for a proposed mixed-use development located at 560 Main Street East in the Town of Milton. **Figure 1.1** illustrates the location of the subject site.

This study determines the impacts of the development traffic on the surrounding road network and identifies the recommended improvements to accommodate the site-generated traffic. The scope of the study includes:

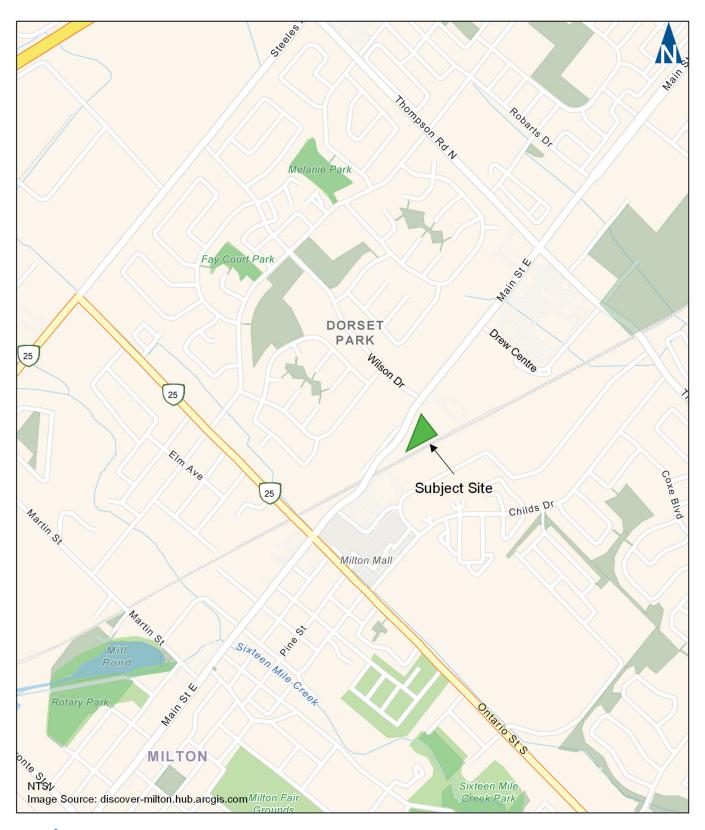
- Determine and assess the current study area traffic conditions;
- Forecast the additional traffic generated by the proposed development;
- Assess the site's circulation of delivery and waste collection vehicles;
- Analyze the impacts of the additional traffic on the study area street network;
- Recommend any necessary remedial measures to mitigate the traffic impacts;
- Review the proposed parking supply, and determine its adequacy compared to estimated parking demands; and
- Review and identify potential Transportation Demand Management (TDM) measures that can be implemented for the proposed development.

Appendix A contains the study's Terms of Reference provided to the Town of Milton in February 2021 and additional background material and email correspondence regarding the scope of the study.

1.2 Study Area

This study examines the weekday AM and PM peak hours for the following study area intersections:

- Main Street East at Ontario St North (signalized);
- Main Street East at Milton Mall Entrance (signalized);
- Main Street East at Wilson Drive (signalized);
- Main Street East at Drew Centre (signalized);
- ▶ Main Street East at Thompson Road (signalized); and
- One site driveway to the future GO Station Busway.





Location of Subject Site

2 Existing Conditions

The section of the report provides an overview of the existing conditions of the roadways in the study area and other features of the transportation network, including transit and active transportation infrastructure.

2.1 Road Network

The roadways of interest within the study area include:

- Main Street East is an east-west major roadway² with a four-lane urban cross-section. The posted speed limit within the study area is 50 km/h. Bike lanes are on the north and south side of the roadway between the Milton Mall Entrance and Wilson Drive. Sidewalks are provided along the north and south side of this roadway for the entire corridor.
- Ontario Street is a north-south major roadway with a four-lane urban cross-section. The posted speed limit within the study area is 50 km/h. There are no cycling facilities within the study area. Sidewalks are present along the east and west sides of the roadway.
- ▶ **Milton Mall Entrance** is north-south private access with a twolane urban cross-section. The access connects through to Nipissing Road. The speed limit is assumed to be 50 km/h.
- ▶ Wilson Drive is a north-south local roadway with a two-lane urban cross-section. The posted speed limit within the study area is 50 km/h. Sidewalks are present along the east and west sides of the roadway. There are no cycling facilities within the study area. Wilson Drive is planned to be extended in conjunction with the build-out of the proposed development southerly to serve as a bus loop connecting to the Milton GO Station and to provide access to the proposed development. The new busway will give access to the subject site. The extension is assumed to be complete by 2031.
- ▶ **Drew Centre** is a north-south local roadway with a two-lane urban cross-section with exclusive bus lanes. Sidewalks are present along the east and west sides of the street. The statutory 50 km/h speed limit is assumed. There are no cycling facilities within the study area.

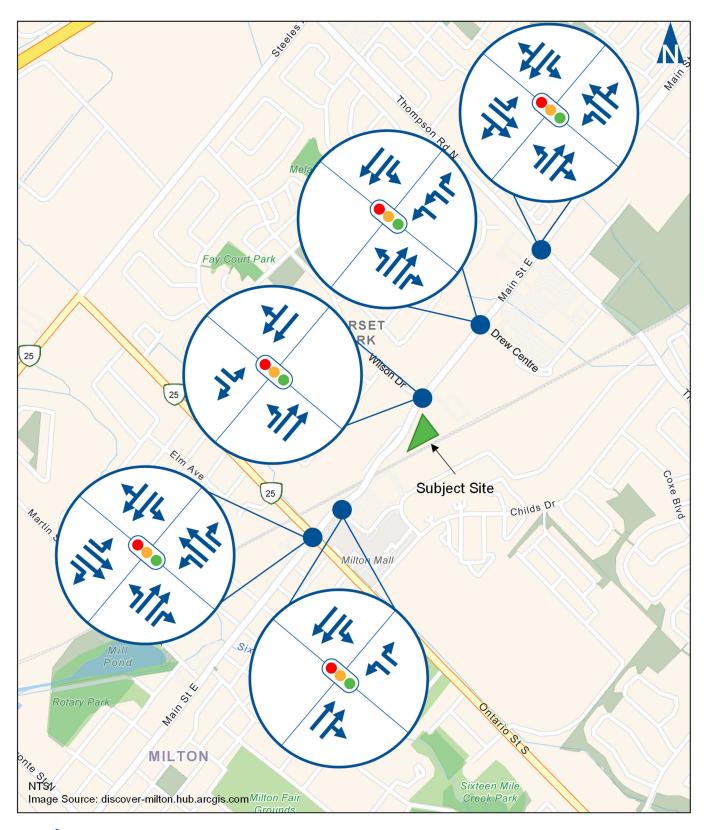
² Regional Municipality of Halton Regional Road Network, Halton Region Public Works, June 2017



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▶ **Thompson Road** is a north-south major roadway with a fourlane urban cross-section. The posted speed limit within the study area is 60 km/h. There are no cycling facilities within the study area. Sidewalks are present along the east and west sides of the roadway.

Figure 2.1 illustrates the existing lane configuration and traffic control at the study area intersections.





Existing Lane Configuration & Traffic Control

2.2 Pedestrian and Cycling Network

2.2.1 Pedestrian Network

The Town's pedestrian infrastructure within the study area consists of sidewalks along Main Street East, Ontario Street, Wilson Drive, Drew Centre, and Thompson Road.

2.2.2 Cycling Network

Cycling infrastructure typically consists of on-street and off-street facilities. On-street facilities comprise of cycling lanes, signed cycling routes, and paved shoulders. Off-street facilities are in the form of multi-use or informal trails.

Cycling lanes are between Milton Mall Entrance and Wilson Drive on Main Street East.

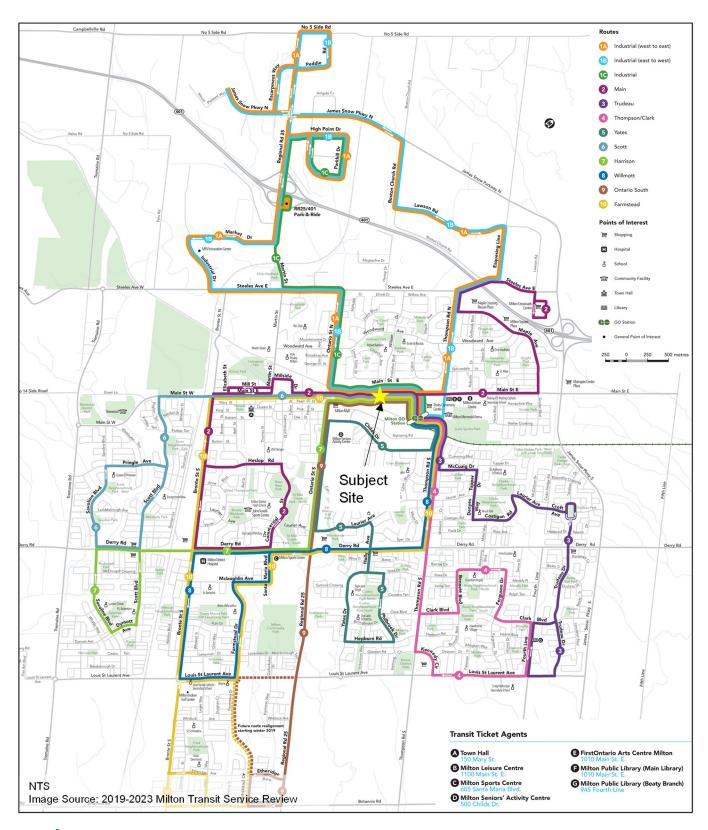
2.3 Transit Service

Milton Transit is the public transit operator in the Town of Milton. Milton Transit currently operates ten surface bus routes between Milton GO Station and the neighbourhoods across Milton between 5:15 AM and 10:13 PM during the weekdays and between 7:10 AM and 7:40 PM on Saturdays. The Milton Transit routes and frequencies are summarized in **Table 2.1**.

The closest transit stop is approximately 100 metres (2-minute walk) east of the site, located at the northeast corner of Main Street East and Wilson Drive. **Figure 2.2** illustrates the existing transit network, and **Figure 2.3** shows the transit stops within 500 metres (6-minute walk) from the site location.

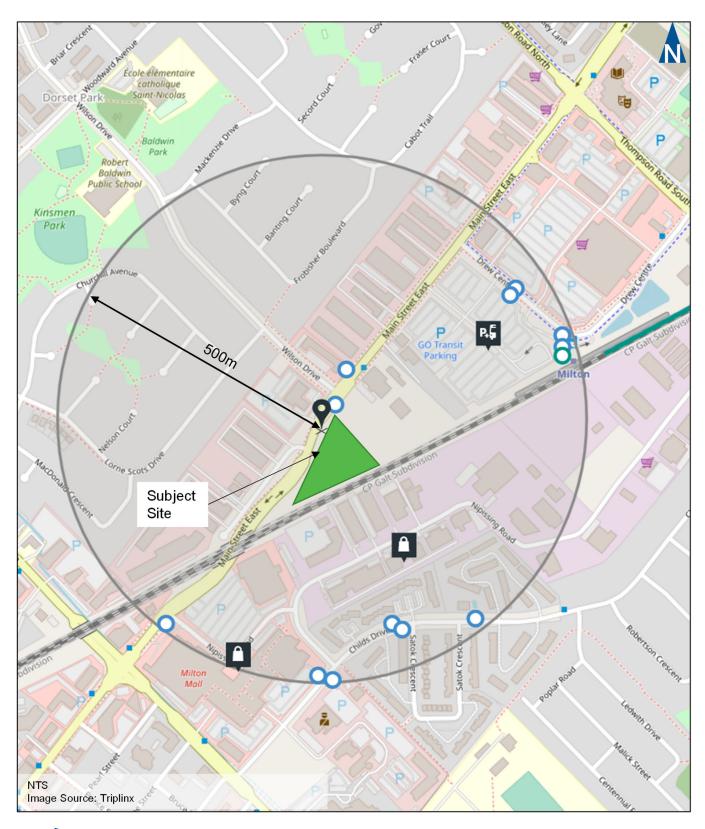
TABLE 2.1: MILTON TRANSIT ROUTES

.	D 10	Service Frequency				
Route	Description	Weekday	Saturday			
1 – Industrial	Provides service between the industrial area of Milton north of Main St and the Milton GO Station.	40-45 minute service	60-minute service			
2 – Main	Provides service between the Milton Crossroads Centre and the Milton Hospital, with an intermediate stop at the Milton GO Station.	30-minute service	30-minute service			
3 – Trudeau	Provides service from Milton GO Station south along Trudeau Dr.	30-minute peak service and 60- minute off-peak service	60-minute service			
4 – Thompson/ Clark	Provides service from Milton GO Station south along Thompson Rd and across Clark Blvd, serving the neighbourhood south of Derry Rd and east of Thompson Rd S.	30-minute peak service and 60- minute off-peak service	60-minute service			
5 – Yates	Provides service from Milton GO Station south along Ontario St S and Yates Dr serving the neighbourhood south of Derry Rd and east of Regional Rd 25	60-minute service	60-minute service			
6 – Scott	Provides service between the Milton GO Station and the neighbourhood west of Bronte St S, south of Main St W.	30-minute peak service and 60- minute off-peak service	60-minute service			
7 – Harrison	Provides service from Milton GO Station south along Ontario St S and west along Derry Rd, serving the neighbourhood south of Derry Rd and west of Bronte St S.	30-minute peak service and 60- minute off-peak service	60-minute service			
8 – Willmott	Provides service from Milton GO Station south along Thompson Rd S and west along Derry Rd, serving the neighbourhood south of Derry Rd and east of Bronte St S.	60-minute service	60-minute service			
9 – Ontario South	Provides service from Milton GO Station south along Ontario St S.	1-hour 15-minute service	60-minute service			
10 – Farmstead	Provides service from Milton GO Station south along Bronte St S and Farmstead Dr.	1-hour 15-minute service	60-minute service			





Existing Transit Network





Transit Stop Locations

2.4 Traffic Volumes

Turning Movement Counts (TMC) are used to assess intersection operations to quantify the movement of vehicles. Existing traffic counts at an intersection or road section form the foundation for analysis. The traffic counts are usually collected during peak periods at an intersection to complete the level of service analysis.

Table 2.1 summarizes the location and date of the existing TMC data collected for use in the analysis. Weekday peak hour TMC data was collected by the Town of Milton during February 2020. TMC data for the intersections at Ontario Street North, Wilson Drive, and Drew Centre were referenced from the Milton Major Transit Station Area (MTSA) Transportation Plan³. **Appendix B** contains the turning movement data.

TABLE 2.2: TURNING MOVEMENT COUNT LOCATION AND DATE

Date	Intersection	Peak Hour				
Date	intersection	AM	PM			
September 21, 2017	Main Street East & Ontario Street	07:45 hr	17:30 hr			
February 5, 2020	Main Street East & Milton Mall Entrance	07:15 hr	17:15 hr			
September 21, 2017	Main Street East & Wilson Drive	07:30 hr	18:00 hr			
September 21, 2017	Main Street East & Drew Centre	07:45 hr	18:00 hr			
February 5, 2020	Main Street East & Thompson Road	07:30 hr	16:45 hr			

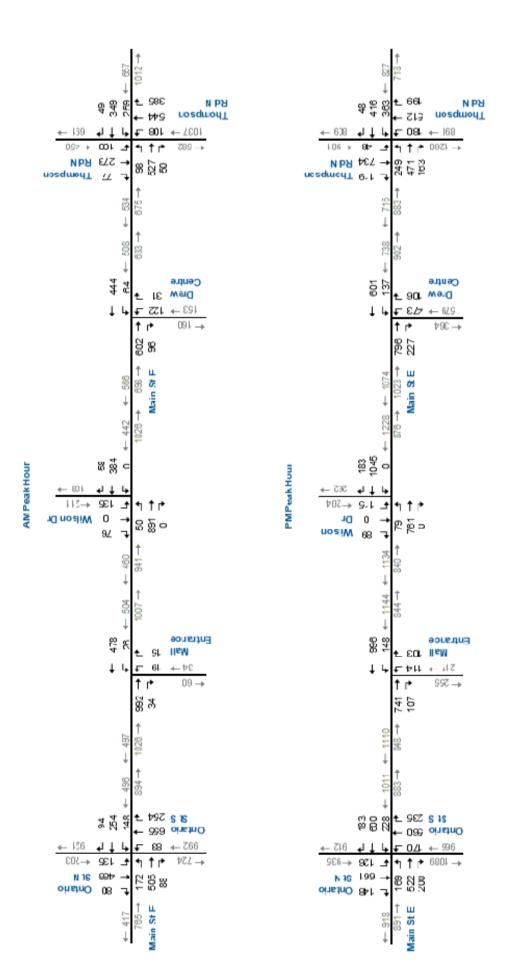
Town Staff identified growth rates during the pre-study consultation. To account for possible traffic increases in the historical count volumes, a base year condition (year 2021) is forecast. A generalized growth rate of 2.0% per annum is used to adjust the count data to the base year volumes. **Figure 2.4** illustrates the base year total traffic volumes.

³ Town of Milton – Milton Major Transit Station Area: Area Transportation Plan – April 2020



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Base Year Traffic Volumes





2.5 Traffic Operations

The operations of the intersections in the study area were evaluated for level-of-service conditions using the existing lane configurations, traffic controls and peak hour traffic volumes.

Intersection level of service (LOS) is a recognized method of quantifying traffic flow efficiency at intersections. It is based on the delay experienced by individual vehicles executing the various movements. The delay is related to the number of vehicles desiring to move compared to the estimated capacity for that movement. The capacity is based on several criteria related to the opposing traffic flows. The highest possible rating is LOS A, where the average total delay is equal to or less than 10.0 seconds per vehicle. When the average delay exceeds 80 seconds at signalized intersections (or 50 seconds at unsignalized intersections), the movement is considered to have a LOS F and remedial measures are usually implemented if feasible.

The level of service conditions on the existing road network has been assessed using Synchro 10. Based on the Region of Halton guidelines⁴, movements are considered critical under the following conditions:

- Delays classified as LOS E-F;
- Volume to capacity ratios for through movements or shared through/turning movements is greater than or equal to 0.85,
- Volume to capacity ratios for exclusive turning movements is greater than or equal to 0.95, and
- Queue lengths for individual movements are projected to exceed the available turning lane storage. Queue lengths are estimated using Synchro.

Table 2.2 details the existing level of service conditions. There are no critical movements in the base year AM and PM peak hours

Appendix C contains the supporting detailed Synchro 10 output.



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⁴ Halton Region – Transportation Impact Study Guidelines 2015

TABLE 2.3: BASE YEAR TRAFFIC OPERATIONS

pc										Directi	on / M	oveme	nt / App	oroach						
Peric					Eastk	ound			West	ound			North	bound			South	bound		
Analysis Period	Analysis Intersection	Control Type	MOE	Пеft	Through	Right	Approach	Heft	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Overall
	1 - Ontario St & Main St E	TCS	LOS Delay V/C Q Ex Avail.	C 26 0.51 26 40 14	C 30 0.59 42 -	A 0 0.00 0 -	C 29	C 27 0.53 22 35 13	C 29 0.41 28 -	C 30 0.43 28	C 29	B 14 0.18 9 70 61	B 18 0.43 44 -	B 18 0.37 34 65 31	B 18	B 15 0.39 14 40 26	B 16 0.32 30 -	A 0 0.00 0 -	B 16	C 22
	2 - Main St E & Mall Entrance	TCS	LOS Delay V/C Q Ex Avail.		A 3 0.37 26 -	> > > >	A 3	A 4 0.05 2 70 68	A 2 0.19 9		A 2	C 27 0.09 2 -		C 26 0.08 2 -	C 27					A 4
AM Peak Hour	3 - Main St E & Wilson Dr	TCS	LOS Delay V/C Q Ex Avail.	A 4 0.07 2 50 48	A 4 0.33 25 -		A 4		A 6 0.20 15 -	^ ^ ^ ^ ^ ^	A 6					C 34 0.51 22 55 33		C 32 0.33 24 -	C 33	A 8
	4 - Main St E & Drew Centre	TCS	LOS Delay V/C Q Ex Avail.	A 0 0.00 0 15 15	A 5 0.24 20 -	A 4 0.09 6 40 34	A 5	A 3 0.11 3 45 42	A 2 0.16 9		A 2	D 37 0.24 10 -	A 0 0.00 0	D 38 0.19 5 55 50	D 38	v v v v v	A 0 0.00 0	^ ^ ^ ^ ^ ^		A 7
	5 - Main St E & Thompson Rd	TCS	LOS Delay V/C Q Ex Avail.	C 25 0.24 15 60 45	C 34 0.54 55 -	>	C 32	C 29 0.69 42 150 108	C 25 0.32 32 -	· · · · ·	C 27	B 19 0.24 14 60 46	C 34 0.71 94 -	· · · · · ·	C 32	C 23 0.42 14 55 41	C 23 0.27 27 -	× × × × ×	C 23	C 29
	1 - Ontario St & Main St E	TCS	LOS Delay V/C Q Ex Avail.	C 31 0.65 28 40 12	C 30 0.52 45 -	A 0 0.00 0 -	C 30	C 30 0.67 14 35 21	D 37 0.78 80 -	D 38 0.79 78	D 36	B 19 0.45 22 70 48	C 22 0.40 43 -	C 22 0.37 36 65 29	C 22	B 19 0.35 16 40 24	C 24 0.49 53 -	A 0 0.00 0	C 23	C 28
	2 - Main St E & Mall Entrance	TCS	LOS Delay V/C Q Ex Avail.		A 5 0.33 26 -	^	A 5	A 7 0.29 11 70 59	A 4 0.39 29 -		A 5	C 26 0.35 15 -		C 27 0.36 14 -	C 27					A 7
PM Peak Hour	3 - Main St E & Wilson Dr	TCS	LOS Delay V/C Q Ex Avail.	A 6 0.19 4 50 46	A 3 0.29 20 -		A 4		A 9 0.54 58 -	^ ^ ^ ^ ^ ^	A 9					C 33 0.44 19 55 36		C 32 0.37 28 -	C 33	A 9
	4 - Main St E & Drew Centre	TCS	LOS Delay V/C Q Ex Avail.	A 0 0.00 0 15 15	A 9 0.35 40 -	A 9 0.24 22 40 18	A 9	A 8 0.32 10 45 35	A 5 0.23 21 -		A 5	D 38 0.57 46 -	A 0 0.00 0 -	D 36 0.33 20 55 35	D 37	v v v v v	A 0 0.00 0 -	^ ^ ^ ^ ^		B 15
	5 - Main St E & Thompson Rd	TCS	LOS Delay V/C Q Ex Avail.	C 25 0.52 40 60 20	D 40 0.62 68 -	> > > >	D 35	D 36 0.83 68 150 82	C 29 0.39 42 -	^ ^ ^ ^ ^ ^	C 32	C 32 0.67 31 60 29	C 32 0.56 70 -	^ ^ ^ ^ ^ ^	C 32	C 27 0.19 8 55 47	D 43 0.75 98 -	^ ^ ^ ^ ^ ^	D 42	D 35
MOE - N	leasure of Effectiveness				Q - 95	th Perce	entile G	ueue L	ength		TCS -	Traffic	Control	Signal			RBT -	Rounda	bout	

MOE - Measure of Effectiveness LOS - Level of Service Delay - Average Delay per Vehicle in Seconds Q - 95th Percentile Queue Length Ex. - Existing Available Storage Avail. - Available Storage TCS - Traffic Control Signal TWSC - Two-Way Stop Control AWSC - All-Way Stop Control RBT - Roundabout </>- Shared movement



3 Development Concept

3.1 Site Description

The subject site is 560 Main Street East in the Town of Milton includes a mixed-use development with 570 residential units and 960 m² (10,340 sq.ft.) of retail space.

Vehicle access is proposed via a driveway connection to the future southerly extension of Wilson Drive. Build-out is assumed to occur at or before the 2025 horizon for this report. **Figure 3.1** illustrates the site concept plan.

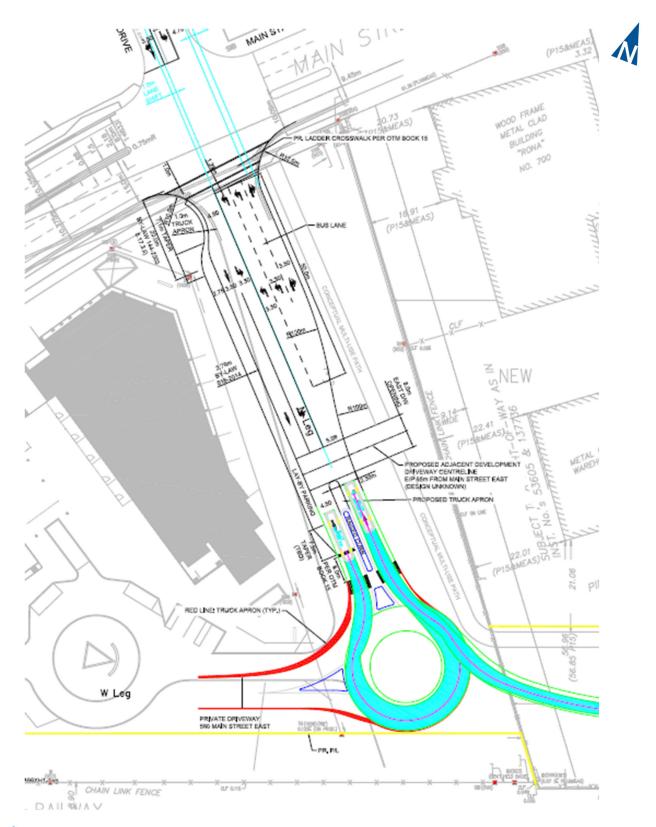




3.1.1 Wilson Drive Extension

As Metrolinx proposes to provide a bus loop through the future extension of Wilson Drive, this connection's ultimate configuration and functionality have been reviewed. Vehicle access to the development is currently only permitted through the extension of Wilson Drive as the Town of Milton has advised they will not support access to Main Street East. **Appendix D** of the report includes a design brief prepared by Paradigm that discusses the extension's issues and overall design considerations.

Figure 3.2 illustrates the proposed design. Subject to detailed engineering drawings, the functional design indicates access to adjacent developments can be accommodated within the proposed Wilson Drive Extension right-of-way.





Wilson Drive Extension Functional Design

3.2 Trip Generation

3.2.1 Trip Generation Methodology

The Institute of Transportation Engineers (ITE) Trip Generation⁵ methods are used to estimate the site trip generation. The following land use codes were referenced:

▶ LUC 222 (Multi-Family Housing – High Rise): This land use is described as apartments, townhouses, and condominiums with more than ten levels and likely have one or more elevators.

As per the Town recommendations, the retail component's trip generation has been estimated based on proxy data provided by the Town at a site in the City of Burlington at 5327 Upper Middle Road. This development comprises 90 residential condominiums (66 single-bedroom and 24 two-bedroom units) and 9,690 square feet of ground-floor commercial space. The peak hour trip generation for the retail component during the peak hour of the adjacent street network was observed as 0.25 trips and 1.24 trips per 1,000 square feet of GFA during the weekday peak hours.

3.2.2 Internal Trips

The ITE Trip Generation Handbook describes a multi-use development as a single project that consists of two or more ITE land use classifications in which trips can be made between land uses without using the off-site roadway system. Based on this description, the proposed development is considered a multi-use development, with compatible commercial land uses that are likely to share – or capture – trips that do not require vehicular travel outside the site. Sharing trips between compatible land uses without travelling off-site is an internal capture.

The ITE Trip Generation Handbook has been used to account for internal trips within the development. ITE data suggests an internal capture rate of up to 1% for residential development and 29% for retail development during the PM peak hours.

3.2.3 Pass-by Trips

Pass-by trips are a subset of the trip generation that only applies to commercial/retail land uses and represent a portion of the traffic already using a roadway that may stop at a business along a route. An

⁵ Trip Generation Manual 10th Edition + Supplement Institute of Transportation Engineers Washington DC 2020



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example of a pass-by trip is a motorist driving home from work and stopping for groceries on the way.

Pass-by rates were not included in the 5327 Upper Middle Road field surveys collected; however, given the retail nature, pass-by reductions should be included. The estimates of pass-by trips were derived using the ITE Trip Generation Handbook⁶. The ITE Trip Generation Handbook identifies a pass-by rate of 34% for shopping centres (LUC 820) during the weekday PM peak hour.

3.2.4 Modal Split

As requested by Town staff during pre-consultation, no adjustments have been made to account for alternate modes of transportation (transit, cycling, and walking), which could reduce the trip generation estimates.

3.2.5 Trip Generation Estimates

Table 3.1 summarizes the trip generation estimates for the weekday AM and PM peak hours. These estimates translate the trip generation reductions noted above. A total of 175 new weekday AM and 206 new weekday PM peak hour trips are forecast to be added to the study area roadways.

ITE Land Use Code / **Trips AM Peak Hour PM Peak Hour Number of Units** Rate ln Out Sum Rate Out Sum ln 131 172 123 79 202 Total 41 Multifamily Housing 0% 0 1% Internal 0 (High-Rise) (222): 0% 0 0 0 0 0 0 Pass-Bv Units = 570 3 100% 41 131 172 99% 121 78 199 New Total 2 3 7 14 Commercial - 5327 0% 0 0 0 29% 3 Internal Upper Middle Road -0% 0 0 0 34% 2 2 4 Pass-By Burlington Proxy Site: GFA = 10,340 sq.ft.100% 2 3 37% 3 7 New 4 175 Total 43 132 130 86 216 0 Internal --0 0 --3 3 6 Total 0 0 0 2 2 Pass-By 4 132 175 125 206 New

TABLE 3.1: SITE-GENERATED TRAFFIC

Equations

⁶ Institute of Transportation Engineers. Trip Generation Handbook, 3rd Edition. Washington D.C. 2004.



^{*} LUC 222, Eqn Per Unit AM: T = 0.28(X) + 12.86 | PM: T = 0.34(X) + 8.56

^{**} AM Avg. 1,000 ft² GFA Rate = 0.25 | PM Rate = 1.24

3.3 Development Distribution and Assignment

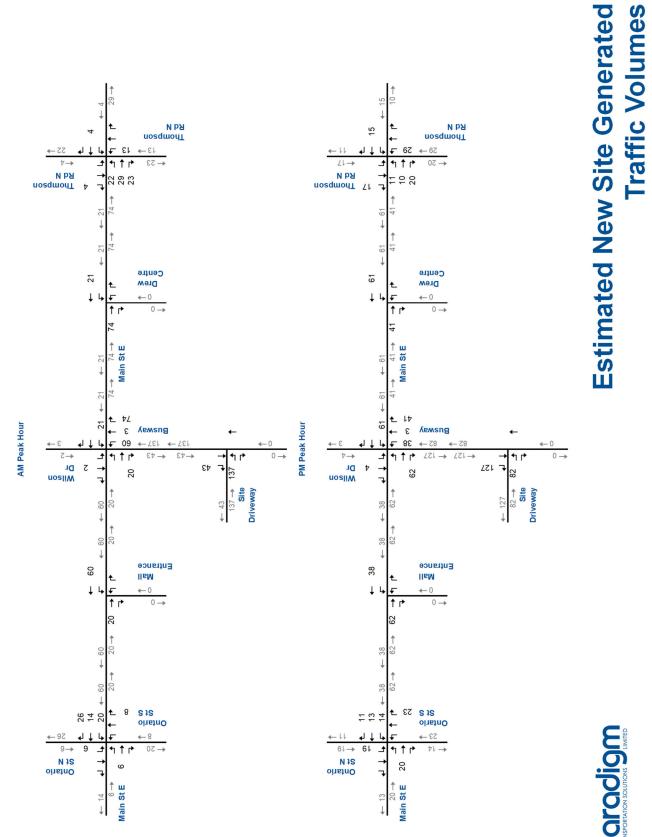
Table 3.2 summarizes the estimated trip distribution. Traffic distribution is based on traffic count data and trip distributions from the MTSA⁷ Transportation Plan. **Figure 3.3** illustrates the estimated new sitegenerated peak hour traffic volumes. Note that volumes have been rounded up to the nearest whole number; as a result, site traffic volumes assigned to the network show a conservative estimate of traffic volumes.

TABLE 3.2: ESTIMATED TRIP DISTRIBUTION

		AM F	Peak	PM Peak			
From/To	Route	Но	ur	Hour			
		In	Out	ln	Out		
	Ontario Street	13%	19%	15%	14%		
North	Thompson Road	9%	16%	13%	13%		
	Wilson Drive	4%	2%	3%	4%		
East	Main Street E	11%	21%	12%	12%		
West	Main Street E	15%	10%	16%	16%		
South	Ontario Street	18%	15%	18%	17%		
South	Thompson Road	30%	17%	23%	24%		
Total		100%	100%	100%	100%		

⁷ Town of Milton – Milton Major Transit Station Area: Area Transportation Plan – April 2020







3.4 Access and Circulation Review

The site circulation has been assessed using a Front-End Waste Garbage Truck and Moving truck as large design vehicles.

Appendix E contains reduced-scale vehicle turning movement diagrams for the site's loading zones and main circulation drive aisles. The diagrams were produced using the site concept plan, and AutoTURN swept path analysis software.

Based on the analysis, the design vehicles can circulate the site without conflicting with the proposed building and other on-site objects (e.g., parking spaces, etc.).

4 Future Conditions

The assessment of future conditions in this section includes the development of future traffic estimates and an operational review to assess the site traffic implications on the adjacent road network:

4.1 Traffic Forecast

A ten-year horizon from the year of the study (The year 2031) has been assessed. The likely future traffic volumes near the subject site are estimated to consist of:

- Increased non-site traffic (generalized background traffic growth). A growth rate of 2.0% per annum was applied to the base year traffic for all intersections⁸;
- ▶ 700 Main Street East is a proposed mixed-use development with 689 residential units and 186 m² (2,002 ft²) of retail space. Trips generated by this site are based on ITE trip generation rates for LUC 222 (Multifamily Housing High-Rise) and the retail proxy site data outlined in Section 3.2.1. Access to this site will be from the Wilson/Busway extension. Trip distribution for the site trips is based on the MTSA Transportation Plan; and
- Traffic generated by the subject site.

Milton Transit buses leaving the Milton GO Station via Drew Centre will reroute to use the new Wilson Drive extension busway. Eastbound and westbound buses exiting from Drew Centre at Main Street East will shift to the new busway and are assumed to make the same movements through the corridor as existing buses. Buses exiting Drew Centre at Thompson Road are assumed to travel eastbound from the new Main Street East and Busway intersection.

Appendix F contains the background development trip assignment and the bus rerouting assignment.

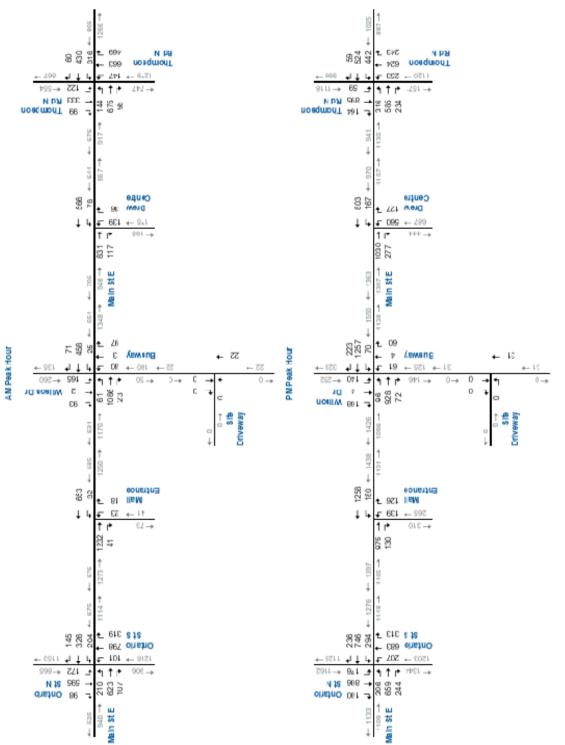
Figure 4.1 illustrates the forecast Background Traffic volumes. **Figure 4.2** shows the forecast Total Traffic volumes.



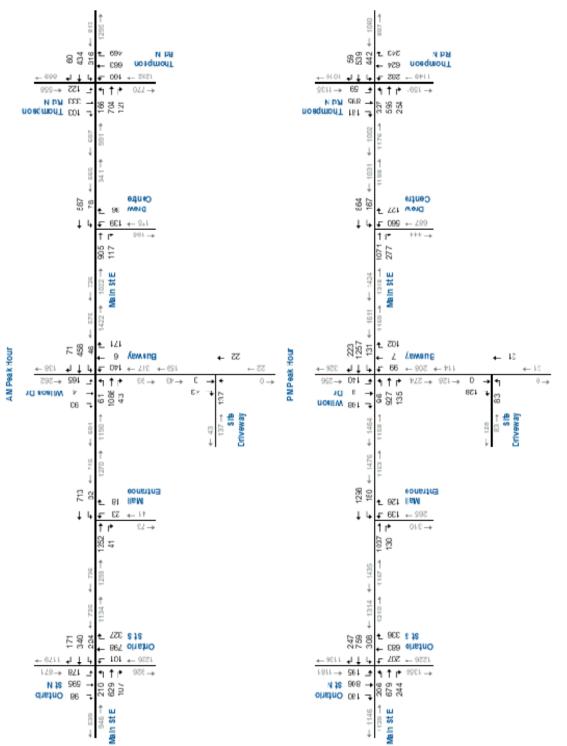
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⁸ Growth rate identified by Halton Region Staff (Appendix A)

Forecast Background Traffic Volumes









4.2 Background Traffic Operations

The study area intersection background traffic operations analyses followed the same methodology used for existing conditions. Signal timings were optimized to improve traffic operations through the corridor. **Table 4.1** details the level of service conditions, and the critical movements are summarized below:

AM Peak Hour

- Main Street East and Thompson Road (signalized):
 - Northbound shared through/right-turn is forecast to operate with delays in the LOS F range with a v/c ratio of 1.00.

PM Peak Hour

- Main Street East and Ontario Street (signalized):
 - Westbound left-turn queue length is forecast to extend beyond the currently available storage.
 - Westbound shared through/right-turn is forecast to operate with delays in the LOS D range with a v/c ratio greater than 0.90.
- Main Street East and Thompson Road (signalized):
 - Eastbound shared through/right-turn is forecast to operate with delays in the LOS E range with a v/c ratio greater than 0.90.
 - Westbound left turn is forecast to operate with delays in the LOS E range with a v/c ratio greater than 1.00.
 - Northbound left turn is forecast to operate with delays in the LOS E range with a v/c ratio greater than 0.95. The queue length is forecast to extend beyond existing storage.
 - Southbound shared through/right-turn is forecast to operate with delays in the LOS F range with a v/c ratio of 1.00.

Appendix G contains the supporting detailed Synchro 10 output.

Background traffic growth is forecast to result in congestion through the study corridor during the PM peak hour. Westbound through movements at Ontario Street is forecast to operate at a v/c ratio above 0.90. Operations at Thompson Road are forecast to operate with LOS E or worse during the AM and PM peak hours. Overall operations at Main Street and Thompson Road are expected to worsen from existing conditions, with certain movements forecast to operate at a LOS E-F range during peak hours.

TABLE 4.1: BACKGROUND TRAFFIC OPERATIONS

þc				Direction / Movement / Approach																
eric		_			Easth	oound			Westk	ound			North	bound			South	bound		
Analysis Period	Intersection	Control Type	MOE	IJӘŢ	Through	Right	Approach	Left	Through	Right	Approach	IJЭŢ	Through	Right	Approach	цеft	Through	Right	Approach	Overall
	1 - Ontario St & Main St E	TCS	LOS Delay V/C Q Ex Avail.	C 29 0.63 11 40 29	C 30 0.67 52 -	A 0 0.00 0 -	C 30	C 32 0.71 13 35 22	C 29 0.53 38 -	^ ^ ^ ^ ^ ^	O 30	B 17 0.27 12 70 58	C 24 0.60 61 -	C 25 0.53 50 65 15	C 24	B 19 0.57 20 40 20	B 20 0.42 40 -	A 0 0.00 0 -	B 20	C 25
	2 - Main St E & Mall Entrance	TCS	LOS Delay V/C Q Ex Avail.		A 4 0.47 36 -	> > > >	A 4	A 5 0.08 2 70 68	A 2 0.26 14 -		A 3	C 26 0.10 3 -		C 26 0.09 2 -	C 26					A 4
AM Peak Hour	3 - Main St E & Wilson Dr/Busway	TCS	LOS Delay V/C Q Ex Avail.	A 5 0.10 4 50 46	A 6 0.43 42 -	> > > >	A 6	A 8 0.07 2 40 38	A 8 0.26 22 -	^ ^ ^ ^ ^ ^	A 8	C 33 0.32 13 -	C 26 0.01 1 -	C 29 0.35 14 35 21	C 31	C 32 0.49 26 55 29	C 29 0.32 14 -	^ ^ ^ ^	C 31	B 12
	4 - Main St E & Drew Centre	TCS	LOS Delay V/C Q Ex Avail.	A 0 0.00 0 15 15	A 5 0.33 30 -	A 4 0.11 8 40 32	A 5	A 4 0.16 4 45 41	A 2 0.20 13 -		A 2	D 37 0.25 12 -	D 38 0.21 7 55 48	^ ^ ^ ^ ^ ^	D 38	v v v v v	A 0 0.00 0 -	v v v v v		A 7
	5 - Main St E & Thompson Rd	TCS	LOS Delay V/C Q Ex Avail.	C 22 0.32 21 60 39	D 35 0.67 77 -	>	C 33	C 30 0.79 50 150	C 23 0.35 38 -	× × × × ×	C 26	C 25 0.40 22 60 38	F 97 1.07 182 -		F 87	D 35 0.65 21 55 34	C 31 0.42 39 -	v v v v v	C 32	D 51
	1 - Ontario St & Main St E	TCS	LOS Delay V/C Q Ex Avail.	D 36 0.78 36 40 4	C 34 0.67 61 -	A 0 0.00 0 -	C 34	C 31 0.77 48 35	D 50 0.91 118 -	^ ^ ^ ^ ^ ^	D 46	C 26 0.66 31 70 39	C 30 0.59 61 -	C 32 0.59 58 65 7	C 30	C 24 0.57 26 40 14	C 33 0.71 77 -	A 0 0.00 0 -	C 32	D 36
	2 - Main St E & Mall Entrance	TCS	LOS Delay V/C Q Ex Avail.		A 6 0.43 38 -	> > > > >	A 6	B 11 0.45 18 70 52	A 5 0.49 41 -		A 6	C 27 0.43 19 -		C 27 0.43 17 -	C 27					A 8
PM Peak Hour	3 - Main St E & Wilson Dr/Busway	TCS	LOS Delay V/C Q Ex Avail.	B 10 0.30 8 50 42	A 5 0.39 37 -	> > > >	A 6	A 8 0.16 5 40 35	B 13 0.69 90 -	^ ^ ^ ^ ^ ^	B 13	D 35 0.29 10 -	C 28 0.01 1 -	C 30 0.25 9 35 26	C 32	C 32 0.42 23 55 32	C 31 0.38 18 -	v v v v v	C 32	B 13
	4 - Main St E & Drew Centre	TCS	LOS Delay V/C Q Ex Avail.	A 0 0.00 0 15 15	B 12 0.47 61 -	B 10 0.30 29 40 11	B 12	B 10 0.48 14 45 31	A 6 0.32 32 -		A 7	D 37 0.61 55 -	D 35 0.36 23 55 32	> > > >	D 37	v v v v v	A 0 0.00 0 - -	v v v v v		B 16
	5 - Main St E & Thompson Rd	TCS	LOS Delay V/C Q Ex Avail.	C 29 0.67 56 60 4	E 68 0.92 113 -		E 57	F 79 1.01 141 150 9	C 32 0.52 55 -	^ ^ ^ ^ ^ ^	D 52	E 77 0.97 83 60 -23	D 38 0.70 94 -	^ ^ ^ ^ ^ ^	D 46	C 30 0.29 10 55 45	F 90 1.04 169 -	v v v v v	F 86	E 60
MOE - N	Measure of Effectiveness				Q - 95	th Perce	entile G	Queue L	ength		TCS -	Traffic	Control	Signal			RBT - I	Rounda	bout	

MOE - Measure of Effectiveness LOS - Level of Service Delay - Average Delay per Vehicle in Seconds Q - 95th Percentile Queue Length Ex. - Existing Available Storage Avail. - Available Storage TCS - Traffic Control Signal TWSC - Two-Way Stop Control AWSC - All-Way Stop Control RBT - Roundabout </> - Shared movement



4.3 Total Traffic Operations

The study area intersection background traffic operations analyses followed the same methodology used for existing conditions. **Table 4.2** details the level of service conditions, and the critical movements are summarized below:

AM Peak Hour

- Main Street East and Thompson Road (signalized):
 - Northbound shared through/right-turn is forecast to operate with delays in the LOS F range with a v/c ratio of 1.00.

PM Peak Hour

- Main Street East and Ontario Street (signalized):
 - Westbound left-turn queue length is forecast to extend beyond the currently available storage.
 - Westbound shared through/right-turn is forecast to operate with delays in the LOS D range with a v/c ratio greater than 0.90.
- Main Street East and Thompson Road (signalized):
 - Eastbound shared through/right-turn is forecast to operate with delays in the LOS E range with a v/c ratio greater than 0.95.
 - Westbound left turn is forecast to operate with delays in the LOS F range with a v/c ratio of 1.00.
 - Northbound left turn is forecast to operate with delays in the LOS F range with a v/c ratio of 1.00. The queue length is forecast to extend beyond existing storage.
 - Southbound shared through/right-turn is forecast to operate with delays in the LOS F range with a v/c ratio of 1.00.

Appendix H contains the supporting detailed Synchro 10 output.

Similar to the background traffic operations, congestion is forecasted for westbound movements through the study corridor in the PM peak hour. Specific movements at Ontario Street and Thompson Road are forecast to operate with LOS E or worse during the AM and PM peak hours.

Site traffic is forecast to operate with minimal delay. Northbound queue lengths from Main Street East and Wilson Drive/Busway are not expected to impact driveway operations.

Additional site traffic is expected to increase intersection movement delay by less than 25 seconds during the AM and PM peak hours.

TABLE 4.2: TOTAL TRAFFIC OPERATIONS

poi								T			ion / M	oveme				T				
Per		Control				ound	_		West	ound	_			bound	_			bound		=
Analysis Period	Intersection	Туре	MOE	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Overall
	1 - Ontario St & Main St E	TCS	LOS Delay V/C Q Ex Avail.	C 29 0.65 11 40 29	C 30 0.67 53 -	A 0 0.00 0 -	C 30	D 38 0.78 20 35 15	C 30 0.56 43 -		C 32	B 18 0.27 12 70 58	C 24 0.61 63 -	C 25 0.55 52 65 13	C 24	B 19 0.59 21 40 19	B 20 0.43 40 -	A 0 0.00 0	B 20	C 26
	2 - Main St E & Mall Entrance	TCS	LOS Delay V/C Q Ex Avail.		A 4 0.48 38 -	> > > >	A 4	A 5 0.09 2 70 68	A 3 0.28 15 -		A 3	C 26 0.10 3 -		C 26 0.09 2 -	C 26					A 4
k Hour	3 - Main St E & Wilson Dr/Busway	TCS	LOS Delay V/C Q Ex Avail.	A 6 0.10 4 50 46	A 7 0.46 49 -		A 7	B 10 0.13 4 40 36	A 9 0.27 23 -	> > > >	A 9	C 34 0.47 24 -	C 25 0.01 1 -	C 30 0.51 27 35 8	C 32	C 31 0.47 27 55 28	C 28 0.28 14 -	^ ^ ^ ^ ^	C 30	B 14
AM Peak Hour	4 - Main St E & Drew Centre	TCS	LOS Delay V/C Q Ex Avail.	A 0 0.00 0 15 15	A 6 0.36 33 -	A 4 0.11 8 40 32	A 5	A 4 0.17 4 45 41	A 2 0.21 13 -		A 2	D 37 0.25 12 -	D 38 0.21 7 55 48	· · · · · · · · · · · · · · · · · · ·	D 38		A 0 0.00 0 -	^ ^ ^ ^ ^		A 7
	5 - Main St E & Thompson Rd	TCS	LOS Delay V/C Q Ex Avail.	C 22 0.37 24 60 36	D 38 0.71 84 -	>	C 35	C 33 0.82 51 150 99	C 24 0.36 39 -	> > > > >	C 27	C 25 0.44 24 60 36	F 97 1.07 182 -	>	F 86	D 35 0.65 21 55 34	C 32 0.43 40 -	^ ^ ^ ^	C 32	D 51
	6 - Site Driveway & Busway	TWSC	LOS Delay V/C Q Ex Avail.	A 9 0.14 1 			A 9						A 0 0 		A 0			A 0 0.00 	A 0	
	1 - Ontario St & Main St E	TCS	LOS Delay V/C Q Ex Avail.	D 38 0.79 38 40 2	C 35 0.71 65 -	A 0 0.00 0 -	D 36	C 34 0.81 53 35	D 55 0.93 126 -	> > > >	D 49	C 27 0.66 31 70 39	C 30 0.60 61 -	C 35 0.64 65 65	C 31	C 25 0.62 28 40 12	C 33 0.71 77 -	A 0 0.00 0 -	C 32	D 38
	2 - Main St E & Mall Entrance	TCS	LOS Delay V/C Q Ex Avail.		A 6 0.46 40 -	>	A 6	B 12 0.48 19 70 51	A 5 0.51 44 -		A 6	C 27 0.43 19 -		C 27 0.43 17 -	C 27					A 8
Peak Hour	3 - Main St E & Wilson Dr/Busway	TCS	LOS Delay V/C Q Ex Avail.	B 12 0.32 8 50 42	A 7 0.43 44 -	> > > >	A 7	B 11 0.34 14 40 26	B 15 0.71 99 -	> > > > >	B 15	D 36 0.41 17 -	C 27 0.02 1 -	C 30 0.35 16 35 19	C 33	C 32 0.40 23 55 32	C 30 0.35 18 -	^ ^ ^ ^ ^	C 31	B 14
PM Pea	4 - Main St E & Drew Centre	TCS	LOS Delay V/C Q Ex Avail.	A 0 0.00 0 15 15	B 12 0.49 64 -	B 10 0.30 29 40 11	B 12	B 11 0.50 14 45 31	A 6 0.34 35 -		A 7	D 37 0.61 55 -	D 35 0.36 23 55 32	^ ^ ^ ^ ^ ^	D 37	v v v v v	A 0 0.00 0 -	^ ^ ^ ^ ^		B 16
	5 - Main St E & Thompson Rd	TCS	LOS Delay V/C Q Ex Avail.	C 30 0.71 59 60 1	E 75 0.96 124 -	^	E 62	F 88 1.04 145 150 5	C 34 0.56 59 -	> > > >	57	F 90 1.02 97 60 -37	D 36 0.68 93 -	^	D 49	C 30 0.28 10 55 45	F 98 1.06 176 -	^ ^ ^ ^ ^	F 94	E 66
	6 - Site Driveway & Busway	TWSC	LOS Delay V/C Q Ex Avail.	A 9 0.08 0 			A 9						A 0 0.00 		A 0			A 0 0.00 	A 0	
MOE	- Measure of Effectiveness	1	Avall.	-	Q - 95i	th Perce	entile C	ueue L	.ength		TCS -	Traffic	 Control	Signal			RBT -	 Rounda	bout	Į

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

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

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

RBT - Roundabout </>
</>
</>
Shared movement



5 Mitigation

As summarized in the analysis tables in the previous Chapter, some of the study area locations either currently experience, or are projected to experience, operational deficiencies independent of the development.

The analysis also concludes that the development would have minimal impacts on traffic conditions in the study area. This Chapter includes a summary of potential improvement measures that have been identified to address the development's limited impacts and improve existing deficiencies.

5.1 Intersection / Roadway Mitigation

5.1.1 Main Street East at Thompson Road

Individual movements at the signalized intersection of Thompson Road and Main Street East currently operate at LOS D or better under the 2021 Base year condition. With additional growth projected under the 2031 Background traffic conditions (independent of the proposed development), an increased delay is projected for the all approaches such that operations are forecast to degrade to the LOS E-F range during the PM peak hour.

A possible mitigation measure to alleviate the delay would be through protected dual left turn lanes for the eastbound and westbound approaches. However, dual left turning lanes would prioritize vehicles over pedestrians and decrease the service level for pedestrians with a broader intersection to cross.

Congestion is a known issue in areas with heavy traffic volumes and is typically representative of a good economy. Further, widening any Town roadway to accommodate vehicular traffic volumes is not recommended. Further, widening roads in the study area for additional vehicle traffic goes against the vision of a people-centric, pedestrian-friendly environment that promotes the use of more sustainable modes of travel⁹.

With continued population and employment growth in the Greater Toronto Hamilton Area (GTHA), traffic congestion in Milton will continue. Widening existing roads or building new ones, in most circumstances, will infringe on private property, impact mature trees and green space or compromise the existing public realm (e.g. sidewalks, boulevards). A more sustainable transportation strategy is to move more people per kilometre by

⁹ Milton Major Transit Station Area – Area Transportation Plan, April 2020, WSP



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walking, cycling and transit or in combination with high occupancy vehicles.

Due to the increased congestion expected due to future growth in population and employment for Milton, future improvements to the transportation network are expected to focus on public transit infrastructure primarily. By concentrating on shifting commuter travel to public transit, intersection operations could be expected to maintain the status quo.

6 Parking Justification

As with any equilibrium system, a minimum of two components are required to be in balance and reach the equilibrium point. Parking systems require a balance of parking supply and demand. Achieving an appropriate supply level is equally important as demand. The ubiquitous oversupply of cheap and accessible parking has long been identified as a significant contributing factor to the growth in single-occupant vehicle (SOV) travel.

There is a strong focus on the pedestrian environment and an emphasis on active transportation. As the development proposal focuses on accommodating a suitable pedestrian environment that would encourage active transportation based on the de-emphasis on parking, the use of blanketly applying the Zoning By-law across the development does not reflect these goals.

6.1 Zoning Requirements

The current parking requirements for this development are governed by the Town of Milton's Zoning By-law 016-2014. It is recognized that the actual demand for parking spaces may vary from development to development.

6.1.1 Town of Milton Zoning By-law 016-2014

The minimum parking rates for the proposed development under Zoning By-law 016-2014 are as follows:

- ▶ 1.5 parking spaces per unit plus 0.25 parking spaces for visitor parking in a designated visitor parking area; and
- ▶ 1.0 parking space per 20 square metres (215 square feet) gross floor area dedicated to retail.

Table 6.1 summarizes the minimum parking standard calculations.

TABLE 6.1: ZONING BY-LAW PARKING REQUIREMENTS

		GFA	Town of Milton By-Law 016-2014				
Use	Units	m ²	Parking Rate	Parking Spaces Required			
Apartment - Residents	570	-	1.50 spaces per unit	855.0			
Apartment - Visitors	570		0.25 spaces per unit	142.5			
Retail	-	960	1.0 spaces per 20 m ² GFA	48.0			
			Total Parking Required	1045.5			

The parking requirement for the development under the Town's current Zoning By-Law is 1,046 spaces. The development is proposing 546 parking spaces plus 9 lay-by parking spaces.

However, a number of considerations justify a parking supply that is lower than is required under the Town's standard by-law, as explained in the remainder of this Chapter.

6.2 Parking Reform

Parking standards are increasingly seen as an instrument of planning policy, and parking ratios are now considered to have a primary role in determining car use. Parking ratios have existed in most cities since at least the 1950's and have often been amended incrementally by various means over time. Consequently, it is not surprising that municipalities often cannot trace the justification or reasoning behind some of the older parking ratios found in their current Zoning By-laws.

Given that parking standards reflect an "average" condition, they will rarely prescribe the number of parking spaces to match the parking demands of any individual development project exactly. The empirical challenge is understanding the range over which parking demand for a given use may vary, and the policy question is where the parking standard or ratio should be set in that range. Other municipalities are recognizing the advantages of parking ratios in support of broader Official Plan objectives.

The Town of Oakville recently developed a new zoning by-law for lands north of Dundas Street. The parking rates contained within this by-law for multiple dwelling units stipulate that a maximum parking rate of 1.25 parking spaces per unit would be accepted with no prescribed minimum parking requirement. Additionally, the Town of Oakville specifies that for Neighbourhood Centres, parking spaces may be located on the lot and on the street where parking is permitted . In contrast to generic minimum parking requirements, North Oakville provides maximum limits to restrict the total number of spaces that can be constructed rather than establish a minimum number. This recognizes that on-street and lay-by parking is often utilized for mixed-use development land uses.

The City of Kitchener has recently undertaken a comprehensive review of the zoning by-law (CROZBY) to ensure land and growth are appropriately managed and the zoning regulations are up to date. As part of this work, updated parking requirements were developed that follow a similar trend as taken with the by-law for North Oakville. No minimum parking requirement is required for developments located within an urban growth centre; instead, a maximum of 1.00 parking

space per unit is prescribed. However, for all other zones without a specific designation, the minimum parking requirement is 1.00 parking space per unit, with a maximum of 1.40 spaces per unit.

The City of Burlington acknowledges that the parking requirements within their Zoning By-law are more than 30 years old. As a result, Burlington embarked on a parking standard review to ensure the city's parking requirements accurately reflect current demand and emerging trends in transportation. Burlington will use the recommendations of the parking standards review as the basis for updating parking regulations for development in Burlington. Updated parking requirements for intensification areas stipulate 1.00 parking space per unit, whereas all other zones have a tiered structure based on the number of bedrooms ranging from 1.00 - 1.50 spaces per unit.

Attitudes towards automobile ownership and its role in an urban lifestyle are changing in the eyes of both consumers and policymakers, and lower parking regulations reflect this. As parking regulations are an attempt to provide supply to meet demand, regulations requiring lower supply for future buildings indicate that future demand will be lower.

Neighbouring municipalities are adopting new standards based on broader Official Plan objectives that recognize the correlation between supportive land uses and lower automobile ownership. Parking regulations under Zoning By-law 016-2014 are, on average, 32% higher when comparing the minimum requirements outlined by the Town of Oakville (North Oakville), City of Burlington and City of Kitchener. Further, these rates can be reduced through Transportation Demand Management (TDM) measures.

6.3 Limited Parking Supply

To provide further research on the benefits of a limited parking supply and context into how the supply can influence travel behaviour, recent research indicates that more parking supply influence a higher demand for more automobile use.

A New York City study of three boroughs showed a clear relationship between guaranteed vehicular parking at home and a greater tendency to use the automobile for trips to and from work, even when both work and home are well served by transit. The study infers that driving to other non-work activities is likely higher for households with guaranteed vehicular parking¹⁰.

- A study of households within a two-mile radius of ten rail stations in New Jersey concluded that if development near transit stations is developed with a high parking supply, then those developments will not reduce automobile use compared to developments located further away from transit stations and that parking supply can undermine the incentive to use transit that proximity to transit provides¹¹.
- A study of nine cities across the United States examined whether citywide changes in vehicular parking cause automobile use to increase, or whether minimum parking requirements are an appropriate response to the already rising automobile use. The study concluded that: "parking provision in cities is a likely cause of increased driving among residents and employees in those places."

6.4 Mobility Hub Consideration

The Big Move is the regional transportation plan (RTP) published by Metrolinx for the Greater Toronto and Hamilton Area (GTHA). It makes specific recommendations for transit projects. Since its publication, Metrolinx has been mandated to implement the RTP, which includes new and improved GO Transit service, local rapid transit, stations, and fare payment systems.

The Town's designated mobility hub includes the Milton GO Station, which encompasses approximately 800-metre radii around the transit station. This mobility hub is planned to integrate rapid, regional, and local transit. Mobility Hubs are more than just transit stations. They are places of connectivity where different modes of transportation — from walking to commuter rail — come together seamlessly and where there is an absolute concentration of places to live, work, shop and play. They serve as destinations and places to wait for and connect with transit whether you are walking, cycling, taking transit or driving.

Milton envisions a significant increase in density within the designated Mobility Hub, and a shift to compact, higher density, more intense mixed-use developments is encouraged through revitalizing these

¹¹ Daniel Chatman, Does Transit-Oriented Development Need the Transit? Access, Fall 2015.



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¹⁰ Rachel Weinberger, Death by a thousand curb-cuts: Evidence on the effect of minimum parking requirements on the choice to drive. Transport Policy, 20, March 2012

areas. The Mobility Hub emphasizes modes of transportation, including walking, cycling, and transit.

The Big Move has developed strategies that will contribute to the transformation of the GTHA transportation system. One of these strategies focuses on building pedestrian, cycling, and transit communities. How we design our communities is a significant factor in our travel. People who live in a higher density neighbourhood with a variety of stores and services near their home are more likely to walk, cycle or take transit. Lower-density areas far from shops and services and lack sidewalks and bike lanes are much more likely to drive.

The Region's transportation system and land use development are intended to achieve a 20% transit modal split target when a "mature state" of urban development is reached¹². Based on this projected shift, the demand for automobile parking is also expected to decrease. To contribute to the change from automobile trips to other modes, reduced parking requirements in and around Mobility Hubs will contribute to meeting the Region's transit modal share targets.

Transit-oriented development does much more than just shift automobile trips to transit. People who live or work in communities with high-quality public transit tend to own fewer automobiles and drive fewer annual miles than they otherwise would. Given the proximity of the subject property to local transit service within and a future Mobility Hub, a reduced parking rate for the proposed development is consistent with the policies set out in the Town's Mobility Hub Study¹³:

"Encouraging the adoption of parking standards and policies that promote active transportation and public transit; to consider planning approval, financial and other incentives to encourage development; and to direct Regional services and facilities to Intensification Areas (III.81(8-10)); and

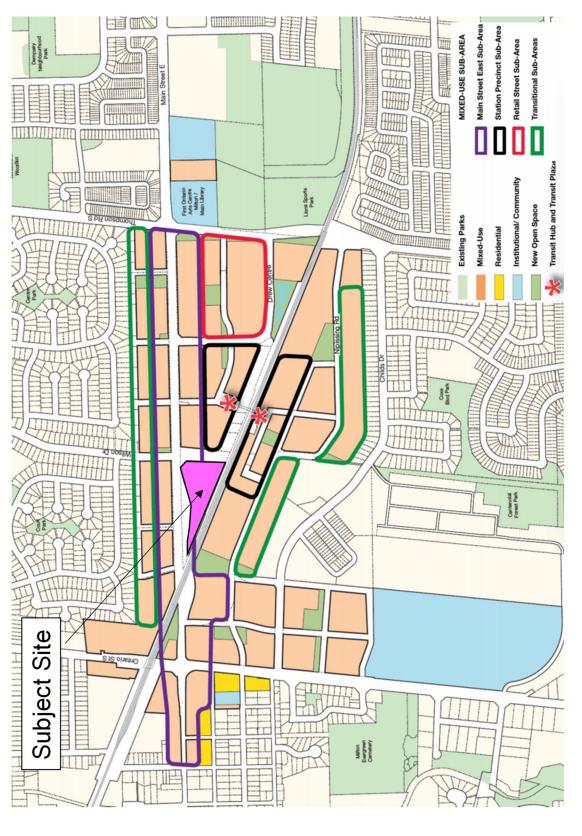
"Provide enough parking to meet the needs of users while also incentivizing transit use and prioritizing pedestrian safety. Encourage reduced parking and maximize opportunities for shared parking. Carefully integrate any parking structures into the overall built form and design them with future adaptability in mind (including bike parking and storage facilities). Minimize surface parking and incorporate parking configurations that can transition to other uses over time."



¹² Milton Transportation Master Plan, April 2019, WSP

¹³ Milton Major Transit Station Area & Mobility Hub Study, May 2020

Figure 6.1 illustrates the location of the Mobility Hub with the development.





6.5 Parking Demand Forecasts

A review of actual parking demands likely to be generated by the proposed development and alternative rates provided by the Town of Milton has been considered to assess, independent and separate from a review of Zoning By-Law requirements.

6.5.1 Alternative Residential Requirements

As part of early discussions in establishing the terms of reference for the enclosed study, The Town of Milton and the Applicant came to a consensus on the overall parking supply that should be considered for the development.

As the development is located adjacent to the Milton GO Station and within the primary zone of the Mobility Hub that offers the greatest opportunity for intensification with significant connectivity to the local and inter-jurisdictional transit network, the following parking rates were identified:

▶ 0.80 parking spaces per unit plus 0.20 parking spaces for visitor parking in a designated visitor parking area subject to the following bicycle requirements (1.00 long-term space per unit and 0.05 short-term space per unit).

6.5.2 Retail Requirements

Most Zoning By-law "retail" standards typically reflect demand seen at larger format retail outlies and standalone centres rather than smaller retail located within a mixed-use development.

The Institute of Transportation Engineers (ITE) produces a periodic report titled Parking Generation¹⁴, which is the prevailing national standard in determining parking demand for development. ITE standards are based on parking demand studies submitted to ITE by various parties, including public agencies, developers and consulting firms. The most recent parking generation manual available is the 5th edition and is a comparative starting point to determine baseline assumptions.

This study includes ITE peak period parking demand rates as guidelines to benchmark how the Town of Milton's Zoning requirements compares to small retail land uses. The average peak period parking demand rate calculation is meant to represent the

¹⁴ Institute of Transportation Engineers. Parking Generation Manual (5th Edition), Washington DC, 2019.



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number of parked cars at the peak period divided by the quantity of the independent variable, such as building area or employees.

According to industry parking standard calculations from ITE, retail requirements range from 1 parking space per 22 to 141 square metres. The higher end of the parking ratio (22) is comparable to a discount supermarket, whereas the lower end (141) is comparable to a pet supply store. Peak parking demand levels from ITE have also been reviewed for smaller retail formats ranging from 1 parking space per 48 to 104 square metres¹⁵.

The ITE parking standards are often based on peak hour demands of suburban sites with isolated; single land uses with free parking. Projections using standard ITE parking rates tend to overestimate demand for mixed-use developments that offer the opportunity to share parking supply between various uses. This reduces the total number of spaces the same land uses would require in standalone developments.

The parking requirement stipulated within Zoning By-law 016-2014 for retail uses of 1 space per 20 square metres is considered reflective of peak demands at more prominent format retail outlets and centres rather than smaller format retailers.

To further validate this with local market demand, results of previous parking surveys conducted at small format retail developments were compiled. Available information about each site, such as the number of units, walking distance to the nearest GO Station, peak parking demand, parking supply and demand rates, is outlined in **Table 6.2**.

TABLE 6.2: SMALL FORMAT RETAIL PARKING SURVEY RESULTS

				GFA	Demand		
Municipality	Address	Туре	Distance to Rail Station	Square Metres	Peak Parking Demand	1 parking space per	
Burlington	5327 Upper Middle Road	Mixed-Use Building (Resident and Commercial)	4.5 km (Appleby GO)	900	25	36 square metres	
Waterdown	35 Main Street South	Mixed-Use Building (Commercial and Office)	4.0 km (Aldershot GO)	1,100	21	53 square metres	

Parking supply rates ranged from 1 parking space per 36-53 square metres, indicating that demand is significantly lower than the Town of Milton's requirements. The highest parking demand rate is from a building situated in a subdivision environment as opposed to an urban

¹⁵ ITE Land Use Codes; 812 Building and Material and Lumber Store, 816 Paint Store, 892 Carpet Store, 890 Furniture Store, 860 Book Store.



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environment which provides for improved access to adjacent residential, employment and retail opportunities through active travel modes.

The surveyed results at 5327 Upper Middle Road have been considered the most appropriate and applicable for the development's retail component as demand at this site represents the parking demand for ground floor commercial with residential units above. Although the site is in Burlington, it is located in the northern portion of the City, which is similar to the study area in that there is considerable reliance on automobile usage.

6.5.3 Projected Base Parking Demand

The base parking demand ratios represent how many spaces should be supplied for each use if the spaces are unshared. A summary of the base peak parking demands for each component uses contemplated within the development is provided in **Table 6.3**. The following summarizes the parking demand rates utilized:

- Residential demand reflects a peak parking demand of 0.80 spaces per unit, consistent with the alternative rate provided by the Town of Milton.
- Visitor demand is reflected by a peak parking demand of 0.20 spaces per unit, consistent with the alternative rate provided by the Town of Milton.
- Retail demand is reflected by a peak parking demand of 1 space per 36 square metres, consistent with the parking demand information collected at a similar site within the Burlington Market.

Assuming that each land use requires a separate pool of parking spaces, the peak unshared parking demand for the whole project is 597 spaces.

TABLE 6.3: PROJECTED BASE PARKING DEMAND

		GFA	Baseline Parking	Demand Demand		
Use	Units	m²	Parking Rate	Parking Spaces Required		
Apartment - Residents	570		0.80 spaces per unit	456.0		
Apartment - Visitors	570		0.20 spaces per unit	114.0		
Retail	-	960	1.0 spaces per 36 m ² GFA*	26.7		
	596.7					

6.5.4 Non-Captive Market

In the shared parking analysis, the term "captive market" reflects the adjustment of parking needs and vehicular trip generation rates due to the interaction among uses in an area. "Captive market" is borrowed from market researchers to describe people already present in the immediate vicinity at certain times. Traditionally, the non-captive adjustment is used to fine-tune the parking needs of persons already counted as parked for the day. For example, an apartment resident who dines at a restaurant only generates a parking demand for one space instead of two.

In designing a shared use analysis, Paradigm has used the inverse or non-captive ratio, which is the percentage of parkers not already counted as parked. There is usually a primary land use, in this case, the residential and office space, which accounts for the longest parking durations of a vehicle.

To estimate the retail non-captive factor, we assumed that a percentage of residents and visitors would visit the retail tenants. This analysis assumed that 10% of residents and 5% of visitors would patronize the retail use, consistent with internal trip characteristics.

6.5.5 Shared Parking Demand

Consideration of shared parking opportunities is common within mixeduse facilities. The concept of shared and managed parking reflects the variations in usage levels of different land uses by the time of day, day of the week and seasonal factors to derive efficiencies in overall parking supply requirements through a permissive sharing of a shared pool of parking that support the range of planned uses at different times.

Each land use does not need its dedicated parking supply, yet that is precisely what standard analysis and Zoning indicate is needed. In reality, throughout the day, different uses have different peak demands: for example, an office may have a high demand until 5 PM, and a restaurant open for dinner may have a high demand only after 5 PM.

Paradigm used and adapted a shared parking model using inputs from the Urban Land Institute¹⁶ (ULI) to model this type of activity. Shared parking allows for the accommodation of peak parking demand but shares a supply among different uses. If each land used was built with



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¹⁶ Shared Parking 2nd Edition, Urban Land Institute, 2005

enough parking to accommodate its peak demand, the collection of spaces would be grossly underutilized.

This analysis is essential because it reflects that specific user groups can share the same parking spaces without requiring additional parking. In the case of the proposed development, it is apparent that visitor and commercial parking are excellent candidates for sharing parking as they peak at different times of the day. When the projected demands are overlapped temporally, the following is noted:

- ► There is no hour in the day when all user groups peak at the same time (contrary to the assumption of superposition);
- When retail demands peak in mid-afternoon, visitor demands are at their lowest levels; and
- As visitor parking demands rise in the late evening, retail and office parking demands fall.

The model started with a baseline demand of 597 spaces, calculated in **Sub-Section 6.5.3.** After adjusting for shared parking and non-captive market, peak demand is estimated to be 586 spaces. If each land used were to build enough parking to accommodate its peak demand, then the supply of spaces would be grossly underutilized. **Table 6.4** outlines the peak shared parking requirement.

TABLE 6.4: PEAK SHARED PARKING DEMAND

Land Use	Unadjusted Demand	Peak Adjustment 6:00 PM	Non Captive	Shared Parking Demand
Retail	26.7	70%	85%	15.9
Apartment - Resident	456.0	100%	100%	456.0
Apartment - Visitor	114.0	100%	100%	114.0
Subtotal Reserved Resident	456.0			456.0
Subtotal Retail/Visitor	140.7			129.9
Total	596.7			585.9

With the Town of Milton's zoning requirements of 1,046 spaces, nearly 460 unutilized spaces are at their peak. However, the supply is expected to be lower with the incorporation of Transportation Demand Management (TDM) measures.

7 Transportation Demand Management

The goal of a Transportation Demand Management (TDM) plan is to reduce the development's overall traffic and parking impacts through the implementation of strategies that are aimed at affecting the demand side of the transportation equation rather than the supply side. By their very nature, TDM programs attempt to change people's behaviour, and to be successful; they must rely on incentives or disincentives to make behaviour attractive to the commuter.

TDM strategies include financial incentives, time incentives, new or enhanced commuter services, information dissemination, and alternative marketing services. TDM strategies include all the incentives and disincentives that increase people's likelihood of changing travel behaviour.

The TDM plan has been formulated to extend reasonable and practical strategies that encourage residents and visitors to take alternative modes of transportation. The strategies identified are expected to improve transportation access and connectivity within the development and reset the study area. For each strategy, an explanation and a description of what the applicant is proposing to provide are provided.

7.1 Through Design

Several factors influencing peoples' travel mode choices are supporting land use/infrastructure that encourage people to choose travel modes other than driving alone. These strategies are already accounted for through the development's overall design and include the following.

7.1.1 Housing Density

Designing the plan with increased densities reduces Greenhouse Gas (GHG) emissions associated with traffic in several ways. Density is usually measured in terms of persons, jobs, or dwellings per unit area. Increased densities generally shorten the distance people travel and provide greater options for their travel mode. This strategy also provides a foundation for the implementation of many other strategies which would benefit from increased densities.

7.1.2 Land Use-Density Mix

Having different types of land uses in close proximity can decrease vehicle mode share since trips between land use types are shorter and may be accommodated by non-automotive transportation. The mix of medium and high-density housing and commercial uses provides land

use diversity that should reduce the number of automobile trips that residents or employees make.

7.1.3 Pedestrian Facilities

Accessibility to and from development is essential in helping ensure that those who can walk do. Proper pedestrian connections from the surrounding community to the development should be constructed to ensure safety and enhance the overall pedestrian experience.

Walking is encouraged by providing a pedestrian-friendly site layout with an extensive network of sidewalks and entrances at key points both within site and connecting to the existing pedestrian network. Most of the site provides direct public access for pedestrians via multiple street-level entrances from Main Street East and Wilson Street Drive Extension. This is intended to provide a comprehensive network of pedestrian connections, allowing for an enhanced pedestrian experience for all site users.

By taking advantage of the future public sidewalk network to attract and serve pedestrians, combined with multiple pedestrian connections within the site, the development offers walkability as one of the critical design features.

7.1.4 Bicycle Facilities

Increasing bicycling to, from and within Milton is a crucial strategy for reducing vehicle trips. The number of people bicycling is directly related to the quality of the bicycling network and the presence of bicycle facilities. As outlined in **Section 2.3**, bicycle facilities are provided along Main Street East.

7.1.5 Bicycle Parking Supply

The Town of Milton By-law includes rates for bicycle parking for Apartment buildings not within the Central Business District (CBD) that require a bicycle parking rate of 0.20 spaces per unit. However, as outlined by the Town of Milton through the alternative parking requirements, the development proposes providing a bicycle parking supply of 1.00 long-term space per unit and 0.05 short-term space per unit.

Overall, 570 long-term bicycle spaces and 29 short-term bicycle spaces are recommended.

7.1.6 Transit

The use of transit places less reliance on personal automobiles for trips that convenient and desirable transit options can complete. Providing timely and desirable transit can be provided by delivering well-lit transit stops with seating and weather-protective shelters. Additional amenities, including bicycle parking, schedule information, real-time bus status, and maps, can increase the convenience of the transit network.

The subject site is currently served by ten (10) Milton Transit Routes that operate primarily on Main Street East connecting residential neighbourhoods with the Milton GO Station. Headways are on the order of 30 minutes during most service hours, with shorter headways provided during peak hour services.

Bus stops adjacent to the existing sidewalk network are provided on Main Street East's north and south sides at the intersection with Wilson Drive. These stops are located less than 100 metres from the centre of the subject site and feature schedule information for riders.

Improving these stops, including installing bus shelters with seating, would enhance transit services. Through these modifications, the transit network would be a viable and convenient option for the development's residents, visitors and employees.

At the development level, direct links connecting residents and visitors to nearby bus stops are planned to be provided as part of the overall design scheme making the development area more navigable toward local bus stops.

7.2 Proposed Strategies

The development should consider the proposed strategies identified herein to reduce the number of auto-trips made to/from the development:

7.2.1 Transportation Information

The applicant will consider developing marketing/informational materials as part of their initial scope of work. Information on transportation options and links to the appropriate website should be conveyed to all prospective residents as a component of a resident welcome packet.

Available information should include schedules for local and regional transit services, bicycle and trail networks and the location of retail and recreational establishments.



7.2.2 Parking Supply

Finding the right balance needed to support the Towns' goals is critical, mainly since parking is an expensive resource. Sufficient automobile parking is necessary for the development to be successful. However, too much parking can encourage traffic congestion, limit the ability to meet trip reduction goals, increase project costs, and impact site design and aesthetics.

Research conducted in San Francisco focuses on whether or not a relationship exists between the provision of off-street parking and the choice to drive among individuals travelling to or from the site. Following data collection and an empirical review of the data, this research found that reductions in off-street vehicular parking for office, residential, and retail developments reduce the overall automobile mode share associated with those developments relative to projects with the same land uses in similar contexts that provide more off-street vehicular parking.

In other words, more off-street vehicular parking is linked to more driving, and people without dedicated parking spaces are less likely to drive. Recent research shows that a reduced Parking Supply is one of the most effective TDM measures available to reduce vehicle travel¹⁷.

The role of parking management is also a key element in helping Milton meet its trip reduction goals. Free and abundant parking encourages people to drive alone rather than car or van pool, be dropped off or picked up, walk, cycle or take transit. If free and unregulated parking is provided, there is little incentive for many residents and visitors to use alternative modes of transportation. When too much parking is provided and is provided free of cost to the user, the use of alternative sustainable modes is put at a substantial disadvantage.

As the development promotes using other modes of transportation through limited on-site parking to meet the projected demand, the development plays a significant role in setting an example for residents and visitors to consider non-automotive travel.

7.2.3 Unbundled Parking

Implementing a paid-parking operation is one of the most effective TDM strategies for encouraging alternative travel habits. To further encourage residents of the apartment building to utilize sustainable travel modes, the development allows residents to opt out of

¹⁷ Transportation Demand Management Technical Justification, City and County of San Francisco, June 2018.



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purchasing their parking space, providing a discount on the purchase price of a unit. This is more equitable and efficient since occupants are not forced to pay for parking they do not need and allows consumers to adjust their parking supply to reflect their needs.

The development will consider the use of unbundled parking. This is an essential factor as residents are notified at the onset of the project that parking is proposed to be provided as an additional cost in lieu of the price to rent a unit. If residents are significantly considering changing their travel behaviour, the cost of renting a parking space could be a contributing factor to this change.

7.3 City of Kitchener TDM Worksheet

The Town of Milton has advised that if a further reduction in parking supply were being sought in addition to the alternative rates provided in **Sub-Section 6.5.1**, the City of Kitchener's TDM Checklist should be used to identify projected parking reduction through TDM measures would be required.

Appendix I contains the City of Kitchener's TDM checklist, indicating a potential reduction of 51 spaces. Combined with the shared parking and non-captive market adjustment, this equates to a total parking supply of 535, consistent with the proposed supply of 546 parking spaces (excluding 9 lay-by spaces). The following measures are proposed that have been considered concerning a parking credit:

- Active uses at grade along street frontages (4 parking space reduction)
- ► The building owner will charge parking as a separate cost to occupants (47 parking space reduction)

Increasing awareness of sustainable transportation opportunities for residents can assist in lowering the site's parking demand and, ultimately, the site's transportation impacts. General education of all modes of transportation, including their benefits and how to make the best use of them, are a vital component of TDM success.

8 Conclusions and Recommendations

8.1 Conclusions

This study evaluated the impacts of background traffic growth and projected the impacts of the development with and without traffic mitigation measures associated with the construction of 570 residential units and 960 m² (10,340 sq.ft.) of retail space. Access to the site is proposed via one right in/left out driveway connection to the future Wilson Drive Extension.

Transportation Study

The proposed development is projected to generate approximately 175 new vehicle trips during the weekday AM peak hour and 206 new vehicle trips during the weekday PM peak hour.

Overall, the forecast traffic volumes to be added by full built out of the development to the study area result in relatively small impacts at the study intersections. However, it is acknowledged that deficiencies are projected to occur at certain locations within the study area. They can be expected to persist in the future with anticipated growth in traffic, independent of the development. The following operational deficiencies have been identified:

Main Street East at Thompsons Road: The westbound and northbound left turn movements and the southbound and eastbound through movements are projected to operate in the LOS E-F range during the weekday PM peak hour under the 2031 horizon (independent of the development). Despite the above, the widening of any Town roadway to accommodate vehicular traffic goes against the vision of a people-centric, pedestrian-friendly environment that expects people to use more sustainable modes to travel¹⁸.

Traditionally, intersection operations have focused on increasing the road network's capacity to accommodate more vehicles. Instead, a "balanced needs" approach that encourages alternative modes of transportation must be considered. Improved capacity along these corridors will be through measures supportive of transit, active transportation and transportation demand management to reduce reliance on single-occupant vehicles. By focusing on shifting commuter

¹⁸ Milton Major Transit Station Area – Area Transportation Plan, April 2020, WSP



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travel to public transit, intersection operations are expected to maintain the status quo.

Further, this intersection of major arterial and minor arterial roads would be expected to experience capacity constraints only for two to four hours a day on a typical weekday. The other 20 hours of the weekday, weekends and holidays would be expected to exhibit better vehicle traffic conditions.

Parking Study

The parking requirement for the development under the Town of Milton's Zoning By-Law 016-2014 is 1,046 spaces, equating to a parking rate of 1.50 per unit (resident) plus 194 spaces for visitors and retail uses. The proposed site provides for a total of 546 parking spaces (excluding 9 lay-by spaces).

The parking requirements outlined in Zoning By-Law 016-2014 are based on an approach that caters to auto-oriented travel rather than transition to promote residential and visitor travel through sustainable modes. Parking ratios need to recognize empirical evidence that parking demand has many factors and varies according to household size, income, auto ownership, and locational factors such as proximity to other uses and availability of multiple transportation mobility options.

Within the context of being in a Mobility Hub area, the land use lends itself to being less reliant on auto use, where residents and visitors can take advantage of the additional transportation choices such as walking, cycling and transit. It is expected that the land use will generate reduced parking demands due to the locale in combination with the proposed overall design and marketing strategy of the project.

Finding the right balance needed to support the Town's goals is critical, mainly since parking is an expensive resource. Sufficient automobile parking is necessary for the development to be successful. However, too much parking can encourage traffic congestion, limit the ability to meet trip reduction goals, increase project costs, and impact site design and aesthetics.

Many existing Zoning By-Law parking requirements are antiquated and require updating to conform to and reflect current policies and best practices. Many municipalities recognize the oversupply of parking and are revising the zoning requirement to reflect this. Key municipalities recognized this include Town of Oakville, the City of Burlington, and the City of Kitchener. These municipalities have undertaken a comprehensive review of parking requirements and recognized that changes are required to meet policy objectives.

On average, the Town of Milton requires 32% more parking to be provided for this development than would be needed for the City of Burlington, Town of Oakville and City of Kitchener, which has adopted new parking requirements.

The transition from an automobile-dependent environment to one that is transit-supportive will require strategies to assist in shifting modal split and enabling the emergence of a more pedestrian-friendly transit-supportive environment. The over-provision of free or low-cost parking creates areas dominated by parking infrastructure that can negatively impact ridership and the pedestrian environment and provide an incentive for single-occupant vehicle use.

The Town of Milton and Applicant recognized this. As part of early discussions in establishing the terms of reference for the enclosed study, an alternative residential parking requirement of 0.80 spaces per unit plus 0.20 parking spaces for visitor parking was deemed appropriate, subject to a minimum bicycle parking supply of 1.00 long-term spaces per unit and 0.05 short-term space per unit.

Reasonable proxy parking demand data conducted at small format retail developments were compiled. These surveys observed a parking rate of no lower than 1 parking space per 36 square metres. The surveyed results are considered to be the most appropriate and applicable for the retail component as opposed to the generic rate outlined within the Zoning By-law. It is also recognized the Town of Milton Zoning By-law requirements for retail uses of 1 spacer per 20 square meters are reflective of demand typically seen at more prominent format retail outlets and standalone centres rather than smaller retail located within a mixed-use development.

Utilizing the alternative rates supplied by the Town of Milton and the parking rates observed at small retail developments, the actual parking demand for the proposed development is projected to be 597 vehicles based on a simplistic approach. The rates are expected to be marginally less, around 586 spaces with time-of-day shared parking demand incorporated. The development will also implement a suite of Transportation Demand Management (TDM) Measures to reduce the dependency on vehicular travel further. These measures include:

- Active uses at grade along street frontages
- Provision of 570 long-term and 29 short-term bicycle spaces
- ► The building owner will allow residents to opt-out of a parking space, providing a discounted purchase price.
- ▶ A minimum of 75% of parking is underground or in a structure.
- Welcome Packets



As documented within the City of Kitchener and Region of Waterloo checklists, the proposed TDM measures result in a parking reduction of 51 spaces, equating to a total parking supply of 535, consistent with the proposed supply. As the TDM plan will be adopted and implemented, these additional parking reduction credits are warranted as they encourage residents to explore alternative sustainable travel modes made more enticing, given parking will be at a premium cost.

The TDM plan and the developments transportation context will provide residents with a range of mobility choices other than a privately-owned vehicle and supports the provision of an appropriate parking supply in the building.

As the development promotes using other modes of transportation through limited on-site parking to meet the projected demand, the development plays a significant role in setting an example for residents and visitors to consider non-automotive travel. This points to the importance of ongoing parking management and demand reduction strategies for this area, given the significant development plays within a Mobility Hub to ensure that an oversupply of parking is not provided that could hinder the ability to attract a substantial portion of the population to transit mode choice.

Based on the imperial data collected as part of this study, it is evident that the oversupply of parking can undermine the incentive for residents to use transit. Per the current development plan, 546 parking spaces are provided, whereas the Zoning by-law requires 1,046 parking spaces. Through the alternative rates offered by the Town of Milton, a review of proxy surveys collected at small retail establishments, and the incorporation of shared parking and transportation demand management measures, the proposed parking supply of 546 spaces is sufficient for the development.

8.2 Recommendations

- ▶ The Town of Milton recognizes the conclusions drawn above;
- ► The Town of Milton supports the proposed parking supply of 0.93 spaces per unit.

Appendix A

Terms of Reference

Greg Lue

From: Michael.Turco@milton.ca
Sent: March 4, 2021 11:31 AM
To: Adam Makarewicz

Cc: Stirling.Todd@milton.ca; 'Colin Rauscher'; 'Mike Vernooy'; Greg Lue; christian.lupis@milton.ca

Subject: RE: 200624: 560 Main Street East - TIA PS - TOR

Follow Up Flag: Follow up Flag Status: Flagged

Hi Adam,

Regarding #4 (background developments), the previously provided site statistics for 700 Main Street East should be utilized. The Brookfield site (706 Main Street East) developer has not provided a concept plan to the Town as of yet. Therefore, we do not have any preliminary site statistics for this site. However, they have been advised that they will only have access to the Wilson Drive extension and need to coordinate with the adjacent development accordingly.

With respect to #5 – site traffic generation and trip distribution, the Town is satisfied with the suggested proxy data for use in the study. Please ensure that the report outlines the similarities between the two sites and why they are anticipated to generate a similar traffic rate.

Regarding #9 (Wilson Drive Extension), per the Region's TIS Guidelines: "Functional design plans or detailed design drawings may be required for identified physical improvements to ensure their feasibility." The functional design is intended to demonstrate feasibility and confirm whether any additional right of way would be required.

In regards to the TDM plan, the Town offers the following alternative solution:

The total TDM parking reduction achieved in Table C of the checklist would only need to be equal to any proposed reduction in parking beyond the following minimum parking rates:

Land Use	Setting/Location	Minimum P	Minimum Parking Rates (Spaces Per Unit)								
		Residential	Visitor	Total							
Apartment	UGC	1.00	0.20	1.20							
Mixed-Use	UGC	0.60	0.20	1.00							

However, this would be subject to the proposed development providing bicycle parking as per (or higher than) the following rates:

Land Use		Minimum Bike Parking				
	Setting/Location	Type 1	Type 2			
		(Long-Term)	(Short-Term)			
Apartment	UGC	1.00	0.05			
Mixed-Use	UGC	1.00	0.05			

Long-term bicycle parking

- Also known as "bicycle parking space-occupant, or Type 1 bicycle parking".
- Includes bicycle racks in an enclosed, secured area with controlled access; or
- Individual, secure enclosures like bicycle lockers;

Short-term bicycle parking

- Also known as "bicycle parking space-visitor, or Type 2 bicycle parking"
- Includes bicycle racks in an easily accessible location;
- Available for public use;
- Sheltered or unsheltered;
- Does not protect bicycles from vandalism or theft attempts.

Should you have any questions, please feel free to contact

me.

Thank you,



Michael Turco, C.E.T., MITE Transportation Planning Technologist 150 Mary Street, Milton ON, 905-878-7252 x2363 www.milton.ca

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From: Adam Makarewicz <amakarewicz@ptsl.com>

Sent: Friday, February 26, 2021 2:19 PM

To: Michael Turco < Michael. Turco@milton.ca>

Cc: Stirling Todd <Stirling.Todd@milton.ca>; Colin Rauscher <Colin.Rauscher@neattcommunities.com>; Mike Vernooy

<mike@neattcommunities.com>; Greg Lue <glue@ptsl.com>; Christian Lupis <christian.lupis@milton.ca>

Subject: RE: 200624: 560 Main Street East - TIA PS - TOR

Hi Michael,

Thank you for providing your comments. We have reviewed these with our client and have provided additional responses below in RED.

We unfortunately cannot accept the Town's request regarding the proposed parking supply needs to be equal of less to the City of Kitchener TDM worksheet. The proposed development is located within the primary zone of the Milton Mobility Hub that offers the greatest opportunities for intensification, improved pedestrian and multimodal connectivity. As outlined in the Milton's Major Transit Station Area & Mobility Hub Study, the market is the best determinate of necessary parking spaces with a further emphasis that minimum parking ratio is not necessary while a maximum parking ratio should be mandatory. The parking supply will be supported through the parking study

justification and will be based on empirical data (proxy surveys, ITE Parking Generation, Comparison of other municipalities, etc.) The emphasis will be on minimizing the over-supply of parking by using the lowest requirement that is reasonable for the area in contrast to the usual approach of requiring extra parking just in case there is not enough.

Given 700 Main Street East is still in the preliminary stages, we are also requesting a reasonable unit count be provided by Town of Milton planning staff as there is no guarantee the density proposed by 700 Main Street East will be approved. If 700 Main Street East intends to seek the density outlined below, their traffic study will capture the higher scenario.

Additionally, as part of the submission, our client has requested that the study be peer reviewed by a consultant approved by the Town.

We look forward to moving ahead with our study.

Regards,

Adam J. Makarewicz Senior Project Manager



Paradigm Transportation Solutions Limited

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From: Michael. Turco@milton.ca < Michael. Turco@milton.ca >

Sent: 24-Feb-21 11:21 AM

To: Adam Makarewicz amakarewicz@ptsl.com>

Subject: RE: 200624: 560 Main Street East - TIA PS - TOR

Hi Adam,

Thank you for providing a proposed TIS and PS Terms of Reference for 560 Main Street East. Please see the Town's comments below in green:

Should you have any questions, please feel free to contact me.

Regards,

Hi Michael,

See below the TOR.

This email provides our proposed scope of work for a transportation and parking study for the proposed mixed-use development at 560 Main Street East in the Town of Milton. The subject site is located on the south side of Main Street East and west of Wilson Drive. Vehicle access is proposed via a driveway toNipissing Road. Vehicle access is proposed via a driveway connection to the future southerly extension of Wilson Drive. As Metrolinx proposes to provide a bus loop through the future extension of Wilson Drive, the ultimate configuration and functionality of this secondary connection is not defined at this point. As you are aware, Paradigm has provided a preliminary concept on how this driveway to the Wilson Drive extension may operate. This transportation impact study component will examine the proposed development's anticipated impact on the study area's traffic operations and identify any necessary road improvements required to accommodate the generated traffic. The parking study component will review the proposed development's anticipated parking demand and propose a Zoning By-law parking requirement variance, if warranted.

Scope of Work

The proposed scope of work, outlined in this section, was developed based on the Town of Milton Transportation Impact Study Guidelines (2010).

Transportation Impact Study

- Development Study Area: We will comment on existing transportation facilities within 500
 metres of the subject site. Existing key roadways, major intersections, transit services, and
 pedestrian facilities will be discussed, as appropriate.
- 2. **Analysis Time Periods and Intersections**: Based on the proposed development's land use, size, and proximity, we plan to analyze the following intersections during the weekday AM/PM peak periods:
 - Main Street East at Ontario Street North (signalized);
 - Main Street East at Milton Mall Entrance (signalized);
 - Main Street East at Wilson Drive (signalized);
 - Main Street East at Drew Centre (signalized); and
 - Main Street East at Thompson Road (signalized)
 - Up to one (1) site driveways
- 3. **2021 Existing Conditions**: Due to the COVID-19 pandemic and stay at home orders at the time or writing. Traffic counts at the study area intersections will be obtained through the Town of Milton and Region of Halton and factored to 2021 volumes (if required). In the even that stay-at-home orders are lifted, and volumes are normalized at the onset of the study, we will revaluate this position in consultation with the review agencies. The 2021 existing traffic operations at the aforementioned intersections will be analyzed using the software program Synchro (version 10) for the weekday AM/PM peak hours.
- 4. 2031 Future Background Traffic Conditions: The background traffic volumes will be determined for the study area intersections, ten years after the study is commissioned. We will identify an applicable background traffic growth rate and other area developments that may introduce traffic into the study area, based on our previous assumptions and discussions with the City. Planned road improvements and other approved developments within close proximity will be taken into consideration. The 2031 background traffic operations will be analyzed for the weekday AM/PM peak hours.
 - The Milton Major Transit Station Area Transportation Plan (MTSA) will need to be considered to develop local road forecasts.

- Confirmation required from Town and Regional staff regarding other nearby developments not accounted for in the MTSA. Please include the following in-stream background development:
 - 700 Main Street East Two proposed residential towers (25 and 32 storeys) with a combined 689 residential units,186 sq metres of commercial GFA fronting onto Main Street East, 3 storey podiums in both towers. Access via the Wilson Drive extension only. Draft TIS not yet completed/available. You will need to calculate the trip generation for this site within the report. We do agree that adjacent developments will need to be considered within the background traffic conditions. As the application for 700 Main Street East is still in preliminary stages, we request a reasonable preliminary unit count be provided by Town of Milton planning staff as there is no guarantee the density proposed by 700 Main Street East will be approved. If 700 Main Street East intends to seek the density outlined above, their traffic study will capture the higher scenario.

We are also requesting the Brookfield site be included as part of in-stream background development given this development will most likely require access through the Wilson Street Extension. Again, we request a reasonable preliminary unit count be provided by Town of Milton planning staff.

- 5. Site Traffic Generation and Trip Distribution: The size and nature of the proposed subject site will be documented based on the received site drawings and statistics, and will be used to estimate the number of automobile and nonautomobile trips likely to be produced during the weekday AM and PM peak hours. The estimation will be based on information from the Institute of Transportation Engineers (ITE) publication, Trip Generation, 10th Edition. The trip distribution for the proposed site will be based on a review of the 2016 Transportation Tomorrow Survey (TTS). The forecast site traffic for the development will be added to the road network based on the trip distribution and assigned to the network based on existing travel patterns, logical travel routes, and available traffic capacity in accordance with our interpretation of these various patterns. Please be advised that LUC 820 is not a good representation of ground floor commercial trip generation. Proxy data at similar high density mixed-use surrogate sites within Halton Region should be used instead (minimum 2-3 sites). The report must outline the similarities between the proxy site(s) and the proposed site and why they will generate a similar traffic demand. The selection and justification of the survey sites is the responsibility of the consultant. No modal split trip reductions are to be applied to the trip generation. As COVID-19 has significantly hampered commercial and retail business activity at "small-scale" developments, the collection of proxy data is not feasible at this time. We will rely on the proxy site data collected at Times Square in Burlington. This data has been previously recommended by the Town of Milton in prior applications.
- 6. **2031 Future Total Traffic Conditions**: The estimated site traffic volumes will be combined with the future background traffic volumes to determine the 2031 total traffic volumes for the study area intersections. Intersection operations analysis will be undertaken for the weekday AM/PM peak hours. Any necessary road improvements required to accommodate total traffic volumes will be identified if necessary, such as additional turning lanes, storage length modifications, intersection reconfigurations, signal timing adjustments, and signal installation. . Please be advised that a PHF of 1.0 should be used to simulate a flat hourly peak for the future background/total scenarios.
- 7. Traffic Signal Warrant Analysis: TAC Signal Warrant will be referenced with regards to signal warrant guidelines to determine if the installation of a traffic signal at the unsignalized intersections within the study area will be required in the future.

