25 Hillcrest Avenue & 3154 Hurontario Street City of Mississauga

Mixed Use Development
Urban Transportation Considerations

Prepared For: 33HC TAS LP, 33HC Corp., 3168HS LP and 3168HS Corp

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TABLE OF CONTENTS

1.0 INTRODUCTION 1

1.1 This Study 1

2.0 PROPOSED DEVELOPMENT 4

2.1 Development Uses 4

2.2 Transportation Improvements 5

2.2.1 Pedestrian Crossing 5

2.2.2 Pick-up / Drop-off Facilities 5

2.2.3 New North-South Road 5

2.2.4 Sight Triangles 5

3.0 POLICY CONTEXT 9

3.1 Provincial and Regional Policies 9

3.1.1 Provincial Policy Statement 9

3.1.2 Places to Grow: Growth Plan for the Greater Golden Horseshoe 9

3.1.3 Metrolinx: The Big Move, Mobility Hub Guidelines, and 2041 Regional Transportation Master Plan 9

3.2 Municipal Policies 9

3.2.1 Mississauga Official Plan Review and Strategic Plan (2009) 9

3.2.2 Mississauga Transportation Master Plan (2019) 10

3.2.3 Mississauga Parking Master Plan (2019) and Parking Regulations Study (2021) 11

3.2.4 Mississauga Cycling Master Plan (2018) 11

3.2.5 Vision Cooksville (2016) 11

3.2.6 Hurontario / Main Street Corridor Master Plan (2020) 12

3.2.7 Downtown Cooksville Official Plan Amendment 12

4.0 AREA TRANSPORTATION CONTEXT 13

4.1 Area Road Network 13

4.1.1 Existing Road Connections 13

4.2 Area Transit Context 18

4.2.1 Existing Transit Connections 18

4.2.2 Planned Transit Connections 19

4.3 Area Active Transportation Network 21

4.3.1 Pedestrian Connections 21

4.3.2 Cycling Connections 21

5.0 VEHICULAR PARKING CONSIDERATIONS 23

5.1 Zoning By-law Vehicular Parking Requirements 23

5.2 Proposed Parking Standards 25

5.3 Appropriateness of Parking Standards 26
5.3.1 Residential Parking 26
5.3.2 Non-residential Parking 36
5.4 Vehicle Parking Supply 43
5.5 Vehicular Parking Summary 43

6.0 BICYCLE PARKING CONSIDERATIONS 45
6.1 Zoning By-law Bicycle Parking Requirements 45
6.2 Bicycle Parking Supply and Access 46

7.0 LOADING CONSIDERATIONS 47
7.1 Zoning By-law Loading Requirements 47
7.2 Loading Supply and Access 47
7.3 Loading Facility Arrangements 48
7.3.1 Operations and Manoeuvring 48
7.3.2 Height Clearances 48
7.4 Loading Summary 48

8.0 TRANSPORTATION DEMAND MANAGEMENT 49

9.0 MULTIMODAL TRAVEL DEMAND FORECASTING 51
9.1 Residential Travel Demand 51
9.1.1 Residential Person Trip Generation 51
9.1.2 Residential Mode Splits 52
9.1.3 Residential Multimodal Forecasts 52
9.2 Retail Travel Demand 53
9.2.1 Retail Person Trip Generation 53
9.2.2 Existing Retail Mode Splits 55
9.2.3 Retail Multi-modal Forecasts 55
9.3 Office Travel Demand 56
9.3.1 Office Person Trip Generation 56
9.3.2 Existing Office Mode Splits 57
9.3.3 Office Multi-modal Forecasts 58
9.4 Community Centre Travel Demand 58
9.4.1 Community Centre Person Trip Generation 58
9.4.2 Existing Community Centre Mode Splits 59
9.4.3 Community Centre Multi-modal Forecasts 59
9.5 Internal Trip Capture 60
9.6 Total External Site Travel Demand 62

10.0 VEHICULAR TRAFFIC VOLUME FORECASTING 64
10.1 Existing Traffic Volumes 64
10.1.1 Recent Data Collection 64
10.1.2 Pre-Pandemic Volume Calibration 64
10.1.3 Cooksville GO Traffic Forecasts 65
10.1.4 Resultant Baseline Existing Traffic Volumes 66
10.2 Future Background Traffic Volumes 68
10.2.1 Background Development Traffic Allowances 68
10.2.2 Corridor Growth Calibration 69
10.2.3 Adjustments for Future Road Network 69
10.2.4 Resultant Future Background Traffic Volumes 70
10.3 Site Traffic Volumes 73
10.3.1 Existing Site Traffic Volumes 73
10.3.2 Total Site Traffic Volumes 73
10.3.3 Net New Site Traffic Volumes 74
10.3.4 Site Traffic Volume Figures 74
10.3.5 Site Trip Distribution 74
10.4 Future Total Traffic Volumes 82

11.0 TRAFFIC OPERATIONS ANALYSIS 84
11.1 Analysis Methodology 84
11.2 Modelling Input and Calibration Parameters 85
11.3 Analysis Scenarios 86
11.4 Signalized Intersection Analysis 87
11.4.1 Hurontario Street / Fairview Road East & West 87
11.4.2 Hurontario Street / John Street 88
11.4.3 Hurontario Street / Hillcrest Avenue / Kirwin Avenue 89
11.4.4 Hillcrest Avenue / GO Access Road 90
11.4.5 Hillcrest Avenue / Private Access Road 91
11.4.6 Confederation Parkway / Hillcrest Avenue 92
11.4.7 Hurontario Street / Dundas Street East & West 93
11.5 Unsignalized Intersection Analysis 94

12.0 TRANSIT TRAVEL ASSESSMENT 97
12.1 Area Transit Services 97
12.2 Transit Site Trip Assignment 97
12.2.1 Sensitivity Transit Mode Splits 97
12.2.2 Transit Site Trip Generation 98
12.2.3 Transit Site Trip Distribution 98

12.3 Transit Capacity Review 100
12.4 Accomodation of Transit Trips.....102

13.0 DEVELOPMENT PHASING 104

14.0 SUMMARY AND CONCLUSIONS 105

LIST OF TABLES

Table 1	Development Proposal	4
Table 2	City of Mississauga Zoning By-law 0225-2007	23
Table 3	City of Mississauga Zoning By-law 0225-2007 City Centre Parking Requirements	24
Table 4	Proposed Site-specific Minimum Parking Requirements	25
Table 5	Existing and Future Transit Service Area Analysis Comparison	29
Table 6	Comparison of Evolving Zoning By-law Parking Standards – Resident	34
Table 7	Non-residential Shared Parking Formula	37
Table 8	Comparison of Evolving Zoning By-law Parking Standards – Visitor	38
Table 9	Observed Residential Visitor Parking Demand	40
Table 10	Observed Community Centre Parking Demand	42
Table 11	Summary of Parking Rationale Ratios	44
Table 12	Mississauga Parking Regulations Study (City Centre)	45
Table 13	Zoning By-law 0225-2007 Minimum Loading Requirements	47
Table 14	Residential Proxies and Site Travel Demand	51
Table 15	Residential TTS Mode Splits	52
Table 16	Multimodal Residential Site Trips	53
Table 17	Retail Site Travel Demand	54
Table 18	Retail TTS Mode Splits	55
Table 19	Multi-modal Retail Site Trips	56
Table 20	First Principles Office Trip Generation	57
Table 21	Office TTS Mode Splits	57
Table 22	Multi-modal Office Site Trips	58
Table 23	Community Centre Site Travel Demand	59
Table 24	Multi-modal Community Centre Site Trips	60
Table 25	Internal Site Trip Capture	61
Table 26	External and Internal Trip Generation Summary	62
Table 27	Total Multimodal Site Trips	63
Table 28	Traffic Data Information	65
Table 29	GO Station Vehicle Trip Rates	66
Table 30	Background Developments List	68
Table 31	Corridor Growth Rates	69

Table 32 Existing Site Traffic Volumes 73
Table 33 Total Site Traffic Volumes 73
Table 34 Retail Pass-by and Primary Site Traffic Volumes 74
Table 35 Net New Site Traffic Volumes 74
Table 36 Residential Site Traffic Distribution 75
Table 37 Office Site Traffic Distribution 75
Table 38 Hurontario Street / Fairview Road Capacity Results 87
Table 39 Hurontario Street / John Street Capacity Results 88
Table 40 Hurontario Street / Hillcrest Avenue / Kirwin Avenue Capacity Results 89
Table 41 Hillcrest Avenue / GO Access Road Capacity Results 90
Table 42 Hillcrest Avenue / Private Access Road Capacity Results 91
Table 43 Confederation Parkway / Hillcrest Avenue Capacity Results 92
Table 44 Hurontario Street / Dundas Street Capacity Results 93
Table 45 Unsignalized Intersection Capacity Results 94
Table 46 Transit Site Trip Generation 97
Table 47 *Sensitivity* Transit Site Trip Generation 98
Table 48 Transit Site Trip Distribution 99
Table 49 Transit Route Assignment 100
Table 50 Transit Service Frequencies 101
Table 51 Transit Site Trips Per Vehicle 102
Table 52 Capacity Utilization of Transit Site Trips 103

LIST OF FIGURES

Figure 1: Site Location 2
Figure 2: Site Context 3
Figure 3: Site Key Plan 8
Figure 4: Area Road Network 16
Figure 5: Existing Lane Configuration and Traffic Control 17
Figure 6: Area Transit Network 20
Figure 7: Area Pedestrian Context / Area Cycling Context 22
Figure 8: Existing Transit Reach 31
Figure 9: Future Transit Reach 32
Figure 10: Baseline Existing Traffic Volumes 67
Figure 11: Background Growth Traffic Volumes 71
Figure 12: Future Background Traffic Volumes (2027 Horizon Year) 72
Figure 13: Residential Site Traffic Volumes 76
Figure 14: Retail Site Traffic Volumes 77
Figure 15: Office Site Traffic Volumes 78
Figure 16: Community Centre Site Traffic Volumes 79
Figure 17: Total Site Traffic Volumes 80
Figure 18: Net New Site Traffic Volumes 81
Figure 19: Future Total Traffic Volumes (2027 Horizon Year) 83

TABLE OF APPENDICES

Appendix A: Reduced Scale Architectural Plans

Appendix B: Sight Triangles

Appendix C: Visitor Parking Demand Data

Appendix D: Community Parking Demand Data

Appendix E: Vehicle Manoeuvring Diagrams

Appendix F: TTS Mode Split Queries

Appendix G: Trip Generation and Internal Trip Capture Calculations

Appendix H: Turning Movement Count Data

Appendix I: TTS Vehicle Trip Distribution Queries

Appendix J: GO Road Layout Master Plan

Appendix K: Existing Signal Timing Plans

Appendix L: Synchro Output Worksheets

Appendix M: TTS Transit Trip Distribution Queries

Appendix N: Sensitivity Multimodal Site Trip Generation (20% Auto Mode Shift

1.0 INTRODUCTION

BA Group is retained by 33HC TAS LP, 33HC Corp., 3168HS LP and 3168HS Corp. (herein referred to as "the client") to provide transportation advisory services in support of their proposed mixed-use development known as 25 Hillcrest Avenue and 3154 Hurontario Street (herein referred to as "the site" or "proposed development"). The site is located on the northwest quadrant of the Hillcrest Avenue / Hurontario Street intersection in the downtown area of the City of Mississauga. The site is also bound by John Street to the north and a private Metrolinx road (the "GO Access Road") to the west. The site location is illustrated in **Figure 1**.

The site is located within the Downtown Cooksville Character Area of Mississauga and is in close proximity to the existing Cooksville GO station. The existing conditions of the site comprise approximately 390 surface parking spaces and commercial uses (e.g., LCBO, The Beer Store, and Bairrada Churrasqueira Grillhouse). These uses will be replaced as part of the proposed development as described in **Section 2.0**. The site context is illustrated in **Figure 2**.