- 8. Access and Circulation Review: We will review the site access and circulation design using AutoTURN and include assessments of vehicle access and egress, clearance and swept path manoeuvres within the site using two design vehicles; MSU and PTAC. The MSU design vehicle will modelled to identify potential conflicts with the site driveways, circulation aisles and loading areas. The PTAC design vehicle will modelled to identify if two passenger vehicles can navigate the underground parking ramp simultaneously in opposing directions. MSU and garbage trucks must be able to enter the site in a forward motion, turn around internal to the site without the use of parking stalls/curbs/etc, and exit in a forward motion. Internal site circulation must be evaluated for safety and functionality. A site access review must be completed to determine that the site access conforms to all TAC and Town standards.
- 9. Functional Design for the Wilson Drive Extension based on TIS findings. Review and evaluate the feasibility of an exclusive bus only lane on the northbound approach of the intersection of Main Street East and Wilson Drive, as well as transit signal priority at this intersection. Confirm necessary lane configurations, driveway traffic control, etc. Ensure that active transportation is highly prioritized, safe, convenient, direct, accessible, with strong consideration to desire lines and access to the transit stops. Although we do agree the Wilson Drive Extension will need to be shown within the TIS, the approval of the functional design should not be a requirement of the TIS as these are two separate issues. The Wilson Drive Extension has additional stake holders and adjacent landowners that will need to be consulted. A separate approval process will need to be undertaken as the consultation will be fairly extensive between all impacted parties.
- 10. Transportation Demand Management (TDM): We will prepare a TDM Plan for the proposed development that will capture existing TDM opportunities near the development site and a list of measures to be considered by the Applicant to encourage greater use of more sustainable modes of transportation (transit, walking, cycling) and trip decision making that reduces, combines, or shortens vehicle trips. TDM should be reviewed the Parking Study instead. Refer to Parking Study TDM requirements below.TDM is outlined in the Milton Transportation Impact Study Guidelines as a requirement for a Traffic impact Study. The following are requirements of the TDM plan as outlined in the Impact Study Guidelines:
 - Provide a description of the TDM initiatives and their function, including a pedestrian routing plan;
 - Evaluate the impacts of the proposed TDM initiatives specifically relating to reduced trip generation associated with the site, reduced peak hour travel, increased transit usage and/or increased auto occupancy; and
 - Incorporate these adjustments into the traffic generation assumptions.

The TDM plan is a component of the Traffic Impact Study and will remain as such.

Parking Study

- 1. **Town of Milton Zoning By-law Review**: The proposed development's parking requirements as per Town of Milton's Zoning By-law will be determined. The by-law parking requirement will be used as a baseline for comparison with other jurisdictions, best practices and empirical data collected.
- 2. **Parking Utilization Survey**: In order to estimate the proposed development's residential peak parking demand, parking utilization surveys conducted at two sites previously approved by the Town of Milton will be reviewed: 33 Whitmer Street and 100 Millside Drive. The proxy site surveys were completed in 2017 between 4:00PM and 10:00PM on two separate weekdays

- and one weekend. These survey times represent the anticipated peak conditions of the residential component. The parking surveys recorded parking demand every 15 minutes.
- 3. Review the estimated parking demand from ITE Parking Generation Manual, 5th Edition
- 4. **Shared Parking**: Consideration of shared parking opportunities is common within mixed-use facilities and will be reviewed. To model this type of activity, a shared parking model using inputs from the Urban Land Institute (ULI) will be used. Shared parking allows for accommodation of peak parking demand but shares a supply among different uses.
- 5. Parking Demand Review: Using the observed parking rate obtained from the proxy site survey data, ITE Parking Generation Manual, and ZBL comparisons, a parking rate will be recommended that is deemed applicable to the subject site taking into account the developments locations in relation to the Milton GO Station Mobility Hub. The recommended rate will then be used to estimate the number of parking spaces needed to meet the projected parking demand. The estimated parking supply needed will be compared to the By-law required supply to assess the feasibility of providing less than the By-law supply requirements. In the event that the parking review determines that a parking reduction cannot be justified, the report will speak to this point.
- 6. A comprehensive TDM plan using the City of Kitchener's TDM Checklist. Through the proposed TDM checklist measures, it must be ensured that the resultant parking requirement in Table C is less than or equal to the proposed parking supply. All proposed TDM measures must be included in the recommendation section of the report. We will include the City of Kitchener TDM worksheet within the TDM plan however the TDM worksheet will not form the sole basis for supporting proposed parking supply. The parking supply will be supported through the parking study justification and will be based on empirical data (proxy surveys, ITE Parking Generation, Comparison of other municipalities, etc.) The emphasis will be on minimizing the over-supply of parking by using the lowest requirement that is reasonable for the area in contrast to the usual approach of requiring extra parking just in case there is not enough. We unfortunately cannot accept the role TDM will play as the deciding factor in supporting the proposed parking supply.

Regards,

Adam J. Makarewicz Senior Project Manager



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From: Adam Makarewicz Sent: 22-Feb-21 10:17 AM To:Michael.Turco@milton.ca

Subject: RE: 200624: 560 Main Street East - TIA PS - TOR

Hi Michael,

Hope you had a good weekend.

Just touching base on the TOR.

Regards,

Adam J. Makarewicz Senior Project Manager



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From: Adam Makarewicz Sent: 10-Feb-21 11:26 AM To:Michael.Turco@milton.ca

Cc: Colin Rauscher <Colin.Rauscher@neattcommunities.com>; Mike Vernooy <mike@neattcommunities.com>

Subject: 200624: 560 Main Street East - TIA PS - TOR

Good Morning Michael,

Paradigm has been retained by Neatt Communities to undertake a Transportation Impact and Parking Study for their proposed development at 560 Main Street East in Milton. I have enclosed our proposed scope of work, site plan as well as our access review regarding the proposed location of the driveway connection to the future Wilson Drive Extension. Note that I have been advised an updated site plan is being prepared.

If you could review and provide confirmation or any comments as soon as possible, that would be helpful, so that we can get started.

Please contact me with any questions.

Regards,

Adam J. Makarewicz

Senior Project Manager



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Appendix B

Existing Traffic Data



File: 1 Ontario St & Main St E

Site:

1719900002 NORTH APPROACH Facing: NORTH

DATE	T10.05		CAR			TRUCK			HEAVY		De de statema
DATE	TIME	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Pedestrians
Recording star	ted at:06:45:00										
9/21/2017		0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	30	77	14	0	2	0	2	10	0	1
9/21/2017	7:30:00	44	74	13	0	2	0	2	6	1	1
9/21/2017	7:45:00	44	76	19	0	2	0	4	4	1	1
9/21/2017	8:00:00	25	103	18	0	1	0	1	6	0	0
9/21/2017	8:15:00	32	144	24	1	2	0	1	13	0	2
9/21/2017	8:30:00	23	121	18	1	5	0	3	11	0	5
9/21/2017	8:45:00	18	94	26	0	4	0	0	14	0	4
9/21/2017	9:00:00	20	102	25	0	2	0	1	9	0	1
9/21/2017		0	0	0	0	0	0	0	0	0	0
	tarted at:10:45:00										
9/21/2017		0	0	0	0	0	0	0	0	0	0
9/21/2017	11:15:00	21	87	21	1	1	0	1	13	1	1
9/21/2017	11:30:00	24	90	27	1	2	0	0	11	1	4
9/21/2017	11:45:00	31	97	25	0	2	0	1	9	0	1
9/21/2017	12:00:00	25	107	32	0	4	0	0	12	0	2
9/21/2017	12:15:00	26	105	28	2	2	3	1	10	0	1
9/21/2017	12:30:00	26	89	24	0	4	1	3	10	1	6
9/21/2017	12:45:00	13	85	25	0	1	0	2	16	0	0
9/21/2017	13:00:00	35	94	37	0	4	0	0	14	1	4
9/21/2017	13:15:00	27	99	34	1	3	0	1	11	0	3
9/21/2017	13:30:00	21	91	31	0	1	0	1	14	1	54
9/21/2017	13:45:00	25	92	26	0	3	0	3	12	1	9
9/21/2017	14:00:00	25	101	27	0	3	0	1	10	0	1
9/21/2017	14:15:00	0	0	0	0	0	0	0	0	0	0
	tarted at:14:45:00				_	_				_	
9/21/2017	15:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	15:15:00	22	134	20	0	4	0	2	11	1	1
9/21/2017	15:30:00	25	140	32	1	3	0	1	9	0	5
9/21/2017	15:45:00	37	139	25	0	0	0	1	4	0	7
9/21/2017	16:00:00	25	122	31	0	0	0	2	7	0	6
9/21/2017	16:15:00	17	135	43	0	0	0	3	10	0	1
9/21/2017	16:30:00	21	136	25	0	1	0	1	7	0	0
9/21/2017	16:45:00	30	157	31	0	1	0	2	9	1	0
9/21/2017	17:00:00	20	142	26	0	1	0	1	6	1	
9/21/2017	17:15:00	36	155	38	0	1	0	1	4	1	2
9/21/2017	17:30:00	32	183	30 53	0	2	0	1	<u>4</u> 5	0	<u>2</u> 7
9/21/2017	17:45:00	41	150		0	2	1				4
9/21/2017	18:00:00	28 22	163 141	31 33	0	2 0	0	0	5 4	0	
9/21/2017	18:15:00										2
9/21/2017	18:30:00	22 28	134 103	39 26	1 0	0	0	0	2	0	0
9/21/2017	18:45:00										0
9/21/2017	19:00:00	33	133	37	0	0	0	1	5	0	
9/21/2017	19:15:00	0	0	0	0			0	0	0	0
9/21/2017	19:15:15	0	0	0	0	0	0	0	0	0	0

File: 1 Ontario St & Main St E

Site: 1719900002 EAST APPROACH

DATE	TIME		CAR			TRUCK			HEAVY		Pedestrians
DATE	TIIVIE	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	reuestrialis
Recording star											
9/21/2017	7:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	20	23	12	0	0	0	2	0	0	0
9/21/2017	7:30:00	22	52	10	0	0	0	3	3	1	4
9/21/2017	7:45:00	37	51	16	0	1	0	1	1	2	0
9/21/2017	8:00:00	36	73	18	0	1	0	3	2	1	3
9/21/2017	8:15:00	28	49	22	0	0	1	2	1	2	3
9/21/2017	8:30:00	38	73	29	1	1	1	2	1	2	0
9/21/2017	8:45:00	34	68	20	1	1	0	2	2	3	1
9/21/2017	9:00:00	32	85	17	2	0	0	0	0	2	0
9/21/2017	9:15:00	0	0	0	0	0	0	0	0	0	0
	arted at:10:45:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	11:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	11:15:00	38	72 65	29 37	0	0	0	1	1	1 2	0
9/21/2017	11:30:00	35			2	0	0	1	0		0
9/21/2017	11:45:00	35	80	29	2	1	1	1	1	0	0
9/21/2017	12:00:00	38	82	45	0	1	0	2	1	1	2
9/21/2017	12:15:00	42	83	31	0	2	3	0	1	0	0
9/21/2017	12:30:00	38	93	34	2	1 0	0	1	0	0	<u>2</u>
9/21/2017	12:45:00 13:00:00	45 40	89 93	33	0 1	0	0	1	0	1	1
9/21/2017 9/21/2017	13:00:00		93	35 20	1	0	1	2	1	1	2
	13:15:00	33 34	103	30	0	0	1	0	1	1	
9/21/2017 9/21/2017	13:45:00	34	89	26	0	0	0	0	1	2	2
9/21/2017	14:00:00	35	89 80	33	0	0	1	1	1	2	1
9/21/2017	14:00:00	35	0	0	0	0	0	0	0	0	0
		U	U	U	U	U	U	U	U	U	U
9/21/2017	arted at:14:45:00 15:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	15:15:00	37	93	31	0	0	0	3	0	3	2
9/21/2017	15:30:00	47	93	41	0	0	0	3	2	0	1
9/21/2017	15:45:00	46	109	34	0	0	1	0	0	2	1
9/21/2017	16:00:00	35	100	28	1	1	1	2	2	3	0
9/21/2017	16:15:00	42	100	40	1	0	0	4	2	2	0
9/21/2017	16:30:00	45	104	35	0	0	1	3	3	2	0
9/21/2017	16:45:00	38	104	45	0	0	0	0	0	0	0
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9/21/2017	17:15:00	49	127	43	0	2	0	1	2	1	0
9/21/2017	17:30:00	62	158	60	0	0	0	2	2	1	1
9/21/2017	17:45:00	49	133	31	0	0	0	0	0	0	1
9/21/2017	18:00:00	53	135	40	0	0	0	2	2	1	0
9/21/2017	18:15:00	58	169	50	0	0	0	2	1	0	0
9/21/2017	18:30:00	68	161	22	0	0	0	2	2	1	1
9/21/2017	18:45:00	61	155	64	0	0	0	1	1	2	2
9/21/2017	19:00:00	39	110	41	0	0	0	2	2	2	0
9/21/2017	19:15:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	19:15:15	0	0	0	0	0	0	0	0	0	0

File: 1 Ontario St & Main St E

Site: **1719900002**

Facing: NORTH

SOUTH APPROACH

DATE	TIDAE		CAR			TRUCK			HEAVY		Dadastriana
DATE	TIME	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Pedestrians
Recording star	rted at:06:45:00										
9/21/2017	7:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	13	114	77	0	3	1	0	3	2	1
9/21/2017	7:30:00	10	111	91	0	3	0	1	6	1	3
9/21/2017	7:45:00	13	114	84	0	3	1	0	10	0	5
9/21/2017	8:00:00	23	183	58	0	5	0	2	9	5	3
9/21/2017	8:15:00	20	160	55	1	0	0	1	7	1	3
9/21/2017	8:30:00	22	155	48	0	1	0	1	8	2	5
9/21/2017	8:45:00	21	128	38	0	2	1	3	8	2	4
9/21/2017	9:00:00	45	114	43	0	1	0	1	11	4	3
9/21/2017	9:15:00	0	0	0	0	0	0	0	0	0	0
Recording rest	tarted at:10:45:00										
9/21/2017	11:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	11:15:00	29	88	32	0	3	1	0	2	2	7
9/21/2017	11:30:00	34	83	41	0	4	0	1	13	1	0
9/21/2017	11:45:00	28	82	44	1	5	1	0	13	1	5
9/21/2017	12:00:00	36	109	42	1	6	3	0	10	1	5
9/21/2017	12:15:00	43	114	49	0	6	4	0	8	2	2
9/21/2017	12:30:00	44	106	43	0	4	0	0	13	1	5
9/21/2017	12:45:00	40	84	39	1	4	1	0	5	1	6
9/21/2017	13:00:00	40	94	45	0	5	1	0	8	0	5
9/21/2017	13:15:00	30	99	45	1	1	0	3	6	1	2
9/21/2017	13:30:00	27	95	40	0	1	0	0	6	0	10
9/21/2017	13:45:00	33	90	44	0	2	0	1	8	1	5
9/21/2017	14:00:00	40	106	41	0	1	2	0	12	1	8
9/21/2017	14:15:00	0	0	0	0	0	0	0	0	0	2
Recording rest	tarted at:14:45:00										
9/21/2017		0	0	0	0	0	0	0	0	0	0
9/21/2017	15:15:00	42	123	44	1	2	1	2	9	2	4
9/21/2017	15:30:00	39	107	49	1	1	0	0	11	0	3
9/21/2017	15:45:00	43	144	49	1	0	2	0	17	4	2
9/21/2017	16:00:00	29	142	51	0	1	0	2	7	3	4
9/21/2017	16:15:00	28	129	50	0	1	1	1	6	3	6
9/21/2017	16:30:00	51	122	63	0	3	0	1	11	1	10
9/21/2017	16:45:00	49	87	36	0	0	0	1	9	2	2
9/21/2017	17:00:00	39	130	67	0	4	0	0	10	0	5
9/21/2017	17:15:00	32	155	55	0	1	0	0	8	2	3
9/21/2017	17:30:00	34	138	57	0	0	0	1	5	1	6
9/21/2017	17:45:00	49	123	57	0	0	0	0	7	1	12
9/21/2017	18:00:00	45	133	65	0	0	0	0	11	0	3
9/21/2017	18:15:00	41	139	52	0	0	1	0	4	1	7
9/21/2017	18:30:00	49	120	45	0	3	0	0	6	2	7
9/21/2017	18:45:00	44	117	46	0	1	0	0	5	3	4
9/21/2017	19:00:00	35	112	41	0	1	1	0	4	3	14
9/21/2017	19:15:00	0	0	0	0	0	0	0	0	0	0
9/21/2017		0	0	0	0	0	0	0	0	0	0

File: 1 Ontario St & Main St E

Site: 1719900002 WEST APPROACH

DATE	TIME		CAR			TRUCK			HEAVY		Pedestrians
DATE	TIIVIE	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Pedestrians
Recording star	ted at:06:45:00										
9/21/2017	7:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	25	104	22	0	0	0	0	2	0	2
9/21/2017	7:30:00	25	146	22	0	0	0	1	2	0	0
9/21/2017	7:45:00	42	153	15	0	0	0	0	2	0	2
9/21/2017	8:00:00	53	115	23	0	0	0	0	3	0	0
9/21/2017	8:15:00	43	110	27	0	0	0	0	1	1	0
9/21/2017	8:30:00	33	119	22	0	0	0	1	2	0	1
9/21/2017	8:45:00	18	79	26	0	2	0	0	1	1	1
9/21/2017	9:00:00	21	78	32	1	0	0	0		0	1
9/21/2017	9:15:00	0	0	0	0	0	0	0	0	0	0
	arted at:10:45:00	0			0				•		
9/21/2017	11:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	11:15:00	21	70 74	31	1	0	0	0	3	0	0
9/21/2017	11:30:00	25		33	0	0	1	0	0		0
9/21/2017	11:45:00	25	80	25	0	0	0	1	1	0	0
9/21/2017 9/21/2017	12:00:00 12:15:00	28 30	97 92	33 32	0	0	0	1 0	0	1	<u> </u>
			92 77	29	0	0	3	2	0	0	0
9/21/2017	12:30:00 12:45:00	26 14	77		0	0	0	0	1	1	0
9/21/2017 9/21/2017	13:00:00	35	100	45 37	1	0	1	0	0	0	1
9/21/2017	13:15:00	23	77	45	0	0	0	0	2	0	2
9/21/2017	13:30:00	28	91	36	0	0	0	0	0	0	3
9/21/2017	13:45:00	20	81	35	1	1	1	1	1	1	2
9/21/2017	14:00:00	33	102	41	0	0	0	0	0	0	7
9/21/2017	14:15:00	0	0	0	0	0	0	0		0	0
	arted at:14:45:00	U	0	0	U	0	0	0	0	0	0
9/21/2017	15:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	15:15:00	32	67	41	1	0	0	0	2	1	0
9/21/2017	15:30:00	27	86	42	0	0	0	1	0	1	3
9/21/2017	15:45:00	32	91	33	0	1	0	0	2	2	1
9/21/2017	16:00:00	40	95	40	0	1	0	0	1	2	5
9/21/2017	16:15:00	25	100	44	0	1	0	0	3	0	0
9/21/2017	16:30:00	42	104	46	0	1	1	0	3	3	5
9/21/2017	16:45:00	36	104	55	1	0	1	0	3	1	5
9/21/2017	17:00:00	43	124	48	0	0	0	1	2	0	1
9/21/2017	17:15:00	43	114	60	0	0	0	0	2	0	0
9/21/2017	17:30:00	37	133	45	2	0	0	1	1	1	1
9/21/2017	17:45:00	51	134	48	0	0	0	0	2	0	0
9/21/2017	18:00:00	40	118	54	0	1	0	0	0	2	7
9/21/2017	18:15:00	38	132	50	0	0	0	0	1	0	1
9/21/2017	18:30:00	36	124	53	0	0	0	0	4	0	3
9/21/2017	18:45:00	29	110	46	0	0	0	0	0	0	1
9/21/2017	19:00:00	40	118	40	0	0	0	0	2	0	11
9/21/2017	19:15:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	19:15:15	0	0	0	0	0	0	0	0	0	0

Summary

Bin Size 15 minutes
Aggregatio Median
Time Zone America/Toronto
Start Time 2/5/2020 0:00
End Time 2/5/2020 23:59

Location Main Street East and Mall Entrance

Latitude ar 43.51927259,-79.87631908

Passenger Vehicles

Passenger vernicles	5					F4						C						14/						
Entry North				East								South						West						
Direction Southbo	ound					Westbo	und					Northb	ound					Eastbou	nd					
Start Time Right	Thru	Left	U-Turn	Peds CW	V Peds CC	CW Right	Thru	Left	U-Turn	Peds CV	V Peds C	CW Right	Thru	Left	U-Turn	Peds CW	Peds CC	W Right	Thru	Left	U-Turn	Peds CV	/ Peds (CCW
0:00:00	0	0	0	0	0	0	0	13	1	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0
0:15:00	0	0	0	0	0	0	0	7	0	0	0	0	1	0	0	0	0	0	0	7	0	0	0	0
0:30:00	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
0:45:00	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
1:00:00	0	0	0	0	0	0	0	7	1	0	0	0	0	0	1	0	0	0	0	4	0	0	0	0
1:15:00	0	0	0	0	0	0	0	3		0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
1:30:00	0	0	0	0	0	0	0	4		0	0	0	n	0	0		0	0	0	1		0	0	0
1:45:00	0	0	0	0	0	0	0	4	-	0	0	0	0	0	0		0	0	0	1		0	0	0
2:00:00	0	0	0	0	0	0	0	2		0	0	0	1	0	0	-	0	0	0	2	-	0	0	0
	0	0	0	0	0	0	0				0	0	0	0	0	-	0	0	0	0	-	0	0	0
2:15:00			-			0	-	1		0	0		-	-	0					-				
2:30:00	0	0	0	0	0	•	0	3		0	•	0	0	0	•		0	0	0	1	-	0	0	0
2:45:00	0	0	0	0	0	0	0	3		0	0	0	0	0	0	0	0	0	0	5		0	0	0
3:00:00	0	0	0	0	0	0	0	4		0	0	0	0	0	0		0	0	0	2		0	0	0
3:15:00	0	0	0	0	0	0	0	1		0	0	0	0	0	0	-	0	0	0	1		0	0	0
3:30:00	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
3:45:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0
4:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
4:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
4:30:00	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	2	15	0	0	0	0
4:45:00	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0
5:00:00	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	2	22	0	0	0	0
5:15:00	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	2	31	0	0	0	0
5:30:00	0	0	0	0	0	0	0	14	2	0	0	0	3	0	0	0	0	0	1	54	0	0	0	0
5:45:00	0	0	0	0	0	0	0	24	0	0	0	0	1	0	1	0	0	0	3	67	0	0	0	0
6:00:00	0	0	0	0	0	0	0	22		0	0	0	1	0	2	0	0	0		.07		0	0	0
6:15:00	0	0	0	0	0	0	0	31		0	0	0	0	0	1	-	0	0		86		0	0	0
6:30:00	0	0	0	0	0	0	0	40	•	0	0	0	1	0	1	-	0	0	-	.39		0	0	0
6:45:00	0	0	0	0	0	0	0	61		0	0	0	5	0	0		0	0		.81		0	0	0
7:00:00	0	0	0	0	0	0	0	54	•	0	0	0	2	0	2	-	0	0		:30		0	0	0
	-	-	0		•	0	0				0	-	4	-	2	0	-	-				-	0	0
7:15:00	0	0	-	0	0	-	-	75		0	-	0	4	0		-	0	0		167		0	0	
7:30:00	0	0	0	0	0	0		107		0	0	0	2	0	4		0			267		0	-	0
7:45:00	0	0	0	0	0	0		130		0	0	0	5	0	6	-	0	0		146	-	0	0	0
8:00:00	0	0	0	0	0	0				0	0	0	4	0	5		0	0		.89		0	0	0
8:15:00	0	0	0	0	0	0	0	146		0	0	0	4	0	4	-	0	0		.78		0	0	0
8:30:00	0	0	0	0	0	0	0	94		0	0	0	5	0	8	-	0			.23		0	0	0
8:45:00	0	0	0	0	0	0	0	117	19	0	0	0	9	0	11	0	0	0	16 1	.55	0	0	0	0
9:00:00	0	0	0	0	0	0	0			0	0	0	9	0	16	0	0	0		.35	0	0	0	0
9:15:00	0	0	0	0	0	0	0		16	0	0	0	14	0	13	0	0	0	16 1	.34	0	0	0	0
9:30:00	0	0	0	0	0	0	0	83	15	0	0	0	8	0	14	0	0	0	17	87	0	0	0	0
9:45:00	0	0	0	0	0	0	0	110	12	0	0	0	11	0	13	0	0	0	28 1	.00	0	0	0	0
10:00:00	0	0	0	0	0	0	0	112	14	0	0	0	19	0	21	0	0	0	20	93	0	0	0	0
10:15:00	0	0	0	0	0	0	0	94	19	0	0	0	25	0	15	0	0	0	19 1	.14	0	0	0	0
10:30:00	0	0	0	0	0	0	0	114	26	0	0	0	17	0	16	0	0	0	15 1	.06	0	0	0	0
10:45:00	0	0	0	0	0	0	0	93	16	0	0	0	21	0	12	0	0	0	21 1	.08	0	0	0	0
11:00:00	0	0	0	0	0	0	0			0	0		25	0	20	0	0			.22	0	0	0	0
11:15:00	0	0	0	0	0	0				0	0		26	0	20		0			.12	0	0	0	0
11:30:00	0	0	0	0	0	0				0	0		25	0	28	-	0	-		18		0	0	0
11:45:00	0	0	0	0	0	0				0	0		23	0	14	0	0			.26	-	0	0	0
12:00:00	0	0	0	0	0	0				0	0		26	0	21	-	0			.36		0	0	0
	0	0	0	0	0	0				0	0		26 29	0	21	0	0			.49	0	0	0	0
12:15:00 12:30:00	0	0	0	0	0	0				0	0		29 17	0	22		0					0	0	0
12.30.00	U	U	U	U	U	U	U .	113	11	U	U	U	1/	U	22	U	U	0	3U I	.15	U	U	U	U

12:45:00	0	0	0	0	0	0	0	142	31	0	0	0	30	0	28	0	0	0	25	112	0	0	0	0
13:00:00	0	0	0	0	0	0	0	144	26	0	0	0	27	0	36	0	0	0	37	140	0	0	0	0
13:15:00	0	0	0	0	0	0	0	143	26	0	0	0	26	0	23	0	0	0	31	135	0	0	0	0
13:30:00	0	0	0	0	0	0	0	115	28	0	0	0	22	0	27	0	0	0	30	105	0	0	0	0
13:45:00	0	0	0	0	0	0	0	127	23	0	0	0	32	0	35	0	0	0	22	114	0	0	0	0
14:00:00	0	0	0	0	0	0	0	133	21	0	0	0	30	0	27	0	0	0	33	125	0	0	0	0
14:15:00	0	0	0	0	0	0	0	132	16	0	0	0	23	0	33	0	0	0	26	150	0	0	0	0
14:30:00	0	0	0	0	0	0	0	159	21	0	0	0	24	0	25	0	0	0	21	140	0	0	0	0
14:45:00	0	0	0	0	0	0	0	138	19	0	0	0	23	0	23	0	0	0	23	154	0	0	0	0
15:00:00	0	0	0	0	0	0	0	204	34	0	0	0	26	0	32	0	0	0	17	145	0	0	0	0
15:15:00	0	0	0	0	0	0	0	174	32	0	0		38	0	24	0	0	0	34	152	0	0	0	0
						•						0												
15:30:00	0	0	0	0	0	0	0	162	31	0	0	0	26	0	37	0	0	0	19	163	0	0	0	0
15:45:00	0	0	0	0	0	0	0	198	32	0	0	0	21	0	26	0	0	0	16	157	0	0	0	0
16:00:00	0	0	0	0	0	0	0	174	18	0	0	0	20	0	23	0	0	0	29	159	0	0	0	0
16:15:00	0	0	0	0	0	0	0	154	28	0	0	0	21	0	29	0	0	0	39	140	0	0	0	0
16:30:00	0	0	0	0	0	0	0	195	37	0	0	0	28	0	34	0	0	0	30	170	0	0	0	0
16:45:00	0	0	0	0	0	0	0	231	39	0	0	0	32	0	31	0	0	0	28	167	0	0	0	0
17:00:00	0	0	0	0	0	0	0	180	35	0	0	0	32	0	28	0	0	0	24	198	0	0	0	0
17:15:00	0	0	0	0	0	0	0	273	34	0	0	0	18	0	32	0	0	0	30	183	0	0	0	0
17:30:00	0	0	0	0	0	0	0	213	40	0	0	0	30	0	29	0	0	0	25	179	0	0	0	0
17:45:00	0	0	0	0	0	0	0	236	29	0	0	0	29	0	19	0	0	0	21	174	0	0	0	0
18:00:00	0	0	0	0	0	0	0	260	45	0	0	0	26	0	34	0	0	0	31	189	0	0	0	0
18:15:00	0	0	0	0	0	0	0	241	29	0	0	0	23	0	23	0	0	0	22	203	0	0	0	0
18:30:00	0	0	0	0	0	0	0	232	28	0	0	0	34	0	20	0	0	0	22	166	0	0	0	0
18:45:00	0	0	0	0	0	0	0	204	23	0	0	0	21	0	18	0	0	0	30	162	0	0	0	0
19:00:00	0	0	0	0	0	0	0	238	29	0	0	0	27	0	26	0	0	0	19	155	0	0	0	0
19:15:00	0	0	0	0	0	0	0	140	28	0	0	0	19	0	30	0	0	0	12	141	0	0	0	0
19:30:00	0	0	0	0	0	0	0	185	23	0	0	0	23	0	19	0	0	0	29	114	0	0	0	0
19:45:00	0	0	0	0	0	0	0	118	16	0	0	0	33	0	22	0	0	0	21	107	0	0	0	0
20:00:00	0	0	0	0	0	0	0	149	11	0	0	0	25	0	25	0	0	0	22	127	0	0	0	0
	0	0	0	0	0	0		130		0	0	0		0		0	0				0	0	0	0
20:15:00	0	0	0	0	0	0	0		16 9	0	0		23		14	0	0	0	19 9	81		0	0	0
20:30:00		-			-	-	-	107	-		-	0	20	0	17	-	-	-	-	91	0			
20:45:00	0	0	0	0	0	0	0	83	9	0	0	0	13	0	16	0	0	0	10	79	0	0	0	0
21:00:00	0	0	0	0	0	0	0	104	10	0	0	0	12	0	19	0	0	0	3	74	0	0	0	0
21:15:00	0	0	0	0	0	0	0	79	4	0	0	0	9	0	9	0	0	0	5	40	0	0	0	0
21:30:00	0	0	0	0	0	0	0	74	4	0	0	0	1	0	12	0	0	0	7	55	0	0	0	0
21:45:00	0	0	0	0	0	0	0	52	5	0	0	0	6	0	7	0	0	0	0	55	0	0	0	0
22:00:00	0	0	0	0	0	0	0	64	3	0	0	0	5	0	2	0	0	0	1	33	0	0	0	0
22:15:00	0	0	0	0	0	0	0	35	2	0	0	0	3	0	0	0	0	0	2	30	0	0	0	0
22:30:00	0	0	0	0	0	0	0	25	1	0	0	0	3	0	3	0	0	0	1	26	0	0	0	0
22:45:00	0	0	0	0	0	0	0	26	3	0	0	0	2	0	2	0	0	0	1	19	0	0	0	0
23:00:00	0	0	0	0	0	0	0	28	3	0	0	0	3	0	3	0	0	0	1	23	0	0	0	0
23:15:00	0	0	0	0	0	0	0	12	1	0	0	0	3	0	0	0	0	0	0	14	0	0	0	0
23:30:00	0	0	0	0	0	0	0	18	1	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0
23:45:00	0	0	0	0	0	0	0	12	1	0	0	0	1	0	0	0	0	0	0	12	0	0	0	0
Single-Unit Truc	cks																							
Entry Nort						East						Sout	h					Wes	st					
Direction Sout						Westb	ound						hbound						bound					
Start Time Righ		Left	U-Turi	n Pede	CW Ped	s CCW Right	Thru	Left	U-T	iirn Pei	ds CW Ped	s CCW Righ		Left	U-Tur	rn Peds	CW Peds	CCW Righ		Left	U-Turn	Peds (W Peds	ccw
0:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
															0									
0:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0
0:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
2:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
2:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-		-	-

3:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6:45:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0
7:15:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
7:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
7:45:00	0	0	0	0	0	0	0	1	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	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:15:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
8:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8:45:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
9:00:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
9:15:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
9:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
9:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
10:00:00	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0
10:15:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
10:30:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	1	2	0	0	0	0
10:45:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0
11:00:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
11:15:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
11:30:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
11:45:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	5	0	0	0	0
12:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
12:15:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0
12:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
12:45:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
13:00:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
13:15:00	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	5	0	0	0	0
13:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0
13:45:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
14:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
14:15:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
14:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
14:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
15:00:00	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	1	4	0	0	0	0
15:15:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0
15:30:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
15:45:00	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
16:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	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	3	0	0	0	0
16:30:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	1	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	4	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	1	0	0	0	0
17:15:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	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	1	0	0	0	0
17:45:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	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	2	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	4	0	0	0	0
18:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
18:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
19:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0

19:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
19:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
19:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
20:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
20:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
20:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	1		0	0 ()	0
20:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	1		0	0 ()	0
21:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
21:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
21:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0		0	0			0 (0
21:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
22:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0			0 ()	0
22:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0		0	0 ()	0
22:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0 ()	0
22:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0 ()	0
23:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0			0 ()	0
23:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0 ()	0
23:30:00	0	0	0		0	0	0	1	0	0	0	0	0	0			0	0	0			0 ()	0
23:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0			0 (0
Articulated Trucks																								
Entry North						East						South					W	/est						
Direction Southbo	ound					Westbo	und					Northbo	ound					astbound						
Start Time Right	Thru	Left	U-Turn	Peds CW	V Peds CC	W Right	Thru	Left	U-Turn	Peds CW	/ Peds CC	W Right	Thru	Left	U-Turn	Peds CW	Peds CCW Ri	ight Th	ru L	eft	U-Turn	Peds CW	Peds CC	w
0:00:00	0	0	0		0	0	0	0	0		0	0	0	0			0 0	0	0			0 (0
0:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
0:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
0:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
1:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
1:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
1:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0			0 ()	0
1:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
2:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
2:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0 0	0	0			0 (0
2:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
2:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0 0	0	0			0 (0
3:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
3:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
3:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
3:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0 0	0	0			0 ()	0
4:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
4:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
4:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
4:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
5:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
5:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
5:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
5:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
6:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
6:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
6:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
6:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
7:00:00	0	0	0	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		0	0 ()	0
7:30:00	0	0	0	0	0	0	0	3	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		0	0 ()	0
8:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0 0	0	1		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		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		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		0	0 ()	0
9:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
9:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	1		0	0 ()	0
9:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0
9:45:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0 0	0	0		0	0 ()	0

10:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45:00 11:00:00	0 0	0	0	0 0	0	0	0	0	0	0 0	0	0	0	0 0	0 0	0	0	0	0	0	0	0	0 0	0
11:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45:00	0	0	0	0 0	0	0	0 0	1 0	0	0 0	0	0	0	0 0	0	0 0	0 0	0	0	0	0	0	0 0	0
14:00:00 14:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1 0	0	0	0	0	0	0	0	0	0
14:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45:00	0	0	0	0	0	0	0	1	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	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	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	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	0	0	0 0	0
17:00:00 17:15:00	0	0	0	0	0	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	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	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	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	0	0	0	0
18:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:45:00 20:00:00	0	0	0	0 0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0
20:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:30:00	0	0	0	0	0	0	0	0 2	0	0	0 0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45:00 23:00:00	0 0	0	0	0 0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0
23:15:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses																								
Entry North						East						South	ı					West						
Direction South						Westb							nbound					Eastbo						
Start Time Right	Thru	Left		Peds C			Thru	Left				CCW Right	Thru	Left			CW Peds (Thru	Left	U-Turn		CW Peds C	CW
	n	Λ	0	Λ	Λ	Λ	Λ	Λ	Λ	Λ.	Λ.	Λ	n	Λ	Λ	Λ	Λ	Λ	(1)	0	0	Λ	(1)	(1

0:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45:00	0	0	0		0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0	0
		0	0	0	-			0	0		-	0	0	0	0	-		0		0	0	0	0	
3:00:00	0			-	0	0	0	0	-	0	0		-	-	-	0	0		0				-	0
3:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
4:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0
5:15:00	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
5:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
5:45:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
6:00:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0
6:15:00	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6:30:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0
6:45:00	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
7:00:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
7:15:00	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
7:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
7:45:00	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	6	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	7	0	0	0	0
8:15:00	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
8:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
8:45:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
9:00:00	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
9:15:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
9:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
10:00:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
10:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30:00	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
10:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
11:00:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
11:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
11:30:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
11:45:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
12:00:00	0		0						-			0			0	0	0	0	0	3		0	-	0
	0	0	0	0	0	0	0	2	0	0 0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
12:15:00		0	0	-	-	0	0	0	0		0	0	-	0	0	0	0			_	0	0	-	0
12:30:00	0 0	0	0	0 0	0	0	0	2	0	0 0	0	0	0	0		0	0	0 0	0 0	2 1	0	0	0	0
12:45:00			0					1						0	0					3			0	
13:00:00	0	0		0	0	0	0	3	0	0	0	0	0	-	-	0	0	0	0		0	0	-	0
13:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
13:30:00	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
13:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
14:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
14:15:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
14:30:00	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
14:45:00	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
15:00:00	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
15:15:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
15:30:00	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
15:45:00	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
16:00:00	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
16:15:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0

16:30:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
16:45:00	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
17:00:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
17:15:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
17:30:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
17:45:00	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
18:00:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
18:15:00	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
18:30:00	0	0	0	0	0	0 0	0	2	0	0 0	0	0	0	0	0	0	0	0	0	2	0	0	0 0	0 0
18:45:00 19:00:00	0 0	0 0	0	0	0	0	0 0	4 3	0	0	0	0	0	0	0 0	0	0 0	0	0	5 4	0 0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:15:00 19:30:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:45:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
20:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:15:00	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
20:45:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
21:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
21:15:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
21:45:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
22:00:00	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
22:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30:00 23:45:00	0 0	0 0	0 0	0	0	0 0	0 0	0	0	0	0	0	0	0	0 1	0	0 0	0	0 1	0	0 0	0 0	0 0	0
Bicycles	U	U	U	U	U	U	U	U	U	U	U	U	U	U	1	U	U	U	1	U	U	U	U	U
Entry No	orth					East						South						West						
	orth outhbound					East Westbo	ound					South Northb	ound					West Eastb	ound					
Entry No Direction So Start Time Rig	uthbound	Left	U-Turn	Peds C	W Peds (East Westbo CCW Right		Left	U-Turi	n Peds	CW Peds C	Northb	ound Thru	Left	U-Turn	ı Peds	CW Peds	West Eastbook CCW Right	ound Thru	Left	U-Tur	n Ped	s CW Ped	s CCW
Direction So	uthbound	Left 0	U-Turn 0	Peds C	W Peds (Westbo	ound Thru 0	Left 0	U-Turr 0	n Peds	CW Peds C	Northb		Left 0	U-Turn 0	Peds	CW Peds	Eastb		Left 0	U-Tur 0	n Ped 0	s CW Ped	s CCW 0
Direction So Start Time Rig	uthbound ght Thru					Westbo CCW Right	Thru					Northb CW Right	Thru					Eastbo CCW Right	Thru					
Direction So Start Time Rig 0:00:00	uthbound ght Thru 0	0	0	0	0	Westbo CCW Right 0	Thru 0	0	0	0	0	Northb CW Right 0	Thru 0	0	0	0	0	Eastbo CCW Right 0	Thru 0	0	0	0	0	0
Direction So Start Time Rig 0:00:00 0:15:00	outhbound ght Thru 0 0	0 0	0 0	0	0	Westbo CCW Right 0 0	Thru 0 0	0 0	0	0 0	0 0	Northb CW Right 0 0	Thru 0 0	0	0	0	0	Eastbook CCW Right 0	Thru 0 0	0 0	0 0	0	0 0	0 0
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Direction So Start Time Riq 0:00:00 0:15:00 0:30:00 0:45:00 1:00:00 1:30:00 1:45:00 2:00:00 2:15:00 2:30:00 2:45:00 3:00:00 3:45:00 4:00:00 4:15:00 4:30:00 4:45:00 5:00:00 5:35:00 6:00:00	outhbound ght Thru 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Westb: CCW Right 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Northb CW Right 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Eastb: CCW Right 0 0 0 0 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
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7:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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7:45:00	0	0	0	0	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	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	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	0
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9:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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10:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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13:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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14:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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16:00:00	0	0	0	0	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	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	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	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	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	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	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	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	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	0	0	0	0
18:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:30:00	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0			0	0	0
19:30:00									0			-	0							0	0			0
	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	
20:00:00	0	-	-	0	-	-	-	0	0	-	-	0	0	0	-	0	0	-	-	0	0	-	-	0
20:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
20:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

23:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:15:00		0		-	-			0	-	0		0	0	0	0	0	-	0	0	0		-	0	0
23:30:00		0						0		0		0	0	0	0	0		0	0	0			0	0
23:45:00	0	0						0		0		0	0	0	0	0		0	0	0			0	0
Pedestrians																								
Entry North						East						South						West						
Direction Southbo	ound					Westboo	und					Northbo	und					Eastbou	nd					
Start Time Right	Thru	Left	U-Turn	Peds CW			Thru	Left	U-Turn		/ Peds CC	-	Thru	Left	U-Turn		/ Peds CC\		Thru	Left	U-Turn	Peds CW		
0:00:00		0						0		0		0	0	0	0	0		0	0	0			0	0
0:15:00	0	0						0		0		0	0	0	0	0		0	0	0			0	0
0:30:00	0	0				0		0		0		0	0	0	0	0		0	0	0			0	0
0:45:00 1:00:00	0	0						0		0		0	0	0	0	0		0	0	0			0 0	0
1:15:00	0	0						0		0		0	0	0	0	0		0	0	0			0	0
1:30:00		0						0		0		0	0	0	0	0		0	0	0		-	0	0
1:45:00	0	0						0		0		0	0	0	0	0		0	0	0			0	0
2:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45:00	0	0				-		0		0		0	0	0	0	0		0	0	0	-	-	0	0
3:00:00	0	0						0		0		0	0	0	0	0		0	0	0			0	0
3:15:00	0	0				-		0		0		0	0	0	0	0		0	0	0			0	0
3:30:00 3:45:00	0	0						0		0		0	0	0	0	0		0	0	0			0 0	0
4:00:00	0	0			-	-		0		0		0	0	0	0	0	-	0	0	0	-	-	0	0
4:15:00		0						0		0		0	0	0	0	0		0	0	0			0	0
4:30:00	0	0				0		0		0		0	0	0	0	0		0	0	0	0	0	0	0
4:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30:00	0	0						0		0		0	0	0	0	0		2	0	0			0	0
5:45:00	0	0		-				0		0		0	0	0	0	0		0	0	0	-		0	0
6:00:00	0	0						0		0		0	0	0	0	0		0	0	0			0	0
6:15:00 6:30:00	0	0						0		0		0	0	0	0	0		0	0	0			0 0	0
6:45:00	0	0						0		0		0	0	0	0	0		0	0	0	-	-	0	0
7:00:00	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
7:30:00	0	0	0	0	0	0	0	0		0		0	0	0	0	0	0	1	0	0	0	0	0	0
7:45:00	0	0	0	0	0	0	0	0	0	0	1	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	-	3	0	0	-	0	0	0
8:15:00	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
8:45:00 9:00:00	0	0		-	-	-	-	0	-	0		0	0	0	0	0	-	1	0	0	-	-	0	0
9:15:00	0	0						0		0		0	0	0	0	0		0	0	0			0	0
9:30:00	0	0						0		0		0	0	0	0	0		1	0	0			0	0
9:45:00	0	0				0		0		0		1	0	0	0	0	0	0	0	0	0		0	0
10:00:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0
10:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
10:30:00	0	0						0		0		0	0	0	0	0		0	0	0			0	0
10:45:00		0						0		0		1	0	0	0	0		1	0	0			0	0
11:00:00	0	0		-	-			0		0		0	0	0	0	0		0	0	0	-		0	0
11:15:00 11:30:00	0	0						0		0		0	0	0	0	0		0	0	0			0 0	0
11:45:00	0	0						0		0		0	0	0	0	0	-	0	0	0			0	0
12:00:00	0	0						0		0		0	0	0	0	0		0	0	0			0	0
12:15:00	0	0						0		0		0	0	0	0	0		2	0	0		-	0	0
12:30:00	0	0						0		0		1	0	0	0	0	1	1	0	0	0		0	0
12:45:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0
13:00:00	0	0					-	0		0		0	0	0	0	0		1	0	0			0	0
13:15:00	0	0						0	0	0	0	1	0	0	0	0		0	0	0			0	0
13:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0

13:45:	:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
14:00:	:00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0
14:15:	:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30:	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
14:45	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
15:00:	:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	1	0	0	0	0	0	0
15:15:	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
15:30:	:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0
15:45:	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
16:00:	:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0
16:15:	:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0
16:30:	:00	0	0	0	0	0	0	0	0	0	0	1	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	1	1	0	0	0	0	1	0	0	0	0	0	0	0
17:00:	:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
17:15:	:00	0	0	0	0	0	0	0	0	0	0	1	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	2	0	0	0	0	2	0	0	0	0	0	0	0
17:45	:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	1	0	0	0	0	0	0
18:00:	:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	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	0	0	0	0
18:30:	:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0
19:00:	:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	3	0	0	0	0	0	0
19:15:	:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
19:30:	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
19:45:	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
20:00:	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:15:	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:30:	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0
20:45	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00:	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:15:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
21:30:	:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
21:45	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
22:00:	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:15:	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:30:	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45:	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00:	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
23:15:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
23:45	:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0

Site: **1719900010**

NORTH APPROACH

5.455	- 10.45		CAR			TRUCK			HEAVY		5 1
DATE	TIME	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Pedestrians
Recording star	ted at:06:45:00										
9/21/2017	7:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	32	0	7	0	0	0	0	0	0	1
9/21/2017	7:30:00	34	0	10	0	0	0	1	0	0	1
9/21/2017	7:45:00	36	0	17	0	0	0	0	0	1	0
9/21/2017	8:00:00	32	0	24	0	0	0	0	0	0	1
9/21/2017	8:15:00	32	0	23	0	0	0	0	0	1	3
9/21/2017	8:30:00	16	0	13	0	0	0	0	0	0	0
9/21/2017	8:45:00	16	0	17	0	0	0	0	0	1	2
9/21/2017	9:00:00	32	0	25	0	0	0	0	0	1	0
9/21/2017	9:15:00	0	0	0	0	0	0	0	0	0	0
Recording rest	arted at:10:45:00										
9/21/2017	11:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	11:15:00	11	0	17	0	0	0	0	0	0	2
9/21/2017	11:30:00	18	0	16	0	0	1	1	0	0	2
9/21/2017	11:45:00	13	0	19	0	0	2	0	0	0	3
9/21/2017	12:00:00	25	0	19	1	0	0	0	0	0	2
9/21/2017	12:15:00	22	0	22	0	0	0	0	0	0	1
9/21/2017	12:30:00	23	0	16	0	0	0	0	0	0	1
9/21/2017	12:45:00	15	0	23	0	0	0	0	0	0	3
9/21/2017	13:00:00	21	0	20	0	0	0	0	0	1	0
9/21/2017	13:15:00	25	0	21	1	0	0	1	0	1	1
9/21/2017	13:30:00	23	0	18	0	0	0	1	0	0	54
9/21/2017	13:45:00	16	0	22	0	0	0	0	0	0	2
9/21/2017	14:00:00	20	0	13	0	0	0	1	0	0	0
9/21/2017	14:15:00	0	0	0	0	0	0	0	0	0	0
Recording rest	arted at:14:45:00										
9/21/2017	15:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	15:15:00	19	0	17	1	0	1	0	0	0	39
9/21/2017	15:30:00	36	0	27	0	0	0	1	0	0	1
9/21/2017	15:45:00	15	0	28	0	0	0	1	0	1	3
9/21/2017	16:00:00	15	0	31	1	0	0	1	0	0	3
9/21/2017	16:15:00	27	0	32	0	0	0	1	0	1	1
9/21/2017	16:30:00	32	0	23	0	0	0	0	0	0	0
9/21/2017	16:45:00	22	0	21	0	0	0	0	0	0	1
9/21/2017	17:00:00	20	0	26	0	0	0	0	0	0	2
9/21/2017	17:15:00	31	0	34	0	0	0	0	0	0	7
9/21/2017	17:30:00	27	0	32	0	0	0	0	0	0	0
9/21/2017	17:45:00	33	0	29	0	0	0	0	0	0	0
9/21/2017	18:00:00	35	0	25	0	0	0	0	0	0	1
9/21/2017	18:15:00	23	0	19	0	0	0	0	0	0	3
9/21/2017	18:30:00	36	0	30	0	0	0	1	0	0	0
9/21/2017	18:45:00	20	0	15	0	0	0	0	0	0	0
9/21/2017	19:00:00	32	0	21	0	0	0	0	0	0	3
9/21/2017	19:15:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	19:15:15	0	0	0	0	0	0	0	0	0	0

Site: 1719900010 EAST APPROACH

DATE	TIME		CAR			TRUCK			HEAVY		Pedestrians
DATE	TIIVIE	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Pedestrians
Recording star	ted at:06:45:00										
9/21/2017	7:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	0	47	9	0	2	0	0		1	1
9/21/2017	7:30:00	0	79	8	0	0	0	0	_	0	1
9/21/2017	7:45:00	0	85	6	0	1	0	0	2	0	2
9/21/2017	8:00:00	0	119	23	0	1	0	0	6	0	1
9/21/2017	8:15:00	0	80	20	0	1	1	0	2	0	4
9/21/2017	8:30:00	0	133	15	0	3	0	0	7	0	1
9/21/2017	8:45:00	0	112	12	0	2	0	0	3	0	1
9/21/2017	9:00:00	0	112	10	0	2	0	0		0	0
9/21/2017	9:15:00	0	0	0	0	0	0	0	0	0	0
	arted at:10:45:00										
9/21/2017	11:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	11:15:00	0	111	12	0	2	1	0	3	0	0
9/21/2017	11:30:00	0	115	20	0	0	0	0	1	0	0
9/21/2017	11:45:00	0	107	22	0	4	0	0	4	0	0
9/21/2017	12:00:00	0	153	21	0	1	0	0	3	0	0
9/21/2017	12:15:00	0	126	28	0	4	1	0	2	0	0
9/21/2017	12:30:00	0	145	16	0	1	0	0	1	0	3
9/21/2017	12:45:00	0	149	22	0	0	0	0	6	1	1
9/21/2017	13:00:00	0	146	19	0	1	0	0	0	0	0
9/21/2017	13:15:00	0	124	27	0	2	0	0	4	1	0
9/21/2017	13:30:00	0	134	15	0	0	0	0	2	0	2
9/21/2017	13:45:00	0	128	19	0	2	0	0	6	0	0
9/21/2017	14:00:00	0	128	18	0	4	1	0		1	2
9/21/2017	14:15:00	0	0	0	0	0	0	0	0	0	0
	arted at:14:45:00										
9/21/2017	15:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	15:15:00	0	133	29	0	0	0	0	3	1	1
9/21/2017	15:30:00	0	155	22	0	1	0	0	6	0	1
9/21/2017	15:45:00	0	146	22	0	1	0	0	3	0	0
9/21/2017	16:00:00	0	146	15	0	2	0	0	7	1	0
9/21/2017	16:15:00	0	166	31	0	1	0	0		0	2
9/21/2017	16:30:00	0	153	29	0	0	0	0	8	0	3
9/21/2017	16:45:00	0	184	34	0	1	0	0	0	1	0
9/21/2017	17:00:00	0	171	31	0	1	0	0	7	0	0
9/21/2017	17:15:00	0	227	41	0	2	0	0	2	0	1
9/21/2017	17:30:00	0	228	42	0	0	0	0	5	0	4
9/21/2017	17:45:00	0	157	37	0	0	0	0	0	0	1
9/21/2017	18:00:00	0	269	53	0	0	0	0	5	0	0
9/21/2017	18:15:00	0	260	47	0	1	0	0		0	1
9/21/2017	18:30:00	0	238	36	0	1	0	0	5	0	0
9/21/2017	18:45:00	0	260	47	0	0	0	0	3	0	2
9/21/2017	19:00:00	0	155	26	0	0	0	0	6	0	0
9/21/2017	19:15:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	19:15:15	0	0	0	0	0	0	0	0	0	0

Site: 1719900010 SOUTH APPROACH

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Pedestrians 0 2 5 3 2 5 7 2 3 0 0 6 0 5 0 3 3 4 4
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		2 5 3 2 5 7 2 3 0 0 0 6 0 5 0 3 3 3 4
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		2 5 3 2 5 7 2 3 0 0 0 6 0 5 0 3 3 3 4
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		5 3 2 5 7 2 3 0 0 6 0 5 0 0 3 3 3 4 4
0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		3 2 5 7 2 3 0 0 6 0 5 0 3 3 3 4 4
0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		2 5 7 2 3 0 0 6 0 5 0 3 3 3 4
0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		5 7 2 3 0 0 6 0 5 0 3 3 3
0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 6 0 5 0 3 3 3 4
0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 6 0 5 0 3 3 3 4
0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 6 0 5 0 3 3 3 4
0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 6 0 5 0 3 3 3 4
0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 6 0 5 0 3 3 4
0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 5 0 3 3 4 4
0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 5 0 3 3 4 4
0 0 0 0 0 0	0 0 0 0 0 0 0		0 5 0 3 3 4 4
0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 0 3 3 4 4
0 0 0 0 0 0	000000000000000000000000000000000000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 3 3 4 4
0 0 0 0	0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	3 3 4 4
0 0 0	0 0 0	0 0 0	3 4 4
0 0	0 0	0 0	4
0	0	0	4
0	0		
		0	
0	0		1
	0	0	4
0	0	0	3
0	0	0	2
0	0	0	0
0	0	0	0
0	0	0	5
0	0	0	13
0	0	0	4
0	0	0	1
0	0	0	5
0	0	0	3
0	0	0	7
0	0	0	3
0	0	0	4
0	0	0	3
0	0	0	9
0	0	0	6
0	0	0	5
0	0	0	4
0			4
0	0	0	3
0			0
0			0
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Site: 1719900010 WEST APPROACH

DATE	710.05		CAR			TRUCK			HEAVY		De de state de
DATE	TIME	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Pedestrians
Recording star	ted at:06:45:00										
9/21/2017	7:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	3	199	0	1	1	0	0	6	0	1
9/21/2017	7:30:00	6	255	0	0	0	0	0	6	0	0
9/21/2017	7:45:00	10	265	0	0	0	0	1	5	0	0
9/21/2017	8:00:00	17	182	0	0	0	0	1	6	0	0
9/21/2017	8:15:00	14	169	0	0	0	0	1	3	0	0
9/21/2017	8:30:00	9	180	0	0	1	0	0	7	0	3
9/21/2017	8:45:00	9	114	0	0	3	0	0	4	0	1
9/21/2017	9:00:00	12	113	0	0	0	0	1	5	0	3
9/21/2017	9:15:00	0	0	0	0	0	0	0	0	0	0
Recording rest	tarted at:10:45:00										
9/21/2017		0	0	0	0	0	0	0	0	0	0
9/21/2017	11:15:00	11	106	0	0	2	0	0	6	0	1
9/21/2017	11:30:00	13	127	0	0	1	0	0	3	0	0
9/21/2017	11:45:00	17	148	0	0	1	0	0	3	0	5
9/21/2017	12:00:00	21	145	0	0	2	0	0	1	0	0
9/21/2017	12:15:00	20	139	0	0	7	0	0	5	0	0
9/21/2017	12:30:00	8	132	0	0	0	0	0	2	0	0
9/21/2017	12:45:00	16	130	0	0	1	0	0	5	0	2
9/21/2017	13:00:00	13	141	0	0	2	0	0	0	0	3
9/21/2017	13:15:00	11	123	0	0	0	0	0	4	0	1
9/21/2017	13:30:00	10	134	0	0	1	0	0	1	0	1
9/21/2017	13:45:00	16	112	0	0	1	0	0	6	0	1
9/21/2017	14:00:00	12	152	0	0	2	0	0	3	0	5
9/21/2017	14:15:00	0	0	0	0	0	0	0	0	0	0
Recording rest	tarted at:14:45:00										
9/21/2017	15:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	15:15:00	19	123	0	0	1	0	0	5	0	2
9/21/2017	15:30:00	23	139	0	0	0	0	1	0	0	2
9/21/2017	15:45:00	18	150	0	0	4	0	0	7	0	2
9/21/2017	16:00:00	18	142	0	1	0	0	0	5	0	0
9/21/2017	16:15:00	25	149	0	0	2	0	0	9	0	3
9/21/2017	16:30:00	23	172	0	1	0	0	0	6	0	0
9/21/2017	16:45:00	18	150	0	0	2	0	0	6	0	0
9/21/2017	17:00:00	18	195	0	0	1	0	0	4	0	1
9/21/2017	17:15:00	25	193	0	0	0	0	0	4	0	3
9/21/2017	17:30:00	17	188	0	0	0	0	0	4	0	2
9/21/2017	17:45:00	27	237	0	0	0	0	0	4	0	0
9/21/2017	18:00:00	29	186	0	0	1	0	0	5	0	2
9/21/2017	18:15:00	16	203	0	0	1	0	0	2	0	1
9/21/2017	18:30:00	16	173	0	0	2	0	0	6	0	5
9/21/2017	18:45:00	18	180	0	0	0	0	0	2	0	4
9/21/2017	19:00:00	16	169	0	0	0	0	0	6	0	2
9/21/2017	19:15:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	19:15:15	0	0	0	0	0	0	0	0	0	0

Site: 1719900009 NORTH APPROACH

DATE	TINAS		CAR			TRUCK			HEAVY		Dedestriens
DATE	TIME	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Pedestrians
Recording star	ted at:06:45:00										
9/21/2017	7:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	7:30:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	7:45:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	8:00:00	0	0	1	0	0	0	0	0	0	2
9/21/2017	8:15:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	8:30:00	1	0	1	0	0	0	0	0	0	0
9/21/2017	8:45:00	6	0	0	0	0	0	0	0	0	0
9/21/2017	9:00:00	3	0	0	0	0	0	0	0	0	0
9/21/2017	9:15:00	0	0	0	0	0	0	0	0	0	0
Recording rest	arted at:10:45:00										
9/21/2017	11:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	11:15:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	11:30:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	11:45:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	12:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	12:15:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	12:30:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	12:45:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	13:00:00	0	0	0	0	0	0		0		0
9/21/2017	13:15:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	13:30:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	13:45:00	0	0	0	0	0	0	0	0		0
9/21/2017	14:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	14:15:00	0	0	0	0	0	0	0	0	0	0
	arted at:14:45:00				_						
9/21/2017	15:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	15:15:00	3	1	0	1	0	0	0	0	0	0
9/21/2017	15:30:00	0	0	2	0	0	0	0	0		0
9/21/2017	15:45:00	1	0	4	0	0	0	0	0	0	0
9/21/2017	16:00:00	0	0	1	0	0	0	0	0		0
9/21/2017	16:15:00	0	0	1	0	0	0	1	0	_	0
9/21/2017	16:30:00	0	0	1	0	0	0		0		3
9/21/2017	16:45:00	2	0	1	0	0	0	0	0	_	0
9/21/2017	17:00:00	1	0	0	0	0	0		0		0
9/21/2017	17:15:00	0	0	2	0	0	0		0		0
9/21/2017	17:30:00	1	0	3	0	0	0		0		0
9/21/2017	17:45:00	3	0	1	0	0	0		0		0
9/21/2017	18:00:00	2	0	1	0	0	0		0		0
9/21/2017	18:15:00	2	0	0	0	0	0	0	0		0
9/21/2017	18:30:00	0	0	1	0	0	0		0		0
9/21/2017	18:45:00	0	0	0	0	0	0		0		0
9/21/2017	19:00:00	0	0	1	0	0	0		0		0
		0	0	0	0	0	0	0	0	0	0
9/21/2017	19:15:00										
9/21/2017	19:15:15	0	0	0	0	0	0	0	0	0	0

Site: 1719900009 EAST APPROACH

			CAR			TRUCK			HEAVY		
DATE	TIME	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Pedestrians
Recording star	ted at:06:45:00										
9/21/2017	7:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	20	77	3	0	2	0	1	1	0	1
9/21/2017	7:30:00	22	97	4	0	0	0	2	2	0	1
9/21/2017	7:45:00	30	108	0	0	1	0	1	2	0	1
9/21/2017	8:00:00	13	108	0	0	0	0	1	1	0	5
9/21/2017	8:15:00	6	90	4	0	2	0	1	1	0	0
9/21/2017	8:30:00	11	124	3	0	3	0	1	4	0	0
9/21/2017	8:45:00	7	117	1	0	3	0	0	0	0	0
9/21/2017	9:00:00	11	112	2	0	2	2	1	2	0	0
9/21/2017	9:15:00	0	0	0	0	0	0	0	0	0	0
	tarted at:10:45:00					_				_	-
9/21/2017		0	0	0	0	0	0	0	0	0	0
9/21/2017	11:15:00	10	80	0	0	2	0		1	0	4
9/21/2017	11:30:00	10	93	0	0	3	0		1	0	0
9/21/2017	11:45:00	6	91	0	0	3	0	1	1	0	2
9/21/2017	12:00:00	8	109	0	0	1	0	0	1	0	2
9/21/2017	12:15:00	24	104	0	0	1	0	1	0	0	3
9/21/2017	12:30:00	19	116	0	0	1	0	1	0	0	1
9/21/2017	12:45:00	20	123	0	0	0	0	2	3	0	2
9/21/2017	13:00:00	11	105	0	0	1	0	0	0	0	4
9/21/2017	13:15:00	10	103	0	0	1	0		4	0	0
9/21/2017	13:30:00	11	106	0	0	0	0	0	2	0	0
9/21/2017	13:45:00	4	83	0	0	2	0		0	0	1
9/21/2017	14:00:00	16	100	0	0	4	0	1	0	0	3
9/21/2017	14:15:00	0	0	0	0	0	0	0	0	0	0
	tarted at:14:45:00	0	0	0	0	U	U	0	U	U	0
9/21/2017		0	0	0	0	0	0	0	0	0	0
9/21/2017	15:15:00	21	110	1	0	0	0	1	0	0	1
9/21/2017	15:30:00	13	124	2	0	0	0	2	3	0	0
9/21/2017	15:45:00	19	108	1	0	1	0	1	3	0	2
9/21/2017	16:00:00	9	118	1	0	1	0	0	3	0	0
9/21/2017	16:15:00	16	135	0	0	0	0		2	0	1
9/21/2017	16:30:00	17	127	2	0	0	1	0	2	0	3
9/21/2017	16:45:00	21	102	0	0	0	0		0	0	2
9/21/2017	17:00:00	20	115	0	0	0	0		3	0	1
9/21/2017	17:15:00	30	143	2	0	2	0	1	0	0	0
9/21/2017	17:30:00	18	158	0	0	0	0	0	0	0	1
9/21/2017	17:45:00	17	147	1	0	0	0	2	2	0	0
9/21/2017	18:00:00	21	154	0	0	0	0	1	0	0	0
9/21/2017	18:15:00	37	154	0	0	1	0	1	1	0	1
9/21/2017	18:30:00	31	182	0	0	2	0	1	0	0	<u>1</u>
9/21/2017	18:45:00	44	109	0	0	0	0		0	0	0
9/21/2017	19:00:00	24	109	1	0	0	0		0	0	0
9/21/2017	19:00:00	0	0	0	0	0	0		0	0	0
			0	0	0	0	0		0	0	0
9/21/2017	19:15:15	0	U	U	U	U	U	U	U	U	U

Site: 1719900009 SOUTH APPROACH

DATE	710.45		CAR			TRUCK			HEAVY		Barda stateme
DATE	TIME	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Pedestrians
Recording star	ted at:06:45:00										
9/21/2017	7:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	19	0	8	0	0	0	0	0	0	0
9/21/2017	7:30:00	25	0	13	0	0	0	6	0	1	1
9/21/2017	7:45:00	24	0	7	0	0	0	0	0	0	2
9/21/2017	8:00:00	36	0	12	0	0	0	4	0	1	1
9/21/2017	8:15:00	22	1	2	0	0	0	1	0	0	4
9/21/2017	8:30:00	30	0	8	0	0	0	5	0	1	3
9/21/2017	8:45:00	21	0	1	1	0	0	1	0	0	3
9/21/2017	9:00:00	18	0	1	0	0	0	2	0	1	1
9/21/2017	9:15:00	0	0	0	0	0	0	0	0	0	0
Recording resta	arted at:10:45:00										
9/21/2017	11:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	11:15:00	42	0	7	0	0	0	2	0	1	0
9/21/2017	11:30:00	42	0	9	0	0	0	0	0	0	0
9/21/2017	11:45:00	37	0	7	1	0	0	4	0	2	2
9/21/2017	12:00:00	71	0	9	0	0	0	1	0	0	1
9/21/2017	12:15:00	42	0	11	1	0	0	2	0	1	3
9/21/2017	12:30:00	47	0	15	0	0	0	0	0	1	3
9/21/2017	12:45:00	45	0	9	1	0	0	4	0	1	2
9/21/2017	13:00:00	44	0	11	0	0	0	0	0	0	1
9/21/2017	13:15:00	43	0	9	0	0	0	4	0	1	1
9/21/2017	13:30:00	45	0	6	0	0	0	0	0	0	0
9/21/2017	13:45:00	52	0	11	0	0	0	7	0	2	2
9/21/2017	14:00:00	47	0	8	1	0	0		0	0	1
9/21/2017	14:15:00	0	0	0	0	0	0	0	0	0	0
Recording resta	arted at:14:45:00										
9/21/2017	15:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	15:15:00	52	0	7	0		0		0	0	2
9/21/2017	15:30:00	41	0	6	1	0	0	2	0	1	7
9/21/2017	15:45:00	52	0	9	1	0	0		0	0	1
9/21/2017	16:00:00	49	0	5	0	0	1	3	0	1	3
9/21/2017	16:15:00	54	0	4	1	0	0		0	0	4
9/21/2017	16:30:00	61	0	4	0	0	0		0	1	1
9/21/2017	16:45:00	87	0	22	0		0		0	1	3
9/21/2017	17:00:00	50	0	3	1	0	0		0	0	3
9/21/2017	17:15:00	88	0	22	0		0		0	0	2
9/21/2017	17:30:00	78	0	13	0		1	3	0	1	7
9/21/2017	17:45:00	49	0	13	0		0		0	0	3
9/21/2017	18:00:00	136	0	43	0		0		0	1	7
9/21/2017	18:15:00	113	0	30	0		0		0	0	3
9/21/2017	18:30:00	91	0	13	0	_	0		0	1	0
9/21/2017	18:45:00	116	0	18	0		0	_	0	0	5
9/21/2017	19:00:00	49	0	14	0	_	0		0	3	1
9/21/2017	19:15:00	0	0	0	0		0		0	0	0
9/21/2017	19:15:15	0	0	0	0	0	0	0	0	0	0

Site: 1719900009 WEST APPROACH

DATE	T10.05		CAR			TRUCK			HEAVY		De de statema
DATE	TIME	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Pedestrians
Recording star	ted at:06:45:00										
9/21/2017		0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	0	87	27	0	1	0	1	1	5	0
9/21/2017	7:30:00	2	127	18	0	0	0	0	3	4	0
9/21/2017	7:45:00	0	143	22	0	0	0	0	3	2	0
9/21/2017	8:00:00	1	135	23	0	0	0	0	2	4	0
9/21/2017	8:15:00	0	160	18	0	0	0	0	3	0	0
9/21/2017	8:30:00	0	154	22	0	0	0	0	2	5	0
9/21/2017	8:45:00	3	106	20	0	2	1	0	4	0	0
9/21/2017	9:00:00	4	110	31	0	0	0	0	1	4	0
9/21/2017		2	0	0	0	0	0	0	0	0	0
	tarted at:10:45:00										
9/21/2017		0	0	0	0	0	0	0	0	0	0
9/21/2017	11:15:00	0	97	28	0	1	0	0	2	4	0
9/21/2017	11:30:00	0	114	36	0	0	1	0	3	1	0
9/21/2017	11:45:00	0	128	40	0	1	0	0	1	2	0
9/21/2017	12:00:00	0	136	38	0	2	1	0	1	0	0
9/21/2017	12:15:00	0	115	51	0	5	0	0	2	3	0
9/21/2017	12:30:00	0	127	29	0	0	1	0	0	2	1
9/21/2017	12:45:00	0	121	25	0	0	1	0	2	3	0
9/21/2017	13:00:00	0	129	35	0	2	0	0	0	0	0
9/21/2017	13:15:00	0	125	30	0	1	0	0	0	5	0
9/21/2017	13:30:00	0	124	39	0	0	1	0	2	1	1
9/21/2017	13:45:00	0	101	29	0	3	0	0	2	4	0
9/21/2017	14:00:00	0	122	35	0	1	0	0	3	0	0
9/21/2017	14:15:00	0	0	0	0	0	0	0	0	0	0
	tarted at:14:45:00										
9/21/2017		0	0	0	0	0	0	0	0	0	0
9/21/2017	15:15:00	1	109	38	0	0	0	1	0	5	0
9/21/2017	15:30:00	4	138	45	0	0	0	0	1	0	0
9/21/2017	15:45:00	0	136	39	0	2	1	0	4	5	0
9/21/2017	16:00:00	0	124	37	0	2	0	0	1	2	0
9/21/2017	16:15:00		134 151	44 40	0	1	1 0	0	4	2	0
9/21/2017	16:30:00	1 1			0	0	1	0	3	3	0
9/21/2017	16:45:00	0	155 171	46 43	0	0	0	0	3		0
9/21/2017 9/21/2017	17:00:00 17:15:00	1	201	43 51	0	0	0	0	2 1	2	0
			195	47	0	0	0	0	1		0
9/21/2017 9/21/2017	17:30:00 17:45:00	2 1	195 202	47 59	0	0	0	0	0	2 5	0
	17:45:00	0	202	59	0	1	1	0	0	1	2
9/21/2017 9/21/2017	18:00:00	0	212	57	0	1	0	0	0	2	0
9/21/2017	18:15:00	0	177	46	0	2	0	0	0	6	0
9/21/2017	18:30:00	0	177	60	0	0	0	0	0	3	0
9/21/2017	19:00:00	0	162	52	0	0	0	0	1	5	0
9/21/2017	19:00:00	0	162	0	0	0	0	0	0	0	0
		0			_						0
9/21/2017	19:15:15	0	0	0	0	0	0	0	0	0	0

Summary

Bin Size 15 minutes
Aggregatio Median
Time Zone America/Toronto
Start Time 2/5/2020 0:00
End Time 2/5/2020 23:59

Location Thompson Road and Main Street Latitude ar 43.52813223,-79.86691475

Passenger Vehicles

Passenger venicle	:5																							
Entry North						East						South						West						
Direction Southb						Westbo						Northb	ound					Eastbou	nd					
Start Time Right	Thru	Left	U-Turn	Peds CV	V Peds C	CW Right	Thru	Left	U-Turn	Peds CW	Peds CC	W Right	Thru	Left	U-Turn	Peds CV	/ Peds CC	W Right	Thru	Left	U-Turn	Peds CV	/ Peds C	CCW
0:00:00	2	10	1	0	0	0	1	7	7	0	0	0	4	9	1	0	0	0	4	6	2	0	0	0
0:15:00	1	8	0	0	0	0	1	4	15	0	0	0	4	3	1	0	0	0	4	8	0	0	0	0
0:30:00	3	13	0	0	0	0	0	1	7	0	0	0	7	4	0	0	0	0	0	1	1	0	0	0
0:45:00	0	6	0	0	0	0	0	6	7	0	0	0	3	2	1	0	0	0	0	6	0	0	0	0
1:00:00	2	5	0	0	0	0	2	2	7	0	0	0	4	6	0	0	0	0	0	3	1	0	0	0
1:15:00	1	7	0	0	0	0	0	1			0	0	8	2	0	0	0	0	0	3	0	0	0	0
1:30:00	1	2	0	0	0	0	1	1		0	0	0	2	1	1	0	0	0	1	1	1	0	0	0
1:45:00	0	2	0	0	0	0	0	2		0	0	0	2	0	0	0	0	0	0	1	0	0	0	0
2:00:00	0	1	0	0	0	0	0	1		0	0	0	0	4	2	0	0	0	0	1	1	0	0	0
	-	_	-	-	-	•	-	_	_		-	-		•	_	-	-	-	-	_	_	-	-	-
2:15:00	0	4	0	0	0	0	0	0		-	0	0	1	2	0	0	0	0	0	0	0	0	0	0
2:30:00	0	5	0	0	0	0	0	3		0	0	0	2	1	0	0	0	0	0	1	0	0	0	0
2:45:00	1	0	0	0	0	0	0	1			0	0	/	4	1	0	0	0	0	2	0	0	0	0
3:00:00	0	0	0	0	0	0	0	4		-	0	0	1	2	0	0	0	0	0	2	0	0	0	0
3:15:00	2	12	0	0	0	0	0	0	4	0	0	0	1	5	0	0	0	0	0	1	0	0	0	0
3:30:00	1	8	0	0	0	0	0	1	4	0	0	0	7	5	0	0	0	0	0	1	1	0	0	0
3:45:00	1	0	0	0	0	0	0	1	3	0	0	0	3	2	1	0	0	0	0	5	1	0	0	0
4:00:00	0	4	0	0	0	0	1	1	3	0	0	0	10	4	0	0	0	0	0	2	1	0	0	0
4:15:00	0	5	1	0	0	0	1	2	5	0	0	0	8	6	0	0	0	0	0	4	0	0	0	0
4:30:00	1	6	0	0	0	0	0	3	2	0	0	0	2	4	1	0	0	0	0	6	4	0	0	0
4:45:00	2	6	0	0	0	0	1	2	4	0	0	0	18	26	0	0	0	0	0	7	2	0	0	0
5:00:00	3	6	2	0	0	0	1	4	4	0	0		24	38	0	0	0	0	2	8	4	0	0	0
5:15:00	3	13	4	0	0	0	1	7	12	0	0		37	16	0	0	0	0	0	19	5	0	0	0
5:30:00	6	6	5	0	0	0	0	17		0	0		45	47	0	0	0	0		27	6	0	0	0
5:45:00	6	17	9	0	0	0		22			0		32	46	11	0	0	0		27	7	0	0	0
6:00:00	11	20	4	0	0	0	0	28		1	0		30	36	3	0	0	0		33	2	0	0	0
6:15:00	8	30	8	0	0	0	-	32			0		40	50	4	0	0	0		33	7	0	0	0
			6	0	0	0		37			0					0	0	0			7	0	0	0
6:30:00	9	38				-				1			34	57	14					32				
6:45:00	9		14	0	0	0	4	59		_	0		43	81	17	1	0	0			11	0	0	0
7:00:00	13		13	0	0	0	2	65		_	0		60	70	12	0	0	0			14	0	0	0
7:15:00	18		21	0	0	0	4	68		0	0		63	80	16	1	0	0			15	0	0	0
7:30:00	18		24	0	0	0	6	68		-	0			101	15	0	0				24	0	0	0
7:45:00	21	63	26	0	0			76	52	0	0	0 1	.01	131	19	0	0	0	14 1	L54	20	1	0	0
8:00:00	21	65	38	0	0	0	22 1	108	73	0	0	0 1	.33	148	41	3	0	0	10 1	138	25	0	0	0
8:15:00	15	76	11	0	0	0	7	88	70	0	0	0	61	152	30	1	0	0	12	91	25	0	0	0
8:30:00	21	93	13	0	0	0	4	51	44	0	0	0	53	104	24	0	0	0	10	81	15	0	0	0
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9:00:00	21	80	19	0	0	0	5	52	54	0	0	0	47	108	34	1	0	0	17	69	29	0	0	0
9:15:00	22	72	14	0	0	0	7	58	44	0	0	0	36	115	35	0	0	0	11	49	28	0	0	0
9:30:00	19	82	15	0	0	0	3	45	39	1	0	0	19	102	26	0	0	0	17	50	31	0	0	0
9:45:00	15	75	10	0	0	0	4	52	49	0	0	0	39	81	25	0	0	0	15	50	40	0	0	0
10:00:00	25		11	0	0	0		37	22	0	0		38	74	22	0	0				35	0	0	0
10:15:00	22		13	0	0		10	44			0		22	82	17	0	0				45	0	0	0
10:30:00	27	70	5	0	0	0	7	66		0	0		28	78	19	0	0				37	0	0	0
10:45:00	21		16	0	0	0	8	46			0		24	97	25	1	0				38	0	0	0
11:00:00	25	71	5	0	0	0	7	53			0		34	79	25	1	0				42	0	0	0
					-	-																	-	
11:15:00	23		12	0	0		14	54		-	0		30	96	20	0	0				44	0	0	0
11:30:00	26		11	0	0	0	6	52		-	0			103	20	1	0				38	0	0	0
11:45:00	27		10	1	0	0	5	63		0	0			118	30	1	0				52	0	0	0
12:00:00	32		14	0	0	0	15	54		-	0		34	98	25	0	0				67	0	0	0
12:15:00	29		14	0	0	0	9	48			0			101	21	1	0				62	0	0	0
12:30:00	22	108	8	0	0	0	9	51	39	0	0	0	40	100	24	1	0	0	24	67	59	0	0	0

12:45:00	28	115	16	0	0	0	9	72	62	0	0	0	38	90	28	1	0	0	14	74	47	0	0	0
13:00:00	25	124	12	0	0	0	10	62	49	0	0	0	32	89	26	0	0	0	20	94	52	_	-	0
13:15:00	45	95	9	0	0	0	6	58	39	0	0	0	33	85	20	0	0	0	15	73	66	0		0
13:30:00	20	106	13	0	0	0	7	55	47	1	0	0	35	98	26	0	0	0	16	67	51	0	-	0
13:45:00 14:00:00	30 26	120 120	13 14	1 0	0	0	5 7	45 59	44 45	0	0	0	34 54	114 90	28 35	2	0	0 0	23 21	64 70	60 59	0	-	0
14:15:00	20	115	14	0	0	0	12	49	45 47	0	0	0	42	82	22	2	0	0	22	86	59 46			0
14:30:00	39	138	12	1	0	0	15	64	48	0	0	0	31	104	20	0	0	0	25	82	43			0
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15:15:00	32	141	18	0	0	0	7	90	61	1	0	0	44	116	29	1	0	0	26	94	69	0	0	0
15:30:00	34	147	16	0	0	0	8	84	62	0	0	0	51	118	33	1	0	0	21	90	70	0	0	0
15:45:00	20	136	18	0	0	0	15	86	66	1	0	0	61	122	48	3	0	0	24	90	47	0	0	0
16:00:00	36	151	10	0	0	0	12	92	81	0	0	0	45	131	45	0	0	0	22	78	55	0	0	0
16:15:00	24	153	14	0	0	0	10	98	76	0	0	0	39	145	37	0	0	0	25	94	65	-	-	0
16:30:00	32	156	10	0	0	0	14	89	86	2	0	0	45	112	55	1	0	0	23	99	50	0		0
16:45:00	30	178	13	1	0	0	9	102	90	1	0	0	45	137	50	1	0	0	35	120	63	1	-	0
17:00:00	31	221	16	0	0	0	15	110	85	0	0	0	47	126	44	1	0	0	31	113	60	-	-	0
17:15:00	25	158	12	0	0	0	13 9	114	92	0	0	0	53	122	44	0	0	0 0	52	134	69	0	-	0
17:30:00 17:45:00	31 33	174 163	6 10	0	0	0 0	9	88 106	94 92	0 0	0	0	50 39	121 111	39 51	1 0	0	0	44 45	97 130	55 73			0
18:00:00	40	151	17	0	0	0	7	106	91	5	0	0	68	107	54	1	0	0	45	103	60	0		0
18:15:00	26	140	15	0	0	0	7	95	81	2	0	0	60	113	53	0	0	0	45	118	57	-	-	0
18:30:00	26	128	12	1	0	0	7	77	75	3	0	0	47	127	43	1	0	0	41	123	60		0	0
18:45:00	26	125	12	1	0	0	9	79	91	1	0	0	29	95	46	1	0	0	44	104	60	0	0	0
19:00:00	23	124	15	0	0	0	7	72	90	1	0	0	46	93	56	1	0	0	42	113	63	1	0	0
19:15:00	26	111	10	0	0	0	11	67	81	0	0	0	38	127	39	1	0	0	43	63	41	0	0	0
19:30:00	33	138	7	0	0	0	11	51	57	0	0	0	46	101	31	0	0	0	29	92	54	0	0	0
19:45:00	22	140	10	0	0	0	10	48	60	1	0	0	48	97	30	0	0	0	33	86	35	0	0	0
20:00:00	16	138	14	1	0	0	12	57	69	0	0	0	37	84	30	1	0	0	44	74	58	0	-	0
20:15:00	21	100	5	0	0	0	12	42	47	0	0	0	46	60	24	0	0	0	31	65	30			0
20:30:00	12	133	4	0	0	0	7	37	44	0	0	0	29	66	18	0	0	0	26	70	29	-	-	0
20:45:00 21:00:00	13 14	110	4 7	0	0	0 0	0 4	42	40	0	0	0	32 20	57	17	1 0	0	0	21	54	27	0		0
21:15:00	11	87 84	5	0	0	0	2	36 21	46 38	1	0	0	36	43 50	17 9	1	0	0	22 19	73 45	22 18	0	-	0
21:30:00	8	77	4	0	0	0	3	32	52	0	0	0	26	50	12	2	0	0	23	46	18	0	-	0
21:45:00	18	44	1	0	0	0	4	25	39	0	0	0	22	36	8	0	0	0	15	54	16			0
22:00:00	13	50	3	0	0	0	9	24	43	0	0	0	20	30	7	0	0	0	10	37	13	-	-	0
22:15:00	5	38	0	0	0	0	1	16	32	0	0	0	26	23	3	0	0	0	8	34	14	0	0	0
22:30:00	5	53	2	0	0	0	2	9	34	0	0	0	13	21	3	0	0	0	5	22	9	0	0	0
22:45:00	5	34	3	0	0	0	1	12	22	0	0	0	11	13	1	1	0	0	6	16	6	0	0	0
23:00:00	6	46	3	0	0	0	0	7	8	0	0	0	11	15	1	0	0	0	7	28	12	0	0	0
23:15:00	0	27	3	0	0	0	1	9	28	0	0	0	12	10	4	0	0	0	4	10	5	0	0	0
23:30:00	2	18	0	0	0	0	1	6	15	0	0	0	15	8	1	0	0	0	4	11	3	0		0
23:45:00	. 2	19	4	1	0	0	2	9	11	0	0	0	5	7	1	0	0	0	0	8	2	0	0	0
Single-Unit True						F4						C+	L					14/						
Entry North						East Westbo	ound					Sout	n hbound					West	ound					
Direction Sout Start Time Righ		Left	U-Turn	Peds CV	N Pads C	Westbi CW Right	Thru	Left	U-Tur	rn Dad	ls CW Peds	CCW Right		Left	U-Tu	rn Dad	s CW Peds	Eastb CCW Right	ouna Thru	Left	U-Turn	Peds CW	Peds CCV	۸/
0:00:00	0	0	0-14111	0	o reus ci	0	0	0	0-141	0	n Cov reus	0	0	0	0-10	0	n reus	0	0	0	0-14111			0
0:15:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0
0:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	-	0
0:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
1:00:00	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0		-	0
2:15:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0
2:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	-	0
2:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0
3:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
3:15:00	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3:30:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
4:15:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0
4:30:00	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15:00	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
5:45:00	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15:00	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30:00 6:45:00	0	0	0 0	0	0	0	0	0	1	0	0	0	1	1 0	0	0	0	0	0	1	0	0	0	0 0
7:00:00	0 0	2 1	0	0 0	0	0	0	2 0	0	0	0	0	1 1	4	0	0	0	0	0 1	0	0	0	0 0	0
7:00:00	1	1	1	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0
7:30:00	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	1	4	0	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	2	0	0	0	0
8:00:00	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8:15:00	0	1	0	0	0	0	0	2	1	0	0	0	3	1	1	0	0	0	0	2	1	0	0	0
8:30:00	0	2	0	0	0	0	0	1	3	0	0	0	1	2	0	0	0	0	1	1	0	0	0	0
8:45:00	2	1	1	0	0	0	0	0	1	0	0	0	3	3	0	1	0	0	0	1	1	0	0	0
9:00:00	0	5	0	0	0	0	0	1	3	0	0	0	1	3	0	0	0	0	0	1	0	0	0	0
9:15:00	0	1	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30:00	0	0	0	0	0	0	0	1	3	0	0	0	3	1	0	0	0	0	0	1	0	0	0	0
9:45:00	1	4	0	0	0	0	0	2	1	0	0	0	2	1	0	0	0	0	0	1	0	0	0	0
10:00:00	1	2	0	0	0	0	0	3	0	0	0	0	3	5	1	0	0	0	0	0	2	0	0	0
10:15:00	2	2	1	0	0	0	0	1	0	0	0	0	2	2	1	0	0	0	0	0	1	0	0	0
10:30:00	0	2	1	0	0	0	0	1	1	0	0	0	2	1	0	0	0	0	0	1	0	0	0	0
10:45:00	0	0	0	0	0	0	0	2	1	0	0	0	0	1	2	0	0	0	0	1	1	0	0	0
11:00:00	2	0	0	0	0	0	0	2	0	0	0	0	4	2	0	1	0	0	0	0	1	0	0	0
11:15:00	0	1	1	0	0	0	0	4	4	0	0	0	0	1	0	0	0	0	1	3	1	0	0	0
11:30:00	3	0	0	0	0	0	0	3	2	0	0	0	3	2	0	1	0	0	1	0	1	0	0	0
11:45:00	0	3	0	0	0	0	0	0	2	0	0	0	2	3	1	0	0	0	0	3	1	1	0	0
12:00:00 12:15:00	1	1 1	1 0	0	0	0	0	1	2	0	0	0	1	2 0	2	0	0	0	1 1	1 2	0	0	0 0	0 0
12:15:00	1 0	0	1	0	0	0	0	1 2	0	0	0	0	4	1	0	0	0	0	0	1	1 0	0	0	0
12:45:00	0	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	0	2	0	0	0	0
13:00:00	0	0	0	0	0	0	1	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0
13:15:00	0	1	1	0	0	0	1	2	3	0	0	0	2	2	0	0	0	0	0	2	0	0	0	0
13:30:00	4	2	1	0	0	0	0	3	2	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
13:45:00	1	1	0	0	0	0	0	1	1	0	0	0	4	2	0	0	0	0	1	3	2	0	0	0
14:00:00	1	0	0	0	0	0	0	0	4	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0
14:15:00	1	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0
14:30:00	0	5	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
14:45:00	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	0	0	0	1	1	0	0	0
15:00:00	0	1	0	0	0	0	0	3	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
15:15:00	0	5	0	0	0	0	0	0	1	0	0	0	3	1	0	0	0	0	0	1	0	0	0	0
15:30:00	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0
15:45:00	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0
16:00:00	0	1 0	0	0	0	0	0	0	0	0	0	0	1	1 0	2	0	0	0	0	0	1	0	0	0
16:15:00	1	-	-	0	0	-	-	0	1	0	0	0	0	1	0	0	0	-	-	2	0	-	-	0
16:30:00 16:45:00	1 0	1	0	0	0	0	0	0 0	0	0	0	0	-	_	-	-	0	0	1	2	0	0	0	0 0
17:00:00	1	0	0	0	0	0	0	0	2	0	0	0	1 2	1 0	1	0	0	0	0	2	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	1	1	1	0	0	0
17:30:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
17:45:00	0	0	0	0	0	0	0	0	1	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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:00	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
18:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

19:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0 0	0		1	0	0 ()	0
19:30:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0 0	0		0	0	0 ()	0
19:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
20:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
20:15:00	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0 0	0		0	0	0 ()	0
20:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
20:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
21:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
21:15:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		1	0	0 ()	0
21:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0 0	0				0 (0
21:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
22:00:00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
22:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
22:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
22:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0 0	0		0	0	0 ()	0
23:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0 0	0		0	0	0 ()	0
23:15:00	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0		0	0	0 ()	0
23:30:00	0	0	0		0	0	0	0	0	0	0	0	0	1			0	0				0 ()	0
23:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0				0 (0
Articulated Trucks																								
Entry North						East						South					v	Vest						
Direction Southbo	ound					Westbo	und					Northbo	ound					astbound	ı					
Start Time Right	Thru	Left	U-Turn	Peds CW	V Peds CC	W Right	Thru	Left	U-Turn	Peds CW	/ Peds CC	W Right	Thru	Left	U-Turn	Peds CW	Peds CCW R	light	Thru	Left	U-Turn	Peds CW	Peds CC\	w
0:00:00	0	0	0		0	0	0	0	0		0	0	0	0			0 0	0				0 (0
0:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
0:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0 0	0		0	0	0 ()	0
0:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
1:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
1:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
1:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0				0 ()	0
1:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
2:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
2:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0 0	0				0 (0
2:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
2:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0 0	0				0 (0
3:00:00	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
3:15:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0 0	1		0	0	0 ()	0
3:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
3:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0 0	0				0 ()	0
4:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0 0	0		0	0	0 ()	0
4:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
4:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
4:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
5:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
5:15:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
5:30:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
5:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
6:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
6:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
6:30:00	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
6:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
7:00:00	0	0	0	0	0	0	0	0	2	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	1	0	0	0	0	1	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	1	0	0 0	0		0	0	0 ()	0
7:45:00	0	0	0	0	0	0	0	0	2	0	0	0	0	1	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	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	0	0 ()	0
8:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0 0	0		0	0	0 ()	0
8:45:00	0	1	0	0	0	0	0	0	0	1	0	0	1	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	0	0 ()	0
9:15:00	0	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0 0	0		0	0	0 ()	0
9:30:00	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0 0	0		1	1	0 ()	0
9:45:00	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0 0	0		0	1	0 ()	0

10:00:00	0	1	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0
10:15:00	0	1	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
10:30:00	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
11:30:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
12:00:00	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0
13:30:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
13:45:00	0	0	0	0	0	0	0	3	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
14:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45:00	0	0	1	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0
15:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
15:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45:00	0	0	0	0	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	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	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	0	0	0	0
16:45:00	0	1	0	0	0	0	2	0	0	0	0	0	0	1	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	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	0	0	0	0
17:30:00	0	0	1	0	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	1	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	0	0	0	0
18:15:00	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
18:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:15:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:30:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
19:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
22:15:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
23:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:15:00	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Buses																								
Entry North						East						South						West						
Direction South						Westbo							bound 					Eastbou						
Start Time Right	Thru	Left	U-Turn	Peds CW	/ Peds Co	CW Right	Thru	Left	U-Turn	Peds (CW Peds	CCW Right	Thru	Left	U-Turn	Peds C	W Peds C0	CW Right	Thru	Left	U-Turn	Peds CV	W Peds C	.cw

0 0

0:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
4:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
5:45:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15:00	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0
6:30:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0
7:00:00	0	2	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
7:15:00	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
7:30:00	0	2	0	0	0	0	0	0	2	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
7:45:00	0	2	0	0	0	0	0	3	0	0	0	0	0	2	0	0	0	0	0	3	2	0	0	0
8:00:00	1	1	0	0	0	0	0	1	1	0	0	0	1	1	1	0	0	0	0	2	1	0	0	0
8:15:00	0	2	1	0	0	0	0	3	4	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0
8:30:00	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
8:45:00	0	1	1	0	0	0	0	3	2	0	0	0	1	2	0	0	0	0	0	2	0	0	0	0
9:00:00	0	0	0	1	0	0	1	4	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0
9:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
9:30:00	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
9:45:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
10:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
10:15:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
10:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
10:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
11:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
11:15:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
11:45:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
12:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
12:15:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30:00	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
13:00:00	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0
13:15:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
13:30:00	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
13:45:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
14:15:00	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
14:30:00	1	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	2	1	0	0	0
14:45:00	0	1	1	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	3	0	0	0	0
15:00:00	1	5	0	0	0	0	4	7	0	1	0	0	3	4	0	2	0	0	0	4	0	0	0	0
15:15:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0
15:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	3	1	0	0	0	0	1	0	0	0	0
15:45:00	1	2	0	0	0	0	0	2	0	0	0	0	3	2	0	0	0	0	0	3	1	0	0	0
16:00:00	2	0	0	0	0	0	0	1	3	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0
16:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0
10.13.00	,	3	J	3	,	Ü	0	3	3	,	,	3	,	3	,	3	3	3	3	-	3	3	5	Ü