1.1 THIS STUDY

BA Group has prepared the following report based upon the following study scope:

- Review of the proposed development program and site plan;
- Documentation of existing transportation infrastructure and future improvements;
- Review of applicable transportation policy directives;
- Review of applicable vehicle parking, bicycle parking, and loading requirements;
- Outline of the proposed Transportation Demand Management (TDM) Plan;
- Multimodal travel demand forecasts for the site's proposed development programme;
- An analysis of traffic operations for the weekday morning and afternoon peak hour existing conditions, future background (without the proposed development), and future total (with the proposed development) scenarios within the proximate study area road network, including the following intersections:
    - Hurontario Street / Fairview Road East & West
    - Hurontario Street / John Street
    - Hurontario Street / Hillcrest Avenue / Kirwin Avenue
    - Hillcrest Avenue / GO Access Road
    - Hillcrest Avenue / Private Access Road
    - Confederation Parkway / Hillcrest Avenue
    - Hurontario Street / Dundas Street East & West
    - Hurontario Street / Agnes Street
    - Hurontario Street / Overflow GO Parking Lot
    - Hillcrest Avenue / Private Driveway
    - Adjacent private intersections on Metrolinx lands
    - Existing and future site driveways
- Outline of specific road improvements, if necessary, to mitigate site traffic impacts; and
- A review of the site-related transit capacity impacts and the ability for the planned transit network to accommodate expected ridership forecasts.



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FIGURE 1 SITE LOCATION



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FIGURE 2 SITE CONTEXT

2.0 PROPOSED DEVELOPMENT

2.1 DEVELOPMENT USES

The proposed development includes five (5) mixed-use buildings comprising the following uses:

- **Building A:** 491 residential units and 1,202 square metres of retail GFA
- **Building B:** 482 residential units and 2,284 square metres of retail GFA
- **Building C:** 444 residential units, 1,086 square metres of retail GFA, and 8,692 square metres of commercial GFA
- **Building D**: 440 residential units and 1,304 square metres of retail GFA
- **Building E:** 367 residential units, 394 square metres of retail GFA, and 6,216 square metres of community GFA

In total, the proposed plan includes 2,224 residential units (mix of market and affordable units), 6,270 square metres of retail GFA, 8,692 square metres of commercial GFA, and 6,216 square metres of community GFA.

The proposed plan is outlined in **Table 1** and illustrated in **Figure 3**. Reduced scale architectural plans are provided in **Appendix A** for reference.

TABLE 1 DEVELOPMENT PROPOSAL

Use		Proposed Development
Residential		1,592 1-Bedroom Units 524 2-Bedroom Units 108 3-Bedroom Unit 2,224 Total Units
Retail		6,270 square metres
Commercial		8,692 square metres
Community		6,216 square metres
Transportation Elements	Vehicle Parking Supply	1,994 spaces (1,452 residential and 542 shared visitor / non-residential spaces)
	Bicycle Parking Supply	2,189 spaces (1,914 long-term spaces and 275 short-term bicycle rings)
	Loading Supply	11 loading spaces
	Site Access	Via east-west Private Road off GO Access Road and north-south Private Road off Hillcrest Avenue and John Street
	Vehicle Parking Access	Via driveway off Private Roads at Buildings A and C
	Bicycle Parking Access	Via elevator at lobby (long-term and short term) and open access at-grade (short-term)
	Loading Access	Via driveway off Private Roads at each building

Notes:
1. Latest site statistics from SvN Architects and Planners received on May 30, 2022.

2.2 TRANSPORTATION IMPROVEMENTS

2.2.1 Pedestrian Crossing

There is an existing mid-block north-south pedestrian crossing of John Street, across from the proposed Building B. The purpose of this pedestrian crossing is to provide safe and convenient connection between the Cooksville GO Station and the existing site. The existing pedestrian crossing provides pavement markings, tactile walking surface indicators, and pedestrian crossing signs. Given the four-lane cross-section of John Street and the increased pedestrian activity expected, it is proposed that this pedestrian crossing be upgraded to a Pedestrian Crossover Level 2 Type B as per Ontario Traffic Manual Book 15, which includes additional pavement markings, overhead signage, and rectangular rapid flashing beacons.

2.2.2 Pick-up / Drop-off Facilities

Pick-up / drop-off ("PUDO") facilities are proposed at two key areas of the site to service the buildings.

One PUDO area will be a loop facility, located on the west side, which terminates the east-west Private Road provided off the GO Access Road. This PUDO facility will primarily serve the uses in Buildings A and E. This facility will be able to hold a capacity of approximately eight (8) vehicles.

The second PUDO area will be an on-street layby facility, located on both sides of north-south Private Road central to Buildings B, C, and D. This facility will be able to hold a capacity of approximately four (4) vehicles.

A total of approximately 12 PUDO / layby spaces will be provided on site to service the overall development. An additional six (6) PUDO / layby spaces are also proposed along the south side of John Street between Building A and Building B.

2.2.3 New North-South Road

To improve the porosity of the site and facilitate the movement of people, a new north-south publicly accessible private road (the "Private Road") connection is proposed, which extends from John Street in the north to Hillcrest Avenue in the south. In addition to provide an additional north-south crossing of the development block, it also provides parking and loading access away from the busier streets that bound the site. The north-south Private Road will provide access to the site's loading and parking facilities associated with Buildings B, C, and D.

2.2.4 Sight Triangles

In comments received by the City on the pre-application submission, the City requested the following sight triangles:

- A 15 metre sight triangle at the northwest corner of Hurontario Street and Hillcrest Avenue
- A 15 metre sight triangle at the southwest corner of Hurontario Street and John Street
- A 10 metre sight triangle at the northwest corner of Hillcrest Avenue and GO Access Road
- A 10 metre sight triangle at the southeast corner of John Street and GO Access Road

The development proposes to provide a 10-metre sight triangle at the intersections of Hurontario Street and Hillcrest Avenue, Hurontario Street and John Street, John Street and GO Access Road and a 6 metre sight triangle at Hillcrest Avenue and GO Access Road. The proposed sight triangles are illustrated in **Appendix B**.

Rather than conveying this property to the City, these sight triangles will be maintained through a surface easement agreement made with the City at the ground level. While the upper levels of the buildings encroach into the sight triangles in plan view, a vertical clearance of 7 to 8.5 metres is maintained, well beyond the typical 0 to 3 metre range above the road surface in which sight distances are required.

The 15 and 10 metre sight triangles at the corners of an arterial / collector road intersection and a collector / private road intersection, respectively, are an excessive requirement, far beyond what is actually required with respect to a sight triangle and results in a situation in which it is challenging to create an urban, walkable built form that supports sustainable modes of travel.

The Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads, June 2017* (the "TAC Guide") defines sight triangles in Section 9.9.2 as:

> *Specified areas along intersection approach legs and across their corners should be clear of obstructions that might block a driver's view of potentially conflicting vehicles. These specified areas are known as clear sight triangles.*

The TAC Guide goes on to state in Section 9.9.2.1 that:

> *The length of the legs of this triangular area, along both intersection roadways, should be such that drivers can see any potentially conflicting vehicles in both the horizontal and vertical plane in sufficient time to slow or stop before colliding within the intersection.*

The TAC Guide continues on in Section 9.2.2.1 to distinguish the need for sight triangles when traffic control devices (traffic signals or stop signs) are present vs. when they are not:

> *Although desirable at higher volume intersections, approach sight triangles like those shown in Figure 9.9.1 may not be needed for intersection approaches controlled by stop signs or traffic signals. In that case, the need for approaching vehicles to stop at the intersection is determined by the traffic control devices and not by the presence or absence of vehicles on the intersection approaches.*

This is logical as at a typical traffic signal, all approaches are controlled by the lights for their respective signal heads. A driver's decision to proceed through the intersection (other than left-turns or right-turns on red), is primarily based on whether the light is green or red, and not on the presence of vehicles on the other approaches. In a busy urban environment, such as the downtown Cooksville area, most drivers would likely operate on the assumption that there are almost always vehicles on the other approaches of the road.

The TAC Guide provides more detailed guidance for intersections with traffic signal control which it identifies as Case D in Section 9.9.2.3:

> *At signalized intersections, the first vehicle stopped on one approach should be visible to the driver of the first vehicle stopped on each of the other approaches. Left-turning vehicles should have sufficient sight distance to select gaps in oncoming traffic and complete left turns. Horizontal alignment of the roadway and the offset of opposing left turn lanes can have a significant impact on these sightlines (see Section 9.1.2.3 for more detail). Similar requirements must be satisfied for right turns. Apart*

from these sight conditions, there are generally no other approach or departure sight triangles needed for signalized intersections.

As properly designed signalized intersections, the intersections identified above provide sufficient sight distance for left and right turning vehicles. Consequently, as noted in the TAC Guide, approach or departure sight triangles are not required for signalized intersections, and the visibility guidelines are that the first vehicle on each approach is visible to the driver of the first vehicle stopped on each of the other approaches.

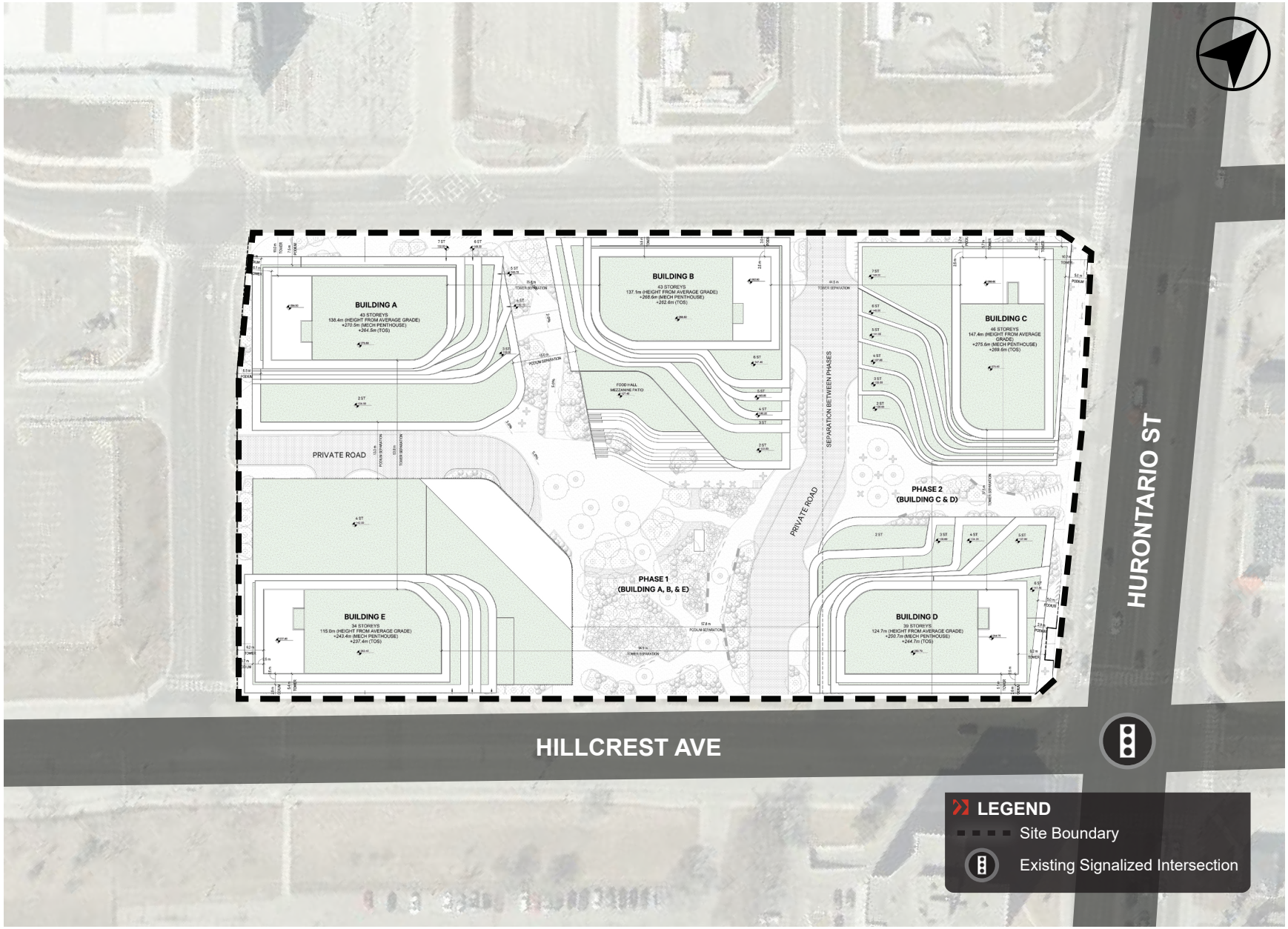

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FIGURE 3 SITE KEY PLAN

3.0 POLICY CONTEXT

The transportation-related policies and plans that directly or indirectly apply to the site on the municipal and provincial levels are detailed below.

3.1 PROVINCIAL AND REGIONAL POLICIES

3.1.1 Provincial Policy Statement

On a general basis, the *Provincial Policy Statement (2020)* encourages the provision of transportation demand management (TDM) strategies within new developments to increase the efficiency of existing and planned transportation infrastructure. It also encourages transit-oriented development and higher density that adopts a mix of uses to promote non-auto based travel. This suggests limiting the number of vehicular site trips, partially through reduced parking as proposed, which will support local transit investments within the site area.

3.1.2 Places to Grow: Growth Plan for the Greater Golden Horseshoe

The *Places to Grow: Growth Plan for the Greater Golden Horseshoe (Growth Plan)* outlines the importance of reducing reliance upon the automobile and promoting transit and active transportation. Planning along priority transit corridors, such as the Hurontario LRT corridor, shall be prioritized and planned for minimum density targets. The Growth Plan also highlights the importance of planning for the integration of active transportation within the existing and planned street network (e.g., complete streets) and within development projects. The site aims to provide greater active travel opportunities (e.g. provision of bicycle parking) and capitalize on transit infrastructure through higher density, transit-oriented development.

3.1.3 Metrolinx: The Big Move, Mobility Hub Guidelines, and 2041 Regional Transportation Master Plan

Building upon the successes of *The Big Move (2008)*, the *Metrolinx 2041 Regional Transportation Master Plan* supports intensification in accordance with sustainable transportation objectives. Additional rapid transit options, greater pedestrian connections, and mixed-use density should be considered for the City of Mississauga and the surrounding region. Emerging mobility hubs, such as the subject site, should adopt such elements and minimize parking in areas that may be more efficiently utilized by more sustainable infrastructure.

It is noted that the Cooksville GO Station area is recognized as a “mobility hub” as per Metrolinx’s *Mobility Hub Guidelines* and Regional Transportation Plan. The site aims to support Cooksville GO through reduced parking.

3.2 MUNICIPAL POLICIES

3.2.1 Mississauga Official Plan Review and Strategic Plan (2009)

The *City of Mississauga Official Plan* (“OP”) outlines a policy framework that aims to protect the natural heritage system, direct growth to where it will benefit the urban form, support a strong public transportation system, and address the long-term sustainability of the City. A focus of the OP includes creating a multi-modal transportation system consisting of transit, vehicular, active transportation, rail, and air travel. The OP recognizes that vehicle trips will account for most of the total trips and intends to shorten the length of these trips by the increase of opportunities to travel by transit, walking, and cycling.

The City is currently undertaking the process of reviewing and updating the plan to ensure it reflects the changing needs, opportunities, and aspirations of the City. To position Mississauga for the next phase of growth, an important change to the City's urban structure is derived from Growth Plan requirements to identify and plan for minimum density targets at major transit station areas ("MTSAs"). Thus, a key component of the review process includes a comprehensive policy review related to the Transportation theme of the OP, as well as the implementation of new land-use and transportation-related policy initiatives and strategies. The site is located within the Hurontario Light Rail Transit (LRT) – 9 / Main MTSA boundary. Although this MTSA already meets the Growth Plan minimum density, there are no established maximum density values thus regular monitoring and further planning should be explored to enhance existing conditions at the site level, including encouraging mixed uses and increasing walkability.

Six (6) proposed policy priority areas are to be captured in the new OP, which includes creating convenient alternatives to the car; establishing a "complete streets" network to promote shared space among all road users; increasing the use of active transportation, carpooling, etc. to support healthy communities; establishing development densities and patterns that support transit; supporting greater connectivity throughout the City; and supporting efficient and effective movement of good throughout the City.

The recommended policy changes to be made in the new OP addresses matters of conformity, simplification, certainty, and innovation that supports coordinated urban design, land use, and transportation planning. The OP Review is currently in the final phase of the three year program, in which the Plan is to be finalized for regional submission this year.

Further, the site is currently located within the **Downtown Cooksville Character Area**, which encourages pedestrian amenities, active mixed-use frontages, and intensified development along the key corridors, such as Hurontario Street.

3.2.2 Mississauga Transportation Master Plan (2019)

The *City's Transportation Master Plan* ("TMP") was developed through *Mississauga Moves*, a study that integrated policy review, transportation and transit data analysis, benchmarking, trend investigation, and public consultation with community members and stakeholders about the future of mobility to / from the City. The TMP was approved by City Council in May 2019 and includes six goals for advancing transportation within Mississauga; these goals include: Safety, Inclusion, Integration, Connectivity, Health, and Resilience.

A relatively new phenomenon related to "micro-mobility" was introduced through policy, which considers services and systems for bike share, e-bikes, and e-scooter rentals. The City is assessing potential options as a short-term objective to determine how it can be integrated with the evolving transportation system and how it can be regulated with private companies without municipal subsidy.

The site's proposed reduced parking rate and overall design acts in support of the TMP's goals primarily in regards to Integration, Health, and Resilience. The goal of Integration and Resilience are achieved through the site's proximity and level of connectivity to more diverse, sustainable modes of transportation, those being MiWay and GO Transit, as well as the nearby bicycle and pedestrian networks. These alternate modes of transportation also improve overall health through the promotion of active transportation for short trips, especially within the Downtown Cooksville area.

3.2.3 Mississauga Parking Master Plan (2019) and Parking Regulations Study (2021)

Building upon the City's TMP, the *Parking Master Plan and Implementing Strategy* ("PMPIS") has been developed and approved in June 2019 to review and analyze the evolving parking needs for all areas of the City. Recent parking trends and mobility characteristics has led to a push towards more balanced parking provisions and management strategies to support a multi-modal city. The PMPIS recommends that the minimum parking requirements be reduced and replaced with a policy designed to manage parking more deliberately.

Shortly after the approval of the PMPIS, the City developed the *Parking Regulations Study* to review and update the off-site parking regulations in the City's current Zoning By-law. This is considered a key action document that focuses on establishing an appropriate amount of (privately-owned) parking to be provided for new development applications in the City. The Parking Regulations Study aims to investigate existing and future parking demand and travel patterns, develop neighbourhood-specific "precincts" with specified rates across the City, and ensure that parking regulations appropriately reflect the number of zoning and minor variance applications being requested by landowners.

It is noteworthy that the site is located within Precinct 1 of the Plan / Study, which proposes reduced residential parking rates to the current in-force By-law. This precinct also recommends a relatively high level of parking management strategies and consideration of parking maximums for most land uses.

The recommendations of the Parking Regulations Study were accepted by the City's Planning and Development Committee on May 30, 2022 and is expected to go to Council later this year.