16:30:00	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
16:45:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	0	0	0
17:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
17:15:00	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
17:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0
17:45:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
18:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30:00	0	0	0	0	0	0 0	0	1 0	0	0 0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0
18:45:00	0	0	0 0	0	0	0	0		0	0	0	0	0	0	0	0	0	-	0	1 0	0	0	0	0
19:00:00	0	0	0	0	0	0	0	1	0	0	0	0	1 0	2	0	0	0	0	0		0	0	0	0
19:15:00 19:30:00	0	0	0	0	0	0	0 0	0 0	0	0	0	0	0	1	0	0	0	0	0	0 0	0 0	0	0	0
19:45:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
20:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:30:00	0	0	0	0	0	0	0	1	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
20:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
21:00:00	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
21:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
21:30:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
21:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
22:00:00	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0
22:15:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
22:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
23:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
23:45:00 Picyclos	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles																								
Entry	North					Fast						South						West						
	North Southbound					East Westbo	ound					South Northb	ound					West Eastbo	ound					
Direction :	Southbound	Left	U-Turn	Peds C	W Peds (Westbo		Left	U-Turi	n Peds	CW Peds C	Northb		Left	U-Turn	Peds	CW Peds	Eastbo		Left	U-Tur	n Ped	s CW Ped	s CCW
	Southbound	Left 0	U-Turn 0	Peds C	W Peds (ound Thru 0	Left 0	U-Turi 0	n Peds	CW Peds C	Northb	ound Thru 0	Left 0	U-Turn 0	Peds 0	CW Peds		ound Thru 0	Left 0	U-Tur 0	n Ped 0	s CW Ped	s CCW 0
Direction Start Time	Southbound Right Thru					Westbo CCW Right	Thru					Northb CW Right	Thru					Eastbo CCW Right	Thru					
Direction : Start Time 0:00:00	Southbound Right Thru O	0	0	0	0	Westbo CCW Right 0	Thru 0	0	0	0	0	Northb CW Right 0	Thru 0	0	0	0	0	Eastbo CCW Right 0	Thru 0	0	0	0	0	0
Direction S Start Time 0:00:00 0:15:00	Southbound Right Thru O O	0 0	0 0	0	0	Westbo CCW Right 0 0	Thru 0 0	0	0	0 0	0 0	Northb CW Right 0 0	Thru 0 0	0	0	0	0	Eastbo CCW Right 0 0	Thru 0 0	0	0 0	0	0 0	0 0
Direction 5 Start Time 0:00:00 0:15:00 0:30:00	Southbound Right Thru 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	Westbo CCW Right 0 0 0	Thru 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	Northb CW Right 0 0 0	Thru 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	Eastbo CCW Right 0 0 0	Thru 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Direction Start Time 0:00:00 0:15:00 0:30:00 0:45:00	Southbound Right Thru 0 0 0 0	0 0 0	0 0 0	0 0 0 1	0 0 0 0	Westbo CCW Right 0 0 0 0	Thru 0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0	Northb CW Right 0 0 0 0	Thru 0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0	Eastbo CCW Right 0 0 0	Thru 0 0 0 0	0 0 0 0	0 0 0	0 0 0	0 0 0 0	0 0 0
Direction : Start Time 0:00:00 0:15:00 0:30:00 0:45:00 1:00:00 1:15:00 1:30:00	Southbound Right Thru 0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 1	0 0 0 0	Westbo CCW Right 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	Northb CW Right 0 0 0 0	Thru 0 0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	Eastbo CCW Right 0 0 0 0	Thru 0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0
Direction : Start Time 0:00:00 0:15:00 0:30:00 0:45:00 1:00:00 1:15:00 1:30:00 1:45:00	Southbound Right Thru 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0	Westbr CCW Right 0 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	Northb CW Right 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	Eastbo CCW Right 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0
Direction : Start Time 0:00:00 0:15:00 0:30:00 0:45:00 1:00:00 1:15:00 1:30:00 1:45:00 2:00:00	Southbound Right Thru 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0 0	Westbr CCW Right 0 0 0 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	Northb CW Right 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	Eastbo CCW Right 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0
Direction 1 Start Time 1 0:00:00 0:15:00 0:30:00 0:45:00 1:00:00 1:15:00 1:45:00 2:00:00 2:15:00	Southbound Right Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 1 0 0 0 0	0 0 0 0 0 0 0 0 0	Westbr CCW Right 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	Northb CW Right 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	Eastbo CCW Right 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0
Direction ! Start Time 0:00:00 0:15:00 0:30:00 0:45:00 1:00:00 1:15:00 1:30:00 1:45:00 2:00:00 2:15:00 2:30:00 2:30:00	Southbound Right Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	Westbr CCW Right 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	Northb CW Right 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	Eastbo CCW Right 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0
Direction 1 Start Time 1 0:00:00 0:15:00 0:30:00 0:45:00 1:00:00 1:15:00 1:30:00 1:45:00 2:00:00 2:15:00 2:30:00 2:45:00	Southbound Right Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 1 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	Westbo	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	Northb CW Right 0 0 0 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	Eastbo CCW Right 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0
Direction 1 Start Time 1 0:00:00 0:15:00 0:30:00 0:45:00 1:00:00 1:15:00 1:30:00 1:45:00 2:00:00 2:30:00 2:45:00 3:00:00	Southbound Right Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 1 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	Westb: CCW Right 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	Northb CW Right 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	Eastbo CCW Right 0 0 0 0 0 0 0 0 0 0	Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0
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10:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
11:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
15:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45:00	0	0	0	0	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	0	0	0	0
16:15:00	1	0	0	0	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	0	0	0	0
16:45:00	0	0	0	0	0	0	0	1	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	0	0	0	0
17:15:00	0	0	0	0	0	0	0	0	0	0	0	0	1	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	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	1	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	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	0	0	0	0
18:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:15:00	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				-					-				-	-	-								-	0
21:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
22:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1-10- 1-10-																								_		
Part			0											0	0	0	0	0	0	0	0	0				
Part																		-								
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Mary								•		Ü	•		•			Ü	Ü	Ü	Ü						•	•
								East						South						West						
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	D	irection Southbo	ound					Westboo	und					Northbo	und					Eastbou	nd					
0.500	S	tart Time Right	Thru	Left	U-Turn	Peds CW	Peds CCV	N Right	Thru	Left	U-Turn	Peds CW	/ Peds CC	W Right	Thru	Left	U-Turn	Peds CV	V Peds CC	W Right	Thru	Left	U-Turn	Peds CW		
CASSON C																										
O-STACE Color Co			-	-			-				-				-	-	-	-	-	-			-	-		
11500																	-	-			-					
11500																	-	-								
135000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			-	-			-	-	-		-				-	-	-	-	-	-	-		-	-		
145500 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																										
20000																		0								
236000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			0	0			0	0					0		0	0	0	0	0	0	0		0) (
24500 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		2:15:00	0	0	0	0 (0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0) ()	0
350000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0													-		0	0	0	0			-					
331500 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0															-		-	-			-			-		
34500 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																	-									
34500 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																										
445000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							-	-			-				-	-	-	-					-	-		
41500 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																										
44500 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			0												0	0	0	0			0		0			
\$50000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		4:30:00	0	0	0	0 (0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0))	0
515.00 0 <td></td> <td>4:45:00</td> <td>0</td> <td>0</td> <td>0</td> <td>0 (</td> <td>0</td> <td>) (</td> <td>)</td> <td>0</td>		4:45:00	0	0	0	0 (0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0) ()	0
53000 0 <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td>0</td> <td>0</td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td>					-				-				-				0	0			-					
\$\frac{5.4500}{5.4500} 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 1 0									-								-	-			-					
600000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																	-									
6:15:00 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0													_				-	-			-					
645000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			-	-			-	-			-				-	-	-	-	-	-	-		-			
645.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																										
7,00,000																	0	0			0					
7:30:00			0	0	0	0 (0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0) (
74,500		7:15:00	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0) ()	4
8:15:00 0 0 0 0 0 0 1 1 2 0 0 0 0 0 0 1 4 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 1 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																										
8.45:00 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 1 0 0 0 1 0 0 0 0 0 0 0			-	-			-	-			-				-	-	-	-	_		-		-			
9:15:00			0	0			1	0	0	0			0		0	0	0	0	1	2	0)		
9:45:00 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0		9:15:00	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0))	1
10:00:00															0		0	0								
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10:45:00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																	-				-					
11:00:00 0<			-	-				_	-		-				-	-	-	-	_	-	-		-	-		
11:15:00 0<																	-									
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12:00:00 0<			0	0	0	0 (0	1	0	0			0	0	0	0	0	0	4	8	0	0	0)	L	1
12:15:00 0 0 0 0 11 0		11:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	11	0	0	0)	l	2
12:30:00 0 0 0 0 1 7 0<			0											2												
12:45:00 0 0 0 0 1 7 0 0 0 0 3 4 0 0 0 0 6 18 0 0 0 0 0 3 4 13:00:00 0 <td></td> <td>•</td> <td>-</td> <td></td> <td>0</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td>														•	-		0				-					
13:00:00 0 0 0 0 3 2 0 0 0 0 5 0 <																	0	-			-					
13:15:00 0 0 0 0 1 3 0 0 0 0 3 2 0 0 0 0 4 5 0 0 0 0 2																										
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13:45:00	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	2	4	0	0	0	0	1	2
14:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
14:15:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	3	0	0	0	0	0	1
14:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0
14:45:00	0	0	0	0	4	0	0	0	0	0	0	5	0	0	0	0	9	1	0	0	0	0	2	0
15:00:00	0	0	0	0	13	1	0	0	0	0	0	15	0	0	0	0	26	5	0	0	0	0	12	3
15:15:00	0	0	0	0	1	4	0	0	0	0	1	2	0	0	0	0	6	7	0	0	0	0	2	2
15:30:00	0	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0	8	1	0	0	0	0	8	2
15:45:00	0	0	0	0	1	1	0	0	0	0	3	1	0	0	0	0	5	2	0	0	0	0	1	0
16:00:00	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	5	0	0	0	0	0	4	1
16:15:00	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	4	4	0	0	0	0	0	1
16:30:00	0	0	0	0	3	1	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	1	2
16:45:00	0	0	0	0	2	0	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0
17:00:00	0	0	0	0	1	4	0	0	0	0	2	0	0	0	0	0	3	2	0	0	0	0	2	2
17:15:00	0	0	0	0	3	2	0	0	0	0	2	2	0	0	0	0	1	1	0	0	0	0	2	1
17:30:00	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	2	1	0	0	0	0	1	0
17:45:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	4	0	0	0	0	3	0
18:00:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	1
18:15:00	0	0	0	0	2	1	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	4	0
18:30:00	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	3	0
18:45:00	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0
19:00:00	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0
19:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:30:00	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0
19:45:00	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
20:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
20:30:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0
20:45:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	1
21:00:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
21:15:00	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1
21:30:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
21:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:15:00	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
22:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
23:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:15:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Site: 1719900007 NORTH APPROACH

DATE	710.45		CAR			TRUCK			HEAVY		Dedestates
DATE	TIME	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Pedestrians
Recording star	ted at:06:45:00										
9/21/2017	7:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	1	78	1	0	0	1	0	1	0	1
9/21/2017	7:30:00	3	116	3	0	1	0	0	1	0	4
9/21/2017	7:45:00	2	129	0	0	1	0	0	7	0	0
9/21/2017	8:00:00	3	142	1	0	2	0	0	4	0	25
9/21/2017	8:15:00	2	149	3	0	0	0	0	6	0	0
9/21/2017	8:30:00	3	170	6	0	1	0	0	6	0	3
9/21/2017	8:45:00	4	143	1	0	3	0	1	6	0	1
9/21/2017	9:00:00	1	136	3	0	0	0	0	5	0	0
9/21/2017	9:15:00	0	0	0	0	0	0	0	0	0	0
Recording rest	arted at:10:45:00										
9/21/2017	11:00:00	0	0	0	0	0	0	0		0	0
9/21/2017	11:15:00	5	138	0	0	2	0	0		0	1
9/21/2017	11:30:00	0	147	6	0	0	0	0		0	4
9/21/2017	11:45:00	4	160	2	0	1	0	_		2	1
9/21/2017	12:00:00	0	161	1	0	1	0			0	1
9/21/2017	12:15:00	3	162	5	0	1	0	_		0	4
9/21/2017	12:30:00	2	180	2	0	1	1	0		0	11
9/21/2017	12:45:00	3	174	4	0	0	0	0		0	4
9/21/2017	13:00:00	3	189	1	0	4	0			0	0
9/21/2017	13:15:00	5	162	3	0	0	0	_		0	1
9/21/2017	13:30:00	6	180	3	0	2	0			0	1
9/21/2017	13:45:00	1	166	3	0	1	0	0		0	0
9/21/2017	14:00:00	1	154	5	0	2	0			0	1
9/21/2017	14:15:00	0	0	0	0	0	0	0	0	0	0
	arted at:14:45:00										
9/21/2017	15:00:00	0	0	0	0	0	0	0		0	0
9/21/2017	15:15:00	4	225	6	0	2	0	0		0	13
9/21/2017	15:30:00	2	229	2	0	1	0	0		0	3
9/21/2017	15:45:00	3	213	2	0	0	0	_		0	1
9/21/2017	16:00:00	3	203	0	0	0	0	0		1	2
9/21/2017	16:15:00	4	212	4	0	2	0	0		1	4
9/21/2017	16:30:00	3	203	1	0	2	0	0		0	9
9/21/2017	16:45:00	4	239	0	0	0	0			0	4
9/21/2017	17:00:00	4	237	0	0	1	0			0	9
9/21/2017	17:15:00	4	295	2	0	0	0			0	5
9/21/2017	17:30:00	3	272	5	0	0	0			0	4
9/21/2017	17:45:00	3	261	7	0	1	0			0	1
9/21/2017	18:00:00	6	301	4	0	0	0	_		0	6
9/21/2017	18:15:00	10	292	3	0	0	0	0		0	10
9/21/2017	18:30:00	12	261	1	0	2	0	0		1	0
9/21/2017	18:45:00	7	270	3	0	0	0	0		0	1
9/21/2017	19:00:00	21	244	1	0	0	0			0	4
9/21/2017	19:15:00	0	0	0	0	0	0	0		0	0
9/21/2017	19:15:15	0	0	0	0	0	0	0	0	0	0

Site: 1719900007 EAST APPROACH

DATE	TIDAE		CAR			TRUCK			HEAVY		Dodostviona
DATE	TIME	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Pedestrians
Recording star	ted at:06:45:00										
9/21/2017	7:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	2	0	0	0	0	0	0	0	0	0
9/21/2017	7:30:00	8	0	0	0	0	0	0	0	0	1
9/21/2017	7:45:00	10	5	0	0	0	0	1	0	0	1
9/21/2017	8:00:00	23	2	1	0	0	0	0	0	0	0
9/21/2017	8:15:00	55	14	2	0	0	0	0	0	0	0
9/21/2017	8:30:00	81	17	0	0	0	0	3	0	0	0
9/21/2017	8:45:00	16	1	0	0	0	0	1	0	0	0
9/21/2017	9:00:00	6	2	0	0	0	0	1	0	0	0
9/21/2017	9:15:00	0	0	0	0	0	0	0	0	0	0
Recording rest	arted at:10:45:00										
9/21/2017	11:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	11:15:00	10	7	1	0	0	0	0	0	0	0
9/21/2017	11:30:00	17	3	1	0	0	0	0	0	0	0
9/21/2017	11:45:00	5	6	1	0	0	0	0	0	0	1
9/21/2017	12:00:00	11	5	3	1	0	0	0	0	0	0
9/21/2017	12:15:00	7	4	1	0	0	0	0	0	0	0
9/21/2017	12:30:00	3	1	1	0	0	0	0	0	0	0
9/21/2017	12:45:00	6	7	0	0	0	0	0	0	0	4
9/21/2017	13:00:00	20	8	0	0	0	0	1	0	0	2
9/21/2017	13:15:00	11	1	0	0	0	0	0	0	0	0
9/21/2017	13:30:00	7	0	2	0	0	0	0	0	0	1
9/21/2017	13:45:00	9	2	2	0	0	0	0	0	0	0
9/21/2017	14:00:00	11	6	2	0	0	0	1	0	0	1
9/21/2017	14:15:00	0	0	0	0	0	0	0	0	0	0
	arted at:14:45:00										
9/21/2017	15:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	15:15:00	11	3	2	0	0	0	0	0	0	6
9/21/2017	15:30:00	16	2	0	0	0	0	0	0	0	0
9/21/2017	15:45:00	20	5	1	0	0	0	0	0	0	4
9/21/2017	16:00:00	19	6	1	0	0	0	0	0	0	0
9/21/2017	16:15:00	17	5	0	0	0	0	0	0	0	0
9/21/2017	16:30:00	22	7	2	0	0	0	0	0	0	0
9/21/2017	16:45:00	18	3	0	0	0	0	0	0	0	0
9/21/2017	17:00:00	28	1	0	0	0	0	0	0	0	0
9/21/2017	17:15:00	22	8	1	0	0	0	0	0	0	0
9/21/2017	17:30:00	19	1	1	0	0	0	0	0	0	0
9/21/2017	17:45:00	19	4	0	0	0	0	0	0	0	0
9/21/2017	18:00:00	22	6	1	0	0	0	0		0	1
9/21/2017	18:15:00	28	14	2	0	0	0	0	0	0	0
9/21/2017	18:30:00	22	8	3	0	0	0	0	0	0	0
9/21/2017	18:45:00	20	15	4	0	0	0	0	0	0	0
9/21/2017	19:00:00	27	10	5	0	0	0	0	0	0	0
9/21/2017	19:15:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	19:15:15	0	0	0	0	0	0	0	0	0	0

Site: 1719900007 SOUTH APPROACH

			CAR			TRUCK			HEAVY		
DATE	TIME	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Pedestrians
Recording star	rted at:06:45:00										
9/21/2017		0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	123	163	7	0	1	0	0	4	0	3
9/21/2017	7:30:00	143	224	7	0	2	0	4	6	0	3
9/21/2017	7:45:00	146	266	15	0	0	0	0	5	0	3
9/21/2017	8:00:00	90	279	30	1	2	0	4	8	0	2
9/21/2017	8:15:00	60	307	56	0	1	0	1	6	1	2
9/21/2017	8:30:00	75	249	33	1	0	0	5	2	0	1
9/21/2017	8:45:00	43	173	5	0	2	0	1	4	0	0
9/21/2017	9:00:00	43	208	5	0	1	0	4	10	0	0
9/21/2017		0	0	0	0	0	0	0	0	0	0
	tarted at:10:45:00		_								-
9/21/2017		0	0	0	0	0	0	0	0	0	0
9/21/2017	11:15:00	60	124	2	0	2	0	3	3	0	0
9/21/2017	11:30:00	57	155	4	0	0	0	0	3	0	4
9/21/2017	11:45:00	59	142	6	0	2	0	3	1	0	3
9/21/2017	12:00:00	51	166	4	0	2	0	0	2	0	0
9/21/2017	12:15:00	66	182	3	0	1	0	2	1	0	0
9/21/2017	12:30:00	57	143	0	1	2	0	1	1	0	1
9/21/2017	12:45:00	62	168	2	0	1	0	3	2	0	1
9/21/2017	13:00:00	48	153	5	1	0	0	1	3	0	0
9/21/2017	13:15:00	41	155	4	0	0	0	2	2	0	2
9/21/2017	13:30:00	42	148	5	0	2	0	0	5	0	5
9/21/2017	13:45:00	43	157	3	0	1	0	4	2	0	0
9/21/2017	14:00:00	54	163	4	1	0	0	0	5	0	2
9/21/2017	14:15:00	0	0	0	0	0	0	0	0	0	0
Recording rest	tarted at:14:45:00										
9/21/2017	15:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	15:15:00	51	155	5	0	1	0	7	4	0	3
9/21/2017	15:30:00	60	177	3	0	2	0	1	2	0	0
9/21/2017	15:45:00	66	185	5	1	0	0	6	7	0	1
9/21/2017	16:00:00	80	203	17	0	2	0	2	6	0	6
9/21/2017	16:15:00	59	204	9	3	1	0	5	3	0	2
9/21/2017	16:30:00	59	222	8	0	1	0	2	3	0	0
9/21/2017	16:45:00	74	187	15	0	2	0	5	1	0	0
9/21/2017	17:00:00	86	197	14	1	1	0	0	0	0	2
9/21/2017	17:15:00	76	236	6	0	1	0	4	3	0	4
9/21/2017	17:30:00	84	209	13	1	0	0	3	2	0	0
9/21/2017	17:45:00	90	213	12	0	1	0	4	1	1	0
9/21/2017	18:00:00	75	260	24	0	0	0	1	1	0	11
9/21/2017	18:15:00	86	266	18	0	0	0	4	1	0	4
9/21/2017	18:30:00	94	214	33	0	0	0	4	0	0	2
9/21/2017	18:45:00	67	210	27	0	0	0	4	1	0	1
9/21/2017	19:00:00	76	255	40	1	1	0	5	1	0	1
9/21/2017	19:15:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	19:15:15	0	0	0	0	0	0	0	0	0	0

Site: 1719900007 WEST APPROACH

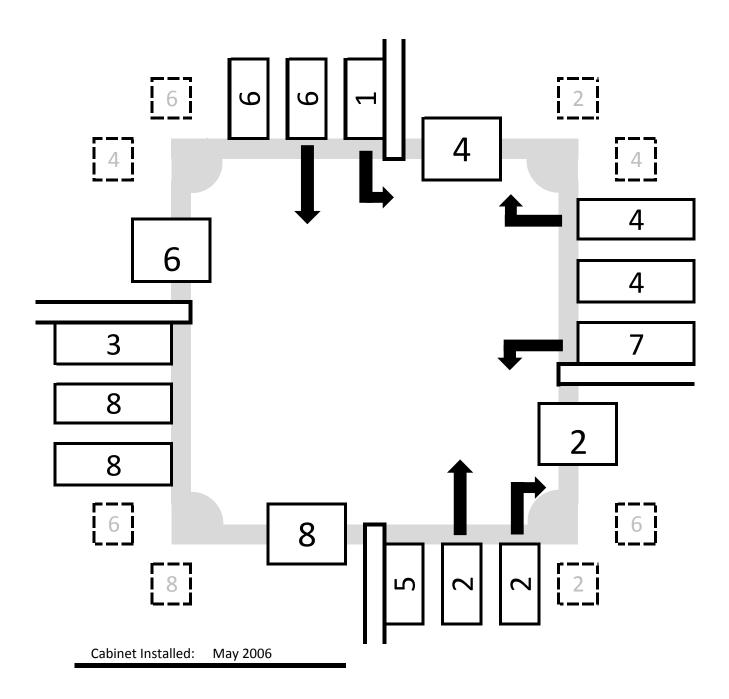
2.175	- 10.45		CAR			TRUCK			HEAVY		5.1
DATE	TIME	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Pedestrians
Recording star	rted at:06:45:00										
9/21/2017	7:00:00	0	0	0	0	0	0	0	0	0	0
9/21/2017	7:15:00	4	0	41	0	0	5	2	0	3	0
9/21/2017	7:30:00	11	0	49	0	0	1	0	0	11	0
9/21/2017	7:45:00	9	0	49	0	0	0	0	0	0	2
9/21/2017	8:00:00	9	5	45	0	0	1	0	0	5	2
9/21/2017	8:15:00	6	4	23	0	0	0	0	0	0	0
9/21/2017	8:30:00	7	1	39	0	0	0	0	0	5	1
9/21/2017	8:45:00	6	0	17	0	0	1	0	0	2	3
9/21/2017	9:00:00	2	2	27	0	0	0	0	0	0	0
9/21/2017	9:15:00	0	0	0	0	0	0	0	0	0	0
Recording rest	tarted at:10:45:00										
9/21/2017		0	0	0	0	0	0	0	0	0	0
9/21/2017	11:15:00	3	2	24	0	0	0	0	0	2	0
9/21/2017	11:30:00	2	3	31	0	0	0	0	0	1	4
9/21/2017	11:45:00	3	3	37	0	0	1	0	0	0	6
9/21/2017	12:00:00	7	1	39	0	0	0	0	0	3	10
9/21/2017	12:15:00	5	0	27	0	0	0	1	1	1	2
9/21/2017		1	0	42	0	0	0	0	0	2	1
9/21/2017	12:45:00	3	2	38	0	0	0	1	0	4	7
9/21/2017	13:00:00	8	0	37	1	0	0	0	0	2	2
9/21/2017	13:15:00	7	1	26	0	0	0	0	0	2	0
9/21/2017	13:30:00	5	0	37	0	0	1	0	0	1	35
9/21/2017		6	1	30	0	0	0	0	0	2	5
9/21/2017		1	1	31	0	0	2	0	0	0	1
9/21/2017		0	0	0	0	0	0	0	0	0	0
	tarted at:14:45:00	Ū		-	- J	Ü	-	Ū		J	- J
9/21/2017		0	0	0	0	0	0	0	0	0	0
9/21/2017		2	0	36	0	0	0	1	0	2	2
9/21/2017		4	1	38	0	0	0	0	0	3	9
9/21/2017		4	1	54	0	0	0	1	0	5	0
9/21/2017		7	1	46	0	0	0	0	0	0	5
9/21/2017	16:15:00	4	0	44	0	0	0	0	0	3	13
9/21/2017	16:30:00	6	1	55	0	0	0	0	0	3	3
9/21/2017	16:45:00	3	0	71	0	0	0	0	0	3	5
9/21/2017	17:00:00	3	2	74	0	0	0	0	0	2	<u>ງ</u>
9/21/2017	17:15:00	8	0	80	0	0	0	0	0	2	3
9/21/2017	17:30:00	3	2	91	0	0	0	0	0	4	7
9/21/2017		5	0	51	0	0	0	0	0	1	0
9/21/2017		5	1	115	0	0	0	0	0	4	6
9/21/2017	18:15:00	9	2	137	0	0	0	0	0	1	3
9/21/2017		6	3	76	0	0	0	0	0	5	5
9/21/2017		5	3	148	0	0	0	0	0	2	9
9/21/2017	19:00:00	4	5	82	0	0	0	0	0	5	8
9/21/2017		0	0	0	0	0	0	0	0	0	0
					0	0	0		0	0	0
9/21/2017	19:15:15	0	0	0	0	0	0	0	0	0	0





ntersection:	Ontario Street Sou	ıth	& N	1ain St	treet F	∃ast

Controller #: ASC/2 **Date**: 5/14/2019



<u>Timing Plan 1</u>																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	5	15	5	15	5	15	7	15								
Delayed Green																
Walk		7		7		7		7								
Walk 2																
Walk Max																
Pedestrian Clearance		18		18		18		18								
Pedestrian Clearance 2																
Pedestrian Clearance Max																
Vehicle Extension	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0								
Vehicle Extension 2																
Max 1	18	38	13	36	18	38	13	36								
Max 2																
Max 3																
Dynamic Max																
Dynamic Max Step																
Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0								
Red Clearance	1.0	3.0	1.0	3.0	1.0	3.0	1.0	3.0								

Coordinator Oprions

	Coord	Options	
Manual Pattern	0	ECPI Coord	
System Source	TBC	System Format	
Splits In	%	Offset IN	
Transition	smooth	Max Select	
Dwell/Add Time		Enable Man Sync	
DLY Coord WK-LZ		No Force Off	
Offset Ref	ĺ	Lead Cal Use Ped Tm	
Ped Recall		Ped Reserve	
Local Zero Ovrd	1	FO Add INI Green	1
Re-Sync Count		Multisync	

	Coord	linator	Patter	'n			1											
	Use S _l	olit Pat	tern 1				1											
	TS2 Pa	attern/	'Offset															
	Cycle						90s			ST	D(CC	OS)						
	Offset	: Val					37%											
	Actua	ted Co	ord							Tir	ning	Plan						
	Act W	alk Re	sto				yes				quer							
	Phase	Resrv	ce 0							Ac	tion	Plan						
						Spl	it Prefe	erer	nce Pl	nase	S							
	Phase	S				1	2		3		4	5		6	7	8		
	SPT					12	39		12	3	37	12		39	12	37		
	Pref 1																	
	Pref2																	
	Splt E	xt																
	Veh P	erm								Di	sp							
	Ring [Disp										(Ring	2-4)					
						Spl	it Prefe	erer	nce Pl	nase	S							
	Phase	S				9	10		11	1	L2	13		14	15	16		
	SPT																	
	Pref 1																	
	Pref2																	
									1		2							
			Spli	t Dema	nd Ptr	n							Xar	t Ptrn				
Phase	1	2	3	4	5	6	7		8	9	10) 1	.1	12	13	14	15	16
Coord		Х				Х												
E Recal																		
D Recal																		
IX Recal																		
OMIT																		
SF OUT										(1	8)							

	Coord	ordinator Pattern e Split Pattern 1 2 Pattern/Offset					3													
	Use Sp	olit Pat	tern 1				3													
	TS2 Pa	attern/	Offset																	
	Cycle						100s				STD(COS)							
	Offset	: Val					49%													
	Actua ⁻	ted Co	ord								Timi	ng Pl	an							
	Act W	alk Res	sto				yes				Sequ	ience	9							
	Phase	Resrvo	ce 0								Actio	on Pl	an							
						Spl	it Prefe	erer	nce I	Pha	ises									
	Phase	S				1	2		3	}	4		5	6		7	8			
	SPT					12	37		13	3	38	1	2	37		13	38			
	Pref 1																			
	Pref2																			
	Splt Ex	ĸt																		
	Veh P	erm									Disp									
	Ring D	isp										(Ri	ng 2	-4)						
						Spl	it Prefe	erer	nce l	Pha	ises									
	Phase	S				9	10		1:	1	12	1	.3	14		15	16			
	SPT																			
	Pref 1																			
	Pref2																			
									1		2									
			Split	t Dema	nd Ptr	n								Xart Pt	rn					
se	1	2	3	4	5	6	7		8	ç	9	10	11	12	2	13	14	1	5	16
rd		Х				Х														
ecal																				
ecal																				
ecal																				
IT																				
UΤ											(1-8)								

Split Pattern

		TII	ME:			930	am	- 33	30pı	n of	ffset	: val	ue:3	37%		
Split F	Split Pattern Number													90s		
Phase		1	. 4	2	۲۰۰,	3	4	1	Ξ,	5	(ŝ		7	8	3
Split	1	.3	3	6	1	9	3	2	1	2	3	7	1	4	3	7
Phase		9	1	0	1	1	1	2	1	3	1	4	1	5	1	.6
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord		Х				Х										
VE Rcal																
PD Rcal																
MX Rcall																
OMIT										·				·	·	

			TII	ME:			800	0pm	ı-60	0an	ı off	set	valı	ıe:4	<u>3%</u>		
Spl	it Pa	tte	rn N	lum	ber	4	1			Cycl	le Ti	me		:	100	5	
Phase		1	L	2	2	11,	3	4	1	Ι,	5	(5		7	8	3
Split		1	2	4	1	1	0	3	7	1	2	4	1	1	0	3	7
Phase		Ç	9	1	0	1	1	1	2	1	3	1	4	1	.5	1	6
Split Value																	
Phase		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord			Х				х										
VE Rcal																	
PD Rcal																	
MX Rcall																	
OMIT																	

		TII	ME:													
Split I	atte	rn N	lum	2	K			Cycl	le Ti	me			Х			
Phase		1	2	2	(1.)	3	4	4	!,	5	(ô		7	8	3
Split																
Phase		9	1	.0	1	1	1	2	1	.3	1	4	1	5	1	6
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

Day Plan

Day Plan #	Event #	Action Plan #	Start Time
	1	1	600am
	2	2	930am
	3	3	330pm
	4	4	800pm
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19	_	
	20		

<u>Schedule</u>

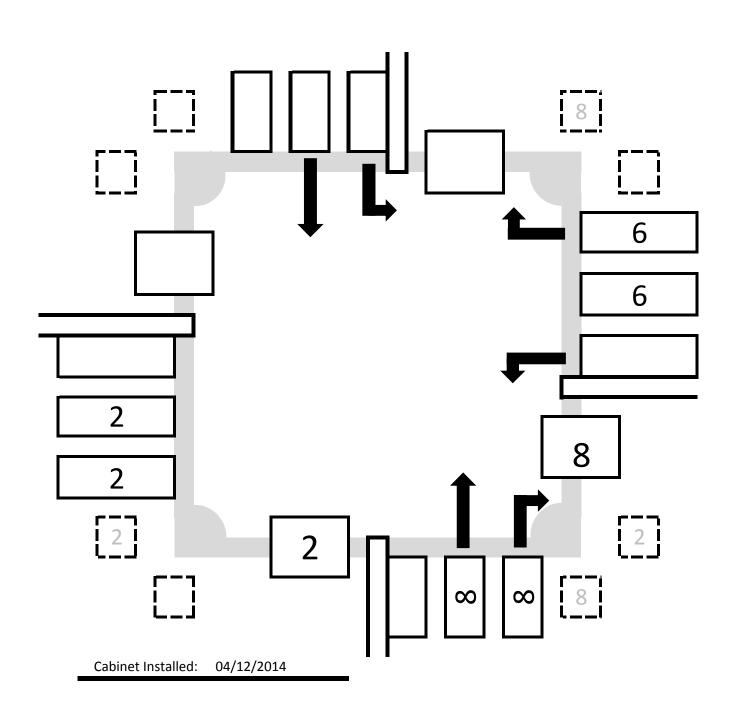
Sche			1												
Day	Plai	n	1	1											
		Ja	an	Fe	eb		M	ar		Α	pr	May	_	_	Jun
! _)	Κ)	X)	Κ)	(Х			Х
Month		Jı	ul	Αι	ug		Se	ер		0	ct	Nov	,		Dec
ĺΣ)	Κ)	X)	Κ)	<	Х			Х
Day 0	Of		Sun	Moi	n	-	Tues	Wed	b	Т	hurs	Fri			Sat
Wee (DOV				х			x	х			х	x			
	1	-	2	3	4	1	5	6	7	7	8	9	10)	11
اج	×	7.	Х	Х	>	(Х	Х	>	\	Х	Х	Х		х
Day Of Month (DOM)	1	2	13	14	1	5	16	17	1	8	19	20	21		22
j≅ _	Х	ζ	Х	Х	>	(Х	Х	>	(Х	Х	Х		Х
Day Of (DOM)	2	3	24	25	2	6	27	28	2	9	30	31			
	×		Х	Х	_>	<u> </u>	Х	Х	_>		Х	Х			





ntersection:	Main St. E & Mall Entrance

Controller #: Cobalt Date: 10/05/17



Timing Plan 1																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	5	30		5		30		10								
Delayed Green																
Walk		15						20								
Walk 2																
Walk Max																
Pedestrian Clearance		7						7								
Pedestrian Clearance 2																
Pedestrian Clearance Max																
Vehicle Extension	3.0															
Vehicle Extension 2																
Max 1	17	55				55		35								
Max 2																
Max 3																
Dynamic Max																
Dynamic Max Step																
Yellow Change	3.0	4.0				4.0		4.0								
Red Clearance	1.0	3.0				3.0		3.0								

Coordinator Options

	Coord	Options	
Manual Pattern		ECPI Coord	1
System Source		System Format	
Splits In		Offset IN	
Transition		Max Select	
Dwell/Add Time		Enable Man Sync	!
DLY Coord WK-LZ		No Force Off	
Offset Ref	ĺ	Lead Cal Use Ped Tm	į
Ped Recall	j	Ped Reserve	j
Local Zero Ovrd	1	FO Add INI Green	
Re-Sync Count		Multisync	

	Coord	linator	Patter	'n																
	Use S	plit Pat	tern 1																	
	TS2 Pa	attern/	'Offset																	
	Cycle										STE	O(CO	S)							
	Offset	t Val																		
		ted Co								_		ning								
		alk Re										quen								
	Phase	Resrv	ce 0									ion l	Plan							
						Spl	it Prefe	erer	nce	Pha	ses	,								
	Phase	S				1	2		(1)	3	4	ļ	5		6	7	8			
	SPT																			
	Pref 1																			
	Pref2																			
	Splt E	xt																		
	Veh P	erm									Dis									
	Ring [Disp											Ring	2-4)						
							it Prefe													
	Phase	:S				9	10		1	1	1	2	13		14	15	16			
	SPT																			
	Pref 1																			
	Pref2																			
			Split	t Dema	nd Ptr	n								Xar	t Ptrn					
ase	1	2	3	4	5	6	7		8	9)	10	1	.1	12	13	14	15	16	;
ord																				
ecal																				
ecal																				
lecal																				
1IT													_							_
TUC											(1-	·8)								

I	Coord	inator	Patter	'n														
	Use Sp	olit Pat	tern 1															
	TS2 Pa	attern/	'Offset															
	Cycle									S	TD(C	OS)						
	Offset	: Val																
		ted Co										g Pla	n					
		alk Re									eque							
	Phase	Resrv	ce 0									n Plai	1					
						Spl	it Prefe	erer	nce F	hase	es							
	Phase	S				1	2		3		4	5		6	7	8		
	SPT																	
	Pref 1																	
	Pref2																	
	Splt Ex	ĸt																
	Veh P	erm								D	isp							
	Ring D	isp										(Rin	g 2-4	!)				
							it Prefe											
	Phase	S				9	10		13	L	12	13		14	15	16		
	SPT																	
	Pref 1																	
	Pref2																	
			Split	t Dema	nd Ptr	n							Xa	art Ptrn				
e	1	2	3	4	5	6	7	- ;	8	9	1	.0	11	12	13	14	15	16
d																		
cal																		
cal																		
cal																		
Г																		
JT										(1-8)							

Split Pattern

		TII	ME:													
Split F	atte	rn N	lum	ber				Cy	/cle	Len	gth					
Phase		1	2	2	(1)	3	4	1	Ξ,	5	(5		7	8	3
Split																
Phase		9	1	0	1	1	1	2	1	3	1	4	1	.5	1	6
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

		TII	ME:													
Split P	atte	rn N	lum	ber					Cycl	le Ti	me					
Phase		1	. 4	2	11,	3	4	4	I,	5	(5		7	8	3
Split																
Phase	•	9		0	1	1	1	2	1	.3	1	4	1	.5	1	6
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

		TII	ME:													
Split F	atte	rn N	lum	ber					Сус	le Ti	me					
Phase		1	2	2	11,	3	4	4	-,	5	(5		7	8	3
Split																
Phase		9		.0	1	1	1	2	1	.3	1	4	1	5	1	6
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

Day Plan

Day Plan #	Event #	Action Plan #	Start Time
	1	1	
	2	2	
	3	3	
	4	4	
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19		
	20		

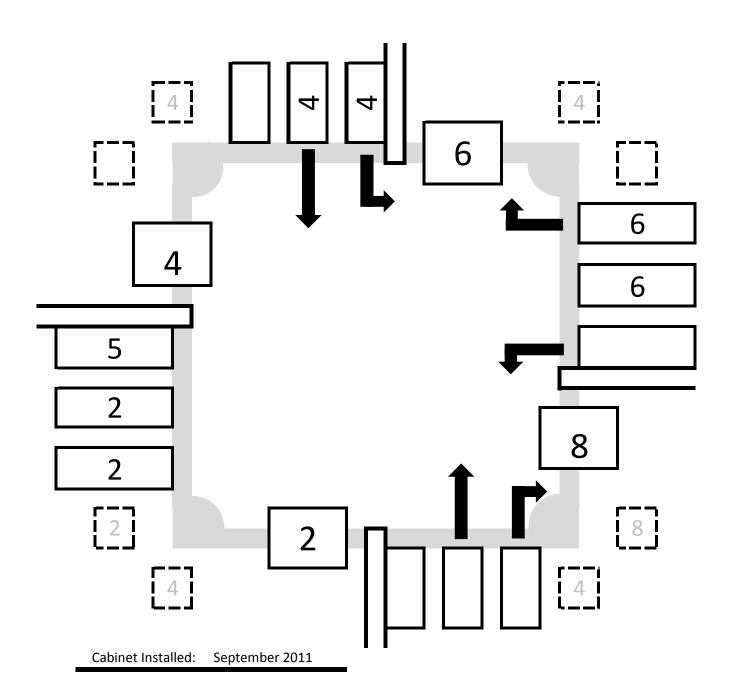
<u>Schedule</u>

Sche Num			1												
Day Num			1												
[]		Ja	in	Fe	eb		M	ar		Α	pr	May	$^{-}$		Jun
! _)	()	K)	Κ)	X	Х			х
Month		Jı	ul	Αı	ug		Se	ер		0	ct	Nov	/		Dec
μ)	`	,	K		,	K		2	X	Х			Х
Day (Of		Sun	Moi	า	-	Tues	We	d	T	hurs	Fri			Sat
Wee (DOV				x			x	х			x	x			
	1	-	2	3	4		5	6	-	7	8	9	1	0	11
اج	Х		Х	Х	х		Х	Х	,	K	Х	Х	>	(х
ont	12	2	13	14	15	5	16	17	1	8	19	20	2	1	22
Day Of Month (DOM)	Х	(Х	Х	Х		Х	Х)	K	Х	Х	>	(Х
Day Of (DOM)	23	3	24	25	26	6	27	28	2	9	30	31			
			Х	Х	X		Х	Х	;	ζ	Х	Х			





ntersection:	Main St. E & Wilson Dr.	



Timing Plan 1																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green		40		10	5	40										
Delayed Green																
Walk		30		7		30										
Walk 2																
Walk Max																
Pedestrian Clearance		10		13		10										
Pedestrian Clearance 2																
Pedestrian Clearance Max																
Vehicle Extension		4.0		4.0	3.0	4.0										
Vehicle Extension 2																
Max 1		40		30	15	50										
Max 2																
Max 3																
Dynamic Max																
Dynamic Max Step																
Yellow Change		4.0		4.0	3.0	4.0										
Red Clearance		2.0		2.0	2.0	2.0										

Coordinator Options

	Coord	Options	
Manual Pattern	í	ECPI Coord	ί
System Source		System Format	
Splits In		Offset IN	
Transition		Max Select	
Dwell/Add Time		Enable Man Sync	
DLY Coord WK-LZ		No Force Off	
Offset Ref	j	Lead Cal Use Ped Tm	į
Ped Recall		Ped Reserve	j
Local Zero Ovrd	1	FO Add INI Green	
Re-Sync Count		Multisync	

	Coord	linator	Patter	'n																
	Use S	plit Pat	tern 1																	
	TS2 Pa	attern/	'Offset																	
	Cycle										STE	O(CO	S)							
	Offset	t Val																		
		ted Co								_		ning								
		alk Re										quen								
	Phase	Resrv	ce 0									ion l	Plan							
						Spl	it Prefe	erer	nce	Pha	ses	,								
	Phase	S.				1	2		(1)	3	4	ļ	5		6	7	8			
	SPT																			
	Pref 1																			
	Pref2																			
	Splt E	xt																		
	Veh P	erm									Dis									
	Ring [Disp											Ring	2-4)						
							it Prefe													
	Phase	:S				9	10		1	1	1	2	13		14	15	16			
	SPT																			
	Pref 1																			
	Pref2																			
			Split	t Dema	nd Ptr	n								Xar	t Ptrn					
ase	1	2	3	4	5	6	7		8	9)	10	1	.1	12	13	14	15	16	;
ord																				
ecal																				
ecal																				
lecal																				
1IT													_							_
TUC											(1-	·8)								

I	Coord	inator	Patter	'n														
	Use Sp	olit Pat	tern 1															
	TS2 Pa	attern/	'Offset															
	Cycle									S	TD(C	OS)						
	Offset	: Val																
		ted Co										g Pla	n					
		alk Re									eque							
	Phase	Resrv	ce 0									n Plai	1					
						Spl	it Prefe	erer	nce F	hase	es							
	Phase	S				1	2		3		4	5		6	7	8		
	SPT																	
	Pref 1																	
	Pref2																	
	Splt Ex	ĸt																
	Veh P	erm								D	isp							
	Ring D	isp										(Rin	g 2-4	!)				
							it Prefe											
	Phase	S				9	10		13	L	12	13		14	15	16		
	SPT																	
	Pref 1																	
	Pref2																	
			Split	t Dema	nd Ptr	n							Xa	art Ptrn				
e	1	2	3	4	5	6	7	- ;	8	9	1	.0	11	12	13	14	15	16
d																		
cal																		
cal																		
cal																		
Г																		
JT										(1-8)							

Split Pattern

		TII	ME:													
Split F	atte	rn N	lum	ber				Cy	/cle	Len	gth					
Phase		1	2	2	(1)	3	4	1	Ξ,	5	(5		7	8	3
Split																
Phase		9		0	1	1	1	2	1	3	1	4	1	.5	1	6
Split Value		9														
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

		TII	ME:													
Split P	atte	rn N	lum	ber					Cycl	le Ti	me					
Phase		1	. 4	2	11,	3	4	4	I,	5	(5		7	8	3
Split																
Phase	•	9		0	1	1	1	2	1	.3	1	4	1	.5	1	6
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

		TII	ME:													
Split F	atte	rn N	lum	ber					Сус	le Ti	me					
Phase		1	2	2	11,	3	4	4	-,	5	(5		7	8	3
Split																
Phase		9		.0	1	1	1	2	1	.3	1	4	1	5	1	6
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

Day Plan

Day Plan #	Event #	Action Plan #	Start Time
	1	1	
	2	2	
	3	3	
	4	4	
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19		
	20		

<u>Schedule</u>

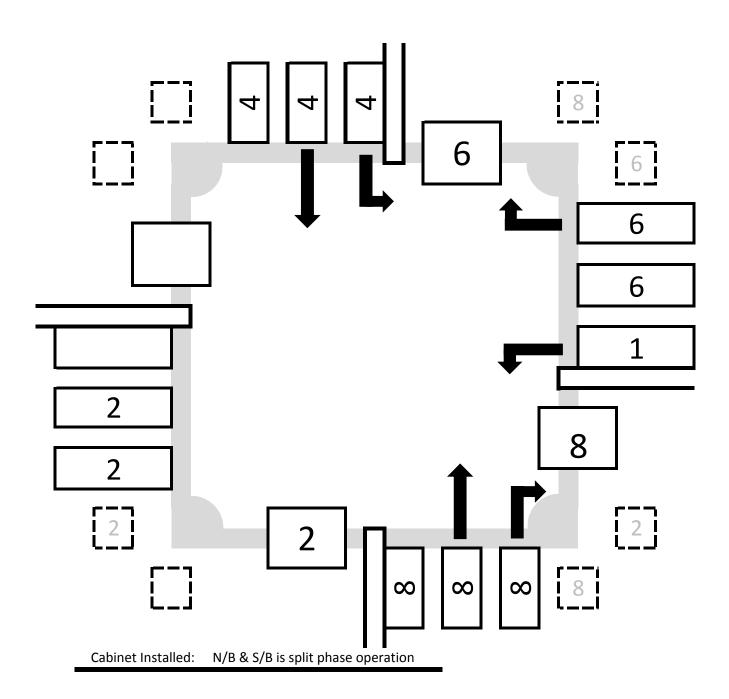
Sche Num			1												
Day Num			1												
[]		Ja	in	Fe	eb		M	ar		Α	pr	May	$^{-}$		Jun
! _)	()	K)	Κ)	X	Х			х
Month		Jı	ul	Αı	ug		Se	ер		0	ct	Nov	/		Dec
μ)	`	,	K		,	K		2	X	Х			Х
Day (Of		Sun	Moi	า	-	Tues	We	d	T	hurs	Fri			Sat
Wee (DOV				x			x	х			x	x			
	1	-	2	3	4		5	6	-	7	8	9	1	0	11
اج	Х		Х	Х	х		Х	Х	,	K	Х	Х	>	(х
ont	12	2	13	14	15		16	17	1	8	19	20	2	1	22
Day Of Month (DOM)	Х	(Х	Х	Х		Х	Х)	K	Х	Х	>	(Х
Day Of (DOM)	23	3	24	25	26	6	27	28	2	9	30	31			
			Х	Х	X		Х	Х	;	ζ	Х	Х			





Intersection:	Main St E & Drew Centre
iitersection.	Main St L & Diew Centre

Controller #: ASC/2S **Date:** 10/05/17



Timing Plan 1																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	5	15		6	0	15	0	6								
Delayed Green																
Walk		7				7		7								
Walk 2																
Walk Max																
Pedestrian Clearance		21				21		13								
Pedestrian Clearance 2																
Pedestrian Clearance Max																
Vehicle Extension	3.0	3.0		3.0		3.0		3.0								
Vehicle Extension 2																
Max 1	16	30		12		30		27								
Max 2																
Max 3																
Dynamic Max																
Dynamic Max Step																
Yellow Change	3.0	4.0		4.0		4.0		4.0								
Red Clearance	1.0	3.0		3.0		3.0		3.0								

Coordinator Options

	Coord	Options	
Manual Pattern		ECPI Coord	1
System Source		System Format	
Splits In		Offset IN	
Transition		Max Select	
Dwell/Add Time		Enable Man Sync	!
DLY Coord WK-LZ		No Force Off	
Offset Ref	ĺ	Lead Cal Use Ped Tm	į
Ped Recall	j	Ped Reserve	j
Local Zero Ovrd	1	FO Add INI Green	
Re-Sync Count		Multisync	

	Coord	linator	Patter	n			1											
	Use S _l	olit Pat	tern 1				1											
	TS2 Pa	attern/	'Offset															
	Cycle						90s			Ç	STD(C	COS)						
	Offset	: Val					21%											
	Actua	ted Co	ord				NO				Γimin	g Pla	n					
	Act W	alk Re	sto				NO				Sequ							
	Phase	Resrv	ce 0							A	\ctio	n Pla	n					
						Spl	it Prefe	erer	nce	Phas	ses							
	Phase	S				1	2		(1)	3	4	5		6	7	8		
	SPT					12	88		()	16	0		47		37		
	Pref 1																	
	Pref2																	
	Splt E	xt																
	Veh P	eh Perm								[Disp							
	Ring D	Disp										(Rir	g 2-4	1)				
						Spl	it Prefe	erer	nce	Phas	ses							
	Phase	S				9	10		1	1	12	13	3	14	15	16		
	SPT																	
	Pref 1																	
	Pref2																	
			n							X	art Ptrn							
Phase	1	2	3	4	5	6	7		8	9		10	11	12	13	14	15	16
Coord		Χ				Χ												
/E Recal																		
D Recal																		
/IX Recal																		
OMIT																		
SF OUT											(1-8)							

	Coord	linator	Patter	'n			2											
	Use S	plit Pat	tern 1				2											
	TS2 Pa	attern/	'Offset															
	Cycle						100s			ST	D(C	OS)						
	Offset	t Val					16%											
	Actua	ted Co	ord				NO			Ti	min	g Plan						
		alk Re					NO			_		ence						
	Phase	Resrv	ce 0							Ad	ction	n Plan						
						Spl	it Prefe	erer	าce P	hase	!S							
	Phase	:S				1	2		3		4	5		6	7	8		
	SPT					13	87		0		14	0		50		36		
	Pref 1																	
	Pref2																	
	Splt E	xt																
	Veh P	/eh Perm								Di	sp							
	Ring [Disp										(Ring	2-4))				
						Spl	it Prefe	erer	าce P	hase	:S							
	Phase	:S				9	10		11		12	13		14	15	16		
	SPT																	
	Pref 1																	
	Pref2																	
													•					
			nd Ptr	n							Xa	rt Ptrn						
hase	1	2	3	4	5	6	7		8	9	1	LO	11	12	13	14	15	16
Coord		Χ				Х												
Recal																		
Recal																		
K Recal																		
TIMC																		
OUT								(1	L-8)									

Split Pattern

		TII	ME:													
Split F	atte	rn N	lum	ber				Cy	/cle	Len	gth					
Phase		1	2	2	(1)	3	4	1	Ξ,	5	(5		7	8	3
Split																
Phase		9	1	0	1	1	1	2	1	3	1	4	1	.5	1	6
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

		TII	ME:													
Split P	atte	rn N	lum	ber					Cycl	le Ti	me					
Phase		1	. 4	2	11,	3	4	4	I,	5	(5		7	8	3
Split																
Phase	•	9	1	0	1	1	1	2	1	.3	1	4	1	.5	1	6
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

		TII	ME:													
Split F	atte	rn N	lum	ber					Сус	le Ti	me					
Phase		1	2	2	11,	3	4	4	-,	5	(5		7	8	3
Split																
Phase		9	1	.0	1	1	1	2	1	.3	1	4	1	5	1	6
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

Day Plan

Day Plan #	Event #	Action Plan #	Start Time
	1	1	
	2	2	
	3	3	
	4	4	
	5		
	6		
	7		
	8		
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	10		
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	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19		
	20		

<u>Schedule</u>

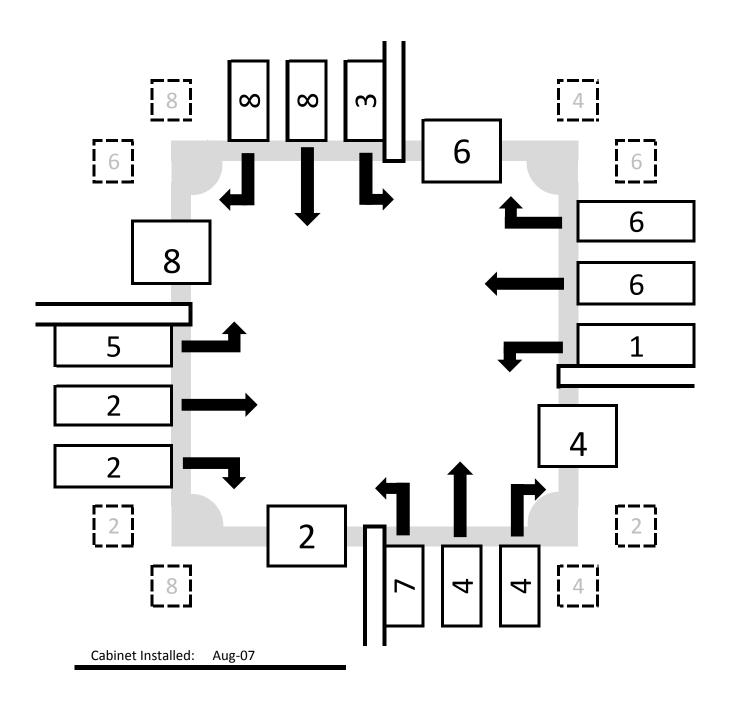
Sche Num			1												
Day Num			1												
[]		Ja	in	Fe	eb		M	ar		Α	pr	May	$^{-}$		Jun
! _)	()	K)	Κ)	X	Х			х
Month		Jı	ul	Αı	ug		Se	ер		0	ct	Nov	/		Dec
μ)	`	,	K		,	K		2	X	Х			Х
Day (Of		Sun	Moi	า	-	Tues	We	d	T	hurs	Fri			Sat
Wee (DOV				x			x	х			x	x			
	1	-	2	3	4		5	6	-	7	8	9	1	0	11
اج	Х		Х	Х	х		Х	Х	,	K	Х	Х	>	(х
ont	12	2	13	14	15		16	17	1	8	19	20	2	1	22
Day Of Month (DOM)	Х	(Х	Х	Х		Х	Х)	K	Х	Х	>	(Х
Day Of (DOM)	23	3	24	25	26	6	27	28	2	9	30	31			
			Х	Х	X		Х	Х	;	ζ	Х	Х			





Intersection: Main Street East and Thompson Road South

Controller #: ASC/3 **Date**: 12/4/2018



Timing Plan 1																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	5	15	5	10	5	15	5	10								
Delayed Green																
Walk		7		7		7		7								
Walk 2																
Walk Max																
Pedestrian Clearance		18		18		18		18								
Pedestrian Clearance 2																
Pedestrian Clearance Max																
Vehicle Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0								
Vehicle Extension 2																
Max 1	14	30	10	25	14	30	10	25								
Max 2																
Max 3																
Dynamic Max																
Dynamic Max Step																
Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0								
Red Clearance	1.0	3.0	1.0	3.0	1.0	3.0	1.0	3.0								

Coordinator Oprions

Coord Options											
Manual Pattern	auto	ECPI Coord	yes								
System Source	sys	System Format	std								
Splits In	%	Offset IN	%								
Transition	smooth	Max Select									
Dwell/Add Time	0	Enable Man Sync	no								
DLY Coord WK-LZ	no	No Force Off	float								
Offset Ref	lead	Lead Cal Use Ped Tm	yes								
Ped Recall	no	Ped Reserve	no								
Local Zero Ovrd	no	FO Add INI Green	no								
Re-Sync Count	3	Multisync	no								

eriod 6:00-	9:30	A۱
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	Coord	linator	Patter		1																	
	Use S _l	plit Pat	tern 1				1															
	TS2 Pa	attern/	'Offset																			
	Cycle						100s				STD(COS)						111	L				
	Offset	: Val					0															
	Actua	ted Co	ord				yes				Tim	ing P	; Plan				1					
	Act W	alk Re	sto		yes					uenc					1							
	Phase	Resrv	ce 0		no				Act	ion P	lan				1							
						Spl	t Preference Phases															
	Phase	S				1	2		(1)	}	4		5		6	7	8					
	SPT					15	32		1	1	42	2	11	3	36	11	42					
	Pref 1																					
	Pref2																					
	Splt Ext																					
	Veh P	erm									Dis)										
	Ring D	Disp						(Ring 2-4)														
						Spl	t Preference Phases															
	Phase	S				9	10	10 11 12 13 14 15						15	16							
	SPT																					
	Pref 1																					
	Pref2																					
						•			1		2		•			•						
			Spli	t Dema	nd Ptr	n								Xart	Ptrn							
hase	1	2	3	4	5	6	7		8	ç	9	10	13	1	12	13	14	15		16		
oord				Х)		Х													
Recal																						
Recal																						
(Recal																						
MIT																						
OUT											(1-	8)										

	Coord	linator		3															
	Use S	plit Pat	tern 1				3												
	TS2 Pa	attern/	'Offset																
	Cycle						110s			S٦	ΓD(C	OS)							
	Offset	t Val					0												
		ted Co					yes			Ti	min	g Plan				1			
		alk Re			yes					nce				1					
	Phase	Resrv	ce 0		no			A	ctior	n Plan				3					
						Spl	it Prefe	t Preference Phases											
	Phase	:S		1	2		3		4	5		6	7	8					
	SPT					20	33		10		37	20		33	13	34			
	Pref 1																		
	Pref2																		
	Splt E	xt																	
	Veh Perm						Disp												
	Ring [Disp										(Ring	2-4)						
				es															
	Phase	S.				9	10	11		12	13	13 14		15	16				
	SPT																		
	Pref 1																		
	Pref2																		
								1 2											
			Spli	t Dema	nd Ptr	n				Xa					art Ptrn				
Phase	1	2	3	4	5	6	7	7 8		9	1	.0 :	11	12	13	14	15	16	õ
Coord				Х				X											
VE Recal																			
PD Recal																			
MX Recal																			
OMIT																			
SF OUT								(2	1-8)										

Split Pattern

		<u>TI</u>	ME:					93	0 ar	n - 3	330p	<u>m</u>				
Spli	Patt	ern l	lum	ber	2	2		Cy	/cle	Len	gth			90s		
Phase		1	:	2	17	3	4	4	ļ	5	(5		7	8	3
Split		15	3	6	1	1	3	8	1	.5	3	6	1	1	3	8
Phase		9	1	.0	1	1	1	2	1	.3	1	4	1	5	1	6
Split Value																
Phase	1	. 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord				Х				Х								
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

		TII	ME:					<u>8</u>	00p	m-6	30a	<u>m</u>				
Split	Patte	ern N	lum	ber	4	1			Cycl	le Ti	me			Х		
Phase		1	2	2	ν.,	3	4	1	Ι,	5	(ŝ		7	8	3
Split		15	3	6	1	1	3	8	1	5	3	6	1	1	3	8
Phase		9	1	0	1	1	1	2	1	3	1	4	1	.5	1	6
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord				х				х								
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

		TII	ME:													
Split I	atte	rn N	lum	ber	2	K			Cycl	le Ti	me			Х		
Phase		1	2	2	(1.)	3	4	4	!,	5	(ô		7	8	3
Split																
Phase		9	1	.0	1	1	1	2	1	.3	1	4	1	5	1	6
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

Day Plan

Day Plan #	Event #	Action Plan #	Start Time
	1	1	600am
	2	2	930am
	3	3	330pm
	4	4	800pm
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19	_	
	20		

<u>Schedule</u>

Sche			1												
Day	Plai	n	1	1											
		Ja	an	Fe	eb		M	ar		Α	pr	May	_	_	Jun
! _)	Κ)	X)	Κ)	<	Х			Х
Month		Jı	ul	Αι	ug		Se	ер		0	ct	Nov	,		Dec
ĺΣ)	Κ)	X)	Κ)	<	Х			Х
Day 0	Of		Sun	Moi	n	-	Tues	Wed	b	Т	hurs	Fri			Sat
Wee (DOV				х			x	х			х	x			
	1	-	2	3	4	1	5	6	7	7	8	9	10)	11
اج	×	7.	Х	Х	>	(Х	Х	>	\	Х	Х	Х		х
Day Of Month (DOM)	1	2	13	14	1	5	16	17	1	8	19	20	21		22
j≅ _	Х	ζ	Х	Х	>	(Х	Х	>	(Х	Х	Х		Х
Day Of (DOM)	2	3	24	25	2	6	27	28	2	9	30	31			
	×		Х	Х	_>	<u> </u>	Х	Х	_>		Х	Х			

Appendix C

Base Year Traffic Operations

Lanes, Volumes, Timings 1: Ontario St S/Ontario St N & Main St E

Lane Group EBL EBT EBR WBL WBT Train Group (vph) 172 505 88 148 254 148 254 148 254 148 254 148 254 148 254 148 254 148 254 149 149 149 149 149 149 149 149 149 14	WBT W 254 254 254 1900 1190 11 3.6 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99	WBR NBL 94 83 94 83 1900 1900 0 700 0 75 0.95 1.00 0 1655 0 0.95 0 1655 0 1655 0 1655 0 1655 0 178 8 3 8 3 94 83	0.95 655 655 655 1900 3.6 50 338.1 24.3 1.00 5% 655 655 655 655 655 655 655 655 655	NBR 254 254 254 1900 0.98 0.850 1522 Yes 254 254 254 254 254		ABT SBR 488 80 488 80 1900 1900 1900 1900 1900 1900 1900
172 505 88 148 254 140 254 140 172 505 88 148 254 140 254 140 175 505 88 148 254 140 254 140 175 505 88 148 254 140 175 505 88 148 254 140 175 505 88 148 254 140 172 505 88 148 348 140 172 505 88 148 348 140 172 505 88 148 348 140 172 505 88 148 348 140 172 505 88 148 348 140 172 505 88 148 348 140 170 170 170 170 170 170 170 170 170 17	284 284 284 284 1900 1900 1900 1900 1900 1100 1100 110	6 6	655 655 655 655 1900 3.6 0.95 3.438 3.438 50 24.3 1.00 5% 655 655			
172 505 88 148 254 172 505 88 148 254 1900 1900 1900 1900 3.3 3.6 3.5 3.3 3.6 100 0.99 0.99 0.99 0.950 0.950 0.99 0.950 0.950 0.99 0.950 0.950 0.950 0.950 0.950 0.950 0.425 3331 1728 3539 1531 1622 3331 1728 3539 1535 443 3331 172 505 88 148 254 172 505 88 148 254 172 505 88 148 348 174 505 88 148 348 175 505 88 148 348 177 505 88 148 348 178 178 178 178 178 178 178 178 100 100 100 100 100 100 0.00 0.00 0.00 100 0.00 0.	254 264 1900 1900 10.95 0.99 0.99 0.99 13331 3331 100 100 100 2%	6,00	655 655 1900 3.6 3.6 0.95 0.95 338.1 24.3 1.00 5% 655 655			
172 505 88 148 254 1900 1900 1900 1900 1900 1900 1900 1900	254 1900 11 3.6 0.95 0.95 0.95 0.95 3331 3331 14.8 9.7 1.00 1	4 0 0 0	655 1900 3.6 3.6 50 338.1 24.3 1.00 5% 655			
1900 1900 1900 1900 1900 1900 1900 1900	1900 11 3.6 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.	6,0	1900 3.6 50 50 338.1 24.3 1.00 5% 655			
3.3 3.6 3.5 3.3 3.6 3.6 400 0.09 0.09 0.09 0.09 0.09 0.09 0.09	3.6 0.95 0.99 0.95 0.95 3331 3331 50 1.00 1.00 2.% 2.8	2 6 0 6 0	3.6 0.95 3438 3438 50 50 24.3 1.00 5% 655 655			
7.5	0.95 0.99 0.99 0.99 3331 3331 50 134.8 9.7 1.00 2.% 2.8	0 0	0.95 3438 3438 50 338.1 24.3 1.00 5% 655			
7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	0.95 0.99 0.99 3331 3331 100 2% 2.84 2.84 2.84	0 0	0.95 3438 3438 50 338.1 24.3 1.00 5% 655			
7.3	0.95 0.99 0.959 3331 50 50 1.00 2% 2.54	0 0	0.95 3438 3438 50 338.1 24.3 1.00 5% 655			
1,00 0.39 0.99 0.99 0.99 0.99 0.99 0.99 0.	0.959 0.959 0.959 3331 63 63 50 1.00 2% 2.84	0 0	3438 3438 3438 50 338.1 24.3 1.00 5% 655			
0.950 0.950	0.959 0.959 3331 63 63 50 134.8 9.7 1.00 2% 28	0 0	3438 3438 50 338.1 24.3 1.00 5% 655			
0.950 0.950	0.555 3331 63 60 134.8 9.7 1.00 2% 264	0 - 0	3438 3438 50 338.1 24.3 1.00 5% 655			
0.950 0.425 0.425 769 3539 1535 443 3331 769 3539 1535 443 3331 769 3539 1535 443 3331 768 63 769 263 145 63 100 1.00 1.00 1.00 1.00 170 1.00 1.00 1.00 1.00 172 505 88 148 348 8 148 348 8 100 1.00 1.00 1.00 101 1.04 1.00 1.00 102 1.00 0.00 0.00 103 1.00 0.00 0.00 104 1.00 1.01 1.04 1.00 105 1.00 0.00 0.00 106 1.00 0.00 0.00 107 1.00 0.00 0.00 108 148 148 148 148 148 148 148 148 148 14	3331 63 63 50 1348 9.7 1.00 2% 284	0 - 0	3438 3438 50 338.1 24.3 1.00 5% 655			
769 3539 1581 1662 3331 769 3539 1585 443 3331 769 3539 1585 443 3331 769 3539 1535 443 3331 769 3539 1535 443 3331 769 47.9 50 50 80 1.00 1.00 1.00 1.00 1.00 1.00 1.00	3331 63 50 134.8 9.7 2.8 254	69.	3438 3438 50 338.1 24.3 1.00 5% 655			
0.425 769 3539 1535 0433 3331 769 3539 1535 443 3331 769 3539 1535 443 3331 769 3539 1535 443 3331 769 3539 1535 443 3331 769 3539 1535 443 3331 769 3539 1535 443 3331 760 100 100 100 100 760 100 100 760 100 760 10	3331 63 50 134.8 9.7 1.00 2% 254	0	3438 50 338.1 24.3 1.00 5% 655			
769 3539 1535 443 3331 769 3539 1535 443 3331 769 3539 1535 63 767 172 505 88 148 254 77 505 88 148 254 77 505 88 148 254 77 505 88 148 348 70 100 100 100 100 70 100 100 100 70 100 100 100 100 70 100 100 100 100 70 100 100 100 100 70 100 100 100 100 70 100 100 100 100 70 100 100 100 100 70 100 100 100 100 70 100 100 100 100 70 100 100 100 100 70 100 100 100 100 70 100 100 100 100 70	3331 63 50 134.8 9.7 1.00 2% 254	_	3438 50 338.1 24.3 1.00 5% 655	1522 Yes Yes 254 254 1.00 3% 254		
788 63 789 789 63 789 789 789 789 789 789 789 789 789 789	63 134.8 9.7 1.00 2.8 2.8		50 338.1 24.3 1.00 5% 655	Yes 254 254 254 3% 254		50 56.3 18.5 11.00
50 145 63 63 63 64 64 64 64 64 64 64 64 64 64 64 64 64	63 50 134.8 9.7 1.00 2% 254		50 338.1 24.3 1.00 5% 655	254 6 1.00 3% 254		50 56.3 18.5 11.00
147.9 144.8 144.	50 134.8 9.7 1.00 2% 254		50 338.1 24.3 1.00 5% 655	6 1.00 3% 254		50 56.3 18.5 11.00
147.9 134.8 134.8 10.0 10.0 1.00 1.00 1.00 1.00 1.00 1.	134.8 9.7 1.00 2% 254		338.1 24.3 1.00 5% 655	6 1.00 3% 254		56.3 18.5 1.00 7%
10.6	9.7 1.00 1 2% 254	_	24.3 1.00 5% 655	6 1.00 3% 254		1.00
1.00	1.00 1 2% 254		1.00 5% 655	6 1.00 3% 254		1.00
1,00 1,00 1,00 1,00 1,00 1,00 1,00 1,00	1.00 1 2% 254		1.00 5% 655	1.00 3% 254	7%	1.00
1% 2% 1% 5% 2% 1% 5% 2% 1/4 505 88 148 254 1/4 505 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4	254		5% 655	3%	%/	%/
%, %, %, %, %, %, %, %, %, %, %, %, %, %	254		655	254		***
%) No N			-		135	488
b) 172 505 88 148 348 cdion No						
Action No		0 83	929	254	135	488
1.04 1.00 1.04 1.00 1.04 1.00 1.00 1.00	2	No No	8	2	2	S
3.3 9.0 4.8 4.8 1.04 1.00 1.01 1.04 25 15 25 15 25 10 25 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Left	Right Left	Left	Right	Left	Left Right
1.04 1.00 1.01 1.04 25 25 25 20 1.00 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			3.3			3.3
1.04 1.00 1.01 1.04 25 15 25 16 25 17 11 1.04 20 10.0 2.0 2.0 0 0.0 0.0 0.0 0.0 0 0.0 0.0 0.0 0.0 0 0.0 0.	0:0		0.0			0.0
1.04 1.00 1.01 1.04 25 25 15 25 15 25 15 25 25 20 20 20 20 20 20 20 20 20 20 20 20 20	4.8		4.8			4.8
1.04 1.00 1.01 1.04 25 15 25 1 25 1 25 1 25 1 26 1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0						
25 15 25 Left Thru Right Left 7 20 100 2.0 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cl+Ex C	1.00	-	1.00	1.01		1.00
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		15 25		15	25	
Left Thru Right Left 2.0 2.0 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		~	2	_	-	2
20 10.0 2.0 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		Left	Thru	Right		Thru Right
00 00 00 00 00 00 00 00 20 06 20 20 CI-EX CI-EX CI-EX CI-EX CI-		2.0	10.0	2.0		
) 00 00 00 00 00 00 00 00 00 00 00 00 00		0.0	0.0	0.0	0.0	0.0
20 06 20 20 CI+EX CI+EX CI+EX CI+EX CI-		0.0	0.0	0.0	0.0	0.0
CI+EX CI+EX CI+EX CI+EX O 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		2.0	9.0			
00 00 00 00		Š	Š Š	C E E	C-FE	CI+Ex CI+Ex
00 00			0	0	0	
		0.0	0.0	0.0	0.0	0.0
0.0 0.0 0.0 0.0		0.0	0.0	0.0	0.0	0.0
0.0 0.0 0.0 0.0		0.0	0.0	0.0	0.0	0.0
(m) 9.4	9.4		9.4			9.4
n) 0.6	9.0		9.0			9.0
Detector 2 Type CI+Ex CI+Ex	Ċ+EX		Ċ Ę		ਠ	CI+EX

Synchro 10 Report Page 1 Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 1: Ontario St S/Ontario St N & Main St E

200624 Base Year AM Peak Hour

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Lane Group	EB	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	Α	Perm	bm+pt	₹		pm+pt	₹	Perm	pm+pt	Α	Perm
Protected Phases	က	∞		7	4		ည	2		_	9	
Permitted Phases	∞		∞	4			2		2	9		9
Detector Phase	က	∞	∞	7	4		2	2	2	_	9	9
Switch Phase												
Minimum Initial (s)	2.0	15.0	15.0	8.9	15.0		2.0	15.0	15.0	2.0	15.0	15.0
Minimum Split (s)	9.5	32.0	32.0	10.8	32.0		9.5	32.0	32.0	9.2	32.0	32.0
Total Split (s)	10.8	33.3	33.3	10.8	33.3		10.8	35.1	35.1	10.8	35.1	35.1
Total Split (%)	12.0%	37.0%	37.0%	12.0%	37.0%		12.0%	39.0%	39.0%	12.0%	39.0%	39.0%
Maximum Green (s)	9.9	26.3	26.3	8.9	26.3		9.9	28.1	28.1	6.8	28.1	28.1
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	3.0	1.0	3.0		1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	0.0	-3.0	-3.0	0.0	-3.0		0.0	-3.0	-3.0	0.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehide Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			18.0	18.0		18.0	18.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	27.5	20.7	20.7	27.5	20.7		45.1	38.3	38.3	48.7	41.6	41.6
Actuated g/C Ratio	0.31	0.23	0.23	0.31	0.23		0.50	0.43	0.43	0.54	0.46	0.46
v/c Ratio	0.56	0.62	0.19	0.65	0.43		0.18	0.45	0.32	0.37	0.31	0.10
Control Delay	28.9	34.4	1.9	35.4	25.2		11.2	20.6	4.0	13.1	17.4	9.0
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	28.9	84. 4.	0. 0.	35.4	25.2		11.2	20.6	4.0	13.1	17.4	9.0
SOT	O	ပ	V	٥	ပ		മ	ပ	∢	Ф	В	⋖
Approach Delay		29.5			28.3			15.5			14.7	
Approach LOS		O			ပ			Ω			ш	
Intersection Summary												
Area Type:	Other											
Oycie Length: 90												
Offset: 33.3 (37%). Referenced to phase 2:NBTL and 6:SBTL. Start of Green	nced to phas	e 2:NBT	L and 6:5	BTL. Star	t of Greer	_						
Natural Cycle: 85	-											
Control Type: Actuated-Coordinated	ordinated											
Maximum v/c Ratio: 0.65												
Intersection Signal Delay: 21.1	21.1			= =	Intersection LOS: C	LOS: C	c					
WINDER OF THE PROPERTY OF THE												

Splits and Phases: 1: Ontario St S/Ontario St N & Main St E

88 → Ø6 (R)

Paradigm Transportation Solutions Limited

Queues 1: Ontario St S/Ontario St N & Main St E

	1	†	<i>></i>	-	ţ	•	←	•	۶	→	•	
Lane Group	EBE	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	172	505	88	148	348	88	655	254	135	488	80	
v/c Ratio	0.56	0.62	0.19	0.65	0.43	0.18	0.45	0.32	0.37	0.31	0.10	
Control Delay	28.9	34.4	1.9	35.4	25.2	11.2	20.6	4.0	13.1	17.4	9.0	
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	28.9	34.4	1.9	35.4	25.2	11.2	20.6	4.0	13.1	17.4	9.0	
Queue Length 50th (m)	22.5	43.9	0.0	19.1	23.2	6.4	42.7	0.0	10.8	29.1	0.0	
Queue Length 95th (m)	35.5	9.99	5.9	#31.5	34.0	14.8	9.79	15.9	22.4	47.3	1.3	
Internal Link Dist (m)		123.9			110.8		314.1			232.3		
Turn Bay Length (m)	40.0			35.0		70.0		65.0	40.0			
Base Capacity (vph)	307	1152	265	227	1126	471	1464	78	373	1558	797	
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	0.56	0.44	0.15	0.65	0.31	0.18	0.45	0.32	0.36	0.31	0.10	
C												

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

HCM 2010 Signalized Intersection Summary 1: Ontario St S/Ontario St N & Main St E

200624 Base Year AM Peak Hour

200624 Base Year AM Peak Hour

	1	Ť	<u> </u>	/	Ļ	1	•	—	•	٠	→	*
Movement	EB	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	"	ŧ	¥C.	<u>,-</u>	₹		<u>,-</u>	+	¥C	<u>, -</u>	‡	¥.
Traffic Volume (veh/h)	172	202	88	148	254	94	83	655	254	135	488	80
Future Volume (veh/h)	172	202	88	148	254	94	83	655	254	135	488	8
Number	m c	∞ <	∞ <	~ c	4 <	4 0	ഗ	~ <	2 0	- -	ဖ င	9 0
Ped-Bike Adi(A pbT)	0.99	>	1.00	0.99		0.98	1.00	>	1.00	1.00	>	1.00
Parking Bus, Adj	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 Sat Flow, veh/h/ln	1881	1863	1881	1810	1838	1900	1810	1810	1845	1776	1776	1881
Adj Flow Rate, veh/h	172	202	0	148	254	94	83	655	254	135	488	0
Adj No. of Lanes	_	2	-	_	7	0	-	2	_	_	2	_
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
Percent Heavy Veh, %	_	2	-	2	7	7	2	2	က	7	7	_
Cap, veh/h	338	857	387	281	909	218	454	1508	685	321	1538	729
Arrive On Green	0.08	0.24	0.00	0.08	0.24	0.21	0.05	0.44	0.44	0.07	0.46	0.00
Sat Flow, veh/h	1792	3539	1599	1723	2502	833	1723	3438	1562	1691	3374	1599
Grp Volume(v), veh/h	172	202	0	148	175	173	83	655	254	135	488	0
Grp Sat Flow(s), veh/h/ln	1792	1770	1599	1723	1746	1655	1723	1719	1562	1691	1687	1599
Q Serve(g_s), s	8.9	11.4	0.0	6.1	9.7	7.	2.5	11.9	8.6	4.1	8.3	0.0
Cycle Q Clear(g_c), s	8.9	11.4	0.0	6.1	9.7	6.	2.5	11.9	8.6	4.1	8.3	0.0
Prop In Lane	1.00		1.00	1.00		0.54	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	338	857	387	281	423	401	454	1508	685	321	1538	729
V/C Ratio(X)	0.51	0.59	0.00	0.53	0.41	0.43	0.18	0.43	0.37	0.39	0.32	0.00
Avail Cap(c_a), veh/h	338	1152	521	784	269	239	200	1508	685	367	1538	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.1	1.00	0.00	0.99	0.99	0.99	1.00	1:00	1.00	1.00	0.1	0.0
Uniform Delay (d), s/veh	26.0	30.1	0.0	26.1	28.7	29.6	14.4	17.5	16.9	14.7	15.6	0.0
Incr Delay (d2), s/veh	0.5	0.2	0.0	0.9	0.2	0.3	0.1	0.9	7.5	0.3	0.5	0:0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	2.6	0.0	2.9	3.7	3.7	1.2	2.8	4.5	6.	4.0	0.0
LnGrp Delay(d),s/veh	26.5	30.4	0.0	27.0	29.0	29.9	14.5	18.4	18.5	15.0	16.1	0.0
LnGrp LOS	ပ	ပ		ပ	ပ	ပ	m	m	m	<u>ш</u>	۵	
Approach Vol, veh/h		229			496			992			623	
Approach Delay, s/veh		29.4			28.7			18.1			15.9	
Approach LOS		ပ			O			മ			Ф	
Timer	_	2	3	4	5	9	7	8				
Assigned Phs	_	2	က	4	2	9	7	00				
Phs Duration (G+Y+Rc), s	6.6	43.5	10.8	25.8	8.4	45.0	10.8	25.8				
Change Period (Y+Rc), s	4.0	7.0	4.0	7.0	4.0	7.0	4.0	7.0				
Max Green Setting (Gmax), s	8.9	78.1	8.9	26.3	8.9	28.1	6.8	26.3				
Max Q Clear Time (g_c+I1), s	6.1	13.9	8.8	10.1	4.5	10.3	8.1	13.4				
Green Ext Time (p_c), s	0.0	4.0	0.0	1.5	0.0	2.5	0.0	2.3				
Intersection Summary												
HCM 2010 Ctrl Delay			22.2									
HCM 2010 LOS			ပ									

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Paradigm Transportation Solutions Limited

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Lanes, Volumes, Timings 2: Mall Entrance & Main St E

4	NBR	R.	15	15	3.5	0.0	-		1.00	0.850		1597	100	/sci	45 45	2			1.00	%0	15	ŕ	CL	2	Right				20	1.01	· -	Right	2.0	0.0	0.0	2.0	CI+Ex		0.0	0.0	0:0					Perm
•	NBL	<u>"</u>	. 61	1000	33	0.0	-	7.5	1.00		0:950	1711	0.950			C	144.7	10.4	1.00	2%	19	Ş	<u> </u>			o	0.0	8.	70	<u> </u>	} ~	Left		0.0	0.0		O ÷E		0.0	0.0	2.					Prot
ţ	WBT	#	478	4/8	36	2			0.95			3343	07.00	3343		C	273.6	19.7	1.00	%8	478	1	4/8	2	Lett	c	0.0	8.	9	3.6	2	Thr	10.0	0.0	0.0	9.0	Ċ Ę		0:0	0.0	5.0	4. 0	CHE CHE	i	0.0	ž
-	WBL	je-	78	2000	333	70.07	-	7.5	1.00		0.950	1745	0.208	492					1.00	%0	26	8	8 :	2	Let				3	= ∓	- 1	Left	2.0	0.0	0.0	2.0	Ċ È		0.0	0.0	5					Perm
<i>></i>	EBR		ヌ :	\$ 5	36	0.0	0		0.95			0	c	O 8	ß				1.00	%0	æ	c	· :	2	Kight				8	3. 4	2															
†	EBT	₩.	992	1900	36	2			0.95	0.995		3491	7070	_ の す	Œ	9 6	134.8	9.7	1.00	3%	392	0007	0701	2	Lett	 	0.0	8.	9	3.	2	Thr	10.0	0.0	0.0	9.0	CH-EX		0.0	0.0	0.0	4.0	Ci+EX	i	0.0	₹
	Lane Group	Lane Configurations	Traffic Volume (vph)	Future Volume (vph)	l ane Width (m)	Storage Length (m)	Storage Lanes	Taper Length (m)	Lane Util. Factor	Fr	Fit Protected	Satd. Flow (prot)	Fit Permitted	Satd. Flow (perm)	Satd Flow (PTOP)	Link Speed (k/h)	Link Distance (m)	Travel Time (s)	Peak Hour Factor	Heavy Vehicles (%)	Adj. Flow (vph)	Shared Lane Traffic (%)	Lane Group Flow (vpn)	Enter Blocked Intersection	Lane Alignment	Median Width(m)	Link Orrset(m)	Crosswalk Width(m)	I wo way Left I urn Lane	Turning Speed (k/h)	Number of Detectors	Detector Template	Leading Detector (m)	Trailing Detector (m)	Detector 1 Position(m)	Detector 1 Size(m)	Detector 1 Type	Detector 1 Channel	Detector 1 Extend (s)	Detector 1 Queue (s)	Detector 1 Detail (s)	Detector 2 Size(m)	Detector 2 Type	Detector 2 Channel	Detector 2 Extend (s)	Turn Type

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Lanes, Volumes, Timings 2: Mall Entrance & Main St E

200624 Base Year AM Peak Hour

200624 Base Year AM Peak Hour

																																							A	
4	NBR		œ	∞		10.0	35.0	35.0	38.9%	28.0	4.0	3.0	-3.0	4.0			3.0	None	20.0	7.0	0	13.0	0.18	0.05	13.4	0.0	13.4	ш										LOS: A	ICU Level of Service A	
•	NBL	∞		∞		10.0	35.0			28.0	4.0	3.0	-3.0	4.0			3.0	None	20.0	0.7	0	13.0	0.18	90.0	25.5	0.0	25.5	O	20.2	O								Intersection LOS: A	U Level o	
ļ	WBT	9		9		30.0	37.0	22.0	61.1%	48.0	4.0	3.0	-3.0	4.0			3.0	None				63.4	0.89	0.16	2.0	0.0	2.0	4	2.1	∢								Ξ	೦	
-	WBL		9	9		30.0	37.0	22.0	61.1%	48.0	4.0	3.0	-3.0	4.0			3.0	None				63.4	0.89	90.0	2.9	0.0	5.9	4												
<u> </u>	EBR																																							
†	EBT	2		2		30.0	37.0	22.0	61.1%	48.0	4.0	3.0	-3.0	4.0			3.0	Max	15.0	7.0	0	63.4	0.89	0.33	2.5	0.0	2.5	A	2.5	A		Other		1.5		Incoord		2.8	ization 43.5%	
	Lane Group	Protected Phases	Permitted Phases	Detector Phase	Switch Phase	Minimum Initial (s)	Minimum Split (s)	Total Split (s)	Total Split (%)	Maximum Green (s)	Yellow Time (s)	All-Red Time (s)	Lost Time Adjust (s)	Total Lost Time (s)	Lead/Lag	Lead-Lag Optimize?	Vehicle Extension (s)	Recall Mode	Walk Time (s)	Flash Dont Walk (s)	Pedestrian Calls (#/hr)	Act Effct Green (s)	Actuated g/C Ratio	v/c Ratio	Control Delay	Queue Delay	Total Delay	SOT	Approach Delay	Approach LOS	Intersection Summary	Area Type:	Cycle Length: 90	Actuated Cycle Length: 71.5	Natural Cycle: 75	Control Type: Semi Act-Uncoord	Maximum v/c Ratio: 0.33	Intersection Signal Delay: 2.8	Intersection Capacity Utilization 43.5%	Analysis Period (min) 15

Splits and Phases: 2: Mall Entrance & Main St E



Paradigm Transportation Solutions Limited

Queues 2: Mall Entrance & Main St E

Queues 2: Mall Entrance & Main St E	Main St	ш				200624 Base Year AM Peak Hour
	†	>	ļ	•	•	
Lane Group	EBT	WBL	WBT	NBL	NBR	
Lane Group Flow (vph)	1026	26	478	19	15	
v/c Ratio	0.33	90.0	0.16	90:0	0.05	
Control Delay	2.5	5.9	2.0	25.5	13.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	2.5	5.9	2.0	25.5	13.4	
Queue Length 50th (m)	0.0	0.0	0.0	2.2	0.0	
Queue Length 95th (m)	34.3	3.0	14.4	7.7	4.7	
Internal Link Dist (m)	110.8		249.6	120.7		
Turn Bay Length (m)		70.0				
Base Capacity (vph)	3094	436	2962	742	701	
Starvation Cap Reductn	243	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.36	90.0	0.16	0.03	0.02	
Intercontion Cummany						

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Paradigm Transportation Solutions Limited

HCM 2010 Signalized Intersection Summary 2: Mall Entrance & Main St E

200624 Base Year AM Peak Hour

																																	000	0 00	11.7	7.0	28.0	0.1		
•	NBR	¥	15	15	18	0	1.00	1.00	1900	15		1.00	186	0.12	1615	15	1615	9.0	9.0	1.00	186	0.08	751	00.1	1.00	0.2	0.0	0.3	26.5	υ U			6 7	9	55.0	2.0	48.0	9.4 4.7		
√	T NBL				6 3				9	.8		0 1.00	7 00 25			.8 19	Γ	9.0 9.				9 0.09			1.00						34		5							
<i>≯</i>	WBL WB1		26 478				1.00		1900 1759	4		<u>:</u>	0 0 0 182 2557			26 47	_			1.00		0.05 0.1	482 2557	0.1 00.1		0.0			3.9 2.		504	.7	m							L
7	T EBR		2 34		2 12		1.00		3 1900						3 119			3 6.4		90.0		0.37			00.1					A S		+ <	2	2	22.0	7.0	48.0	10.3		
Ť	t EBT	-ane Configurations ↑↑	raffic Volume (veh/h) 992		2		obT)		_	h/h		r Factor 1.00	avy ven, 70		veh/h 3553	veh/h	Jln 1		r(g_c), s		p(c), veh/h		Avail Cap(c_a), veh/h 1342	0	c/veh	ncr Delav (d2), s/veh 0.8	h e	/eh/ln	y(d),s/veh 3		Approach Vol, veh/h 1026			Phs	Phs Duration (G+Y+Rc), s	Change Period (Y+Rc), s	Max Green Setting (Gmax), s	Max Q Clear Time (g_c+l1), s Green Ext Time (p_c), s	ofereaction Summany	intel section suffillially
	Movement	Lane Conf	Traffic Vol	Future Vol	Number	Initial Q (Qb), veh	Ped-Bike /	Parking Bus, Adj	Adj Sat Flo	Adj Flow F	Adj No. of Lanes	Peak Hour Factor	Percent He	Arrive On Green	Sat Flow, veh/h	Grp Volum	Grp Sat Fl	Q Serve(g_s), s	Cycle Q C	Prop In Lane	Lane Grp	V/C Katio(X)	Avail Cap(HOM Plato	Upstream Filter(I)	Incr Delay	Initial Q De	%ile Back	LnGrp Del	LnGrp LOS	Approach	Approach LOS	Timer	Assigned Phs	Phs Durati	Change Po	Max Green	Max Q Cle Green Ext	Inforcactio	Ilici social

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Lanes, Volumes, Timings	3: Main St E & Wilson Dr

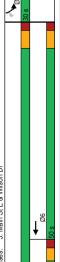
Lanes, Volumes, Timings 3: Main St E & Wilson Dr	mings on Dr						200624 Base Year AM Peak Hour
	4	†	ţ	4	۶	*	
Lane Group	BB	EBT	WBT	WBR	SBL	SBR	
Lane Configurations) {	‡	₹ 3	î	J	* - ;	
Future Volume (vph)	20 20	891	384	23 82	S 5	9/	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (m)	3.3	3.6	3.6	3.6	3.3	3.5	
Storage Length (m)	20.0			0.0	22.0	0.0	
Storage Lanes	-			0	~	-	
Taper Length (m)	7.5				7.5		
Lane Util. Factor	0.1	0.95	0.95	0.95	0.0	1:00	
Ped Bike Factor	1.00		1.00		0.99		
Fit Protected	0.950		0.980		0.950	0.850	
Satd. Flow (prot)	1646	3539	3379	0	1728	1551	
Flt Permitted	0.455				0.950		
Satd. Flow (perm)	786	3539	3379	0	1708	1551	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			24			9/	
Link Speed (k/h)		250 4	2000		174.4		
Travel Time (s)		18.7	36.0		12.4.4		
Confl Peds (#/hr)	ĸ	0.0	70.07	r.	0.00		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	%9	2%	2%	%0	1%	3%	
Adj. Flow (vph)	20	891	384	28	135	92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	20	891	442	0	135	9/	
Enter Blocked Intersection	2	2	2	2	2	8	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		ى. د. د	2.0		2.0		
Crosswalk Width/m)		0.0	0.0		0.0		
Two way I off Tirr I are		2	2		2		
Headway Factor	1.04	1.00	1.00	1:00	1.0	1.01	
Turning Speed (k/h)	22			15	22	15	
Number of Detectors	-	7	2		τ-	_	
Detector Template	Left	Thr	Thru		Left	Right	
Leading Detector (m)	2.0	10.0	10.0		2.0	2.0	
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0:0		0.0	0.0	
Detector 1 Size(m)	0.7	0.0	0.0		7.0	2.0	
Detector 1 Type	Č.	Ę Ċ	Ę Ċ		Ĕ Č	CI+EX	
Detector 1 Channel		c	c		c		
Defector Externo (s)	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)	5.	0.0	0.0		5.	0.0	
Detector 2 Size(m)		0.6	9.0				
Detector 2 Type		CI+Ex	CHEX CHEX				
Detector 2 Channel		i	i				
3							

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Lanes, Volumes, Timings 3: Main St E & Wilson Dr

200624 Base Year AM Peak Hour

up EBI EBI WBT WBR SBL 2 Extend (s) 0.0 0.0 0.0 0.0 3 Extend (s) 0.0 0.0 0.0 0.0 4 Phases 5 2 6 4 4 Phases 5 2 6 4 4 4 Insee 5 2 6 4		١	Ť	,	/	j.	*	
s)	Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
pm+pt NA NA Prot Perm 5 2 6 4 4 2 4 4 5 2 6 4 4 4 4 4 5 5 2 6 4 4 4 4 4 4 6 5 0 40.0 40.0 10.0 10.0 100 46.0 46.0 26.0 26.0 26.0 26.0 150 86.4 3.16% 316% 316% 316% 316% 316% 316% 316% 3	Detector 2 Extend (s)		0.0	0.0				
5 2 6 4 4 5 2 6 4 4 4 5 2 2 6 4 4 4 4 4 4 5 2 2 6 4 4 4 100 46.0 46.0 26.0 26.0 115.0 65.0 50.0 30.0 30.0 30.0 115.8% 684% 526% 316% 316% 316% 115.8% 684% 526% 316% 316% 316% 115.8% 684% 526% 316% 316% 316% 115.8% 684% 526% 316% 316% 316% 110 20 2.0 2.0 2.0 2.0 2.0 110 2.0 2.0 2.0 2.0 2.0 2.0 110 2.0 2.0 2.0 2.0 2.0 2.0 110 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Turn Type	pm+pt	Α	ΑN		Prot	Perm	
2 6 4 4 4 4 4 4 5 2 6 4 4 4 4 4 4 4 5 0 40.0 40.0 10.0 10.0 15.0 45.0 45.0 25.0 15.0 45.0 50.0 30.0 30.0 15.8% 68.4% 52.6% 316% 316% 10.0 59.0 44.0 24.0 24.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 3.0 30.0 30.0 30.0 2.0 4.0 4.0 4.0 4.0 4.0 2.0 30.0 30.0 7.0 7.0 7.0 2.0 5.0 30.0 30.0 7.0 7.0 7.0 2.0 5.0 30.0 30.0 7.0 7.0 7.0 2.0 5.0 30.0 30.0 7.0 7.0 7.0 2.0 4.1 4.9 7.3 35.5 9.1 2.0 4.4 4.9 7.3 35.5 9.1 2.0 4.4 4.9 7.3 25.0 0.0 0.0 2.0 4.4 4.9 7.3 25.0 2	Protected Phases	2	2	9		4		
5 2 6 4 4 4 5 0 40.0 40.0 100 100 10.0 46.0 46.0 26.0 26.0 15.8% 68.4% 52.6% 31.6% 31.6% 10.0 59.0 44.0 24.0 24.0 10.0 59.0 44.0 4.0 4.0 4.0 10.0 59.0 2.0 2.0 2.0 10.0 10.0 2.0 2.0 2.0 10.0 2.0 2.0 2.0 2.0 10.0 2.0 2.0 2.0 2.0 10.0 2.0 2.0 2.0 2.0 10.0 2.0 2.0 2.0 2.0 10.0 2.0 2.0 2.0 2.0 10.0 1.0 4.0 4.0 4.0 4.0 10.0 30.0 7.0 7.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Permitted Phases	2					4	
5.0 40.0 40.0 10.0 10.0 10.0 10.0 10.0 46.0 46.0 26.0 26.0 26.0 26.0 26.0 26.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 3	Detector Phase	2	2	9		4	4	
5.0 40.0 40.0 10.0 10.0 10.0 10.0 46.0 46.0 26.0 26.0 26.0 26.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 3	Switch Phase							
100 46.0 46.0 26.0 26.0 26.0 15.8% (84.8% 52.6% 31.6%	Minimum Initial (s)	2.0	40.0	40.0		10.0	10.0	
15.0 65.0 50.0 30.0 15.0 65.0 50.0 30.0 15.0 65.0 50.0 30.0 15.0 65.0 50.0 30.0 15.0 65.0 50.0 30.0 30.0 15.0 65.0 65.0 41.0 24.0 24.0 24.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	Minimum Split (s)	10.0	46.0	46.0		26.0	26.0	
15.8% 68.4% 52.6% 31.6%	Total Split (s)	15.0	65.0	20.0		30.0	30.0	
100 590 440 240 240 240 240 250 20 20 20 20 20 20 20 20 20 20 20 20 20	Total Split (%)	15.8%	68.4%	25.6%		31.6%	31.6%	
3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	Maximum Green (s)	10.0	29.0	44.0		24.0	24.0	
2.0 2.0 2.0 2.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	Yellow Time (s)	3.0	4.0	4.0		4.0	4.0	
10 -10 -20 -20 -20 -20 -20 -20 -20 -20 -20 -2	All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	
1	Lost Time Adjust (s)	-1.0	-2.0	-2.0		-2.0	-2.0	
Lead Lag S	Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0	
s) 3.0 4.0 4.0 4.0 4.0 long Max None None None None None None None None	Lead/Lag	Lead		Lag				
s) 3.0 4.0 4.0 4.0 4.0 4.0 hore None None None None None None None Non	Lead-Lag Optimize?							
None Max None None None None 10,000 1	Vehide Extension (s)	3.0	4.0	4.0		4.0	4.0	
30.0 30.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	Recall Mode	None	Max	None		None	None	
hr) 100 100 130 130 130 141 151 151 151 151 151 151 151 151 151	Walk Time (s)		30.0	30.0		7.0	7.0	
hr) 61.7 61.7 54.8 15.1 15.1 15.1 15.1 15.1 15.1 15.1 15	Flash Dont Walk (s)		10.0	10.0		13.0	13.0	
## 151 151	Pedestrian Calls (#/hr)		0	0		0	0	
073 073 0.65 0.18 0.18 0.18 0.00 0.00 0.00 0.00 0.00	Act Effct Green (s)	61.7	61.7	54.8		15.1	15.1	
0.08 0.35 0.20 0.44 0.22 4.1 4.9 7.3 35.5 9.1 0.0 0.0 0.0 0.0 4.1 4.9 7.3 35.5 9.1 A A A A D A D A C A A A A C C Other gth: 848 3. Willization 55.8% 1. CU Level of Service B 0.1 3. Main St E & Wilson Dr	Actuated g/C Ratio	0.73	0.73	0.65		0.18	0.18	
### 4.1 4.9 7.3 35.5 9.1 0.0 0.0 0.0 0.0 0.0 0.0 4.1 4.3 7.3 35.5 9.1 A A A D A D A A D A A D A A C C A A A A	v/c Ratio	0.08	0.35	0.20		0.44	0.22	
00 00 00 00 00 00 00 00 00 00 00 00 00	Control Delay	4.1	4.9	7.3		35.5	9.1	
# 4.1 4.9 7.3 35.5 9.1 A A A A D A D A D A D A D D A D D D D	Queue Delay	0.0	0.0	0.0		0.0	0:0	
any Other 4.9 7.3 26.0 A A A C A A C Cher gth: 848 Intersection LOS: A y Ullization 55.8% I CU Level of Service B 3. Main St E & Wilson Dr	Total Delay	4.1	4.9	7.3		35.5	9.1	
9ay Other Other A A A C C CL Ad-Uncoord Oth Williastion 55.8% 3. Main St E & Wilson Dr 1. A Ad-Uncoord Other O	SOT	A	A	∢		٥	Α	
# A A C # Other Other Other Other	Approach Delay		4.9	7.3		26.0		
gth: 84.8 4ct-Uncoord 10.44 Intersection LOS: A Pollay: 8.3 ICU Level of Service B 3: Main St E & Wilson Dr	Approach LOS		∢	⋖		O		
Other 9th: 84.8 Act-Uncoord : 0.44 Intersection LOS: A py Utilization 55.8% ICU Level of Service B 3: Main St E. & Wilson Dr	Intersection Summary							
gth: 84.8 Ad-Uncoord : 0.44 Delay: 8.3 Intersection LOS: A Interse		Other						
gth: 84.8 Ad-Uncoord 0.44 Intersection LOS: A 19 Vilization 55.8% ICU Level of Service B 3: Main St E & Wilson Dr	Cycle Length: 95							
Ad-Uncoord 0.44 Delay: 8.3 Intersection LOS: A y Ullization 55.8% ICU Level of Service B i) 15 3: Main St E & Wilson Dr	Actuated Cycle Length: 84.8	~						
Ad-Uncoord 0.44 Delay: 8.3 Delay: 8.3 Intersection LOS: A Delay: 8.3 ICU Level of Service B n) 15 3: Main St E & Wilson Dr	Natural Cycle: 85							
. 0.44 Delay: 8.3 Intersection LOS: A by Ullization 55.8% ICU Level of Service B in) 15 3: Main St E & Wilson Dr	Control Type: Semi Act-Unc	poord						
Delay: 8.3 Intersection LOS: A by Uliration 55.6% ICU Level of Service B i) 15 3: Main St E. & Wilson Dr	Maximum v/c Ratio: 0.44							
ty Utilization 55.8% ICU Level of Service B n) 15 3: Main St E & Wilson Dr	Intersection Signal Delay: 8.	cr.			Ħ	ersection	LOS: A	
n) 15 3: Main St E & Wilson Dr	Intersection Capacity Utilizar	tion 55.8%			೦	U Level o	of Service B	
3: Main St E & Wilson Dr	Analysis Period (min) 15							
3. Main Ster & Wilson Di		e L	1					
		11 OLE & VV	IISOII DI					-



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N	e Year AM F
	Base
	: Main St E & Wilson Dr
	E & Wi
sen	lain St
Sue	Σ

Queues 3: Main St E & Wilson Dr	n Dr					200624 Base Year AM Peak Hour
	1	†	Ļ	۶	*	
ane Group	EBF	EBT	WBT	SBL	SBR	
ane Group Flow (vph)	20	891	442	135	92	
//c Ratio	0.08	0.35	0.20	0.44	0.22	
Control Delay	4.1	4.9	7.3	35.5	9.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Fotal Delay	4.1	4.9	7.3	35.5	9.1	
Queue Length 50th (m)	1.9	23.3	15.5	20.5	0.0	
Queue Length 95th (m)	2.8	39.5	27.3	37.3	10.9	
nternal Link Dist (m)		236.1	336.6	150.4		
Turn Bay Length (m)	20.0			22.0		
Base Capacity (vph)	683	2575	2191	529	528	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.07	0.35	0.20	0.26	0.14	
Intersection Summary						

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Paradigm Transportation Solutions Limited