3.2.4 Mississauga Cycling Master Plan (2018)

Building upon the City's TMP, the *Cycling Master Plan* outlines specific recommendations and actions to foster a culture of cycling, improve the safety for cycling, increase the number of cycling trips in Mississauga, and build a connected, convenient, and comfortable bicycle network. One of the City's recommended actions in the Cycling Master Plan is to expand the City's bicycle parking supply, including short-term and long-term facilities on commercial, residential, and city-owned properties.

The site supports the City's Cycling Master Plan with an increased supply of both long-term and short-term bicycle parking spaces. This increase can supplement the proposed vehicle parking reduction while fostering the cycling culture within the City due to its close proximity to prominent cycling routes.

3.2.5 Vision Cooksville (2016)

Vision Cooksville is a City-led initiative that was established to develop a long-range community vision for the area of Downtown Cooksville through public engagement. The Downtown Cooksville study area is centred on the intersection of Dundas Street and Hurontario Street – it is bound by the railway in the north, King Street East in the south, Kirwin Avenue in the east, and Confederation Parkway in the west.

Transportation-related feedback received by the public includes the need to improve open spaces and walkability, increase safety for pedestrians in the area (e.g., concern for heavy traffic), enhancement of the public realm, and maintain the excellent access to public transit offered via GO and MiWay transit.

The site (Cooksville GO station area) is located at the northern edge of the Downtown Cooksville study area. It is expected that the proposed development will directly influence and transform the character of the surrounding area in a way that supports and achieves the goals and objectives of the City's vision.

3.2.6 Hurontario / Main Street Corridor Master Plan (2020)

With consideration to the future LRT, the *Hurontario / Main Street Corridor Master Plan* was developed for the evolving corridor within the cities of Mississauga and Brampton. This Master Plan places emphasis on integration planning for rapid transit, intensification, and enhanced urban design along Hurontario / Main Street.

The intent for the Hurontario / Main Street corridor is to link urban growth centres while traversing the mobility hubs (one being the Cooksville GO station area) through transit-oriented development and general redevelopment.

There is a proposed transit LRT station at the Hillcrest / Cooksville GO Station, which will provide greater mobility opportunities as a gateway hub. This will allow for more intense developments that leverage these transit investments and minimize the number of single occupant vehicle trips generated during the peak hours.

3.2.7 Downtown Cooksville Official Plan Amendment

In December 2021, the City's Planning and Development Committee received the Draft Official Plan Amendment and Built Form Standards for the Downtown Cooksville Area. This draft Official Plan Amendment ("OPA") was developed to update the OP policies for this area (as well as 2 adjacent areas) given the transit investments (e.g., Hurontario LRT, Dundas BRT, and two-way all-day GO Transit service) and expected growth in population and employment.

The draft OPA envisions Downtown Cooksville as a 15-minute city in which basic amenities such as parks, jobs, grocery stores, medical offices, schools, etc. can be safely and conveniently accessed by 15 minutes on foot. The ability to provide this requires a mixed-use community, planning for more housing and people, as well as creating a walkable and connected community. More specifically, it identifies the lands around the Cooksville GO Station, (i.e., the subject site), as a one-stop destination where the greatest mix of services and amenities are readily available and accessible by walking or cycling.

Although subject to change, relative to the site, the draft OPA indicates two north-south pedestrian connections between Hillcrest Avenue and John Street and a conceptual future extension of Cook Street north of Hillcrest Avenue to John Street.

4.0 AREA TRANSPORTATION CONTEXT

4.1 AREA ROAD NETWORK

4.1.1 Existing Road Connections

The characteristics of the roads and intersections near the subject site are described below. The area road network and existing lane arrangements and traffic control are illustrated **Figure 4** and **Figure 5**, respectively.

Hurontario Street

A north-south arterial road under the jurisdiction of the City of Mississauga with a posted speed limit of 60 km/h, south of John Street, and a posted speed limit of 60 km/h north of John Street. It runs from Lakeshore Road in the south to Collingwood in the north. It passes through the Mississauga City Centre, where it continues north into the City of Brampton as Main Street. Hurontario has a six-lane urban cross-section, with a center left-turn lane between the northbound and southbound directions. Along Hurontario, there are GO bus stops at North Service Road south of the site and Fairview Road East to the north. **Exhibit 1** illustrates the current condition of the roadway.



EXHIBIT 1: HURONTARIO STREET AT JOHN STREET (FACING NORTH)

Hillcrest Avenue

An east-west minor collector road under the jurisdiction of the City of Mississauga. There is no posted speed limit, thus it is assumed that the statutory 50 km/h speed limit applies. Hillcrest Avenue currently runs from Hurontario Street in the east and terminates at Mavis Road in the west. It has a five-lane urban cross-section with dedicated left turn lanes in the eastbound and westbound directions. The Cooksville Go Station parking entrance is located off Hillcrest Avenue along Go Access Road. On-street parking on Hillcrest Avenue is not permitted. **Exhibit 2** illustrates the current condition of the roadway.



EXHIBIT 2: HILLCREST AVENUE AT GO ACCESS (FACING EAST)

GO Access Road

A private road under the jurisdiction of Metrolinx running in a generally north-south direction with no posted speed limit. It runs between Hillcrest Avenue to the south and John Street to the north. GO Access Road has a basic four-lane cross-section and provides direct access to the Cooksville GO Transit Station. **Exhibit 3** illustrates the current condition of the roadway.