HCM 2010 Signalized Intersection Summary 3: Main St E & Wilson Dr

200624 Base Year AM Peak Hour

																																		2								
_	SBR	W.	76	92	14	0	1.00	00.	1845	9/	- 00	00:1	231	0.15	568	92	1568	3.5	3.5	1.00	231	0.33	504	1.00	00:	30.9	1.2	0.0	32.1	O				8 2 9	9	56.6	0.9	4.0	6.2 4.9			
メメ	WBR SBL S		58 135		16 7	0	1.00 1.00 1	1.00	1881			00.1		0.15	1792	223 135	1792	4.2 5.6	5.6	1.00	564		929		1.00	31.8	2.2	0.0	34.0	O A	211	33.3	O	4 5	2	8.4	6.0 5.0	10.0	7.6 2.7 1.1 0.1			
+	WBT WE	₩	384	384	9	0		1.00	1821	384	2 0	22	1962	0.65	3108	219	1730	4.1	4.1		1125	0.19	1125	1.00	1.00	5.7	0.1	0.0	0.7	e e			V	3								0
† •	EBL EBT		50 891	86	5 2		1.00		1792 1863		100	00.1				50 891		0.7 6.7									0.0 0.3			A	941	3.6	A	1 2	2	65.0	0.9	59.0	13.8			
	Movement	Lane Configurations	Traffic Volume (veh/h)	Future Volume (veh/h)	Number	Initial Q (Qb), veh	Ped-Bike Adj(A_pbT)	Parking Bus, Adj	Adj Sat Flow, veh/h/ln	Adj Flow Kate, veh/h	Adj No. of Lanes	Percent Heavy Veh. %	Cap, veh/h	Arrive On Green	Sat Flow, veh/h	Grp Volume(v), veh/h	Grp Sat Flow(s),veh/h/ln	Q Serve(g_s), s	Cycle Q Clear(g_c), s	Prop In Lane	Lane Grp Cap(c), veh/h	V/C Ratio(X)	Avail Cap(c_a), veh/h	HCM Platoon Ratio	Upstream Filter(I)	Uniform Delay (d), s/veh	Incr Delay (d2), s/veh	Mittal Q Delay(d3),s/ven	InGrn Delay(d) s/veh	LnGrp LOS	Approach Vol, veh/h	Approach Delay, s/veh	Approach LOS	Timer	Assigned Phs	Phs Duration (G+Y+Rc), s	Change Period (Y+Rc), s	Max Green Setting (Gmax), s	Max Q Clear Time (g_c+I1), s Green Ext Time (p_c), s	Intersection Summary	The section Sufficient	

Paradigm Transportation Solutions Limited

200624 Base Year AM Peak Hour Lanes, Volumes, Timings 4: Drew Centre/Private Driveway & Main St E

		L.	۰	•		,	-	-		k	+	r
ane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
-ane Configurations	_	₩	X	<u></u>	₩		K-	42			4	
raffic Volume (vph)	0	602	96	22	444	0	122	0	31	0	0	0
uture Volume (vph)	0	602	8	8	444	0	122	0	3	0	0	0
deal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
ane Width (m)	3.3	3.6	3.5		3.6	3.6	3.3	3.6	3.5	3.6	3.6	3.6
Storage Length (m)	15.0		40.0	45.0		0.0	0.0		55.0	0.0		0.0
Storage Lanes	- 1			- 1		0	7		>	0 1		>
l aper Lengtn (m)	υ. Σ		5	υ 5	0	5	0.7	5	5	υ. Ο	5	5
-ane Util. Factor	8.	0.90	90.0	8.6	0.90	3.	0.97	00.0	90.1	9.1	90.1	9.
Fed bike rador			0.850	 				0.850				
-It Protected				0.950			0.950					
Satd. Flow (prot)	1837	3539	1439	1646	3539	0	3134	1493	0	0	1900	0
-It Permitted				0.380			0.950					ľ
Satd. Flow (perm)	1837	3236	1387	655	3238	0	3134	1493	0	0	1900	0
Right Turn on Red			Yes			Yes		į	Yes			Yes
Satd. Flow (RTOR)			182					473				
-ink Speed (k/h)		20			20			20			20	
ink Distance (m)		360.6			362.0			256.9			51.9	
ravel Time (s)		26.0			26.1			18.5			3.7	
Confl. Peds. (#/hr)	2		9	9		2			9	9		
Peak Hour Factor	1:0	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	2%	42%	%	%:	%	% 5	%0	% ?	%0	%	% 6
Adj. Flow (vph)	0	209	ક્ક	\$	444	0	122	0	رج 1	0	0	0
shared Lane Traffic (%)	•	000	8	3		c	9	3	c	c	c	
ane Group Flow (vph)	o ;	209	S :	\$:	444	o ;	122	بري آ	o ;	o :	o ;	o :
Inter Blocked Intersection	2 °	8 °	2 :	2	2	2 :	2	2 5	2 :	2°	2 .	2
ane Alignment	Lett	Lett	Kight	Lett	Let	Kight	Lett	Lett	Kight	Lett	Left	Kight
Median Width(m)		c						9.9			9.0	
.ink Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			8.8	
I wo way Left I urn Lane	5	5	5	5	5	5	5	00	5	5	5	100
Teauway ractor	5 7	3	5. 4.	<u> </u>	3	8 4		00.1	5. 4.	25.	9.	1.00
Number of Detectors	3 -	0	5 ~	3 -	0	2	3 -	0	2	2 -	0	2
Detector Template	- He	Thru	Right	- He	Thru		- He	Thru		- de	Thru	
eading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Frailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	9.0	2.0	2.0	9.0		2.0	9.0		2.0	9.0	
Detector 1 Type	Ċ÷Ě	Ċ÷Ę	CH-EX	Ċ÷ E	Ċ+EX		Č÷ Ex	Ċ Ę		Ci+EX	Ci+EX	
Detector 1 Channel		d	c	d	c		d	c		c	d	
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	200	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Detay (s)	0.0	0.0	O.O.	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Size(m)		+ 9 - 9			t 9			9			1 9	
Detector 2 Type		25 4			5 5			5 2			3 2	
								1			-	

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Lanes, Volumes, Timings 4: Drew Centre/Private Driveway & Main St E

ane Group Detector 2 Extend (s)							-	-	~		•	,
	EB	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
		0.0			0.0			0.0			0.0	
	Perm	Α	Perm	pm+pt	¥		Perm	≸				
Protected Phases		2		~	9			∞		4	4	
Permitted Phases	2		2	9			∞			4		
Detector Phase	7	2	2	_	9		∞	∞		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	2.0	15.0		0.9	0.9		2.0	2.0	
Minimum Split (s)	35.0	35.0	35.0	9.2	35.0		27.0	27.0		12.0	12.0	
otal Split (s)	32.0	32.0	35.0	16.0	51.0		27.0	27.0		12.0	12.0	
otal Split (%) 3	38.9%	38.9%	38.9%	17.8%	26.7%		30.0%	30.0%		13.3%	13.3%	
Maximum Green (s)	28.0	28.0	28.0	12.0	0.44		20.0	20.0		2.0	2.0	
rellow Time (s)	4.0	4.0	4.0	3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0	3.0	1.0	3.0		3.0	3.0		3.0	3.0	
ost Time Adjust (s)	-3.0	-3.0	-3.0	0.0	-3.0		-3.0	-3.0			-3.0	
otal Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lead/Lag	Lag	Lag	Lag	Lead								
-ead-Lag Optimize?												
_		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
		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				
Flash Dont Walk (s)	21.0	21.0	21.0		21.0		13.0	13.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effct Green (s)		8.09	8.09	69.3	69.3		12.7	12.7				
Actuated g/C Ratio		0.68	0.68	0.77	0.77		0.14	0.14				
//c Ratio		0.25	0.10	0.11	0.16		0.28	0.05				
Control Delay		8.9	0.2	3.3	3.1		35.4	0.2				
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0				
otal Delay		8.9	0.2	3.3	3.1		35.4	0.2				
SO:		⋖	⋖	⋖	∢		_	⋖				
Approach Delay		5.9			3.1			28.3				
Approach LOS		∢			4			O				
ntersection Summary												
Area Type: Other	er											
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 18.9 (21%), Referenced to phase 2:EBTL, Start of Green	to phase	e 2:EBTI	., Start of	Green								
Natural Cycle: 85												
Control Type: Actuated-Coordinated	nated											
Maximum v/c Ratio: 0.28												
Intersection Signal Delay: 7.4	00			드	Intersection LOS: A	LOS: A	<					
Intersection Capacity Utilization 44.6%	44.6%			2	CU Level of Service A	1 Service	¥					

Splits and Phases: 4: Drew Centre/Private Driveway & Main St E

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200624 Base Year AM Peak Hour Queues 4: Drew Centre/Private Driveway & Main St E

	†	<i>></i>	>	Ļ	•	-	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	
Lane Group Flow (vph)	602	96	49	444	122	31	
v/c Ratio	0.25	0.10	0.11	0.16	0.28	0.05	
Control Delay	8.9	0.2	3.3	3.1	35.4	0.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.9	0.2	3.3	3.1	35.4	0.2	
Queue Length 50th (m)	21.2	0.0	2.2	8.7	10.3	0.0	
Queue Length 95th (m)	33.9	0.0	2.7	15.0	17.8	0.0	
Internal Link Dist (m)	336.6			338.0		232.9	
Turn Bay Length (m)		40.0	45.0				
Base Capacity (vph)	2390	966	929	2724	800	733	
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	0.10	0.10	0.16	0.15	0.04	
Intersection Summary							

1.00 1.00 1.00

0 - 0.0

0 0 0 0

0001

0.00 0 0 0 0 0 0

1.00 1.00 444 2 1.00 2.835 0.80 3632 444 444 1770 2.6 2.6 2.6

1.00

1.00

0.00

0.0 0.0

0.00 0.00 0.00 0.00 0.00 0.00 0.00

153 37.5 D

A.6 A.6

7.0 7.0 20.0 5.1 0.6

76.1 7.0 44.0 4.6 4.0

68.1 7.0 28.0 7.3 5.3

7.4

HCM 2010 Ctrl Delay HCM 2010 LOS

200624 Base Year AM Peak Hour

HCM 2010 Signalized Intersection Summary 4: Drew Centre/Private Driveway & Main St E

1 0.00 0.00 961 8.0 12.0 2.9 0.1 1.00 Assigned Phs
Phs Duration (G+/+Rc), s
Change Period (Y+Rc), s
Max Green Setting (Gmax), s
Max Q Clear Time (g_c+H), s
Green Ext Time (g_c+H), s Number
Initial Q (ab), weh
Ped-Bika Adja, abt)
Pading Bus, Adja, Abt)
Pading Bus, Adja, Adji Sat Flow, welthIn
Adj Flow Rate, welth
Adj No of Lanes
Percent Heavy Veh, %
Cap, welth
Arrive On Green
Sat Flow, welth
Grp Volume(v), welvh
Grand(c, a), welvh
Grand(c, a), welvh
HCM Platbom Ratio
Upstream Filter(l)
Uniform Delay (d2), siveh
In or Delay (d2), siveh Initial Q Delay(d3),s/veh %ile BackOfQ(50%),veh/ln LnGrp LOS Approach Vol, veh/h Approach Delay, s/veh Approach LOS Lane Configurations Traffic Volume (veh/h) -uture Volume (veh/h) .nGrp Delay(d),s/veh

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Lanes, Volumes, Timings 5: Thompson Rd & Main St E

								-				
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	₽ ₽		r	₩		F	₩		F	₽	
Traffic Volume (vph)	88	527	20	259	349	49	108	244	385	100	273	77
Future Volume (vph)	86	527	20	259	349	46	108	244	385	100	273	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	33.3	3.6	3.6	 	3.6	3.6	3.3	3.6	3.6	3.3	3.6	3.6
Storage Length (m)	60.0		0:0	150.0		0.0	0.09		0.0	25.0		0.0
Taner I enoth (m)	7.5		>	7.5		>	7.5		>	- 2		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Fr		0.987			0.982			0.938			0.967	
Fit Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1728	3531	0	1711	3514	0	1711	3339	0	1745	3404	0
Flt Permitted	0.517			0.207			0.480			0.162		
Satd. Flow (perm)	940	3531	0	373	3514	0	864	3339	0	298	3404	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			16			207			42	
Link Speed (k/h)		20			20			09			09	
Link Distance (m)		362.0			250.3			278.6			217.9	
Travel Time (s)		26.1			18.0			16.7			13.1	
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 (%)	1%	%	%0	5%	%	%	5%	%	5%	%	%%	1%
Adj. Flow (vph)	88	527	20	259	349	46	108	244	382	100	273	77
Shared Lane Traffic (%)	8	E	c	C L		c	9		c	9	c c	•
Lane Group Flow (vpn)	S :	//6	> :	627	282	> ;	<u>8</u> :	828	> :	00 2	00s	2
Enter Blocked Intersection	0 P	9 -	2 :	2	2 -	2 :	8 E	0 P	2	2	2	2
Lane Alignment	Lett	Left	Kignt	Lett	Left	Kignt	Геп	Left	Kight	Len	Left	Right
Median Width(m)		2.0			2.0			2.0			ى ك. د	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
I wo way Left I urn Lane												
Headway Factor	<u>4</u>	1.00	1.00	<u>4</u>	1.00	9.	<u>4</u>	1:00	1.00	1.04	1.00	1.00
Turning Speed (k/h)	22		15	22		15	25		15	25		15
Number of Detectors	-	5			5		-	5		-	5	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	9.0		2.0	9.0		2.0	9.0		2.0	9.0	
Detector 1 Type	Č÷ Č	Ċ÷Ę		Ċ+E	Ę Ę		Č÷ EX	Ċ÷ Ę		Ci+EX	Č÷ Č	
Detector 1 Channel	0	d		0	d		d	d		d	d	
Detector 1 Extend (s)	0:0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Defector 1 Defector (3)	5	5 6		9.	9 0		5	0.0		9	0.0	
Detector 2 Position(m)		4.0			4. 0			4. 0			4. 0	
Defector 2 Size(m)		۵. ۲ ۲			ن ۲ (۲			و. ا ا			ې ۱ ۵:۵	
Detector 2 Type		CI+EX			C+E			CI+EX			CHE CHE	
Detector 2 Extend (c)		0			0			0			0	
Turn Type		3			5							

Synchro 10 Report Paradigm Transportation Solutions Limited Page 17

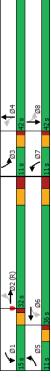
Lanes, Volumes, Timings 5: Thompson Rd & Main St E

200624 Base Year AM Peak Hour

200624 Base Year AM Peak Hour

FBL FBT FBR WBL WBT WBR NBL NBT NBT NBT NBT NBT NBT NBT NBT NBT SBL SBT 5	lane Group												
Phases 5 2 1 6 7 4 9 3 Phases 5 2 6 6 4 4 8 Phases 5 2 6 6 6 4 4 8 Phases 5 2 6 6 6 4 4 8 Bases 5 2 6 6 6 4 4 8 Bases 5 2 1 6 6 7 4 4 8 Bases 5 2 1 6 6 7 4 4 8 Bases 5 2 1 6 6 7 4 4 8 Bases 5 2 1 6 6 7 4 4 8 Bases 5 2 1 6 6 7 4 4 8 Bases 5 2 1 6 6 6 7 4 4 8 Bases 5 2 1 6 6 6 7 4 4 8 Bases 5 2 1 6 6 6 100 5 0 100 5 0 Bases 5 1 10 8.0 15.0 8.0 11.0 42.0 11.0 Bases 5 1 10 8.0 15.0 8.0 11.0 42.0 11.0 Bases 6 1 10 8.0 11.0 3.0 11.0 42.0 11.0 Bases 6 1 10 8.0 11.0 3.0 11.0 3.0 11.0 42.0 Bases 6 1 10 8.0 11.0 3.0 11.0 3.0 11.0 3.0 Bases 6 1 10 8.0 11.0 3.0 11.0 3.0 11.0 3.0 Bases 6 1 10 8.0 11.0 3.0 11.0 3.0 11.0 3.0 Bases 6 1 10 8.0 11.0 3.0 11.0 3.0 11.0 Bases 6 1 10 8.0 11.0 3.0 11.0 3.0 11.0 Bases 7 10 10 10 10 10 10 10 10 10 10 10 10 10		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Phases 2 6 6 4 8 8 Phases 2 1 6 6 4 4 8 8 Phases 5 2 1 6 6 6 7 4 4 8 8 Phases 5 2 1 6 6 1 6 7 7 4 4 3 3 ases 5 2 1 6 6 1 6 0 7 7 4 4 3 8 ases 5 2 2 1 6 0 1 6 0 0 5 0 1 0 0 0 5 0 1 0 0 0 0 0 0 0 0 0	Protected Phases	5	2		-	9		7	4		က	∞	
shase 5 2 1 6 7 4 3 asia shill 5 15.0 15.0 15.0 10.0 5.0 state 1 3 2.2 9.5 32.0 9.5 32.0 9.5 (s) 1.0 3.2 1.5 3.0 4.0 4.0 4.0 4.0 9.5 (s) 1.0 3.0 4.0 3.0 4.0 3.0 4.0	Permitted Phases	2			9			4			œ		
sae	Detector Phase	2	2		-	9		7	4		က	∞	
Signature Sign	Switch Phase												
Spilt (s) 9.5 32.0 32.0 32.0 32.0 32.0 32.0 32.0 32.0 32.0 32.0 32.0	Minimum Initial (s)	2.0	15.0		2.0	15.0		2.0	10.0		2.0	10.0	
(%) 1100 320 150 360 110 420 110% 420 110% 420% (%) (%) 1100% 320% 150% 360% 1100% 420% 1100% 420% 1100% 420% 1100% 420% 1100% 420% 1100% 420% 1100% 420% 1100% 420% 1100% 420% 1100% 420% 1100% 420% 1100% 420% 1100% 420% 1100% 420% 1100% 420% 1100% 420% 120% 420% 120% 420% 120% 420% 120% 420% 120% 420% 420% 420% 420% 420% 420% 420% 4	Minimum Split (s)	9.5	32.0		9.5	32.0		9.2	32.0		9.2	32.0	
(%) 110% 320% 150% 360% 1110% 420% 420% 420% 420% 420% 420% 420% 42	Total Split (s)	11.0	32.0		15.0	36.0		11.0	45.0		11.0	42.0	
Charles 7.0 25.0 11.0 29.0 7.0 35.0 7.0 35.0 7.0 3.0	Total Split (%)	11.0%	32.0%		15.0%	36.0%		11.0%	45.0%		11.0%	42.0%	
Section Sect	Maximum Green (s)	7.0	25.0		11.0	29.0		7.0	35.0		2.0	35.0	
Adjust (s) 10 3.0 10 3.0 10 3.0 10 3.0 10 3.0 10 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
Adjust (s) 0.0 -3.0 0.0 -3.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	All-Red Time (s)	1.0	3.0		1.0	3.0		1.0	3.0		1.0	3.0	
Time (s) 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	Lost Time Adjust (s)	0.0	-3.0		0.0	-3.0		0.0	-3.0		0.0	-3.0	
Lead	Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Optimize? Atension (s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
dension (s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 dension (s) 3.0 3.0 3.0 3.0 3.0 dension (s) 3.0 3.0 3.0 3.0 3.0 dele Nore C-Max Nore Max	Lead-Lag Optimize?												
de None C-Max None Max None Max None P (5) \$ (5)	Vehide Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
(s) 7.0	Recall Mode	None	C-Max		None	Max		None	Max		None	Max	
Nakk S	Walk Time (s)		7.0			7.0			7.0			7.0	
n Calls (#hh) 34.8 0 0 0 streen (s) 34.8 28.0 43.0 34.2 45.8 40.2 45.0 green (s) 34.8 28.0 0.43 0.34 0.45 40.0 0.45 green (s) 0.26 0.28 0.44 0.33 0.24 0.63 0.43 alay 19.5 33.2 45.8 25.0 15.4 27.1 19.9 alay 19.5 33.2 45.8 25.0 15.4 27.1 19.9 alay 19.5 33.2 45.8 25.0 15.4 27.1 19.9 All Delay 31.2 2 2 2 2 2 2 Los 31.2 32.2 5 5 5 5 3 3 3 3 3 3 3 3 3 3 3 3 4 3 4 4 4 4 4 4 4 <td>Flash Dont Walk (s)</td> <td></td> <td>18.0</td> <td></td> <td></td> <td>18.0</td> <td></td> <td></td> <td>18.0</td> <td></td> <td></td> <td>18.0</td> <td></td>	Flash Dont Walk (s)		18.0			18.0			18.0			18.0	
State Stat	Pedestrian Calls (#/hr)		0			0			0			0	
yiC Ratio 0.35 0.28 0.43 0.34 0.46 0.40 0.45 0.49 0.35 0.28 0.43 0.34 0.45 0.45 0.43 0.34 0.35 0.24 0.63 0.43 0.43 0.34 0.35 0.24 0.63 0.43 0.43 0.45 0.50 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Act Effct Green (s)	34.8	28.0		43.0	34.2		45.8	40.2		45.0	38.1	
19	Actuated g/C Ratio	0.35	0.28		0.43	0.34		0.46	0.40		0.45	0.38	
195 33.2 45.8 25.0 154 21.1 19.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	v/c Ratio	0.26	0.58		0.84	0.33		0.24	0.63		0.43	0.26	
10.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Control Delay	19.5	33.2		45.8	25.0		15.4	21.1		19.9	19.3	
19,5 33,2 45,8 25,0 15,4 21,1 19,9 B C D C B C B 31,2 33,2 20,5 C C C C c C c C C C C C C C C C C C C C	Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
B C B C B C B B C B C B C B C C B C	Total Delay	19.5	33.2		45.8	25.0		15.4	21.1		19.9	19.3	
31.2	FOS	Ф	ပ		۵	ပ		ш	O		ш	ш	
er hase 2:EBTL, Start of Green hated Intersection LOS: C ICU Level of Service D	Approach Delay		31.2			33.2			20.5			19.4	
er hase 2:EBTL, Start of Green nated 176.8%	Approach LOS		O			O			O			В	
er hase 2:EBTL, Start of Green rated 176.8%	Intersection Summary												
hase 2:EBTL, Start of Green haled 176.8%	Area Type:	Other											
hase 2:EBTL, Start of Green nated	Cycle Length: 100												
hase 2:EBTL, Start of Green nated 176.8%	Actuated Cycle Length: 10	0											
nated 7.76.8%	Offset: 0 (0%), Referenced	to phase 2:f	EBTL, Sta	rt of Gree	Ę								
nated 176.8%	Natural Cycle: 85												
176.8%	Control Type: Actuated-Co	ordinated											
176.8%	Maximum v/c Ratio: 0.84												
ization /6.8%	Intersection Signal Delay:	25.9			<u>=</u> 9	ersection	LOS: C						
	Intersection Capacity Utiliza	ation 76.8%			೨	U Level o	of Service						

Splits and Phases: 5: Thompson Rd & Main St E



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200624 Base Year AM Peak Hour Queues 5: Thompson Rd & Main St E

	1	†	>	ļ	•	+	۶	→	
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Group Flow (vph)	86	577	259	398	108	929	100	350	
v/c Ratio	0.26	0.58	0.84	0.33	0.24	0.63	0.43	0.26	
Control Delay	19.5	33.2	45.8	25.0	15.4	21.1	19.9	19.3	
Queue Delay	0:0	0:0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	19.5	33.2	45.8	25.0	15.4	21.1	19.9	19.3	
Queue Length 50th (m)	11.8	52.2	34.6	31.1	11.5	63.4	9.01	22.1	
Queue Length 95th (m)	22.2	70.3	6.89#	44.3	21.4	86.1	19.9	33.2	
Internal Link Dist (m)		338.0		226.3		254.6		193.9	
Turn Bay Length (m)	0.09		150.0		0.09		55.0		
Base Capacity (vph)	384	995	307	1212	455	1466	235	1324	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.26	0.58	0.84	0.33	0.24	0.63	0.43	0.26	

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

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Paradigm Transportation Solutions Limited

HCM 2010 Signalized Intersection Summary 5: Thompson Rd & Main St E

200624 Base Year AM Peak Hour

	4	†	>	/	Į.	4	•	•	•	٠	→	*
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	F	₽		F	₩.		۴	₩.		<u>, </u>	₩.	
Traffic Volume (veh/h)	88	527	20	259	349	49	108	544	385	100	273	11
Future Volume (veh/h)	86	527	20	259	349	49	108	544	385	100	273	11
Number	2	2	12	-	9	16	7	4	14	က	∞	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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 Sat Flow, veh/h/ln	1881	1883	1900	1863	1883	1900	1863	1874	1900	1900	1853	1900
Adj Flow Rate, veh/h	8	527	20	259	349	49	108	244	382	100	273	11
Adj No. of Lanes	-	2	0	τ.	2	0	_	2	0	_	7	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1:00	1.00	1.00	1:00	1.00	9.	9.
Percent Heavy Veh, %	-	_	0	2	-	0	5	-	5	0	က	_
Cap, veh/h	406	972	92	3/5	1099	153	45/	99/	242	239	1036	787
Arrive On Green	1702	3304	343	1777	3156	0.32	1774	1004	1411	1810	0.38	0.35
Sat Flow, velilli	76/1	1000	2 6	1	0010	200	111	+66	- :	0101	6717	5 1
Grp Volume(v), veh/h	707	780	787	7274	1780	1808	108	1780	1625	100	1760	1700
O Serve(a s) s	30	13.4	13.5	10 4	80	82	5	23.1	23.5	2 5	8 8	7.2
Cycle O Clear(a.c.) s	0 8	13.4	13.5	10.4	0.8	8.2	0 8	23.1	23.5	3 5	8 9	7.2
Prop In Lane	1.00		0.17	1.00		0.24	1.00		0.87	1.00		4.0
Lane Grp Cap(c), veh/h	406	526	537	375	623	629	457	683	624	239	699	653
V/C Ratio(X)	0.24	0.54	0.54	69.0	0.32	0.32	0.24	0.71	0.71	0.42	0.26	0.27
Avail Cap(c_a), veh/h	431	526	537	375	623	629	482	683	624	27.1	699	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	29.6	29.9	23.2	23.9	24.2	19.1	26.1	27.3	22.1	21.3	21.9
Incr Delay (d2), s/veh	0.3	4.0	3.9	5.3	1.3	1.3	0.3	6.2	6.7	1.2	6.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0:0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/In	2.0	7.1	7.3	9.6	4.2	4.3	1.9	12.5	11.6	6.	3.5	3.6
LnGrp Delay(d),s/veh	24.8	33.6	33.8	28.6	25.2	25.5	19.3	32.3	34.1	23.3	22.3	22.9
LnGrp LOS	ပ	٥	ပ	ပ	ပ	ပ	۵	ပ	ပ	٥	ပ	ျ
Approach Vol, veh/h		675			657			1037			450	
Approach Delay, s/veh		32.4			26.6			31.7			22.7	
Approach LOS		O			ပ			ပ			O	
Timer	1	2	3	4	5	9	7	8				
Assigned Phs	_	2	3	4	2	9	7	8				
Phs Duration (G+Y+Rc), s	15.0	33.4	9.5	45.4	9.6	38.8	9.6	45.0				
Change Period (Y+Rc), s	4.0	7.0	4.0	7.0	4.0	2.0	4.0	7.0				
Max Green Setting (Gmax), s	11:0	25.0	7.0	32.0	7.0	29.0	7.0	35.0				
Max Q Clear Time (g_c+I1), s	12.4	15.5	5.5	25.5	5.9	10.2	5.9	9.5				
Green Ext Time (p_c), s	0.0	5.8	0.0	4.6	0.0	5.6	0.0	2.4				
Intersection Summary												
HCM 2010 Ctrl Delay			29.3									
HCM 2010 LOS			ပ									

Paradigm Transportation Solutions Limited

	SB	_	47.3	23.2	43.8				40.0	~	2
	BB B	œ	63.2	20.9	40.7				65.0	0	0
	BB	⊢	9.07	37.8	62.6	322.4				0	_
	8	⊢	77.2	45.8	69.7	322.4				~	-
	8	_	41.1	13.8	29.4				20.0		
 	WB	エ	53.7	29.0	47.6	108.2					
ain St F	WB	-	50.2	20.8	39.9	108.2				~	-
⊗ ⊗ N	WB	_	45.0	24.5	41.6				35.0	ა	7
io St	EB	⊢	82.8	36.4	63.9	133.0					
0/Ontai	B	H	100.8	47.7	78.7	133.0	0	0		14	24
io St S	EB	_	47.4	29.1	51.0				40.0	τ-	2
Intersection: 1: Ontario St S/Ontario St N & Main St E	Movement	Directions Served	Maximum Queue (m)	Average Queue (m)	95th Queue (m)	Link Distance (m)	Upstream Blk Time (%)	Queuing Penalty (veh)	Storage Bay Dist (m)	Storage Blk Time (%)	Queuing Penalty (veh)

SB 81.3 38.8 64.7 241.6

Intersection: 1: Ontario St S/Ontario St N & Main St E

Movement	SB	SB SB
Directions Served	⊥	⊤ R
Maximum Queue (m)	61.9	1.9 2.8
Average Queue (m)	26.4	5.4 0.1
95th Queue (m)	20.0	0.0 1.9
Link Distance (m)	241.6	1.6 241.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Mall Entrance & Main St E

Movement	EB	EB	WB	WB	WB	8	NB NB	
Directions Served	⊢	TR	٦	⊢	⊢	٦	æ	
Maximum Queue (m)	63.6	64.0	14.7	29.6	36.2	10.3	8.6	
Average Queue (m)	18.8	19.9	4.4	7.1	8.3	3.5	3.7	
95th Queue (m)	51.5	51.5	12.5	22.3	26.0	10.1	10.4	
Link Distance (m)	108.2	108.2		251.1	251.1	127.6	127.6	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			0.07					
Storage Blk Time (%)								
Queuing Penalty (veh)								

SimTraffic Report Page 1

Queuing and Blocking Report

Intersection: 3: Main St E & Wilson Dr

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200624 Base Year PM Peak Hour

Lanes, Volumes, Timings	1: Ontario St S/Ontario St N & Main St E	*
200624	Base Year AM Peak Hour	

Movement	8	8	8	WB	WB	SB	SB	
Directions Served	_	⊢	⊢	⊢	TR	_	œ	
Maximum Queue (m)	44.5	9.19	70.1	39.9	37.6	41.1	18.7	
Average Queue (m)	9.7	22.4	26.8	13.9	14.5	21.9	8.2	
95th Queue (m)	22.9	49.1	52.8	29.6	30.9	36.2	15.4	
Link Distance (m)		242.6	242.6	338.7	338.7		160.5	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)	20.0					22.0		
Storage Blk Time (%)	0	~				0		
Queuing Penalty (veh)	0	0				0		

Intersection: 4: Drew Centre/Private Driveway & Main St E

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	
Directions Served	⊢	⊢	ď	_	⊢	⊢	٦	٦	TR	
Maximum Queue (m)	38.4	39.1	21.3	25.8	31.2	42.2	37.0	21.0	14.4	
Average Queue (m)	13.4	14.7	0.9	9.6	8.8	12.6	18.3	0.9	3.8	
95th Queue (m)	28.8	31.1	16.8	20.5	23.2	30.3	31.4	15.6	10.6	
Link Distance (m)	338.7	338.7			334.9	334.9	239.6	239.6	239.6	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)			40.0	45.0						
Storage Blk Time (%)	2	0								
Queuing Penalty (veh)	0	0								

1561 Yes 148

1559 Yes 235

Ves 0

3425

1495 Yes 200

3505

50 256.3 18.5

50 338.1 24.3

44 50 134.8 9.7

50 147.9 10.6

1597

3505

0.950 1711 0.349 628

1581

3438 3438

0.950 1728 0.270 489

3425

0.950 1694 0.297 522

1566

3574 3574

0.950 1728 0.156 282

Traffe Configurations
Traffe Colume (yph)
Hearl Volume (yph)
Hearl Four (yph)
Lane Width (m)
Storage Length (m)
Storage Length (m)
Storage Length (m)
Lane Uill, Factor
Fri
Pee Bike Factor
Fri
Friceded
Sadd. Flow (prd)
Fit Pemitted
Sadd. Flow (prd)
Hink Speed (kih)
Link Speed (kih)
Stavel Time (s)
Conf. Peak Hour Factor
Heavy Vehides (%)
Peak Hour Factor
Heavy Vehides (%)
Shared Lane Traffic (%)
Shared Lane Traffic (%)

0.95

1.00

0.95

1.00

0.95

7.5 1.00 0.99

0.95

7.5

0.95

1.00 0.96 0.850

1.00 0.99 0.850

148 148 1900 3.5 0.0

126 126 1900 3.3 40.0

235 235 1900 3.5 65.0

170 170 3.3 3.3 70.0

183 1900 3.6 0.0

228 228 1900 3.3 35.0

3.5

169 169 3.3 40.0

EBT 522 522 1900 3.6

\$600 900 3.6

\$BT 661 1900 3.6

\$60 560 3.6

No Right

126 No Left

No No Right

Left No

Right No.

228 No Left

200 No Right

Left No 169

0.0 661 8.3 9.3 4.8

No No 3.3 3.3 4.8

No No 3.3 3.4 4.8

522 No No 3.3 3.3 4.8

Lane Group Flow (riph)
Enter Blocked Intersection
Lane Alignment
Median Width(m)
Link Offset(m)
Crosswalk Width(m)
Two way Left Turn Lane
Headway Factor

1.00

1.04

1.00

1.04

1.00

1.00

1.04

1.00

Turning Speed (k/h) Number of Detectors

1.00 0% 148

1.00 3% 661

2% 12%

1.00 1.00 235 235

1.00 5% 560

9 6 % 5

12 % 28

1.00

28 3% 228

28 200 200 200

1.00

5 6 6 6

Right 2.0 2.0 0.0 2.0 CI+Ex

Thru 10.0 0.0 0.6 C+Ex

2.0 0.0 0.0 CI+Ex

Right 2.0 0.0 0.0 CI+Ex

Thru 10.0 0.0 0.6 CI+Ex

2.0 0.0 0.0 2.0 2.0 2.1+Ex

10.0 0.0 0.0 CI+Ex

2.0 0.0 0.0 2.0 CI+Ex

Right 2.0 0.0 0.0 CI+Ex

Thru 10.0 0.0 0.0 CI+Ex

2.0 0.0 0.0 2.0 2.0 2.0 2.0

Detector Template Leading Detector (m) Trailing Detector (m) Detector 1 Position(m) Detector 1 Size(m)

Detector 1 Type

Intersection: 5: Thompson Rd & Main St E

Mariamani	ב	ב	ב	2/	0/47	2/47	2	2	2	S	c	C
Movernerit	םם			O VV	Q AA	O V	Q N	Q N	Q N	00	20	מם
Directions Served	٦	⊢	TR	_	⊢	TR	_	⊢	TR	_	⊢	T
Maximum Queue (m)	45.5	74.0	78.3	79.0	6.03	52.1	65.9	86.4	109.7	27.4	44.7	39.5
Average Queue (m)	17.1	43.3	47.1	38.8	29.7	28.0	16.7	49.2	29.8	12.8	23.4	14.2
95th Queue (m)	34.8	9.79	71.4	2'. 19	47.7	47.4	40.2	6.77	7.76	24.2	40.7	31.7
Link Distance (m)		334.9	334.9		233.6	233.6		263.1	263.1		201.3	201.3
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	0.09			150.0			0.09			22.0		
Storage Blk Time (%)		2					0	2			0	
Queuing Penalty (veh)		2					0	က			0	

Network Summary

Network wide Queuing Penalty: 51

SimTraffic Report Page 2

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Synchro 10 Report Page 1

0.0 0.0 0.0 9.4 0.6 CHEX

0.0 0.0 0.0 9.4 0.6 CI+EX

0.0 0.0 0.0 0.6 CI+Ex

0.0 0.0 0.0 0.0 0.4 0.6 CI+Ex

Detector 1 Channel
Detector 1 Extend (s)
Detector 1 Queue (s)
Detector 1 Delay (s)
Detector 2 Position(m)
Detector 2 Size(m)
Detector 2 Size(m)
Detector 2 Channel

0.0

0.0

0.0

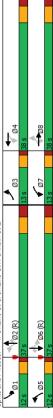
0.0

0.0

Lanes, Volumes, Timings 1: Ontario St S/Ontario St B

	*	†	<i>></i>	-	ļ	4	•	←	•	۶	→	*
Lane Group	EBF	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	bm+pt	Ϋ́	Perm	bm+pt	Ϋ́		pm+pt	ΑΝ	Perm	bm+pt	≨	Perm
Protected Phases	ന	∞	c	_ '	4		ഗ	2	c	← (9	(
Permitted Phases	×0 1	١	×ο ι	4	ŀ		7	ľ	7	۰ م	١	۱ ٥
Detector Phase	က	∞	∞	_	4		2	2	2	-	9	9
Switch Phase	C		r.	1			C					
Minimum Initial (s)	5.0	15.0	15.0	0.7	15.0		5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	6.5	32.0	32.0	0.17	32.0		υ (υ, υ	32.0	32.0	υ. υ.	32.0	32.0
Total Split (s)	13.0	38.0	38.0	13.0	38.0		12.0	37.0	37.0	12.0	37.0	37.0
l otal split (%)	13.0%	38.0%	38.0%	13.0%	38.0%		%0.ZI	37.0%	37.0%	12.U%	37.0%	37.0%
Waximum Green (s)	9.0	0.0	0.10	0.0	0.0		0.0	0.00	0.00	0.0	0.00	0.00
Tellow IIIIIe (s)	0.0		5.0	5.0	5. c		0.0	5.0	5.0	0.0	5.0	0.4
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0		5.0	0.0	0.0	9 0	0.0	0.0
Total I act Time (c)	0.0	5.5	9	0.5	9 6		0.0	5.5	5 6	0.0	5 6	5
l ord/l ad	1.0 Pad		5. <u>e</u>	t 4	0.4		t 0	0.4	5. 6	1.0 P. 4	5. 6	0.4
Lead-Lag Optimize?	2	i S	n S	3	P S		2	n I	n 1	2	n 1	3
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			18.0	18.0		18.0	18.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	37.3	28.6	28.6	38.0	29.0		47.1	38.6	38.6	45.6	37.8	37.8
Actuated g/C Ratio	0.37	0.29	0.29	0.38	0.29		0.47	0.39	0.39	0.46	0.38	0.38
v/c Ratio	0.73	0.51	0.35	0.75	0.77		0.51	0.42	0.32	0.34	0.50	0.22
Control Delay	38.0	31.1	5.4	36.8	35.6		21.1	25.0	4.5	17.4	26.6	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.3		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.0	31.1	5.4	36.8	32.9		21.1	25.0	4.5	17.4	26.6	5.0
SOT	۵	O	⋖	_	_		ပ	ပ	⋖	ш	ပ	⋖
Approach Delay		26.6			36.1			19.3			21.9	
Approach LOS		O			٥			В			O	
Intersection Summary												
Area Type:	Other											
Cycle Length: 100												
Actuated Cycle Length: 100	00											
Offset 49 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	ced to phase	2:NBTL	and 6:SB	TL, Start	of Green							
Natural Cycle: 85												
Control Type: Actuated-Coordinated	oordinated											
Maximum v/c Ratio: 0.77												
Intersection Signal Delay: 26.1	26.1			드 :	Intersection LOS: C	COS: C						
Intersection Capacity Utilization 75.7%	zation /5./%			۷	ICU Level of Service D	1 Service	_					
Analysis Period (min) 15												

1: Ontario St S/Ontario St N & Main St E Splits and Phases:



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Synchro 10 Report Page 2

Queues 1: Ontario St S/Ontario St N & Main St E

200624 Base Year PM Peak Hour

SBR 148 0.22 5.0 5.0 5.0 0.0 SBT 661 0.50 26.6 0.0 26.6 55.4 76.8 232.3 0.50 1325 40.0 0 0.33 SBL 126 0.34 17.4 0.0 17.4 13.4 26.5 235 0.32 4.5 0.0 4.5 0.0 16.4 65.0 745 0 0 0 0.32 560 0.42 25.0 0.0 25.0 44.3 64.4 314.1 342 170 0.51 21.1 21.1 18.6 34.7 783 0.77 35.6 0.3 35.9 72.1 87.9 1193 35.0 WBL 228 0.75 36.8 0.0 36.8 30.3 #46.6 200 200 0.35 5.4 0.0 0.0 640 40.0 236 1215 0 0 0 0 0 0 0 0 0 0 0 0 522 0.51 31.1 0.0 31.1 46.2 58.2 123.9 169 169 0.73 38.0 38.0 21.6 #38.9 Control Delay
Queue Delay
Total Delay
Queue Enright 50th (m)
Queue Length 95th (m)
Internal Link Dist (m)
Turn Bay Length (m)
Base Capacity (np)
Sanvation Cap Reduch
Spillback Cap Reduch
Sorage Cap Reduch
Sorage Cap Reduch Lane Group Flow (vph)

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

0.22

0.50

0.75

HCM 2010 Signalized Intersection Summary 1: Ontario St S/Ontario St N & Main St E

	4	†	>	>	ţ	4	•	•	•	٠	→	*
Movement	田田	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	‡	¥.	F	₩.		F	‡	¥L.	r	‡	¥.
Traffic Volume (veh/h)	169	522	200	228	009	183	170	260	235	126	199	148
Future Volume (veh/h)	169	522	200	228	009	183	170	290	235	126	991	148
Number	က	∞ .	9	7	4	14	2	2	12	_	9	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.39		0.97	1.00		0.99	1.00		1.00
Parking Bus, Adj	9.	0.1	1.00	1:00	1:00	1.00	1.00	1:00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1863	1845	1881	1900	1881	1810	1881	1863	1845	1900
Adj Flow Rate, veh/h	169	522	0	228	009	183	9	260	235	126	991	0
Adj No. of Lanes	τ.	7	_	_	2	0	-	5	_	-	2	
Peak Hour Factor	9.	0.0	9.	9.	0.1	9.	0.0	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	- 6	- 9	7	က	- ;	- 6	- 6	2	- ;	2 5	e :	0 10
Cap, ven/h	797	1012	448	342	\$ 8	737	380	1389	642	326	1361	179
Arnve On Green	60.0	0.28	0.00	0.09	0.29	0.26	0.08	0.40	0.40	0.06	0.39	0.00
Sat Flow, veh/h	1792	3574	1583	1757	2677	815	1792	3438	1588	1774	3505	1615
Grp Volume(v), veh/h	169	522	0	228	400	383	170	290	235	126	991	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1583	1757	1787	1705	1792	1719	1588	1774	1752	1615
Q Serve(g_s), s	6.9	12.3	0.0	0.6	20.6	20.8	5.9	11.6	10.3	4.4	14.2	0.0
Cycle Q Clear(g_c), s	6.9	12.3	0.0	0.6	20.6	20.8	5.9	11.6	10.3	4.4	14.2	0.0
Prop In Lane	1.00		1.00	1.00		0.48	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	1012	448	342	510	486	380	1389	642	329	1361	627
V/C Ratio(X)	0.65	0.52	0.00	0.67	0.78	0.79	0.45	0.40	0.37	0.35	0.49	0.00
Avail Cap(c_a), veh/h	266	1215	238	342	809	280	383	1389	642	389	1361	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.93	0.93	0.93	1.00	1:00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.7	30.1	0.0	26.7	32.9	33.6	18.8	21.2	20.8	18.7	23.0	0.0
Incr Delay (d2), s/veh	4.0	0.2	0.0	3.7	4.3	4.6	0.3	0.9	1.6	0.2	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.9	0.0	1:8	10.7	10.4	5.9	2.7	4.8	2.2	7.1	0.0
LnGrp Delay(d),s/veh	30.7	30.2	0.0	30.4	37.2	38.2	19.1	22.1	22.4	18.9	24.3	0.0
LnGrp LOS	ပ	ပ		ပ			В	ပ	ပ	В	ပ	
Approach Vol, veh/h		691			1011			965			787	
Approach Delay, s/veh		30.4			36.0			21.6			23.4	
Approach LOS		ပ			Ω			O			O	
Timer	_	2	က	4	2	9	7	00				
Assigned Phs	~	2	က	4	2	9	7	80				
Phs Duration (G+Y+Rc), s	10.3	44.4	12.8	32.5	11.8	42.8	13.0	32.3				
Change Period (Y+Rc), s	4.0	2.0	4.0	7.0	4.0	7.0	4.0	7.0				
Max Green Setting (Gmax), s	8.0	30.0	9.0	31.0	8.0	30.0	0.6	31.0				
Max Q Clear Time (g_c+I1), s	6.4	13.6	8.9	22.8	7.9	16.2	11.0	14.3				
Green Ext Time (p_c), s	0.0	3.6	0.0	2.7	0.0	3.2	0.0	2.7				
Intersection Summary												
HCM 2010 Ctrl Delay			28.0									
HCM 2010 LOS			ပ									

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Lanes, Volumes, Timings 2: Mall Entrance & Main St E

200624 Base Year PM Peak Hour

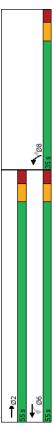
200624 Base Year PM Peak Hour

p EBT EBR WBI WBI NBI gurations 44 107 148 996 114 nme (cph) 741 107 148 996 114 nme (cph) 741 107 148 996 114 nme (cph) 741 107 148 996 114 nmes 3.6 3.6 3.6 3.3 3.3 3.3 nmes 0.0 0.0 1.0 1.0 0.0 1.0 nmes 0.381 0.95 0.95 1.00 0.95 1.0 actor 0.981 1.00 0.95 1.00 0.95 1.00 actor 0.981 1.00 0.95 1.00 1.00 1.00 0.95 0.95 1.00 0.95 0.95 1.00 0.95 0.00 0.95 0.00 0.00 0.95 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 <td< th=""><th>## PBR WBL WBT NBL</th><th></th><th>†</th><th>*</th><th>-</th><th>Ļ</th><th>•</th><th>•</th><th></th></td<>	## PBR WBL WBT NBL		†	*	-	Ļ	•	•	
74 1 107 148 946 1144 147 148 996 1144 1900 1900 1900 1900 1900 1900 1900	190	ne Group	EBT	EBR	WBL	WBT	NBL	NBR	
74 1 107 148 996 114 14 1970 148 996 114 14 1970 1900 1900 1900 1900 1900 1900 1900	741 107 148 996 114 1900 1900 1900 1900 1900 1900 1900	ne Configurations	44		F	++	F	¥C.	
1900 1900 1900 1900 1900 1900 1900 1900	741 107 148 996 114 114 115 115 115 115 115 115 115 115	affic Volume (vph)	741	107	148	966	114	103	
3.6 3.6 3.3 3.6 3.3 3.8 3.3 3.6 3.3 3.3	36 1900 1900 1900 1900 1900 1900 1900 190	ture Volume (vph)	741	107	148	966	114	103	
3.6 3.6 3.3 3.6 3.3 3.6 3.3 3.6 3.3 3.6 3.3 3.6 3.3 3.8 3.3 3.8 3.3 3.8 3.3 3.8 3.3 3.8 3.3 3.8 3.3 3.8 3.3 3.9 3.3 3.9 3.3 3.3 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	35.6 3.6 3.3 3.6 3.3 3.6 3.3 3.6 3.3 3.6 3.3 3.6 3.3 3.6 3.3 3.3	eal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
0.05 0.05 0.00 0.00 0.00 0.00 0.00 0.00	0.95 0.95 1.00 0.95 1.00 0.95 0.961 0.961 0.962 0.961 0.962 0.960 0.960 0.960 0.961 0.962	ne Width (m)	3.6	3.6	3.3	3.6	3.3	3.5	
0 1 7.5 7.5 7.5 7.5 0.381 0.381 0.382 0.385 1.00 0.35 0.395 1.00 0.35 0.395 0.395 1.00 0.35 0.39	0 17.5 7.5 7.5 7.5 7.5 0.381 0.381 0.382 0.385 1.00 0.95 1.00 0.95 1.00 0.381 0.381 0.380 0.381 0.380 0.381 0.380 0.381 0.380 0.381 0.380 0.381 0.380 0.381 0.380 0.381 0.380 0.381 0.380 0.381 0.380 0.381 0.381 0.380 0.381	orage Length (m)		0.0	0.07		0.0	0.0	
0.95 0.95 1.00 0.95 1.00 0.95 0.095	0.95 0.95 1.00 0.95 1.00 0.95 1.00 0.981 0.950 0	orage Lanes		0	_		_	-	
0.38 0.95 1.00 0.95 1.00 0.960	0.981 0.95 1.00 0.95 1.00 0.991 0.992 0.992 0.992 0.992 0.992 0.993 0.99	per Length (m)			7.5		7.5		
0.991 0.950	0.981 0.950	ne Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00	
3511 0 1745 3610 1745 1745 1745 1745 1745 1745 1745 1745	3511 0 0.950 0.950 0.950 0.351		0.981					0.850	
3511 0 1745 3610 1745 1 29	3511 0 1745 3610 1745 1 29	Protected			0.950		0.950		
3511 0 0.313 0.950 29 Yes 50 50 50 50 50 50 134.8 273.6 144.7 9.7 10.0 1.00 1.00 1.00 1.00 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.	3511 0 575 3610 1745 1 29 Yes 50 50 50 50 50 50 50 50 50 50 50 50 50	td. Flow (prot)	3511	0	1745	3610	1745	1597	
29	3511 0 575 3610 1745 1 29	Permitted			0.313		0.950		
Yes 50 50 134.8 273.6 144.7 100 100 100 100 100 100 100 1	Yes 50 134.8 27.36 144.7 100 100 100 100 114 100 100 100 100 100	td. Flow (perm)	3511	0	275	3610	1745	1597	
50 50 50 50 50 50 50 50 50 50 50 50 50 5	50 50 50 50 50 50 50 50 50 50 50 50 50 5	ght Tum on Red		Yes				Yes	
134.8 134.8 134.8 134.8 134.8 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10	134.8 2736 144.7 3.7 19.7 19.7 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	itd. Flow (RTOR)	59					103	
134.8 273.6 144.7 100 1.00 1.00 1.00 1.00 1% 0% 0% 0% 0% 741 107 148 996 114 19	134.8 273.6 144.7 1.00 1.00 1.00 1.00 1.00 1.44 0.00 0.00 1.00 1.00 1.00 1.00 1.48 0.06 1.14 1.00 1.04 1.00 0.0 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.00 1.04 1.00 1.04 1.00 1.00 1.04 1.00 0.0 1.00 0.0 0.0 0.0	ık Speed (k/h)	20			20	20		
9.7 10.4 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	9.7 10.4 10.0 1.00 1.00 1.00 1.00 1.00 1.00	nk Distance (m)	134.8			273.6	144.7		
100 100 100 100 100 100 100 100 100 11	100 1,00 1,00 1,00 1,00 1,00 1,00 1,00	avel Time (s)	9.7			19.7	10.4		
1% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	1% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	ak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
10 848 0 148 996 114 241 107 148 996 114 251	tion No	avy Vehides (%)	1%	%0	%0	%0	%0	%0	
(b) 848 0 148 996 114 ition No	(b) 848 0 148 996 114 Strong Left Right Left Left Left Right Righ	ij. Flow (vph)	741	107	148	966	114	103	
1) 848 0 148 996 114 String No	1	ared Lane Traffic (%)							
ition No	Helf Right Left Left Right Sign No	ne Group Flow (vph)	848	0	148	966	114	103	
1.00	Left Right Left Left Left Left	iter Blocked Intersection	2	8	8	8	8	%	
3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3	3.3 3.3 3.3 3.3 3.4 4.8 4.8 4.8 4.8 4.8 4.8 4.8 4.8 4.8 4.8	ne Alignment	Left	Right	Left	Left	Left	Right	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	100 1.00 1.04 1.04 1.07 1.04 1.07 1.04 1.07 1.07 1.04 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07	edian Width(m)	3.3			3.3	3.3		
1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.00	1.00 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.00	ık Offset(m)	0.0			0.0	0.0		
15 25 25 25 25 25 17 100 1.04 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	15 25 25 25 25 25 25 25 25 25 25 25 25 25	osswalk Width(m)	4.8			4.8	4.8		
1.00 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.00	100 1.00 1.04 1.00 1.04 1 Thru Left Thru Left R 10.0 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	vo way Left Turn Lane							
15 25 25 1	15 25 25 Thru Left Thru Left R 10.0 2.0 10.0 2.0 0.0 0.0 0.0 0.0 0.6 2.0 0.6 2.0 0.6 Cl+Ex Cl+Ex Cl+Ex Cl+Ex Cl 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	adway Factor	1.00	1.00	1.04	1.00	1.04	1.01	
Thu Left Thru Left R 10.0 2.0	Thru Left Thru Left R 10.0 2.0 10.0 2.0 10.0 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	rning Speed (k/h)	c	12	25	c	52	15	
100	100 2.01 100 2.01 100 2.01 100 100 100 100 100 100 100 100 100	Imper of Detectors	7.1		- 4	7	- 4	- 1	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	elector i emplate	700		Lell C	70 0	Lell C	וואוט	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	admig Defector (m)	0.0		0.2	0.0	0.2	0.2	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	theter 1 Decition(m)	0.0		9 0	9 0	9 0	9 0	
CHEX CHEX CHEX CHEX CHEX CI-EX	CHEX CHEX CHEX CHEX CHEX CHEX CHEX CHEX	tector i Position(III)	0.0		0.0	0.0	0.0	0.0	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	tector 1 Size(III)	2. 5.		0.7	2. 5.	2.7	0.7	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	tector Type	ž Š		Ϋ́ C	Ž Č	ž Č	ž Š	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	tector i crialinei	0		0	0	0	0	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	tector 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 0.0 0.0 0.6 0.6	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	rector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
0.0 0.0 Port NA Port	0.6 0.4 0.6 0.6 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0	stector 1 Delay (s)	0.0		0:0	0.0	0:0	0:0	
C+Ex C+Ex C+Ex (s) 0.0 0.0 0.0 NA Pert NA Pert	C+Ex C+Ex C+Ex C+Ex (s) 0.0 0.0 0.0 NA Prot	tector 2 Figure (III)	1: 0			1 4			
0.0 O.0 NA Pint	0.0 0.0 NA Prot	tector 2 Size(m)	0.0			0.0			
0.0 0.0 NA Perm NA Prof	0.0 0.0 NA Perm NA Prot	stector 2 Ohannel	<u> </u>			<u> </u>			
NA Perm NA Prot	NA Perm NA Prot	stector 2 Extend (e)	0			0			
		rector 2 Exterior (s)	0. 2		Dorm	2 2	- tul	Dorm	

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	†	<u> </u>	-	ļ	€	4	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Protected Phases	2			9	∞		
Permitted Phases			9			œ	
Detector Phase	2		9	9	∞	∞	
Switch Phase							
Minimum Initial (s)	30.0		30.0	30.0	10.0	10.0	
Minimum Split (s)	37.0		37.0	37.0	35.0	35.0	
Total Split (s)	22.0		22.0	22.0	35.0	35.0	
Total Split (%)	61.1%		61.1%	61.1%	38.9%	38.9%	
Maximum Green (s)	48.0		48.0	48.0	28.0	28.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	3.0		3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	-3.0		-3.0	-3.0	-3.0	-3.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Recall Mode	Max		None	None	None	None	
Walk Time (s)	15.0				20.0	20.0	
Flash Dont Walk (s)	7.0				7.0	7.0	
Pedestrian Calls (#/hr)	0				0	0	
Act Effct Green (s)	53.8		53.8	53.8	14.1	14.1	
Actuated g/C Ratio	0.71		0.71	0.71	0.19	0.19	
v/c Ratio	0.34		0.36	0.39	0.35	0.27	
Control Delay	4.7		7.8	5.2	29.1	7.7	
Queue Delay	0.2		0.0	0.0	0.0	0.0	
Total Delay	4.9		7.8	5.2	29.1	7.7	
SOT	∢		∢	⋖	ပ	ď	
Approach Delay	4.9			5.5	18.9		
Approach LOS	V			∢	Ф		
Intersection Summary							
Area Type:	Other						
Cycle Length: 90							
Actuated Cycle Length: 76	9						
Natural Cycle: 75							
Control Type: Semi Act-Uncoord	ncoord						
Maximum v/c Ratio: 0.39							
Intersection Signal Delay: 6.6	6.6			≟	tersection	Intersection LOS: A	
	AN AN AN AN AN			_	9/0	Clillaval of Sanzina C	

Splits and Phases: 2: Mall Entrance & Main St E



Synchro 10 Report Page 6

200624 Base Year PM Peak Hour Queues 2: Mall Entrance & Main St E

	†	-	ļ	✓	•	
Lane Group	EBT	WBL	WBT	NBL	NBR	
Lane Group Flow (vph)	848	148	966	114	103	
v/c Ratio	0.34	0.36	0.39	0.35	0.27	
Control Delay	4.7	7.8	5.2	29.1	7.7	
Queue Delay	0.2	0.0	0.0	0.0	0.0	
Total Delay	4.9	7.8	5.2	29.1	7.7	
Queue Length 50th (m)	18.7	6.7	24.1	14.4	0.0	
Queue Length 95th (m)	32.2	19.5	40.5	28.4	11.6	
Internal Link Dist (m)	110.8		249.6	120.7		
Turn Bay Length (m)		70.0				
Base Capacity (vph)	2494	407	2556	715	715	
Starvation Cap Reductn	826	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.52	0.36	0.39	0.16	0.14	
Inforceotion Cummony						
IIII SECTION SOUTHINGLY						

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HCM 2010 Signalized Intersection Summary 2: Mall Entrance & Main St E

																																	8 2	∞	16.9	7.0	78.0	0.0	9.		
4	NBR	W.	103	103	18	0	1.00	1.00	1900	103	-	1.00	280	0.18	1615	103	1615	4.0	4.0	280	0.36	269	1.00	1.00	25.9	0.7	0.0 4.8	26.6	ပ				. 9	9	55.0	7.0	48.0	10.0	C:3		
•	NBL	*	114	_	က				1900				324					4.0			0.35										26.6	O	2								
†	WBL WBT		148 996		1 6		1.00				1 2					148 996		8.0 8.0			0.29 0.39			1.00 1.00	6.8 4.2		1.5 3.9			1144	4.6	∢	3 4								
>	EBR V				12				•				333								0.33												2	2	22.0	7.0	48.0).0 0 0	ò		
†	EBT	₩.	741	741	2	0		1.00	1884	741	2	1.00	2228	0.71	3234	422	1789	6.4	6.4	1270	0.33	1270	1.00	1.00	4.0	0.7	3.4	4.7	A	848	4.8	∢	_				S	ဟ			
	Movement	Lane Configurations	Traffic Volume (veh/h)	Future Volume (veh/h)	Number	Initial Q (Qb), veh	Ped-Bike Adj(A_pbT)	Parking Bus, Adj	Adj Sat Flow, veh/h/ln	Adj Flow Rate, veh/h	Adj No. of Lanes	Peak Hour Factor	Percent Heavy Veh, %	Arrive On Green	Sat Flow, veh/h	Grp Volume(v), veh/h	Grp Sat Flow(s),veh/h/ln	Q Serve(g_s), s	Cycle Q Clear(g_c), s	l and Gm Can(a) wah (h	V/C Ratio(X)	Avail Cap(c a), veh/h	HCM Platoon Ratio	Upstream Filter(I)	Uniform Delay (d), s/veh	Incr Delay (d2), s/veh	"initial Q Delay(d3),s/ven %ile BackOfO(50%) yeh/ln	LnGrp Delay(d),s/veh	LnGrp LOS	Approach Vol, veh/h	Approach Delay, s/veh	Approach LOS	Timer	Assigned Phs	Phs Duration (G+Y+Rc), s	Change Period (Y+Rc), s	Max Green Setting (Gmax), s	Green Ext Time (g_C+IT), s		Intersection Summary	

Synchro 10 Report Page 8

Laries, voluriles, Tiriings	3: Main St E & Wilson Dr	

200624 Base Year PM Peak Hour

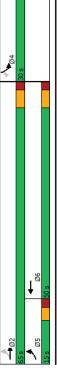
200624 Base Year PM Peak Hour

Lane Group Feb. Febr Wer Wer Seb. Seb.		1	†	ļ	4	۶	•	
ph) 79 761 1045 183 115 ph) 79 761 1045 183 115 9 761 1045 183 115 9 761 1045 183 115 9 761 1045 183 115 9 75 761 1045 183 115 9 75 761 1045 183 115 9 75 859 3459 0 1728 11 1 100 100 100 100 100 100 1 1 25 801 3606 174.4 9 79 761 1228 0 174.4 9 79 761 1228 0 115 1 100 100 100 100 100 100 1 1 20 100 100 100 100 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 3.3 3.3 3.3 3.3 1 3.3 3.3 3.3 3.3 1 4 8.4 8 4.8 4.8 1 7 8 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
ph) 79 76 1 1445 183 115 (ph) 79 761 1445 183 115 (ph) 1900 1900 1900 1900 1900 1900 1900 190	Lane Configurations	je.	*	*		K	æ	
(m) 79 761 1045 183 115 116 1900 1900 1900 1900 1900 1900 1900	Traffic Volume (vph)	79	761	1045	183	115	88	
1900 1900 1900 1900 1900 1900 1900 190	Future Volume (vph)	79	761	1045	183	115	83	
m) 50.0 3.6 3.6 3.3 m) 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.	Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
m) 500 0.0 550 1,00 0.95 0.95 0.95 1.00 1.00 1,00 0.978 0.978 0.95 1.00 1.00 1,145 3539 3459 0 1720 1.10 1,100 1.00 1.00 1.00 1.00 1.00 1,100 1.00 1.00 1.00 1.00 1.00 1.00 1,100 1.00 1.00 1.00 1.00 1.00 1.00 1,100 1.00 1.00 1.00 1.00 1.00 1.00 1,100 1.00 1.00 1.00 1.00 1.00 1.00 1,100 1.00 1.00 1.00 1.00 1.00 1.00 1,100 1.00 1.00 1.00 1.00 1.00 1.00 1,100 1.00 0.00 0.00 0.00 0.00 1,100 1.00 0.00 0.00 0.00 0.00 1,100 0.00 0.00 0.00 0.00 1,100 0.00 0.00 0.00 0.00 0.00 1,100 0.00 0.00 0.00 0.00 1,100 0.00 0.00 0.00 0.00 1,100 0.00 0.00 0.00 0.00 1,100 0.00 0.00 0.00 0.00 1,100 0.00 0.00 0.00 0.00 1,100 0.00 0.00 0.00 0.00 1,100 0.00 0.00 0.00 0.00 1,100 0.00 0.00 0.00 0.00 1,100 0.00 0.00 0.00 0.00 1,100 0.00 0.00 0.00 0.00 1,100 0.00 0.00 0.00 0.00 1,100 0.00 0.00 0.00 1	Lane Width (m)	3.3	3.6	3.6	3.6	3.3	3.5	
7.5	Storage Length (m)	20.0			0.0	22.0	0.0	
1,00	Storage Laries	- 4			>	- 7	-	
(m) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	lane Util Factor	00	0.95	0.95	0.95	100	100	
(m) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Ped Bike Factor	1.00		1.00		1.00	0.97	
(m) 20 950 0.950 0.950 0.1728 11 1745 3539 3459 0 1728 11 1745 3539 3459 0 1728 11 1745 1744 174 174 174 174 174 174 174 174 17	F			0.978			0.850	
(vph) 79 79 3539 3459 0 1728 119 1145 3539 3459 0 1728 119 1145 3539 3459 0 1728 119 1145 1145 1145 1145 1145 1145 1145	Fit Protected	0.950				0.950		
(m) 0.152 0.0950 0.1720 14.4 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Satd. Flow (prot)	1745	3539	3459	0	1728	1597	
(m) 279 3539 3459 0 1720 11 R5 50 50 50 50 50 50 50 50 50 50 50 50 50	Flt Permitted	0.152				0.950		
R S S S S S S S S S	Satd. Flow (perm)	279	3539	3459	0	1720	1551	
(m) 50 50 50 50 50 50 50 50 50 50 50 50 50	Right Tum on Red				Yes		Yes	
(m) 260 50 50 50 50 50 50 50 50 50 50 50 50 50	Satd. Flow (RTOR)			59			88	
(m) 260.1 360.6 174.4 (m) 260.1 360.6 174.4 (m) 260.1 360.6 174.4 (m) 26.2 2% 2% 2% 2% 1% 145.6 (kph) 79 761 1228 0 115.6 (kph) 79 761 1228 0 100 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Link Speed (k/h)		20	20		20		
(m) 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Link Distance (m)		260.1	360.6		174.4		
(m) 1,0 1,0 1,0 1,0 1,0 1,0 1,0 1,0 1,0 1,0	Travel Time (s)		18.7	26.0		12.6		
1,00 1,00	Confl. Peds. (#/hr)	4			4	က	12	
%) 0% 2% 2% 0% 1% (v(ph) 79 761 1045 183 115 (v(ph) 79 761 1028 0 115 (v(ph) 79 761 1228 0 115 (v(ph) No No No No No No (m) Leff Leff Leff RR 4.8 4.8 (m) 20 0.0 0.0 0.0 0.0 0.0 (m) 22 1 25 20 1 25 (m) 20 0.0 0.0 0.0 0.0 0.0 0.0 (m) 0.0 0.0 0.0 0.0 0	Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
(%) 79 761 1045 183 115 ((yph) 79 761 1228 0 115 ((yph) No No No No No No ((yph) 100 No No </td <td>Heavy Vehicles (%)</td> <td>%0</td> <td>2%</td> <td>5%</td> <td>%0</td> <td>1%</td> <td>%0</td> <td></td>	Heavy Vehicles (%)	%0	2%	5%	%0	1%	%0	
ffic (%) (v(vph)) 79 761 1228 0 115 Elesection No	Adj. Flow (vph)	26	761	1045	183	115	88	
(m) 79 761 1228 0 115 leisection No	Shared Lane Traffic (%)							
Interaction No	ane Group Flow (vph)	26	761	1228	0	115	88	
(m)	Enter Blocked Intersection	욷	2	2	2	2	2	
(m)	_ane Alignment	Left	Left	Left	Right	Left	Right	
(m) 4.8 4.8 4.8 4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Median Width(m)		 	 		 		
(m) 4.8 4.8 4.8 4.8 4.8 (m) mLane 1.04 1.00 1.00 1.00 1.04 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07	Link Offset(m)		0.0	0.0		0.0		
trick and the control of the control	Crosswalk Width(m)		4.8	8.8		4.8		
(tr) 1.04 1.00 1.00 1.04 1.04 1.00 1.04 1.04	Two way Left Turn Lane							
(m) 20 15 25 (m) 25 (m) 20 (m) 20 17 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Headway Factor	1.04	1.00	1.00	1.00	1.04	1.01	
(m) 2.0 1.0 2.0 2.0 (m) 2.0 1.0 10.0 10.0 0.0 0.0 0.0 0.0 0.0 0.0	Turning Speed (K/h)	£3.	•	•	15	72	ر د	
(m) 2.0 10.0 10.0 2.0 (m) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Number of Detectors	- :	7	7 -			- :	
r (m) 2.0 10.0 10.0 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Detector Template	ret S	Thru	Thru		Left	Right	
(m) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Leading Detector (m)	2.0	10.0	10.0		2.0	5.0	
nor(m) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0	
m) 2.0 0.6 0.6 2.0 Ci+EX Ci+EX Ci+EX Ci+EX Ci+EX Ci d(s) 0.0 0.0 0.0 0.0 (s) 0.0 0.0 0.0 0.0 (s) 0.0 0.0 0.0 0.0 m) 0.6 0.6 Ci+EX Ci+EX Ci+EX Ci m) 0.6 0.6 m) 0.6 0.6 mel	Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0	
CHEX CI+EX CI+EX CI+EX CI+EX CI d(s) 0.0 0.0 0.0 0.0 e(s) 0.0 0.0 0.0 0.0 on(m) 9.4 9.4 n) CI+EX CI+EX CI	Detector 1 Size(m)	2.0	9.0	9.0		2.0	2.0	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Detector 1 Type	C+EX	CI+EX	CI+EX		CI+EX	CI+EX	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Detector 1 Channel							
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.4 9.4 0.0 0.6 0.6 CI+EX CI+EX	Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0	
0.0 0.0 0.0 0.0 9.4 9.4 0.6 0.6 CI+Ex CI+Ex	Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0	
9.4 0.6 CI+Ex CI	Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0	
0.6 CI+Ex CI	Detector 2 Position(m)		9.4	9.4				
CI+EX	Detector 2 Size(m)		9.0	9.0				
Detector 2 Channel	Detector 2 Type		CI+EX	CI+EX				
	Detector 2 Channel							

Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 3: Main St E & Wilson Dr	imings son Dr						200624 Base Year PM Peak Hour
	4	†	ţ	4	۶	*	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Detector 2 Extend (s)		0.0	0.0				
Turn Type	pm+pt	NA	ΑN		Prot	Perm	
Protected Phases	2	2	9		4		
Permitted Phases	2					4	
Detector Phase	2	2	9		4	4	
Switch Phase							
Minimum Initial (s)	2.0	40.0	40.0		10.0	10.0	
Minimum Split (s)	10.0	46.0	46.0		26.0	26.0	
Total Split (s)	15.0	0.59	20.0		30.0	30.0	
Total Split (%)	15.8%	68.4%	25.6%		31.6%	31.6%	
Maximum Green (s)	10.0	29.0	44.0		24.0	24.0	
Yellow Time (s)	3.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead		Lag				
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	4.0	4.0		4.0	4.0	
Recall Mode	None	Max	None		None	None	
Walk Time (s)		30.0	30.0		7.0	7.0	
Flash Dont Walk (s)		10.0	10.0		13.0	13.0	
Pedestrian Calls (#/hr)		0	0		0	0	
Act Effct Green (s)	61.2	61.2	51.8		14.2	14.2	
Actuated g/C Ratio	0.73	0.73	0.62		0.17	0.17	
v/c Ratio	0.23	0.29	0.57		0.39	0.26	
Control Delay	5.2	4.3	11.4		34.7	9.1	
Queue Delay	0.0	0:0	0.0		0.0	0.0	
Total Delay	5.2	4.3	11.4		34.7	9.1	
TOS	A	A	В		O	Α	
Approach Delay		4.4	11.4		23.5		
Approach LOS		∢	В		O		
Intersection Summary							
Area Type:	Other						
Cycle Length: 95							
Actuated Cycle Length: 83.4	4						
Natural Cycle: 85							
Control Type: Semi Act-Uncoord	poord						
Maximum v/c Ratio: 0.57							
Intersection Signal Delay: 9.9	6.			<u>=</u>	Intersection LOS: A	LOS: A	
Intersection Capacity Utilization 60.2%	ation 60.2%			೦	U Level o	CU Level of Service B	
Analysis Period (min) 15							

Splits and Phases: 3: Main St E & Wilson Dr



Paradigm Transportation Solutions Limited

Queues 3: Main St E & Wilson Dr

200624 Base Year PM Peak Hour

	1	†	ţ	۶	•	
Lane Group	EBL	EBT	WBT	SBL	SBR	
Lane Group Flow (vph)	6/	761	1228	115	68	
v/c Ratio	0.23	0.29	0.57	0.39	0.26	
Control Delay	5.2	4.3	11.4	34.7	9.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	5.2	4.3	11.4	34.7	9.1	
Queue Length 50th (m)	5.9	17.8	29.0	17.3	0.0	
Queue Length 95th (m)	7.6	30.4	93.0	32.6	12.0	
Internal Link Dist (m)		236.1	336.6	150.4		
Turn Bay Length (m)	20.0			22.0		
Base Capacity (vph)	398	2597	2158	538	545	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.20	0.29	0.57	0.21	0.16	
Intersection Summary						

Paradigm Transportation Solutions Limited

Synchro 10 Report Page 10

HCM 2010 Signalized Intersection Summary 3: Main St E & Wilson Dr

200624 Base Year PM Peak Hour

Volumes, Timings	Jrew Centre/Private Driveway & Main St E
Lanes, \	4: Drew

200624 Base Year PM Peak Hour

ı	EBT	WBT	WBR	SBI	SBR		
	*	\$		-	*		
	761	1045	183	115	- 8		
	761	1045	183	115	68		
	2	9	16	7	4		
	0	0	0	0	0		
			0.5	0.0	1.00		
	00.1	1:00	00.1	00.1	1.00		
	1863	1868	1900	1881	1900		
	رور	1045	183	115	gg 1		
	N 6	N 6	> 5	- 5	- 6		
	9.1	0.1	9.6	9.7	00.1		
	7 000	7 000	0 0	- 5	0 00		
	6007	930	338	703	738		
	0.75	4 5	40.0	4700	0.15		
	3032	4	070	76/1	CIO		
	761	613	615	115	80		
	0//	رد/ /L	1//3	7,67	1615		
	2.5	15.3	15.4	4.7	4.0		
	5.5	15.3	15.4	4.7	4.0		
			0.30	1.00	1.00		
	2669	1137	1136	263	238		
	0.29	0.54	0.54	0.44	0.37		
	2669	1137	1136	216	519		
	1.00	1.00	1:00	1.00	1:00		
	1.00	1:00	1.00	1.00	1:00		
	3.1	8.0	8.0	31.4	31.1		
	0.3	0.7	0.7	1.6	1.4		
	0.0	0.0	0.0	0.0	0.0		
	2.7	7.5	7.7	2.5	1.9		
	3.4	9.8	8.7	33.1	32.5		
	Α	Α	Α	ပ	ပ		
	840	1228		204			
	3.6	8.7		32.8			
	×	A		O			
	2	3	4	2	9	7	8
	2		4	2	9		
	65.0		15.9	9.2	55.8		
	0.9		0.9	2.0	0.9		
	59.0		24.0	10.0	44.0		
	7.5		6.7	3.0	17.4		
	11.2		1.1	0.1	15.3		
		0 6					
		<					

Synchro 10 Report	Page 12
	lutions Limited
	Paradigm Transportation Sol

Lane Group EBI EBI	227 227 227 227 227 3.5 40.0 1.00 0.95 0.85 0.85 0.85 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	WBL 137 137 137 130 1900 3.3 45.0 1.00 0.95 0.95 0.95 0.95 457 457	MMBT N 601 601 1900 3.6 3.6 3.6 3.6 50 50 50 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.95 1.00 0.95 1.00 1.0	WBR 1900 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	NBL 473 473 473 3.3 0.0 0.0 0.0 0.99 0.99 0.99 0.99 0.	1.00 1.00 1.00 1.00 1.00 1.57 1.57 1.57 1.57 1.00 1.00	NBR 106 1900 1000 1000 1000 1000 1000 1000	SBL 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3.6 1900 3.6 3.6 1900 190	3.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1900 1900 3.3 15.0 15.0 1.00 1.00 1.00 1.00 0%	227 227 227 227 3.5 40.0 1.00 0.850 0.850 0.850 1.621 1.621 1.621 1.00 5%	137 137 137 137 133 45.0 1.00 0.95 0.95 0.95 0.95 1694 0.258 457	601 601 1900 3.6 3.6 0.95 50 50 26.1 1.00 0%	1,00 0,0 0,0 0,0 0,0 0,0 0,0 0,0 0,0 0,0	473 473 473 1900 3.3 0.0 0.0 0.95 0.95 0.950 3255 0.950 3255 3295 3295 3295 3296 3296 3296 3296 3296 3296 3296 3296	1900 0 0 0 0 3.6 0.98 0.850 1557 1557 435 50 256.9 18.5	106 1006 1006 3.5 55.0 0 0 1.00 7 es	0 0 3.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	1900 3.6 3.6 1900 1900 1900 1900 1900 1000 1000 100	76 1.0 0.1 × 6 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
1900 1900 150 150 100 100 100 100 100 1	227 227 1900 3.5 40.0 1.00 0.95 0.850 1521 1451 Yes 180 1.00 5%	137 1900 3.3 45.0 1.00 0.99 0.960 1694 0.258 457 1.00 15	601 1900 3.6 3.6 50 50 50 26.1 1.00 0%	100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	473 473 1900 3.3 0.0 7.5 0.95 0.95 0.95 0.95 3.25 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.9	1900 3.6 3.6 0.850 0.850 1557 1557 435 50 256.9 18.5	106 106 3.55 0 0 0 1.00 7 fes	1900 3.6 0.0 1.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3.6 3.6 3.6 1900 1900 1900 1900 1900 1000 3.7	20 ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °
1900 3.3 15.0 15.0 1.00 1.00 1.00 1.00 1.00 1.00	227 1900 3.5 40.00 1.00 0.95 0.95 0.850 1451 Yes 180 1.00 5%	137 1900 3.3 45.0 1.00 0.99 0.99 0.258 457 1.00 15 1.00 15 1.00 15 1.00 15 1.00 15 1.00 15 1.00 10 10 10 10 10 10 10 10 10 10 10 10 1	601 3.6 3.6 0.95 50 50 3610 3610 1.00 0% 601	0 3.6 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	473 1900 2 3.3 0.0 2 7.5 0.97 0.950 3255 0.950 3255 0.950 3255 0.950 3255 0.950 3255 0.950 3255 0.950 3255 0.950 3255 0.950 0.	3.6 3.6 1.00 0.98 0.850 1557 1557 435 50 256.9 18.5	106 1900 3.5 3.5 5.0 0 0 0 0 7 es	1900 3.6 0.0 0.0 1.00 0 0 0 0 0 0 0 0 0 0 0 0 0	3.6 3.6 1900 1900 1900 50 51.9 3.7	3.3.3.3.3.3.4.0.0.1.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0
1900 3.3 15.0 1.00 1.00 1.00 1.00 1.00 0 0	3.5 40.0 1.00 0.95 0.850 1.00 1.00 1.00 5% 1.00 5%	1900 3.3 45.0 45.0 1.00 0.95 0.95 0.95 457 457 1.00 3%	3.6 3.610 3.610 3.610 2.6.1 1.00 0%	3.6 0.0 0 0 1.00 0 7 es	1900 3.3 0.0 2 7.5 7.5 0.95 0.95 0.95 0.95 3.255 0.95 0.950 3.255 0.950	3.6 3.6 1.00 0.38 0.850 1557 1557 435 50 256.9 18.5	1900 3.5.0 0 0 0 7 Yes	3.6 0.0 0.0 1.00 0 0 0 0 0 0 0 0 0 0 0 0 0	3.6 3.6 1.00 1900 50 51.9 3.7 3.7	3.6 3.6 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
3.3 15.0 1.00 1.00 1837 1837 1,00 0,0%	3.5 40.0 1.00 0.95 0.850 1.00 1.00 5% 1.00 5%	3.3 45.0 1.0 0.950 0.950 1694 0.258 457 457 1.00 3%	3.6 0.95 3610 3610 50 26.1 1.00 0%	3.6 0.0 0 0 0 1.00 0 7 es	3.3 0.0 7.5 0.97 0.95 0.950 3.255 0.950 3.255 3.255 1.00 4%	3.6 1.00 0.98 0.850 1.557 1.557 4.35 50 2.256.9 1.00	3.5 55.0 0 0 0 7 es	3.6 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3.6 1900 1900 1900 50 50 51.9 3.7	3.6 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
15.0 7.5 1.00 1.00 1.00 0 0%	40.0 1.00 0.95 0.850 0.850 1.80 1.00 5%	45.0 1.00 0.95 0.950 0.258 457 457 1.00 3%	0.95 3610 3610 362.0 26.1 1.00 0%	0.0 0 0 1.00 0 Ves	0.0 2 7.5 0.97 0.95 0.950 3255 0.950 3255 1.00 2 1.00	1.00 0.98 0.850 1557 1557 435 50 256.9 18.5	1.00 0 Yes 1.00 1.00 1.00	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.00 1900 1900 50 51.9 3.7	7.0 1.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0
1 1.00 1.00 1.	1.00 0.95 0.850 1.00 1.00 5%	7.5 1.00 0.99 0.950 1694 0.258 457 457 1.00	50 3610 3620 50 3620 1.00 0%	1.00 0 0 Ves 7.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 7.5 0.97 0.950 3255 0.950 3255 1.00 4%	1.00 0.98 0.850 1557 1557 435 50 256.9 18.5	7 Kes 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.00 1900 1900 50 50 51.9 3.7	1.00 Ves 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
7.5 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.	1.00 0.95 0.850 1.851 1451 Yes 180 1.00 5%	7.5 1.00 0.99 0.950 1694 0.258 457 1.00	0.95 3610 362.0 26.1 1.00 0%	1.00 0 Ves 1.00 0%	7.5 0.97 0.950 3255 0.950 3255 1.00 4%	1.00 0.98 0.98 0.850 1557 1557 435 50 256.9 1.00	7 de s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,00 1900 1900 50 51.9 3.7	0.1 0.000000000000000000000000000000000
1.00 1837 R) 1837 (1) 1.00 %) 0% %) 0%	1.00 0.95 0.95 0.850 1.621 1.60 1.00 5%	1.00 0.950 0.950 1694 0.258 457 457 1.00	3610 3610 50 362.0 26.1 1.00 0%	1.00 0 Ves 1.00 0%	0.97 0.99 0.950 3255 0.950 3239 3239 1.00 4%	1.00 0.98 0.850 1.557 1.557 435 50 2.56.9 1.00	7 Yes 1.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1900 1900 1900 50 51.9 3.7	7 Yes 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
(1837 (1937) (1) (1837) (2) (1937) (3) (1937) (4) (1937) (6) (1937)	0.95 0.850 0.850 1451 1451 1461 150 1.00 5%	0.950 0.258 0.258 457 1.00 3%	3610 3610 50 50 26.1 1.00 0%	0 0 1.00 0.00 0.00 0.00 0.00 0.00 0.00	0.950 0.950 3.255 0.950 3.239 3.239 4.00 4.00 4.00	0.850 0.850 1557 1557 435 50 256.9 1.00	Yes 0 0 100	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1900 1900 50 51.9 3.7	Yes 7 4 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1837 1837 (A) 1837 (A) 100 (A) 0% (B) 0% (B) 0%	0.850 1451 1451 Yes 180 1.00 5%	0.950 1694 0.258 457 1.00 3%	3610 3610 50 362.0 26.1 1.00 0%	0 0 Ves 1.00 0%	0.950 3255 0.950 3239 1.00 4%	0.850 1557 1557 435 50 256.9 1.00	Xes 0 0 100	0 0 0	1900 1900 50 51.9 3.7	0.000
1837 Md (R) (R) (r) (r) (r) (r) (r) (r) (r) (r	1521 1451 Yes 180 1.00 5%	0.950 1694 0.258 457 457 1.00	3610 362.0 26.1 1.00 0%	0 0 0 1.00 0.00 0.00 0.00 0.00 0.00 0.0	0.950 3255 0.950 3239 1.00 4%	1557 1557 435 50 256.9 1.00	0 Ves Yes	0 0 0 1.00	1900 1900 50 51.9 3.7	7 Ver 1.00.
1837 FR) 1837 (1) 1.00 %) 0% (2) 0%	1521 1451 Yes 180 15 1.00 5%	1694 0.258 457 15 1.00	3610 3610 50 362.0 26.1 1.00 0%	0 0 Ves 1.00 0%	3255 0.950 3239 1.00 4%	1557 1557 435 50 256.9 1.00	7 Yes	0 0 0	1900 1900 50 51.9 3.7	, 0°, 0°, 0°, 0°, 0°, 0°, 0°, 0°, 0°, 0°
m) 1837 (sed OR) () m) m) (rir) 1.00 (%) 0%	1451 Yes 180 180 1.00 5%	0.258 457 15 1.00	3610 50 362.0 26.1 1.00 0% 601	7 Yes 0 1.00 0%	0.950 3239 1.00 4%	1557 435 50 256.9 18.5	Yes 3	0 0 1.00	1900 50 51.9 3.7 1.00	, 0°0 0°0 0°0 0°0 0°0 0°0 0°0 0°0 0°0 0°
mm) 1837 (eed ORN) 08 (h) m) (in) 1.00 (%) 0% 0 and (%)	1451 Yes 180 180 1.00 5%	457 1.00 3%	3610 50 362.0 26.1 1.00 0% 601	7es 7	3239 1.00 4%	435 50 256.9 18.5	Yes 1.00	0 8 1.00	50 51.9 3.7 1.00	9° 0.1
eled O(R) () () () () () ((%) (%) (%)	Yes 180 150 1.00 5%	1.00	50 362.0 26.1 1.00 0% 601	Yes 1.00 0%	1.00	435 50 256.9 18.5	Yes 1.00	1.00	50 51.9 3.7	% 0.10.
OR) 1) 1n) 1rr) 100 100 (%) 0	1.00 1.00 5%	1.00	50 362.0 26.1 1.00 0% 601	1.00	1.00	435 50 256.9 18.5	1.00	1.00	50 51.9 3.7	0.00
n) hh) thr) tool (%) 0%	1.00	1.00	50 362.0 26.1 1.00 0% 601	1.00	1.00	50 256.9 18.5	1.00	1.00	51.9	5.0
m) hr, topic 1.00 (%) 0% affic (%)	1.00	1.00	362.0 26.1 1.00 0% 601	1.00	1.00	18.5	1.00	1.00	3.7	0.0
hr) tor 1.00 (%) 0% o 0	1.00 5%	1.00	1.00 0% 601	1.00	1.00	18.5	1.00	1.00	3.7	0.00
hr) 1.00 1 (%) 0% 0 1.00 1 0 1.00 1 1	1.00 5%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
tor 1.00 1 (%) 0% 0% 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.00	1.00	1.00	0%	4%	1.00	1.00	1.00	1.00	6.0
: (%) 0% . 0	22%	3%	0%	%0	4%				200	0
affic (%)	207	2	601		110	%0	2%	%0	%0	
Shared Lane Traffic (%)	177	137		0	473	0	106	0	0	
0	227	137	601	0	473	106	0	0	0	
itersection No	2	2		S	S	2	2	8	8	ટ
reft	Right	Left		Right	Left	Left	Right	Left	Left	Right
Median Width(m) 3.3			3.3			9.9			9.9	
Link Offset(m) 0.0			0.0			0.0			0:0	
Crosswalk Width(m) 4.8			4.8			4.8			4.8	
n Lane										
-	1.01	1.04	1.00	1.00	1.04	1.00	1.01	1.00	1:00	9.
25	15	25	,	15	25	,	15	52	,	_
S .	-	_	2		_	2		_	2	
Left	Right	Left	Thru		Left	Thru		Left	Thru	
) 2.0 (2.0	2.0	10.0		5.0	10.0		2.0	10.0	
0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
(m) 0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
m) 2.0	2.0		0.6		2.0	9.0		2.0	0.0	
Detector I type OFEX OFEX OFEX Detector Channel	ř Š	Х Н С	Σ E		ž - -	ž Š		Σ 5	ž Š	
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	0.0		0.0	0.0		0.0	0.0	
0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
) (H			9.4			9.4			9.4	
Detector 2 Size(m) 0.6			9.0			9.0			9.0	
Detector 2 Type CI+Ex			CI+Ex			CI+EX			CI+EX	

Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 4: Drew Centre/Private Driveway & Main St E

	1	†	<i>></i>	>	ţ	4	•	←	4	۶	→	*
Lane Group	BB	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	Ν				
Protected Phases		2	•	← 0	9			∞		4 .	4	
Permitted Phases	.7		7	. م			∞ (4		
Detector Phase	2	2	2	~	9		∞	∞		4	4	
Minimum Initial (a)	4	4	24	4	0 11		9	9		9	9	
Minimum Split (s)	35.0	35.0	35.0	0.0	35.0		0.0	0.0		13.0	13.0	
Total Solit (s)	39.0	39.0	39.0	16.0	55.0		310	34.0		14.0	14.0	
Total Split (%)	39.0%	39.0%	39.0%	16.0%	25.0%		31.0%	31.0%		14.0%	14.0%	
Maximum Green (s)	32.0	32.0	32.0	12.0	48.0		24.0	24.0		7.0	7.0	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0	3.0	1.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	-3.0	-3.0	-3.0	0.0	-3.0		-3.0	-3.0			-3.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	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				
Flash Dont Walk (s)	21.0	21.0	21.0		21.0		13.0	13.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effct Green (s)		52.8	52.8	9:59	9.59		26.4	26.4				
Actuated g/C Ratio		0.53	0.53	99.0	99.0		0.26	0.26				
v/c Ratio		0.42	0.27	0.34	0.25		0.55	0.15				
Control Delay		16.3	2.0	9.7	8.0		33.7	0.4				
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0				
Total Delay		16.3	5.0	9.7	8.0		33.7	0.4				
TOS		ш	×	⋖	⋖		O	∢				
Approach Delay		13.8			8.3			27.6				
Approach LOS		В			∢			O				
Intersection Summary												
Area Tvoe:	Other											
Cycle Length: 100												
Actuated Cycle Length: 100	0											
Offset 16 (16%), Referenced to phase 2:EBTL, Start of Green	ed to phase	2:EBTL,	Start of (Green								
Natural Cycle: 85												
Control Type: Actuated-Coordinated	ordinated											
Maximum v/c Ratio: 0.55												
Intersection Signal Delay: 15.5 Intersection Capacity Utilization 61.1%	15.5 ation 61.1%			드인	Intersection LOS: B ICU Level of Service B	LOS: B	В					
Analysis Period (min) 15												

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Splits and Phases: 4: Drew Centre/Private Driveway & Main St E

- € Ø2 (R)

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Paradigm Transportation Solutions Limited

Queues 4: Drew Centre/Private Driveway & Main St E

200624 Base Year PM Peak Hour Lane Group EBT EBR WBI WBT NBL NBT
Lane Group Flow (vph) 796 227 137 601 473 106

Wc Ratio Control Delay 16.3 5.0 9.7 8.0 33.7 0.4

Courtor Delay 16.3 5.0 9.7 8.0 33.7 0.4

Queue Length 50th (m) 43.7 6.19 20.3 38.9 53.8 0.0

I um Bay Length (m) 38.6 40.0 40.0 0.0

Sanvalion Cap Reductn 0 0 0 0 0 0 0

Sundse Cap Reductn 0 0 0 0 0 0 0

Reduced vic Ratio 0.42 0.27 0.31 0.25 0.51 0.14

Paradigm Transportation Solutions Limited

HCM 2010 Signalized Intersection Summary 4: Drew Centre/Private Driveway & Main St E

	1	†	<u> </u>	>	ļ	4	•	←	4	۶	→	*
Movement	田田	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	-	*	ĸ.	F	ŧ		K.	Ŷ,			4	
Traffic Volume (veh/h)	0	962	227	137	601	0	473	0	106	0	.0	0
Future Volume (veh/h)	0	962	227	137	601	0	473	0	106	0	0	0
Number	2	2	12	-	9	16	က	∞	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.39	1:00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	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 Sat Flow, veh/h/In	1900	1900	1810	1845	1900	0	1827	1863	1900	1900	1900	1900
Adj Flow Rate, veh/h	0	962	227	137	601	0	473	0	106	0	0	0
Adj No. of Lanes	_	2	-	-	2	0	2	_	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
Percent Heavy Veh, %	0	0	2	က	0	0	4	0	2	0	0	0
Cap, veh/h	72	2266	924	426	2589	0	828	0	319	0	0	0
Arrive On Green Sat Flow, veh/h	831	0.63 3610	0.63	0.05	3705	0.00	3375	0.00	1575	0.00	0.00	0.00
Gro Volume(v). veh/h	0	962	227	137	601	0	473	0	106		0.0	
Grp Sat Flow(s),veh/h/ln	831	1805	1520	1757	1805	0	1688	0	1575			
Q Serve(g_s), s	0:0	10.5	6.5	2.8	5.6	0.0	13.0	0.0	5.9			
Cycle Q Clear(g_c), s	0.0	10.5	6.5	2.8	2.6	0.0	13.0	0.0	5.9			
Prop In Lane	1.00		1:00	1:00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	72	2266	954	426	2589	0	828	0	319			
V/C Ratio(X)	0.00	0.35	0.24	0.32	0.23	0.00	0.57	0.00	0.33			
Avail Cap(c_a), veh/h	72	2266	954	220	2589	0	1055	0	425			
HCM Platoon Ratio	1.00	1.00	1:00	1:00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	9.5	9:1	9:	9:	0.00	9 5	0.00	1.00			
Uniform Delay (d), s/veh	0.0	8.9	8.2	7.1	4.8	0.0	37.0	0.0	35.4			
Incr Delay (d2), s/veh	0:0	0.4	9.0	4.0	0.0	0.0	9.0	0.0	9.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	5.3	2.9	4:	5.8	0.0	6.1	0.0	5.6			
LnGrp Delay(d),s/veh	0.0	 6	8.7	7.5	8.4	0.0	37.6	0.0	36.0			
Lugh LOS		∢	∢	∢	<							
Approach Vol, veh/h		1023			738			579				
Approach Delay, sweri		3.5			o.c.			ر د. ر				
Approach LOS		∢			∢			a				
Timer	—	2	3	4	2	9	7	80				
Assigned Phs	1	2				9		8				
Phs Duration (G+Y+Rc), s	9.0	8.99				75.7		24.3				
Change Period (Y+Rc), s	4.0	7.0				7.0		7.0				
Max Green Setting (Gmax), s	15.0	32.0				48.0		24.0				
Max Q Clear Time (g_c+l1), s	4.8	12.5				7.6		12.0				
Green Ext Time (p_c), s	0.3	9.7				2.7		2.2				
Intersection Summary												
HCM 2010 Ctrl Delay			14.9									
HCM 2010 LOS			മ									

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Lanes, Volumes, Timings 5: Thompson Rd & Main St E

200624 Base Year PM Peak Hour

200624 Base Year PM Peak Hour

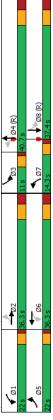
p EBI EBI EBR WBL WBT WBR igurations 1	<u>+</u>	,	1	•	—	•	۶	→	*
249 471 163 363 416 48 249 477 163 363 416 48 249 477 163 363 416 48 1900 1900 1900 1900 1900 1900 3 3 3 3 6 3 6 3 3 3 3 6 3 6 600 0.090 1900 1900 1900 1900 0.961 0.095 0.95 1.00 0.95 0.95 17.5 0.961 0.096 1.00 0.962 0.95 1.00 0.95 0.95 0.416 0.963 0.960 3838 0 0.416 0.963 0.963 3838 0 0.416 0.963 0.963 3838 0 0.416 0.960 0.960 0.960 0.97 343 0.94 471 163 363 416 48 0.97 471 163 363 416 48 0.98 471 163 363 416 48 0.99 471 163 363 416 48 0.90 0.00 0.00 0.00 0.00 0.00 0.00 0.00	. EBR		WBR	NBL	NBT	NBR	SBL	SBT	SBR
249 471 163 363 416 48 190 190 190 190 190 190 190 190 190 190		¥		K	*		K	*	
1900 1900 1900 1900 1900 1900 1900 1900	163			180	512	199	48	734	119
1900 1900 1900 1900 1900 1900 1900 1900	163			180	512	199	48	734	119
3.3 3.6 3.8 3.3 3.6 3.8 3.6 3.6 3.6 3.6 3.6 3.6 3.8 3.6 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.6 3.8 3.8 3.6 3.8 3.6 3.8 3.8 3.6 3.8 3.6 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8	1900	•	<u>~</u>	1900	1900	1900	1900	1900	1900
600 0.0 150.0 0.0 150.0 0.0 150.0 0.0 17.5 1.0 0.95.0 0.95.0 1.00 0.95.0 0.95.0 1.00 0.95.0 0.95.0 1.00 0.95.0 0.9	3.6		3.6	3.3	3.6	3.6	3.3	3.6	3.6
7.5 1 0 7.5 0.05 1.00 0.95 0.95 1.00 0.95 0.95 1.04 0.960 0.960 0.960 0.960 0.960 1.04 0.416 0.198 764 3435 0 1728 3338 0 0 0.416 0.198 764 3435 0 1728 3338 0 0 0.416 0.190 0.100 1.00 1.00 0.00 0.100 0.100 1.00 1.	_	0.0	0.0	0.09		0.0	55.0		0.0
1,00 0.95 0.95 1,00 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.	0	- ı	0	- ı		0	- ı		0
1.00 0.95 0.95 1.00 0.95 0.95 0.95 0.964 0.966 0.964 0.966 0.966 0.964 0.966 0.964 0.966 0.964 0.966 0.964 0.966 0.964 0.966 0.964 0.966 0.964 0.966 0.964 0.966 0.964 0.966 0.964 0.966 0.964 0.966 0.964 0.966 0.964 0.966 0.966 0.964 0.966 0			•	6.7	0	0	6.7	0	0
0.950 0.950 0.954 0.954 0.950 0.950 0.950 0.950 0.950 0.950 0.416 0.198 0.198 0.446 0.198 0.260 0.950	0.95	Ì	0	1.00	0.95	0.95	1.00	0.95	0.95
1745 3435 0 1759 3538 0 0 4416 0 1764 3435 0 1768 3538 0 0 4416 0 1764 3435 0 1768 3538 0 0 4416 1 100 1.00 1.00 1.00 1.00 1.00 1.00 1				0	0.958		0	0.979	
(a) 145 3435 0 1726 3336 0 1726 3336 0 1726 3336 0 1726 3336 0 1726 3336 0 1726 3336 0 1726 3336 0 1726 3336 0 1726 3336 0 1726 3336 0 1726 3326 0 1726 1726 1726 1726 1726 1726 1726 1726	c			0.950	000	c	0.950	0	C
(c) 100 100 100 100 100 100 100 100 100 10	0			1728	3439	0	1/1	3258	0
(a) 249 (74) (74) (74) (74) (74) (74) (74) (74)	c			0.12	2420	c	#C7.0	25.00	_
90.00000000000000000000000000000000000	0 00			117	0453	۰ م ۷	5	2223))
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362.0 250.3 250.3 250.3 26.1 10.0 1.00 1.00 1.00 1.00 1.00 1.00 1	20	20			09			09	
26.1 18.0 1.00 1.00 1.00 1.00 0.00 0.00 0.	362.0	250.3			278.6			217.9	
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	26.1	18.0			16.7			13.1	
0% 1% 1% 1% 0% 4% 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			_	1.00	1.00	1.00	1.00	1.00	1.00
10 249 471 163 363 416 48 48 10 363 416 48 48 10 363 416 48 10 363 416 48 10 363 416 48 10 363 416 48 10 363 416 48 10 363 416 48 10 363 416 48 10 363 416 48 10 363 416 48 10 363 416 48 10 363 416 48 10 36 48 1	1%			1%	%0	2%	2%	%0	1%
(b) 249 634 0 363 464 0 0 100 No	163			180	512	199	48	734	119
Displayer (234 of 634 of 64 of									
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1.00			Ċ	9	9	2	9 -	9 -	2
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1.04 1.00 1.04 1.00 1.00 1.00 1.00 1.00	0.0	0.0			0.0			0.0	
104 1.00 1.00 1.04 1.00 1.00 25 15 25 15 1 2 1 15 26 17,00 0.00 0.00 0.00 20 0.00 0.00 0.00 20 0.00 0.0	4.0	4.0			0.4			0.4	
2.0	5			2	5	5	20	5	5
Left Thru Left T	00.1 2.1			25	00.1	2,5	2,04 7,04	3	8. 1
Left Thru 2.0 10.0 2.0 10.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2		2	3 -	c	2	3 -	c	2
2.0 10.0 2.0 10.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0				- 	Zhrii		- 	Thrii	
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0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0				0.0	0.0		0.0	0.0	
2.0 0.6 2.0 0.6 CI-EX CI				0.0	0.0		0.0	0.0	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	9.0			2.0	9.0		2.0	9.0	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0				CI+EX	CI+EX		CI+Ex	CI+Ex	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0									
00 00 00 00 00 00 00 00 9.4 9.4 9.4 0.6 0.6 0.6 CI+EX CI+EX	0.0			0.0	0.0		0.0	0.0	
m) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0			0.0	0.0		0.0	0.0	
m) 9.4 9.4 0.6 0.6 CI+EX CI+EX s) 0.0 0.0	0.0			0.0	0.0		0.0	0.0	
CI+EX CI+EX (00 00 00 00 00 00 00 00 00 00 00 00 00	9.4	9.4			9.4			9.4	
0.0 0.0 (s	CI+Ex	CI+EX			CI+EX			CI+EX	
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-	0.0	0.0			0.0			0.0	
pm+pt NA	NA pm	+pt NA		pm+pt	¥		pm+pt	Ν	

Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 5: Thompson Rd & Main St E

EBL EBT EBR WBL WBT WBT NBL NBT NBT <th></th>													
6 7 4 3 4 4 8 7 4 3 6 7 4 3 8 6 50 100 50 9 5 32.0 9.5 10.3 32.7 11.0 10.3 33.7 7.0 10.3 33.7 7.0 10.0 3.0 1.0 10.0 0.0 0.0 10.0 0.0 0.0 10.0 0.0 1	ane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
5.0 10.0 5.0 9.5 3.0 10.0 5.0 9.5 32.0 9.5 32.0 9.5 32.0 9.5 32.0 9.5 32.0 9.5 32.0 32.0 33.0 30.0 33.0 30.0 32.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	Protected Phases	5	2		-	9		7	4		က	∞	
6 7 4 3 3 4 6 10 6 5 0 5 0 10 0 5 0 10 0 5 0 10 0 5 0 10 0 5 0 0 0 0	Permitted Phases	2			9			4			∞		
5.0 10.0 5.0 9.5 32.0 9.5 32.0 9.5 32.0 9.5 32.0 9.5 32.0 9.5 32.0 9.5 32.0 9.5 32.0 9.5 32.0 9.5 32.0 9.5 32.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9	Detector Phase	2	2		τ-	9		7	4		က	∞	
9 50 10.0 5.0 10.0 5.0 10.0 5.0 10.0 5.0 10.0 5.0 10.0 3.0 10.0 3.0 10.0 3.0 10.0 5.0 10.0 10	Switch Phase												
3 143, 320 9.5 3 143, 370% 10.0% 37.0% 10.0% 30.0 0 1.0 3.0 4.0 3.0 0 0.0 -3.0 0.0 0 4.0 4.0 4.0 4.0 0 Lead Lag Lead Lag Lead 18.0 0 0.0 0.0 0.0 0 47.3 39.0 40.2 0 47.3 39.0 40.2 0 6 46.2 29.0 20.5 0 6 46.2 29.0 20.5 0 6 46.2 29.0 20.5 0 7.0 0.0 0.0 0.0 0 32.5 C C	Ainimum Initial (s)	2.0	15.0		2.0	15.0		2.0	10.0		2.0	10.0	
3 143 40.7 110 3.6 110.8 34.7 10.8 34.7 10.8 34.7 10.8 34.7 10.8 34.7 10.8 34.7 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10	Ainimum Split (s)	9.2	32.0		9.5	32.0		9.5	32.0		9.5	32.0	
130% 370% 100% 34 103 38.7 7 10 3 10 10 10 10 10 10 10 10 10 10 10 10 10	otal Split (s)	22.0	36.3		22.0	36.3		14.3	40.7		11.0	37.4	
3 10.3 33.7 7.0 30.0 10.0 3.0 10.3 33.7 7.0 3.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	otal Split (%)	20.0%	33.0%		20.0%	33.0%		13.0%	37.0%		10.0%	34.0%	
3.0 4.0 3.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	Aaximum Green (s)	18.0	29.3		18.0	29.3		10.3	33.7		7.0	30.4	
1.0 3.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	(ellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
0.0 3.0 0.0 0.0 4.0 4.0 0.4.0 4.0 0.4.0 4.0 0.3.0 3.0 0.3.0 3.0 0.4.3 3.0 0.78 3.0 0.78 3.0 0.78 0.57 0.20 0.0	II-Red Time (s)	1.0	3.0		1.0	3.0		1.0	3.0		1.0	3.0	
9 Lead Lag Lead 1.0 3.0 3.0 3.0 1.0 3.0 3.0 3.0 1.0 C.Max None C-II 1.0 18.0 1.0 18.0 1.0 0.0 0.0 1.0 0.	ost Time Adjust (s)	0.0	-3.0		0.0	-3.0		0.0	-3.0		0.0	-3.0	
Used Lag Lead 3.0 3.0 3.0 1.0 3.0 3.0 1.0 3.0 3.0 1.0 18.0 1.	otal Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
3.0 3.0 3.0 3.0 3.0 None C-Max None C-I 18.0	.ead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
9. 3.0 3.0 3.0 3.0 0.0 0.0 0.0 0.0 0.0 0.	.ead-Lag Optimize?												
Mone C-Max None C-I 1.0 18.0 18.0 18.0 18.0 19.0 47.3 39.0 40.2 39.0 40.2 50.0 60.0 60.0 7.0 7.0 18.0 18.0 60.0	(ehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
7.0 18.0 0 0 0 0 47.3 39.0 40.2 3 3 0.43 0.35 0.37 (2) 0 0.7 (2) 0 46.2 29.0 20.5 4 0 46.2 29.0 20.5 4 0 20.5 20.0 20.5 4 0 32.5 20.0 C C C	Recall Mode	None	Max		None	None		None	C-Max		None	C-Max	
18.0 0 47.3 39.0 40.2 0 47.3 0.35 0.37 0 7.8 0.57 0.20 46.2 29.0 0.0 0 0 0 0 0.0 46.2 29.0 20.5 0 46.2 29.0 20.5 0 5.0 0 7.0 0 7.0 0 0 0 0.0 0 0 0 0 0.0 0 0 0 0 0.0 0 0 0 0 0 0 0 0.0 0 0 0 0 0 0 0.0 0 0 0 0 0 0 0 0 0.0 0 0 0 0 0 0 0 0 0 0.0 0 0 0 0 0 0 0 0 0 0 0.0 0 0 0 0 0 0 0 0 0 0 0 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Valk Time (s)		7.0			7.0			7.0			7.0	
9 47.3 39.0 40.2 9 0.43 0.35 0.37 0.78 0.57 0.20 9 46.2 29.0 20.5 0 0.0 0.0 0.0 0 46.2 29.0 20.5 0 46.2 29.0 20.5 0 32.5 C C	lash Dont Walk (s)		18.0			18.0			18.0			18.0	
9 47.3 39.0 40.2 3 0.48 0.35 0.35 0.20 9 46.2 29.0 20.5 0 46.2 29.0 20.5 0 20.5 0 32.5 0 32.5 0 C	edestrian Calls (#/hr)		0			0			0			0	
3 0,43 0,35 0,37 0,20 0,20 0,20 0,20 0,20 0,20 0,00 0,0	ct Effct Green (s)	46.9	32.5		52.8	35.9		47.3	39.0		40.2	33.6	
0 0.78 0.57 0.20 9 46.2 29.0 20.5 0 0.0 0.0 0.0 0.0 46.2 29.0 20.5 0 32.5 C	ctuated g/C Ratio	0.43	0.30		0.48	0.33		0.43	0.35		0.37	0.31	
9 46.2 29.0 20.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	/c Ratio	0.55	0.61		0.92	0.40		0.78	0.57		0.20	0.78	
0 00 00 00 9 462 29.0 20.5 D C C C C C C C C C C C C C C C C C C C	Sontrol Delay	21.8	33.8		52.8	29.9		46.2	29.0		20.5	40.2	
9 46.2 29.0 20.5 C C C C C C C C C C C C C C C C C C C	Queue Delay	0.0	0.0		0.0	0:0		0.0	0.0		0.0	0.0	
32.5 0 0 0	otal Delay	21.8	33.8		52.8	29.9		46.2	29.0		20.5	40.2	
32.5 C	SO	O	O		□	ပ		Ω	O		O	Ω	
	pproach Delay		30.4			40.0			32.5			39.2	
rea Type: yole Length: 110 yole Length: 110 filter (10%). Referenced to phase 4:NBTL, Start of Green latural Cycle: 85 control Type: Actualed-Coordinated latural cycle: 85 latural Cycle: 85 control Type: Actualed-Coordinated latural cycle: 85 latural of Start of Green latural cycle: 85 latural of Green latural cycle: 85 latur	pproach LOS		ပ			Ω			O			Ω	
vea Type: ycle Length: 110 ycle Length: 110 Jifset U (0%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green latural Cycle: 85 control Type: Actualed-Coordinated laxinim v/c Raio 0.0.92	ntersection Summary												
ycle Length: 110 Inclusted Cycle Length: 110 Inclusted Cycle Length: 110 Inclusted Cycle: 88 Inclusion:		ther											
cituated Cyde Length: 110 Actual Cyde Length: 110 Attual Cycle: 85 Sortiol Type: Actuated-Coordinated Astual Cycle: 0.032 Astuant of Cycle: 100 Astuant of	Sycle Length: 110												
Offset 0 (0%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green latural Cycle: 85 Control Type: Actuated-Coordinated latural cycle: 0.92	Actuated Cycle Length: 110												
	Offset 0 (0%), Referenced to	phase 4:	NBTL and	8:SBTL,	Start of (een							
	Vatural Cycle: 85												
	Sontrol Type: Actuated-Coorc	linated											
	Aaximum v/c Ratio: 0.92												
	ntersection Signal Delay: 35.4	4			ii.	ersection	LOS: D						
ntersection Capacity Utilization 85.7% ICU Level of Service E	ntersection Capacity Utilization	nn 85 7%			<u>C</u>	l l ava	P. Service	ш					
	the first terms of the second	2			2	2000							

5: Thompson Rd & Main St E Splits and Phases:



Paradigm Transportation Solutions Limited

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200624 Base Year PM Peak Hour Queues 5: Thompson Rd & Main St E

Lane Group		t	>			-	•	+	
	EB	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Group Flow (vph)	249	634	363	464	180	711	48	853	
v/c Ratio	0.55	0.61	0.92	0.40	0.78	0.57	0.20	0.78	
Control Delay	21.8	33.8	52.8	29.9	46.2	29.0	20.5	40.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	21.8	33.8	52.8	29.9	46.2	29.0	20.5	40.2	
Queue Length 50th (m)	32.1	60.3	51.7	41.6	25.2	64.5	6.2	8.06	
Queue Length 95th (m)	49.6		#113.5	59.3	#58.1	84.6	13.6	115.5	
Internal Link Dist (m)		338.0		226.3		254.6		193.9	
Turn Bay Length (m)	0.09		150.0		0.09		55.0		
Base Capacity (vph)	210	1045	396	1160	232	1255	248	1089	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.49	0.61	0.92	0.40	0.78	0.57	0.19	0.78	

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

HCM 2010 Signalized Intersection Summary 5: Thompson Rd & Main St E

	4	t	~	>	ţ	4	•	-	•	٠	-	*
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	F	₩		r	₩		F	₩₽		r	₩	
Traffic Volume (veh/h)	249	471	163	363	416	48	180	512	199	48	734	119
Future Volume (veh/h)	249	471	163	363	416	48	180	512	199	48	734	119
Number	2	2	12	_	9	16	7	4	14	က	∞	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	0.1	0.1	0.1	0.1	0.1	9.	9.	9.	1.00	1.00	1.00	1:00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1881	1892	1900	1881	1889	1900	1863	1897	1900
Adj Flow Rate, veh/h	249	471	163	363	416	\$	081	512	199	48	734	119
Adj No. of Lanes	- 5	2 5	0 9	- 5	2 5	0 9	- 5	2 5	0 0	- 0	2 5	0 0
Peak Hour Factor	0.0	1.00	1.00	1.00	9.1	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Ven, %	0 04	757	- 700	- 67	1004	4 5	- 000	0 00	7 250	7 2	0 22	- 1
cap, vervn	6,4	/0/	705	954	\$ 2	5 7 - 6	207	920	222	007	116	200
Sat Flow Veh/h	1810	2612	808	1702	3254	373	1702	0.37	0.34	1774	3107	507
Cm Volume(v) yorkh	0 0	207	242	26.1	000	300	100	2007	240	9	3010	407
Gro Sat Flow(s), veh/h/ln	1810	1787	1723	1792	1798	1826	1792	1795	1717	1774	1802	1808
Q Serve(g_s), s	10.8	17.0	17.4	15.5	10.7	10.9	7.5	17.6	18.0	2.1	23.3	23.4
Cycle Q Clear(g_c), s	10.8	17.0	17.4	15.5	10.7	10.9	7.5	17.6	18.0	2.1	23.3	23.4
Prop In Lane	1.00		0.52	1.00		0.20	1.00		0.57	1.00		0.28
Lane Grp Cap(c), veh/h	479	525	206	439	299	609	268	657	628	256	267	269
V/C Ratio(X)	0.52	0.61	0.62	0.83	0.38	0.39	0.67	0.55	0.56	0.19	0.75	0.75
Avail Cap(c_a), veh/h	222	525	206	445	233	609	282	657	628	307	267	269
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1:00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1:00	1.00	1:00	1.00	1.00	1.00	1.00	1.00	1.00	1:00
Uniform Delay (d), s/veh	24.3	33.5	34.3	24.3	28.0	28.3	26.7	27.7	28.5	26.7	33.8	34.2
Incr Delay (d2), s/veh	0.9	5.3	9.6	12.1	0.4	0.4	2.7	3.3	3.5	0.4	8.9	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	9.5	9.0	9.0	5.3	5.6	4.1	9.4	9.1	1.0	13.0	13.1
LnGrp Delay(d),s/veh	25.1	38.7	39.8	36.4	28.4	28.7	32.4	31.0	32.0	27.1	42.7	43.1
LnGrp LOS	ပ				ပ	ပ	ပ	ပ	ပ	ပ		
Approach Vol, veh/h		883			827			891			901	
Approach Delay, s/veh		35.3			32.0			31.7			42.1	
Approach LOS					O			ပ			٥	
Timer	~	2	က	4	2	9	7	8				
Assigned Phs	~	2	က	4	2	9	7	∞				
Phs Duration (G+Y+Rc), s	21.6	36.3	7.8	44.2	17.2	40.7	13.5	38.6				
Change Period (Y+Rc), s	4.0	2.0	4.0	7.0	4.0	7.0	4.0	7.0				
Max Green Setting (Gmax), s	18.0	29.3	7.0	33.7	18.0	29.3	10.3	30.4				
Max Q Clear Time (g_c+11), s	17.5	19.4	4.1	20.0	12.8	12.9	9.5	25.4				
Green Ext Time (p_c), s	0.1	3.3	0:0	5.4	0.5	3.0	0.1	2.5				
Intersection Summary												
HCM 2010 Ctrl Delay			35.3									
HCM 2010 LOS			Ω									

Synchro 10 Report Page 20

Paradigm Transportation Solutions Limited

Intersection: 1: Ontario St S/Ontario St N & Main St E

Movement	8	B	B	B	WB	WB	WB	R	R	9	8	SB
Directions Served	_	_	_	œ	٦	⊢	TR	_	⊢	⊢	ď	_
Maximum Queue (m)	47.4	9.96	71.3	19.6	42.5	108.1	109.8	71.0	78.4	73.9	51.2	47.4
Average Queue (m)	32.8	47.8	38.4	8.0	38.1	6.69	73.3	27.0	47.0	40.3	19.2	28.1
95th Queue (m)	52.5	2.97	2.09	9.2	50.5	107.5	108.8	48.6	6.69	64.8	35.5	54.1
Link Distance (m)		133.0	133.0	133.0		108.2	108.2		322.4	322.4		
Upstream Blk Time (%)						_	-					
Queuing Penalty (veh)						∞	∞					
Storage Bay Dist (m)	40.0				35.0			0.07			0.59	40.0
Storage Blk Time (%)	က	14			17	23		0	~	0		-
Queuing Penalty (veh)	00	23			2	25		С				2

Intersection: 1: Ontario St S/Ontario St N & Main St E

Movement	SB	SB	SB	
Directions Served	⊢	-	œ	
Maximum Queue (m)	93.6	84.4	18.0	
Average Queue (m)	55.3	43.6	2.3	
95th Queue (m)	83.5	7.1.7	11.3	
Link Distance (m)	241.6	241.6	241.6	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)	20			
Queuing Penalty (veh)	22			

Intersection: 2: Mall Entrance & Main St E

Movement	æ	8	WB	WB	WB	RB	BB	
Directions Served	⊢	TR	_	⊢	⊢	_	~	
Maximum Queue (m)	64.6	9.79	49.6	61.9	63.0	42.1	25.1	
Average Queue (m)	25.7	27.6	21.3	26.9	32.0	17.9	10.4	
95th Queue (m)	53.5	54.7	40.4	52.5	60.3	34.2	19.0	
Link Distance (m)	108.2	108.2		251.1	251.1	127.6	127.6	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			0.07					
Storage Blk Time (%)				0				
Queuing Penalty (veh)				0				

SimTraffic Report Page 1

Paradigm Transportation Solutions Limited

Queuing and Blocking Report

200624 Base Year PM Peak Hour

	Wilson Dr
ı	∞ర
ı	Ш
ı	Sţ
	Main
ı	₩.
	Intersection: 3: Main St E & Wilson

Movement	EB	EB	EB	WB	WB	SB	SB	
Directions Served	_	⊢	H	-	T	_	~	
Maximum Queue (m)	28.0	49.4	28.0	0.66	6.96	37.6	22.8	
Average Queue (m)	12.4	19.9	24.2	44.2	45.8	18.7	10.3	
95th Queue (m)	22.0	45.9	47.9	80.1	84.1	32.4	19.3	
Link Distance (m)		242.6	242.6	338.7	338.7		160.5	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)	20.0					22.0		
Storage Blk Time (%)		0						
Queuing Penalty (veh)		0						

Intersection: 4: Drew Centre/Private Driveway & Main St E

Movement	8	EB	B	WB	WB	WB	8	8	NB	
Directions Served	F	F	22	-	F	F	-	-	TR	
Maximum Queue (m)	71.1	80.3	47.5	48.2	53.8	49.7	73.7	71.9	22.4	
Average Queue (m)	39.3	38.2	21.6	21.0	20.5	24.4	49.5	40.4	8.8	
95th Queue (m)	68.7	70.3	47.9	38.1	40.5	44.3	70.2	64.6	18.9	
Link Distance (m)	338.7	338.7			334.9	334.9	239.6	239.6	239.6	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)			40.0	45.0						
Storage Blk Time (%)	56	22	0	0	0					
Queuing Penalty (veh)	0	12	0	_	_					

Intersection: 5: Thompson Rd & Main St E

Movement	EB	æ	æ	WB	WB	WB	乮	8	R	SB	SB	SB
Directions Served	٦	⊢	TI	٦	⊢	TK	٦	⊢	TR	٦	⊢	IR
Maximum Queue (m)	67.4	97.8	92.0	131.9	88.3	64.3	66.2	86.7	84.2	62.3	127.8	122.0
Average Queue (m)	41.4	9.09	9.89	0.79	39.7	34.5	32.8	45.0	46.7	20.4	86.4	7.77
95th Queue (m)	6.99	82.4	88.1	112.0	72.4	56.9	8.73	72.1	73.9	59.1	124.5	118.1
Link Distance (m)		334.9	334.9		233.6	233.6		263.1	263.1		201.3	201.3
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	0.09			150.0			0.09			22.0		
Storage Blk Time (%)	Ψ	2		0	0		Ψ-	-		0	怒	
Queuing Penalty (veh)	က	12		τ-	0		4	က		0	16	

Network Summary
Network wide Queuing Penalty: 232

Appendix D

Design Brief





5A-150 Pinebush Road Cambridge ON N1R 8J8 p: 905.381.2229

www.ptsl.com

02 August 2022 Project: (200624)

Colin Rauscher NEATT Communities

Dear Mr. Rauscher:

RE: 560 MAIN STREET EAST, MILTON

DESIGN BREIF

Paradigm Transportation Solutions Limited (Paradigm) has provided the following design brief for the proposed mixed-used development at 560 Main Street East, in the Town of Milton.

Vehicle access to the development is currently only permitted through the extension of Wilson Drive as the Town of Milton has advised they will not support access to Main Street East. As Metrolinx proposes to provide a bus loop through the future extension of Wilson Drive, the ultimate configuration and functionality of this access connection needs to be reviewed.

Figure 1 (attached) illustrates the development location.

This technical memorandum provides guidance and opinion regarding the proposed access location. It should be noted the Paradigm has relied on information contained within the Milton Major Transit Station Area, Area Transportation Plan (MTSA)¹.

Access Review

To assist in determining the appropriateness of the access locations, the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads² was reviewed. Other additional considerations such as capacity requirements have also been included.

Corner Clearances at Major Intersections

TAC Chapter 8.8 (Corner Clearances at Major Intersection), Section 8.8.1 (General) states, "Corner clearance is the distance from an intersection to the nearest access upstream or downstream of it. Corner clearance is measured from the near curb of the cross roadway to the near edge of the access throat. It consists of three components: the curb return radius at the intersection, a length of tangent, and the curb return radius or flare dimension at the

¹ Milton Major Transit Station Area, Area Transportation Plan (MTSA), BA Group, April 2020.

² Geometric Design Guide for Canadian Roads, Transportation Association of Canada, 2017

driveway. Inadequate corner clearance between accesses and intersections along a major road, such as a major arterial, can create operational issues."

TAC has been reviewed to determine sufficiency of the corner clearance from a major intersection. The suggested corner clearances as stipulated by TAC are as follows:

- Arterials 70 metres (curb radii to curb radii)
- Collectors 55 metres (curb radii to curb radii)
- Locals 15 metres (curb radii to curb radii)

As the proposed bus loop will have dual purpose, serve local travel demands and accommodate transit service, the bus loop resembles the characteristics of a collector roadway. Based on this assessment, access to 560 Main Street East should be located at least 55 metres (curb radii to curb radii) from the signalized intersection of Main Street East and Wilson Drive.

The method utilized by TAC in determining corner clearances is a standard method in assessing spacing of access driveways. However, this approach often does not recognize that some intersections are more important than other minor public or private intersections, in terms of protecting the higher level of service needs of the roadway.

Operational Assessment

With the accesses spaced relatively close to the Main Street East and Wilson Drive intersection, vehicles wanting to turn left out of 560 Main Street East may be blocked as a result of queue spillback from the intersection of Main Street East and Wilson Drive. This would result in traffic queuing behind the vehicle waiting to turn which may creating operational issues within the development.

Based on projections contained in the MTSA, detailed intersection performance analysis of at the Main Street East and Wilson Drive signalized intersections to identify the potential vehicle delays, capacity constraints and queue lengths at full build out of the study area. The operation assessment It is a qualitative measure that provides an index to the operational qualities of a roadway segment or an intersection with designations that range from LOS A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. The evaluation criteria used to analyze intersections are based on the 2000 Highway Capacity Manual (HCM) utilizing Synchro 10. The following parameters were used in the analysis:

- ► Future lane configurations, synchro settings, and traffic volumes for Main Street East & Wilson Drive/Busway intersection were referenced from the Milton Major Transit Station Area (MTSA) Area Transportation Plan (2020).
- ▶ The future Main Street East & Wilson Drive intersection lane configuration adds the south leg to the intersection. The south leg has been assumed to have exclusive lanes



for left, through, and right-turn movements. The future lane configuration also assumes a westbound left turn lane has been added.

- ► Future traffic volumes, heavy vehicle percentages, peak hour factors, and conflicting pedestrian volumes are consistent with the Milton MTSA Transportation Report.
- ► Future signal timings have been optimized for traffic operations. No northbound/southbound exclusive left-turn phases have been assumed.
- Queuing at the intersection has been modelled using SimTraffic Queueing (five 60-min iterations) for the AM and PM peak hours.

Table 1 summarizes the operational analysis for full-build our of the area; the following is noted:

▶ The northbound approach is forecast to operate at level of service C or better with a v/c ratio no greater than 0.70 during the AM and PM Peak Hours. The 95th percentile queue length is projected at 60 metres. Overall, the intersection is operating with satisfactory conditions.

Appendix A contains the Synchro outputs.

TABLE 1: OPERATIONAL ASSESSMENT

þ										Directi	on / M	oveme	nt / App	roach						
Period					Eastb	ound			Westl	ound			North	bound			South	bound		
Analysis F	Intersection	Control Type	MOE	ње	Through	Right	Approach	IJeТ	Through	Right	Approach	Left	Through	Right	Approach	Teft	Through	Right	Approach	Overall
Peak Hour	1 - Main Street East at Wilson Drive	TCS	LOS Delay V/C	A 9	B 14	B 14	B 14	A 9	B 13	B 13	B 12	C 31	C 24	C 24	C 28	C 27	C 25	C 25	C 26	B 16
AMI			V/C Q	0.16 38	0.51 71	0.51 65		0.09	0.39 55	0.39 47		0.44 38	0.02	0.08		0.30	0.17 34	0.17 34		0.46
Hour			LOS	В	В	В	В	В	В	В	В	D	С	С	С	С	С	С	C	В
eak H	1 - Main Street East at Wilson Drive	TCS	Delay	15	16	16	16	12	16	16	16	37	22	22	31	25	22	22	24	19
PM Pe	Wilson Drive		V/C	0.42	0.55	0.55		0.28	0.56	0.56		0.67	0.10	0.05		0.30	0.11	0.11		0.59
Δ.			Q	46	76	67		42	75	68		59	21	16		37	27	27		
MOE	- Measure of Effectiveness				Q - 95	th Perce	entile Q	ueue L	enath		TCS -	Traffic	Control	Signal			RBT -	Rounda	bout	

MOE - Measure of Effectiveness LOS - Level of Service Delay - Average Delay per Vehicle in Seconds Q - 95th Percentile Queue Length Ex. - Existing Available Storage Avail. - Available Storage TCS - Traffic Control Signal TWSC - Two-Way Stop Control AWSC - All-Way Stop Control

Driveway Alignment

It is understood there is an adjacent development proposed on the east side of the Wilson Drive extension, providing for opposing driveways.

When the roadway has a moderate to high volume of traffic and the driveway volumes are moderate to high, such as a high-volume collector serving a busy land use, the examination of the relative location of opposite driveways constitutes good design practice. The key traffic movements in the analysis are the accommodation of left turns into the opposite developments, and the inter-development traffic flow.

Where inter-development traffic is expected to be significant, and signalization of the driveway. intersection is not desirable, the manoeuvre required to cross the entire width of a busy roadway in a single continuous movement may be difficult. In this case, it is often advantageous to offset the opposing driveways to eliminate the concentrated conflict zone. A minimum offset of 100 metres between driveway centre lines is desirable. This technique does, however, increase the number of slow-moving vehicles making ingress, egress and weaving manoeuvres on the roadway, which may present other operational concerns.

The current concept plans provided for both 560 Main Street East and the adjacent development depicts an offset arrangement. The primary issue to consider with offset intersections are the possibility of overlapping left turns and the potential difficulty in making a weaving maneuver to travel between the offset legs of the intersection. These issues are illustrated in **Exhibit 1** as outlined by TAC³.

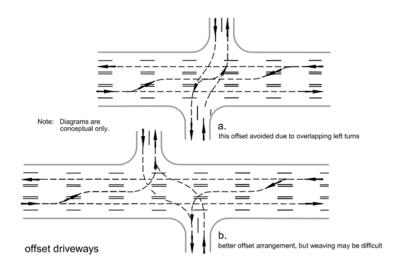


EXHIBIT 1: OFFSET ARRANGEMENT

Paradigm Transportation Solutions Limited | Page 4

³ Transportation Association of Canada (TAC), Geometric Design Guide for Canadian Road, 1999

The location of the two opposite driveways would result in a similar situation as shown in Diagram "b" of **Exhibit 1**, which is identified as the better offset arrangement since there is no issues with overlapping left turns along the main roadway as in Diagram "a".

With respect to the weaving manoeuvre that would be required to, it is reasoned that the potential for this traffic movement is negligible as inter-development traffic is not expected to be significant given the similarities is land uses (i.e., residential with limited retail). Therefore, unlike a situation where offset intersections may comprise two busy public roads or private driveways with a high expectation of weaving traffic travelling between the offset legs, it can be concluded that the location of the two opposing driveways is of no consequence in this regard.

Another issue to consider with the offset would be conflicting vehicle movements with respect to the potential for simultaneous turns from the opposing driveways onto the Wilson Drive extension. However, as the adjacent property will not be permitted to operate with outbound left turn movements given then one-way designation of the bus loop, it is reasoned that this manoeuvre is of no consequence in this regard.

The offset arrangement between the opposing driveway connections does not create any remarkable impacts or differences with respect to traffic operations, design considerations, or traffic safety.

Functional Design

Based on our engineering judgement and professional traffic operations experience, we have developed a functional design that provides access for adjacent development parcels to the Wilson Street Extension. The design includes the following:

- Outbound lanes are reflective of lane arrangement developed by Metrolinx;
- ▶ Inbound lanes are reflective of two travel lanes to minimize delay and queuing between development traffic;
- A centre median is provided to separate inbound and outbound traffic;
- Multi-use trail provided on east side of Wilson Drive Extension as development by Metrolinx;
- Crosswalk proposed for the south leg of Main Street and Wilson Drive intersection to facilitate pedestrian crossing movements between the two sites;
- ▶ A Roundabout is proposed at the access to 560 Main Street East to accommodate access to 560 Main as well as the Metrolinx Bus Loop but also to streamline winter maintenance activities and accommodate turnaround movements;
- ▶ Development driveways are located at least 60 metres (curb radii to curb radii) from the intersection of Main Street East and Wilson Drive;
- An 8.0 metre median break is provided to facilitate inbound movements for development traffic on the east side of the Wilson Drive Extension but to further act as a turnaround



for vehicles that drive down the extension by mistake. The median break has been designed to facilitate large design vehicles;

- ▶ Development driveways have been positioned in a positive offset arrangement.
- ► Emergency access and winter maintenance considered by providing for a pavement width of at least 6 metres:
- Separate Left Turn Lane for Busses Only is provided for the south approach at Main Street East and Wilson Drive.
- ▶ Transit priority for northbound left turns will be provided through a split phasing.
- Lane configuration has been designed to a practical minimum to reduce the pedestrian crossing distance for the south leg of Main and Wilson by eliminating one lane. Previous iterations of the functional design included five lanes.

Subject to detailed engineering drawings, the functional design indicates access to adjacent developments can be accommodated within the proposed Wilson Drive Extension right-of-way. **Appendix B** illustrates the proposed design.

Yours very truly,

PARADIGM TRANSPORTATION SOLUTIONS LIMITED

Adam J. Makarewicz

C.E.T.

Senior Project Manager

Stew Elkins B.E.S., MITE Vice President



Attachments







Proposed Location

Appendix A

SYNCHRO REPORTS



	۶	→	•	←	4	†	/	>	ļ
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	ሻ	↑ ↑	7	↑ ↑	ř		7	ň	ĵ»
Traffic Volume (vph)	67	777	31	638	122	11	119	103	43
Future Volume (vph)	67	777	31	638	122	11	119	103	43
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2	1	6		8			4
Permitted Phases	2		6		8		8	4	
Detector Phase	5	2	1	6	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	40.0	5.0	40.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	10.0	47.0	10.0	47.0	26.0	26.0	26.0	26.0	26.0
Total Split (s)	10.0	49.0	10.0	49.0	26.0	26.0	26.0	26.0	26.0
Total Split (%)	11.8%	57.6%	11.8%	57.6%	30.6%	30.6%	30.6%	30.6%	30.6%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-2.0	-1.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?									
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	51.0	45.0	51.0	45.0	22.0	22.0	22.0	22.0	22.0
Actuated g/C Ratio	0.60	0.53	0.60	0.53	0.26	0.26	0.26	0.26	0.26
v/c Ratio	0.16	0.52	0.09	0.39	0.44	0.02	0.25	0.30	0.30
Control Delay	6.6	13.5	6.1	12.3	32.2	23.8	6.5	28.1	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.6	13.5	6.1	12.3	32.2	23.8	6.5	28.1	10.5
LOS	Α	В	Α	В	С	С	Α	С	В
Approach Delay		13.0		12.0		19.7			17.5
Approach LOS		В		В		В			В
Intersection Summary									

Cycle Length: 85

Actuated Cycle Length: 85

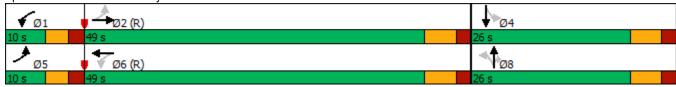
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85 Control Type: Pretimed Maximum v/c Ratio: 0.52

Intersection Signal Delay: 14.0 Intersection LOS: B Intersection Capacity Utilization 75.8% ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Busway/Wilson Drive & Main Street East



	•	→	•	•	—	•	•	†	~	/	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	∱ }		ሻ	∱ }		ሻ	†	7	ň	ĵ»	
Traffic Volume (vph)	67	777	167	31	638	71	122	11	119	103	43	112
Future Volume (vph)	67	777	167	31	638	71	122	11	119	103	43	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.6	3.6	3.3	3.6	3.6	3.3	3.6	3.5	3.3	3.6	3.6
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.99	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1645	3418		1711	3388		1711	1863	1531	1710	1649	
Flt Permitted	0.33	1.00		0.23	1.00		0.60	1.00	1.00	0.75	1.00	
Satd. Flow (perm)	565	3418		406	3388		1082	1863	1531	1351	1649	
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	777	167	31	638	71	122	11	119	103	43	112
RTOR Reduction (vph)	0	22	0	0	10	0	0	0	88	0	83	0
Lane Group Flow (vph)	67	922	0	31	699	0	122	11	31	103	72	0
Confl. Peds. (#/hr)	5					5			8	8		
Heavy Vehicles (%)	6%	3%	2%	2%	5%	2%	2%	2%	2%	1%	2%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	48.0	43.0		48.0	43.0		20.0	20.0	20.0	20.0	20.0	
Effective Green, g (s)	50.0	45.0		50.0	45.0		22.0	22.0	22.0	22.0	22.0	
Actuated g/C Ratio	0.59	0.53		0.59	0.53		0.26	0.26	0.26	0.26	0.26	
Clearance Time (s)	5.0	6.0		5.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)	408	1809		330	1793		280	482	396	349	426	
v/s Ratio Prot	c0.01	c0.27		0.01	0.21			0.01			0.04	
v/s Ratio Perm	0.08			0.05			c0.11		0.02	0.08		
v/c Ratio	0.16	0.51		0.09	0.39		0.44	0.02	0.08	0.30	0.17	
Uniform Delay, d1	7.8	12.9		8.1	11.9		26.3	23.5	23.8	25.3	24.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	1.0		0.6	0.6		4.9	0.1	0.4	2.1	0.9	
Delay (s)	8.6	13.9		8.7	12.5		31.2	23.6	24.2	27.4	25.3	
Level of Service	Α	В		Α	В		С	С	С	С	С	
Approach Delay (s)		13.6			12.3			27.6			26.1	
Approach LOS		В			В			С			С	
Intersection Summary												
HCM 2000 Control Delay			16.2	Н	CM 2000	Level of	Service		В			
HCM 2000 Volume to Capa	acity ratio		0.46									
Actuated Cycle Length (s)			85.0		um of lost				12.0			
Intersection Capacity Utilization	ation		75.8%	IC	U Level	of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

c Critical Lane Group

Intersection: 1: Busway/Wilson Drive & Main Street East

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	Т	TR	L	Т	R	L	TR	
Maximum Queue (m)	47.3	80.7	69.2	17.9	60.2	52.8	47.6	11.8	23.6	41.6	44.2	
Average Queue (m)	13.9	47.7	38.6	5.2	34.8	24.2	21.0	1.9	10.5	17.9	18.1	
95th Queue (m)	37.6	71.3	64.5	14.3	54.9	46.5	37.6	8.0	19.5	34.2	34.0	
Link Distance (m)		199.4	199.4		321.7	321.7	125.0	125.0			237.8	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0			40.0					35.0	60.0		
Storage Blk Time (%)	0	11			4						0	
Queuing Penalty (veh)	0	8			1						0	

Network Summary

Network wide Queuing Penalty: 9

1: Busway/Wilson Drive & Main Street East

	•	-	•	←	1	†	~	-	ļ	
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	
Lane Configurations	7	∱ î≽	ሻ	∱ ∱	ሻ	†	7	7	f)	
Traffic Volume (vph)	121	867	85	845	226	57	73	115	14	
Future Volume (vph)	121	867	85	845	226	57	73	115	14	
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2	1	6		8			4	
Permitted Phases	2		6		8		8	4		
Detector Phase	5	2	1	6	8	8	8	4	4	
Switch Phase										
Minimum Initial (s)	5.0	40.0	5.0	40.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	10.0	46.0	10.0	46.0	26.0	26.0	26.0	26.0	26.0	
Total Split (s)	10.0	46.0	10.0	46.0	29.0	29.0	29.0	29.0	29.0	
Total Split (%)	11.8%	54.1%	11.8%	54.1%	34.1%	34.1%	34.1%	34.1%	34.1%	
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-2.0	-1.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag	Lead	Lag						
Lead-Lag Optimize?										
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	
Act Effct Green (s)	48.0	42.0	48.0	42.0	25.0	25.0	25.0	25.0	25.0	
Actuated g/C Ratio	0.56	0.49	0.56	0.49	0.29	0.29	0.29	0.29	0.29	
v/c Ratio	0.41	0.55	0.28	0.56	0.67	0.10	0.14	0.30	0.25	
Control Delay	11.4	16.2	9.3	16.3	37.9	22.6	3.0	25.9	6.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	11.4	16.2	9.3	16.3	37.9	22.6	3.0	25.9	6.9	
LOS	В	В	Α	В	D	С	Α	С	Α	
Approach Delay		15.7		15.7		28.3			15.5	
Approach LOS		В		В		С			В	

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 85

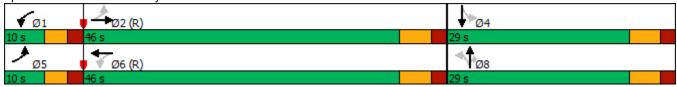
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 85 Control Type: Pretimed Maximum v/c Ratio: 0.67

Intersection Signal Delay: 17.3 Intersection LOS: B
Intersection Capacity Utilization 78.4% ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Busway/Wilson Drive & Main Street East



	۶	→	\rightarrow	•	←	•	•	†	/	>	ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	, T	∱ }		,	↑ ↑		J.	†	7	*	ĵ»	
Traffic Volume (vph)	121	867	84	85	845	103	226	57	73	115	14	127
Future Volume (vph)	121	867	84	85	845	103	226	57	73	115	14	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.6	3.6	3.3	3.6	3.6	3.3	3.6	3.5	3.3	3.6	3.6
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.99	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1646	3461		1711	3383		1711	1863	1531	1711	1597	
Flt Permitted	0.21	1.00		0.21	1.00		0.64	1.00	1.00	0.72	1.00	
Satd. Flow (perm)	364	3461		376	3383		1148	1863	1531	1297	1597	
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)	121	867	84	85	845	103	226	57	73	115	14	127
RTOR Reduction (vph)	0	9	0	0	11	0	0	0	52	0	90	0
Lane Group Flow (vph)	121	942	0	85	937	0	226	57	21	115	51	0
Confl. Peds. (#/hr)	5					5			8	8		
Heavy Vehicles (%)	6%	3%	2%	2%	5%	2%	2%	2%	2%	1%	2%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	45.0	40.0		45.0	40.0		23.0	23.0	23.0	23.0	23.0	
Effective Green, g (s)	47.0	42.0		47.0	42.0		25.0	25.0	25.0	25.0	25.0	
Actuated g/C Ratio	0.55	0.49		0.55	0.49		0.29	0.29	0.29	0.29	0.29	
Clearance Time (s)	5.0	6.0		5.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)	291	1710		302	1671		337	547	450	381	469	
v/s Ratio Prot	c0.03	0.27		0.02	c0.28			0.03			0.03	
v/s Ratio Perm	0.20			0.14			c0.20		0.01	0.09		
v/c Ratio	0.42	0.55		0.28	0.56		0.67	0.10	0.05	0.30	0.11	
Uniform Delay, d1	10.4	14.9		10.0	15.0		26.4	21.8	21.5	23.2	21.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.3	1.3		2.3	1.4		10.2	0.4	0.2	2.0	0.5	
Delay (s)	14.7	16.2		12.4	16.4		36.6	22.2	21.7	25.3	22.4	
Level of Service	В	В		В	В		D	С	С	С	С	
Approach Delay (s)		16.1			16.1			31.2			23.7	
Approach LOS		В			В			С			С	
Intersection Summary												
HCM 2000 Control Delay			18.8	Н	CM 2000	Level of	Service		В			
HCM 2000 Volume to Capa	city ratio		0.59									
Actuated Cycle Length (s)			85.0	S	um of lost	time (s)			12.0			
Intersection Capacity Utiliza	ition		78.4%		U Level o				D			
Analysis Period (min)			15									

c Critical Lane Group

Intersection: 1: Busway/Wilson Drive & Main Street East

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	
Directions Served	L	Т	TR	L	T	TR	L	Т	R	L	TR	
Maximum Queue (m)	47.4	85.2	75.0	47.3	87.4	77.0	78.2	24.5	21.0	40.2	31.1	
Average Queue (m)	22.2	50.9	41.0	17.6	49.5	42.2	34.9	9.2	7.3	20.2	15.6	
95th Queue (m)	45.6	75.5	67.2	41.7	74.9	68.2	59.0	21.3	15.5	36.6	26.6	
Link Distance (m)		199.4	199.4		321.7	321.7	125.0	125.0			237.8	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0			40.0					35.0	60.0		
Storage Blk Time (%)	1	13		0	12			0				
Queuing Penalty (veh)	4	16		0	10			0				

Network Summary

Network wide Queuing Penalty: 30

Appendix B

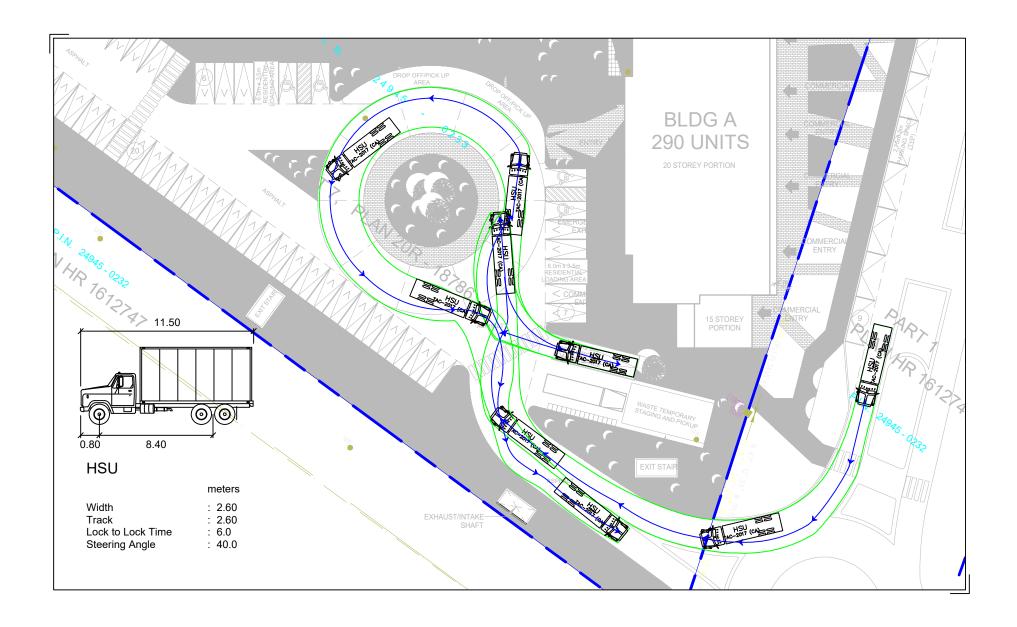
FUNCTINOAL DESIGN

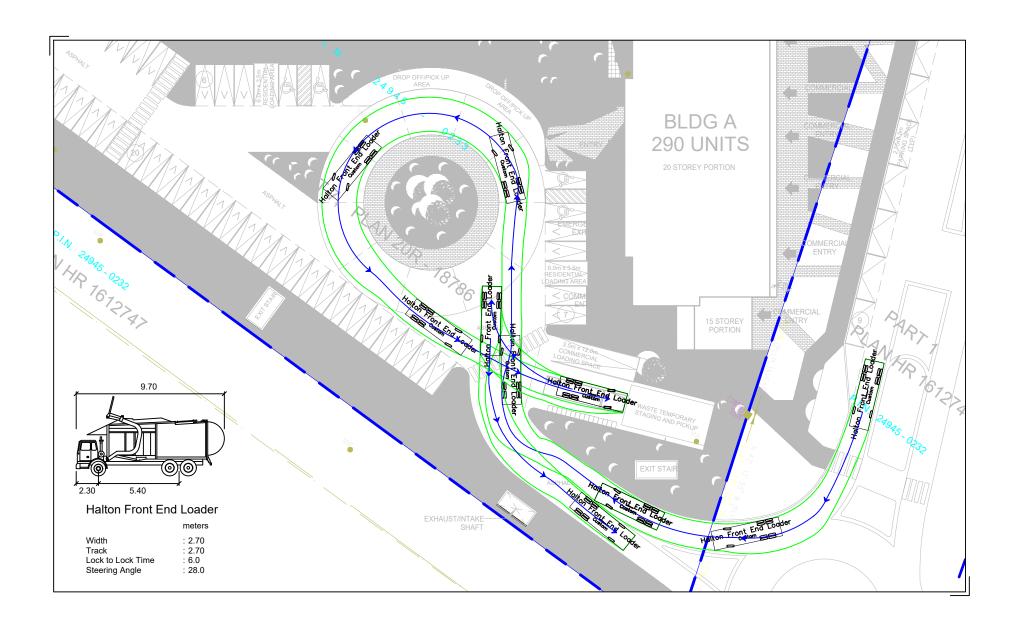


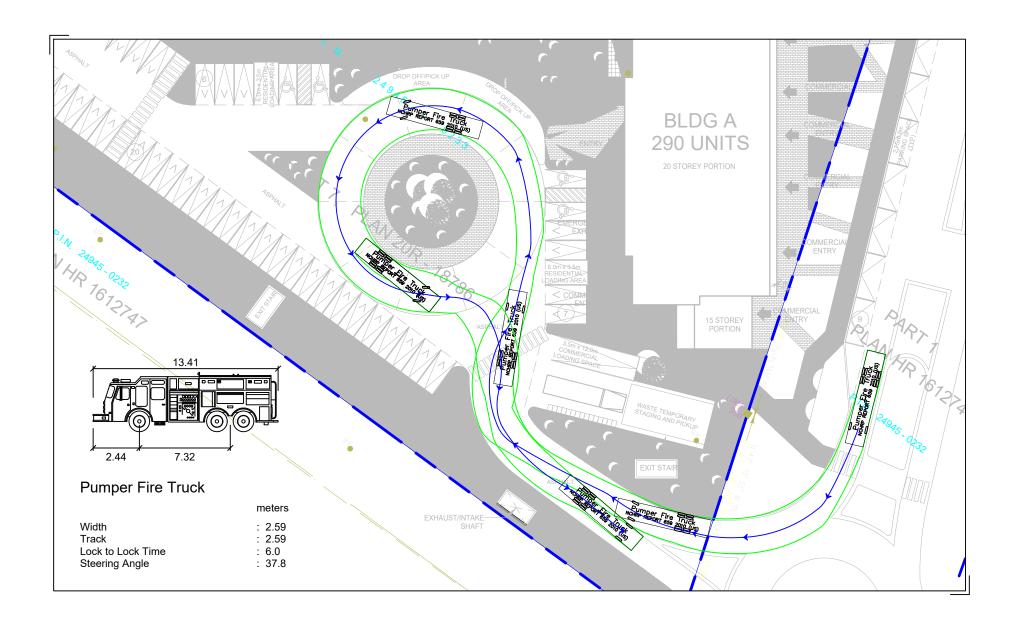


Appendix E

Vehicle Circulation Diagrams

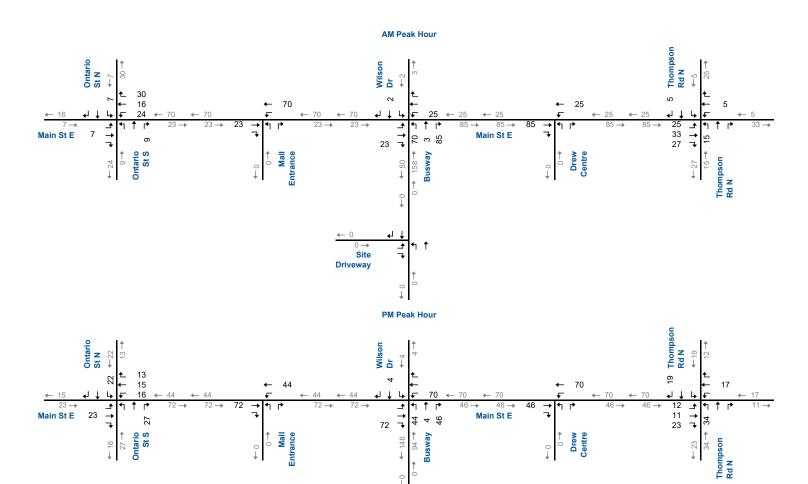






Appendix F

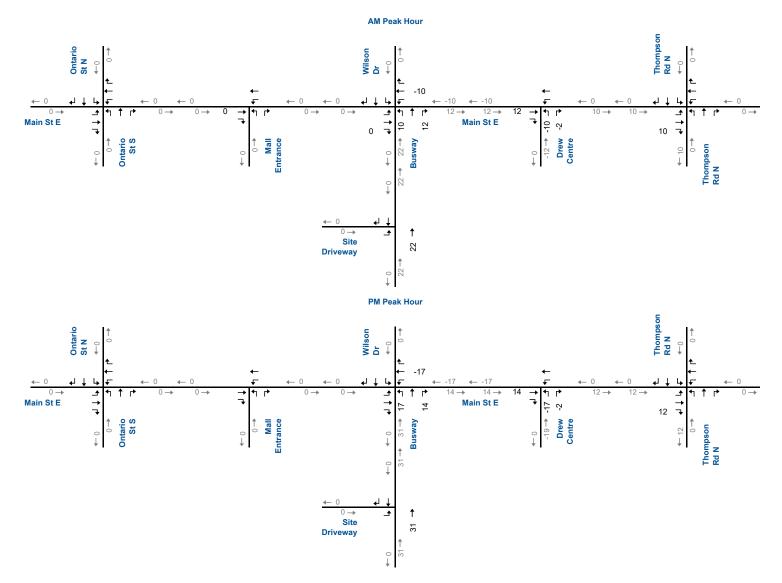
Background Trip Assignment & Bus Rerouting



Site Driveway



700 Main Street East Trip Assignment





Milton Transit Bus Reroute Trip Assignment

Appendix G

Future Background Traffic Operations

Lanes, Volumes, Timings 1: Ontario St S/Ontario St N & Main St E

Company Comp	Lane Group Lane Configurations Traffic Volume (vph) Ideal Flow (vphpl) Ideal Flow (vphpl)	田	EBT	EBR	WBL	WBT	WBR	aN	H	OON	5		כככ
10 10 10 10 10 10 10 10	Lane Configurations Traffic Volume (vph) Future Volume (vph) Ideal Flow (vphpl)	_				44		INDL	NBI	NDN	SBL	SBT	SBK
210 623 107 204 326 145 101 788 319 172 210 623 107 204 326 145 101 789 319 172 33 3.6 3.5 3.3 3.6 3.5 3.3 3.6 3.5 3.3 30 3.5 3.5 3.3 3.6 3.5 3.3 3.6 3.3 3.4 3.6 5.6 3.0 3.3 3.4 3.6 5.6 3.0 3.3 3.4 3.6 5.6 3.0 3.2 3.2 3.2 3.2 3.3 3.3 3.3 3.3 3.3 3.3	Traffic Volume (vph) Future Volume (vph) Ideal Flow (vphpl)		#	¥c_	<i>y</i> -	1		F	‡	*-	je-	‡	*
100 623 107 204 326 145 101 738 319 172 3.3 3.6 3.5 3.3 3.6 3.6 3.5 3.3 3.6 3.6 400 900 900 900 900 900 900 900 900 7.5 1.00 0.95 0.95 0.95 0.95 0.95 0.95 1.00 0.95 1.00 1.00 0.95 0.95 1.00 0.95 1.00 1.00 0.95 1.00 0.95 0.99 1.00 0.95 1.00 1.00 1.00 0.95 0.99 0.99 1.00 0.95 1.00 0.95 1.00 0.95 0.99 0.99 1.00 0.95 1.00 0.95 1.00 0.95 0.95 0.95 0.95 1.00 0.95 1.00 1.00 0.95 0.95 0.95 0.95 1.00 0.95 1.00 1.00 0.95 0.95 0.95 0.95 1.00 0.95 0.95 1.00 0.95 0.95 0.95 0.95 1.00 0.95 0.95 1.00 0.95 0.95 0.95 0.95 0.95 0.95 1.00 0.95 0.95 0.95 0.95 0.95 0.95 1.00 0.95 0.95 0.95 0.95 0.95 0.95 1.00 0.95 0.95 0.95 0.95 0.95 0.95 1.00 0.95 0.95 0.95 0.95 0.95 0.95 1.00 0.95 0.95 0.95 0.95 0.95 0.95 1.00 0.95 0.95 0.95 0.95 0.95 0.95 1.00 0.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 0.00 0.00 0.00 1.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Future Volume (vph) Ideal Flow (vphpl) Lane Width (m)	210	623	107	204	326	145	101	798	319	172	292	86
1900 1900	Ideal Flow (vphpl)	210	623	107	204	326	145	101	798	319	172	292	88
3.3 3.6 3.5 3.3 3.6 3.6 3.6 3.5 3.3 3.6 40.0 1 1 1 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Lane Width (m)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
10	()	3.3	3.6	3.5	3.3	3.6	3.6	3.3	3.6	3.5	3.3	3.6	3.5
7.5 7.6 1.00 0.95 0.95 0.95 1.00 0.95 1.00 1.00 0.95 0.95 1.00 0.95 0.99 0.99 0.99 0.99 0.99 0.99 0	Storage Length (m)	40.0		0.0	35.0		0.0	70.0		65.0	40.0		0.0
1,0	Storage Lanes	- 1		-	-		0	- 1		-	- 1		
1,00 0,95 1,00 0,95 0,95 1,00 0,95 1,00 0,95 1,00 0,95 1,00 0,95 1,00 0,95 1,00 0,95 0,95 1,00 0,95 0,95 0,95 0,95 0,95 0,95 0,95 0	l aper Length (m)	4.5			c:)			c: /	į		4.5		
100 0.95 0.95 0.95 1.00 0.96 1.00 0.96 1.00 0.96 1.00 0.95 0.95 1.00 0.95 0.95 1.00 0.96 0.95 1.00 0.96 0.95 1.00 0.96 0.95 1.00 0.96 0.95 1.00 0.96 0.95 1.00 0.96 0.95 1.00 0.96 0.95 1.00 0.96 0.95 1.00 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0	Lane Util. Factor	0.5	0.95	0.1	0.0	0.95	0.95	0.0	0.95	1.00	1.00	0.95	1.00
0.950 1728 1728 1728 1728 1739 1739 1748 1758 1758 1758 1758 1758 1758 1758 175	Ped Bike Factor	1.00		0.97	0.39	0.33		1.00		0.98	1.00		0.98
1728 3539 1581 1662 305 0 1662 3438 1551 1631 0.336	μ			0.850		0.954				0.850			0.850
1728 5539 1581 1662 3405 0 1662 3438 1551 1651 1651 1651 1651 1651 1651 165	Fit Protected	0.950		į	0.950		•	0.950			0.950		
0.336	Satd. Flow (prot)	1728	3239	1581	1662	3305	0	1662	3438	1551	1631	3374	1281
147, 9 134, 8 34, 148, 148, 148, 147, 9 144, 8	FIt Permitted	0.336			0.194		,	0.377			0.180	į	
Yes	Satd. Flow (perm)	609	3236	1535	337	3305	0	629	3438	1522	309	3374	1557
145 82 50 50 147.9	Right Turn on Red			Yes			Yes			Yes			Yes
147.9 148.9 38.1 10.6 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.01 1.02 1.03 1.07 2.04 477 0 0.10 7.98 319 172 1.01 1.02 1.04 1.04 1.00 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.04 1.00 1.01 1.05 1.05 1.05 1.05 1.05 1.00 1.00 1.00 1.00 1.00 1.00 1.01 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.	Satd. Flow (RTOR)			145		82				300			145
147.9 134.8 138.1 147.9 147.9 147.9 147.9 147.9 147.9 147.9 147.9 147.9 147.9 147.9 147.9 147.9 147.0 1.00	Link Speed (k/h)		20			20			20			20	
106 16 16 16 17 100 10	Link Distance (m)		147.9			134.8			338.1			256.3	
1,00	Travel Time (s)		10.6			9.7			24.3			18.5	
1,00 1,00 1,00 1,00 1,00 1,00 1,00 1,00	Confl. Peds. (#/hr)	œ		16	16		∞	က		9	9		c
1% 2% 1% 5% 2% 7% 5% 5% 3% 7% 1% 1% 1% 1% 1% 1% 1% 1% 1% 1% 1% 1% 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
10 623 107 204 326 145 101 798 319 172	Heavy Vehicles (%)	%	2%	4%	2%	2%	%/	2%	2%	3%	%/	%/	1%
10 10 10 10 10 10 10 10	Adj. Flow (vph)	210	623	107	204	326	145	101	798	319	172	595	86
10 10 10 10 10 10 10 10	Shared Lane Traffic (%)												
Hon No	Lane Group Flow (vph)	210	623	107	204	471	0	101	798	319	172	595	98
Left Left Right Right Left Right Righ	Enter Blocked Intersection	S	2	2	2	2	2	8	8	2	2	2	2
3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3	Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
1.04 1.00 1.01 1.04 1.00 1.00 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.04 1.04	Median Width(m)		3.3			3.3			3.3			3.3	
He 1.04 1.00 1.01 1.04 1.00 1.09 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.00 1.01 1.00 1.01 1.01	Link Offset(m)		0.0			0.0			0.0			0.0	
1.04 1.00 1.01 1.04 1.00 1.04 1.04	Crosswalk Width(m)		4.8			4.8			4.8			4.8	
1.04 1.00 1.01 1.04 1.00 1.09 1.04 1.00 1.01 1.04 1.00 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.04 1.00 1.01 1.00 1.01 1.00 1.00	Two way Left Turn Lane												
25 15 25 15	Headway Factor	<u>4</u>	1.00	1.01	<u>4</u>	1.00	1:00	<u>4</u>	1:00	1.01	1.04	1.00	1.0
Left Thru Right Left Thru Left Thru Right Left Thru Co. 2.0 1.0 2.0 2.0 1.0 2.0 1.0 2.0 2.0 1.0 2.0 2.0 1.0 2.0 2.0 1.0 2.0 2.0 1.0 2.0 2.0 2.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	Turning Speed (k/h)	22		15	22		15	22		15	25		15
Left Thru Right Left Thru Left Thru Right Left Thru 20 100 20 100 20 100 20 100 20 100 20 100 20 100 20 100 20 100 20 100 20 100 10	Number of Detectors	-	2	_	_	2		~	2	-	-	2	_
20 100 2.0 2.0 100 2.0 2.0 100 2.0 2.0 100 2.0 2.0 100 2.0 2.0 2.0 100 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	Detector Template	Left	Thro	Right	Left	Thro		Left	Thr	Right	Left	Thru	Right
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
00 00 00 00 00 00 00 00 00 00 00 00 00	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
20 0.6 2.0 2.0 2.0 CHEX CI-EX	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
CHEX CI-EX C	ا	2.0	9.0	2.0	2.0	9.0		2.0	9.0	2.0	2.0	9.0	2.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		C+EX	Ċ÷ Č	Ċ Ę	Š Č	Ci+Ex		Ċ÷ Č	Ċ Ę	Ċ Ę	Ċ Ę	Č+Ę	CHÉX
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Detector 1 Charmel	d	d	0	c	0		d	d	d	d	d	d
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Defector 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 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Detector I 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 0.0 0.4 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
C+EX C+EX C+EX C.	Detector 2 Position(m)		9.4			9.4			4.0			4.0	
C+EX C+EX	Detector 2 Size(m)		0.0 1			ο. Ο. Γ			ο. Ο ι			0.0 1	
	Detector 2 Type		CH CH CH			C+EX			Č.			CI+EX	

Synchro 10 Report Paradigm Transportation Solutions Limited Page 1

Lanes, Volumes, Timings 1: Ontario St S/Ontario St N & Main St E

200624 2031 Background AM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	Ϋ́	Perm	pm+pt	¥		pm+pt	¥	Perm	pm+pt	Ϋ́	Perm
Protected Phases	က	∞		7	4		2	2		_	9	
Permitted Phases	∞		∞	4			2		2	9		9
Detector Phase	က	∞	00	7	4		5	2	2	_	9	9
Switch Phase												
Minimum Initial (s)	2.0	15.0	15.0	7.0	15.0		2.0	15.0	15.0	2.0	15.0	15.0
Minimum Split (s)	9.5	32.0	32.0	11.0	32.0		9.2	32.0	32.0	9.5	32.0	32.0
Total Split (s)	11.5	32.0	32.0	12.0	32.5		10.8	32.5	32.5	13.5	35.2	35.2
Total Split (%)	12.8%	35.6%	35.6%	13.3%	36.1%		12.0%	36.1%	36.1%	15.0%	39.1%	39.1%
Maximum Green (s)	7.5	25.0	25.0	8.0	25.5		8.9	25.5	25.5	9.2	28.2	28.2
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1:0	3.0	3.0	1.0	3.0		1:0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	0.0	-3.0	-3.0	0.0	-3.0		0.0	-3.0	-3.0	0.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehide Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			18.0	18.0		18.0	18.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	30.6	23.1	23.1	31.6	23.6		40.5	33.7	33.7	45.9	38.0	38.0
Actuated g/C Ratio	0.34	0.26	0.26	0.35	0.26		0.45	0.37	0.37	0.51	0.42	0.42
v/c Ratio	0.70	0.69	0.21	0.86	0.51		0.27	0.62	0.42	0.59	0.42	0.13
Control Delay	33.0	34.0	2.9	54.5	24.6		14.4	26.6	5.5	21.4	21.0	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	8.0	2.9	54.5	24.6		14.4	26.6	5.5	21.4	21.0	1.7
FOS	ပ	O	⋖	_	O		ш	O	∢	O	O	A
Approach Delay		30.2			33.6			20.1			18.9	
Approach LOS		O			O			O			В	
Intersection Summary												
Area Type:	Other											
Cycle Length: 90												
Actuated Cycle Length: 90 Offset: 33 3 (37%) Referenced to phase 2:NBTI and 6:SBTI Start of Green	nced to phase	2-NRT	S:9 pue	RTI	t of Green							
Natural Cycle: 85												
Control Type: Actuated-Coordinated	oordinated											
Maximum v/c Ratio: 0.86												
Intersection Signal Delay: 24.8	24.8			= =	Intersection LOS: C	LOS: C	_					
	27.7			_								

Splits and Phases: 1: Ontario St S/Ontario St N & Main St E

13.5s 12.5s 132.5s 10.5s 10.5s

Paradigm Transportation Solutions Limited

Queues 1: Ontario St S/Ontario St N & Main St E

200624 2031 Background AM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	210	623	107	204	471	101	798	319	172	595	86	
v/c Ratio	0.70	69.0	0.21	98.0	0.51	0.27	0.62	0.42	0.59	0.42	0.13	
Control Delay	33.0	34.0	5.9	54.5	24.6	14.4	26.6	5.5	21.4	21.0	1.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	33.0	34.0	5.9	54.5	24.6	14.4	26.6	5.5	21.4	21.0	1.7	
Queue Length 50th (m)	26.0	53.7	0.0	25.2	31.3	8.9	62.1	2.2	15.9	40.8	0.0	
Queue Length 95th (m)	39.2	67.1	6.3	#51.2	43.0	19.5	89.4	21.6	31.2	61.1	4.3	
Internal Link Dist (m)		123.9			110.8		314.1			232.3		
Turn Bay Length (m)	40.0			35.0		70.0		65.0	40.0			
Base Capacity (vph)	300	1101	277	236	1102	380	1288	757	302	1423	740	
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	0.70	0.57	0.19	0.86	0.43	0.27	0.62	0.42	0.56	0.42	0.13	
0												

Intersection Summary
96th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 2010 Signalized Intersection Summary 1: Ontario St S/Ontario St N & Main St E

200624 2031 Background AM Peak Hour

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	je-	₩	¥C	F	4₽		<u>,-</u>	₩	¥C	je-	₩	¥C
Traffic Volume (veh/h)	210	623	107	204	326	145	101	798	319	172	595	86
Future Volume (veh/h)	210	623	107	504	326	145	101	798	319	172	292	8
Number (AC) Chi	mc	∞ <	<u> </u>	~ 0	4 0	4 0	ഹ	2 0	12	- -	9 0	16
Dod Diko Adira aht)	000	>	0 5	000	>	000	0 0	>	5	9	>	5 0
Parking Bus. Adi	1.00	1.00	00.1	1.00	1.00	1.00	1.00	1.00	8 0	1.00	1.00	8.0
Adj Sat Flow, veh/h/ln	1881	1863	1881	1810	1835	1900	1810	1810	1845	1776	1776	1881
Adj Flow Rate, veh/h	210	623	0	204	326	145	101	798	319	172	595	0
Adj No. of Lanes	-	2	-	-	2	0	_	2	_	-	2	_
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
Percent Heavy Veh, %	-	2	-	2	2	7	2	2	က	7	7	_
Cap, veh/h	333	932	421	588	632	275	378	1324	601	303	1401	664
Arrive On Green	0.08	0.26	0.00	0.09	0.27	0.24	0.05	0.39	0.39	0.08	0.42	0.00
Sat Flow, veh/h	1792	3539	1599	1723	2351	1022	1723	3438	1561	1691	3374	1599
Grp Volume(v), veh/h	210	623	0	204	240	231	101	798	319	172	295	0
Grp Sat Flow(s),veh/h/ln	1792	1770	1599	1723	1743	1630	1723	1719	1561	1691	1687	1599
Q Serve(g_s), s	7.5	14.2	0.0	8.0	10.5	11.0	3.3	16.7	14.2	2.2	11.3	0.0
Cycle Q Clear(g_c), s	7.5	14.2	0.0	8.0	10.5	11.0	3.3	16.7	14.2	2.7	11.3	0.0
Prop In Lane	1.00		1.00	1.00		0.63	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	932	421	588	469	438	378	1324	601	303	1401	664
V/C Ratio(X)	0.63	0.67	0.00	0.71	0.51	0.53	0.27	09.0	0.53	0.57	0.42	0.00
Avail Cap(c_a), veh/h	333	1101	497	588	225	216	414	1324	601	338	1401	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1:00	1.00
Upstream Filter(I)	9 1	1.00	0.00	0.98	0.98	0.98	1.00	1.00	1.00	0.1	9. !	0.00
Uniform Delay (d), s/veh	25.7	29.6	0.0	25.6	27.9	28.9	17.3	22.1	21.4	18.1	18.7	0.0
Incr Delay (d2), s/veh	2.9	0.8	0.0	6.4	0.3	0.4	0.1	2.0	3.3	0.8	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	0.7	0.0	1.7	5.1	2.0	9.	8.5	9.9	5.6	5.4	0.0
LnGrp Delay(d),s/veh	28.6	30.4	0.0	32.0	28.2	29.3	17.4	24.2	24.7	18.8	19.6	0.0
LnGrp LOS	O	O		O	ပ	O	۵	O	ပ	m	m	
Approach Vol, veh/h		833			675			1218			767	
Approach Delay, s/veh		29.9			29.7			23.8			19.5	
Approach LOS		ပ			ပ			ပ			m	
Timer	_	2	က	4	2	9	7	80				
Assigned Phs	-	2	က	4	2	9	7	∞				
Phs Duration (G+Y+Rc), s	11.6	38.7	11.5	28.2	8.9	41.4	12.0	27.7				
Change Period (Y+Rc), s	4.0	7.0	4.0	7.0	4.0	7.0	4.0	7.0				
Max Green Setting (Gmax), s	9.5	25.5	7.5	25.5	8.9	28.2	8.0	25.0				
Max Q Clear Time (g_c+I1), s	7.7	18.7	9.5	13.0	5.3	13.3	10.0	16.2				
Green Ext Time (p_c), s	0.1	3.2	0.0	6.	0.0	2.9	0.0	2.4				
Intersection Summary												
HCM 2010 Ctrl Delay			25.4									
HCM 2010 LOS			O									

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Paradigm Transportation Solutions Limited

Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 2: Mall Entrance & Main St E

	Ì	~	•		_		
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	₩.		r	*	r	*	
Traffic Volume (vph)	1232	4	32	653	23	- 82	
Future Volume (vph)	1232	4	35	653	23	18	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (m)	3.6	3.6	3.3	3.6	3.3	3.5	
Storage Length (m)		0.0	70.0		0.0	0.0	
Storage Lanes		0	~		-	—	
Taper Length (m)			7.5		7.5		
Lane Util. Factor	0.95	0.95	9.	0.95	9:1	0.1	
Fr	0.995					0.850	
Fit Protected		•	0.950	9	0.950	1011	
Satd. Flow (prot)	3491	0	1/45	3343	1/11	159/	
Fit Permitted	1010	c	0.197	0000	0.950	4507	
Salu: Flow (pellil)	5	> 8	205	242		/6C/	
Right Tulm on Red	ď	2				2 ÷	
Satu. Flow (RTOR)	o 6			2	2	0	
Link Distance (m)	2 2 8			27.2 6	2 7 1/1		
Travel Time (s)	0.4.0			19.7	10.4		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	3%	%0	%0	%8	5%	%0	
Adj. Flow (vph)	1232	41	32	653	23	18	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1273	0	35	653	23	8	
Enter Blocked Intersection	2	2	2	2	2	2	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(m)	3.3			E. 6	 		
Link Offset(m)	0.0			0:0	0.0		
Crosswalk Width(m)	4.8			4.8	8.		
I wo way Left I urn Lane	9	9	3	9	3	3	
Headway Factor	1.00	9:1	2. 2.	1:00	2. 2.	1.01	
Turning Speed (k/h)	,	15	25	,	52	15	
Number of Detectors	2		- :	2	- -	- : i	
Detector Template	Ihra		Let	Ihru	Left	Right	
Leading Detector (m)	10.0		2.0	10.0	2.0	2.0	
I railing Detector (m)	0.0		0.0	0:0	0.0	0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	
Defector I Size(m)	0.0		0.2	0.D	0.2	0.2	
Detector 1 Type	EX C:		ž Š	ξ 5	ξ 5	Ž Č	
Detector 1 Extend (s)	0.0		0	0	0	00	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)	9.4			9.4			
Detector 2 Size(m)	9.0			9.0			
Detector 2 Type	CI+EX			CI+EX			
Detector 2 Channel							
Detector 2 Extend (s)	0.0			0.0			
Turn Type	A		Perm	ΑN	Prot	Perm	

Lanes, Volumes, Timings 2: Mall Entrance & Main St E

200624 2031 Background AM Peak Hour

200624 2031 Background AM Peak Hour

•	NBR		80	80		10.0	35.0	35.0	38.9%	28.0	4.0	3.0	-3.0	4.0			3.0	None	20.0	2.0	0	13.1	0.18	90:0	12.5	0.0	12.5	В										LOS: A	Service A	
√	r NBL	8 9		8 9				0 32.0	38.9%			3.0		0.4.0			3.0	e None	20.0	7.0	0			3 0.08		0.0			9 20.4	0								Intersection LOS: A	ICU Level of Service A	
.	- WBT		9	9		30.0) 55.0	9	0.84		3.0		0.4.0			3.0	None						1 0.23				A	2.9	∀										
•	EBR WBI		9	v		30.0	37.(55.0	61.1%	48.0	4.0	3.0	-3.0	4.0			3.0	None				62.0	0.84	0.11	4.1	0.0	4	V												
†	EBT EE	2		2		30.0	37.0	55.0	61.1%	48.0	4.0	3.0	-3.0	4.0			3.0	Max	15.0	7.0	0	62.0	0.84	0.44	3.8	0.3	4.1	A	4.1	A		Other		4.2		Incoord		: 4.0	ization 50.4%	
	Lane Group	Protected Phases	Permitted Phases	Detector Phase	Switch Phase	Minimum Initial (s)	Minimum Split (s)	Total Split (s)	Total Split (%)	Maximum Green (s)	Yellow Time (s)	All-Red Time (s)	Lost Time Adjust (s)	Total Lost Time (s)	Lead/Lag	Lead-Lag Optimize?	Vehicle Extension (s)	Recall Mode	Walk Time (s)	Flash Dont Walk (s)	Pedestrian Calls (#/hr)	Act Effct Green (s)	Actuated g/C Ratio	v/c Ratio	Control Delay	Queue Delay	Total Delay	SOT	Approach Delay	Approach LOS	Intersection Summary	Area Type:	Cycle Length: 90	Actuated Cycle Length: 74.2	Natural Cycle: 75	Control Type: Semi Act-Uncoord	Maximum v/c Ratio: 0.44	Intersection Signal Delay: 4.0	Intersection Capacity Utilization 50.4%	Analysis Period (min) 15

Splits and Phases: 2: Mall Entrance & Main St E



Paradigm Transportation Solutions Limited

Queues 200624 2: Mall Entrance & Main St E 2031 Background AM Peak Hour

	†	>	Ļ	•	•	
Lane Group	EBT	WBL	WBT	RE	NBR	
Lane Group Flow (vph)	1273	32	653	23	18	
v/c Ratio	0.44	0.11	0.23	0.08	90:0	
Control Delay	3.8	4.1	5.9	26.6	12.5	
Queue Delay	0.3	0.0	0:0	0.0	0.0	
Total Delay	4.1	4.1	5.9	26.6	12.5	
Queue Length 50th (m)	34.8	1.2	14.2	3.5	0.0	
Queue Length 95th (m)	47.0	3.9	20.2	8.7	5.1	
Internal Link Dist (m)	110.8		249.6	120.7		
Turn Bay Length (m)		70.0				
Base Capacity (vph)	2916	302	2791	719	682	
Starvation Cap Reductn	878	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.62	0.11	0.23	0.03	0.03	
Intersection Summary						

Synchro 10 Report Page 7

Paradigm Transportation Solutions Limited

HCM 2010 Signalized Intersection Summary 2: Mall Entrance & Main St E

200624 2031 Background AM Peak Hour

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Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings
3: Busway/Wilson Dr & Main St E

	1086 23 1086 23 1086 23 1900 1900 3 3 6 3.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WBL 25 25 26 1900 3.6 40.0 1 7.5 1.00 0.950 0.950 479	445 458 458 458 1900 3.6 0.95 1.00 0.980 33.79 33.79 28 50 50 50	71 71 71 1900 3.6 0.0 0 0 0 0.95 0.95 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	80 80 80 80 3.6 0.0 1.0 1.00 1.59 1.00 1.69 1.169	1900 3.6 3.6 3.6 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.	97 97 97 1900 3.6 3.6 3.0 1.00 1.00	SBL 165 1900 3.3 3.3 55.0	2 2 2 2 1900	93 93 1900
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Heavy Vehicles (%) 6% 2		2%	2%	3 %	13%	2%	12%	1%	2%	%2
		23	400	_	8	ာ	6	COL	7	32
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0	0.0		0.0			0.0			0.0	
Crosswalk Width(m) 4	4.8		8.4			4.8			4.8	
ane										
1.04	1.00 1.00	1:00	1:00	1.00	1.00	1.00	1.00	1.04	1.00	1.01
urning Speed (k/h) 25	15	22		15	22		15	25		15
- J	2	-	5		-	5	-	_	2	
Left	Thru	Left	Thru		Left	Thru	Right	Left	Thru	
2.0	10.0	2.0	10.0		2.0	10.0	2.0	5.0	10.0	
0:0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
(m) 0:0	0.0	0.0	0.0		0:0	0.0	0.0	0.0	0.0	
	9.0		9.0			9.0	2.0	2.0	9.0	
Detector 1 Type CI+Ex CI+Ex Detector 1 Channel	Ж	Ϋ́ E	÷ Č		Ě Č	Ċ Ę	Ψ Ö	Č÷ Č	Č÷ Č	
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	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
0:0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
(F	9.4		9.4			9.4			9.4	
(u	9.0		9.0			9.0			9.0	
Detector 2 Type CI+Ex	Ĕ		CI+EX			CI+EX			CI+EX	

Synchro 10 Report Paradigm Transportation Solutions Limited Page 9

Lanes, Volumes, Timings 3: Busway/Wilson Dr & Main St E

200624 2031 Background AM Peak Hour

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Lane Group	EBF	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	ΑN		Perm	¥		Perm	¥	Perm	Perm	ΑĀ	
Protected Phases	S	2			9			∞			4	
Permitted Phases	2			9			∞		∞	4		
Detector Phase	2	2		9	9		∞	∞	∞	4	4	
Switch Phase												
Minimum Initial (s)	2.0	40.0		40.0	40.0		2.0	2.0	2.0	10.0	10.0	
Minimum Split (s)	10.0	46.0		46.0	46.0		26.0	26.0	26.0	26.0	26.0	
Total Split (s)	11.0	61.0		20.0	20.0		29.0	29.0	29.0	29.0	29.0	
Total Split (%)	12.2%	%8'.29	-		25.6%		32.2%	32.2%	32.2%	32.2%	32.2%	
Maximum Green (s)	0.9	22.0		44.0	44.0		23.0	23.0	23.0	23.0	23.0	
Yellow Time (s)	3.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		5.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-2.0		-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Recall Mode	None	Max		None	None		None	None	None	None	None	
Walk Time (s)		30.0		30.0	30.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		10.0		10.0	10.0		13.0	13.0	13.0	13.0	13.0	
Pedestrian Calls (#/hr)		0		0	0		0	0	0	0	0	
Act Effct Green (s)	57.2	57.2		48.5	48.5		18.1	18.1	18.1	18.1	18.1	
Actuated g/C Ratio	0.69	69.0		0.58	0.58		0.22	0.22	0.22	0.22	0.22	
v/c Ratio	0.11	0.46		0.09	0.27		0.32	0.01	0.25	0.56	0.23	
Control Delay	2.7	7.3		11.5	6.6		30.4	24.3	7.5	36.5	9.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	2.7	7.3		11.5	6. 6.		30.4	24.3	7.5	36.5	9.7	
SOT	A	∢		В	∢		ပ	ပ	∢	Ω	∢	
Approach Delay		7.2			6.6			17.9			25.9	
Approach LOS		∢			⋖			m			ပ	
Intersection Summary												
Area Type:	Other											
Cycle Length: 90												
Actuated Cycle Length: 83.3	c.											
Natural Cycle: 85												
Control Type: Semi Act-Uncoord	coord											
Maximum v/c Ratio: 0.56												
Intersection Signal Delay: 11.0	11.0			Ī	Intersection LOS: B	LOS: B						
Intersection Capacity Utilization 73.2%	ation 73.2%			⊇	ICU Level of Service D	f Service	۵					
Analysis Period (min) 15												
Colife and Dhagae: 3: Dis	3. Busway/Mileon Dr. & Main C+ E	or 8 Mai	ц ф									
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Paradigm Transportation Solutions Limited

200624 2031 Background AM Peak Hour Queues 3: Busway/Wilson Dr & Main St E

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	4	†	>	ţ	•	←	4	۶	→	
Lane Group	EBF	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	
Lane Group Flow (vph)	61	1109	25	529	8	က	97	165	92	
v/c Ratio	0.11	0.46	0.09	0.27	0.32	0.01	0.25	0.56	0.23	
Control Delay	2.7	7.3	11.5	6.6	30.4	24.3	7.5	36.5	9.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	2.7	7.3	11.5	6.6	30.4	24.3	7.5	36.5	7.6	
Queue Length 50th (m)	2.8	37.6	1.8	21.3	11.3	0.4	0.0	24.6	0.3	
Queue Length 95th (m)	8.3	9.59	8.9	36.8	23.6	2.5	11.4	44.0	11.5	
Internal Link Dist (m)		236.1		336.6		176.7			150.4	
Turn Bay Length (m)	20.0		40.0				35.0	55.0		
Base Capacity (vph)	223	2424	279	1980	351	561	201	409	539	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.11	0.46	0.09	0.27	0.23	0.01	0.19	0.40	0.18	
Information O maintain										

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Paradigm Transportation Solutions Limited

HCM 2010 Signalized Intersection Su 3: Busway/Wilson Dr & Main St E

200624	2031 Background AM Peak Hour
n Summary	

	4	†	<i>></i>	/	Ļ	4	•	•	•	٠	→	*
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	F	₩		۴	₽		r	+	¥.	r	2	
Traffic Volume (veh/h)	61	1086	23	25	458	71	80	က	97	165	5	83
Future Volume (veh/h)	61	1086	23	25	458	71	80	က	6	165	2	93
Number	2	2	12	_	9	16	က	00	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		1.00	1.00		0.99
Parking Bus, Adj	1.00	1:00	1.00	1.00	1.00	1.00	1:00	1.00	1.00	1.00	0.1	1.00
Adj Sat Flow, veh/h/ln	1792	1863	1900	1863	1821	1900	1681	1863	1696	1881	1845	1900
Adj Flow Rate, veh/h	6	1086	23	52	428	71	80	m ·	97	165	7	83
Adj No. of Lanes	- :	5	0	- !	7	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	0.0	1.00
Percent Heavy Ven, %	9 0	2506	7 2	384	1700	0 277	753	7 7 7	270	340	N 4	200
Arrive On Green	900	0.71	0.68	090	090	0.60	0.19	0 19	0.19	0 19	0 19	0 19
Sat Flow, veh/h	1707	3544	75	206	3004	463	1158	1863	1442	1302	33	1521
Grp Volume(v), veh/h	61	545	295	25	263	266	80	က	26	165	0	95
Grp Sat Flow(s),veh/h/ln	1707	1770	1849	206	1730	1737	1158	1863	1442	1302	0	1554
Q Serve(g_s), s	1.0	10.4	10.5	1.8	2.8	5.9	5.1	0.1	4.7	9.4	0.0	4.2
Cycle Q Clear(g_c), s	1:0	10.4	10.5	3.5	2.8	5.9	9.4	0.1	4.7	9.2	0.0	4.2
Prop In Lane	1.00		0.04	1.00		0.27	1.00		1.00	1.00		0.98
Lane Grp Cap(c), veh/h	619	1252	1308	38	1036	19	253	360	279	340	0	301
V/C Ratio(X)	0.10	0.43	0.43	0.07	0.25	0.26	0.32	0.01	0.35	0.49	0.00	0.32
Avail Cap(c_a), veh/h	899	1252	1308	384	1036	194	388	218	447	492	0	482
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	9.5	1.00	1:00	1.00	1:00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	2.0	2.0	2.0	9.7	9.7	7.7	31.9	26.3	28.1	30.1	0.0	27.9
Incr Delay (d2), s/veh	0.7	-	0.	0.1	0.2	0.2	1:0	0.0	- - ;	5.	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/In	0.5	5.4	5.6	0.3	2.8	2.9	1.7	0.1	o. 6	3.5	0.0	o. 6
LnGrp Delay(d),s/ven	2.0	۰.۷	٥.٦	- <	Σ. <	Σ: <	33.0	26.3	29.5	31.6	0.0	78.8
Approach Vol. south	c	1470	<	<	2 2	<		180	>	>	080	
Approach Delay skeh		0 0			2 8			30.8			30.6	
Approach LOS		V			< <			O			O	
Timer	_	2	3	4	2	9	7	8				
Assigned Phs		2		4	2	9		80				
Phs Duration (G+Y+Rc), s		61.0		19.6	8.7	52.3		19.6				
Change Period (Y+Rc), s		0.9		0.9	2.0	0.9		0.9				
Max Green Setting (Gmax), s		22.0		23.0	0.9	44.0		23.0				
Max Q Clear Time (g_c+l1), s		12.5		11.5	3.0	7.9		11.4				
Green Ext Time (p_c), s		16.8		4.	0.0	9.9		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			11.5									
HCM 2010 LOS			œ									

Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 4: Drew Centre/Private Driveway & Main St E

		t	•	-			-	-	_		•	,
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	‡	*	r	‡		K.	£\$			4	
Traffic Volume (vph)	0	831	117	78	266	0	139	0	36	0	0	0
Future Volume (vph)	0	831	117	78	266	0	139	0	36	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	w. f	3.6	3.5	w f	3.6	9.0	e. e	3.6	3.5	3.6	3.6	3.6
Storage Lengtn (m)	12.0		40.0	45.0		0.0	0.0		22.0	0.0		0.0
Storage Lanes	-		-	- 1		0	7 -		0	0		0
Taper Length (m)	7.5			7.5	0		7.5			7.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1:00	1:00	1:00	1.00
Ped Bike Factor			0.30	3				0.98				
ב <u>ר</u>			0.850					0.850				
Fit Protected	4007	0010	74.00	0.950	0020	c	0.950	4 100	c	c	000	
Satd. Flow (prot)	103/	2228	458	1040	2028	>	2000	2002	>	>	200	0
Pit Permitted Satd Flow (norm)	1837	3530	1387	407.0 400	3530	c	3385	1583	c	c	1000	
Dight Time on Dod	200	666	200	25	666	> 50	2000	200	> 50	>	200	> 20
Right Turn on Red			2 S			ß		700	ß			200
Jake Canad (Lib.)		C	70		C			3			C	
LIIIK Speed (K/II)		0000			0000			000			00 0	
LINK Distance (m)		300.0			302.0			2007			0.0	
Travel Time (s)	c	70.07	ç	ç	70.1	c		0.0	G	G	2.0	
Doak Hour Easter	7 6	5	5 5	5 5	5	4 6	5	100	0 0	9 6	00	100
Heavy Vehicles (%)	8.8	3,0	3.1	3.8	8.0	8.8	8 %	8 %	8 %	8.8	8 %	8.0
Adi. Flow (vph)	0	831	117	282	566	0	139	0	36	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	831	117	28	299	0	139	36	0	0	0	0
Enter Blocked Intersection	2	8	2	2	욷	2	2	2	8	2	2	S
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			9.9			9.9	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane							į					
Headway Factor	4 2	1.00	1.01	4 2 3	1.00	1.00	2. 22. 9	1.00	1.01	1.00	1:00	1.00
I urning Speed (k/h)	52	•	. 15	52	•	15	52	•	15	52	•	15
Number of Detectors	- :	7	- :		7		- .	7		- .	5	
Detector Template	Left	Thr	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	9.0	2.0	2.0	9.0		2.0	9.0		2.0	9.0	
Detector 1 Type	ž Č	Σ - -	ξ 5	ξ 5	Σ 5		ž Š	Σ Č		ž Č	Σ 5	
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Defector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	00		0.0	0.0		0.0	0.0	
Detector 2 Position(m)	3	9.4	2	2	9.4			9.4		3	9.4	
Detector 2 Size(m)		9.0			9.0			9.0			9.0	
Detector 2 Tyne		Ž Į Į			5			\ \ \ \ \ \ \ \ \ \			5	
		2			1			ZI-L			×Ц+	

Lanes, Volumes, Timings 4: Drew Centre/Private Driveway & Main St E

200624 2031 Background AM Peak Hour

Particle	Perm Perm 15.0 35.0 40.0 44.4% 33.0 33.0 3.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	0.0 NA 2 2 2 2 2 2 2 35.0 40.0 44.4% 33.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4		WBL pm+pt	WBT 0.0		Æ	NBT 0.0	NBR	SBL	SBT	SBR
reend (s) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Perm 2 2 2 44,00 33,0 4,00 4,00 4,00 3,00 3,00 3,0	0.0 NA 2 2 2 2 35.0 40.0 40.0 44.4% 33.0 4.0 4.0 4.0		pm+pt	0.0			0.0				
Perm NA Perm pm+pt NA Perm NA	Perm 15.0 2 2 2 2 2 35.0 44.4% 33.0 33.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	NA 2 2 2 2 35.0 40.0 44.4% 33.0 4.0 4.0 4.0		pm+pt							0.0	
hasess 2 2 6 6 8 8 4 asee 2 2 2 6 6 8 8 4 asee 2 2 2 1 6 6 8 8 8 4 asee 2 2 2 1 6 6 8 8 8 4 asee 2 2 2 1 6 6 8 8 8 4 asee 2 2 2 1 6 6 8 8 8 4 asee 2 2 2 1 6 6 8 8 8 4 asee 2 2 2 1 6 6 6 0 6 0 50 itial(s) 350 350 350 95 350 270 270 120 s) 40, 40, 40, 40, 110 510 270 270 270 120 s) 330 330 330 7, 0 440 20, 200 200 50 (s) 30 30 30 30 10 30 30 30 30 a(s) 30 30 30 30 30 30 30 30 a(s) 30 30 30 30 30 30 30 a(s) 30 30 30 30 30 30 30 a(s) 30 30 30 30 30 30 a(s) 30 30 30 30 30 30 a(s) 40 40 40 40 40 40 40 a(s) 40 40 40 40 40 40 a(s) 50 40 40 40 40 40 a(s) 60 3 60 69 69 0 130 10 a(s) 60 3 60 69 69 0 130 a(s) 60 0 0 0 0 0 a(s) 60 0 0 0 0 0 a(s) 60 0 0 0 0 0 0 a(s) 60	15.0 2 2 2 2 35.0 40.0 44.4% 8) 33.0 33.0 3.0 5) -3.0 4.0 4.0	2 2 35.0 40.0 44.4% 33.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	2 2		≸	ď	erm	¥				
hases 2 2 6 6 8 8 4 4 ase	15.0 35.0 40.0 44.4% s) 33.0 5) -3.0 5) -3.0 6) -4.0	2 35.0 40.0 40.0 4.0 33.0 4.0 4.0	2 2		9			œ		4	4	
sase 2 2 2 1 6 8 8 4 4 sase 2 2 2 1 6 6 6 8 8 4 4 lat (s) 150 150 150 150 6 6 6 6 0 50 lit (s) 350 350 350 350 350 270 270 270 lat (s) 40 400 410 110 510 270 270 120 lat (s) 330 330 330 70 440 200 200 300 lat (s) 40 40 410 4122% 567% 300% 300% 313% 17 lat (s) 40 40 40 110 510 200 200 300 lat (s) 30 330 330 330 40 40 40 40 40 lat (s) 30 30 30 30 30 30 30 30 30 lat (s) 40 40 40 40 40 40 40 40 40 40 lat (s) 30 30 30 30 30 30 30 30 lat (s) 40 40 40 40 40 40 40 40 40 lat (s) 30 30 30 30 30 30 30 lat (s) 40 40 40 40 40 40 40 40 40 lat (s) 30 30 30 30 30 30 30 30 lat (s) 40 40 40 40 40 40 40 40 40 lat (s) 30 30 30 30 30 30 30 lat (s) 40 40 40 40 40 40 40 40 lat (s) 20 20 200 lat (s) 20 20 20 20 lat (s) 20	(s) 15.0 (s) 35.0 (s) 44.0 (s) 33.0 (t) 3.0 (t) 3.0 (t) 4.0	2 35.0 40.0 44.4% 33.0 4.0 3.0 -3.0 4.0	2	9			œ			4		
tial (s) 150 150 150 150 60 60 50 170 (s) 850 170 170 170 170 170 170 170 170 170 17	(s) 15.0 s) 35.0 40.0 44.4% nr (s) 33.0) 30.0 st (s) 3.0 st (s) 4.0	33.0 4.0 4.0 4.0 33.0 3.0 -3.0 4.0		_	9		00	œ		4	4	
itial (s) 15.0 15.0 15.0 15.0 16.0 6.0 5.0 16.0 (s) 16.0	(s) 15.0 s) 35.0 40.0 44.4% n (s) 33.0 10 3.0 st (s) 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	15.0 35.0 44.4% 33.0 4.0 -3.0 -3.0										
iti (s) 350 350 350 350 350 270 270 120 310 350 350 350 350 350 370 270 270 120 310 310 310 310 310 310 310 310 310 31	s) 35.0 40.0 44.4% n(s) 33.0 4.0) 3.0 st (s) 4.0 (s)	35.0 44.4% 33.0 4.0 -3.0 -4.0	15.0	2.0	15.0		0.9	0.9		2.0	2.0	
State Stat	40.0 44.4% n (s) 33.0 4.0 7.0 5 3.0 5 (s) -3.0 (s) 4.0	40.0 44.4% 33.0 4.0 -3.0 -3.0	35.0	9.5	35.0	. 4	27.0	27.0		12.0	12.0	
(s) 44,% 44,% 44,% 12,% 56,7% 30,0% 30,0% (s)	44.4% n(s) 33.0 33.0 4.0 (s) 3.0 3.0 3.0 3.0 (s) 6.0 4.0 (s)	33.0 33.0 4.0 3.0 -3.0 4.0	40.0	11.0	51.0	. 4		27.0		12.0	12.0	
reen (s) 330 330 330 70 440 200 200 50 (e) (e) 30 30 330 330 330 330 30 40 40 40 40 40 40 40 40 40 40 40 40 40	n (s) 3	33.0	44.4%	12.2%	26.7%	30		30.0%	_	13.3%	13.3%	
(if) 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 (if) 3,0 3,0 3,0 3,0 3,0 3,0 3,0 3,0 3,0 3,0) of (s) (s)	3.0	33.0	7.0	44.0	. 4	50.0	20.0		2.0	2.0	
e (s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0		3.0	4.0	3.0	4.0		4.0	4.0		4.0	4.0	
djust (s) 3.0 3.0 3.0 0.0 3.0 -3.0 -3.0 diust (s) 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 diust (s) 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0		-3.0	3.0	1.0	3.0		3.0	3.0		3.0	3.0	
ime (s) 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0		4.0	-3.0	0.0	-3.0		-3.0	-3.0			-3.0	
ptimizer Lag Lag Lag Lead Lead Lead Lead Lead Lead Lead Lead	(2)		4.0	4.0	4.0		4.0	4.0			4.0	
primize? Interpretation 15, 20, 3.0, 3.0, 3.0, 3.0 Interpretation 16, 21, 31, 31, 31, 31, 31, 31, 31, 31, 31, 3		Lag	Lag	Lead								
sustion (s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0												
s C-Max C-Max None None None None None sake (S) 2.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	3.0		3.0	3.0	3.0		3.0	3.0		3.0	3.0	
s) 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	C-Max		C-Max	None	None	Ż	one	None		None	None	
Availe (\$ 21.0 21.0 21.0 13.0 Jalia (#Inr) 0 0 0 0 0 0 0 Charles (\$ 60.3 60.3 69.0 69.0 13.0 Charles (\$ 60.3 60.3 60.3 60.3 60.3 60.3 60.3 Fatio 0.67 0.67 0.77 0.77 0.14 N. 20 0.0 0.0 0.0 0.0 0.0 N. 29 A A A A A D Summary Culter (\$ 6.8 A A A B B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B		7.0	7.0		7.0		7.0	7.0				
ear (s) 60.3 60.3 60.0 69.0 0.0 0.0 ear (s) 60.3 60.3 60.3 60.0 69.0 13.0 0.3 Earlie (#frr) 0.0 67.0 67.0 0.77 0.77 0.77 0.75 0.79 0.70 0.70 0.70 0.70 0.70 0.70 0.70		21.0	21.0		21.0	,-	13.0	13.0				
Pan (s) 60.3 69.0 69.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13		0	0		0		0	0				
C Ratio 0.67 0.77 0.74 9 S 0.35 0.12 0.71 0.29 9 Y 7.7 0.5 3.8 3.3 35.3 9 Y 0.0 0.0 0.0 0.0 7 7 0.5 3.8 3.3 35.3 9 A A A A A D 68 B 3.4 D 0.0 0.0 0.0 0.0 90 Cell Length 50 A A A A A A D D D 0.0 0.	Act Effet Green (s)	60.3	60.3	0.69	0.69		13.0	13.0				
yy 7.7 0.5 38 33 35.3 9.7 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	Actuated g/C Ratio	0.67	0.67	0.77	0.77	_	14	0.14				
yy 77 0.5 3.8 3.3 35.3 35.3 y	/c Ratio	0.35	0.12	0.17	0.21	J	0.73	0.07				
y 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Sontrol Delay	7.7	0.5	3.8	3.3	(.,	35.3	0.2				
A A A A B D	Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0				
A A A A A D D	otal Delay	7.7	0.5	3.8	3.3	(.)	35.3	0.2				
elay 6.8 3.4 Summary A A Summary Other n: 90 cle Length: 90 cle Length: 90 cle Retinor Coordinated for Ratio: 0.35 Signal Delay, 77 Capacity Ultization 45.8% Intersection LOS: A Capacity Ultization 45.8% ICU Level of Service A	SO:	∢	∢	4	∢			V				
Summany Summany Other iv. 90 (21%) Referenced to phase 2:EBTL, Start of Green e: 85 Statused-Coordinated for Ratio: 0.35 Fathor 0.35 Intersection LOS: A Capacity Utilization 45.8% Copposity Utilization 45.8%	Approach Delay	6.8			3.4			28.1				
Summary Other n: 90 cle Length: 90 cle Length: 90 state effection of Green e: 85 s: Actualet-Coordinated to Ratio: 0.35 Signal Delay: 7.7 Capacity Utilization 45.8%	Approach LOS	V			∢			O				
n: 90 Other n: 90 cle-Length: 77 cle-Length: 90 cle	ntersection Summary											
h: 90 cle Length: 90 cle Length: 90 else Length: 90 else Length: 90 else Length: 90 else Length: Start of Green else 85 else Coordinated for Ratio: 0.35 else Pales: 7.7 else Centration 45.8%												
nase 2:EBTL, Start of Green	Cycle Length: 90											
nase 2:EBTL, Start of Green	Actuated Cycle Length: 90											
~ %	Offset: 18.9 (21%), Referenced to phase	e 2:EBTL	, Start of	Green								
~	Vatural Cycle: 85											
: 7.7 ization 45.8%	Sontrol Type: Actuated-Coordinated											
: 7.7 ization 45.8%	Aaximum v/c Ratio: 0.35											
ization 45.8%	ntersection Signal Delay: 7.7			프	tersection	LOS: A						
	ntersection Capacity Utilization 45.8%			2	U Level of	Service A						