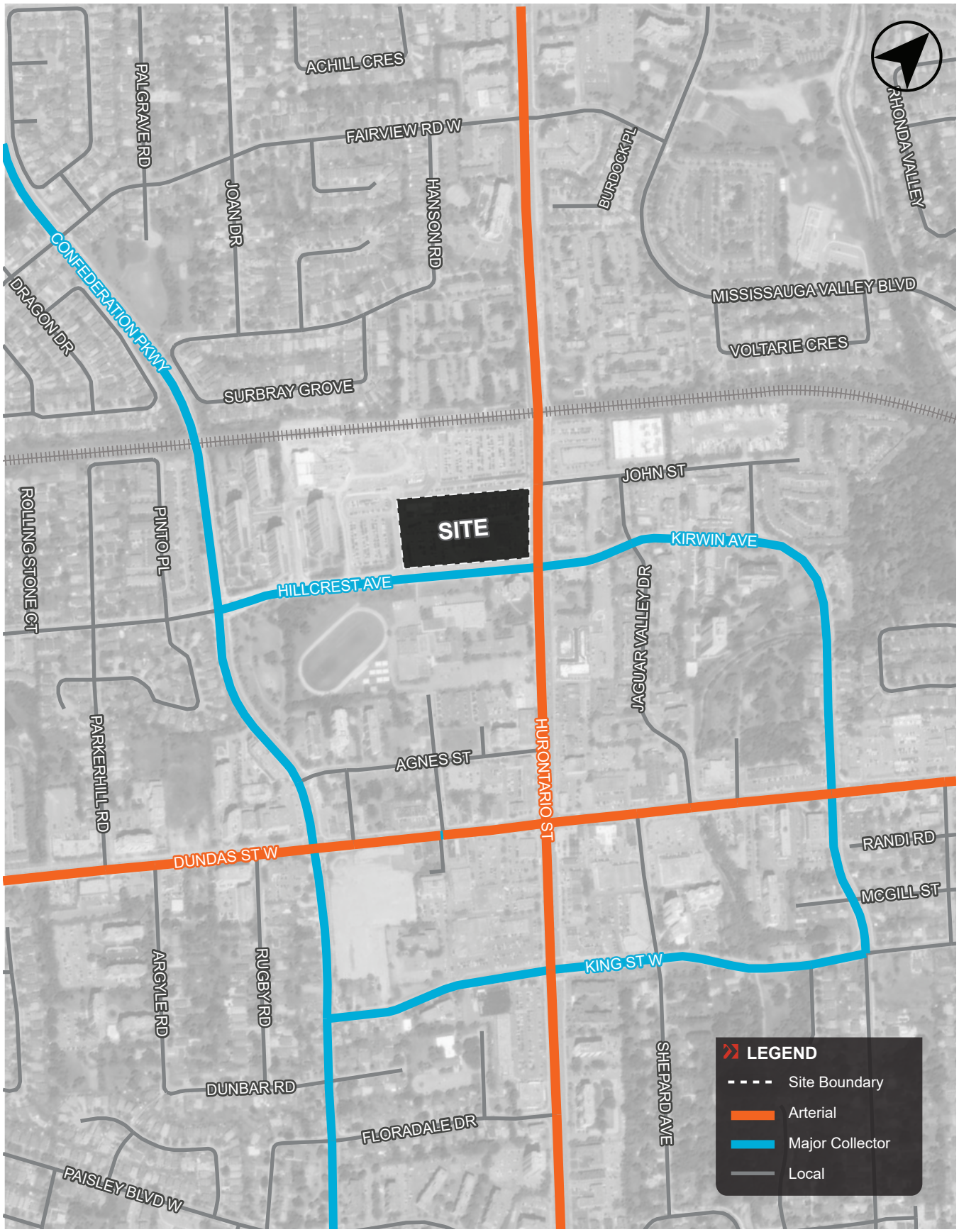
EXHIBIT 3: GO ACCESS ROAD AT HILLCREST AVENUE (FACING NORTH)

John Street

West of Hurontario Street, John Street is a private road under the jurisdiction of Metrolinx with no posted speed limit. It runs from GO Access Road to Hurontario Street and has a four-lane cross-section with a multi-use path on the north side and sidewalks along both sides. East of Hurontario Street, John Street has a three-lane cross section with on-street parking on the south side and is a municipal local road under the jurisdiction of the City of Mississauga.

Confederation Parkway

A north-south major collector road under the jurisdiction of the City of Mississauga with a posted speed limit of 50 km/h. It runs from Queensway West in the south to Eglinton Avenue West in the north, where it continues into northern Mississauga and the City of Brampton as McLaughlin Road. Confederation Parkway has a basic five-lane urban cross-section with dedicated left turn lanes in the northbound and southbound directions at Hillcrest Avenue. Along Confederation Parkway through the study area, there are bicycle lanes on both sides indicated by pavement markings on the street and signs identifying the reserved lane.



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Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 4 EXISTING AREA ROAD NETWORK