Splits and Phases: 4: Drew Centre/Private Driveway & Main St E



Paradigm Transportation Solutions Limited

Queues
4: Drew Centre/Private Driveway & Main St E

	†	~	>	Ļ	•	-	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	
Lane Group Flow (vph)	831	117	282	566	139	36	
v/c Ratio	0.35	0.12	0.17	0.21	0.29	0.07	
Control Delay	7.7	0.5	3.8	3.3	35.3	0.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0:0	
Total Delay	7.7	0.5	3.8	3.3	35.3	0.2	
Queue Length 50th (m)	32.4	0.0	2.7	11.8	11.8	0:0	
Queue Length 95th (m)	50.2	1.7	6.8	19.5	19.7	0:0	
Internal Link Dist (m)	336.6			338.0		232.9	
Turn Bay Length (m)		40.0	45.0				
Base Capacity (vph)	2372	066	468	2715	865	655	
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	0.35	0.12	0.17	0.21	0.16	0.05	
Intersection Summary							

0 - 0.0

0 0 0 0

0.00

1.00

1.00

0.00

0.0 0.0

0.00 0.00 0.00 0.00 0.00 0.00 0.00

37.5 D 7.0 20.0 5.3 0.7

76.0 7.0 44.0 5.4 5.2

67.8 7.0 33.0 10.1 7.9 7.4

HCM 2010 Ctrl Delay HCM 2010 LOS

2031 Background AM Peak Hour

HCM 2010 Signalized Intersection Summary 4: Drew Centre/Private Driveway & Main St E

Traffic Volume (vehih)

Traffic Volume (vehih)

Future Volume (vehih)

Adj Sat Flow, vehih

Adj No of Lanes

Adj No of Lanes

Adj No of Lanes

Feak Hour Factor

O'Adj Sat Flow, vehih

Adj No of Lanes

Forcert Heavy Veh. %

O'Adj No of Lanes

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Paradigm Transportation Solutions Limited

Synchro 10 Report Page 16

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Lanes, Volumes, Timings 200624 5: Thompson Rd & Main St E 2031 Background AM Peak Hour

generalizations FBL EBL ABB NBI NBI NBI NBI NBI NBI NBI NBI ABB SBL mre (vmh) 144 675 98 316 430 60 147 663 469 122 mre (vmh) 144 675 98 316 430 60 147 663 469 122 mre (vmh) 144 675 98 316 430 60 147 663 469 122 meter 1 0.0 10.0 150 190 110		1	†	/	-	ļ	1	•	—	•	۶	→	*
144 675 98 316 430 60 147 683 469 122 144 675 98 316 430 60 147 683 469 122 144 675 98 316 430 60 147 683 469 122 144 675 98 316 430 60 147 683 469 122 150 1900 1900 1900 1900 1900 1900 1900 150 150 150 150 10 10 10	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
144 675 98 316 430 60 447 663 469 122 144 675 98 316 430 60 447 663 469 122 150 1900 1900 1900 1900 1900 1900 1900 3 3 3 3 3 3 3 3 3	Lane Configurations	*	₩.		F	₩₽		F	₩		r	₽	
144 675 98 316 430 60 147 663 469 122 1900 1900 1900 1900 1900 1900 1900 1900 33 36 33 36 36 33 36 36	Traffic Volume (vph)	4	675	88	316	430	09	147	663	469	122	333	66
1900 1900 1900 1900 1900 1900 1900 1900	Future Volume (vph)	144	675	88	316	430	09	147	993	469	122	333	66
3.3 3.6 3.6 3.3 3.6 3.6 3.3 3.6 3.8 3.3 3.6 3.8 3.8 3.8 3.6 3.0 4.00 40.0 40.0 40.0 40.0 40.0 40.0	Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
1.00 0.0 150 0.0 60 0.0 65 0.0 1.0 0.0 1.0 0.0 1.0 0.0 1.0 0.0 1.0 0.0 0.0 0.0 0.0 1.0 0.0	Lane Width (m)	3.3	3.6	3.6	3.3	3.6	3.6	3.3	3.6	3.6	3.3	3.6	3.6
7.5	Storage Length (m)	0.09		0.0	150.0		0.0	0.09		0.0	22.0		0.0
1.00	Storage Lanes	~		0	-		0	~		0	~		0
1.00 0.95 0.95 1.00 0.95 0.95 1.00 0.95 0.95 1.00 0.95	Taper Length (m)	7.5			7.5			7.5			7.5		
0.950 0.951 0.950	Lane Util. Factor	1:00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
0.950 0.950 0.950 0.473 0.473 0.473 0.473 0.473 0.473 0.70 0.400 0	Ĕ		0.981			0.982			0.938			0.966	
1728 3511 0 1711 3514 0 1711 3339 0 1745 860 3511 0 127	Fit Protected	0.950			0.950			0.950			0.950		
100 101 100 101 100 101	Satd. Flow (prot)	1728	3511	0	1711	3514	0	1711	3339	0	1745	3401	0
Sep S511 0 229 3514 0 672 3339 0 272	FIt Permitted	0.473			0.127			0.373			0.148		
16 18 768	Satd. Flow (perm)	860	3511	0	229	3514	0	672	3339	0	272	3401	0
16 50 50 60 60 100 1.00 1.00 1.00 1.00 1.00 1.0	Right Turn on Red			Yes			Yes			Yes			Yes
Section	Satd. Flow (RTOR)		9			9			185			40	
1.00	Link Speed (k/h)		20			20			09			09	
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Link Distance (m)		362.0			250.3			278.6			217.9	
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Travel Time (s)		26.1			18.0			16.7			13.1	
1% 1% 0% 2% 1% 0% 2% 1% 2% 1% 2% 0% 147 149 675 98 316 430 60 147 663 469 122 122	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
144 675 98 316 430 60 147 663 469 122 144 773 0 316 490 0 147 1132 0 172 148 773 0 316 490 0 147 1132 0 172 159 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150 150	Heavy Vehicles (%)	1%	1%	%0	5%	1%	%0	5%	1%	5%	%0	3%	1%
144 773 0 316 490 0 147 1132 0 122 164 Left Right Left Right Left Left Left Thru Thru Left Thru Left Thru Thru Left Thru T	Adj. Flow (vph)	4	675	88	316	430	09	147	663	469	122	333	66
144 773 0 316 490 0 147 1132 0 122 151	Shared Lane Traffic (%)												
Left Left Right Left Right Left Left Right Left Left Left Right Right Left Right Right Right Right Right Right Right Left Right R	Lane Group Flow (vph)	4	773	0	316	490	0	147	1132	0	122	432	0
Left Left Right Left Right Left Left Right Left Left Right Left Right Left Left Right Right Left Right	Enter Blocked Intersection	8	8	2	2	2	8	8	%	%	%	%	8
1.04 1.00 1.00	Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.05 1.04 1.05 1.04 1.05 1.04 1.05 1.04 1.05 1.04 1.05 1.04 1.05 1.04 1.05 1.04 1.05 1.04 1.05 1.04 1.05 1.04 1.05 1.04 1.05 1.04 1.05	Median Width(m)		3.3			3.3			3.3			3.3	
1.04 1.00 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.05 1.04 1.00 1.04 1.04	Link Offset(m)		0.0			0.0			0.0			0.0	
1.04 1.00 1.00 1.00	Crosswalk Width(m)		4.8			4.8			4.8			4.8	
1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.04 1.00 1.00	Two way Left Turn Lane												
25 15 25 15	Headway Factor	<u>4</u>	1.00	1.00	<u>4</u>	9:	1.00	<u>+</u> 2	1:00	1.00	1.04	1.00	1.00
1	Turning Speed (k/h)	22		15	22		15	22		15	25		15
Left Thru Left Co. 10.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Number of Detectors	~	2		_	2		~	2		~	2	
20 100 20 20 20 20 20 20 20 20 20 20 20 20 2	Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
00 000 00 00 00 00 00 00 00 00 00 00 00	Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Trailing Detector (m)	0:0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
20 0.6 2.0 0.6 2.0 0.6 2.0 0.6 2.0 0.6 2.0 0.6 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-EX C1-EX C	Detector 1 Size(m)	2.0	9.0		2.0	9.0		2.0	9.0		2.0	9.0	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Detector 1 Type	Ci+Ex	Č÷ Č		Ċ E	Č Ę		Č÷ Č	Č Ę		Ċ÷Ę	Č÷ Č	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Detector 1 Channel												
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	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 0.0 0.0 0.0 0.0 0.0 0.0	Defector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
0.6 0.0 0.0 0.0 0.0	Defector I Defay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
0.6 0.0 0.0 0.0 0.0 0.0	Detector 2 Position(m)		9.4			4.6			4.0			4.0	
00 00 00	Detector 2 Size(m)		9.0			9.0			9.0			9.0	
0.0 0.0	Detector 2 Type		CI+EX			CH-EX			CI+EX			CI+EX	
0.0	Detector 2 Channel		c			c			c			c	
Time Time	Time Time	40.000	0 <		40.000	0. 4		40.000	0. 4		40.000	0.5	
													ı

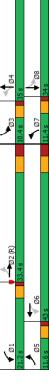
Synchro 10 Report Paradigm Transportation Solutions Limited Page 17

Lanes, Volumes, Timings 5: Thompson Rd & Main St E

200624 2031 Background AM Peak Hour

Lane Group Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Spili (s)	EBL	EBT	EBR V	WBL	TOW			NRT	NBR	SBL	SBT	CRD
Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Splif (s)	5				WBI	WBR	NDL	2)	הבי ה
Permitted Phases Detector Phase Switch Phase Minimum Initial (s)		7		-	9		7	4		8	8	
Detector Phase Switch Phase Minimum Initial (s) Minimum Spilt (s)	2			9			4			œ		
Switch Phase Minimum Initial (s) Minimum Split (s)	2	2		_	9		7	4		က	∞	
Minimum Initial (s) Minimum Solit (s)												
Minimum Split (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
(1)	9.5	32.0		9.5	32.0		9.5	32.0		9.5	32.0	
Total Split (s)	11.6	33.4			43.0			35.0		10.4	34.0	
Total Split (%)	11.6%	33.4%	21		43.0%		11.4%	35.0%		10.4%	34.0%	
Maximum Green (s)	9.7	26.4		17.2	36.0		7.4	28.0		6.4	27.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	3.0		1.0	3.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	0.0	-3.0		0.0	-3.0		0.0	-3.0		0.0	-3.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	_	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehide Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	2	None	Max		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		18.0			18.0			18.0			18.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	37.8	30.4		9.09	39.1		38.4	31.0		36.4	30.0	
Actuated g/C Ratio	0.38	0.30		0.51	0.39		0.38	0.31		0.36	0.30	
v/c Ratio	0.37	0.72		0.89	0.35		0.44	0.97		0.63	0.41	
Control Delay	17.4	35.1		50.5	21.6		23.7	50.2		35.2	56.6	
Queue Delay	0.0	0.0		0.0	0.0		0:0	0.0		0.0	0.0	
Total Delay	17.4	35.1		50.5	21.6		23.7	50.2		35.2	26.6	
FOS	В	Ω		Ω	ပ		ပ	□		Ω	ပ	
Approach Delay		32.3			32.9			47.2			28.5	
Approach LOS		O			O			۵			O	
Intersection Summary												
Area Type: O	Other											
Cycle Length: 100												
Actuated Cycle Length: 100												
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green	phase 2:E	BTL, Star	rt of Green									
Natural Cycle: 85												
Control Type: Actuated-Coordinated	dinated											
Maximum v/c Ratio: 0.97												
Intersection Signal Delay: 37.2	.2			Inte	Intersection LOS: D	LOS: D						
Intersection Capacity Utilization 92.7%	ion 92.7%			ਹ	J Level of	ICU Level of Service F	ш					
Analysis Period (min) 15												

Splits and Phases: 5: Thompson Rd & Main St E



Paradigm Transportation Solutions Limited

200624 2031 Background AM Peak Hour Queues 5: Thompson Rd & Main St E

	•	†	>	ļ	•	—	۶	→	
Lane Group	EBL	EBT	WBL	WBT	BE	NBT	SBL	SBT	
Lane Group Flow (vph)	144	773	316	490	147	1132	122	432	
v/c Ratio	0.37	0.72	0.89	0.35	0.44	0.97	0.63	0.41	
Control Delay	17.4	35.1	50.5	21.6	23.7	50.2	35.2	26.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	17.4	35.1	50.5	21.6	23.7	50.2	35.2	26.6	
Queue Length 50th (m)	15.2	73.2	45.3	35.1	18.8	103.6	15.4	33.3	
Queue Length 95th (m)	26.4	95.4	#93.2	48.5	32.7	#151.3	#29.5	47.6	
Internal Link Dist (m)		338.0		226.3		254.6		193.9	
Turn Bay Length (m)	0.09		150.0		0.09		22.0		
Base Capacity (vph)	392	1077	370	1385	334	1162	193	1048	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.72	0.85	0.35	0.44	0.97	0.63	0.41	

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

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Paradigm Transportation Solutions Limited

HCM 2010 Signalized Intersection Summary 5: Thompson Rd & Main St E

200624 2031 Background AM Peak Hour

Movement EBI EBT EBR WB WB WB WB NB NB NB NB		4	Ť	1	/	Ļ	4	•	←	•	۶	→	*
144 675 98 316 430 60 147 663 469 122 333 144 675 98 316 430 60 147 663 469 122 333 144 675 98 316 430 60 147 663 469 122 333 144 675 98 316 430 60 147 663 469 122 333 150 100 100 100 100 100 100 100 100 100	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
144 675 98 316 430 60 447 663 469 122 333 144 675 98 316 430 60 147 663 469 122 333 150 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 1881 1884 1900 1863 1883 1900 1863 1874 1900 1900 1853 144 675 98 316 430 60 147 683 469 122 333 144 675 98 316 430 60 147 683 469 122 100 100 100 100 100 100 100 100 100 100 101 102 103 103 103 103 103 103 103 144 675 98 316 430 60 147 683 469 122 333 144 675 98 316 430 60 147 683 469 122 144 675 98 138 147 138 104 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 144 315 348 348 3474 3474 348 348 348 144 38 38 349 1238 174 349 349 349 144 39 38 349 123 144 349 349 349 144 38 38 341 372 388 362 340 340 340 144 446 579 583 349 702 708 383 552 504 188 528 144 579 583 341 702 708 383 552 504 188 528 144 579 583 341 702 708 383 552 504 188 528 144 579 583 414 414 417 414 418 348 348 144 579 583 414 414 414 414 414 414 414 414 144 579 583 414 414 414 414 414 414 414 414 414 155 185 187 188 341 414 415 414 410 414 410 414 410 414 410 414 410 414 410 414 410 414 410 414 410	Lane Configurations	-	₽ ₽		r	₩		F	₩		F	₩	
144 675 98 316 430 60 447 663 469 122 333 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 1881 1884 1890 1863 1883 1890 1863 1874 1900 1853 144 675 98 316 430 60 147 663 469 122 333 145 675 98 316 430 60 147 663 469 122 333 146 675 98 316 430 60 147 663 469 122 333 147 10 10 10 10 10 10 10 1	Traffic Volume (veh/h)	4	675	86	316	430	09	147	663	469	122	333	66
100	Future Volume (veh/h)	144	675	98	316	430	09	147	663	469	122	333	66
100	Number	2	2	12	-	9	16	7	4	14	က	∞	18
100 100 100 100 100 100 100 100 100 100	Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
100 100 100 100 100 100 100 100 100 100	Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
1881 1884 1900 1863 1883 1900 1863 1874 1900 1900 1863 1884 1900 1863 1874 1900 1900 1863 1874 1900 1900 1863 1874 1900 1900 1863 1874 1900 1900 1863 1874 1900	Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
144 675 98 316 430 60 147 663 469 122 333 110 100 1.00 1.00 1.00 1.00 1.00 1.	Adj Sat Flow, veh/h/ln	1881	1884	1900	1863	1883	1900	1863	1874	1900	1900	1853	1900
100 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Adj Flow Rate, veh/h	4	675	86	316	430	09	147	993	469	122	333	ගි
1.00	Adj No. of Lanes	- !	5	0	- !	5	0	-	5	0	- !	5	0
6 4 1 1 1 0 2 1 1 0 2 1 1 0 2 1 1 0 2 1 1 0 2 1 1 0 0 0 0	Peak Hour Factor	1.00	1.00	1:00	1:00	1.00	0.1	1:00	1.00	1:00	00.1	9.	9.
446 1015 147 399 1738 172 363 619 436 188 800 1702 3138 455 1774 3157 438 1774 1997 1408 1810 2897 1702 3138 455 1774 3157 438 1774 1997 1408 1810 2897 1702 3138 316 243 247 147 591 541 122 216 1702 217 214 217 241 345 368 274 279 217 214 217 241 345 368 274 279 217 214 217 241 345 368 274 279 217 214 217 241 345 368 274 361 317 214 217 241 340 317 2 267	Percent Heavy Veh, %	- :	- !	0 !	2 5	- 6	0 9	2 2	- 6	2 5	0 0	က	- 0
1792 1789 1803 1774 1789 1806 1774 1780 1810 2687 1700 1700 1703 1702 1703 1702 1703 1702 1703 1702 1703 1702 1703 1702 1703 1702 1703 1702 1703 1702 1703 1703 1702 1703 1703 1703 1703 1703 1703 1703 1703	Cap, veh/h	446	1015	147	399	1238	17.2	363	619	436	88 6	808	236
144 385 388 316 243 247 147 591 541 122 216 155 185 187 118 95 97 59 310 310 48 918 156 185 187 118 95 97 59 310 310 48 918 157 189 1803 1774 1789 1806 1774 1780 1625 1810 1760 158 187 118 95 97 59 310 310 48 918 158 187 118 95 97 59 310 310 48 918 159 100 100 100 100 100 100 100 100 100 150 150 100 100 100 100 100 100 100 100 150 150 100 100 100 100 100 100 100 100 150 150 150 172 14 217 244 279 150 150 150 150 100 100 100 100 100 150 150 150 100 100 100 100 100 100 150 150 150 150 170 170 170 170 170 150 150 150 170 170 170 170 170 170 150 150 150 170 170 170 170 170 170 170 150 150 170 170 170 170 170 170 170 170 150 150 170 170 170 170 170 170 170 170 150 150 170 170 170 170 170 170 170 170 150 150 170 170 170 170 170 170 170 170 150 150 170 170 170 170 170 170 170 170 150 150 170 170 170 170 170 170 170 170 1	Sat Flow web/h	1792	3138	455	1774	3157	438	1774	1997	1408	1810	2687	787
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	Orr Volume(v) sub/h	144	305	000	246	CVC	247	447	100	1	425	216	240
5.5 18.5 18.7 11.8 9.5 9.7 5.9 31.0 31.0 4.8 9.8 1.00 1.00 1.00 1.00 1.00 1.00 4.8 9.8 9.8 1.0 31.0 4.8 9.8 1.00 1.00 2.5 1.00 7.02 7.08 83.3 552 504 188 528 0.32 0.66 0.67 0.79 0.35 0.35 0.40 107 107 106 1.00 </td <td>Gro Sat Flow(s).veh/h/ln</td> <td>1792</td> <td>1789</td> <td>1803</td> <td>1774</td> <td>1789</td> <td>1806</td> <td>1774</td> <td>1780</td> <td>1625</td> <td>1810</td> <td>1760</td> <td>1714</td>	Gro Sat Flow(s).veh/h/ln	1792	1789	1803	1774	1789	1806	1774	1780	1625	1810	1760	1714
5.5 18.5 18.7 11.8 9.5 9.7 5.9 31.0 31.0 4.8 9.8 11.00	Q Serve(g_s), s	5.5	18.5	18.7	11.8	9.2	9.7	5.9	31.0	31.0	4.8	8.6	10.2
100 025 100 024 100 087 100 446 579 583 582 594 188 528 044 449 579 583 451 702 708 363 552 594 188 528 044 449 579 583 451 702 708 363 552 594 188 528 044 100 1.00 1.00 1.00 1.00 1.00 1.00 1	Cycle Q Clear(g_c), s	5.5	18.5	18.7	11.8	9.2	9.7	5.9	31.0	31.0	4.8	8.6	10.2
446 579 583 389 702 708 363 552 564 188 528 604 149 579 583 389 702 708 363 552 564 188 528 100 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Prop In Lane	1.00		0.25	1.00		0.24	1.00		0.87	1.00		0.46
0.32 0.66 0.67 0.79 0.35 0.36 0.40 1.07 1.07 0.65 0.41 449 579 583 454 70.2 708 363 552 564 188 528 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Lane Grp Cap(c), veh/h	446	579	583	388	702	208	363	552	504	188	528	514
449 579 583 451 702 708 363 552 554 188 528 100 1.00 1.00 1.00 1.00 1.00 1.00 1.00	V/C Ratio(X)	0.32	99.0	0.67	0.79	0.35	0.35	0.40	1.07	1.07	0.65	0.41	0.42
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Avail Cap(c_a), veh/h	449	629	583	451	702	208	363	552	204	188	528	514
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
218 29,1 29,5 21,7 21,4 21,7 24,1 34,5 35,8 27,4 27,9 (0.4 5.9 5.9 5.9 5.9 5.9 5.9 5.9 5.9 5.9 5.9	Upstream Filter(I)	1:00	1.00	1:00	1:00	1:00	1.00	1.00	1.00	1:00	1.00	9.0	1.00
0.4 5.9 5.9 8.3 1.4 1.4 0.7 586 616 776 2.3 10	Uniform Delay (d), s/veh	21.8	29.1	29.5	21.7	21.4	21.7	24.1	34.5	35.8	27.4	27.9	28.6
00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Incr Delay (d2), s/veh	0.4	5.9	5.9	8.3	1.4	1.4	0.7	58.6	9.19	9.7	2.3	2.5
No. 28	Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
222 35,1 35,4 30,0 22,7 23,1 24,8 93,1 97,4 35,1 30,3 3,1 97,4 35,1 30,3 3,1 97,4 35,1 30,3 3,1 97,4 35,1 30,3 3,1 97,4 35,1 30,3 3,1 97,4 35,1 30,3 3,1 97,4 35,1 30,3 3,1 97,4 35,1 97,4 35,1 97,4 35,1 97,4 35,1 97,4 35,1 97,4 37,1 97,4 97,1 97,1 97,1 97,1 97,1 97,1 97,1 97,1	%ile BackOfQ(50%),veh/In	5.8	10.0	10.3	9.9	2.0	5.1	2.9	24.2	22.5	2.8	5.1	5.2
C D D C C C F F D 917 806 1279 312 25,7 F 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 3 36.3 10.4 35.0 11.4 32. 11.4 34.0 10.5 2.7 0.0 0.0 0.0 3.6 0.0 2.5 10.5 2.7 0.0 0.0 0.0 3.6 0.0 2.5 10.5 2.6 6 7 8 8 10.5 2.7 0.0 0.0 0.0 3.6 0.0 2.5 10.5 2.7 0.0 0.0 0.0 3.6 0.0 2.5	LnGrp Delay(d),s/veh	22.2	35.1	35.4	30.0	22.7	23.1	24.8	93.1	97.4	35.1	30.3	31.1
917 806 1279 33.2 25.7 87.1 C C C F S 18.3 36.3 10.4 35.0 11.4 43.2 11.4 34.0 SNJ, S 17.2 26.4 6.4 28.0 7.6 36.0 7.4 27.0 11), s 138 20.7 6.8 33.0 7.5 11.7 7.9 12.2 11), s 2.7 0.0 0.0 0.0 3.6 0.0 2.5 D D	LnGrp LOS	ပ			O	O	ပ	O	니	니		O	0
33.2 25.7 87.1 C C C F 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 s 18.3 36.3 10.4 35.0 11.4 43.2 11.4 34.0 s 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 s) 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 s) 17.2 26.4 6.4 28.0 7.6 36.0 74 27.0 1/1), s 13.8 20.7 6.8 33.0 7.5 11.7 7.9 12.2 50.6 50.6	Approach Vol, veh/h		917			908			1279			554	
1 2 3 4 5 6 7 7 8 18 3 6 3 10 4 10 4 10 10 10 10 10 10 10 10 10 10 10 10 10	Approach Delay, s/veh		33.2			25.7			87.1			31.7	
1 2 3 4 5 6 7 8 18.3 36.3 10.4 35.0 11.4 2.2 11.4 8 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 10.5 2.7 0.0 0.0 0.0 3.6 0.0 10.5 2.6 0.0	Approach LOS		O			O			ட			ပ	
1 2 3 4 5 6 7 8 14 8 15 8 14 8 15 8 14 8 15 8 14 8 15 8 14 8 15 8 14 8 15 8 14 8 15 8 14 8 14	Timer	_	2	က	4	2	9	7	8				
s 183 36.3 10.4 35.0 11.4 43.2 11.4 s 3 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	Assigned Phs	_	2	3	4	2	9	7	8				
s 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 xx), s 17.2 26.4 6.4 28.0 7.6 36.0 7.4 2 11), s 13.8 20.7 6.8 33.0 7.5 11.7 7.9 1 2 1.0 0.0 0.0 3.6 0.0 D	Phs Duration (G+Y+Rc), s	18.3	36.3	10.4	35.0	11.4	43.2	11.4	34.0				
ax),s 17.2 26.4 6.4 28.0 7.6 36.0 7.4 2 (f),s 13.8 20.7 6.8 33.0 7.5 11.7 7.9 1 0.5 2.7 0.0 0.0 0.0 3.6 0.0 5 50.6 D	Change Period (Y+Rc), s	4.0	7.0	4.0	7.0	4.0	7.0	4.0	7.0				
(1), s 13.8 20.7 6.8 33.0 7.5 11.7 7.9 0.5 2.7 0.0 0.0 0.0 3.6 0.0 0.0 0.0 3.6 0.0 D.0 D.0 D.0 D.0 0.0 0.0 0.0 0.0 0.0	Max Green Setting (Gmax), s	17.2	26.4	6.4	28.0	9.7	36.0	7.4	27.0				
0.5 2.7 0.0 0.0 0.0 3.6 0.0 50.6 D	Max Q Clear Time (g_c+I1), s	13.8	20.7	8.9	33.0	7.5	11.7	7.9	12.2				
	Green Ext Time (p_c), s	0.5	2.7	0.0	0.0	0.0	3.6	0.0	2.5				
	Intersection Summary												
	HCM 2010 Ctrl Delay			9.09									
	HCM 2010 LOS												

Paradigm Transportation Solutions Limited

Intersection: 1: Ontario St S/Ontario St N & Main St E	rio St	3/Onta	rio St N	N & M	ain St E							
Movement	8	B	8	WB	WB	WB	8	9	R	R	SB	SB
Directions Served	_	H	⊢	_	H	TR	_	⊢	H	œ	_	-
Maximum Queue (m)	47.4	112.9	8.68	45.4	84.9	83.8	77.3	108.2	109.7	72.2	47.4	88.8
Average Queue (m)	37.6	61.5	48.1	33.8	37.7	38.1	21.9	63.8	58.4	34.9	30.7	46.7
95th Queue (m)	56.9	0.96	77.3	48.8	0.77	2.99	54.4	95.7	94.5	0.89	52.0	72.9
Link Distance (m)		133.0	133.0		108.2	108.2		322.4	322.4			241.6
Upstream Blk Time (%)					-	0						
Queuing Penalty (veh)					4	0						
Storage Bay Dist (m)	40.0			35.0			20.0			65.0	40.0	
Storage Blk Time (%)	о	22		24	2		0	2	4	-	4	7
Queuing Penalty (veh)	27	45		40	2		0	2	12	က	7	19

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Movement	SB	SB	
Directions Served	⊢	Я	
Maximum Queue (m)	76.3	2.8	
Average Queue (m)	36.8	0.1	
95th Queue (m)	9.49	2.0	
Link Distance (m)	241.6	241.6	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Mall Entrance & Main St E

Movement	B	EB	WB	WB	WB	æ	SB B	
Directions Served	⊢	TR	_	⊢	_	_	œ	
Maximum Queue (m)	74.0	79.2	19.2	48.0	43.9	14.0	13.9	
Average Queue (m)	24.5	25.9	6.7	12.1	12.2	4.5	3.6	
95th Queue (m)	62.4	9.49	16.1	34.0	32.8	11.9	10.9	
Link Distance (m)	108.2	108.2		251.1	251.1	127.6	127.6	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			0.07					
Storage Blk Time (%)								
Queuing Penalty (veh)								

SimTraffic Report Page 1

Queuing and Blocking Report

Intersection: 3: Busway/Wilson Dr & Main St E

200624 2031 Background AM Peak Hour

Lanes, Volumes, Timings 1: Ontario St S/Ontario St D & Main St E

1

2031 Background PM Peak Hour 200624

180 1900 3.5 0.0

176 176 1900 3.3 40.0

313 313 1900 3.5 65.0

207 207 1900 3.3 70.0

236 236 1900 3.6 0.0

294 294 1900 3.3 35.0

746 746 746 1900 3.6

\$806 806 1900 3.6

																																										_
•	EBR	*	244	244	1900	3.5	0.0	-		1.00	96.0	0.850		1566		1495	Yes	244				28	1.00	2%	244		244	<u>ا</u> ک	Kight					1.01	15	_	Right	2.0	0.0	0.0	2.0	C-F
	EBT	++	629	629	1900	3.6				0.95				3574		3574			20	147.9	10.6		1.00	%	629		629	운 :	Left	3.3	0.0	4.8		1.00		2	Thr	10.0	0.0	0.0	9.0	CJ-EX
	EBL	je-	206	206	1900	3.3	40.0	~	7.5	1.00	1.00		0.950	1728	0.163	296						15	1.00	1%	206		206	<u>ا</u>	Let					1.04	52	-	Left	2.0	0.0	0.0	2.0	Ċ+ EA
	Lane Group	Lane Configurations	Traffic Volume (vph)	Future Volume (vph)	Ideal Flow (vphpl)	Lane Width (m)	Storage Length (m)	Storage Lanes	Taper Length (m)	Lane Util. Factor	Ped Bike Factor	표	Fit Protected	Satd. Flow (prot)	Flt Permitted	Satd. Flow (perm)	Right Turn on Red	Satd. Flow (RTOR)	Link Speed (k/h)	Link Distance (m)	Travel Time (s)	Confl. Peds. (#/hr)	Peak Hour Factor	Heavy Vehides (%)	Adj. Flow (vph)	Shared Lane Traffic (%)	Lane Group Flow (vph)	Enter Blocked Intersection	Lane Alignment	Median Width(m)	Link Offset(m)	Crosswalk Width(m)	Two way Left Turn Lane	Headway Factor	Turning Speed (k/h)	Number of Detectors	Detector Template	Leading Detector (m)	Trailing Detector (m)	Detector 1 Position(m)	Detector 1 Size(m)	Detector 1 Type
																													-													
																												Č	SB	TR	56.6	26.3	49.9	201.3								
	SB	T	24.1	10.4	19.4	160.4																						ć	SB	_	56.9	33.3	54.0	201.3				0	0			
	SB	_	47.7	26.0	8.4				22.0	0	0																	ě	SB	_	45.8	20.7	35.9				22.0					
	NB	œ	33.6	14.0	28.1				35.0	0	0				NB	エ	11.3	4.0	9.3	239.5								-	NB	Ľ	278.2	239.3	319.4	263.1	46	0						
	NB	_	16.8	6:0	8.4	186.0									NB	_	25.7	6.9	17.5	239.5									NB	_	274.1	230.2	323.3	263.1	32	0		63	92			
	NB	_	40.2	16.9	32.3	186.0									NB	_	35.9	18.9	32.0	239.5									NB	_	67.4	53.9	98.6				0.09	0	0			
	WB	K	53.1	17.1	37.5	335.0							StE		WB	⊢	37.2	14.6	32.0	334.9									MB	ĸ	929	29.8	20.9	233.6								
	WB	-	57.2	18.0	41.1	335.0				-	0		& Mair		WB	⊢	38.2	12.1	30.1	334.9				0	0				WB	—	61.9	33.5	55.2	233.6								
	WB	_	12.9	4.1	7.				40.0				eway		WB	_	28.7	11.4	22.6				45.0				Ш		WB	_	83.5	46.8	78.8				150.0					
	EB	꿈	82.7	34.5	65.3	240.3							te Driv		EB	œ	43.1	9.1	28.0				40.0	0	0		lain St	í	EB	۲	109.5	70.4	266	334.9								
	EB	_	82.8	30.2	62.0	240.3				-	—		v Centre/Private Driveway & Main St E		EB	⊢	55.2	23.6	47.2	335.0				-	-		3d & M	í	EB	_	109.6	64.5						14	20			
	EB	_	43.1	8. 8.	24.5				20.0				Centre		EB	⊢	50.4	20.9	45.9	335.0				9	0		mpson Rd & Main St E		ER	_	67.3	28.5	62.7				0.09	0	0			lty: 288
													>														-															1

Yes 180

1559 Yes 313

3438

Ves 0 0

3421

3505

50 256.3 18.5

50 338.1 24.3

44 50 134.8 9.7

1597

3505

0.950 1711 0.245 441

1581

3438

0.950 1728 0.132 240

3421

0.950 1694 0.160 283

Intersection: 4: Drew

95th Queue (m) Link Distance (m) Upstream Blk Time (%)

Maximum Queue (m) Average Queue (m) Directions Served

Queuing Penalty (veh) Storage Bay Dist (m) Storage Blk Time (%) Queuing Penalty (veh)

0.95

7.5 1.00 1.00

0.95

1.00

0.95

7.5 1.00 0.99

0.95

1.00 0.99 0.850

180 No Right

176 No Left

313 No Right

207 No Left

Right No

294 No Left

Intersection: 5: Thon

Queuing Penalty (veh) Storage Bay Dist (m) Storage Blk Time (%) Queuing Penalty (veh)

Link Distance (m) Upstream Blk Time (%)

Directions Served Maximum Queue (m) Average Queue (m) 95th Queue (m)

Average Queue (m)
95th Queue (m)
Link Distance (m)
Upstream Blk Time (%)

Directions Served Maximum Queue (m)

982 No 3.3 0.0 4.8

806 No 3.3 0.0 4.8

0.0 0.0 4.8

1.00

1.04

1.00

1.04

1.00

1.00

25

Right 2.0 2.0 0.0 2.0 CI+Ex

Thru 10.0 0.0 0.6 C+Ex

2.0 0.0 0.0 CI+Ex

Right 2.0 0.0 0.0 CI+Ex

Thru 10.0 0.0 0.6 CI+Ex

2.0 0.0 0.0 2.0 Ci+Ex

Thru 10.0 0.0 0.0 0.6 CI+Ex

2.0 0.0 0.0 2.0 CI+Ex

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0 0.0 0.0 9.4 0.6 CHEX

0.0 0.0 0.0 0.0 0.6 CI+EX

0.0 0.0 0.0 9.4 0.6 CI+Ex

0.0 0.0 0.0 9.4 0.6 CI+EX

Detector 1 Channel
Detector 1 Channel
Detector 1 Queue (s)
Detector 1 Delay (s)
Detector 2 Position(m)
Detector 2 Size(m)
Detector 2 Vipe
Detector 2 Channel

1.00 180 180

3%

2% 176

1.00 2 313 313

1.00 5% 683

20,27

1.00

28 3% 294

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Network wide Queuing Penalty: 288

Network Summary

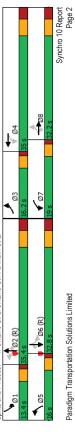
Queuing Penalty (veh) Storage Bay Dist (m) Storage Blk Time (%) Queuing Penalty (veh)

Lanes, Volumes, Timings 1: Ontario St S/Ontario St I & Main St E

200624 2031 Background PM Peak Hour

	1	†	~	-	↓	4	•	←	•	۶	→	*
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	Ν	Perm	pm+pt	Ν		pm+pt	Ν	Perm	pm+pt	¥	Perm
Protected Phases	က	∞		7	4		2	2		_	9	
Permitted Phases	∞		∞	4			2		2	9		9
Detector Phase	က	∞	∞	7	4		2	2	2	_	9	9
Switch Phase												
Minimum Initial (s)	2.0	15.0	15.0	7.0	15.0		2.0	15.0	15.0	2.0	15.0	15.0
Minimum Split (s)	9.5	32.0	32.0	11.0	32.0		9.5	32.0	32.0	9.5	32.0	32.0
Total Split (s)	16.2	32.2	32.2	19.0	35.0		16.0	35.4	35.4	13.4	32.8	32.8
Total Split (%)	16.2%	32.2%	32.2%	19.0%	35.0%		16.0%	35.4%	35.4%	13.4%	32.8%	32.8%
Maximum Green (s)	12.2	25.2	25.2	15.0	28.0		12.0	28.4	28.4	9.4	25.8	25.8
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	3.0	1.0	3.0		1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	0.0	-3.0	-3.0	0.0	-3.0		0.0	-3.0	-3.0	0.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			18.0	18.0		18.0	18.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	38.5	27.5	27.5	45.3	31.0		44.1	33.2	33.2	39.9	31.1	31.1
Actuated g/C Ratio	0.38	0.28	0.28	0.45	0.31		0.44	0.33	0.33	0.40	0.31	0.31
//c Ratio	0.76	0.67	0.41	0.89	0.30		0.78	09:0	0.43	0.61	0.74	0.30
Control Delay	38.0	36.0	0.9	50.3	43.9		40.2	31.1	2.0	27.4	36.5	5.6
Queue Delay	0.0	0.0	0.0	0.0	2.8		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.0	36.0	0.9	50.3	49.6		40.2	31.1	2.0	27.4	36.5	5.6
SO.1	_	_	⋖	_	_			O	∢	O	۵	∢
Approach Delay		29.8			49.8			25.9			30.3	
Approach LOS		O			۵			O			O	
Intersection Summary												
	Other											
th: 100												
Actuated Cycle Length: 100												
Offset 49 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	ed to phase	2:NBTL	and 6:SB	TL, Start	of Green							
Natural Cycle: 85												
Control Type: Actuated-Coordinated	rdinated											
Maximum v/c Ratio: 0.90												
Intersection Signal Delay: 34.3	4.3			드	Intersection LOS: C	LOS: C						
Intersection Capacity Utilization 87.0%	tion 87.0%			⊆	ICU Level of Service E	of Service	ш					
Analysis Period (min) 15												

1: Ontario St S/Ontario St N & Main St E Splits and Phases:



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200624 2031 Background PM Peak Hour

28R 180 0.30 5.6 0.0 5.6 0.0 0.30 SBT 806 0.74 36.5 79.7 103.3 232.3 40.0 SBL 176 0.61 27.4 0.0 27.4 27.5 36.0 313 313 0.43 5.0 5.0 5.0 19.1 65.0 726 0 0 0 0 0.0 31.1 62.4 62.4 82.3 314.1 NBL 207 0.78 40.2 0.0 40.2 25.8 #57.2 70.0 1104 88 0 WBT 982 0.90 0.90 43.9 5.8 49.6 96.2 #135.3 110.8 WBL 294 294 0.89 60.3 60.3 38.8 #86.2 35.0 Queues 1: Ontario St S/Ontario St N & Main St E 244 0.41 6.0 0.0 6.0 0.0 18.1 969 659 0.67 36.0 0.0 36.0 62.2 82.0 1007 206 0.76 38.0 0.0 38.0 24.3 #52.4 40.0 292 0 0 0 0 0 0 Control Delay
Queue Delay
Total Delay
Queue Enright 50th (m)
Queue Length 95th (m)
Internal Link Dist (m)
Turn Bay Length (m)
Base Capacity (np)
Sanvation Cap Reduch
Spillback Cap Reduch
Sorage Cap Reduch
Sorage Cap Reduch Lane Group Flow (vph)

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

HCM 2010 Signalized Intersection Summary 1: Ontario St S/Ontario St N & Main St E

Comparable Com		1	†	~	>	ţ	4	•	-	•	۶	-	*
100 100	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1	Lane Configurations	F	‡	*	r	₩		F	\$	*	r	*	¥.
2.06 659 244 294 746 236 207 663 313 176 806 1.00	Traffic Volume (veh/h)	206	629	244	294	746	236	207	683	313	176	908	180
3 8 18 7 4 14 5 2 12 10 0 0 0 0 0 1 100 0 0 0 0 0 0 0 0	Future Volume (veh/h)	206	629	244	294	746	236	207	683	313	176	908	180
1.00	Number	က	∞	9	7	4	14	2	2	12	-	9	16
1.00	Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
1,00 1,00 1,00 1,00 1,00 1,00 1,00 1,00	Ped-Bike Adj(A_pbT)	1.00		1.00	0.39		0.97	1.00		0.99	1.00		1.00
1881 1881 1883 1845 1881 1900 1881 1810 1881 1863 1845 206 659 0 294 746 236 207 683 313 176 806 650 1 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Parking Bus, Adj	1.00	1.00	1.00	1:00	1.00	1:00	1:00	1:00	1.00	1.00	1.00	1.00
206 659 0 294 746 236 207 683 313 176 806 1 1 2 1 1 2 3 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1	Adj Sat Flow, veh/h/In	1881	1881	1863	1845	1881	1900	1881	1810	1881	1863	1845	1900
1	Adj Flow Rate, veh/h	506	629	0	294	746	236	207	683	313	176	908	0
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Adj No. of Lanes	_	2	-	_	2	0	_	5	-	_	2	_
6 6 77 4 74 75 75 75 75 75 75 75 75 75 75 75 75 75	Peak Hour Factor	0.	0.1	9.	1:00	1.00	0.1	0.1	1.00	1.00	1.00	1.00	1.00
266 979 434 381 822 260 314 1160 533 308 1139 1792 3574 1583 1757 2851 839 1792 3438 1986 1774 3505 18 5 164 0.0 12.0 27.0 27.1 79 164 16.3 6.8 20.2 18 5 164 0.0 12.0 27.0 27.1 79 164 16.3 6.8 20.2 10 0 10 0 0.0 77 027 1 79 164 16.3 6.8 20.2 10 0 10 0 0.0 77 027 1 79 164 16.3 6.8 20.2 10 0 10 0 0.0 77 091 100 100 100 100 100 100 10 0 10 0	Percent Heavy Veh, %	_	_	7	· ·	_	-	- :	2	_	7		0
1792 3574 1687 1757 2651 879 170 34 0.34 0.03 0.33 1774 3505 1772 3574 1687 1757 2651 879 1792 3438 1586 1774 3505 1779 1782 1787 1787 1792 1779 1782 1779 1782 1779 1782 1787 1782 1787 1782 1779 1883 178 1886 1774 1752 1885 164 0.0 12.0 27.0 27.1 7.9 16.4 16.3 6.8 20.2 1.00 1.00 1.00 1.00 277 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91	Cap, veh/h	566	626	434	384	822	260	314	1160	232	308	1139	525
1/92 25/4 1583 1757 2651 839 1792 2438 1380 1/14 2505 1764 1583 1757 1767 1767 1767 1768 1386 1/74 1752 1864 1653 168 20.2 1.00 1.	Arrive On Green	0.11	0.27	0.00	0.14	0.31	0.28	0.10	0.34	0.34	0.09	0.33	0.00
172 1787 1587 1788 1788 1	Sat Flow, veh/h	1792	35/4	1583	1/2/	7651	836	1/92	3438	1586	1//4	3205	1615
1792 1787 1583 1757 1787 1703 1792 1719 1586 1774 1752 1719 1586 1774 1752 1719 1586 1774 1752 1719 1586 1774 1752 1719 1586 1774 1752 1719 1586 1774 1752 1719	Grp Volume(v), veh/h	206	629	0	594	203	479	207	683	313	176	908	0
85 164 00 120 270 271 79 164 163 68 202 100 100 100 100 100 100 100 100 100	Grp Sat Flow(s),veh/h/ln	1792	1787	1583	1757	1787	1703	1792	1719	1586	1774	1752	1615
85 164 0.0 12.0 27.0 27.1 7.9 164 16.3 6.8 20.2 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Q Serve(g_s), s	8.5	16.4	0.0	12.0	27.0	27.1	7.9	16.4	16.3	8.9	20.2	0.0
1,00	Cycle Q Clear(g_c), s	8.5	16.4	0.0	12.0	27.0	27.1	7.9	16.4	16.3	8.9	20.2	0.0
hh 266 979 434 381 554 528 314 1160 555 308 1139 2078 067 000 077 0391 0391 066 059 059 057 071 100 1.00 1.00 1.00 1.00 1.00 1.00	Prop In Lane	1.00		1.00	1.00		0.49	1.00		1.00	1.00		1.00
0.78 0.67 0.07 0.77 0.91 0.91 0.66 0.59 0.59 0.57 0.71 0.70 0.78 0.07 0.77 0.91 0.91 0.91 0.66 0.59 0.59 0.59 0.57 0.71 0.70 0.00 0.00 0.00 0.00 0.00 0.0	Lane Grp Cap(c), veh/h	266	979	434	384	224	228	314	1160	535	308	1139	525
286 1008 447 396 554 528 350 1160 535 319 1139 1130 1100 1100 1100 1100 1100	V/C Ratio(X)	0.78	0.67	0.00	0.77	0.91	0.91	99.0	0.59	0.59	0.57	0.71	0.00
Hone 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Avail Cap(c_a), veh/h	296	1008	447	396	224	228	320	1160	535	319	1139	525
eh 1.00 1.00 0.00 0.86 0.86 1.00 1.00 1.00 1.00 1.00 0.00 0.89 0.86 0.86 1.00 1.00 1.00 1.00 0.00 0.84 0.38 0.36 2.34 2.24 4.2 2.8 2.96 0.90 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
eh 269 323 00 24.1 33.1 33.9 23.6 27.4 27.4 22.8 29.6 eh 25.9 32.3 0.0 24.1 33.1 33.9 23.6 27.4 27.4 22.8 29.6 eh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Upstream Filter(I)	1.00	1.00	0.00	0.86	0.86	0.86	1:00	1:00	1.00	1.00	1.00	0.00
9.5 14 0.0 6.8 16.4 17.0 2.7 2.2 4.6 14 3.7 eth 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 eth 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Uniform Delay (d), s/veh	56.9	32.3	0.0	24.1	33.1	33.9	23.6	27.4	27.4	22.8	29.6	0.0
ethin 4.8 8.2 0.0 6.4 158 152 4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Incr Delay (d2), s/veh	9.2	4.	0.0	6.8	16.4	17.0	2.7	2.2	4.6	1.4	3.7	0.0
arhin 4.8 8.2 0.0 6.4 15.8 15.2 4.1 8.1 7.8 3.4 10.3 36.4 33.7 0.0 30.9 49.5 50.9 26.3 29.6 32.0 24.2 33.3 D C	Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
364 337 0.0 309 495 509 263 296 320 242 33.3 D C C D D C C C C C C C C C C C C C C	%ile BackOfQ(50%),veh/ln	4.8	8.2	0.0	6.4	15.8	15.2	4.1	8.1	7.8	3.4	10.3	0.0
D C C D D C C C C C C C C C C C C C C C	LnGrp Delay(d),s/veh	36.4	33.7	0.0	30.9	49.5	20.9	26.3	29.6	32.0	24.2	33.3	0.0
1 2 3 4 5 6 7 88 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 3 4 5 6 7 8 1 5 8 11 314 1 5 8 14 12 2 80 140 365 181 314 1 5 8 18 1 184 122 280 140 258 150 252 1 6 11, s 8, s 18, t 10, 5 29, t 9, 222 14,0 18,4 1 8 0.0 3,6 0.1 0.0 0.1 1,6 0.1 2.1	LnGrp LOS		ပ		ပ			ပ	ပ	ပ	ပ	ပ	
1 2 3 4 5 C C C C C C C C C C C C C C C C C C	Approach Vol, veh/h		865			1276			1203			982	
C D D C C D D C C C C C C C D D C C C C	Approach Delay, s/veh		34.3			45.8			29.7			31.7	
1 2 3 4 5 6 7 1 2 3 4 5 6 7 2), s 128 37.7 14.5 350 140 36.5 181 3 3), s 4 28.4 12.2 280 120 25.8 15.0 2 3, s 0.0 3.6 0.1 0.0 0.1 1.6 0.1 35.8 D D	Approach LOS		O			Ω			O			O	
C), s 128 37.7 14.5 350 14.0 36.5 18.1 35.0 14.0 36.5 18.1 35.0 14.0 36.5 18.1 35.0 14.0 36.5 18.1 35.0 14.0 36.5 18.1 35.0 14.0 36.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	Timer	-	2	က	4	2	9	7	∞				
C), s 12.8 37.7 14.5 35.0 14.0 36.5 18.1 3 C), s 4.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	Assigned Phs	~	2	က	4	2	9	7	∞				
), s 4,0 7,0 4,0 7,0 4,0 7,0 4,0 7,0 4,0 max), s 9,4 284 12.2 28.0 12.0 25.8 15.0 2, c-t-l1), s 8.8 18,4 10.5 29.1 9.9 22.2 14,0 1, s 0.0 3.6 0.1 0.0 0.1 1.6 0.1 25.8 25.8 25.8 25.8 25.8 25.8 25.8 25.8	Phs Duration (G+Y+Rc), s	12.8	37.7	14.5	35.0	14.0	36.5	18.1	31.4				
max), s 94 284 12.2 280 12.0 25.8 15.0 cerl1), s 8.8 18.4 10.5 29.1 9.9 22.2 14.0 cerl 2.5 0.0 3.6 0.1 0.0 0.1 1.6 0.1 35.8 D	Change Period (Y+Rc), s	4.0	7.0	4.0	7.0	4.0	7.0	4.0	7.0				
cerl), s 88 184 10.5 29.1 9.9 22.2 14.0 s 0.0 3.6 0.1 0.0 0.1 1.6 0.1 35.8 D	Max Green Setting (Gmax), s	9.4	28.4	12.2	28.0	12.0	25.8	15.0	25.2				
35.8 D D	Max Q Clear Time (g_c+I1), s	ω ω α	18.4	10.5	29.1	6.6	22.2	14.0	18.4				
	Green Ext Time (p_c), s	0.0	3.6	0.1	0.0	0.1	9.	0.1	2.1				
	Intersection Summary												
	HCM 2010 Ctrl Delay			35.8									
	HCM 2010 LOS			۵									

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Lanes, Volumes, Timings 2: Mall Entrance & Main St E

200624 2031 Background PM Peak Hour

200624 2031 Background PM Peak Hour

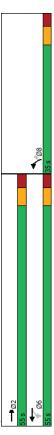
•	NBR	¥.	126	126	0061	3.0	0.0	-		1.00	0.850		1597		1597	Yes	112				1.00	%0	126	9	126	S to	2				1.01	15	-	Right	2.0	0.0	0.0	CI+F	Š	0.0	0.0	0.0					
•	NBL	r	139	139	0061	0.0 0.0	0.0	-	7.5	1.00		0.950	1745	0.950	1745			20	144.7	10.4	1.00	%0	139	9	139	2 4	3.3	0.0	4.8		1.04	25	-	Left	2.0	0.0	0.0	ZI+F	Š	0.0	0.0	0.0					
ļ	WBT	*	1258	1258	0061	3.0				0.95			3610		3610			20	273.6	19.7	1.00	%0	1258	0	1258	2 g	3.3	0.0	4.8		1.00		5	Thru	10.0	0.0	0.0	1 1 1 1	5	0.0	0.0	0.0	9.4	9.0	CI+EX		
>	WBL	F	180	180	0061	3.3	0.0	-	7.5	1.00		0.950	1745	0.223	410						1.00	%0	180	9	180	2 5	i				1.04	25	-	Left	2.0	0.0	0.0	7 1 1	Š	0.0	0.0	0.0					
-	EBR		130	130	0061	0.0	0.0	0		0.95			0		0	Yes					1.00	%0	130	c	0 :	S #	162				1.00	15															
†	EBT	₽ ₽	975	975	0061	3.0				0.95	0.982		3514		3514	į	27	20	134.8	9.7	1.00	%	975	1077	1105	2 ±	333	0.0	4.8		1.00		5	Thru	10.0	0.0	0.0	2. T	5	0.0	0.0	0.0	9.4	9.0	C+EX		
	Lane Group	Lane Configurations	Traffic Volume (vph)	Future Volume (vph)	Ideal Flow (vpnpl)	Chrase Length (m)	Siorage Lerigin (III)	Storage Lanes	Taper Length (m)	Lane Util. Factor	Fr	Flt Protected	Satd. Flow (prot)	Flt Permitted	Satd. Flow (perm)	Right Turn on Red	Satd. Flow (RTOR)	Link Speed (k/h)	Link Distance (m)	Travel Time (s)	Peak Hour Factor	Heavy Vehides (%)	Adj. Flow (vph)	Shared Lane Traffic (%)	Lane Group Flow (vph)	Enter Blocked Intersection	Median Width(m)	Link Offset(m)	Crosswalk Width(m)	Two way Left Turn Lane	Headway Factor	Turning Speed (k/h)	Number of Detectors	Detector Template	Leading Detector (m)	Trailing Detector (m)	Detector 1 Size(m)	Detector 1 Type	Detector 1 Channel	Detector 1 Extend (s)	Detector 1 Queue (s)	Detector 1 Delay (s)	Detector 2 Position(m)	Detector 2 Size(m)	Detector 2 Type	Detector 2 Channel	

Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 2: Mall Entrance & Main St

Lanes, Volumes, Timings 2: Mall Entrance & Main St E	nings 1ain St	Ш					200624 2031 Background PM Peak Hour
	†	>	>	ţ	•	*	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Protected Phases	2			9	∞		
Permitted Phases			9			80	
Detector Phase	2		9	9	∞	80	
Switch Phase							
Minimum Initial (s)	30.0		30.0	30.0	10.0	10.0	
Minimum Split (s)	37.0		37.0	37.0	35.0	35.0	
Total Split (s)	22.0		22.0	22.0	35.0	35.0	
Total Split (%)	61.1%		61.1%	61.1%	38.9%	38.9%	
Maximum Green (s)	48.0		48.0	48.0	28.0	28.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	3.0		3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	-3.0		-3.0	-3.0	-3.0	-3.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Recall Mode	Max		None	None	None	None	
Walk Time (s)	15.0				20.0	20.0	
Flash Dont Walk (s)	0.7				7.0	7.0	
Pedestrian Calls (#/hr)	0				0	0	
Act Effct Green (s)	51.1		51.1	51.1	14.8	14.8	
Actuated g/C Ratio	0.69		69:0	0.69	0.20	0.20	
v/c Ratio	0.45		0.64	0.50	0.40	0.31	
Control Delay	5.9		20.6	6.5	29.2	0.6	
Queue Delay	0.4		0.0	0.0	0.0	0.0	
Total Delay	6.4		20.6	6.5	29.2	0.6	
ros	⋖		O	⋖	O	⋖	
Approach Delay	6.4			8.3	19.6		
Approach LOS	A			∢	В		
Intersection Summary							
	Other						
Cycle Length: 90							
Actuated Cycle Length: 73.9							
Natural Cycle: 90							
Control Type: Semi Act-Uncoord	ord						
Maximum v/c Ratio: 0.64				2	A. O. C. Continue	<	
Intersection Capacity Utilization 74 4%	74 4%			<u> </u>	I level of	CIT I evel of Service D	
Analysis Period (min) 15				!	2		

Splits and Phases: 2: Mall Entrance & Main St E



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200624 2031 Background PM Peak Hour Queues 2: Mall Entrance & Main St E

•	NBR	126	0.31	9.0	0.0	9.0	1.7	14.6			735	0	0	0	0.17
•	NBL	139	0.40	29.5	0.0	29.5	17.8	33.4	120.7		733	0	0	0	0.19
Ļ	WBT	1258	0.50	6.5	0.0	6.5	36.2	8.09	249.6		2494	0	0	0	0.50
-	WBL	180	0.64	20.6	0.0	20.6	11.5	#23.0		70.0	283	0	0	0	0.64
†	EBT	1105	0.45	5.9	0.4	6.4	29.2	50.1	110.8		2436	759	0	0	99.0
	Lane Group	Lane Group Flow (vph)	v/c Ratio	Control Delay	Queue Delay	Total Delay	Queue Length 50th (m)	Queue Length 95th (m)	Internal Link Dist (m)	Turn Bay Length (m)	Base Capacity (vph)	Starvation Cap Reductn	Spillback Cap Reductn	Storage Cap Reductn	Reduced v/c Ratio

Intersection Summary

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

Queue shown is maximum after two cydes.

HCM 2010 Signalized Intersection Summary 2: Mall Entrance & Main St E

HCM 2010 Signalized Intersection Summary 2: Mall Entrance & Main St E	d Inter lain St	section	mns r	mary				200624 2031 Background PM Peak Hour
	1	/	\ \	1	•			
Movement	FBT	- EBR	. WBI	WBT	- E	NBR.		
Lane Configurations	₹	i	-	\$	-	*		
Traffic Volume (veh/h)	975	130	180	1258	139	126		
Future Volume (veh/h)	975	130	180	1258	139	126		
Number (10,01)	~ ~	12	- c	9	m c	∞ 0		
Dod-Bike Adi/A phT)	0	9	5	0	9 6	0 6		
Parking Rus Adi	1 00	8.0	9.0	100	8.6	8.0		
Adi Sat Flow. veh/h/ln	1883	1900	1900	1900	1900	1900		
Adj Flow Rate, veh/h	975	130	180	1258	139	126		
Adj No. of Lanes	2	0	-	2	-	_		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	- 6	0	0	0	0	0		
Cap, veh/h	2250	300	399	2559	326	291		
Sat Flow, veh/h	3269	423	518	3705	1810	1615		
Grp Volume(v), veh/h	549	256	180	1258	139	126		
Grp Sat Flow(s),veh/h/ln	1789	1809	518	1805	1810	1615		
Q Serve(g_s), s	9.3	9.2	16.2	11.2	4.9	2.0		
Cycle Q Clear(g_c), s	9.3	9.2	25.8	11.2	4.9	2.0		
Prop In Lane		0.23	0.0		1.00	1.00		
Lane Grp Cap(c), veh/h	1268	1282	333	2559	326	291		
V/C Katio(X) Avail Can(c, a), veh/h	1268	1282	399	25.59	780	0.43		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	4.4	4.6	6.6	4.7	26.2	26.2		
Incr Delay (d2), s/veh	Ξ:	Ξ:	0.8	0.1	6:0	1:0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOtQ(50%),ven/in	4. π Σ. π	5.7	47.7	υ. Σ. α	2.5	2.3		
LnGrp LOS	9 ⋖	₹	В	<	U	i O		
Approach Vol, veh/h	1105			1438	265			
Approach Delay, s/veh	9.6			5.6	27.2			
Approach LOS	∢			∢	ပ			
Timer	_	2	က	4	2	9	7 8	
Assigned Phs		2				9	8	
Phs Duration (G+Y+Rc), s		55.0				22.0	16.9	
Change Period (Y+Rc), s		2.0				7.0	7.0	
Max Green Setting (Gmax), s		48.0				48.0	28.0	
Max Q Clear Time (g_c+I1), s		11.5				27.8	7.0	
Green Ext Time (p_c), s		11.4				13.1		
Intersection Summary								
HCM 2010 Ctrl Delay			7.6					
HCM 2010 LOS			¥					

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Lanes, Volumes, Timings 3: Busway/Wilson Dr & Main St E

200624 2031 Background PM Peak Hour

	4	†	1	>	ļ	4	•	←	•	۶	→	*
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	<i>y</i> -	4₽		r	4₽		۳	+	¥C	r	æ	
Traffic Volume (vph)	96	928	72	20	1257	223	61	4	09	140	4	108
Future Volume (vph)	නි දි	928	72	0 2	1257	223	61	4	09	140	4	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	ري د. د	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	2.2	3.6	3.5
Storage Length (m)	0.00		0.0	40.0		0.0	0.0		22.0	22.0		0.0
Storage Lanes	-		>	-		>	-		-	-		>
Taper Length (m)	100	0.95	0.95	100	0.95	0.95	1.00	100	100	100	9	00
Ped Bike Factor	1.00	5		2	1.00	9	2	2	2	1.00	0.97	8
Ŧ		0.989			0.977				0.850		0.855	
Fit Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1745	3500	0	1770	3455	0	1410	1863	1313	1728	1580	0
Flt Permitted	0.095	0	d	0.287	1	d	0.661	000	2	0.755	1	d
satd. Flow (perm)	1/4	3200	0	232	3455	o ;	200	1803	1313	136/	0861	> ;
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			36				26		108	
Link Speed (k/h)		20			20			20			20	
Link Distance (m)		260.1			360.6			143.5			174.4	
Travel Time (s)		18.7			26.0			10.3			12.6	
Confl. Peds. (#/hr)	4					4				က		12
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 Vehides (%)	%0	5%	2%	2%	2%	%0	28%	2%	23%	1%	2%	%0
Adj. Flow (vph)	8	928	72	20	1257	223	61	4	09	140	4	108
Shared Lane Traffic (%)	ć	000	•	í		•	č		ć			•
Lane Group Flow (vph)	ි නි :	1000	0	2	1480	0	. 61	4	09	140	112	0
Enter Blocked Intersection	2	2	<u>ء</u>	2	2	2	2	2	2	2	2	2
Lane Alignment	Fet	Let	Right	Let	ret Cet	Right	Let	Lett	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1:00	1:00	1.00	1.00	1.00	1.00	0.1	1.04	0.0	1.01
Turning Speed (k/h)	25	,	15	25	,	15	25	,	15	52	,	15
Number of Detectors	_	2		-	7		-	7	-	-	7	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	5.0	10.0		5.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	9.0		5.0	9.0		5.0	9.0	2.0	2.0	9.0	
Detector 1 Type	C+EX	CI+EX		CI+EX	CI+EX		CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0:0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0:0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		9.0			9.0			9.0			9.0	
Detector 2 Type		CI+EX			CI+EX			CI+Ex			CI+EX	
Detector 2 Channel												

Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 3: Busway/Wilson Dr & Main St E

200624 2031 Background PM Peak Hour

	i											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0:0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA	Perm	Perm	A	
Protected Phases	2	2			9			∞			4	
Permitted Phases	2			9			∞		∞	4		
Detector Phase	2	2		9	9		00	00	00	4	4	
Switch Phase												
Minimum Initial (s)	2.0	40.0		40.0	40.0		2.0	2.0	2.0	10.0	10.0	
Minimum Split (s)	10.0	46.0		46.0	46.0		26.0	26.0	26.0	26.0	26.0	
Total Split (s)	10.0	64.0		54.0	24.0		26.0	26.0	26.0	26.0	26.0	
Total Split (%)	11.1%	71.1%		%0.09	%0.09		28.9%	28.9%	28.9%	28.9%	28.9%	
Maximum Green (s)	2.0	58.0		48.0	48.0		20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	3.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-2.0		-2.0	-2.0		-2.0	-2.0	-5.0	-5.0	-5.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Recall Mode	None	Max		None	None		None	None	None	None	None	
Walk Time (s)		30.0		30.0	30.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		10.0		10.0	10.0		13.0	13.0	13.0	13.0	13.0	
Pedestrian Calls (#/hr)		0		0	0		0	0	0	0	0	
Act Effct Green (s)	60.1	60.1		52.2	52.2		16.7	16.7	16.7	16.7	16.7	
Actuated g/C Ratio	0.71	0.71		0.61	0.61		0.20	0.20	0.20	0.20	0.20	
v/c Ratio	0.41	0.40		0.21	69.0		0.32	0.01	0.18	0.52	0.28	
Control Delay	6.6	5.9		11.5	14.2		33.4	26.2	3.4	37.6	8.4	
Queue Delay	0.0	0.0		0.0	0:0		0:0	0.0	0.0	0.0	0.0	
Total Delay	6.6	5.9		11.5	14.2		33.4	26.2	3.4	37.6	8.4	
SOT	A	∢		Ф	Ф		ပ	ပ	V	Ω	∢	
Approach Delay		6.3			14.0			18.8			24.6	
Approach LOS		⋖			В			Ф			O	
Intersection Summary												
Area Type:	Other											
Cycle Length: 90												
Actuated Cycle Length: 84.9	4.9											
Natural Cycle: 85												
Control Type: Semi Act-Uncoord	Incoord											
Maximum v/c Ratio: 0.69												
Intersection Signal Delay: 12.3	: 12.3			Ξ	Intersection LOS: B	LOS: B						
Intersection Capacity Utilization 91.8%	ization 91.8%			೦	ICU Level of Service F	f Service	ш					
Analysis Period (min) 15												

Splits and Phases: 3: Busway/Wilson Dr & Main St E

Paradigm Transportation Solutions Limited

Synchro 10 Report Page 10

Queues 200624 3: Busway/Wilson Dr & Main St E 2031 Background PM Peak Hour

	\	Ť	>			_	L	•	+	
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	
Lane Group Flow (vph)	96	1000	70	1480	61	4	09	140	112	
v/c Ratio	0.41	0.40	0.21	69.0	0.32	0.01	0.18	0.52	0.28	
Control Delay	6.6	5.9	11.5	14.2	33.4	26.2	3.4	37.6	8.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	6.6	5.9	11.5	14.2	33.4	26.2	3.4	37.6	8.4	
Queue Length 50th (m)	4.3	29.7	5.2	84.3	0.6	9.0	0.0	21.5	9.0	
Queue Length 95th (m)	11.1	20.0	14.5	128.6	20.3	3.2	4.2	39.5	13.5	
Internal Link Dist (m)		236.1		336.6		119.5			150.4	
Turn Bay Length (m)	20.0		40.0				35.0	55.0		
Base Capacity (vph)	234	2484	329	2139	254	483	412	355	490	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.41	0.40	0.21	69.0	0.24	0.01	0.15	0.39	0.23	

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HCM 2010 Signalized Intersection Summary 3: Busway/Wilson Dr & Main St E

200624 2031 Background PM Peak Hour

	4	†	<u> </u>	-	ļ	1	•	—	4	۶	→	*
Movement	田田	EBI	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	r	₩.		۳	₩		r	*	*-	۴	Ŷ,	
Traffic Volume (veh/h)	96	928	72	2	1257	223	61	4	09	140	4	108
Future Volume (veh/h)	96	928	72	20	1257	223	61	4	09	140	4	108
Number	2	2	12	_	9	16	က	∞ .	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		1.00	1.00		0.98
Parking Bus, Adj	1:00	1:00	1.00	1:00	1.00	1.00	1.00	9:	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1868	1900	1484	1863	1545	1881	1899	1900
Adj Flow Rate, veh/h	8	928	75	2	1257	223		4	09	140	4	108
Adj No. of Lanes	- 6	7 5	0 8	- 5	7 5	0 9	- 5	- 6	- 6	- 6	- 6	0 0
Peak Hour Factor	00.1	00.1	9.1	0.1	0.1	0.1	00.1	1.00	1.00	1.00	1.00	00.1
Con with heavy veri, %	247	2000	106	7 90 1	1020	200	000	24.5	24.5	224	4 5	200
Arrive On Green	200	0 77	000	0.54	0000	0.61	0.18	0.18	0.18	- 27	0 20	0.18
Sat Flow, veh/h	1810	3328	258	261	3017	531	1002	1863	1313	1346	57	1535
Gro Volume(v), veh/h	96	493	202	02	735	745	61	4	09	140	0	112
Grp Sat Flow(s),veh/h/ln	1810	1770	1816	261	1775	1773	1002	1863	1313	1346	0	1592
Q Serve(g_s), s	1.5	9.0	9.1	4.7	23.2	23.7	4.7	0.1	3.3	6.7	0.0	5.1
Cycle Q Clear(g_c), s	1.5	9.0	9.1	4.7	23.2	23.7	6.6	0.1	3.3	8.1	0.0	5.1
Prop In Lane	1.00		0.14	1.00		0:30	1.00		1.00	1.00		96.0
Lane Grp Cap(c), veh/h	317	1274	1308	426	1077	1075	209	345	241	331	0	293
V/C Ratio(X)	0.30	0.39	0.39	0.16	0.68	0.69	0.29	0.01	0.25	0.42	0.00	0.38
Avail Cap(c_a), veh/h	329	1274	1308	426	1077	1075	588	492	347	439	0	420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.1	0.1	9:1	0.1	9.	9:	0.1	0.1	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	4.5	4.6	7.4	11.0	11:1	34.2	27.8	29.1	31.1	0.0	29.8
Incr Delay (d2), s/veh	0.5	0.9	6:0	0.3	2.0	2.1	-	0.0	0.8	1.2	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.	4.7	4.9	0.7	4.0	12.0	4:	0.1	1.2	ب. 1.	0.0	2.4
LnGrp Delay(d),s/veh	10.3	5.4	5.5	7.6	13.0	13.3	35.3	27.8	29.8	32.3	0.0	31.0
LnGrp LOS	n	∢	⋖	⋖	2	2		اد	اد	اد		اد
Approach Vol, veh/h		1096			1550			125			252	
Approach Delay, s/veh		2.9			12.9			32.4			31.7	
Approach LOS		∢			œ			O			ပ	
Timer	1	2	3	4	5	9	7	8				
Assigned Phs		2		4	2	9		8				
Phs Duration (G+Y+Rc), s		64.0		19.3	9.5	54.5		19.3				
Change Period (Y+Rc), s		0.9		0.9	2.0	0.9		0.9				
Max Green Setting (Gmax), s		58.0		20.0	2.0	48.0		20.0				
Max Q Clear Time (g_c+l1), s				10.1	3.5	25.7		11.9				
Green Ext Time (p_c), s		14.9		ر ن	0.0	17.0		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			12.7									
HCM 2010 LOS			ш									

Paradigm Transportation Solutions Limited

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Lanes, Volumes, Timings 4: Drew Centre/Private Driveway & Main St E

200624 2031 Background PM Peak Hour

	1	†	<i>></i>	-	↓	4	•	←	•	۶	→	*
Lane Group	EBF	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	‡	¥C.	je-	‡		F	£			€\$	
Traffic Volume (vph)	0	1030	27.7	167	803	0	260	0	127	0	0	0
Future Volume (vph)	0	1030	27.7	167	803	0	260	0	127	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	x. x.	3.6	3.5	3.3	3.6	3.6	3.3	3.6	3.5	3.6	3.6	3.0
Storage Length (III)	0.01		0.04	45.0		0.0	0.0		0000	0.0		0.0
Taper Length (m)	7.5		-	7 2		>	7 2		>	7 2		>
lape I Hil Factor	5 6	0.05	100	001	0.05	100	700	100	100	00 1	100	00
Ped Bike Factor	3	5	0.95	1.00	5	9	0.99	0.98	9	9	3	3
Ĕ			0.850					0.850				
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1837	3610	1521	1694	3610	0	3385	1588	0	0	1900	0
Flt Permitted				0.154			0.950					
Satd. Flow (perm)	1837	3610	1451	274	3610	0	3368	1588	0	0	1900	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			178					373				
Link Speed (k/h)		20			20			20			20	
Link Distance (m)		360.6			362.0			256.9			51.9	
Travel Time (s)		26.0			26.1			18.5			3.7	
Confl. Peds. (#/hr)			15	15			7		က	က		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 Vehides (%)	%0	%0	2%	3%	%0	%0	%0	%0	%0	%0	%0	%0
Adj. Flow (vph)	0	1030	277	167	803	0	260	0	127	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1030	277	167	803	0	260	127	0	0	0	0
Enter Blocked Intersection	8	8	8	8	9	9	8	8	8	8	8	8
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			9.9			9.9	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane				į								
Headway Factor	1.04	1.00	1.01	1.04	1.00	1:00	1.04	1.00	1.01	1.00	1.00	9:1
I urning Speed (k/h)	52	•	15	52		15	52	•	15	52		15
Number of Detectors		5	- : i		2		- .	2			2	
Detector Template	Left	Thr.	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0:0	0:0		0.0	0:0	
Detector 1 Size(m)	2.0	9.0	2.0	2.0	9.0		2.0	9.0		2.0	9.0	
Detector 1 Type	CHEX	CI+EX	CI+EX	CI+EX	CI+EX		CI+EX	CI+EX		CI+EX	CI+EX	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0:0		0.0	0.0		0.0	0:0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		9.0			9.0			9.0			9.0	
Detector 2 Type		CI+EX			CI+EX			CI+EX			CI+EX	
Detector 2 Channel												

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Lanes, Volumes, Timings 4: Drew Centre/Private Driveway & Main St E

200624 2031 Background PM Peak Hour

200624 2031 Background PM Peak Hour

Queues 4: Drew Centre/Private Driveway & Main St E 127 0.17 0.0 0.0 0.0 0.0 232.9

560 0.57 31.8 0.0 31.8 49.5 60.4

803 803 0.35 10.2 10.2 38.1 59.2 338.0

167 167 0.53 15.1 0.0 15.1 13.1

277 277 0.35 8.4 0.0 8.4 10.7 34.3

21.8 0.0 21.8 21.8 76.2 119.5 336.6

Lane Group Lane Group Flow (vph) v/c Ratio 737

1009

40.0 796 0 0 0 0.35

1753 0 0 0 0 0.59

Intersection Summary

0.35

2263

339

Control Delay
Queue Delay
Total Delay
Queue Length 50th (m)
Queue Length 95th (m)
Iumanal Link Dist (m)
Base Capacity (vph)
Sanvation Cap Reduch
Spillback Cap Reduch
Sorage Cap Reduch
Sorage Cap Reduch
Reduced v/c Ratio

	1	†	<i>></i>	>	ţ	4	•	←	4	۶	→	•
Lane Group	EBF	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	Ν	Perm	pm+pt	NA		Perm	NA				
Protected Phases		2		-	9			∞		4	4	
Permitted Phases	2		2	ဖ			∞			4		
Detector Phase	2	2	2	-	9		∞	∞		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	2.0	15.0		0.9	0.9		0.9	0.9	
Minimum Split (s)	35.0	35.0	35.0	9.5	35.0		27.0	27.0		13.0	13.0	
Total Split (s)	45.0	45.0	45.0	15.0	27.0		30.0	30.0		13.0	13.0	
Total Split (%)	42.0%	45.0%	42.0%	15.0%	22.0%		30.0%	30.0%		13.0%	13.0%	
Maximum Green (s)	35.0	35.0	35.0	11.0	20.0		23.0	23.0		0.9	0.9	
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0	3.0	1.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	-3.0	-3.0	-3.0	0.0	-3.0		-3.0	-3.0			-3.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	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				
Flash Dont Walk (s)	21.0	21.0	21.0		21.0		13.0	13.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effct Green (s)		48.6	48.6	62.7	62.7		29.3	29.3				
Actuated g/C Ratio		0.49	0.49	0.63	0.63		0.29	0.29				
v/c Ratio		0.59	0.35	0.53	0.35		0.57	0.17				
Control Delay		21.8	8.4	12.1	10.2		31.8	0.5				
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0				
Total Delay		21.8	8.4	12.1	10.2		31.8	0.5				
SOT		ပ	∢	В	В		ပ	∢				
Approach Delay		18.9			11.0			26.0				
Approach LOS		В			ш			O				
Intersection Summary												
Area Type:	Other											
Cycle Length: 100												
Actuated Cycle Length: 100	00											
Offset. 16 (16%), Referenced to phase 2:EBTL, Start of Green	ced to phase	2:EBTL,	Start of G	reen								
Natural Cycle: 85												
Control Type: Actuated-Coordinated	oordinated											
Maximum v/c Ratio: 0.59												
Intersection Signal Delay: 18.0 Intersection Capacity Utilization 70.4%	18.0 ration 70 4%			⊆ ⊆	Intersection LOS: B	LOS: B	c					
Analysis Period (min) 15				2			,					
- · · · · · · · · · · · · · · · · · · ·												

Splits and Phases: 4: Drew Centre/Private Driveway & Main St E



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HCM 2010 Signalized Intersection Summary 4: Drew Centre/Private Driveway & Main St E

200624 2031 Background PM Peak Hour

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Movement	EBI	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	<u>,-</u>	‡	¥.	<u>,-</u>	#		F	æ			4	
Traffic Volume (veh/h)	0	1030	277	167	803	0	260	0	127	0	0	0
Future Volume (veh/h)	0	1030	277	167	803	0	260	0	127	0	0	0
Number	2	2	12	-	9	16	က	∞ .	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	9:		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	0.1	0.1	0.1	1.00	1.00	0.1	9.1	1.00	1.00	1:00	1:00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1810	1845	1900	0	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	0	1030	277	167	803	0	260	0	127	0	0	0
Adj No. of Lanes	- 5	7	- 5	- 5	7	0 9	7	- 5	0 0	0 0	- 6	0 0
Peak Hour Factor	3.5	9.5	90.1	9	9.0	9.5	9.	00.1	00.1	00.1	00.1	00.1
Car inhth	2 6	2 2	2 2	2 47	0 00	> <	2 0	> <	0 0	> <	> <	0
Arriva On Green	7/ 0	0,60	0.60	0.00	0.00		0 22		0.19	000		
Sat Flow veh/h	689	3610	1519	1757	3705	0	3510	0	1607	8	000	
Gro Volume(v) veh/h	С	1030	277	167	803	0	560	0	127		0.0	
Grp Sat Flow(s).veh/h/ln	689	1805	1519	1757	1805	0	1755	0	1607			
Q Serve(q s), s	0.0	15.9	8.9	3.7	9.8	0.0	14.8	0.0	6.9			
Cycle Q Clear(g_c), s	0:0	15.9	8.9	3.7	9.8	0.0	14.8	0.0	6.9			
Prop In Lane	1:00		1.00	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	72	2173	914	347	2530	0	913	0	352			
V/C Ratio(X)	0.00	0.47	0:30	0.48	0.32	0.00	0.61	0.00	0.36			
Avail Cap(c_a), veh/h	72	2173	914	437	2530	0	1057	0	418			
HCM Platoon Ratio	1:00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.1	1.00	1.00	1:00	0.00	1:00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	11.1	9.7	9.4	2.8	0.0	36.3	0.0	34.4			
Incr Delay (d2), s/veh	0:0	0.7	6:0	0.	0.1	0.0	8. 6	0.0	9.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	œ. :	3.9	6 .	4.3	0.0	7.3	0.0	ب ب			
LnGrp Delay(d),s/veh	0.0	11.8	10.5	10.4	2.8	0.0	37.1	0.0	35.1			
LnGrp LOS		m	m	М	∢							
Approach Vol, veh/h		1307			970			289				
Approach Delay, s/veh		11.6			9.9			36.7				
Approach LOS		В			∢			۵				
Timer	-	2	က	4	2	9	7	∞				
Assigned Phs	-	2				9		∞				
Phs Duration (G+Y+Rc), s	9.6	64.2				74.1		25.9				
Change Period (Y+Rc), s	4.0	7.0				7.0		7.0				
Max Green Setting (Gmax), s	11.0	35.0				20.0		23.0				
Max Q Clear Time (g c+11), s	5.7	17.9				10.6		16.8				
Green Ext Time (p_c), s	0.3	9.3				8.2		2.0				
Intersection Summary												
HCM 2010 Ctrl Delay			15.8									
HCM 2010 LOS			മ									

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Lanes, Volumes, Timings 5: Thompson Rd & Main St E

200624 2031 Background PM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	₩		K	₩		F	*		K.	₩	
Traffic Volume (vph)	316	585	234	442	524	29	253	624	243	29	895	164
Future Volume (vph)	316	585	234	442	524	29	253	624	243	29	895	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	m 6	3.6	9.0	3.3	3.6	3.6	3.3	3.6	3.6		3.6	3.6
Storage Length (m)	0.00		0.0	150.0		0.0	90.0		0.0	22.0		0.0
Storage Lanes	- 1		>	- 1		>	- 1		>	- 1		>
laper Lengm (m)	ς , υ ,	0		C. 7	0	0	0.7	0		0.7		C
Lane Util. Factor	1.00	0.95	0.95	1:00	0.95	0.95	1:00	0.95	0.95	1:00	0.95	0.55 55.
Fit Protected	0.950	50.0		0.950	0.00		0.950	0.00		0.950	5.5	
Satd. Flow (prot)	1745	3421	0	1728	3542	0	1728	3439	0	1711	3522	0
Flt Permitted	0.323			0.138			0.124			0.172		
Satd. Flow (perm)	593	3421	0	251	3542	0	225	3439	0	310	3522	0
Right Tum on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			=			26			19	
Link Speed (k/h)		20			20			09			09	
Link Distance (m)		362.0			250.3			278.6			217.9	
Travel Time (s)		26.1			18.0			16.7			13.1	
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 Vehides (%)	%0	1%	1%	1%	%0	4%	1%	%0	2%	2%	%0	1%
Adj. Flow (vph)	316	585	234	442	524	29	253	624	243	29	895	164
Shared Lane Traffic (%)												
Lane Group Flow (vph)	316	819	0	442	583	0	253	867	0	29	1059	0
Enter Blocked Intersection	2	2	2	2	2	2	2	2	2	2	2	2
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.3			3.3			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		8.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	9.	1.00
Turning Speed (k/h)	. 25	,	15	25	,	15	25	,	15	52	,	15
Number of Detectors	- .	5		- .	5		- .	5		- .	5	
Detector I emplate	Let C	Ihrd 6		ret C	I hru		Let	Ihru		Let	Ihru	
Leading Defector (m) Trailing Defector (m)	0.2	0.0		0.2	0.0		0.2	0.0		0.2	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	9.0		2.0	0.0		2.0	0.0		2.0	0.0	
Detector 1 Type	X L X L X	Ę.		CH-EX	Ž+Ľ		CH-FX	Ĭ.		CI+Ex	Z+EX	
Detector 1 Channel	i	i		í	i i		i	i 5		i	i	
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		9.0			9.0			9.0			9.0	
Detector 2 Type		Ę Ę			ξ÷ C÷			CI+EX			Σ Ċ Ċ	
Detector 2 Extend (s)		0			0			0			0	
Turn Type	tu+mu	S AN		tu+mu	S N		tu+mu	N AN		tu+mu	O N	
uni iyka	ž	ζ.		4	5		4	Ē		Dir. Pr	ζ.	1

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Lanes, Volumes, Timings 5: Thompson Rd & Main St E

200624 2031 Background PM Peak Hour

5: Thompson Rd & Main St E

Queues

200624 2031 Background PM Peak Hour

1012

1256

1083

429 150.0

Total Delay

Queue Length 50th (m)

Queue Length 50th (m)

Queue Length 50th (m)

Lune Bay Length (m)

Base Capacity (vph)

Base Capacity (vph)

Sarvation Cap Reduch

Soriage Cap Reduch

Soriage Cap Reduch

Reduced v/c Ratio

60.0 487 0 0 0 0 0 0

60.0

0 0 1.05

0.69.0

Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

96th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

55.0 184 0 0 0 0.32

SBT 1059 1.05 79.4 0.0 79.4 ~135.5 #178.5

SBL 59 0.32 24.1 0.0 24.1 7.7

867 0.69 32.3 0.0 32.3 84.5 108.4 254.6

253 253 0.97 77.0 0.0 77.0 40.0 #93.0

583 0.54 34.2 0.0 34.2 56.6 78.6 226.3

WBL 442 1.03 82.4 0.0 82.4 ~89.0 #156.0

EBL EBT 316 819 0.74 0.90 29.1 51.4 0.0 0.0 29.1 851.4 42.2 851.4 63.4 #125.3 3

Control Delay Queue Delay

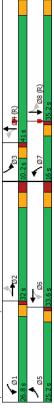
Lane Group Flow (vph)

	1	†	*	-	ţ	1	•	←	•	۶	→	*
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	9		7	4		3	80	
Permitted Phases	2			9			4			∞		
Detector Phase	ည	2		_	9		7	4		က	∞	
Switch Phase												
Minimum Initial (s)	2.0	15.0		2.0	15.0		2.0	10.0		2.0	10.0	
Minimum Split (s)	9.5	32.0		9.5	32.0		9.5	32.0		9.5	32.0	
Total Split (s)	25.2	32.0		26.8	33.6		16.0	41.0		10.2	35.2	
Total Split (%)	22.9%	29.1%		24.4%	30.5%		14.5%	37.3%		9.3%	32.0%	
Maximum Green (s)	21.2	25.0		22.8	56.6		12.0	34.0		6.2	28.2	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	3.0		1.0	3.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	0.0	-3.0		0.0	-3.0		0.0	-3.0		0.0	-3.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		18.0			18.0			18.0			18.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	45.4	28.0		53.9	33.4		47.2	39.0		37.3	31.2	
Actuated g/C Ratio	0.41	0.25		0.49	0.30		0.43	0.35		0.34	0.28	
v/c Ratio	0.74	06:0		1.03	0.54		0.97	69.0		0.32	1.05	
Control Delay	29.1	51.4		82.4	34.2		0.77	32.3		24.1	79.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	29.1	51.4		82.4	34.2		0.77	32.3		24.1	79.4	
TOS	O	Ω		ட	ပ		ш	ပ		ပ	ш	
Approach Delay		45.2			55.0			45.4			76.5	
Approach LOS		٥			Ω			Ω			ш	
Intersection Summary												

Other

Intersection LOS: DICU Level of Service G Actuated Cycle Length: 10
Actuated Cycle Length: 110
Office to (0%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green
Office 105
Control Type: Actuated-Coordinated
Maximum vic Ratio: 1.05
Intersection Signal Delay: 54.7
Intersection Capacity Utilization 105.5%
Analysis Period (min) 15

5: Thompson Rd & Main St E Splits and Phases:



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HCM 2010 Signalized Intersection Summary 5: Thompson Rd & Main St E

200624 2031 Background PM Peak Hour

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	r	₩		F	₩		F	₩		r	₩	
Traffic Volume (veh/h)	316	585	234	442	524	26	253	624	243	29	895	164
Future Volume (veh/h)	316	585	234	442	524	29	253	624	243	29	895	164
Number	2	2	12	—	9	16	7	4	14	က	∞	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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 Sat Flow, veh/h/In	1900	1881	1900	1881	1892	1900	1881	1889	1900	1863	1897	1900
Adj Flow Rate, veh/h	316	585	234	442	524	29	253	624	243	29	895	164
Adj No. of Lanes	_	2	0	—	2	0	_	2	0	_	2	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
Percent Heavy Veh, %	0	-	-	-	0	4	_	0	2	2	0	_
Cap, veh/h	469	635	254	437	1002	112	261	897	349	202	863	158
Arrive On Green	0.15	0.25	0.23	0.21	0.31	0.28	0.11	0.35	0.33	0.04	0.28	0.26
Sat Flow, veh/h	1810	2496	997	1792	3260	366	1792	2527	983	1774	3043	228
Grp Volume(v), veh/h	316	419	400	442	288	295	253	443	424	29	530	529
Grp Sat Flow(s),veh/h/ln	1810	1787	1705	1792	1798	1828	1792	1795	1716	1774	1802	1799
Q Serve(g_s), s	14.4	25.1	25.2	22.8	14.6	14.7	11.4	23.3	23.5	2.7	31.2	31.2
Cycle Q Clear(g_c), s	14.4	25.1	25.2	22.8	14.6	14.7	11.4	23.3	23.5	2.7	31.2	31.2
Prop In Lane	1.00		0.58	1.00		0.20	1.00		0.57	1.00		0.31
Lane Grp Cap(c), veh/h	469	455	434	437	225	295	261	637	609	202	211	510
V/C Ratio(X)	0.67	0.92	0.92	1.01	0.52	0.52	0.97	0.70	0.70	0.29	1.04	1.04
Avail Cap(c_a), veh/h	238	422	434	437	225	295	261	637	609	238	211	510
HCM Platoon Ratio	1.00	1:00	1:00	1:00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	9.	9:	9:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	39.9	40.8	32.9	31.4	31.7	29.7	30.4	31.2	29.6	39.4	39.9
Incr Delay (d2), s/veh	2.8	26.3	27.5	46.1	0.9	0.9	47.2	6.2	6.5	0.8	49.6	49.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	15.7	15.1	18.8	7.3	7.5	11.1	12.5	12.2	د .	22.5	22.5
LnGrp Delay(d),s/veh	28.8	66.2	68.4	79.0	32.3	32.6	6.97	36.6	37.7	30.3	89.0	89.6
LnGrp LOS	ပ	ш	ш	띠	ပ	ပ	ш	۵		ပ	띠	۳
Approach Vol, veh/h		1135			1025			1120			1118	
Approach Delay, s/veh		9.99			52.5			46.1			86.2	
Approach LOS		ш			Ω			Ω			ш	
Timer	-	2	က	4	2	9	7	∞				
Assigned Phs	~	2	က	4	2	9	7	∞				
Phs Duration (G+Y+Rc), s	26.8	32.0	8.2	43.0	21.0	37.8	16.0	35.2				
Change Period (Y+Rc), s	4.0	7.0	4.0	7.0	4.0	7.0	4.0	7.0				
Max Green Setting (Gmax), s	22.8	25.0	6.2	34.0	21.2	26.6	12.0	28.2				
Max Q Clear Time (g_c+l1), s	24.8	27.2	7.4	25.5	16.4	16.7	13.4	33.2				
Green EXt IIMe (p_c), s	0.0	0.0	0.0	S. 9.	0.0	N.9	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			60.5									
HCM 2010 LOS			ш									

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Paradigm Transportation Solutions Limited

200624 2031 Background PM Peak Hour

Intersection: 1: Ontario St S/Ontario St N & Main St E

Movement	8	æ	B	8	WB	WB	WB	R	8	翌	읟	SB
Directions Served	_	_	_	œ	_	_	TR	_	⊢	_	œ	-
Maximum Queue (m)	47.4	122.6	110.6	40.1	42.5	114.9	118.8	77.3	100.5	101.0	72.4	47.5
Average Queue (m)	39.0	68.2	58.4	2.2	41.1	107.1	107.1	37.6	61.0	55.2	32.5	41.3
95th Queue (m)	57.2	113.0	8.76	16.7	47.8	122.6	123.2	2.89	90.1	82.0	67.9	57.8
Link Distance (m)		133.0	133.0	133.0		108.2	108.2		322.4	322.4		
Upstream Blk Time (%)		~	0			23	21					
Queuing Penalty (veh)		0	0			160	149					
Storage Bay Dist (m)	40.0				35.0			0.07			65.0	40.0
Storage Blk Time (%)	6	56			88	43		0	က	2	0	15
Queuing Penalty (veh)	53	22			142	126		0	7	7	_	09

Intersection: 1: Ontario St S/Ontario St N & Main St E

Movement	SB	SB	SB	
Directions Served	-	-	Я	
Maximum Queue (m)	164.0	150.9	26.7	
Average Queue (m)	98.9	85.1	4.2	
95th Queue (m)	165.5	147.0	17.3	
Link Distance (m)	241.6	241.6	241.6	
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (m)				
Storage Blk Time (%)	4			
Queuing Penalty (veh)	28			

Intersection: 2: Mall Entrance & Main St E

d T TR L T T T	aw aw	R15 R15	an	NB
862 89.7 77.4 2178 36.0 41.1 54.9 140.0 68.1 73.5 97.7 285.7 108.2 108.2 255.1 6) 0 0 170.0 10.0 70.0	ı	ı	ı	J.
862 897 77.4 2178 360 41.1 54.9 1400 68.1 77.5 97.7 295.7 108.2 108.2 251.1 6) 0 0 170 0 0 70.0	-		_	м
36.0 41.1 54.9 140.0 68.1 73.5 97.7 285.7 (108.2 108.2 251.1 0.0 0 172.0 0 0 172.0 0 0 122.0 0	222.6	91.0 88.6	9.89	30.3
68.1 73.5 97.7 295.7 108.2 108.2 251.1 0 0 0 17.0 0 0 17.0 0 0 17.0 0 0 12.2 0	142.4		28.5	3.1
6) 0 0 172 0 0 0 177 0 0 70,0 3 33	297.3		57.1	3.2
6) 0 0 17 0 0 0 122 70.0 3 33	251.1	239.2 239.2	127.6 12	9.7
) 0 0 122 70.0 3 33		1		
70.0		9		
က				
	33			
Queuing Penalty (veh) 22 59	29			

Paradigm Transportation Solutions Limited

SimTraffic Report Page 1

Queuing and Blocking Report

200624 2031 Background PM Peak Hour

Intersection: 3: Busway/Wilson Dr & Main St E

Movement	8	B	B	WB	WB	WB	2	윋	R	SB	SB
Directions Served	_	_	TR	_	⊢	TR	_	_	œ	_	TR
Maximum Queue (m)	33.4	2.09	72.4	47.4	115.1	119.5	40.2	7.8	27.7	48.6	34.9
Average Queue (m)	14.2	24.3	33.3	14.3	59.6	62.0	14.7	8.0	9.6	24.6	14.3
95th Queue (m)	26.5	54.8	9.99	36.3	102.3	105.5	31.8	4.6	22.0	41.1	27.2
Link Distance (m)		239.2	239.2		335.8	335.8	127.9	127.9			160.4
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (m)	20.0			40.0					35.0	22.0	
Storage Blk Time (%)		-			15				0	0	
Queuing Penalty (veh)		_			10				0	0	

Intersection: 4: Drew Centre/Private Driveway & Main St E

	í	í	í	:	:	:	9	9	9	
Movement	EB	EB	EB	WB	WB	WB	BB	BB	NB	
Directions Served	⊢	⊢	ď	٦	⊢	⊢	_	_	TR	
Maximum Queue (m)	239.9	260.2	47.5	52.1	75.3	75.4	86.0	79.9	38.4	
Average Queue (m)	96.2	102.6	35.7	25.8	31.5	33.8	52.8	42.8	12.7	
95th Queue (m)	196.7	211.1	63.1	46.7	62.7	63.2	16.0	9.79	27.6	
Link Distance (m)	335.8	335.8			334.9	334.9	239.5	239.5	239.5	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)			40.0	45.0						
Storage Blk Time (%)	23	32	-	~	2					
Queuing Penalty (veh)	0	97	2	2	4					

Intersection: 5: Thompson Rd & Main St E

Movement	æ	æ	æ	WB	WB	WB	乮	8	NB	SB	SB	SB
Directions Served	٦	⊢	TR	٦	⊢	TR	٦	⊢	TR	٦	⊢	TR
Maximum Queue (m)	67.5	340.1	340.2	157.4	229.0	216.8	67.4	176.9	163.0	62.4	208.2	208.2
Average Queue (m)	0.99	267.6	269.2	122.6	119.2	98.1	60.2	107.7	7.76	26.3	206.1	206.0
95th Queue (m)	4.77	404.0	405.9	180.6	262.4	229.3	80.7	199.9	178.0	207	207.6	207.0
Link Distance (m)		334.9	334.9		233.6	233.6		263.1	263.1		201.3	201.3
Upstream Blk Time (%)		2	7		21	2					11	8
Queuing Penalty (veh)		59	41		0	0					0	0
Storage Bay Dist (m)	0.09			150.0			0.09			25.0		
Storage Blk Time (%)	20	62		59	0		46	4		0	28	
Queuing Penalty (veh)	28	196		11	~		143	10		0	46	

Network Summary
Network wide Queuing Penalty: 1881

Appendix H

Future Total Traffic Operations

Lanes, Volumes, Timings 200624 1: Ontario St S/Ontario St N & Main St E Future Total 2031 AM Peak Hour

		Ť	~	*		,		-	•	•	+	•
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	<i>y</i> -	#	¥C	je-	₩		jr.	‡	¥C	<u>r</u>	‡	*
Traffic Volume (vph)	210	629	107	224	340	171	101	798	327	178	262	86
Future Volume (vph)	210	629	107	224	340	171	5	86	327	178	292	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.6	3.5	 	3.6	3.6	3.3	3.6	3.5	 	3.6	3.5
Storage Length (m)	40.0		0.0	35.0		0:0	70.0		65.0	40.0		0.0
Stolage Lailes	7.5		-	7.5			7.5		-	7.5		
l apel Hil Eactor	5 6	0 05	8	5 5	0 05	0.05	5 5	0.05	100	5.0	0.05	1 00
Dad Rika Factor	8.8	6.6	200	00.0	0.00	8.9	8.6	6.9	00.0	90.0	0.00	00.0
Fr.	3		0.850	66.0	0.950		8.		0.850	00.		0.850
Fit Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1728	3539	1581	1662	3285	0	1662	3438	1551	1631	3374	1581
FIt Permitted	0.294			0.195			0.379			0.176		
Satd. Flow (perm)	533	3539	1535	339	3285	0	662	3438	1522	302	3374	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145		102				301			145
Link Speed (k/h)		20			20			20			20	
Link Distance (m)		147.9			134.8			338.1			256.3	
Travel Time (s)		10.6			9.7			24.3			18.5	
Confl. Peds. (#/hr)	80		16	16		∞	က		9	9		3
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 (%)	1%	2%	1%	2%	2%	%/	2%	2%	3%	%/	%2	1%
Adj. Flow (vph)	210	629	107	224	340	171	101	798	327	178	292	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	210	629	107	224	211	0	101	798	327	178	292	98
Enter Blocked Intersection	2	2	2	2	2	2	2	2	2	2	2	ž
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.3			 			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		8.			4.8			4.8			4.8	
I wo way Left I urn Lane	5	5	5	70	5	5	5	00	5	70	00	-
Turning Speed (k/h)	5 K	3	5 4	<u> </u>	3	8. 4	<u> </u>	99.		25	00.1	2.7
Number of Detectors	3 -	0	2 ~	3 -	0	2	3 -	0	5 ~	54	0	5 -
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
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)	2.0	9.0	2.0	2.0	9.0		2.0	9.0	2.0	2.0	9.0	2.0
Detector 1 Type	Č÷ Č	Ċ÷ E	Ċ÷ E	Ċ+EX	CH-EX		Č÷ Č	Č.	Č.	Ċ÷ E	Ci+Ex	CI+EX
Detector 1 Channel	d	6	0	0	0		d	0	0	0	0	d
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	9 0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Detay (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)		4.0			4: 0			4. 0			4. 0	
Defector 2 Size(III)		2 5			5 5			2.5			2.5	
		X + L >			<u> </u>			× ++.			2	

Paradigm Transportation Solutions Limited Page 1

Lanes, Volumes, Timings 1: Ontario St S/Ontario St N & Main St E

200624 Main St E Future Total 2031 AM Peak Hour

			•	٠			-	-	-		٠	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0:0			0.0			0.0	
Turn Type	pm+pt	Α	Perm	pm+pt	≨		pm+pt	≨	Perm	pm+pt	Ϋ́	Perm
Protected Phases	က	∞		7	4		2	2		_	9	
Permitted Phases	∞		∞	4			2		2	9		9
Detector Phase	က	∞	∞	7	4		2	2	2	_	9	9
Switch Phase												
Minimum Initial (s)	2.0	15.0	15.0	7.0	15.0		2.0	15.0	15.0	2.0	15.0	15.0
Minimum Split (s)	9.5	32.0	32.0	11.0	32.0		9.2	32.0	32.0	9.2	32.0	32.0
Total Split (s)	11.7	32.0	32.0	12.0	32.3		10.8	32.4	32.4	13.6	35.2	35.2
Total Split (%)	13.0%	35.6%	35.6%	13.3%	35.9%		12.0%	36.0%	36.0%	15.1%	39.1%	39.1%
Maximum Green (s)	7.7	25.0	25.0	8.0	25.3		8.9	25.4	25.4	9.6	28.2	28.2
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	3.0	1.0	3.0		1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	0.0	-3.0	-3.0	0.0	-3.0		0.0	-3.0	-3.0	0.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehide Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			18.0	18.0		18.0	18.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	30.9	23.2	23.2	31.5	23.5		40.1	33.4	33.4	46.0	37.9	37.9
Actuated g/C Ratio	0.34	0.26	0.26	0.35	0.26		0.45	0.37	0.37	0.51	0.42	0.42
v/c Ratio	0.74	0.69	0.21	0.95	0.55		0.27	0.63	0.43	0.61	0.45	0.13
Control Delay	36.2	84.0	2.9	70.7	24.5		14.5	27.0	5.9	22.4	21.1	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	34.0	2.9	70.7	24.5		14.5	27.0	5.9	22.4	21.1	1.7
SOT	٥	O	V	ш	O		В	O	V	O	O	A
Approach Delay		31.0			38.6			20.3			19.2	
Approach LOS		O			Ω			O			m	
Intersection Summary												
Area Type:	Other											
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 33.3 (37%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	ced to phas	e 2:NBT	and 6:S	BTL, Star	t of Greer	_						
Natural Cycle: 85												
Control Type: Actuated-Coordinated	ordinated											
Maximum v/c Ratio: 0.95												
Intersection Signal Delay: 26.3	6.3			≟	Intersection LOS: C	LOS: C						
Intersection Capacity Utilization 76.5%	ation 76.5%			2	ICU Level of Service D	f Service						
Annual Danied Amin's AE												

Splits and Phases: 1: Ontario St S/Ontario St N & Main St E



Paradigm Transportation Solutions Limited

200624 Future Total 2031 AM Peak Hour Queues 1: Ontario St S/Ontario St N & Main St E

	•	†	<i>></i>	-	ļ	•	←	4	۶	→	*	
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	210	629	107	224	511	101	798	327	178	595	86	
v/c Ratio	0.74	69.0	0.21	0.95	0.55	0.27	0.63	0.43	0.61	0.42	0.13	
Control Delay	36.2	34.0	2.9	7.07	24.5	14.5	27.0	5.9	22.4	21.1	1.7	
Queue Delay	0.0	0:0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	36.2	34.0	2.9	7.07	24.5	14.5	27.0	5.9	22.4	21.1	1.7	
Queue Length 50th (m)	25.9	54.3	0.0	28.1	33.3	8.9	62.5	3.0	16.6	41.0	0.0	
Queue Length 95th (m)	#1.7	8.79	6.3	#61.6	45.7	19.5	89.5	23.2	#33.2	61.1	4.3	
Internal Link Dist (m)		123.9			110.8		314.1			232.3		
Turn Bay Length (m)	40.0			35.0		0.07		65.0	40.0			
Base Capacity (vph)	285	1101	277	236	1102	378	1275	753	302	1419	739	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.74	0.57	0.19	0.95	0.46	0.27	0.63	0.43	0.58	0.42	0.13	

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

HCM 2010 Signalized Intersection Summary 1: Ontario St S/Ontario St N & Main St E

200624 Future Total 2031 AM Peak Hour

	1	†	<u> </u>	-	ļ	4	•	—	4	۶	→	*
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	F	‡	¥C.	r	₩		×	‡	¥	<u>, </u>	‡	¥
Traffic Volume (veh/h)	210	629	107	224	340	171	101	798	327	178	595	86
Future Volume (veh/h)	210	629	107	224	340	171	101	798	327	178	292	88
Number	က	∞ (9	7	4	14	2	2	12	- (9	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99	9	1.00	0.99	,	0.98	1.00	9	0.5	0.5	9	0.0
Parking Bus, Adj	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 Sat Flow, Verynin	240	620	8	224	240	121	1010	1010	327	178	6//	000
Adj No of Lanes	5 -	200	- c	- 4	3	- -	2	000	170	5 -	8	~
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100.	1.00
Percent Heavy Veh, %	~	2	-	2	2	7	2	2	က	7	7	_
Cap, veh/h	321	936	423	289	601	296	377	1312	296	304	1397	662
Arrive On Green	0.09	0.26	0.00	0.09	0.27	0.23	0.05	0.38	0.38	60.0	0.41	0.00
Sat Flow, veh/h	1792	3539	1599	1723	2246	1106	1723	3438	1561	1691	3374	1599
Grp Volume(v), veh/h	210	629	0	224	262	249	101	798	327	178	269	0
Grp Sat Flow(s),veh/h/ln	1792	1770	1599	1723	1741	1610	1723	1719	1561	1691	1687	1599
Q Serve(g_s), s	7.7	14.3	0.0	8.0	11.7	12.2	3.3	16.8	14.8	5.9	11.3	0.0
Cycle Q Clear(g_c), s	7.7	14.3	0.0	8.0	11.7	12.2	3.3	16.8	14.8	5.9	11.3	0.0
Prop In Lane	1.00		1.00	1.00		69.0	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	321	936	423	289	466	431	377	1312	296	304	1397	662
V/C Ratio(X)	0.65	0.67	0.00	0.78	0.56	0.58	0.27	0.61	0.55	0.59	0.43	0.00
Avail Cap(c_a), veh/h	321	1101	497	289	247	206	413	1312	296	337	1397	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.98	0.98	0.98	1.00	1.00	1.00	1.00	0.0	0.00
Uniform Delay (d), s/veh	25.5	29.6	0.0	27.2	28.4	29.5	17.5	22.4	21.8	18.2	18.8	0.0
Incr Delay (d2), s/veh	9	0.8	0.0	11.2	0.4	0.4	0.1	2.1	3.6	-	0:1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0:0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	7.1	0.0	5.6	2.7	5.5	9.	8.4	7.0	5.8	5.4	0.0
LnGrp Delay(d),s/veh	29.3	30.4	0.0	38.5	28.8	29.9	17.6	24.5	25.4	19.3	19.7	0.0
LnGrp LOS	ပ	ပ			ပ	ပ	m	O	ပ	m	m	
Approach Vol, veh/h		839			735			1226			773	
Approach Delay, s/veh		30.1			32.1			24.2			19.6	
Approach LOS		ပ			ပ			O			œ	
Timer	-	2	က	4	2	9	7	8				
Assigned Phs	_	2	က	4	2	9	7	∞				
Phs Duration (G+Y+Rc), s	11.8	38.4	11.7	28.1	8.9	41.3	12.0	27.8				
Change Period (Y+Rc), s	4.0	7.0	4.0	7.0	4.0	7.0	4.0	7.0				
Max Green Setting (Gmax), s	9.6	25.4	7.7	25.3	8.9	28.2	8.0	25.0				
Max Q Clear Time (g_c+I1), s	7.9	18.8	9.7	14.2	5.3	13.3	10.0	16.3				
Green Ext Time (p_c), s	0.1	3.1	0.0	2.0	0.0	2.9	0.0	2.4				
Intersection Summary												
HCM 2010 Ctrl Delay			26.2									
HCM 2010 LOS			O									

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Paradigm Transportation Solutions Limited

Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 2: Mall Entrance & Main St E

4	NBR	R.	. 18	18	3.5	000			1.00	0.850		1597	1507	Yes Yes	18				1.00	%0	18	28	2	Right					1.01 15	<u>5</u> ←	Right	2.0	0.0	0.0	2.0	CI+Ex	()	0.0	0:0	0:5					Perm
•	NBL NBL	<u></u>	23		33		-	7.5	_			1711				20	_		1:00		23	23		_				,	5. 42. K	3 -	Left				2.0	Ċ÷ Ex		0.0							Prot
ţ	WBT	*	713	_	3.6				0.95			3343	33/13			20	273.6		_		713	713			3.3	0.0	4.8		J.00	2		ľ				Ċ Ę		0.0			0.6	CI+EX			NA
-	WBL	-	32	5		7		7.5	_			1745							_		32		2	_					2 와 K		Left	2.0	0.0	0.0	2.0	Ċ÷ Ě	d	0:0	0.0	5				,	Perm
/	EBR		4	41	3.6	0.0	0		0.95			0		Yes	3						4	0	ĺ	~					9.1	2															
†	EBT	₩.	1252	1252	3.6	2			0.95	0.995		3491	2401	5	9	20	134.8	9.7	1.00	3%	1252	1293	2	Left	3.3	0.0	4.8		9.1	2	Thru	10.0	0.0	0.0	9.0	Ċ÷ Ci-		0.0	0.0	9.0	0.6	CI+Ex	•	0:0	Z Z
	Lane Group	Lane Configurations	Traffic Volume (vph)	Future Volume (vph)	luear Flow (vprlpr)	Storage Length (m)	Storage Lanes	Taper Length (m)	Lane Util. Factor	T'L	Fit Protected	Satd. Flow (prot)	Satd Flow (norm)	Right Turn on Red	Satd. Flow (RTOR)	Link Speed (k/h)	Link Distance (m)	Travel Time (s)	Peak Hour Factor	Heavy Vehicles (%)	Adj. Flow (vph)	l ane Group Flow (vph)	Enter Blocked Intersection	Lane Alignment	Median Width(m)	Link Offset(m)	Crosswalk Width(m)	Two way Left Turn Lane	Headway Factor	Number of Detectors	Detector Template	Leading Detector (m)	Trailing Detector (m)	Detector 1 Position(m)	Detector 1 Size(m)	Detector 1 Type	Detector 1 Channel	Detector 1 Extend (s)	Defector 1 Delay (s)	Detector 2 Position(m)	Detector 2 Size(m)	Detector 2 Type	Detector 2 Channel	Detector 2 Extend (s)	Turn Type

Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 2: Mall Entrance & Main St E

200624 Future Total 2031 AM Peak Hour

200624 Future Total 2031 AM Peak Hour

91.00							
dnois a	EBT	EBR	WBL	WBT	NBL	NBR	
Protected Phases	2			9	∞		
Permitted Phases			9			80	
Detector Phase	2		9	9	∞	œ	
Switch Phase							
Minimum Initial (s)	30.0		30.0	30.0	10.0	10.0	
Minimum Split (s)	37.0		37.0	37.0	35.0	35.0	
otal Split (s)	92.0		22.0	22.0	35.0	35.0	
otal Split (%)	61.1%		61.1%	61.1%	38.9%	38.9%	
Maximum Green (s)	48.0		48.0	48.0	28.0	28.0	
rellow Time (s)	4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	3.0		3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	-3.0		-3.0	-3.0	-3.0	-3.0	
otal Lost Time (s)	4.0		4.0	4.0	4.0	4.0	
Lead/Lag							
_ead-Lag Optimize?							
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Recall Mode	Max		None	None	None	None	
Walk Time (s)	15.0				20.0	20.0	
Flash Dont Walk (s)	7.0				7.0	7.0	
Pedestrian Calls (#/hr)	0				0	0	
Act Effet Green (s)	62.0		62.0	62.0	13.1	13.1	
Actuated g/C Ratio	0.84		0.84	0.84	0.18	0.18	
v/c Ratio	0.44		0.11	0.26	0.08	90.0	
Control Delay	3.8		4.2	2.9	26.6	12.5	
Queue Delay	0.3		0.0	0.0	0.0	0:0	
Fotal Delay	4.2		4.2	2.9	26.6	12.5	
SO ⁻	∢		∢	⋖	O	Ф	
Approach Delay	4.2			3.0	20.4		
Approach LOS	⋖			⋖	O		
ntersection Summary							
4rea Type:	Other						
Cycle Length: 90							
Actuated Cycle Length: 74.2	2						
Natural Cycle: 75							
Control Type: Semi Act-Uncoord	coord						
Maximum v/c Ratio: 0.44							
ntersection Signal Delay: 4.1	<u></u>			드	Intersection LOS: A	LOS: A	
ntersection Capacity Utilization 50.9%	ation 50.9%			⊇	U Level o	ICU Level of Service A	
Analysis Period (min) 15							

Splits and Phases: 2: Mall Entrance & Main St E

555 ↑ 08

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Synchro 10 Report Page 5

Queues 2: Mall Entrance & Main St E

200624 Future Total 2031 AM Peak Hour		~	18	9	2	0	2	0	_			2	0	0	0	3	
	`	NBR		90:0	12.5	0.0	12.5	0.0	5.1			682				0.03	
	•	BE	23	0.08	26.6	0.0	26.6	3.5	8.7	120.7		719	0	0	0	0.03	
	ţ	WBT	713	0.26	2.9	0.0	2.9	15.8	22.2	249.6		2791	0	0	0	0.26	
Ш	>	WBL	32	0.11	4.2	0.0	4.2	1.2	3.9		70.0	295	0	0	0	0.11	
Main St	†	EBT	1293	0.44	3.8	0.3	4.2	35.7	48.2	110.8		2916	870	0	0	0.63	
Queues 2: Mall Entrance & Main St E		Lane Group	Lane Group Flow (vph)	v/c Ratio	Control Delay	Queue Delay	Total Delay	Queue Length 50th (m)	Queue Length 95th (m)	Internal Link Dist (m)	Turn Bay Length (m)	Base Capacity (vph)	Starvation Cap Reductn	Spillback Cap Reductn	Storage Cap Reductn	Reduced v/c Ratio	Intersection Summary

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Paradigm Transportation Solutions Limited

HCM 2010 Signalized Intersection Summary 2: Mall Entrance & Main St E

200624 Future Total 2031 AM Peak Hour

						-			
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	₩		*	ŧ	r	¥.			
Traffic Volume (veh/h)	1252	41	32	713	23	.8			
Future Volume (veh/h)	1252	41	32	713	23	18			
Number	2	12	_	9	က	18			
Initial Q (Qb), veh	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00			
Parking Bus, Adj	1:00	1.00	1:00	1:00	1:00	1.00			
Adj Sat Flow, veh/h/ln	1846	1900	1900	1759	1863	1900			
Adj Flow Rate, veh/h	1252	41	32	713	23	9			
Adj No. of Lanes	2	0	_	2	_	_			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	က	0	0	∞	7	0			
Cap, veh/h	2625	98	375	2531	220	200			
Arrive On Green	0.76	0.71	92.0	92.0	0.12	0.12			
Sat Flow, veh/h	3559	113	433	3431	1774	1615			
Grp Volume(v), veh/h	633	099	32	713	23	18			
Grp Sat Flow(s),veh/h/ln	1754	1826	433	1671	1774	1615			
2 Serve(g_s), s	9.2	9.3	2.0	4.4	8.0	0.7			
Cycle Q Clear(g_c), s	9.2	9.3	11.4	4.4	8.0	0.7			
Prop In Lane		90.0	1.00		1.00	1.00			
-ane Grp Cap(c), veh/h	1328	1383	375	2531	220	200			
//C Ratio(X)	0.48	0.48	60.0	0.28	0.10	60.0			
Avail Cap(c_a), veh/h	1328	1383	375	2531	816	743			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00			
Jpstream Filter(I)	1:00	1.00	1.00	1.00	1.00	1.00			
Jniform Delay (d), s/veh	3.1	3.2	5.3	2.5	26.2	26.1			
ncr Delay (d2), s/veh	1.2	1.2	0.1	0.1	0.2	0.2			
nitial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.8	5.1	0.3	2.0	0.4	0.3			
nGrp Delay(d),s/veh	4.3	4.3	5.4	5.6	26.4	26.3			
nGrp LOS	⋖	∢	⋖	⋖	ပ	O			
Approach Vol, veh/h	1293			745	41				
Approach Delay, s/veh	4.3			2.7	26.4				
Approach LOS	∢			∢	O				
Timer	_	2	က	4	2	9	7	∞	
Assigned Phs		2				9		œ	
Phs Duration (G+Y+Rc), s		55.0				55.0		12.4	
Change Period (Y+Rc), s		7.0				7.0		7.0	
Max Green Setting (Gmax), s		48.0				48.0		28.0	
Max Q Clear Time (g_c+I1), s	"	11.3				13.4		2.8	
Green Ext Time (p_c), s		14.3				7.5		0.1	
Intersection Summary									
HCM 2010 Ctrl Delav			4.2						
			1						

Paradigm Transportation Solutions Limited

200624 Future Total 2031 AM Peak Hour Lanes, Volumes, Timings 3: Busway/Wilson Dr & Main St E

		t	•	٠			_	-	_	L	+	r
ane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
ane Configurations	*	₩		F	₩		F	*	R.	*	2,	
Fraffic Volume (vph)	61	1086	43	46	458	71	140	9	171	165	4	93
uture Volume (vph)	9	1086	43	46	428	7	140	9	171	165	4	93
deal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
-ane Width (m)		3.6	3.6	3.6	3.6	9.0	3.6	3.6	3.6	ب س ر	3.6	3.5
Storage Lengtn (m)	20.0		0.0	40.0		0.0	0.0		35.0	22.0		0.0
Storage Lanes	- L		>	- 1		>	- 1		-	- 1		0
l aper Length (m)	(.5	0	0	(.5 20	0		ر دن 5	9	9	Ç. 2		3
ane Util. Factor	9.1	0.95	0.95	3.0	0.95	0.95	1.00	1.00	1:00	1.00	1.00	1.00
ed Bike Factor	1.00	7000			00.F				0	0.99	0	
±-		0.994			0.980				0.850		0.856	
-It Protected	0.950		•	0.950		•	0.950			0.950		·
satd. Flow (prot)	1646	3518	0	1770	33/8	0	1687	1863	1209	1728	1580	0
Fit Permitted	0.398	25.40	c	0.252	0200	c	0.694	1060	4500	1255	4500	
oatu, riow (perin)	000	2	200	402	200))	707	200	200	200	200	200
Kignt Turn on Red		•	L GS		6	L GS			8 5		d	res
satd. Flow (RTOR)		တ			88				113		93	
ink Speed (k/h)		20			20			20			20	
ink Distance (m)		260.1			360.6			65.1			174.4	
ravel Time (s)		18.7			26.0			4.7			12.6	
Confl. Peds. (#/hr)	വ					2				∞		
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	2%	2%	2%	2%	%0	%/	5%	%/	1%	2%	3%
Adj. Flow (vph)	61	1086	43	46	458	77	140	9	171	165	4	93
Shared Lane Traffic (%)												
ane Group Flow (vph)	61	1129	0	46	529	0	140	9	171	165	97	0
Enter Blocked Intersection	2	2	2	2	2	2	2	2	2	2	2	ž
ane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
.ink Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
wo way Left Turn Lane	3	9	9	9	9	9	9	9	9	3		3
Headway Factor	± 8	0.1	9.1	9.5	30.1	9:	9.1	00.I	00.1	1.04	00.1	.0.1
urning Speed (k/h)	52		15	52		15	52		15	52	•	15
Number of Detectors	_	7		-	7		-	7	-	-	7	
Detector Template	Left	Thr		Left	Thro		Left	Thr	Right	Left	Thru	
eading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
railing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	9.0		2.0	9.0		2.0	9.0	2.0	2.0	9.0	
Detector 1 Type Detector 1 Channel	Ċ÷ E	C+E		÷	Ċ Ĕ		Ċ÷ E	C Ę	S E	÷ E	÷ E	
Detector 1 Extend (s)	0.0	0:0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0:0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0:0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		9.0			9.0			9.0			9.0	
Detector 2 Type		2			5			2			ī	
		×			×L+I			×L+.			X++.	

Synchro 10 Report Page 9 Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 3: Busway/Wilson Dr & Main St E

200624 Future Total 2031 AM Peak Hour

Particle	FBI FBT FBR WBL WBT WBR NBL NBT SBL SBT				٠				-	-				
Difference Dif	Definition Def	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
pmr-pt NA Perm NA Perm P	pm-pt NA Perm NA Perm Pe	Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
5 2 6 6 8 8 4 5 2 6 6 6 8 8 4 5 2 6 6 6 8 8 4 5 2 6 6 6 8 8 8 4 5 2 2 6 6 6 8 8 4 100 46.0 46.0 46.0 46.0 46.0 24.0 24.0 24.0 26.0 20.0 20.0 29.0 </td <td>5 2 6 6 8 8 4 5 2 6 6 6 8 8 4 5 2 6 6 6 8 8 4 5 2 6 6 6 8 8 8 4 5 2 2 6 6 6 8 8 4 100 40 40 40 6 6 8 8 4 100 40 40 40 40 40 240 240 20</td> <td>Turn Type</td> <td>bm+pt</td> <td>NA</td> <td></td> <td>Perm</td> <td>¥</td> <td></td> <td>Perm</td> <td>Ā</td> <td>Perm</td> <td>Perm</td> <td>NA</td> <td></td>	5 2 6 6 8 8 4 5 2 6 6 6 8 8 4 5 2 6 6 6 8 8 4 5 2 6 6 6 8 8 8 4 5 2 2 6 6 6 8 8 4 100 40 40 40 6 6 8 8 4 100 40 40 40 40 40 240 240 20	Turn Type	bm+pt	NA		Perm	¥		Perm	Ā	Perm	Perm	NA	
2 6 6 6 8 8 8 4 4 5 2 6 6 6 6 8 8 8 4 4 5 3 2 6 6 6 6 8 8 8 4 4 1 4 0 40 40 40 5 5 5 5 5 100 1 10 460 460 460 240 240 240 260 1 10 460 460 460 290 290 290 290 1 122% 678% 556% 322% 322% 322% 322% 5 0 50 40 40 40 20 290 290 290 290 2 0 20 20 20 20 20 20 1 0 20 2.0 2.0 2.0 2.0 2.0 2.0 2.0 1 0 20 2.0 2.0 2.0 2.0 2.0 2.0 1 0 40 40 40 40 40 40 40 40 40 40 40 2 0 2.0 2.0 2.0 2.0 2.0 2.0 1 0 20 2.0 2.0 2.0 2.0 1 0 40 40 40 40 40 40 40 40 40 40 2 0 20 2.0 2.0 2.0 2.0 1 0 40 40 40 40 40 40 40 40 40 40 2 0 20 2.0 2.0 2.0 2.0 1 0 40 40 40 40 40 40 40 40 40 40 2 0 20 20 20 20 20 2 0 20 20 2 0 20 20	2 6 6 6 8 8 8 4 4 5 2 6 6 6 6 8 8 8 8 4 6 4 4 6 6 6 6 8 8 8 8 4 10 400 46.0 46.0 25.0 5.0 5.0 100 110 46.0 46.0 46.0 29.0 29.0 29.0 29.0 122% 67.8% 55.6% 55.6% 32.2% 32.2% 32.2% 32.2% 32.0 12.0 4.0 4.0 44.0 2.0 29.0 29.0 29.0 29.0 10 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 10 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 10 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 10 10 10 10 10 10 10 10 10 10 10 10 10 1	Protected Phases	2	2			9			∞			4	
5 2 6 6 6 8 8 8 4 4 50 40.0 40.0 40.0 5.0 5.0 5.0 100 10.0 46.0 46.0 46.0 24.0 24.0 24.0 26.0 112.26 67.8% 55.6% 52.5% 32.2	5 2 6 6 6 8 8 8 4 4 50 40.0 40.0 40.0 5.0 5.0 5.0 100 10.0 46.0 46.0 46.0 24.0 24.0 24.0 26.0 112.26 67.8% 55.6% 55.6% 32.2% 32.2% 32.8	Permitted Phases	2			9			œ		∞	4		
5.0 40.0 40.0 40.0 5.0 5.0 5.0 10.0 10.0 46.0 46.0 46.0 24.0 24.0 24.0 26.0 112.7% 67.8% 55.6% 55.6% 32.2% 32.2% 32.2% 32.8% 32.2% 32.8% 3	5.0 40.0 40.0 40.0 5.0 5.0 5.0 10.0 10.0 46.0 46.0 46.0 24.0 24.0 24.0 26.0 11.0 61.0 50.0 50.0 29.0 29.0 29.0 29.0 12.2% 67.8% 55.6% 55.6% 32.2% 32.2% 32.2% 32.0% 32.0% 30.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	Detector Phase	2	2		9	9		∞	∞	∞	4	4	
50 40.0 40.0 40.0 50.0 50.0 50.0 50.0 10.0 10.0 46.0 46.0 40.0 50.0 50.0 50.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 2	50 40.0 40.0 40.0 50.0 50.0 50.0 100 11.0 46.0 46.0 46.0 50.0 50.0 50.0 29.0 29.0 29.0 11.0 46.0 46.0 46.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29	Switch Phase												
10.0 46.0 46.0 46.0 24.0 24.0 24.0 28.0 11.2.% 67.8% 55.6% 55.6% 32.2% 3	10.0 46.0 46.0 46.0 220.0 220.0 220.0 220.0 1.20.0 1.0.0 61.0 61.0 61.0 61.0 61.0 61.0	Minimum Initial (s)	2.0	40.0		40.0	40.0		2.0	2.0	2.0	10.0	10.0	
12.2% 67.8% 56.0% 50.0 290 290 290 290 290 290 290 290 290 29	12.2% 67.8% 55.6% 55.6% 32.2% 32.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	Minimum Split (s)	10.0	46.0		46.0	46.0		24.0	24.0	24.0	26.0	26.0	
12.2% 67.8% 55.6% 55.6% 32.2% 32.2% 32.2% 32.2% 32.2% 32.2% 32.2% 32.0% 55.6% 55.6% 55.6% 55.6% 55.6% 55.6% 32.2% 32.0% 32.0% 30.0% 20.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.	12.2% 67.8% 55.6% 52.8% 32.2% 32.2% 32.2% 32.9% 32.0% 6.0 55.0 44.0 44.0 23.0 23.0 23.0 23.0 23.0 23.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	Total Split (s)	11.0	61.0		20.0	20.0		29.0	29.0	29.0	29.0	29.0	
60 55.0 44.0 44.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	60 550 4410 4410 230 230 230 230 230 230 230 240 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	Total Split (%)	12.2%	%8'.19		25.6%	25.6%		32.2%	32.2%	32.2%	32.2%	32.2%	
3.0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,	3.0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,	Maximum Green (s)	0.9	22.0		44.0	44.0		23.0	23.0	23.0	23.0	23.0	
10 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	10 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	Yellow Time (s)	3.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
10 -2.0 -2.0 -2.0 -2.0 -2.0 -2.0 -2.0 -2.	10 -20 -20 -20 -20 -20 -20 -20 -20 -20 -2	All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Lead	4,0	Lost Time Adjust (s)	-1.0	-2.0		-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0	
Lead Lag At 0	Lead	Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
None Max	3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	Lead/Lag	Lead			Lag	Lag							
3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	30 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,	Lead-Lag Optimize?												
None Max None N	None Max None None None None None None None None	Vehide Extension (s)	3.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
30.0 30.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	30.0 30.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	Recall Mode	None	Max		None	None		None	None	None	None	None	
100 100 110 110 110 110 130 1 572 572 485 485 68 0 0 0 0 572 572 485 485 181 181 181 181 181 181 181 181 181 1	100 100 110 110 110 110 130 1 57.2 57.2 48.5 48.5 18.1 18.1 18.1 18.1 18.1 18.1 18.1 1	Walk Time (s)		30.0		30.0	30.0		7.0	7.0	7.0	7.0	7.0	
572 57.2	572 57.2 6.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Flash Dont Walk (s)		10.0		10.0	10.0		11.0	11.0	11.0	13.0	13.0	
57.2 57.2 48.5 48.5 18.1 18.1 18.1 18.1 18.1 18.1 18.1 1	57.2 57.2 48.5 48.5 18.1 18.1 18.1 18.1 18.1 18.1 18.1 1	Pedestrian Calls (#/hr)		0		0	0		0	0	0	0	0	
0.69 0.69 0.58 0.58 0.22 0.22 0.22 0.22 0.21 0.47 0.17 0.27 0.52 0.01 0.41 0.56 0.58 0.58 0.50 0.02 0.02 0.02 0.02 0.02 0.02 0.03 0.03	0.69 0.69 0.58 0.58 0.22 0.22 0.22 0.22 0.21 0.41 0.56 0.58 0.58 0.52 0.01 0.41 0.56 0.58 0.50 0.00 0.41 0.56 0.58 0.50 0.00 0.00 0.00 0.00 0.00 0.00	Act Effct Green (s)	57.2	57.2		48.5	48.5		18.1	18.1	18.1	18.1	18.1	
0.11 0.47 0.17 0.27 0.52 0.01 0.41 0.56 0 0.00 0.00 0.00 0.00 0.00 0.00 0.0 5.8 7.3 12.8 9.9 35.9 24.3 13.5 36.5 6.8 7.3 12.8 9.9 35.9 24.3 13.5 36.5 7.3 12.8 9.9 35.9 24.3 13.5 36.5 A A B A D C B D Cher Other Other 1.12.3 Intersection LOS: B	0.11 0.47 0.17 0.27 0.52 0.01 0.41 0.56 C 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	Actuated g/C Ratio	69.0	0.69		0.58	0.58		0.22	0.22	0.22	0.22	0.22	
5.8 7.3 12.8 9.9 35.9 24.3 13.5 36.5 5.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	5.8 7.3 12.8 9.9 35.9 24.3 13.5 36.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	v/c Ratio	0.11	0.47		0.17	0.27		0.52	0.01	0.41	0.56	0.23	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Control Delay	5.8	7.3		12.8	9.9		35.9	24.3	13.5	36.5	7.9	
5.8 7.3 12.8 9.9 35.9 24.3 13.5 36.5 A A A B A D C B D C B D C C B D C C B D C C B D C C B D C C C C C C C C C C C C C C C C C C C	5.8 7.3 12.8 9.9 35.9 24.3 13.5 36.5 A A B A D C B D C B D 23.6 C C C C C C C C C C C C C C C C C C C	Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
A B A D C B D 7.3 10.1 23.6 A B C Other Other 1.12.3 Intersection LOS: B Ization 73.2% ICU Level of Service D	A B A D C B D 7.3 10.1 23.6 A B A D C B D Cother Other 1.2.3 Intersection LOS: B ICU Level of Service D	Total Delay	5.8	7.3		12.8	6.6		35.9	24.3	13.5	36.5	7.9	
7.3 10.1 23.6 A B C Other 1.12.3 Intersection LOS: B Ization 73.2% ICU Level of Service D	7.3 10.1 23.6 A B C Other Ancoord Intersection LOS: B Ication 73.2% ICU Level of Service D	SOT	∢	⋖		മ	⋖		_	ပ	മ	_	⋖	
A B C C Other 3.3 Intersection LOS: B Ization 73.2% ICU Level of Service D	A B C C Other 3.3 Ancoord Intersection LOS: B Ization 73.2% ICU Level of Service D	Approach Delay		7.3			10.1			23.6			25.9	
Other 3.3 Incoord 112.3 Iration 73.2%	Other 3.3 hocoord 12.3	Approach LOS		∢			В			O			ပ	
Other 3.3 Incoord 11.2.3 Italion 73.2%	Other 3.3 Incoord 1.12.3 Ization 73.2%	Intersection Summary												
3.3 Incoord : 12.3 Taation 73.2%	3.3 Incoord 1.12.3 Ization 73.2%	Area Type:	Other											
3.3 Incoord :12.3 ization 73.2%	3.3 Incoord :12.3 ization 73.2%	Cycle Length: 90												
Incoord : 12.3 ization 73.2%	ncoord : 12.3 ization 73.2%	Actuated Cycle Length: 8:	3.3											
Incoord : 12.3 ization 73.2%	Incoord : 12.3 ization 73.2%	Natural Cycle: 85												
: 12.3 ization 73.2%	: 12.3 ization 73.2%	Control Type: Semi Act-Ul	ncoord											
		Maximum v/c Ratio: 0.56												
		Intersection Signal Delay:	12.3			İ	ersection	LOS: B						
Analysis Period (min) 15	Analysis Period (min) 15	Intersection Capacity Utili:	zation 73.2%			⊇	U Level o	f Service	٥					
		Analysis Period (min) 15												

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Paradigm Transportation Solutions Limited

200624 Future Total 2031 AM Peak Hour Queues 3: Busway/Wilson Dr & Main St E

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	4	†	>	ţ	•	←	4	٠	→	
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	
Lane Group Flow (vph)	61	1129	46	529	140	9	171	165	26	
v/c Ratio	0.11	0.47	0.17	0.27	0.52	0.01	0.41	0.56	0.23	
Control Delay	2.8	7.3	12.8	6.6	35.9	24.3	13.5	36.5	7.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	2.8	7.3	12.8	6.6	35.9	24.3	13.5	36.5	7.9	
Queue Length 50th (m)	2.9	38.7	3.5	21.4	20.7	8.0	7.9	24.7	0.5	
Queue Length 95th (m)	8.3	67.1	11.4	36.8	38.5	3.7	24.3	44.0	11.9	
Internal Link Dist (m)		236.1		336.6		41.1			150.4	
Turn Bay Length (m)	20.0		40.0				35.0	22.0		
Base Capacity (vph)	225	2417	273	1979	370	260	533	407	540	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.11	0.47	0.17	0.27	0.38	0.01	0.32	0.41	0.18	
Intersection Summary										

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Paradigm Transportation Solutions Limited

HCM 2010 Signalized Intersection Summary 3: Busway/Wilson Dr & Main St E

200624 Future Total 2031 AM Peak Hour

Movement EBI EBT EBR WB WB WB WB NB NB NB NB		4	†	1	-	Ļ	1	•	—	•	۶	→	*
10	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1,00	Lane Configurations	F	₩		r	₩		r	*	¥.	F	£,	
100 61 1086 43 46 458 71 140 6 171 165 4 100 100 100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 111 121 122 74 63 64 133 62 63 104 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 100 1100 100 100 100 100 100 100 1100 100 100 100 100 100 100	Traffic Volume (veh/h)	61	1086	43	46	458	71	140	. 9	171	165	4	93
100	Future Volume (veh/h)	61	1086	43	46	458	71	140	9	171	165	4	93
100 100 100 100 100 0 0 0 0 0 0 0 0 0 0	Number	2	2	12	-	9	16	က	00	18	7	4	14
100 100 100 100 0.99 100 100 100 100 100 100 100 100 100 1	Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
1,00	Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		1.00	1.00		0.99
1722 1863 1900 1863 1821 1900 1776 1863 1776 1861 1845 1	Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
6f 1086 43 46 458 771 140 6 171 165 4 4 11 10 10 100 1100 1100 1100 1100 1	Adj Sat Flow, veh/h/ln	1792	1863	1900	1863	1821	1900	1776	1863	1776	1881	1845	1900
1, % 6 0 1 1 2 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Adj Flow Rate, veh/h	61	1086	43	46	458	71	140	9	171	165	4	83
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Adj No. of Lanes	-	2	0	-	2	0	-	-	-	-	-	0
6 592 236 4 362 173 5 00 7 2 7 1 2 1 2 0.06 0.06 0.06 0.06 0.06 0.06 0.08 0.08	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
982 284 94 382 1731 287 286 416 337 384 14 006 0.68 0.68 0.68 0.22 0.22 0.22 0.22 0.22 1707 3470 3470 137 486 3004 463 1222 1883 1509 1214 64 1707 1770 1838 486 1730 1737 1222 1883 1509 1214 0 1717 1771 1838 486 1730 1737 1222 1883 1509 1214 0 1717 1771 12.1 12.2 4.0 6.3 6.4 90 0.2 83 10.3 0.0 1717 1717 12.1 12.2 7.4 6.3 6.4 133 0.2 83 10.3 0.0 1718 0.07 0.07 0.07 0.07 0.07 0.07 0.00 1700 0.46 0.13 0.2 0.2 0.2 1.0 1.00 1700 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1700 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Percent Heavy Veh, %	9	2	5	2	2	0	7	5	7	~	7	က
1006 0.068 0.068 0.068 0.58 0.58 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.2	Cap, veh/h	295	2364	94	352	1731	267	596	416	337	324	4	334
1/07 1770 436 3004 445 1222 1863 1599 1214 64	Arrive On Green	90:0	0.68	99.0	0.58	0.58	0.58	0.22	0.22	0.22	0.22	0.22	0.22
1707 1770 1838 266 140 6 171 165 0 1707 1770 1838 266 140 6 171 165 0 1.1 12.1 12.2 4.0 6.3 6.4 9.0 0.2 8.3 10.5 0.0 1.1 12.1 12.2 4.0 6.3 6.4 9.0 0.2 8.3 10.5 0.0 1.0 1.0 0.07 1.00 0.2 0.2 1.00 1.00 1.00 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	Sat Flow, ven/h	1/0/	34/0	13/	496	3004	463	7.77.1	1863	1509	1214	\$	1498
1707 1770 1888 496 1730 1737 1722 1883 1599 1214 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Grp Volume(v), veh/h	61	224	575	46	263	266	140	9	171	165	0	26
1.1 12.1 12.2 7.4 6.3 6.4 9.0 0.2 8.3 10.3 0.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	Grp Sat Flow(s),veh/h/ln	1707	1770	1838	496	1730	1737	1222	1863	1209	1214	0	1562
1.1 12.1 12.2 7.4 6.3 6.4 133 0.2 8.3 105 0.0 1.00 0.07 1.00 0.00 1.00 1.00 1.00 1.00 0.46 0.46 0.43 0.26 0.27 1.00 1.00 1.00 1.00 0.46 0.46 0.43 0.26 0.27 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Q Serve(g_s), s		12.1	12.2	4.0	6.3	6.4	9.0	0.2	8.3	10.3	0.0	4.3
100 100 100 100 100 100 100 100 100 100	Cycle Q Clear(g_c), s	- -	12.1	12.2	7.4	6.3	6.4	13.3	0.2	.3 .3	10.5	0.0	4.3
592 1206 1252 382 997 1001 296 416 337 384 0 637 1206 1252 382 997 1001 296 416 337 384 0 637 1206 1252 382 997 1001 388 557 451 446 0 100 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Prop In Lane	1.00		0.07	1.00		0.27	1.00		1.00	1.00		96.0
0.10 0.46 0.46 0.13 0.26 0.27 0.47 0.01 0.51 0.47 0.00 0.00 0.10 0.100 1.00 1.00 1.00 1.	Lane Grp Cap(c), veh/h	295	1206	1252	352	266	1001	596	416	337	354	0	348
637 1206 1252 362 997 1001 388 557 451 446 0 100 1.00 1.00 1.00 1.00 1.00 1.00 1.	V/C Ratio(X)	0.10	0.46	0.46	0.13	0.26	0.27	0.47	0.01	0.51	0.47	0.00	0.28
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Avail Cap(c_a), veh/h	637	1206	1252	352	266	1001	388	222	451	446	0	467
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
5.9 6.2 6.2 9.9 8.9 8.9 324 25.3 28.5 29.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Upstream Filter(I)	1.00	1.00	1:00	1:00	1.00	1.00	1:00	1.00	1.00	1.00	0.00	1.00
0.1 1.3 1.2 0.2 0.2 0.2 1.7 0.0 1.7 1.4 0.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Uniform Delay (d), s/veh	5.9	6.2	6.2	6.6	8.9	8.9	32.4	25.3	28.5	29.4	0.0	26.9
No. Incr Delay (d2), s/veh	0.1	 	1.2	0.2	0.2	0.2	1.7	0.0	1.7	4.	0.0	9.0	
No. 05 6.3 6.5 0.6 3.0 3.1 3.2 0.1 3.6 3.6 0.0 6.0 7.4 7.4 10.2 9.1 3.1 3.2 0.1 3.6 3.0 0.0 2.2 A A A B A A C C C C C C C C C C C C C C	Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60 74 74 102 9,1 9,1 34,1 254 302 308 00 37 A A B A A C C C C C C C C C C C C C C C	%ile BackOfQ(50%),veh/ln	0.5	6.3	6.5	9.0	3.0	3.1	3.2	0.1	3.6	3.6	0.0	6.
A A B A A C C C C C C C C C C C C C C C	LnGrp Delay(d),s/veh	0.9	7.4	7.4	10.2	9.1	9.1	34.1	25.4	30.2	30.8	0.0	27.5
1190 575 317 7.4 9.2 31.8 A A A A C C S 61.0 22.7 88 522 22.7 S 65.0 5.0 6.0 6.0 6.0 S 55.0 23.0 6.0 44.0 23.0 II), s 14.2 12.5 3.1 9.4 15.3 13.6 B	LnGrp LOS	A	⋖	⋖	۵	A	A	ပ	ပ	ပ	ပ		ျ
1 2 3 4 5 6 7 8 2 4 5 6 7 8 3 61.0 22.7 8 52.2 22.7 3 6.0 6.0 6.0 6.0 3 5,5 0 23.0 6.0 44.0 23.0 41),s 14.2 12.5 3.1 9.4 15.3 17.0 1.4 0.0 7.1 1.3	Approach Vol, veh/h		1190			275			317			262	
1 2 3 4 5 6 7 2 8 6 1 1 1 2 1 1 2 1 1 2 1 1 1 2 1 1 1 1 1	Approach Delay, s/veh		7.4			9.5			31.8			29.6	
s 610 23.0 6 7 8 6 7 8 8 622 8 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	Approach LOS		∢			∢			O			O	
s 61.0 22.7 8.8 52.2 s 61.0 22.7 8.8 52.2 sx), s 55.0 6.0 6.0 11), s 14.2 12.5 3.1 9.4 17.0 1.4 0.0 7.1	Timer	1	2	3	4	5	9	7	8				
s 61.0 22.7 88 52.2 s 6.0 6.0 6.0 sx),s 55.0 6.0 44.0 11),s 14.2 12.5 3.1 9.4 17.0 1.4 0.0 7.1	Assigned Phs		2		4	2	9		8				
s 6.0 6.0 6.0 6.0 10,0 11,5 55.0 23.0 6.0 44.0 17.0 1.4 0.0 7.1 13.6 B	Phs Duration (G+Y+Rc), s		61.0		22.7	8.8	52.2		22.7				
ax), s 55.0 23.0 6.0 44.0 (1), s 14.2 12.5 3.1 9.4 (17.0 1.4 0.0 7.1 13.6 B	Change Period (Y+Rc), s		0.9		0.9	2.0	0.9		0.9				
11), s 14,2 12,5 3,1 9,4 17.0 1.4 0.0 7.1 13.6 B	Max Green Setting (Gmax), s		55.0		23.0	0.9	44.0		23.0				
17.0 1.4 0.0 13.6 B	Max Q Clear Time (g_c+I1), s		14.2		12.5	3.1	9.4		15.3				
	Green Ext Time (p_c), s		17.0		4.	0.0	7.1		1 .3				
	Intersection Summary												
	HCM 2010 Ctrl Delay			13.6									
	HCM 2010 LOS			മ									

Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 4: Drew Centre/Private Driveway & Main St E Future Total 2031 AM Peak Hour

ph) (m	EBL	EBT	FBR	IQ/V	WBT	2	ON			80.	F	
(vph)			1	WBL		WBK	NBL	NBT	NBR	כנו	SBI	SBR
(vph) 1 pl) 1	r	‡	*	je-	#		F	æ			4	
(vph) 1 1 (m) 1	0	902	117	28	287	0	139	0	36	0	0	0
(m)	0	902	117	82	287	0	139	0	36	0	0	0
(m)	006	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
(E) .	3.3	3.6	3.5	c	3.6	3.6	 	3.6	3.5	3.6	3.6	3.6
otorage Lanes	15.0		40.0	45.0		0.0	0.0		22.0	0.0		0.0
Concer Concerts (me)	- 4		-	- 1		0	7		0	0 4		>
	ر. د		5	υ ς ο	100	5	0.7	5	9	U. 0	5	5
	3	0.80	00:1	9.5	0.85	30.1	0.97	0.5	00.1	00.1	00.L	9.
red bike rador			0.30	3.				0.30				
Tt Drotoctod			0000	0 0 0			0 050	0.00				
rot)	1837	3539	1439	1646	3539	C	3385	1583	C	С	1900	C
	5	8	3	0.258	200	•	0.950	2	>	•	0	
oerm)	1837	3539	1387	446	3539	0	3385	1583	0	0	1900	0
			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182					327				
ink Speed (k/h)		20			20			20			20	
ink Distance (m)		360.6			362.0			256.9			51.9	
ravel Time (s)		26.0			26.1			18.5			3.7	
Confl. Peds. (#/hr)	7		9	10		2			9	9		
Peak Hour Factor 1	8	1.00	1:00	1.00	1:00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
(9)	%0	2%	11%	%9	5%	%0	%0	%0	%0	%0	%0	%0
	0	902	117	28	287	0	139	0	36	0	0	0
Shared Lane Traffic (%)												
ane Group Flow (vph)	0	902	117	28	287	0	139	38	0	0	0	0
Enter Blocked Intersection	운	8	2	2	2	2	8	2	8	8	2	ટ
ane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			9.9			9.9	
.ink Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
wo way Left Turn Lane												
	<u>4</u>	9.0	1:01	4	1:00	1:00	<u>4</u>	1.00	1.01	1:00	1.00	1.00
urning Speed (k/h)	22		15	25		15	25		15	25		15
S	-	2	-	-	2		-	2		-	2	
	Left	Thr	Right	Left	Thru		Left	Thro		Left	Thru	
	5.0	10.0	5.0	2.0	10.0		2.0	10.0		2.0	10.0	
	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	
í í	0.2	0.0	0.7	0.7	0.0		0.7	0.0		0.2	0.0	
Detector 1 Type Detector 1 Channel	Ĕ E	Σ E E	Ě Č	Σ 5	<u>й</u>		Σ 5 C	ž Č		Ž Ž	Σ <u>+</u>	
Detector 1 Extend (s)	0:0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		9.0			9.0			9.0			9.0	
Detector 2 Type		CI+EX			C+EX			C , Ex			CI+EX	

Synchro 10 Report Paradigm Transportation Solutions Limited Page 13

Lanes, Volumes, Timings 4: Drew Centre/Private Driveway & Main St E

200624 Future Total 2031 AM Peak Hour

Particle	Extend (s) Extend (s) Perm Phases 2 thase 2 thase 2 2 thase 3 5 (s) (w) (w) (h) (h) (h) (h) (h) (h	D.0 NA 2 2 2 2 2 44.4% 33.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4		9.5 11.0 12.2% 10.5 11.0 12.2%			₩ E «			<u>В</u>	0.0 4	SBR
reend (s) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Extend (s) Perm Phases 2 2 asse initial (s) 50/16 (s) 6/16 (h) 10/16 (h) 10/	0.0 NA 2 2 2 2 35.0 40.0 44.4% 33.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4		pm+pt 6 1 5.0 9.5 11.0 7.0 3.0	0.0 NA NA 6 6 15.0 35.0	Pe	Eα	0.0 V		4	0.0	
Perm NA Perm Perm NA Perm Perm Perm NA Perm Perm NA Perm Perm NA Perm Perm NA Perm Perm<	Phrases 2 1 hase 2 2 see 2 2 point (s) 40.0 (%) 44.4% (%) 44.4% Green (s) 33.0 e (s) 4.0 Adusts (s) 3.0 Time (s) 4.0	2 2 2 2 15.0 35.0 44.4% 33.0 3.0 -3.0 1.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3		6 6 6 11.0 5.0 9.5 11.0 7.0 7.0 3.0	NA 6 6 15.0 35.0	Pe	Εα	¥		4	4	
hasess 2 2 6 6 8 8 4 ase 2 2 2 2 6 6 8 8 4 ase 2 2 2 1 6 6 8 8 8 4 ase 2 2 2 2 1 6 6 8 8 8 4 be ase 2 2 2 1 6 6 8 8 8 4 ase 2 2 2 2 1 6 6 8 8 8 4 ase 8 2 1 15 0 15 0 15 0 15 0 15 0 15 0 15 0	Phases 2 Phase 2 See 2 Susceptible (s)	2 2 15.0 35.0 44.4% 33.0 4.0 3.0 4.0 4.0 3.0 4.0 3.0 4.0 3.0 4.0 4.0 4.0 3.0 3.0 3.0 3.0 3.0		1 6 6 7.0 11.0 7.0 3.0	6 15.0 35.0		α			4	4	
hases 2 2 6 6 8 8 4 4 ase	Phases 2 see 2 see 7 see (s) 6,000 (2 35.0 44.4% 33.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0 3.0		6.0 9.5 11.0 7.0 3.0	6 35.0		α	œ				
see 2 2 1 6 8 8 4 tall (s) 150 <	base 2 ase 2 ase 6 initial (s) 50.0 5pit (s) 35.0 (s) 40.0 Green (s) 33.0 for et (s) 4.0 in et (s) 3.0 Time (s) 4.0	2 35.0 44.4% 33.0 4.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0 3.0		5.0 9.5 11.0 7.0 3.0	6 15.0 35.0		٥			4		
tial (s) 150 150 150 150 60 60 50 170 (s) 180 (s) 350 350 350 270 270 120 350 350 350 350 350 270 270 120 370 344% 44% 122% 56.7% 30.0% 30.0% 133% 120 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40	sse nitial (s) 150 pplit (s) 35.0 (s) 40.0 (%) 44.4% Green (s) 33.0 ne (s) 3.0 Adjust (s) 2.0 Time (s) 4.0 Time (s) 4.0	15.0 35.0 40.0 40.0 4.0 33.0 33.0 4.0 4.0 1.3 1.0 3.0		5.0 9.5 11.0 7.0 3.0	15.0 35.0		∞	œ		4	4	
itial (s) 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	initial (s) 15.0 pplit (s) 35.0 (%) 44.4% Green (s) 33.0 et (s) 4.0 hr (s) 3.0 Time (s) 4.0 Time (s) 4.0	35.0 40.0 40.0 40.0 33.0 33.0 4.0 4.0 1.3 1.0 3.0 3.0		5.0 9.5 11.0 7.0 3.0	35.0							
iti (s) 350 350 350 350 270 270 120 3) 44,00 44,00 44,40 44,40 1228, 550 270 270 120 40. 40.0 40.0 110 510 270 270 120 40. 40.0 40.0 110 510 270 270 120 41. 44,40 44,40 44,40 40.0 1220 200 200 (s) 330 330 330 370 7.0 440 200 200 50 (s) 30 30 30 30 10 30 30 30 30 30 dist(s) 30 30 30 30 30 30 30 30 mine (s) 40 4.0 4.0 4.0 4.0 4.0 4.0 4.0 mine (s) 40 4.0 4.0 4.0 4.0 4.0 4.0 4.0 mine (s) 40 4.0 4.0 4.0 4.0 4.0 4.0 4.0 mine (s) 20 30 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 mine (s) 20 30 30 30 30 30 30 mine (s) 20 30 mine (s) 20 30 30 mine (s) 20	35.0 (%) 44.4% (%) (%) 44.4% (%) (%) (%) (%) (%) (%) (%) (%) (%) (%	35.0 44.4% 33.0 3.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4		9.5 11.0 12.2% 7.0 3.0	35.0	9	0.0	0.9	4,	2.0	2.0	
State Stat	(s) 40.0 (%) 44.4% (Geen (s) 33.0 (s) 4.0 ne (s) 3.0 Adjust (s) -3.0 Time (s) 4.0	40.0 44.4% 33.0 4.0 -3.0 -4.0 -4.0 Lag		11.0	0 12	27	0.	27.0	17	5.0	12.0	
(s) 44.% 44.% 44.% 12.% 56.7% 300% 300% 13.3% (s) 33.0 33.0 33.0 33.0 4.0 4.0 20.0 20.0 5.0 (s) 3.0 3.0 33.0 33.0 33.0 33.0 4.0 4.0 4.0 4.0 4.0 5.0 (s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(%) 44.4% Green (s) 33.0 e (s) 4.0 me (s) 3.0 Adjust (s) -3.0 Time (s) 4.0	33.0 4.0 4.0 -3.0 -3.0 -4.0 Lag		12.2%	0.10	27		27.0	=======================================		12.0	
reen (s) 330 330 330 70 440 200 500 500 (e) (e) (e) 30 30 330 330 330 330 330 300 40 40 40 40 40 40 40 40 40 40 40 40 4	Green (s) 3 (c) (s) (c) (s) (d) (d) (d) (d) (d) (d) (d) (d) (e) (e) (e) (f) (f) (f) (f) (f) (f) (f) (f) (f) (f	3.0 -3.0 -3.0 -4.0 -4.0 -4.0 3.0	33.0 4.0 3.0 -3.0 -4.0 Lag 3.0 C-Max	3.0	26.7%	30.0		%0:0	13.3		3.3%	
(if) 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	re (s) ne (s) Adjust (s)	4.0 -3.0 -4.0 -4.0 3.0	4.0 -3.0 -3.0 -4.0 Lag 3.0 C-Max	3.0	44.0	20	0.0	20.0	Δ,	2.0	2.0	
e (s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	ne (s) Adjust (s) Time (s)	3.0 -3.0 -4.0 -4.0 -3.0	3.0 -3.0 -3.0 Lag 3.0 C-Max		4.0	7	0:	4.0	7	4.0	4.0	
diust (s) 3.0 3.0 3.0 -3.0 -3.0 -3.0 diust (s) 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	Adjust (s) Time (s)	-3.0 Lag	-3.0 4.0 Lag 3.0 C-Max	1.0	3.0	.,	3.0	3.0	.,	3.0	3.0	
ime (s) 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0 4,0	Time (s)	4.0 Lag	4.0 Lag 3.0 C-Max	0.0	-3.0	Ÿ	0.0	-3.0			-3.0	
ptimizery Lag Lag Lag Lead pdimizery 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 s) 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3		Lag 3.0	Lag 3.0 C-Max	4.0	4.0	7	0.	4.0			4.0	
primize? Indication (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 C-Max	Lead								
subsidior (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 C-Max									
s C-Max C-Max None None None None None None None Salk (s) 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	3.0		C-Max	3.0	3.0	(-,		3.0	(-,		3.0	
s) 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	C-Max			None	None	S		None	S		None	
Availe (s) 210 210 210 130		7.0	7.0		7.0	-	0.	7.0				
cent (#firt) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		21.0	21.0		21.0	=	0.0	13.0				
Part (s) 60.3 69.0 69.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13		0	0		0		0	0				
Shatio 0,67 0,77 0,77 0,14 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,	Act Effct Green (s)	60.3	60.3	0.69	0.69	#	3.0	13.0				
yy 80 0.12 0.18 0.22 0.29 0.29 0.29 0.29 0.20 0.20 0.20	Actuated g/C Ratio	0.67	0.67	0.77	0.77	0	4	0.14				
yy 80 0.5 3.9 3.3 35.3 35.3 y 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	/c Ratio	0.38	0.12	0.18	0.22	0	59	20.0				
y 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Sontrol Delay	8.0	0.5	3.9	3.3	35	.3	0.3				
8.0 0.5 3.9 3.3 35.3 36.3 alay A A A A A D D A A A D D A A A A D D A A A A A D D A A A A A D D A A A A A A D D A	Queue Delay	0.0	0.0	0.0	0.0	J	0.0	0.0				
belay 7.1 A A A D D belay 7.1 3.4 D D SUmmary 7.1 Surface Length: 90 Cele Leng	otal Delay	8.0	0.5	3.9	3.3	35	.3	0.3				
elay, 7.1 3.4 Summary N: 90 N: 90 Cicle Length: 90 Cicle Leng	SO:	V	V	∢	4		Ω	A				
Summany Summany Other iv. 30 cle Length: 30 cle Length: 30 cle Station 30 st. Actualed-Coordinated to Ratio: 0.38 Signal Delay: 7.8 Capacity Ultization 46,5% ICUL Level of Service A	Approach Delay	7.1			3.4			28.1				
Summary Other n: 90 cle Length: 90 cle Length: 90 s: Actualed-Coordinated te Ratio 0.38 Signal Delay: 7.8 Capacity Utilization 46.5%	Approach LOS	∢			∢			ပ				
n: 90 Other n: 90 cle-Length: 90 cle-Length: 90 cle-Length: 90 signal beta beta beta beta beta beta beta beta	ntersection Summary											
h: 90 cle Length: 90 cle Length: 90 cle Length: 90 cl. Start of Green cit 8.8 cleared-Coordinated c Ratio: 0.38 Signal Delay: 7.8 Signal Delay: 7.8 cleared-Coordinated c Ratio: 0.38 Signal Delay: 7.8 cleared-Utilization 46.5%												
nase 2:EBTL, Start of Green	Cycle Length: 90											
nase 2:EBTL, Start of Green	Actuated Cycle Length: 90											
%	Offset: 18.9 (21%), Referenced to phase	2:EBTL	, Start of	Green								
~	Vatural Cycle: 85											
	Control Type: Actuated-Coordinated											
	Aaximum v/c Ratio: 0.38											
	ntersection Signal Delay: 7.8			ᆵ	ersection L	OS: A						
	ntersection Capacity Utilization 46.5%			೦	U Level of	Service A						

Splits and Phases: 4: Drew Centre/Private Driveway & Main St E



Paradigm Transportation Solutions Limited

200624 Future Total 2031 AM Peak Hour Queues 4: Drew Centre/Private Driveway & Main St E

	†	<u> </u>	>	Ļ	•	←	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	
Lane Group Flow (vph)	902	117	78	587	139	98	
v/c Ratio	0.38	0.12	0.18	0.22	0.29	0.07	
Control Delay	8.0	0.5	3.9	3.3	35.3	0.3	
Queue Delay	0.0	0.0	0:0	0.0	0.0	0.0	
Total Delay	8.0	0.5	3.9	3.3	35.3	0.3	
Queue Length 50th (m)	36.3	0.0	2.7	12.3	11.8	0.0	
Queue Length 95th (m)	55.6	1.7	8.9	20.3	19.7	0.0	
Internal Link Dist (m)	336.6			338.0		232.9	
Turn Bay Length (m)		40.0	45.0				
Base Capacity (vph)	2372	066	437	2715	865	647	
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	0.38	0.12	0.18	0.22	0.16	90:0	
Intersection Summary							

HCM 2010 Signalized Intersection Summary 4: Drew Centre/Private Driveway & Main St E

200624 Future Total 2031 AM Peak Hour

Movement		4	Ť	<u> </u>	-	ļ	4	✓	—	4	۶	→	*
	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
0 965 117 78 887 0 139 0 36 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lane Configurations	je-	#	¥C	je-	#		K.	2			4	
0 905 117 78 587 0 139 0 36 0 0 0 1 100 100 100 100 100 100 100 10	Traffic Volume (veh/h)	0	902	117	78	287	0	139	0	36	0	0	0
5 2 12 1 6 16 3 8 18 7 4 4 100	Future Volume (veh/h)	0	902	117	78	287	0	139	0	36	0	0	0
1.00	Number	2	2	12	-	9	16	က	∞	18	7	4	4
1.00	Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
100 1600 100 100 100 100 100 100 100 100	Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
1900 1863 1712 1792 1863 0 190	Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1:00	1:00	1.00	1.00	1.00	1.00
0 905 117 78 887 0 139 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Adj Sat Flow, veh/h/ln	1900	1863	1712	1792	1863	0	1900	1900	1900	1900	1900	1900
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Adj Flow Rate, veh/h	0	902	117	78	287	0	139	0	36	0	0	0
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Adj No. of Lanes	- 5	7 5	- 0	- 6	7 5	0 0	7	- 6	0 9	0 9	- 6	0 8
842 3539 1445 1707 3632 0 549 0 175 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Peak Hour Factor	00.1	00.1	1.00	00.1	00.1	00.1	00.1	00.1	00.1	00.1	9.6	9.1
0.00 0.771 0.77 0.85 0.80 0.00 0.11 0.00 0.00 0.00 0.00 0.00	Percent rieavy ven, 76	o 6	2507	1003	465	7833	0	240	0	175	>	>	0
842 3539 1445 1707 3552 0.00 1577 0.00 1842 3539 1445 1707 3552 0.00 3510 0.01 577 0.00 1842 3539 1445 1707 170 170 1755 0.01 577 0.00 1842 1770 1445 1707 170 1755 0.01 1755 0.01 1757 0.01 170 170 170 170 170 170 170 170 170 1	Arrive On Green	8 8	0.71	0.71	005	080		2 -	000	800			000
842 1770 1475 78 587 0 139 0 36 842 1770 1445 1707 1770 0 1755 0 1577 0.0 9.0 2.3 1.1 3.6 0.0 3.3 0.0 1.9 1.00 10.0 9.0 2.3 1.1 3.6 0.0 3.3 0.0 1.9 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Sat Flow, veh/h	845	3539	1445	1707	3632	0	3510	0	1577	9	0	9
842 1770 1445 1707 1770 0 1755 0 11 0.00 9,0 2,3 1,1 36 0.00 33 0.0 0.0 9,0 2,3 1,1 36 0.00 33 0.0 1,00 10,0 1,00 1,00 33 0.0 1,00 1,00 1,00 1,00 1,00 1,00 0.25 0.00 80 2507 1023 516 2833 0 549 0 1 1,00 1,00 1,00 1,00 1,00 1,00 1,00	Grp Volume(v), veh/h	0	902	117	78	287	0	139	0	36		0.0	
0.0 9.0 2.3 1.1 3.6 0.0 3.3 0.0 1.00 9.0 2.3 1.1 3.6 0.0 3.3 0.0 1.00 1.00 1.00 1.00 1.00 1.	Grp Sat Flow(s),veh/h/ln	845	1770	1445	1707	1770	0	1755	0	1577			
100 9.0 2.3 1.1 3.6 0.0 3.3 0.0 1.0 1.00 1.00 1.00 1.00 1.0	Q Serve(g_s), s	0.0	9.0	2.3	1.1	3.6	0.0	3.3	0.0	1.9			
1,00 1,00 1,00 1,00 1,00 1,00 1,00 1,00	Cycle Q Clear(g_c), s	0.0	9.0	2.3	[-	3.6	0.0	3.3	0.0	6.			
80 2507 1023 465 2833 0 549 0 000 036 0311 017 021 000 025 000 000 100 100 100 100 100 100 100 100	Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00			
80 2507 1023 516 2833 0 1057 000 025 000 000 000 000 000 000 000 000	Lane Grp Cap(c), veh/h	8	2507	1023	465	2833	0	549	0	175			
100 100	V/C Ratio(X)	0.00	0.36	0.11	0.17	0.21	0.00	0.25	0.00	0.21			
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Avail Cap(c_a), veh/h	8	2507	1023	216	2833	0	1057	0	403			
house 100 1100 1100 1100 0000 1100 0000 000	HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
h 0.00 5.1 4.2 3.9 2.1 0.00 37.1 0.00 h 0.00 0.4 0.02 0.0 0.0 0.0 0.0 0.0 h 0.00 0.4 0.02 0.0 0.0 0.0 0.0 0.0 h/lin 0.00 4.4 1.0 0.5 1.7 0.0 1.6 0.0 h/lin 0.00 4.4 1.0 0.5 1.7 0.0 1.6 0.0 h/lin 0.00 4.4 1.0 0.5 1.7 0.0 1.6 0.0 h/lin 0.00 4.4 1.0 0.5 1.7 0.0 1.6 0.0 h/lin 0.00 4.4 1.0 0.5 1.7 0.0 1.6 0.0 h/lin 0.00 4.4 1.0 0.5 1.7 0.0 h/lin 0.00 4.4 1.0 0.0 0.0 0.0 0.0 h/lin 0.00 4.4 1.0 0.0 0.0 0.0 0.0 h/lin 0.00 4.4 1.0 0.0 0.0 0.0 0.0 h/lin 0.00 4.4 1.0 0.0 0.0 h/lin 0.00 4.4 1.0 0.0 0.0 0.0 h/li	Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1:00			
0.0 0.4 0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Uniform Delay (d), s/veh	0.0	5.1	4.2	3.9	2.1	0.0	37.1	0.0	37.8			
hin 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Incr Delay (d2), s/veh	0.0	0.4	0.2	0.2	0.0	0.0	0.2	0.0	9.0			
hin 0.0 44 1.0 0.5 1.7 0.0 1.6 0.0 A A A A D 1022 665 1.7 0.0 37.3 0.0 3 1022 665 1.75 5.4 2.4 37.5 A A A B D 1.2 3 4 5 6 7 8 8.3 67.8 7.0 7.0 7.0 7.0 nax), s 7.0 7.0 7.0 7.0 s 4.0 7.0 7.0 7.0 7.0 s 5.0 0.7 s 7.4	Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
0.0 5.5 4.4 4.0 2.2 0.0 37.3 0.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	%ile BackOfQ(50%),veh/ln	0.0	4.4	1.0	0.5	1.7	0.0	9.1	0.0	0.9			
102 666 175 54 A A A D 175 54 666 175 54 A D 58 8.3 67.8 76.0 14.0 18\(\) s \ 8.4 \ 7.0 \ 7.0 \ 7.0 18\(\) s \ 8.1 \ 11.0 \ 8.5 \ 8.3 \$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	LnGrp Delay(d),s/veh	0.0	5.5	4.4	4.0	2.2	0.0	37.3	0.0	38.4			
1022 665 5.4 2.4 A A A A A A A A A 6 6 7 5.8 83 678 760 7.0 70 70 70 70 7.1 85 3.1 11.0 5.6 5.1 7.4	LnGrp LOS		∢	⋖	⋖	∢			!				
1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 3 4 5 6 7 1 3 4 5 6 7 1 4 0 7,0 1 1 1,0 1 1,0 2 1 1,0 3 1 1,1 4 1,0 5 6 5 5 7 4	Approach Vol, veh/h		1022			999			175				
1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 7.60), s 4.0 7.0 1.0 3.0 1.1 1.0 5.6 1.1 8.5 1.4 7.4	Approach Delay, s/veh		5.4			2.4			37.5				
1 2 3 4 5 6 7 1 2 6 7 (c),s 8.3 67.8 76.0),s 7.0 7.0 7.0 c+t1),s 3.1 11.0 5.6 ,s 0.1 8.5 5.5	Approach LOS		∢			∢			Ω				
C), s 8.3 67.8 76.0 76.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	Timer	_	2	က	4	2	9	7	∞				
(c), s 8.3 67.8 76.0 3, s 4.0 7.0 7.0 7.0 7.0 7.0 44.0 7.0 2.0 44.0 5.6 5.6 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5	Assigned Phs	-	2				9		∞				
),s 4.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	Phs Duration (G+Y+Rc), s	8.3	8.79				76.0		14.0				
imax), s 7.0 33.0 44.0 (+4.0 c+1), s 3.1 11.0 5.6 (+5 c+1), s 0.1 8.5 5.5 (+7.4 c+1), s 0.1 8.5 (+7.4 c+1), s	Change Period (Y+Rc), s	4.0	0.7				7.0		7.0				
C+ff), s 3.1 11.0 5.6 , s 0.1 8.5 5.5 / 7.4	Max Green Setting (Gmax), s	7.0	33.0				44.0		20.0				
7.4	Max Q Clear Time (g_c+I1), s Green Ext Time (p_c). s	0.1	8.5				5.5		5.3				
	Intersection Summary												
	HCM 2010 Ctrl Delay			7.4									

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Paradigm Transportation Solutions Limited

200624 Future Total 2031 AM Peak Hour Lanes, Volumes, Timings 5: Thompson Rd & Main St E

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	<i>y-</i>	₩.		<i>y</i> -	₩.		F	₩.		<i>y-</i>	₩	
Traffic Volume (vph)	166	704	121	316	434	09	160	993	469	122	333	103
Future Volume (vph)	166	704	121	316	434	09	160	993	469	122	333	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.6	3.6	3.3	3.6	3.6	3.3	3.6	3.6	3.3	3.6	3.6
Storage Length (m)	0.09		0.0	150.0		0.0	0.09		0.0	22.0		0.0
Storage Lanes	-		0	-		0	~		0	~		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1:00	0.95	0.95	1.00	0.95	0.95
TH		0.978			0.982			0.938			0.965	
Fit Protected	0.950			0:620			0.950			0.950		
Satd. Flow (prot)	1728	3501	0	1711	3514	0	1711	3339	0	1745	3398	0
Flt Permitted	0.471			0.128			0.360			0.151		
Satd. Flow (perm)	857	3501	0	230	3514	0	648	3339	0	277	3398	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			17			185			42	
Link Speed (k/h)		20			20			09			09	
Link Distance (m)		362.0			250.3			278.6			217.9	
Travel Time (s)		26.1			18.0			16.7			13.1	
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 (%)	1%	1%	%0	5%	1%	%0	2%	1%	5%	%0	3%	1%
Adi. Flow (vph)	166	704	121	316	434	09	160	663	469	122	333	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	166	825	0	316	494	0	160	1132	0	122	436	0
Enter Blocked Intersection	2	2	2	욷	2	2	2	2	8	8	S	2
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.3			3.3			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.04	1.00	1:00	1.04	1.00	1.00	1.04	1.00	1.00
Turning Speed (k/h)	52		15	52		15	22		15	22		15
Number of Detectors	-	7		-	2		-	7		~	5	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	9.0		2.0	9.0		2.0	9.0		2.0	9.0	
Detector 1 Type	CI+EX	CI+EX		CI+EX	C+EX		CHEX	CI+EX		CI+Ex	CI+EX	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0:0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		9.0			9.0			9.0			9.0	
Detector 2 Type		CI+EX			CH-EX			CI+EX			CI+EX	
Detector 2 Channel					d			d				
Detector 2 Extend (s)		0.0			0:0		•	0.0			0.0	
							44.					

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Lanes, Volumes, Timings 5: Thompson Rd & Main St E

200624 Future Total 2031 AM Peak Hour

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Lane Group	EBF	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		-	9		7	4		က	∞	
Permitted Phases	2			9			4			œ		
Detector Phase	2	2		_	9		7	4		က	∞	
Switch Phase												
Minimum Initial (s)	2.0	15.0		2.0	15.0		2.0	10.0		2.0	10.0	
Minimum Split (s)	9.5	32.0		9.5	32.0		9.5	32.0		9.5	32.0	
Total Split (s)	13.4	33.1		21.5	41.2			35.0		10.4	33.4	
Total Split (%)	13.4%	33.1%		21.5%	41.2%		12.0%	35.0%		10.4%	33.4%	
Maximum Green (s)	9.4	26.1		17.5	34.2		8.0	28.0		6.4	26.4	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	3.0		1.0	3.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	0.0	-3.0		0.0	-3.0		0.0	-3.0		0.0	-3.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	Max		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		18.0			18.0			18.0			18.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	39.3	30.3		9.03	37.6		38.9	31.0		35.9	29.5	
Actuated g/C Ratio	0.39	0.30		0.51	0.38		0.39	0.31		0.36	0:30	
v/c Ratio	0.40	0.77		0.88	0.37		0.48	0.97		0.63	0.42	
Control Delay	17.5	36.9		49.7	22.9		24.4	50.2		35.3	27.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	17.5	36.9		49.7	22.9		24.4	50.2		35.3	27.1	
FOS	ш	_		_	O		ပ	_		۵	ပ	
Approach Delay		33.7			33.3			47.0			28.9	
Approach LOS		O			O						O	
Intersection Summary												
	Other											
Cycle Length: 100												
Actuated Cycle Length: 100												
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green	o phase 2:	EBTL, Sta	irt of Gree	L								
Natural Cycle: 85												
Control Type: Actuated-Coordinated	rdinated											
Maximum v/c Ratio: 0.97												
Intersection Signal Delay: 37.6	9.7			ᄪ	Intersection LOS: D	LOS: D						
Intersection Capacity Utilization 94.3%	tion 94.3%			೦	U Level o	CU Level of Service F	ш					
Analysis Period (min) 15												

Splits and Phases: 5: Thompson Rd & Main St E



Paradigm Transportation Solutions Limited

Queues 5: Thompson Rd & Main St E

EBL EBT WBL 166 825 316 0.40 0.77 0.88 17.5 36.9 49.7 17.7 79.8 45.2 30.1 103.4 #92.2 30.1 107.3 375 975 975 975 975 975 975 975 975 975 9	WBT NBL 494 160 0.37 0.48 22.9 24.4 0.0 0.0 22.9 24.4	NBT 1132 0.97 50.2 0.0	SBL 122 0.63 35.3 0.0	SBT 887 436 0,42 27.1 27.1 0.0
EBL EBT WBL 166 825 316 0.40 0.77 0.88 17.5 36.9 49.7 17.5 36.9 49.7 17.7 79.8 45.2 30.1 103.4 #92.2 2 38.0 60.0 42.1 107.3 37.5 17.0 42.1 107.3 47.5 17.0 42.1 107.3 47.5 17.0 42.1 107.3 47.5 17.0 42.1 107.3 47.5 17.0 4		1132 0.97 50.2 0.0	SBL 122 0.63 35.3 0.0	SBT 436 0.42 27.1 0.0
166 825 316 0.40 0.77 0.88 17.5 36.9 49.7 0.0 0.0 0.0 17.5 36.9 49.7 17.7 79.8 45.2 30.1 103.4 #92.2 38.0 45.2 2 42.1 107.3 375 42.1 107.3 375		1132 0.97 50.2 0.0	122 0.63 35.3 0.0	436 0.42 27.1 0.0
0.40 0.77 0.88 17.5 36.9 49.7 0.0 0.0 17.5 36.9 49.7 17.7 79.8 45.2 30.1 103.4 #92.2 38.0 150.0 42.1 107.3 375		0.97	0.63 35.3 0.0	0.42 27.1 0.0
17.5 36.9 49.7 17.5 36.9 49.7 17.5 36.9 49.7 17.7 79.8 45.2 30.1 103.4 #92.2 20.0 150.0 42.1 107.3 37.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0		50.2	35.3	0.0
0.0 0.0 0.0 17.5 36.9 49.7 17.7 79.8 45.2 30.1 103.4 #92.5 338.0 150.0 60.0 150.0 42.1 1073 375		0.0	0.0	0.0
17.5 36.9 49.7 17.7 79.8 45.2 30.1 103.4 #39.2 2 338.0 150.0 2 60.0 150.0 42.1 1073 375		0		7 70
17.7 79.8 45.2 30.1 103.4 #92.2 38.0 2 60.0 150.0 421 1073 375		20.7	35.3	7/.1
30.1 103.4 #92.2 338.0 2 60.0 150.0 42.1 1073 375	36.7 20.7	103.6	15.4	33.7
338.0 60.0 421 1073 375	50.6 35.4	#151.3	#29.5	48.4
60.0 150.0 421 1073 375	226.3	254.6	_	193.9
421 1073 375	0.09		92.0	
	1332 337	1162	193	1030
Starvation Cap Reductn 0 0 0	0 0	0	0	0
Spillback Cap Reductn 0 0 0	0 0	0	0	0
Storage Cap Reducth 0 0 0	0 0	0	0	0
Reduced v/c Ratio 0.39 0.77 0.84 0	0.37 0.47	0.97	0.63	0.42

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

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Paradigm Transportation Solutions Limited

HCM 2010 Signalized Intersection Summary 5: Thompson Rd & Main St E

200624 Future Total 2031 AM Peak Hour

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	jr.	4₽		<u>,-</u>	₹		y -	₩		<u>,-</u>	4₽	
Traffic Volume (veh/h)	166	704	121	316	434	09	160	663	469	122	333	103
Future Volume (veh/h)	166	704	121	316	434	09	160	663	469	122	333	103
Number	2	2	12	- 0	9	16	7	4 (4	က	∞ (9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	5	1.00	1.00	6	1.00	1.00	5	1.00	0.0	5	1.00
Adi Sat Flow Mah/h/h	1881	1884	1900	1863	1883	1900	1863	1874	1900	1900	1853	1900
Adi Flow Rate, veh/h	166	704	121	316	434	09	160	663	469	122	333	103
Adj No. of Lanes	-	2	0	_	2	0	-	2	0	-	2	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
Percent Heavy Veh, %	-	_	0	7	_	0	2	_	2	0	က	_
Cap, veh/h	451	886	170	382	1209	166	366	619	436	188	782	238
Arrive On Green	0.08	0.32	0.29	0.14	0.38	0.35	0.08	0.31	0.28	90.0	0.29	0.26
Sat Flow, veh/h	1792	3056	525	1774	3161	435	1774	1997	1408	1810	2661	810
Grp Volume(v), veh/h	166	412	413	316	245	249	160	591	541	122	219	217
Grp Sat Flow(s),veh/h/ln	1792	1790	1791	1774	1789	1807	1774	1780	1625	1810	1761	1710
Q Serve(g_s), s	6.4	20.2	20.4	11.8	8.6	10.0	6.5	31.0	31.0	4.9	10.0	10.4
Cycle Q Clear(g_c), s	6.4	20.2	20.4	11.8	8.6	10.0	6.5	31.0	31.0	4.9	10.0	10.4
Prop In Lane	1.00		0.29	1.00		0.24	1.00		0.87	1.00		0.47
Lane Grp Cap(c), veh/h	451	218	6/9	382	685	691	366	552	204	188	518	503
V/C Ratio(X)	0.37	0.71	0.71	0.82	0.36	0.36	0.44	1.07	1.07	0.65	0.42	0.43
Avail Cap(c_a), veh/h	470	218	226	442	685	691	366	225	204	188	218	203
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	9.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1:00	0.1	9.
Uniform Delay (d), s/veh	21.5	29.8	30.2	22.1	22.1	22.4	24.3	34.5	35.8	27.7	28.5	29.2
Incr Delay (d2), s/veh	0.5	7.3	7.3	9.01	.5	.5	0.8	58.6	91.9	9.7	2.5	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	1.1	11.2	8.9	5.1	5.2	3.2	24.2	22.5	5.8	5.2	5.3
LnGrp Delay(d),s/veh	22.0	37.1	37.5	32.6	23.5	23.9	25.1	93.1	97.4	35.3	31.0	31.9
LnGrp LOS	ပ			ပ	ပ	ပ	ပ	-	4		O	٥
Approach Vol, veh/h		991			810			1292			228	
Approach Delay, s/veh		¥.7			27.2			86.5			32.3	
Approach LOS		ပ			ပ			ட			O	
Timer	1	2	3	4	5	9	7	8				
Assigned Phs	τ-	2	3	4	2	9	7	8				
Phs Duration (G+Y+Rc), s	18.3	36.3	10.4	35.0	12.3	42.3	12.0	33.4				
Change Period (Y+Rc), s	4.0	7.0	4.0	7.0	4.0	7.0	4.0	7.0				
Max Green Setting (Gmax), s	17.5	26.1	6.4	28.0	9.4	34.2	8.0	26.4				
Max Q Clear Time (g_c+I1), s	13.8	22.4	6.9	33.0	8.4	12.0	8.5	12.4				
Green Ext Time (p_c), s	0.5	2.0	0.0	0.0	0.1	3.6	0.0	2.5				
Intersection Summary												
HCM 2010 Ctrl Delay			51.0									
HCM 2010 LOS			□									

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Lanes, Volumes, Timings 6: Busway & Site Driveway

200624 Future Total 2031 AM Peak Hour

*	SBR	¥c_	43	43	1900	1.00	0.865		1611		1611				1.00	43		43	2	Right					1.00	15					ICU Level of Service A	
→	SBT		0	0	1900	1.00			0		0	20	65.1	4.7	1.00	0		0	2	Left	0.0	0.0	4.8		1.00		Free				U Level o	
—	NBT	44	22	22	1900	0.95			3539		3539	20	134.6	9.7	1.00	22		22	운	Left	0.0	0.0	4.8		1.00		Free				ᅙ	
•	NBL		0	0	1900	1.00			0		0				1.00	0		0	2	Left					1.00	22						
-	EBR		0	0	1900	1.00			0		0				1.00	0		0	8	Right					1.00	15						
4	EBL	<u>r</u>	137	137	1900	1:00		0.950	1770	0.950	1770	20	29.0	4.2	1:00	137		137	2	Left	3.6	0.0	4.8		1:00	22	Stop		Other		n 17.6%	
	Lane Group	Lane Configurations	Traffic Volume (vph)	Future Volume (vph)	Ideal Flow (vphpl)	Lane Util. Factor	Fr	Flt Protected	Satd. Flow (prot)	Flt Permitted	Satd. Flow (perm)	Link Speed (k/h)	Link Distance (m)	Travel Time (s)	Peak Hour Factor	Adj. Flow (vph)	Shared Lane Traffic (%)	Lane Group Flow (vph)	Enter Blocked Intersection	Lane Alignment	Median Width(m)	Link Offset(m)	Crosswalk Width(m)	Two way Left Turn Lane	Headway Factor	Turning Speed (k/h)	Sign Control	Intersection Summary	Area Type: Ot	Control Type: Unsignalized	Intersection Capacity Utilization 17.6%	Analysis Period (min) 13

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Paradigm Transportation Solutions Limited

HCM 2010 TWSC 6: Busway & Site Driveway

200624 Future Total 2031 AM Peak Hour

Int Delay, s/veh	7.8						
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations	-			‡		R.	
Traffic Vol, veh/h	137	0	0	22	0	43	
Future Vol, veh/h	137	0	0	22	0	43	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	1	None	•	None	•	None	
Storage Length	0		•		•	0	
Veh in Median Storage, #		1	1	0	1		
Grade, %		•		0	0		
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	7	7	7	7	7	2	
Mvmt Flow	137	0	0	22	0	43	
Major/Minor N	Minor2	2	Major1				
Conflicting Flow All	11	•		0			
Stage 1	0	1	1	1			
Stage 2	Ξ	'	'	'			
Critical Hdwy	6.84	•	٠	•			
Critical Hdwy Stg 1	•	'	'	•			
Critical Hdwy Stg 2	5.84	•	•	•			
Follow-up Hdwy	3.52	•	٠	•			
Pot Cap-1 Maneuver	1007	0	0	•			
Stage 1	•	0	0	٠			
Stage 2	1010	0	0	1			
Platoon blocked, %				•			
Mov Cap-1 Maneuver	1007	•	•	•			
Mov Cap-2 Maneuver	1007	٠	٠	٠			
Stage 1	' 6	•	•	•			
Stage 2	1010		٠	٠			
Approach	B		R				
HCM Control Delay, s	9.1		0				
HCM LOS	⋖						
Minor Lane/Major Mvmt		NBT EBLn1	BLn1				
Capacity (veh/h)			1007				
HCM Lane V/C Ratio		·	0.136				
HCM Control Delay (s)		•	9.1				
HCM Lane LOS		•	⋖ !				
HCM 95th %tile Q(veh)		•	0.5				

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Intersection: 1: Ontario St S/Ontario St N & Main St E

Movement	B	B	EB	WB	WB	WB	R	R	R	9	SB	SB
Directions Served	_	-	H	_	⊢	TR	_	⊢	⊢	œ	_	-
Maximum Queue (m)	47.4	113.4	90.1	42.4	92.8	94.4	70.5	124.9	105.8	72.5	47.4	88.7
Average Queue (m)	38.7	62.6	49.7	35.8	44.4	46.3	21.0	65.7	27.0	36.1	30.2	49.9
95th Queue (m)	27.7	98.5	9.62	49.9	87.0	78.2	49.8	98.5	87.0	66.3	52.9	77.2
Link Distance (m)		133.0	133.0		108.2	108.2		322.4	322.4			241.6
Upstream Blk Time (%)		0			0	0						
Queuing Penalty (veh)		0			2	0						
Storage Bay Dist (m)	40.0			35.0			0.07			0.59	40.0	
Storage Blk Time (%)	=	20		9	4		0	2	က	0	က	13
Queuing Penalty (veh)	98	43		21	တ		0	2	တ	-	6	23

Intersection: 1: Ontario St S/Ontario St N & Main St E

Movement	SB	SB SB	
Directions Served	-	T R	
Maximum Queue (m)	77.0	7.0 2.9	
Average Queue (m)	38.7		
95th Queue (m)	65.7	5.7 2.9	
Link Distance (m)	241.6	6 241.6	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Mall Entrance & Main St E

Movement	EB	EB	WB	WB	WB	NB	NB	
Directions Served	⊢	TR	٦	⊢	⊢	٦	œ	
Maximum Queue (m)	74.2	74.6	19.4	49.8	46.6	14.9	12.4	
Average Queue (m)	28.8	31.9	5.9	14.4	15.7	2.0	3.8	
95th Queue (m)	67.2	71.1	15.1	37.1	37.2	12.5	10.9	
Link Distance (m)	108.2	108.2		251.1	251.1	127.6	127.6	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			0.07					
Storage Blk Time (%)								
Queuing Penalty (veh)								

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Paradigm Transportation Solutions Limited

Queuing and Blocking Report

200624 Future Total 2031 AM Peak Hour

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Movement	8	B	B	WB	WB	WB	8	8	R	SB	SB
Directions Served	_	-	TR	_	⊢	TR	_	H	œ	_	出
Maximum Queue (m)	42.7	83.5	9.88	22.9	45.9	38.4	39.1	14.9	32.9	54.3	23.9
Average Queue (m)	9.1	32.6	39.2	7.5	16.6	16.4	22.7	6.	17.3	27.7	11.2
95th Queue (m)	26.8	66.5	74.2	17.9	34.8	33.9	37.7	10.6	30.4	45.5	19.9
Link Distance (m)		240.2	240.2		335.2	335.2	40.7	40.7			160.4
Upstream Blk Time (%)							-	0	0		
Queuing Penalty (veh)							-	0	0		
Storage Bay Dist (m)	20.0			40.0					35.0	22.0	
Storage Blk Time (%)		2			0			0	0	0	
Queuing Penalty (veh)		_			0			0	0	0	

Intersection: 4: Drew Centre/Private Driveway & Main St E

Movement	EB	EB	EB	WB	WB	WB	BB	BB	NB	
Directions Served	⊢	⊥	ď	٦	⊢	⊢	_	٦	TR	
Maximum Queue (m)	62.0	8.07	42.7	28.0	43.2	49.6	34.4	19.7	15.0	
Average Queue (m)	24.6	28.4	6.6	12.4	13.5	15.8	19.5	9.6	4.1	
95th Queue (m)	49.9	55.3	31.0	23.8	32.2	37.2	30.8	14.7	10.7	
Link Distance (m)	335.2	335.2			334.9	334.9	239.5	239.5	239.5	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)			40.0	45.0						
Storage Blk Time (%)	12	2	0		0					
Queuing Penalty (veh)	0	က	0		0					

Intersection: 5: Thompson Rd & Main St E

		B	8	MB	WB	WB	æ	æ	B N	SB	SB	SB
Directions Served	٦	⊢	TR	٦	⊢	TK	٦	⊢	TR	٦	⊢	띰
Maximum Queue (m)	67.4	139.8	145.4	91.2	59.9	52.6	67.4	274.7	275.3	52.4	57.2	46.5
Average Queue (m)	39.0	77.3	81.4	49.1	34.5	29.2	56.5	239.1	244.9	22.7	31.9	24.5
95th Queue (m)	76.2	126.6	127.1	7.67	22.8	49.6	88.8	315.6	311.6	42.3	50.9	44.3
Link Distance (m)		334.9	334.9		233.6	233.6		263.1	263.1		201.3	201.3
Upstream Blk Time (%)								34	49			
Queuing Penalty (veh)								0	0			
Storage Bay Dist (m)	0.09			150.0			0.09			55.0		
Storage Blk Time (%)	0	22					~	99		~	0	
Queuing Penalty (veh)	0	37					2	105		-	0	

Queuing and Blocking Report

200624

Intersection: 6: Bus	Intersection: 6: Busway & Site Driveway
Movement	8
Directions Served	
Maximum Queue (m)	24.4
Average Queue (m)	10.2
95th Queue (m)	18.3
Link Distance (m)	51.3
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary Network wide Queuing Penalty: 338

Lanes, Volumes, Timings 1: Ontario St S/Ontario St B & Main St E

200624 Future Total 2031 PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	F	*	R.	F	*		×	*	ĸ.	r	*	•
Traffic Volume (vph)	206	629	244	308	759	247	207	683	336	195	806	18
Future Volume (vph)	206	629	244	308	759	247	207	683	336	195	806	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.6	3.5	3.3	3.6	3.6	3.3	3.6	3.5	3.3	3.6	3.5
Storage Length (m)	40.0		0.0	35.0		0.0	20.0		65.0	40.0		0.0
Storage Lanes	- 1		~	-		0	- 1		-	-		_
Taper Length (m)	7.5			7.5		į	7.5			7.5		
Lane Util. Factor	0.5	0.95	1.00	1.00	0.95	0.95	0.1	0.95	1.00	1.00	0.95	0.0
Ped Bike Factor	1.00		0.96	0.99	0.99		1.00		0.99	1.00		0.98
בע	0		0.850	0	0.903		0		0.850	0		0.850
Fit Protected	1720	257.4	100	0.950	2447	c	1700	0070	1007	0.950	2020	4507
Satu. Flow (prot)	0.165	4 /00	000	0 144	245	>	0 137	0450	000	0.224	cocc	1001
Satd. Flow (perm)	299	3574	1495	255	3417	0	249	3438	1559	403	3505	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			244		46				336			18
Link Speed (k/h)		20			20			20			20	
Link Distance (m)		147.9			134.8			338.1			256.3	
Travel Time (s)		10.6			9.7			24.3			18.5	
Confl. Peds. (#/hr)	15		28	28		15	6		2	2		o
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 Vehides (%)	1%	%	5%	%	%	1%	1%	2%	1%	5%	3%	%0
Adj. Flow (vph)	206	629	244	308	759	247	207	683	336	195	806	180
Shared Lane Traffic (%)												
Lane Group Flow (vph)	506	629	244	308	1006	0	207	683	336	195	908	9 :
Enter Blocked Intersection	2	2	2 :	2 .	8	2	8	8	2	2	2	2
Lane Alignment	Lett	Left	Kight	Lett	Left	Kight	Lett	Lett	Kight	Left	Left	Kight
Median widin(m)		0.0			0.0			0.0			0.0	
LINK Umset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		δ.			4. X			φ.			δ.	
Iwo way Left Turn Lane	104	100	101	104	1 00	100	104	100	101	104	00	, ,
Turning Speed (k/h)	25	2	15	25	2	15	25	2	15	25	2	2
Number of Detectors	-	7	-	-	2	:	-	7	-	-	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Righ
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		5.0	10.0	2.0	2.0	10.0	2.0
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)	2.0	9.0	2.0	2.0	9.0		2.0	9.0	2.0	2.0	9.0	2.0
Detector 1 Type	CHEX	CI+EX	CI+EX	CI+EX	CI+EX		CI+Ex	CI+EX	CI+EX	CI+EX	CI+EX	CI+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	9
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		9.0			9			9.0			2	
								5			5	

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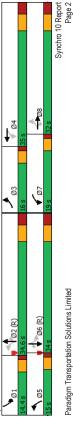
SimTraffic Report Page 3

Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 1: Ontario St S/Ontario St N & Main St I

2.0 C-Max 7.0 18.0 15.0 32.0 34.0 34.0% 27.0 4.0 3.0 -3.0 Lag Perm 2.0 C-Max 0.₹ 4.0 Lag pm+pt 9.5 14.4% 10.4 3.0 1.0 0.0 Perm 2.0 C-Max 32.0 34.6% 27.6 3.0 -3.0 -4.0 Lag 32.2 0.32 0.46 5.2 0.0 5.2 A 2.0 C-Max 32.2 0.32 0.62 32.1 0.0 C NA O.O 15.0 32.0 34.6 34.6% 27.6 4.0 3.0 -3.0 4.0 Lag 2.0 None pm+pt 5.0 9.5 15.0 11.0 3.0 1.0 0.0 4.0 Lead 42.6 0.43 0.80 43.3 0.0 43.3 Intersection LOS: DICU Level of Service E Actuated Cyde Length: 100 Offset 49 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green NA NA 15.0 32.0 35.0 28.0 28.0 4.0 4.0 3.0 4.0 4.0 2.0 None 7.0 18.0 31.2 0.31 0.92 45.8 8.3 54.1 7.0 11.0 19.0% 15.0 3.0 1.0 0.0 4.0 Lead 0.46 0.94 61.0 61.0 E1.0 pm+pt 2.0 Perm 15.0 32.0 32.0 32.0% 25.0 4.0 3.0 4.0 4.0 4.0 2.0 None 7.0 18.0 0 27.3 0.27 0.42 6.1 6.1 15.0 32.0 32.0% 25.0 4.0 4.0 Lag 27.3 0.27 0.70 36.9 0.0 36.9 NA 0.0 1 Intersection Signal Delay: 36.3 Intersection Capacity Utilization 87.7% Analysis Period (min) 15 38.2 0.38 0.76 38.5 0.0 38.5 pm+pt 5.0 9.5 16.0% 12.0 3.0 1.0 0.0 4.0 Lead Natural Cycle: 85 Control Type: Actuated-Coordinated Other Lost Time Adjust (s)
Total Lost Time (s)
Lead-Lag Optimize?
Vehicle Extension (s)
Recall Mode
Walk Time (s)
Pedestrian Calls (#Ihr)
Act Effct Green (s) Total Split (s)
Total Split (%)
Maximum Green (s)
Yellow Time (s)
Al-Red Time (s) Detector Phase Switch Phase Minimum Initial (s) Protected Phases Permitted Phases Area Type: Cycle Length: 100 Actuated g/C Ratio Minimum Split (s) Approach Delay Approach LOS Control Delay Queue Delay Total Delay LOS

1: Ontario St S/Ontario St N & Main St E Splits and Phases:



Paradigm Transportation Solutions Limited

Queues 1: Ontario St S/Ontario St N & Main St E

200624 Future Total 2031 PM Peak Hour

200624

Future Total 2031 PM Peak Hour

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Lane Group	EBF	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	506	629	244	308	1006	207	683	336	195	908	180
v/c Ratio	0.76	0.70	0.42	0.94	0.92	0.80	0.62	0.46	29.0	0.73	0.29
Control Delay	38.5	36.9	6.1	61.0	45.8	43.3	32.1	5.2	29.5	35.6	5.4
Queue Delay	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.5	36.9	6.1	61.0	54.1	43.3	32.1	5.2	29.5	35.6	5.4
Queue Length 50th (m)	24.4	9.49	0.0	9.44	2.66	25.6	63.2	0.0	24.0	78.3	0.0
Queue Length 95th (m)	#53.1	85.0	18.1	0.76#	#140.8	4.09#	83.3	19.8	#39.9	101.4	15.4
Internal Link Dist (m)		123.9			110.8		314.1			232.3	
Turn Bay Length (m)	40.0			35.0		70.0		65.0	40.0		
Base Capacity (vph)	583	1000	594	331	1102	270	1107	730	304	1104	615
Starvation Cap Reductn	0	0	0	0	84	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	0.71	0.68	0.41	0.93	0.99	0.77	0.62	0.46	0.64	0.73	0.29

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

Paradigm Transportation Solutions Limited

HCM 2010 Signalized Intersection Summary 1: Ontario St S/Ontario St N & Main St E

FBL FBT FBR WBL WBT WBR NBL NBT NBR SBL NBL NBT NBR NBL NBT NBT NBL NBT NBT		4	1	1	\	ţ	4	•	—	•	۶	-	*
266 679 244 308 759 247 207 683 336 195 206 679 244 308 759 247 207 683 336 195 38 18 18 7 4 14 5 2 2 12 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0	Movement	盟	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
206 679 244 308 759 247 207 683 336 195 206 679 244 308 759 247 207 683 336 195 20 0	Lane Configurations	r	*	*	F	₩ ₽		F	‡	*	F	*	*
206 679 244 308 759 247 207 663 336 195 3 8 18 7 4 14 5 2 12 1 1 0 <td>Traffic Volume (veh/h)</td> <td>206</td> <td>629</td> <td>244</td> <td>308</td> <td>759</td> <td>247</td> <td>207</td> <td>683</td> <td>336</td> <td>195</td> <td>908</td> <td>180</td>	Traffic Volume (veh/h)	206	629	244	308	759	247	207	683	336	195	908	180
100	Future Volume (veh/h)	206	629	244	308	759	247	207	683	336	195	908	180
100	Number	က	∞	9	7	4	14	2	2	12	-	9	16
1.00	Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
100	Ped-Bike Adj(A_pbT)	1.00		1.00	0.39		0.97	1.00		0.99	1.00		1.00
1881 1883 1845 1881 1893 1891 1883 1884 1883 1845 1881 1893 1845 1881 1893 1845 1881 1893 1845 1881 1893 1845 1883 1845 1891 1893 1845 1893 1845 1845 1845 1845 1845 1845 1845 1445	Parking Bus, Adj	0.1	1:00	1.00	1:00	9:	1:00	1.00	1.00	1:00	1.00	1.00	1.00
206 679 0 308 759 247 207 633 336 195 1.00	Adj Sat Flow, veh/h/ln	1881	1881	1863	1845	1881	1900	1881	1810	1881	1863	1845	1900
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Adj Flow Rate, veh/h	506	629	0	308	759	247	202	683	336	195	908	0
1.00	Adj No. of Lanes	_	2	-	_	2	0	_	2	_	_	2	_
261 961 426 39 815 265 314 132 523 314 132 525 314 132 525 314 132 525 314 132 525 314 132 525 314 132 525 314 132 526 6779 0.00 0.15 0.31 0.28 0.10 0.33 0.33 0.10 1722 1787 1583 1757 2650 886 1722 7792 1787 189 186 1774 38 185 1771 0.0 126 28.0 28.0 7.9 16.6 18.0 7.5 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.	Peak Hour Factor	0.0	0.1	9.	0.1	9.	0.1	9.	1.00	1.00	1.00	1.00	1.00
266 679 0 614 28 819 815 265 314 1132 552 314 1132 3574 1583 1757 2630 865 1792 3438 1586 1774 2 206 679 0 145 263 186 1792 374 1782 1787 1689 1792 1791 1586 1774 2 1787 1689 1782 1791 1586 1774 2 1787 1787 1689 1782 1791 1586 1774 2 1787 1787 1880 189 1792 1791 1586 1774 2 1791 1792 1791 1792 1791 1586 1774 2 1791 1792 1791 1586 1774 2 1791 1792 1791 1792 1791 1586 1774 2 1791 1792 1791 1792 1791 1586 1774 2 1791 1792 1791 1792 1791 1792 1792 17	Percent Heavy Veh, %	-	-	2	က	-	-	-	2	-	2	က	0
10, 11 0, 12 0, 10 0,	Cap, veh/h	561	961	456	380	812	565	314	1132	522	314	1139	525
206 679 0 308 516 490 1792 1719 1569 1772 1719 1710 1710 1710 1710 1710 1710 1710	Arrive On Green	1702	3574	0.00	0.15	0.31	0.28	0.10	3.438	0.33	0.10	3505	1615
1792 1787 1583 1757 1787 1699 1792 1779 1586 1774 8.5	Gra Volume(v) veb/b	206	670		308	516	400	207	683	336	105	808	
8.5 17.1 0.0 12.6 28.0 28.0 7.9 16.6 18.0 7.5 1.0 1.0 1.2 28.0 28.0 7.9 16.6 18.0 7.5 1.0 1.0 1.0 1.2 28.0 28.0 7.9 16.6 18.0 7.5 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	Gro Sat Flow(s), veh/h/ln	1792	1787	1583	1757	1787	1699	1792	1719	1586	1774	1752	1615
8.5 17.1 0.0 12.6 28.0 7.9 16.6 18.0 7.5 2.61 4.00 1.00 1.00 1.00 1.00 1.00 1.00 2.61 4.26 1.00 1.00 1.00 1.00 1.00 1.00 2.71 0.00 0.81 0.33 0.33 0.66 0.66 0.62 3.34 2.87 1.001 4.43 3.86 5.54 5.27 3.33 1.32 5.22 3.30 1.00	Q Serve(g_s), s	8.5	17.1	0.0	12.6	28.0	28.0	7.9	16.6	18.0	7.5	20.2	0.0
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Cycle Q Clear(g_c), s	8.5	17.1	0.0	12.6	28.0	28.0	7.9	16.6	18.0	7.5	20.2	0.0
26 96 426 380 554 577 314 1132 552 314	Prop In Lane	1.00		1.00	1.00		0.50	1.00		1.00	1.00		1.00
0.79 0.77 0.00 0.81 0.83 0.83 0.86 0.66 0.66 0.64 0.62 0.63 0.03 0.03 0.03 0.03 0.03 0.03 0.03	Lane Grp Cap(c), veh/h	261	961	426	380	554	527	314	1132	522	314	1139	525
287 1001 444 386 554 557 333 1122 552 330 1100 1100 1100 1100 1100 1100 1100	V/C Ratio(X)	0.79	0.71	0.00	0.81	0.93	0.93	99.0	0.60	0.64	0.62	0.71	0.00
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Avail Cap(c_a), veh/h	287	1001	443	386	224	527	333	1132	522	330	1139	525
1.00 1.00 0.00 0.88 0.88 1.00 1.00 1.00	HCM Platoon Ratio	1.00	1:00	1.00	1:00	1:00	1:00	1.00	1.00	1.00	1.00	1.00	1.00
27.1 33.0 0.0 24.2 33.5 34.2 23.7 28.1 28.6 22.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Upstream Filter(I)	0.1	0.1	0.0	0.85	0.85	0.85	9.	9.	1:00	1.00	1.00	0.00
11.1 18 00 98 199 206 33 24 6.0 23 5.0 8.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 5.0 8.2 34.8 0.0 34.0 53.3 54.8 27.0 30.5 34.6 25.2 D C C D D C C C C C 885 1314 126 C C C C 1314 126 C C C 131 2 3 4 5 6 7 8 13.5 36.9 146 35.0 13.9 36.5 13.0 5. 10.4 27.6 12.0 28.0 11.0 27.0 15.0 25.0 5. 9.5 20.0 10.5 30.0 9.9 22.2 14.6 19.1 0.0 3.1 0.1 0.0 0.1 2.0 0.0 2.0	Uniform Delay (d), s/veh	27.1	33.0	0.0	24.2	33.5	34.2	23.7	28.1	28.6	22.9	29.6	0.0
5.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Incr Delay (d2), s/veh	1.1	-89	0.0	8.6	19.9	20.6	3.3	2.4	0.9	2.3	3.7	0.0
5.0 8.7 0.0 7.1 16.8 16.1 4.1 8.2 8.7 3.8 5.0 8.7 0.0 34.0 65.3 54.8 16.1 4.1 8.2 8.7 3.8 5.0 885	Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
382 348 0.0 34.0 553 548 27.0 30.5 34.6 25.2 D C C D D C C C C C D C C C C C C C C	%ile BackOfQ(50%),veh/ln	2.0	8.7	0.0	7.1	16.8	16.1	4.1	8.2	8.7	3.8	10.3	0.0
135 865 1314 1226 7 C C C C C C C C C C C C C C C C C C	LnGrp Delay(d),s/veh	38.2	34.8	0.0	34.0	53.3	24.8	27.0	30.5	34.6	25.2	33.3	0.0
888 1314 1226 356 49.3 31.0 5.6 49.3 31.0 5.6 49.3 31.0 C C C C C C C C C C C C C C C C C C C	Lugib LOS	4	اد		اد			اد	2	اد	اد	اد	
356 493 310 1 2 3 4 5 6 7 8 135 36.9 14.6 35.0 13.9 36.5 18.7 30.9 4,0 7,0 4,0 7,0 4,0 7,0 4,0 7,0 5 9,5 20,0 10.5 30,0 9,9 22.2 14.6 19.1 0.0 3.1 0.1 0.0 0.1 2.0 0.0 2.0	Approach Vol, veh/h		882			1314			1226			1001	
1 2 3 4 5 6 7 135 36 4 5 6 7 135 36 136 36 187 (2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.	Approach Delay, s/veh		35.6			49.3			31.0			31.7	
1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1 1 2 3 3 4 5 6 7 1 1 2 3 3 4 5 6 7 1 1 2 1 3 1 4 5 6 7 1 1 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1	Approach LOS		Ω			٥			ပ			ပ	
115 36 146 35 149 66 77 115 369 146 350 139 365 187 67 140 70 40 70 40 70 40 70 40 15 95 20.0 10.5 30.0 9.9 22.2 146 10.0 3.1 0.1 0.0 0.1 2.0 0.0 17.5	Timer	_	2	က	4	2	9	7	∞				
135 369 146 350 139 365 187 3 4,0 7,0 4,0 7,0 4,0 7,0 4,0 7 10,4 5,0 0 10,5 30,0 9,9 22,2 14,6 3 0,0 3,1 0,1 0,0 0,1 2,0 0,0 0,0 0,0 0,0 0,0 0,0 0,0 0,0 0,0	Assigned Phs	_	2	က	4	2	9	7	∞				
4.0 7.0 4.0 7.0 4.0 7.0 4.0 8.0 10.4 27.6 12.0 28.0 11.0 27.0 15.0 28.0 10.0 27.0 15.0 2.0 0.0 3.1 0.1 0.0 0.1 2.0 0.0 0.1 2.0 0.0 0.1 2.0 0.0 0.1 2.0 0.0 0.1 2.0 0.0 0.0 0.1 2.0 0.0 0.0 0.1 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Phs Duration (G+Y+Rc), s	13.5	36.9	14.6	35.0	13.9	36.5	18.7	30.9				
s 10.4 27.6 12.0 28.0 11.0 27.0 15.0 s 9.5 20.0 10.5 30.0 9.9 22.2 14.6 0.0 3.1 0.1 0.0 0.1 2.0 0.0 37.5	Change Period (Y+Rc), s	4.0	7.0	4.0	7.0	4.0	7.0	4.0	7.0				
3.5 200 103 300 33 222 14.5 0.0 0.0 3.1 0.1 0.0 0.1 2.0 0.0 0.0 37.5 P.	Max Green Setting (Gmax), s	10.4	27.6	12.0	78.0	0.11	27.0	15.0	75.0				
37.5 D	Max Q Clear Time (g_c+I1), s	0.0 0.0	20.0	10.5	30.0	D C	7.77	0.45	<u>.</u> .				
	Green Ext IIme (p_c), s	0:0	3.7	0.1	0.0	0.1	7.0	0.0	7.0				
	Intersection Summary												
HCM 2010 LOS	HCM 2010 Ctrl Delay			37.5									
LIOM SO IO EOO	HCM 2010 LOS			□									

Paradigm Transportation Solutions Limited

Synchro 10 Report Page 4

Lanes, Volumes, Timings 2: Mall Entrance & Main St E

200624 Future Total 2031 PM Peak Hour

•	NBR	¥.	126	126	1900	3.5	0:0	-		1.00	0.850		1597		1597	Yes	96				1.00	%0	126	126	No.	Right					1.01	15	- : i	Kignt	0.0	0.0	2.0	CI+Ex		0:0	0.0	0:0						Perm
•	NBL	×	139	139	1900	3.3	0.0	~	7.5	1.00		0.950	1745	0.950	1745			20	144.7	10.4	1.00	%0	139	130	2 2	0 d	3.3	0.0	4.8		1.04	25	- .	Left	0.0	0.0	2.0	CI+Ex		0.0	0.0	0.0						Prot
ţ	WBT	*	1296	1296	1900	3.6				0.95			3610		3610			20	273.6	19.7	1.00	%0	1296	1206	ON ON	0 4	3.3	0.0	4.8		1.00		5	10 of	0.0	0.0	9.0	CHEX		0.0	0.0	0.0	9.4	9.0	C+EX	d	0.0	Ϋ́
>	WBL	K	180	180	1900	3.3	0.07	-	7.5	1.00		0.950	1745	0.205	377						1.00	%0	180	180	2 2	0 d	Í				1.04	22	← .	Left	0.0	0.0	2.0	CI+Ex		0.0	0.0	0.0					ı	Perm
/	EBR		130	130	1900	3.6	0.0	0		0.95			0		0	Yes					1.00	%0	130	c	2	Richt	5				1.00	15																
†	EBT	# ‡	1037	1037	1900	3.6				0.95	0.983		3517		3517		22	20	134.8	9.7	1.00	1%	1037	1167	2	<u></u>	3.3	0.0	4.8		1.00		- 5	200	0.0	0.0	9.0	Č+EX		0.0	0.0	0.0	9.4	9.0	Č+	0	0.0	A
	Lane Group	Lane Configurations	Traffic Volume (vph)	Future Volume (vph)	Ideal Flow (vphpl)	Lane Width (m)	Storage Length (m)	Storage Lanes	Taper Length (m)	Lane Util. Factor	Ft	Flt Protected	Satd. Flow (prot)	Flt Permitted	Satd. Flow (perm)	Right Turn on Red	Satd. Flow (RTOR)	Link Speed (k/h)	Link Distance (m)	Travel Time (s)	Peak Hour Factor	Heavy Vehides (%)	Adj. Flow (vph)	Shared Lane Traffic (%)	Enter Blocked Intersection	Lane Alichment	Median Width(m)	Link Offset(m)	Crosswalk Width(m)	Two way Left Turn Lane	Headway Factor	Turning Speed (k/h)	Number of Detectors	Detector Lemplate	Trailing Detector (m)	Detector 1 Position(m)	Detector 1 Size(m)	Detector 1 Type	Detector 1 Channel	Detector 1 Extend (s)	Detector 1 Queue (s)	Detector 1 Delay (s)	Detector 2 Position(m)	Detector 2 Size(m)	Detector 2 Type	Detector 2 Channel	Detector 2 Extend (s)	Turn Type

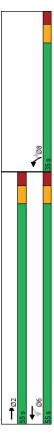
Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 2: Mall Entrance & Main St E

200624	uture Total 2031 PM Peak Hour
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	†	<u>/</u>	-	Ļ	•	•	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Protected Phases	2			9	∞		
Permitted Phases			9			80	
Detector Phase	2		9	9	∞	80	
Switch Phase							
Minimum Initial (s)	30.0		30.0	30.0	10.0	10.0	
Minimum Split (s)	37.0		37.0	37.0	35.0	35.0	
Total Split (s)	22.0		22.0	22.0	35.0	35.0	
Total Split (%)	61.1%		61.1%	61.1%	38.9%	38.9%	
Maximum Green (s)	48.0		48.0	48.0	28.0	28.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	3.0		3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	-3.0		-3.0	-3.0	-3.0	-3.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Recall Mode	Max		None	None	None	None	
Walk Time (s)	15.0				20.0	20.0	
Flash Dont Walk (s)	7.0				7.0	7.0	
Pedestrian Calls (#/hr)	0				0	0	
Act Effct Green (s)	51.1		51.1	51.1	14.8	14.8	
Actuated g/C Ratio	0.69		0.69	0.69	0.20	0.20	
v/c Ratio	0.48		69:0	0.52	0.40	0.32	
Control Delay	6.2		25.7	6.7	29.2	11.1	
Queue Delay	0.5		0.0	0.0	0.0	0.0	
Total Delay	6.7		25.7	6.7	29.2	11.1	
SOT	∢		O	∢	O	Ф	
Approach Delay	6.7			9.0	20.6		
Approach LOS	A			∢	O		
Intersection Summary							
Area Type:	Other						
Cycle Length: 90							
Actuated Cycle Length: 73.9	3.9						
Natural Cycle: 90							
Control Type: Semi Act-Uncoord	ncoord						
Maximum v/c Ratio: 0.69							
Intersection Signal Delay: 9.1	9.1			드	Intersection LOS: A	LOS: A	
Intersection Capacity Utilization 76.1%	zation 76.1%			2	U Level o	CU Level of Service D	
Analysis Period (min) 15							

Splits and Phases: 2: Mall Entrance & Main St E



Paradigm Transportation Solutions Limited

Synchro 10 Report Page 6

Paradigm Transportation Solutions Limited

Synchro 10 Report Page 7

200624 Future Total 2031 PM Peak Hour Queues 2: Mall Entrance & Main St E

•	NBR	126	0.32	11.1	0.0	11.1	3.6	16.8			726	0	0	0	0.17	
•	NBL	139	0.40	29.2	0.0	29.2	17.8	33.4	120.7		733	0	0	0	0.19	
ļ	WBT	1296	0.52	6.7	0.0	6.7	38.0	63.6	249.6		2494	0	0	0	0.52	
>	WBL	180	69.0	25.7	0.0	25.7	12.3	9.95#		0.07	260	0	0	0	69.0	
†	EBT	1167	0.48	6.2	0.5	6.7	31.7	54.3	110.8		2437	739	0	0	69.0	
	Lane Group	Lane Group Flow (vph)	v/c Ratio	Control Delay	Queue Delay	Total Delay	Queue Length 50th (m)	Queue Length 95th (m)	Internal Link Dist (m)	Turn Bay Length (m)	Base Capacity (vph)	Starvation Cap Reductn	Spillback Cap Reductn	Storage Cap Reductn	Reduced v/c Ratio	

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

Lane Configurations									
## HER WBL WBT NBL NBR 1037 130 180 1296 139 126 130 120 1206 130 120 120 120 120 120 120 120 120 120 12		t	<u>/</u>	>	Ļ	€	•		
↑↑	Movement	EBT	EBR	WBL	WBT	NBL	NBR		
1037 130 180 1296 139 126 103 130 180 1296 139 126 2 12 1 6 8 13 18 0 0 0 0 0 0 0 0 0 100 1.00 1.00 1.00	Lane Configurations	₩		je-	*	r	¥		
1037 130 180 1296 139 128 2 12 1 6 3 18 2 0 0 0 0 0 0 0 0 100 1.00 1.00 1.00 1.0	Traffic Volume (veh/h)	1037	130	180	1296	139	126		
2 12 1 6 3 18 10 10 10 10 100 1100 1100 1100 1100 1103 1900 1900 1900 1900 1103 1900 1900 1900 1900 1103 1900 1900 1900 1900 1100 1.00 1.00 1.00 1.00 1.00 1.00 1.	Future Volume (veh/h)	1037	130	180	1296	139	126		
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Number	2	12	-	9	က	9		
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Initial Q (Qb), veh	0	0	0	0	0	0		
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Ped-Bike Adj(A_pb1)		00.1	9.1		0.1	00.1		
1833 1900 1900 1900 1900 1900 1900 1900 19	Parking Bus, Adj	1.00	1.00	00.1	00.1	1.00	1:00		
103 130 180 180 180 180 180 180 180 180 180 18	Adj Sat Flow, veh/h/ln	1883	1900	1900	1900	1900	1900		
100 100 100 100 100 100 100 100 100 100	Adj Flow Rate, veh/h	1037	130	180	1296	139	179		
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Adj No. of Lanes	7 50	0 0	- 5	7 5	- 6	- 6		
2269 284 376 259 320 291 0.71 0.67 0.71 0.67 0.71 0.71 0.18 0.18 2395 401 489 3705 1810 1615 1789 1813 489 1805 1810 1615 10.0 10.3 285 11.7 4.9 5.0 10.0 10.3 285 11.7 4.9 5.0 10.0 10.3 285 11.7 4.9 5.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	Peak Hour Factor	9	9.6	9.1	9.1	9.1	00.1		
2295 447 6259 3705 291 2296 401 489 3705 1810 1615 579 588 180 1296 139 126 1789 1813 489 1805 1810 1615 1789 1813 489 1805 1810 1615 100 10.3 18.2 11.7 4.9 5.0 1268 1285 376 2559 326 291 1268 1285 376 2559 326 291 1268 1285 376 2559 326 291 120 1.00 1.00 1.00 1.00 1.00 4.5 4.7 10.7 4.8 262 282 1.2 12 0.9 0.2 0.9 1.0 1.0 0.0 0.0 0.0 0.0 4.5 4.7 10.7 4.8 262 282 1.2 5.9 11.7 4.9 27.1 27.3 A A B A C C 1 167 4.9 2.5 5.8 2.5 2.3 1 2 3 4 5 6 6 5 6 7 5 8 5 6 7 1 2 3 4 5 7 1 2 3 4 5 7 1 1 2 3 4 5 7 1 1 2 3 4 5 7 1 1 2 3 4 5 7 1 1 2 3 4 5 7 1 1 2 3 4 5 7 1 1 2 3 4 12.3 30.5 11.1 12 12 12 12 12 1 1 2 12 12 12 1 1 2 12 12 12 1 1 2 12 12 12 1 1 2 13 12.1	Percent Heavy Ven, %	_ 0000	0 ,	0 9	0	0 0	0 ;		
2.295 401 489 3705 1810 1615 679 588 180 1296 139 126 1100 10.3 18.2 11.7 4.9 5.0 10.0 10.3 18.2 11.7 4.9 5.0 10.0 10.3 18.2 11.7 4.9 5.0 10.0 10.3 18.2 11.7 4.9 5.0 10.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	Cap, veh/h	2269	284	376	2559	326	291		
1789 188 180 1296 139 1281 1789 1813 182 173 489 1805 1810 1615 100 10.3 182 17.7 4.9 5.0 10.0 1.0.3 28.2 17.7 4.9 5.0 1.0.0 1	Sat Flow veh/h	3295	401	489	3705	1810	16.15		
1789 1813 489 1805 1810 1615 100 100 103 285 117 49 50 100 100 103 285 117 49 50 100 103 285 117 49 50 100 103 285 117 49 50 100 100 122 100 100 100 100 100 100 10	Gm Volume(v) veh/h	579	288	180	1296	130	126		
100 103 18.2 11.7 4.9 5.0 100 10.3 18.2 11.7 4.9 5.0 100 10.3 28.5 11.7 4.9 5.0 122 1.00 1.00 1.00 1.00 1268 1285 376 2569 326 291 1268 1285 376 2569 780 696 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Gro Sat Flow(s) veh/h/ln	1789	1813	489	1805	1810	1615		
10.0 10.3 28.5 11.7 4.9 5.0 0.2 1.00 1.00 1.00 1.00 1.00 1.00 1.0	O Serve(a s). s	10.0	10.3	18.2	11.7	6.4	2.0		
1288 1285 376 2599 100 1.00 0.46 0.48 0.48 0.51 0.599 326 291 0.46 0.48 0.48 0.51 0.599 326 291 0.46 0.48 0.51 0.599 326 291 0.48 0.48 0.51 0.599 326 291 0.48 0.48 0.51 0.49 0.51 0.00 1.00 1.00 1.00 1.00 1.00 1.00	Cycle Q Clear(q c), s	10.0	10.3	28.5	11.7	4.9	2.0		
1268 1285 376 2559 326 291 0.43 0.44 0.46 0.46 0.48 0.51 0.43 0.43 0.44 0.45 0.46 0.46 0.46 0.48 0.51 0.43 0.43 0.44 0.45 0.46 0.46 0.46 0.48 0.51 0.49 0.49 0.49 0.49 0.49 0.49 0.49 0.49	Prop In Lane		0.22	1:00		1:00	1.00		
0.46 0.46 0.48 0.51 0.43 0.43 1708 1268 376 2593 780 696 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Lane Grp Cap(c), veh/h	1268	1285	376	2559	326	291		
1268 1285 376 2559 780 696 100 1.00 1.00 1.00 1.00 1.00 1.00 1.00	V/C Ratio(X)	0.46	0.46	0.48	0.51	0.43	0.43		
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Avail Cap(c_a), veh/h	1268	1285	376	2559	780	969		
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1:00		
4.5 4.7 10.7 4.8 26.2 26.2 1.0 10.0 0.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 0.0 0.0 0.0 1.1 2 5.8 2.5 2.3 1.2 5.9 11.7 4.9 27.1 27.3 1.2 5.8 2.5 2.3 1.3 4 6 6 7 1.4 2 3 4 5 6 5.0 5.0 8 7.0 7.0 8 7.0 7.0 1.1 2 3 4 5 6 1.2 3 4 8.0 1.2 3 4.8.0 1.2 3 4.8.0 1.2 3 4.8.0 1.2 3 4.8.0 1.2 3 4.8.0 1.2 3 4.8.0 1.2 3 4.8.0 1.2 3 4.8.0 1.2 3 4.8.0 1.2 3 4.8.0 1.2 1.2 3 30.5	Upstream Filter(I)	1:00	1.00	1:00	1:00	1.00	1:00		
112 12 0.9 0.2 0.9 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Uniform Delay (d), s/veh	4.5	4.7	10.7	4.8	26.2	26.2		
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Incr Delay (d2), s/veh	1.2	1.2	6:0	0.2	6.0	0:1		
In 5,2 5,4 2,5 5,8 2,5 2,3 7,1 5,7 5,9 11,7 4,9 2,7,1 2,7,3 7,1 2,7 3,1 1,6 7,1 1,7 1,7 1,7 1,7 1,7 1,7 1,7 1,7 1,7	Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
5,7 5,9 11,7 4,9 27,1 27,3 4,6 5,6 7 1,6 7 7,0 8,7 7,0 8,7 7,7 8,9 8,7 7,0 8,7	%ile BackOfQ(50%),veh/ln	5.2	5.4	2.5	2.8	2.5	2.3		
1167 1476 286 5.8 5.8 5.7 272 5.8 5.7 272 5.9 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	LnGrp Delay(d),s/veh	2.7	ა ა. <	11.7 a	4 დ <	27.1	27.3		
5.8 5.7 27.2 A A C C 7 1 2 3 4 5 6 7 2 2 6 6 7 5 55.0 55.0 8 7.0 7.0 8 7.0 7.0 11), s 48.0 48.0 11), s 12.3 12.1	Approach Vol. veh/h	1167	:		1476	265			
A A C 1 2 3 4 5 6 7 2 8 6 7 s 550 sx, s 480 11), s 12,3 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Approach Delay, s/veh	2.8			5.7	27.2			
s 55.0 6 7 s 7.0 7.0 sx), s 48.0 48.0 11), s 12.3 30.5 7.7 7.0 7.0 7.0 7.0 7.0 7.0 7.0	Approach LOS	⋖			⋖	O			
s 55.0 56.0 s 7.0 56.0 xy, s 48.0 48.0 11), s 12.3 30.5 7.7	Timer	-	2	က	4	2	9	7	000
s 550 550 s 7.0 57.0 xx), s 48.0 48.0 11), s 12.3 30.5 77	Assigned Phs		2				9		ω ω
s 7.0 7.0 7.0 7.0 xxl, s 48.0 48.0 48.0 48.0 10.3 30.5 12.1 12.1 12.1	Phs Duration (G+Y+Rc), s		22.0				25.0		16.9
xx), s 48.0 48.0 11), s 12.3 30.5 12.3 12.1	Change Period (Y+Rc), s		7.0				7.0		7.0
(1), s 12.3 30.5 12.3 12.1 27	Max Green Setting (Gmax), s		48.0				48.0		28.0
12.3 12.1	Max Q Clear Time (g_c+11), s		12.3				30.5		7.0
	Green Ext Time (p_c), s		12.3				12.1		1.1
	Intersection Summary								

Paradigm Transportation Solutions Limited

Synchro 10 Report Page 8

Lanes, Volumes, Timings 3: Busway/Wilson Dr & Main St E

200624 Future Total 2031 PM Peak Hour

	4	1	/	>	Į.	4	•	←	*	۶	→	*
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	,	₩		r	₩.		r	*	*-	r	\$	
Traffic Volume (vph)	96	927	135	131	1257	223	66	7	102	140	. ∞	108
Future Volume (vph)	96	927	135	131	1257	223	66	7	102	140	∞	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	35.0	55.0	0.0	0.0
Storage Lanes	-		0	-		0	-		-	-		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00				1.00					1.00	0.97	
Frt		0.981			0.977				0.850		0.860	
Fit Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1745	3472	0	1770	3455	0	1543	1863	1417	1728	1589	0
Fit Permitted	0.095	0.447	c	0.269	0.40	c	0.651	4000	7 777	0.753	7	c
Sald: Flow (periff)	+	2412	V V	000	2400	V V	(60)	200	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	502	800	V APS
Satd. Flow (RTOR)		38	3		36	3			102		108	3
Link Speed (k/h)		20			20			20			20	
Link Distance (m)		260.1			360.6			64.9			174.4	
Travel Time (s)		18.7			26.0			4.7			12.6	
Confl. Peds. (#/hr)	4					4				3		12
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 Vehides (%)	%0	5%	5%	5%	5%	%0	17%	5%	14%	1%	5%	%0
Adj. Flow (vph)	96	927	135	131	1257	223	66	7	102	140	∞	108
Shared Lane Traffic (%)	8	1062	c	124	1400	c	C	_	405	440	45	C
Enter Blocked Intersection	8 S	Z Z Z	2	2 2	<u> </u>	2	e N	- S	N N	<u>2</u> 2	2 2	2
Lane Alignment	P =	- t	Richt	- t	<u>_</u>	Richt	- H	#	Right	<u></u>	<u>_</u>	Richt
Median Width(m)	i	3.6	168	Ĭ	3.6	16		3.6	6	Š	3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.0
Turning Speed (k/n)	£ 5.	c	12	52	c	12	52	c	ر ک	£ 53	c	15
Detector Template	- 	Thri		4	Thru		- 	Zhru	Right	- J e	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	5.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	9.0		2.0	9.0		2.0	9.0	2.0	2.0	9.0	
Detector 1 Type	Ċ÷ĘX	C ļ Ē		Ci+Ex	CI+EX		CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		4. 0			4.0			4. 0			4. 0	
Defector 2 Size(m)		0.0			0.0			0.0			0.0	
Defector 2 Channel		Ž			ž.			ŽĮ.			¥	
Detector 2 Originies												

Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 3: Busway/Wilson Dr & Main St E

EBL EBT EBR pm+pt NA 2 2 2 2 5 0 40.0 10.0 64.0 11.1% 71.1% 5.0 48.0 10.0 64.0 11.1% 71.1% 5.0 58.0 2.0 2.0 -1.0 -2.0 -1.0 -2.0 10.0 60.1 60.1 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71 10.0	WBL 66 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	WBT WBR 0.0 NA 6 6 6 6 46.0 854.0 80.0% 44.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.	NBL NBT NA NA N	26.28.96 28.99 28.99 2.22.22.24.4.4.4.4.4.4.4.4.4.4.4.4	R SBL 4 8 4 4 8 8 4 4 8 8 4 4 8 8 7 8 9 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9	NA 4 4 4 4 4 4 4 4 4 4 4 6.0 28.9% 28.9% 28.9% 20.0 2.0 2.0 2.0 4.0 4.0 4.0
Extend (s) 0.0 Phases 5.2 Phases 5.2 Phases 5.2 Phases 5.2 Phases 6.2 Phase 6.3 Phase		0.0 NA 6 6 6 6 7 40.0 854.0 854.0 854.0 854.0 84.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0				0.0 NA 4 4 4 4 10.0 26.0 28.0 28.9% 20.0 20.0 4.0 4.0
Phases pm+pt NA hases 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		NA 6 6 6 5540 00.0% 480 4.0 2.0 2.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4		.,	100	A4 4 4 4 4 4 4 4 4 4 4 6 6 6 6 6 6 6 6 6
hases 5 2 hases 5 2 hase 6 400 (%) 11.1% 71.1% (%) 11.00 64.0 (%) 11.1% 71.1% (%) 11.00 64.0 hadjust (s) 3.0 4.0 hadjust (s) -1.0 -2.0 hadjust (s) -		6 6 6 740.0 6 6 740.0 740.0 6 740.0	8	No.	38	26.0 26.0 28.9% 20.0 20.0 20.0 20.0 20.0 4.0 4.0
Phases 5 2 see nital (s) 5.0 40.0 pipit (s) 10.0 46.0 (s) 10.0 64.0 (s) 10.0 64.0 (s) 11.1% 71.1% Green (s) 5.0 58.0 and (s) 2.0 2.0 Adjust (s) -1.0 -2.0 Time (s) 1.0 -2.0 Ti		6 40.0 46.0 54.0 54.0 54.0 54.0 4.0 4.0 4.0 4.0 Lag 4.0 1.20 4.0 4.0 4.0 4.0	2	2	38	10.0 26.0 26.0 28.9% 20.0 20.0 4.0 2.0 2.0 4.0 2.0 2.0 4.0
initial (s) 5.0 40.0 folial (s) 10.0 46.0 (s) 10.0 46.0 (s) 10.0 64.0 (s) 10.0		6 6 46.0 554	2	2	38	10.0 26.0 26.0 28.9% 20.0 4.0 2.0 4.0 4.0
sise sise sise sise sise sise sise sise		40.0 46.0 554.0 554.0 60.0% 4.0 2.0 2.0 2.0 4.0 1.0 4.0 1.0 4.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	2	8	78.7	10.0 26.0 26.0 28.9% 20.0 4.0 2.0 2.0 2.0 2.0 4.0
intial (s) 5.0 40.0 (s) polit (s) 10.0 46.0 (s) 40.0 (s) 40.0 (s) 40.0 (s) 40.0 (s) 40.0 (s) 40.0 (s) 5.0 58.0 (s) 5.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2		40.0 546.0 50.0% 48.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0		2	287	10.0 26.0 26.0 28.9% 20.0 4.0 2.0 2.0 2.0 4.0
ppit (s) 10.0 46.0 (%) 11.1% 71.1% Green (s) 5.0 58.0 file (s) 2.0 2.0 Adjust (s) -1.0 -2.0 Time (s) 4.0 4.0 Time (s) 4.0 4.0 Time (s) 6.0 4.0 Time (s) 6.0 4.0 Time (s) 6.0 4.0 Calls (#hr) 60.1 60.1 CRatio 0.71 0.71 CRatio 0.71 0.71 CRatio 0.40 0.0 y A A A A A A A A A A A A A A A A A A		46.0 5540 50.0% 48.0 48.0 2.0 2.0 2.0 4.0 Lag 4.0 4.0	2	2	22	26.0 26.0 28.9% 20.0 4.0 2.0 2.0 4.0
(%) 10.0 64.0 (%) 11.1% 71.1% Green (s) 5.0 5.80 e (s) 3.0 4.0 Adjust (s) -1.0 -2.0 Time (s) 4.0 4.0 Adjust (s) 4.0 4.0 Detain (s) 4.0 4.0 Adjust (s) 6.0 1 Adj		54.0 00.0% 48.0 4.0 2.0 2.0 -2.0 Lag 4.0 4.0 4.0	2	Š	2	26.0 28.9% 20.0 4.0 2.0 2.0 4.0
(%) 111% 711% 111% 111% 111% 111% 111% 11		90.0% 48.0 4.0 2.0 -2.0 4.0 Lag 4.0	2	2	2	28.9% 20.0 4.0 2.0 2.0 -2.0 4.0
Green (s) 5.0 5 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	48.0 4.0 2.0 -2.0 4.0 Lag	48.0 4.0 2.0 2.0 -2.0 4.0 Lag 4.0 A.0				20.0 4.0 -2.0 4.0
in et (s) 3.0 in et (s) 2.0 in et (s) -1.0 in et (s) 4.0 in et (s) 4.0 in et (s) 4.0 in et (s) 6.0 in et	4.0 2.0 -2.0 4.0 Lag	4.0 2.0 2.0 -2.0 4.0 4.0 4.0 Mone				4.0 -2.0 -4.0
Adjust (s) 2.0 Adjust (s) -1.0 Adjust (s) -1.0 Adjust (s) 1.0 Adjust (s) 1.0 Adjust (s) 3.0 Be	2.0 -2.0 4.0 Lag	2.0 -2.0 4.0 Lag 4.0 None				2.0
Adjust (s) -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0	-2.0 4.0 Lag	-2.0 4.0 Lag 4.0 None				4.0
Time (s)	4.0 Lag	4.0 Lag 4.0 None				4.0
Lead Dptimize? Lead 3.0 mone None None None None None None None N	Lag	Lag 4.0 None				
s) 3.0 None N None N None N None N 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		4.0 None				
s) 3.0 None N 11 11 11 11 11 11 11 11 11 11 11 11 11		4.0 None				
(hr) None None None None None None None None	4.0	None			0.4.0	4.0
my Other ActUncoord ActUncoord	None			Z	z	None
Inr) 60.1 6 0.71 C 0.71 C 0.71 C 0.9 9.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	30.0	30.0				7.0
(hr) 60.1 6 0.71 0 0.41 0 9.9 9.9 8.9 9.9 A A Act-Uncoord	10.0	10.0	13.0 13	5	.0 13.0	13.0
60.1 6 0.71 C 0.41 0 9.9 0 9.9 A A ActUncoord	0	0				0
0.71 C 0.41 0 9.9 0.0 0.0 0.9 9.9 A Acturoord Acturoord	52.2	52.2				16.7
mary Other O Series Ser	0.61	0.61				0.20
9.9 0.0 9.9 A A Other Cother Sength: 84.9 Emith Cother	0.43	69.0	0.48 0.	_	8 0.52	0.29
0.0 9.9 A A Other 0 1 1 1 2 1 3 1 3 1 3 1 3 1 3 3 3 3 3 4 4 4 4 4 5 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1	16.1	14.2				6.8
mary Other Other ami Act-Uncoord	0:0	0.0		0.0 0.0	0.0	0.0
mary Other Other analyse 4.9 mil Act-Uncoord	16.1	14.2				6. 6.
mary Other Other Days 84.9	В	В	Ω		A D	A
		14.3	23	23.0		24.6
Intersection Summary Area Type: Other Cycle Length: 90 Actuated Cycle Length: 84.9 Natural Cycle: 85 Control Type: Semi Act-Uncoord		ш		O		ပ
Area Type: Other Cycle Length: 80 Actualed Cycle Length: 84.9 Natural Cycle: 85 Control Type: Semi Act-Uncoord						
Cycle Length: 90 Actualed Cycle Length: 84.9 Natural Cycle: 86 Control Type: Semi Act-Uncoord						
Actuated Cyde Length: 84.9 Natural Cycle: 85 Control Type: Semi Act-Uncoord						
Natural Cycle: 85 Control Type: Semi Act-Uncoord						
Control Type: Semi Act-Uncoord						
Maximum v/c Ratio: 0.69						
Intersection Signal Delay: 12.8	Inte	Intersection LOS: B				
Intersection Capacity Utilization 91.8%	<u>ე</u>	ICU Level of Service F	ш			
Analysis Period (min) 15						

Splits and Phases: 3: Busway/Wilson Dr & Main St E

→ 0.2 64.8 → 0.5 → 0.5 10.8 → 0.6 10.8 → 0.4 → 0.6 10.8 → 0.4 → 0.6

Paradigm Transportation Solutions Limited

Queues 3: Busway/Wilson Dr & Main St E

200624 Future Total 2031 PM Peak Hour

	1	†	-	Ļ	•	←	•	۶	→	
Lane Group	EB	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	
Lane Group Flow (vph)	96	1062	131	1480	66	7	102	140	116	
v/c Ratio	0.41	0.43	0.43	69.0	0.48	0.02	0.28	0.52	0.29	
Control Delay	6.6	0.9	16.1	14.2	38.0	26.6	8.2	37.7	8.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0:0	0.0	0.0	0.0	
Total Delay	6.6	0.9	16.1	14.2	38.0	26.6	8.2	37.7	8.9	
Queue Length 50th (m)	4.3	31.8	11.3	84.3	12.1	1.0	0.0	21.5	1.1	
Queue Length 95th (m)	11.1	53.4	30.9	128.6	30.5	4.5	12.3	39.5	14.2	
Internal Link Dist (m)		236.1		336.6		40.9			150.4	
Turn Bay Length (m)	20.0		40.0				35.0	55.0		
Base Capacity (vph)	234	2470	308	2139	274	483	443	354	492	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.41	0.43	0.43	69.0	0.36	0.01	0.23	0.40	0.24	
Intersection Summary										

Paradigm Transportation Solutions Limited

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HCM 2010 Signalized Intersection Summary 3: Busway/Wilson Dr & Main St E

200624 Future Total 2031 PM Peak Hour

EBL EBT EBR WBL WBT WBR WBR FF FF FF FF FF FF FF						
96 927 135 131 1257 223 96 927 135 131 1257 223 96 927 135 131 1257 223 96 927 135 131 1257 223 96 927 135 131 1257 223 96 100 1.00 1.00 1.00 1.00 1.00 1.00 1.00	EBR WBL		NBL NBI	NBR	SBL	SBT SBR
96 927 135 131 1257 223 96 927 135 131 1257 223 96 927 135 131 1257 223 97 135 131 1257 223 98 927 135 131 1257 223 99 927 136 131 1257 223 90 927 136 131 1257 223 90 927 136 131 1257 223 90 100 100 100 100 100 100 90 927 136 131 1257 223 90 927 136 131 1257 223 90 927 136 131 1257 223 90 927 136 131 1257 223 90 927 136 131 1257 223 90 927 136 138 131 1257 223 90 927 137 1245 384 1044 1043 90 927 125 100 100 100 1100 1100 90 927 125 100 100 100 1100 1100 90 927 13 13 1245 384 1044 1043 90 928 043 043 043 070 071 90 929 1775 1722 256 256 90 929 1775 1722 256 256 90 929 1775 1722 256 256 90 929 1775 1722 90 929 1775 1722 90 929 1775 1722 90 929 1775 1722 90 929 1775 1722 90 929 1775 1722 90 929 1775 1722 90 929 1775 1722 90 929 1775 1722 90 929 1775 1722 90 929 1775 1772 9	*		_	*	×	
96 927 135 131 1257 223 0 100 100 100 100 100 100 100 100 100 100 100 0 2 2 2 2 0 301 2167 315 384 1775 312 1810 3100 688 0.89 0.89 1810 1770 1782 529 1775 1772 1810 1770 1782 529 109 301 1237 1245 384 1044 1043 311 1237 1245 384 1044 1043 311 1237 1245 384 1044 1043 311 1287 1246 384 1044 1043 311 1287 128 384 1044 1043 311 128	135 131		2 66	102	140	. ∞
5	135 131	7	2 66	102	140	8 108
1.00		3 16	3 8	18	7	4
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	0	0 0			0	
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00		0.99	1.00	1.00	86.0
1900 1865 1900 1865 1900 1865 1900 1865 1900 1865 1900 1865 1900 1865 1900 1865 1900 1865 1900 1865 1900 1900 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00					
90 927 135 131 1257 22.2 1.00 1.00 1.00 1.00 1.00 1.00 3.01 2167 315 32 2 0 3.01 2167 315 315 312 0.06 0.70 0.88 0.59 0.59 0.59 1.81 8.0 529 633 131 735 745 1.0 1770 1782 529 1775 1772 1.0 170 172 12.2 25.0 25.6 1.0 0 0.25 0.43 0.44 1043 0.31 1237 1245 394 1044 1043 0.12 0.43 0.43 0.44 0.70 0.71 0.10 1.00 1.00 1.00 1.00 1.00 1.00 1.00	1900 1863	•	1624 1863	•		-
100 100 100 100 100 100 100 100 100 100	135 131				140	801 8
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	0 .					
0 0 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.00 1.00		1.00 1.00	_	1.00	1.00 1.00
301 2167 315 384 1775 312 0.06 0.70 0.68 0.59 0.59 0.59 0.59 0.59 181 0.50 0.59 0.59 0.59 0.59 0.59 0.59 0.59	2 2					
1810 0.05 0.68 0.59 0.55	315 384					
1810 3100 451 529 3017 531 531 531 531 531 531 531 531 531 531	0.68 0.59		0.21 0.21	0.21		0.21 0.21
1810 1770 1782 524 524 145 1	451 529					111 1492
1810 1770 1782 559 1775 1772 116 110 112 122 250 256 110 112 122 250 256 110 112 122 250 256 1100 122 120 120 120 120 120 120 120 12	533 131		2 66	102	140	0 116
16 110 112 122 250 256 100 100 100 100 100 100 100 100 100 10	1782 529		_	_	1292	0 1603
1.00 11.2 13.9 25.0 25.6 1.00 23.0 3.0 3.0 3.0 1.237 1245 3.04 10.44 10.43 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	11.2 12.2		7.3 0.3	5.3	8.3	0.0 5.3
100 025 100 030 030 030 030 030 030 030 030 030	11.2 13.9				9.8	0.0
301 1237 1245 384 1044 1043 311 1237 1245 384 1044 1043 311 1237 1245 384 1044 1043 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	0.25 1.00			•	1.00	0
0.32 0.43 0.44 0.70 0.71 0.71 0.72 0.43 0.44 10.70 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1245 384	`	244 387			
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	0.43 0.34			0.35		
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	1245 384		29/ 4//			0 411
11.2 5.5 5.7 106 124 125 0.0 0.1 1.1 0.7 24 2.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	1.00		100	9.0	8.6	000
0.6 1.1 1.1 0.7 2.4 2.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	57 106					
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	11 07		1.5	10	1 1	
1.0 5.7 5.8 1.8 12.7 13.2 11.8 6.6 6.8 114 14.8 15.1 15.1 15.8 11.58 16.1 14.7 14.7 14.7 14.7 14.7 14.7 14.7 14	0.0 0.0		0.0 0.0		0.0	0.0 0.0
11.8 6.6 6.8 11.4 14.8 15.1 5 15.0 A B B B B B B B B B B B B B B B B B B	5.8			2.1	3.1	
1188 A B B B B 1611 7.1 14.7 A B C C C C C C C C C C C C C C C C C C	6.8 11.4				31.5	
1158 1611 7.1 14.7 A A B B 64.0 21.8 9.5 6.0 6.0 5.0 5 13.2 10.6 3.6 16.2 1.3 0.0	В		0	O	O	
7.1 14.7 A B B 2 4 5 64.0 21.8 9.5 6.0 6.0 5.0 S 58.0 20.0 5.0 s 13.2 10.6 3.6 16.2 1.3 0.0		_	208			256
1 2 3 4 5 2 4 5 64.0 218 9.5 6.0 6.0 5.0 8 58.0 20.0 5.0 13.2 10.6 3.6 16.2 1.3 0.0		7	32.7			30.8
1 2 3 4 5 6 6 6 6 6 6 6 6 8 9 6 8 6 8 6 8 6 8 6 8	A	Ω.	O			ပ
64.0 2.18 9.5 64.0 2.18 9.5 6.0 6.0 5.0 5 58.0 20.0 5.0 13.2 10.6 3.6 16.2 1.3 0.0	4		7 8			
64.0 21.8 9.5 6.0 6.0 5.0 5 58.0 20.0 5.0 13.2 10.6 3.6 16.2 1.3 0.0	4		8			
s 580 6.0 5.0 s 13.2 10.6 3.6 16.2 1.3 0.0	21.8		21.8			
s 58.0 20.0 5.0 s 13.2 10.6 3.6 16.2 1.3 0.0	0.9		0.9			
>11), s 13.2 10.6 3.6 s 16.2 1.3 0.0	20:0		20.0			
s 16.2 1.3 0.0	10.6		14.6			
	1.3		9.0			
HCM 2010 Ctrl Delay 14.4	14.4					
	œ					

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Lanes, Volumes, Timings 4: Drew Centre/Private Driveway & Main St E

200624 Future Total 2031 PM Peak Hour

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	F	‡	*	r	‡		F	£,			4	
Traffic Volume (vph)	0	1071	277	167	864	0	260	0	127	0	0	0
Future Volume (vph)	0	1071	277	167	864	0	260	0	127	0	0	0
Ideal Flow (vphpi)	333	96	3.5	33	36	3,6	33	3,6	3.5	3,6	3,6	3,6
Storage Length (m)	15.0	3	40.0	45.0	3	0:0	0.0	3	55.0	0:0	3	0.0
Storage Lanes	-		-	-		0	2		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.95				0.99	0.98				
Ŧ			0.850					0.850				
Fit Protected				0.950			0.950					
Satd. Flow (prot)	1837	3610	1521	1694	3610	0	3385	1588	0	0	1900	0
Flt Permitted				0.141			0.950					
Satd. Flow (perm)	1837	3610	1451	221	3610	0	3368	1588	0	0	1900	0
Right Tum on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			171					371				
Link Speed (k/h)		20			20			20			20	
Link Distance (m)		360.6			362.0			256.9			51.9	
Travel Time (s)		26.0			26.1			18.5			3.7	
Confl. Peds. (#/hr)			15	15			2		m	c		2
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 Vehides (%)	%0	%0	2%	3%	%0	%0	%0	%0	%0	%0	%0	%0
Adj. Flow (vph)	0	1071	277	167	864	0	260	0	127	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1071	277	167	864	0	260	127	0	0	0	0
Enter Blocked Intersection	8	8	8	2	2	8	8	8	2	8	8	ž
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			9.9			9.9	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.01	1.04	1.00	1.00	1.04	1.00	1.01	1.00	1.00	1.00
Turning Speed (k/h)	22		15	22		15	25		15	52		15
Number of Detectors	_	2	-	_	2		-	2		-	2	
Detector Template	Left	Thr	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	9.0	2.0	2.0	9.0		2.0	9.0		2.0	9.0	
Detector 1 Type	C÷EX	CI+EX	CI+EX	CI+EX	CI+EX		Ci+EX	Ci+EX		CI+EX	CI+EX	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		9.0			9.0			9.0			9.0	
Detector 2 Type		CI+EX			CI+EX			CI+EX			CI+EX	
Detector 2 Channel												

Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 4: Drew Centre/Private Driveway & Main St E

Participate		*	†	<i>></i>	/	ţ	4	•	←	*	۶	→	•
Perm NA Perm pm+pt NA Perm NA A A A A A A A A A A A A A A A A A A	Lane Group	BB	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Peim NA Peim pm+pt NA Peim NA Peim NA Peim NA Peim NA Peim Pht NA Peim	Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	Turn Type	Perm	ΑN	Perm	pm+pt	ΑĀ		Perm	Α̈́				
2 2 2 6 6 8 8 4 4 2 2 2 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Protected Phases	•	2	•	← (9		•	∞		4	4	
15.0 15.0 15.0 15.0 15.0 6.0 6.0 6.0 6.0 35.0 35.0 35.0 35.0 35.0 35.0 35.0 35	Permitted Phases	7		7	9			∞			4		
150 150 150 150 50 150 60 60 60 350 350 350 350 350 350 350 350 350 35	Detector Phase	2	2	2	_	9		∞	∞		4	4	
15.0 15.0 15.0 15.0 15.0 6.0 6.0 6.0 6.0 6.0 4.0 4.0 4.0 4.2 4.2 4.2 4.2 4.2 4.2 4.2 4.2 4.2 4.2	Switch Phase												
35.0 35.0 35.0 35.0 37.0 27.0 13.0 42.0% 42.0% 42.0% 15.0% 57.0% 30.0% 30.0% 13.0% 35.0 35.0 35.0 110 50.0 23.0 23.0 23.0 36.0 35.0 35.0 110 50.0 23.0 23.0 30.0% 36.0 35.0 35.0 110 50.0 23.0 30.0% 37.0 30.0 30.0 30.0 30.0 30.0 30.0 38.0 30.0 30.0 30.0 30.0 30.0 30.0 39.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0	Minimum Initial (s)	12.0	15.0	12.0	2.0	15.0		0.9	0.9		0.9	0.9	
420 420 420 150 570 300 300 130 420 420 420 420 450 570 300% 300% 300% 300% 350 350 350 350 350 360 300 300 300 420% 420% 420% 420% 420% 420% 420% 42	Minimum Split (s)	35.0	35.0	32.0	9.5	32.0		27.0	27.0		13.0	13.0	
42.0% 42.0% 45.0% 57.0% 30.0% 30.0% 13.0% 13.0% 13.0 10.0 10.0 10.0% 13.0 10.0 10.0% 13.0 10.0 10.0% 13.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	Total Split (s)	45.0	42.0	45.0	15.0	27.0		30.0	30.0		13.0	13.0	
350 350 350 310 500 230 230 60 360 350 350 350 110 500 230 230 230 60 370 30 30 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 1.00 10.00 0.00 0.00 0.00 1.00 10.00 0.00	Total Split (%)	42.0%	45.0%	45.0%	15.0%	27.0%		30.0%	30.0%		13.0%	13.0%	
40 40 40 30 40 40 40 40 40 40 40 30 30 30 30 30 30 30 30 30 30 30 30 30	Maximum Green (s)	35.0	35.0	35.0	11.0	20.0		23.0	23.0		0.9	0.9	
3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	Yellow Time (s)	4.0	4.0	4.0	3.0	4.0		4.0	4.0		4.0	4.0	
-30 -30 -30 -30 -30 -30 -30 -30 -40 -40 -40 -40 -40 -40 -40 -40 -40 -4	All-Red Time (s)	3.0	3.0	3.0	1.0	3.0		3.0	3.0		3.0	3.0	
140 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	Lost Time Adjust (s)	-3.0	-3.0	-3.0	0.0	-3.0		-3.0	-3.0			-3.0	
Lag Lag Lad 30 30 30 30 30 30 30 30	Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	Lead/Lag	Lag	Lag	Lag	Lead								
C-Max C-Max None None None None None None None None	Lead-Lag Optimize?												
C-Max C-Max None None None None None 7.0 1.0 0 0 0 0 0 0 7.0 1.1 0 0 0 0 7.0 1.2 0 0 0 0 7.0 1.2 0 0 0 0 7.0 0 0 0 0 0 0 7.0 0 0 0 0 0 0 7.0 0 0 0 0 0 0 7.0 0 0 0 0 0 0 7.0 0 0 0 0 0 7.0 0 0 0 0 0 7.0 0 0 0 0 0 7.0 0 0 0 0 0 7.0 0 0 0 0 0 7.0 0 0 0 0 0 7.0 0 0 0 0 0 7.0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 7.0 0 0 0 7.0 0 0 0 7.0 0 0 0 7.0 0 0 0 7.0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 0 7.0 0 0 0 0 7.0 0	Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	Recall Mode	C-Max	C-Max	C-Max	None	None		None	None		None	None	
21.0 21.0 21.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 1	Walk Time (s)	7.0	7.0	7.0		7.0		7.0	7.0				
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Flash Dont Walk (s)	21.0	21.0	21.0		21.0		13.0	13.0				
2.7 62.7 29.3 25.5 65.0 0.63 0.63 0.52 0.55 0.52 0.57 0.5 0.57 0.5 0.57 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	Pedestrian Calls (#/hr)	0	0	0		0		0	0				
83 0.63 0.29 (85 0.38 0.57 (87 10.4 31.8 (11.4 0.4 31.8 (11.4 C 2	Act Effct Green (s)		48.6	48.6	62.7	62.7		29.3	29.3				
55 0.38 0.57 0 1,4 10,4 31.8 1,8 10,0 0.0 1,4 10,4 31.8 1,4 0.7 1,4 11,4 C. L.	Actuated g/C Ratio		0.49	0.49	0.63	0.63		0.29	0.29				
1,4 10.4 31.8 10 0.0 0.0 10 0.0 0.0 10 0.0 0.0 11.4 C. E.	v/c Ratio		0.61	0.35	0.55	0.38		0.57	0.17				
10 00 00 00 118 118	Control Delay		22.3	89. 89.	16.4	10.4		31.8	0.5				
1.4 10.4 31.8 B B C 11.4 B B C C C C C C C C C C C C C C C C C	Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0				
B B C T14 B Hersection LOS: B ICU Level of Service C	Total Delay		22.3	8.8	16.4	10.4		31.8	0.5				
11.4 B Intersection LOS: B ICU Level of Service C	SOT		O	∢	Ω	Ω		O	∢				
B Intersection LOS: B ICU Level of Service C	Approach Delay		19.5			11.4			26.0				
	Approach LOS		В			Ф			O				
	Intersection Summary												
	Area Type:	Other											
	Cycle Lenath: 100												
	Actuated Cycle Length: 11	00											
	Offset 16 (16%), Referen	ced to phase	2:EBTL,	Start of C	reen								
	Natural Cycle: 85												
: 18.2 ization 71.5%	Control Type: Actuated-C	oordinated											
: 18.2 ization 71.5%	Maximum v/c Ratio: 0.61												
ization 71.5%	Intersection Signal Delay:	18.2			드	tersection	LOS: B						
Analysis Period (min) 15	Intersection Capacity Utili.	zation 71.5%			<u>○</u>	:U Level o	f Service	O					
	Analysis Period (min) 15												

Splits and Phases: 4: Drew Centre/Private Driveway & Main St E



Paradigm Transportation Solutions Limited

Synchro 10 Report Page 14

Queues 4: Drew Centre/Private Driveway & Main St E

200624 Future Total 2031 PM Peak Hour

ane Group ane Group Flow (vph) //c Ratio Control Delay Joueu Delay Joueu Ength Sch (m) Cherue Length Sch (m) Turn Bay Length (m) Base Capacity (vph) Base Capacity (vph)	EBT 1071 0.01 22.3 0.0 22.3 80.4 126.0 336.6	277 277 0.35 8.8 0.0 8.8 11.5 35.6 792	WBL 167 0.55 16.4 0.0 16.4 13.1 28.3 45.0	WBT 864 0.38 10.4 0.0 10.4 42.0 64.7 338.0	NBL 560 0.57 31.8 49.5 60.4	NBT 127 0.17 0.0 0.0 0.0 232.9 735	
Storage Cap Reducting	0	0	0	0	0	0	
Sedired v/c Ratio	061	0.35	0.51	0.38	0.56	0.17	

Paradigm Transportation Solutions Limited

HCM 2010 Signalized Intersection Summary 4: Drew Centre/Private Driveway & Main St E

ons eh/h) reh/h) T obT)	EBL	EBT	EBR	WBL	WBT	M/DD	IQIA	FCIA	NBR	SBI	SBT	SAR
ons reh/h) reh/h) obT)	ĸ-	**		,		WBK	NDL	NBI	-)		5
		T	¥	-	#		ř.	æ			4	
reh/h) r obT)	0	1071	277	167	864	0	260	0	127	0	0	0
obT)	0	1071	277	167	864	0	260	0	127	0	0	0
obT)	2	2	12	—	9	16	က	∞	18	7	4	14
obT)	0	0	0	0	0	0	0	0	0	0	0	0
. N. N.	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
	8.	1.00	1.00	1.00	00.1	1.00	1.00	9.	1.00	1.00	1.00	1.00
_	1900	1900	1810	1845	1900	0	1900	1900	1900	1900	1900	1900
h/h	0	1071	277	167	864	0	290	0	127	0 (0	0
	- 8	2 5	- 5	- 6	2 5	0 6	2 5	- 0	0 0	0 0	- 6	0 9
Peak Hour Factor	9.0	9.0	00.1	00.1	9.0	00.1	9.0	00.1	00.1	00.1	00.L	9.0
	22	2173	914	337	2530	o	913	0	352	0	0	0
heen	00:	09:0	09:0	90.0	0.70	0.00	0.22	0.00	0.19	00:0	0.00	0.00
Sat Flow, veh/h	650	3610	1519	1757	3705	0	3510	0	1607		0	
	0	1071	277	167	864	0	260	0	127		0.0	
,veh/h/In	650	1805	1519	1757	1805	0 0	1755	0	1607			
	0.0	16.8	8.0 0.0	3.7	4.0	0.0	8. 5	0.0	6.9			
r(g_c), s	0.0	16.8	8.9	3.7	4.	0.0	8. 6	0:0	6.9			
	3 5	1	3.5	9.6	000	9.0	9.6	•	00.1			
.ane Grp Cap(c), veh/h	2 2	2173	914	33/	2530	0 6	913	0 0	352			
	3 5	0.43	0.30	0.50	0.04 0.04	9.0	10.01	0.00	0.30			
Wall Cap(C_a), Vell/III	7 8	100	4 6	100	100	0 0	100	0 0	100			
	000	100	001	100	00.	000	8.0	000	100			
. s/veh	0.0	11.3	9.7	86	5.9	0.0	36.3	0.0	34.4			
	0.0	0.8	6:0	[0.1	0.0	0.8	0.0	9.0			
qe.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
/lu	0:0	9.8	3.9	4.8	4.7	0.0	7.3	0.0	3.1			
nGrp Delay(d),s/veh	0.0	12.1	10.5	10.9	0.9	0.0	37.1	0.0	35.1			
nGrp LOS		В	В	В	Α		D		D			
pproach Vol, veh/h		1348			1031			289				
Approach Delay, s/veh		11.7			8.9			36.7				
Approach LOS		മ			⋖			Ω				
imer	_	2	3	4	5	9	7	8				
	_	2				9		8				
	6.6	64.2				74.1		25.9				
	4.0	7.0				7.0		7.0				
s	11.0	35.0				20.0		23.0				
c+I1), s	2.7	18.8				11.4		16.8				
3reen Ext Time (p_c), s	0.3	9.3				0.6		2.0				
ntersection Summary												
HCM 2010 Ctrl Delay			15.7									
HCM 2010 LOS			ш									

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Lanes, Volumes, Timings 5: Thompson Rd & Main St E

200624 Future Total 2031 PM Peak Hour

200624 Future Total 2031 PM Peak Hour

	1	†	>	>	ţ	4	•	←	•	۶	-	*
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	*		r	*		F	A t		×	*	
Traffic Volume (vph)	327	595	254	442	539	29	282	624	243	29	895	181
Future Volume (vph)	327	595	254	442	539	29	282	624	243	29	895	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.6	3.6	3.3	3.6	3.6	3.3	3.6	3.6	3.3	3.6	3.6
Storage Length (m)	0.09		0.0	150.0		0.0	0.09		0.0	22.0		0.0
Storage Lanes	-		0	-		0	-		0	-		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ē		0.955			0.985			0.958			0.975	
Fit Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1745	3413	0	1728	3542	0	1728	3439	0	1711	3514	0
Fit Permitted	0.287			0.138			0.125			0.186		
Satd. Flow (perm)	257	3413	0	251	3542	0	227	3439	0	335	3514	0
Right Tum on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			10			22			21	
Link Speed (k/h)		20			20			09			09	
Link Distance (m)		362.0			250.3			278.6			217.9	
Travel Time (s)		26.1			18.0			16.7			13.1	
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 Vehides (%)	%0	%	%	%	%0	4%	%	%0	5%	5%	%0	%
Adj. Flow (vph)	327	292	254	442	539	29	282	624	243	29	895	184
Shared Lane Traffic (%)												
Lane Group Flow (vph)	327	849	0	442	298	0	282	867	0	29	1076	0
Enter Blocked Intersection	2	2	2	2	2	2	2	2	2	2	2	2
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.3			3.3			3.3			3.3	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	9.	1.00
Turning Speed (k/h)	22		15	25		15	25		15	22		15
Number of Detectors	-	2		-	2		~	2		-	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	9.0		2.0	9.0		2.0	9.0		2.0	9.0	
Detector 1 Type	Ç÷EX	Ċ÷ĘX		Ci+EX	CH-EX		CI+EX	C+EX		CI+EX	C+EX	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0:0	0.0		0:0	0.0		0:0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		9.0			9.0			9.0			9.0	
Detector 2 Type		CI+EX			CI+EX			CI+EX			CI+EX	
Detector 2 Channel		0			d			d			d	
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	bm+bt	N A		bm+pt	≨		pm+pt	₹		pm+pt	AN	
					١				١			

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Lanes, Volumes, Timings 5: Thompson Rd & Main St E

Lane Group Protected Phases Permitted Phases Detector Phase Switch Phase					,		-	L	k	+	•
Protected Phases Permitted Phases Detector Phase Switch Phase	EBL	EBT	EBR WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases Detector Phase Switch Phase	2	2	1	9		~	4		က	8	
Detector Phase Switch Phase	7		9			4			∞		
Switch Phase	2	2	_	9		7	4		က	∞	
Minimum Initial (s)	2.0	15.0	5.0	15.0		2.0	10.0		2.0	10.0	
Minimum Split (s)	9.5	32.0	9.5			9.5	32.0		9.2	32.0	
Total Split (s)	24.0	32.0	26.0	34.0		17.0	41.8		10.2	35.0	
Total Split (%) 21	21.8%	29.1%	23.6%	30.9%		15.5%	38.0%		9.3%	31.8%	
(s) u	20.0	25.0	22.0			13.0	34.8		6.2	28.0	
Yellow Time (s)	3.0	4.0	3.0			3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	3.0	1.0			1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	0.0	-3.0	0.0			0.0	-3.0		0.0	-3.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
	None	Max	None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		18.0		18.0			18.0			18.0	
Pedestrian Calls (#/hr)		0		0			0			0	
Act Effct Green (s)	45.7	28.0	53.0			48.0	39.8		37.1	31.0	
Actuated g/C Ratio	0.42	0.25	0.48			0.44	0.36		0.34	0.28	
	0.79	0.93	1.06	0.57		1.02	0.68		0.31	1.07	
	33.4	55.0	92.2			88.2	31.3		23.4	87.0	
Queue Delay	0.0	0.0	0.0			0.0	0.0		0.0	0.0	
Total Delay	33.4	22.0	92.2	33		88.2	31.3		23.4	87.0	
TOS	ပ	_	L			ш	O		ပ	ш	
Approach Delay		49.0		9.69			45.3			83.7	
Approach LOS		٥		ш			۵			ш	
Intersection Summary											
Area Type: Other	'n										
Cycle Length: 110											
Actuated Cycle Length: 110											
Offset 0 (0%), Referenced to phase 4:NBTL and 8:SBTL, Start of Green	nase 4:N	BTL and	8:SBTL, Start o	d Green							
Control Type: Actuated-Coordinated	ated										
Maximum v/c Ratio: 1.07											
Intersection Signal Delay: 59.2				Intersection LOS: E	LOS: E						
Intersection Capacity Utilization 108.5%	108.5%			ICU Level of Service G	of Service	ഗ					

5: Thompson Rd & Main St E Splits and Phases:



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200624 Future Total 2031 PM Peak Hour Queues 5: Thompson Rd & Main St E

		,,	_		0	_	"	m	0		10	_	_		7
→	SBT	1076	1.0	87.0	0.0	87.0	~140.6	#183.8	193.9		1005			_	1.07
۶	SBL	59	0.31	23.4	0.0	23.4	9.7	15.8		55.0	190	0	0	0	0.31
←	NBT	867	0.68	31.3	0.0	31.3	83.3	106.9	254.6		1282	0	0	0	0.68
•	NBL	282	1.02	88.2	0.0	88.2	~50.2	#104.9		0.09	276	0	0	0	1.02
ţ	WBT	298	0.57	35.5	0.0	35.5	60.2	80.4	226.3		1048	0	0	0	0.57
-	WBL	442	1.06	92.2	0.0	92.2	~93.0	#158.6		150.0	416	0	0	0	1.06
†	EBT	849	0.93	22.0	0.0	55.0	93.0	#132.5	338.0		912	0	0	0	0.93
4	EBL	327	0.79	33.4	0.0	33.4	44.7	0.89		0.09	451	0	0	0	0.73
	Lane Group	Lane Group Flow (vph)	v/c Ratio	Control Delay	Queue Delay	Total Delay	Queue Length 50th (m)	Queue Length 95th (m)	Internal Link Dist (m)	Turn Bay Length (m)	Base Capacity (vph)	Starvation Cap Reductn	Spillback Cap Reductn	Storage Cap Reductn	Reduced v/c Ratio

- Volume exceeds capacity, queue is theoretically infinite.

 Volume exceeds capacity, queue may be longer.

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

 Queue shown is maximum after two cycles.

HCM 2010 Signalized Intersection Summary 5: Thompson Rd & Main St E

Control Cont		1	†	<u> </u>	/	Ļ	4	•	—	4	۶	→	*
1.00 1.00	Movement	盟	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
37 586 284 442 539 59 282 624 243 59 895 37 596 254 442 539 59 262 243 59 895 10 0	Lane Configurations	<u>,-</u>	₩		je-	₩		jr.	₩		<u>,-</u>	4₽	
377 595 254 442 539 59 282 624 243 59 895 5 2 12 1 6 16 7 4 14 3 8 1 0 <td>Traffic Volume (veh/h)</td> <td>327</td> <td>595</td> <td>254</td> <td>442</td> <td>539</td> <td>29</td> <td>282</td> <td>624</td> <td>243</td> <td>29</td> <td>895</td> <td>181</td>	Traffic Volume (veh/h)	327	595	254	442	539	29	282	624	243	29	895	181
5 2 12 1 6 16 7 4 14 3 8 100 100 100 0	Future Volume (veh/h)	327	262	254	442	539	29	282	624	243	29	895	181
1,00	Number	2	2	12	-	9	16	7	4	14	က	00	18
1,00	Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
100	Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
1900 1881 1900 1881 1893 1900 1881 1890 1881 1897 1900 1881 1893 1900 1881 1897 1900 1881 1893 1900 1881 1897 1900 1881 1895 1900 1885 1897 1900	Parking Bus, Adj	1.00	1.00	1:00	1.00	1:00	1:00	1:00	1.00	1.00	1.00	1.00	1.00
377 596 254 442 539 59 282 624 243 59 895 1 2 0 1	Adj Sat Flow, veh/h/In	1900	1881	1900	1881	1893	1900	1881	1889	1900	1863	1897	1900
1	Adj Flow Rate, veh/h	327	292	254	442	539	29	282	624	243	29	895	181
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Adj No. of Lanes	-	2	0	-	2	0	_	2	0	-	2	0
0 1 1 1 0 4 1 0 4 1 0 4 1 0 6 2 2 0 0 4 1 0 0 4 1 0 0 4 1 0 0 4 1 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
459 622 266 424 970 106 277 915 356 271 842 0.16 0.25 0.23 0.20 0.27 0.12 0.28 0.33 0.04 0.28 327 435 444 102 2227 387 1774 598 327 435 444 442 296 302 282 443 424 59 540 1810 1787 1697 1792 1792 1792 1774 1802 1 424 59 540 1449 264 265 220 152 154 130 230 23 27 310 1 1449 264 265 220 152 154 130 230 23 27 310 310 310 310 310 310 310 310 310 310 310 310 310 310 310 310 310 <td>Percent Heavy Veh, %</td> <td>0</td> <td>_</td> <td>_</td> <td>_</td> <td>0</td> <td>4</td> <td>_</td> <td>0</td> <td>2</td> <td>2</td> <td>0</td> <td>_</td>	Percent Heavy Veh, %	0	_	_	_	0	4	_	0	2	2	0	_
18:10	Cap, veh/h	429	622	265	424	970	106	277	915	326	211	845	170
1810	Arrive On Green	0.16	0.25	0.23	0.20	0.30	0.27	0.12	0.36	0.33	0.04	0.28	0.25
327 435 414 442 296 302 282 443 424 59 540 1810 1787 1897 1792	Sat Flow, veh/h	1810	2443	1042	1792	3270	357	1792	2527	983	1774	2988	604
1810 1787 1697 1792 1798 1830 1792 1795 1716 1774 1802 144.9 264 265 22.0 15.2 15.4 13.0 23.0 23.3 2.7 31.0 1.00	Grp Volume(v), veh/h	327	435	414	442	296	302	282	443	424	29	240	536
149 264 265 220 152 154 130 230 233 2.7 310 143 264 265 220 152 154 130 230 233 2.7 310 100	Grp Sat Flow(s),veh/h/ln	1810	1787	1697	1792	1798	1830	1792	1795	1716	1774	1802	1790
14.9 26.4 26.5 22.0 15.2 15.4 13.0 23.3 2.7 31.0 150 456 456 457 453 54.3 27.0 65.0 62.1 21.0 450 455 453 454 27.2 650 62.1 21.0 60.7 1.09 0.96 1.04 0.55 0.56 1.02 0.68 0.68 0.28 1.06 50.2 455 43.2 424 533 543 277 650 62.1 214 508 1.00	Q Serve(g_s), s	14.9	26.4	26.5	22.0	15.2	15.4	13.0	23.0	23.3	2.7	31.0	31.0
1,00 0.61 1,00 0.61 1,00 0.67 1,00 0.67 1,00 0.08 0.58 1,00 0.00 <th< td=""><td>Cycle Q Clear(g_c), s</td><td>14.9</td><td>26.4</td><td>26.5</td><td>22.0</td><td>15.2</td><td>15.4</td><td>13.0</td><td>23.0</td><td>23.3</td><td>2.7</td><td>31.0</td><td>31.0</td></th<>	Cycle Q Clear(g_c), s	14.9	26.4	26.5	22.0	15.2	15.4	13.0	23.0	23.3	2.7	31.0	31.0
459 455 424 533 543 277 650 621 211 508 0.71 0.96 0.96 1.04 0.55 0.56 1.05 1.06 1.00	Prop In Lane	1.00		0.61	1.00		0.20	1.00		0.57	1.00		0.34
0,77 0,96 0,96 1,04 0,55 0,56 1,02 0,68 0,68 0,08 0,08 1,06 1,00 1,00 1,00 1,00 1,00 1,00 1,00	Lane Grp Cap(c), veh/h	459	455	432	424	533	543	277	650	621	211	208	202
502 455 432 424 533 543 277 650 621 244 508 1.00	V/C Ratio(X)	0.71	96.0	96.0	1. 2	0.55	0.56	1.02	0.68	0.68	0.28	1.06	1.06
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Avail Cap(c_a), veh/h	205	455	432	424	533	543	277	650	621	244	208	202
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
262 40.4 41.3 32.9 32.6 32.9 31.1 29.7 30.5 29.5 39.5 4.3 22.9 32.6 34.0 55.4 13.1 3 58.6 5.7 6.0 0.7 57.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Upstream Filter(I)	1.00	1.00	1:00	1.00	1:00	1:00	1:00	1.00	1.00	1.00	1.00	1.00
4.3 22.6 34.0 55.4 1.3 1.3 58.6 5.7 6.0 0.7 57.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Uniform Delay (d), s/veh	26.2	40.4	41.3	32.9	32.6	32.9	31.1	29.7	30.5	29.5	39.5	40.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Incr Delay (d2), s/veh	4.3	32.6	34.0	55.4	1.3	 5.	58.6	2.7	0.9	0.7	97.6	57.9
7.9 172 16.5 19.3 7.7 7.9 12.9 12.4 12.1 1.3 23.5 30.5 73.0 75.3 88.2 33.8 34.1 89.8 35.4 36.5 30.2 97.1 C E E F C C C F D D C F F C C C F D D C F F C C C F D D C C F F C C C C	Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0:0	0.1	0.0	0.0	0.0	0.0	0.0
305 730 753 882 338 34.1 898 354 36.5 30.2 97.1 C	%ile BackOfQ(50%),veh/ln	7.9	17.2	16.5	19.3	7.7	7.9	12.9	12.4	12.1	1.3	23.5	23.4
C E E F C C F D D C C C F D D C C C C F D D C C C C	LnGrp Delay(d),s/veh	30.5	73.0	75.3	88.2	33.8	84.1	89.8	35.4	36.5	30.2	97.1	97.9
1176 1040 1149 1	LnGrp LOS	ပ	Е	Ш	ш	ပ	ပ	Ь	D	٥	ပ	ш	ч
62.0 57.0 49.2 E	Approach Vol, veh/h		1176			1040			1149			1135	
1 2 3 4 5 6 7 1 2 3 4 5 6 7 26.0 32.0 82 43 214 366 17.0 22.0 25.0 6.2 34.8 20.0 27.0 13.0 24.0 28.5 4.7 25.3 16.9 17.4 15.0 0.0 0.0 0.0 4.3 0.4 3.0 0.0 65.7	Approach Delay, s/veh		62.0			27.0			49.2			94.0	
1 2 3 4 5 6 7 200 320 82 438 214 366 17 40 70 40 70 40 70 40 220 250 62 348 200 270 130 240 285 47 253 169 174 150 0.0 0.0 0.0 4.3 0.4 3.0 0.0 657	Approach LOS		ш			ш			۵			ш	
260 320 82 438 214 366 77 220 250 62 348 204 366 17.0 220 250 62 348 200 270 13.0 240 285 4.7 25.3 16.9 17.4 15.0 0.0 0.0 0.0 4.3 0.4 3.0 0.0 0.0 6.7 7 6.7 8.7 8.7 8.7 8.7 8.7 8.7 8.7 8.7 8.7 8	Timer	_	2	က	4	2	9	7	∞				
26.0 32.0 8.2 43.8 21.4 36.6 17.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 22.0 25.0 6.2 34.8 20.0 27.0 13.0 24.0 28.5 4.7 25.3 16.9 17.4 15.0 0.0 0.0 0.0 4.3 0.4 3.0 0.0 65.7	Assigned Phs	1	2	3	4	2	9	7	8				
4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 22.0 25.0 62 34.8 20.0 27.0 13.0 24.0 28.5 4.7 25.3 16.9 17.4 15.0 0.0 0.0 4.3 0.4 3.0 0.0 65.7 E.F.	Phs Duration (G+Y+Rc), s	26.0	32.0	8.2	43.8	21.4	36.6	17.0	35.0				
22.0 25.0 6.2 34.8 20.0 27.0 13.0 24.0 28.5 4.7 25.3 16.9 17.4 15.0 0.0 0.0 4.3 0.4 3.0 0.0 65.7 E.F.	Change Period (Y+Rc), s	4.0	7.0	4.0	7.0	4.0	7.0	4.0	7.0				
24.0 28.5 4.7 25.3 16.9 17.4 15.0 0.0 0.0 0.0 4.3 0.4 3.0 0.0 0.0 65.7 E.F.	Max Green Setting (Gmax), s	22.0	25.0	6.2	34.8 8.	20.0	27.0	13.0	28.0				
s 0.0 0.0 0.0 4.3 0.4 3.0 0.0 65.7 E	Max Q Clear Time (g_c+I1), s	24.0	28.5	4.7	25.3	16.9	17.4	15.0	33.0				
	Green Ext Time (p_c), s	0.0	0.0	0.0	4.3	0.4	3.0	0.0	0.0				
	Intersection Summary												
HCM 2010 LOS E	HCM 2010 Ctrl Delay			65.7									
	HCM 2010 LOS			ш									

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Paradigm Transportation Solutions Limited

Lanes, Volumes, Timings 6: Busway & Site Driveway

200624 Future Total 2031 PM Peak Hour

ane Group ane Configurations	EB	EBR	NBL	NBT	SBT	SBR	
Traffic Volume (vph)	8 8	00	00	<u>ج</u> ج	00	128	
deal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
ane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00	
						0.865	
It Protected	0.950						
Satd. Flow (prot)	1770	0	0	1805	0	1611	
It Permitted	0.950						
Satd. Flow (perm)	1770	0	0	1805	0	1611	
ink Speed (k/h)	20			20	20		
ink Distance (m)	29.9			58.4	64.9		
ravel Time (s)	4.3			4.2	4.7		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehides (%)	5%	5%	5%	100%	5%	2%	
Adj. Flow (vph)	88	0	0	31	0	128	
Shared Lane Traffic (%)							
-ane Group Flow (vph)	83	0	0	31	0	128	
Enter Blocked Intersection	2	8	8	8	8	%	
ane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(m)	3.6			0.0	0.0		
.ink Offset(m)	0.0			0.0	0.0		
Crosswalk Width(m)	4.8			4.8	4.8		
wo way Left Turn Lane							
leadway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Furning Speed (k/h)	52	15	25			15	
Sign Control	Stop			Free	Free		
ntersection Summary							
Area Type:	Other						
Control Type: Unsignalized							
Intersection Capacity Utilization 14.6%	ion 14.6%			⊇	U Level o	ICU Level of Service A	
Analysis Period (min) 15							

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- I	6: Busway & Site Driveway				Future Total 2031 PM Peak Hour
Intersection					
Int Delay, s/veh 6.5					
Movement EBL EBR	R NBL	L NBT	SBT	SBR	
L Su		•		×	
83			0	128	
83	0		0	128	
eds, #/hr 0			0	0	
Sign Control RT Channelized - None	de lee	None -	Lige	None	
0				0	
storage, #	,	0 -	٠		
0			0		
100 10	9		9 9	100	
	7 0	001. 7	7 0	128	
3			>	170	
A	1				
MINOTZ 16 16	Majori				
20					
16					
Critical Hdwy 6.84	ì	1			
Stg 1 -	,				
3 2		•			
3.52					
Pot Cap-1 Maneuver 1000		0 0			
- 1001					
+001 * ×		' '			
Mov Cap-1 Maneuver 1000		1			
1000					
Stage 1					
Approach	8	m			
trol Delay, s		0			
HCM LOS A					
Minor Lane/Major Mvmt NB	NBT EBLn1	_			
Capacity (veh/h)	- 1000	0			
HCM Lane V/C Ratio	- 0.083	3			
HCM Control Delay (s)	- 8.9	0			
HCM Lane LOS		< 0			
HCM 95th %tile Q(veh)	- 0.3	m			

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	tion: 1: Ontario St S/Ontario St N & Main St E
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Queuing and Blocking Report

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Movement	EB	EB	EB	EB	WB	WB	WB	BB	NB	NB	NB	SB
Directions Served	_	_	⊢	œ	_	_	TR	_	⊢	⊢	œ	-
Maximum Queue (m)	47.5	133.8	111.6	37.4	42.5	116.5	119.3	8.97	101.0	103.6	72.4	47.5
Average Queue (m)	41.7	76.3	64.2	3.0	41.5	110.4	110.5	39.7	61.1	56.3	38.2	41.7
95th Queue (m)	57.2	125.2	105.0	18.9	46.8	113.3	114.5	71.3	9.06	87.2	70.2	58.9
Link Distance (m)		133.0	133.0	133.0		108.2	108.2		322.4	322.4		
Upstream Blk Time (%)		2	0			30	53					
Queuing Penalty (veh)		0	0			217	210					
Storage Bay Dist (m)	40.0				35.0			0.07			0.59	40.0
Storage Blk Time (%)	19	27			41	47		-	4	က	~	17
Queuing Penalty (veh)	প্র	26			155	144		2	∞	တ	က	89

Intersection: 1: Ontario St S/Ontario St N & Main St E

Movement	SB	SB	SB	
Directions Served	⊥	⊢	æ	
Maximum Queue (m)	162.2	144.7	26.3	
Average Queue (m)	6.96	83.6	3.3	
95th Queue (m)	147.6	132.1	15.7	
Link Distance (m)	241.6	241.6	241.6	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)	46			
Queuing Penalty (veh)	88			

Intersection: 2: Mall Entrance & Main St E

108.2 251.1 240.3 240.3 127.6 70.0 222 244 8 8 0 70.0 52 24 70.0 52 244 8 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	irections Served Irections Served Iaximum Queue (m) verage Queue (m) 5th Queue (m)	T 76.4 37.8 70.1	TR 82.7 42.9 75.5	WB L 77.4 68.8 99.1	WB T 272.4 199.3 324.0	WB T 272.1 200.3 324.7	B15 T 153.5 56.3 202.5	B15 T 153.9 56.6 201.9	NB L 92.8 39.1 79.0	R 29.0 12.6 23.3	Ш
70.0	vistance (m) sam Blk Time (%)	108.2	108.2		251.1	251.1	240.3	240.3	127.6	127.6	
10	ng Penalty (veh)			20.07	222	244	00	∞	0		
	ge Blk Time (%)			9 9	52						

Queuing and Blocking Report

200624 Future Total 2031 PM Peak Hour

Intersection: 3: Busway/Wilson Dr & Main St E

Movement	8	B	B	WB	WB	WB	BB	BB	BB	SB	SB
Directions Served	_	_	TR	_	_	TK	_	⊢	œ	٦	TR
Maximum Queue (m)	47.6	2.96	112.0	47.4	139.7	134.5	40.8	11.6	29.3	47.0	34.0
Average Queue (m)	17.1	35.4	42.2	26.3	58.2	59.2	20.9	1.6	13.2	22.9	14.1
95th Queue (m)	37.7	91.1	99.4	51.2	105.0	105.6	36.9	7.4	25.2	39.7	24.9
Link Distance (m)		240.3	240.3		335.1	335.1	40.2	40.2			160.4
Upstream Blk Time (%)							2				
Queuing Penalty (veh)							-				
Storage Bay Dist (m)	20.0			40.0					32.0	22.0	
Storage Blk Time (%)	0	4		~	13				0	0	0
Queuing Penalty (veh)	0	4		∞	17				0	0	0

Intersection: 4: Drew Centre/Private Driveway & Main St E

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	
Directions Served	⊥	⊥	œ	_	⊢	⊢	٦	_	TR	
Maximum Queue (m)	291.9	297.2	47.5	52.3	74.4	77.4	86.1	74.1	52.9	
Average Queue (m)	154.9	159.0	38.4	25.9	32.0	35.7	53.5	45.0	16.4	
95th Queue (m)	318.5	325.4	63.9	46.9	62.5	64.5	75.8	62.9	37.0	
Link Distance (m)	335.1	335.1			334.9	334.9	239.5	239.5	239.5	
Upstream Blk Time (%)	2	2								
Queuing Penalty (veh)	6	12								
Storage Bay Dist (m)			40.0	45.0						
Storage Blk Time (%)	61	47	0	0	က					
Queuing Penalty (veh)	0	129	က	2	2					

Intersection: 5: Thompson Rd & Main St E

Movement	EB	EB	EB	WB	WB	WB	BB	NB	NB	SB	SB	SB
Directions Served	٦	⊢	TR	٦	⊢	TK	_	⊢	TR	٦	⊢	TR
Maximum Queue (m)	67.5	342.7	339.4	157.4	244.4	240.4	67.4	239.5	231.3	62.4	208.8	209.0
Average Queue (m)	629	299.1	300.9	139.9	184.8	164.6	64.5	164.2	149.1	33.7	206.0	206.0
95th Queue (m)	76.1	410.5	408.5	194.9	323.4	305.6	76.4	287.9	261.4	79.1	207.5	207.6
Link Distance (m)		334.9	334.9		233.6	233.6		263.1	263.1		201.3	201.3
Upstream Blk Time (%)		∞	13		25	2		~	0		9/	88
Queuing Penalty (veh)		48	8		0	0		0	0		0	0
Storage Bay Dist (m)	0.09			150.0			0.09			22.0		
Storage Blk Time (%)	54	29		61	~		29	က		0	78	
Queuing Penalty (veh)	72	194		164	4		210	10		0	46	

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Paradigm Transportation Solutions Limited

Queuing and Blocking Report

200624 Future Total 2031 PM Peak Hour

Intersection: 6: Busway & Site Driveway

Directions Served L T Maximum Queue (m) 18.3 5.9 Average Queue (m) 8.4 0.3 95th Queue (m) 14.7 3.4 Link Distance (m) 51.7 50.9 Queuing Penalty (veh) Storage Bix Time (%) Queuing Penalty (veh) Storage Bix Time (%) Queuing Penalty (veh) Storage Bix Time (%) Queuing Penalty (veh)	Movement	8	NB	
18.3 8.4 14.7 51.7 5	Directions Served	_	⊢	
8.4 14.7 51.7 5 ()	Maximum Queue (m)	18.3	5.9	
14.7	Average Queue (m)	8.4	0.3	
51.7	95th Queue (m)	14.7	3.4	
Upstream Blk Time (%) Queung Penalty (veh) Slorage Bay Dist (m) Slorage Blk Time (%) Queung Penalty (veh)	Link Distance (m)	51.7	50.9	
Queuing Penalty (veh) Shorage Bay Dist (m) Shorage Bu Time (%) Queuing Penalty (veh)	Upstream Blk Time (%)			
Storage Bay Dist (m) Storage BIK Time (%) Queuing Penalty (veh)	Queuing Penalty (veh)			
Storage BIk Time (%) Queuing Penalty (veh)	Storage Bay Dist (m)			
Queuing Penalty (veh)	Storage Blk Time (%)			
	Queuing Penalty (veh)			

Network Summary Network wide Queuing Penalty: 2682

Paradigm Transportation Solutions Limited

SimTraffic Report Page 3

Appendix I

City of Kitchener's TDM Checklist



PARTS TDM: City of Kitchener TDM Checklist

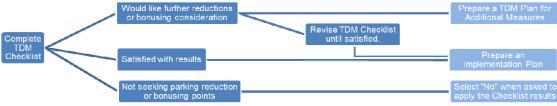
Applicant Name:	Date of Application (YY-MM-DD):
Site Location:	Landowner / Developer Name:
Zone:	TDM Checklist No. (filled by staff):

Using the TDM Report Checklist

The TDM Checklist is one component of submitting a TDM Report, and a tool intended for Developers' use when determining potential parking reductions in exchange for certain TDM measures. Derived from the Region of Waterloo's TDM Checklist and Parking Management Worksheet, this City of Kitchener TDM Checklist applies to all developments within Station Areas with the exception of residential developments with 6 units or less. Currently, this Checklist applies to the downtown area and the lands located within the Station Study Areas dentified in PARTS Phase 1, and supersedes the Region's Checklist and Parking Management Worksheet for any developments within those defined areas.

TDM Report Reference Guide

A Reference Guide has been prepared for submission of a TDM Report, and can be found appended to the PARTS Phase 2: TDM Strategy. The general process behind completing a TDM Report is depicted by the diagram below.



Specific requirements for an Implementation Plan or TDM Plan are included within the Reference Guide.

Instructions to Complete the TDM Checklist

To complete the TDM Checklist, fill out Table A and Table B. Once completed, review the Summary Results in Table C and Table D.

Table A is broken down into two sections. Please complete Table A1 with any applicable parking and bicycle parking requirements from Schedule 6 of the Zoning By-law for your site. Mixed-use developments may also be eligible for shared parking space reductions where the development will use unassigned parking spaces; if in Table A1 you specify parking requirements for multiple land uses, Table A2 will automatically calculate shared parking rates and a percent parking reduction.

TABLE A

SHARED PARKING REQUIREMENTS

Mixed-use developments may be eligible for parking space reductions based on shared parking ratios between uses. Please fill out the yellow boxes in the table below based on the Zoning By-Law requirements for parking and bicycle parking for your land use(s). Orange boxes will automatically show your results.

TABLE A1. Zoning E	By-law Requ	irements			-	TABLE A2. Share	ed Parking Rate	Breakdown		
Land Use	Parking	Class A Bike	Mon	ning	N	oon	After	noon		Evening
Lanu Use	Parking	Parking	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend
Office	0	0	0	0	0	0	0	0	0	0
Medical	0	0	0	0	0	0	0	0	0	0
Real Estate	0	0	0	0	0	0	0	0	0	0
Financial Institution	0	0	0	0	0	0	0	0	0	0
Retail	16	0								
Personal Services	0	0	1							
Art Gallery	0	0								
Museum	0	0	8	8	8	12	12	16	12	2
Repair Establishment	0	0								
Restaurant/Take-out Restaurant	0	0	0	0	0	0	0	0	0	0
Hotel (rooms)	0	0	0	0	0	0	0	0	0	0
Hotel (Function Space)	0	0	0	0	0	0	0	0	0	0
Residential - Resident	456	0	411	411	297	297	411	411	456	456
Residential - Visitor	114	0	23	23	23	23	57	69	114	114
Other	0	0	0	0	0	0	0	0	0	0
Total Required Parking	586	0	442	442	328	332	480	496	582	572
Shared / Unassigned Required Parking	582			Reduction ual Uses)	4	Parking (Ind	Over Unshared ividual Uses)	0.7		
Plaza Complex or Mixed- Office-Residential ^T	0	0		Reduction Mixed ^{TT})	0		Over Unshared za / Mixed TT)	#DIV/0!		

T Note: See Zoning By-Law S.6 to calculate parking requirement for Plaza / Mixed uses. | T Note: For further potential reductions, apply individual use rates in Table A1.

Shared Parking Summary	Yes or No ?	Resultant Parking Required
Would you like to apply Table A shared rates for a parking reduction?	No	586.0 Spaces
Note to such the control 4000/ of a cities would be bound by the cities of the cities	d al lilla a A a a car	b d b

Note: to apply these rates, 100% of parking must be shared between uses and unassigned. If you would like to use shared parking rates for only a portion of the required parking spaces, you must provide the proposed shared parking rates and applicable reductions in an Implementation Plan or TDM Plan within the TDM Report.



PARTS TDM: City of Kitchener TDM Checklist

TABLE B OPTIONAL TDM MEASURES

Certain TDM measures are required by the Zoning By-Law. Exceeding these minimum requirements is optional and can lead to parking reductions based on the discretion of the City of Kitchener. To complete this form, please fill out the yellow boxes in the table below with details about your development proposal. Please refer to the Urban Design Manual for feature design standards.

Measure	Features	Parking Reduction Available	To a Maximum Reduction of		Developer Proposes Provision of		Maximum Reduction	Bonusing Points
			Amount	Unit	Amount	Unit	Allowable	(TBD)
B1	Provision of indoor secure bicycle parking spaces beyond the minimum amount required by the Zoning By-law.	1 car space reduction per 5 bicycle spaces beyond minimum Zoning By-law requirement.	10%	of total parking required		Bicycle Spaces beyond minimum required	0	
B2	Non-residential uses: provision of shower and change facilities at an amount of not less than 13sqm in equal proportion of male and female facilities (Note: maximum reduction amount calculated based on required bicycle parking).	2 car space reduction for each additional shower facility provided at (13sqm).	0	parking space(s)	0	sqm of shower / change facilities	0	
B3*	Non-residential (office) uses: Provision of 1 car share vehicle and dedicated parking space in a priority location that is publically accessible for a development with at least 25 required parking spaces, and 1 additional car share vehicle and dedicated parking space for every 50 additional required parking spaces. (Note: maximum reduction amount calculated based on required parking).	4 car space reduction for each car share vehicle and dedicated parking space provided	0	parking space(s)	0	Non-residential car share vehicle(s) and Space(s)	0	
	Residential uses: Provision of 1 car share vehicle and dedicated parking space in a priority location that is publically accessible unless it is a private shared vehicle for every 75 dwelling units. (Note: maximum reduction amount calculated based on required parking).	4 car space reduction for each car share vehicle and dedicated parking space provided	28	parking space(s)		Residential car share vehicle(s) and Space(s)	0	
В4	Non-residential uses: Provision of ride share parking spaces in a priority location.	3 car space reduction for each ride share space provided	5%	of total parking required	0	Priority Car Pool Spaces	0	
B5	Provision of active uses at-grade along street frontages.	1% car space reduction	1%	of total parking required	✓ Yes	Check "Yes" (left) if you will provide	4	
B6*	The building owner/occupant will provide fully subsidized transit passes for all occupants for a period of two years.	10% car space reduction	10%	of total parking required	Yes	Check "Yes" (left) if you will provide	0	
В7	Building owner/occupant agrees to charge for parking as a separate cost to occupants.	10% car space reduction	10%	of total parking required	✓ Yes	Check "Yes" (left) if you will provide	47	
B8*	Employment Uses: Building owner/occupant agrees to join Travelwise (TMA) that provides ride matching services for car/vanpooling and emergency ride home options.	10% car space reduction	10%	of total parking required	Yes	Check "Yes" (left) if you will provide	0	
В9	Enhanced bus shelters with seating are provided at the transit stop immediately adjacent to the development in consultation with the City of Kitchener and the Region of Waterloo.	Not Applicable for parking reduction	Can only be applied to bonusing consideration		Yes	Check "Yes" (left) if you will provide	0	
B10	Provide television monitors in visible and accessible locations on site and in adjacent transit stops to allow to City of Kitchener and the Region of Waterloo to display information regarding public transportation.	Not Applicable for parking reduction	Can only be applied to bonusing consideration		Yes	Check "Yes" (left) if you will provide	0	
B11	Provision of bicycle self-service station equipped with tools necessary to perform basic repairs and maintenance	Not Applicable for parking reduction	Can only be applied to bonusing consideration		Yes	Check "Yes" (left) if you will provide	0	
	25% to 49% of required parking is located underground or in a structure		Can only be applied to bonusing consideration Select only one option (right)		Yes	Check "Yes" (left) if you will provide	0	
B12	50% - 74% of required parking is located underground or in a structure A minimum of 75% of required parking is located underground or in	Not Applicable for parking reduction			Yes	Check "Yes" (left) if you will provide Check "Yes" (left) if	0	
	a structure				Yes	you will provide	0	
B13	Non-residential use: Implements paid parking system, where price is set greater than the cost of a monthly transit pass, on all or part of the site (e.g. parking permits, paid parking near main entrances, enabled by gate and transponder access, or Pay & Display stations).	1% car space reduction for every 10% of parking spaces under a paid parking system	10%	of total parking required	0%	% of total parking spaces under paid parking system	0	

* If you have selected Measures B3, B6 or B8 for a parking reduction, you must demonstrate to the satisfaction of the Director of Transportation Services that you will be able to achieve the proposed TDM measure, including any ongoing programming or management that may be required for program success.

TABLE C	ABLE C POTENTIAL PARKING REDUCTION SUMMARY			TABLE D	BONUSING POINT SCORE SUMMARY *		
Displayed below are the potential reductions to required parking s based on the amounts entered into Table A and Table B			es available	le If you achieved a Bonusing Points score greater than X, you may be eligible for bonusing. Please contact City of Kitchener staff for more details.			
Original # Par	king Spaces Required:	586	0	Total Bonusing Points Achieved 0		0	
Shared Parking Reduction ^P :		0	0	Eligible for Bonusing Consideration?		No	
Parking Redu	ction for TDM Measures B1-B12:	51	0	*Approach to bonusing to be determined by City staff		taff	
Total Parking	Reduction:	51	0				
Resultant Par	king Requirement:	535	0	1			
PERCENT R	EDUCTION	9	#DIV/0!				

^P Note: If applicable, Parking Reductions for Plaza / Mixed-Use are noted in brown

Would you like to apply Table C rates for a parking reduction?

Select an Option	
Yes	

NEXT STEPS

Thank you for completing the TDM Checklist. Please select whether you would like to apply for a potential parking reduction at the bottom of this page. Refer to the TDM Report Reference Guide for submission requirements to City of Kitchener Staff. If you would like to achieve a greater parking reduction than may be considered through the TDM Checklist, you may develop a TDM Plan as set out in the TDM Report Reference Guide.

If you selected No, please submit your completed Checklist to City staff for review.

If you selected Yes, please refer to the TDM Report Reference Guide for submission requirements of an Implementation Plan or TDM Plan.