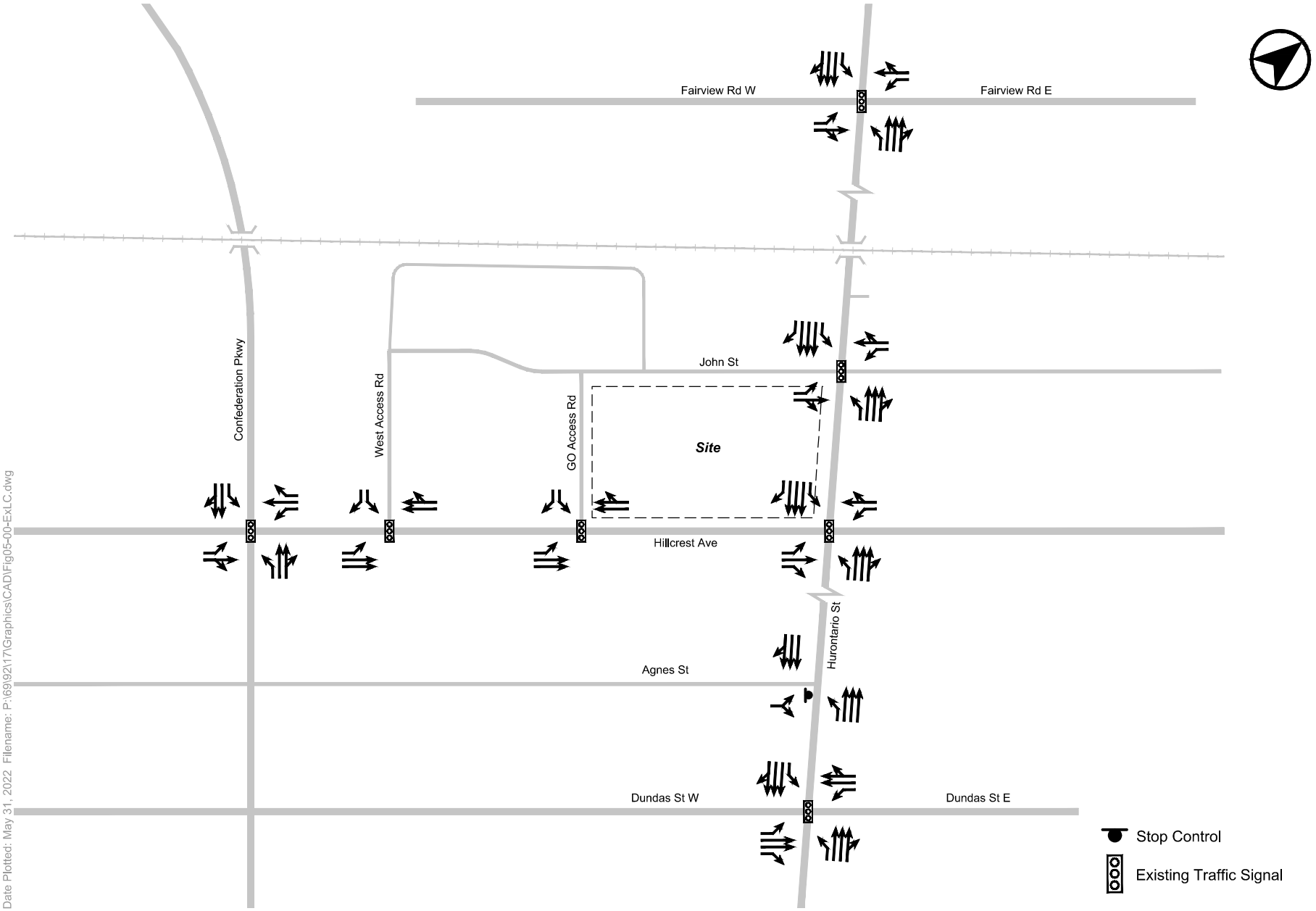

FIGURE 5 EXISTING LANE CONFIGURATION AND STOP CONTROL - EXTERNAL

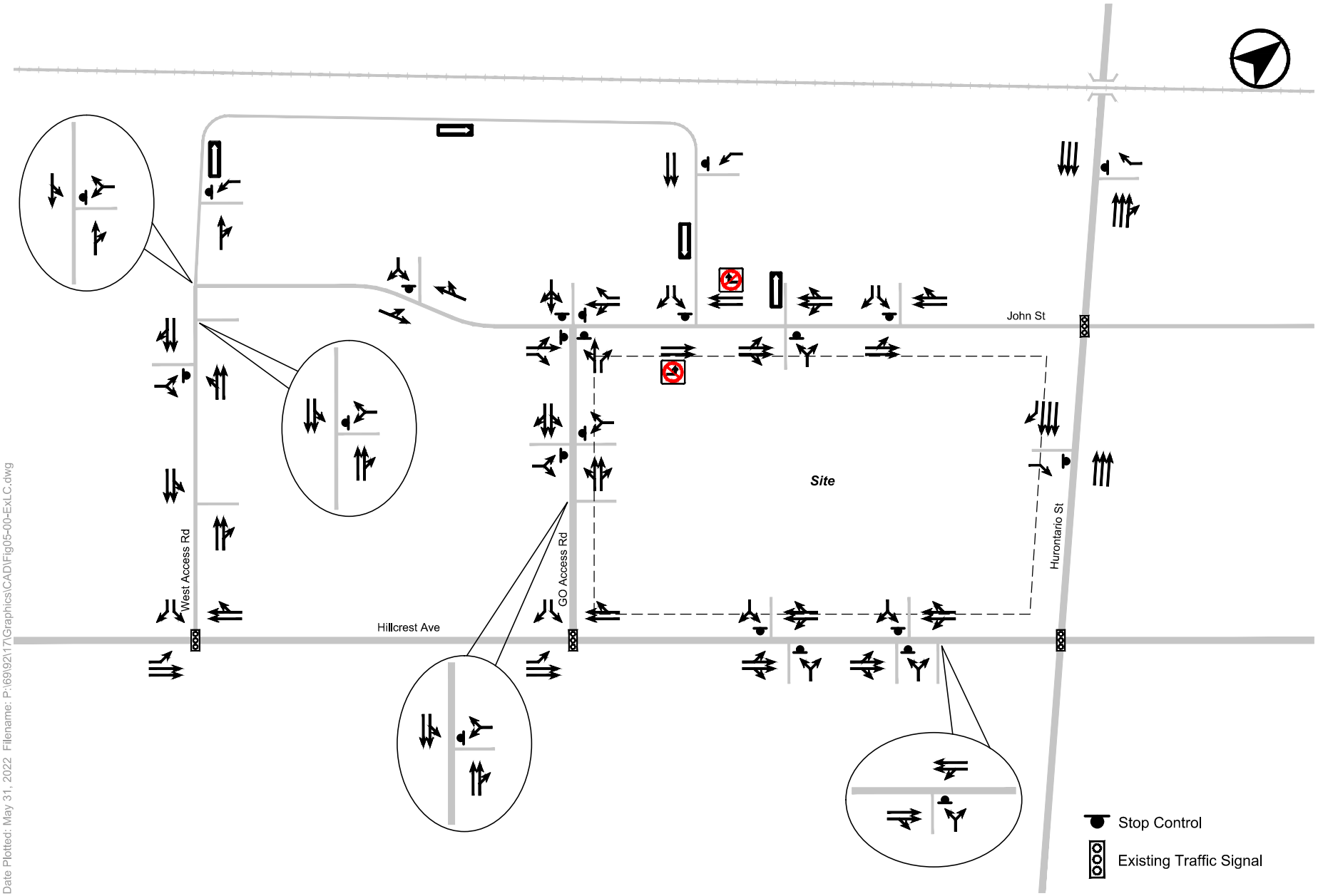

FIGURE 5 EXISTING LANE CONFIGURATION AND STOP CONTROL - INTERNAL

4.2 AREA TRANSIT CONTEXT

4.2.1 Existing Transit Connections

The site is currently well served by transit with the Cooksville GO Station which accommodates bus services operated by the Mississauga transit service provider MiWay and GO Transit as well as train service on the Milton GO line, which provides peak hour service between Milton and Union Station in Toronto and Kipling Station on the Toronto Transit Commission (TTC) subway network. The adjacent bus routes to the site also provide access to the Square One GO Bus Terminal, providing connections to locations such as Toronto, Kitchener, Milton, and Brampton. There is an existing MiWay transit stop on the east of the site bordering Hurontario Street. Bus routes that service the site within a 500-metre radius include:

- **MiWay Bus Route 2 Hurontario/103 Hurontario Express** – This bus service operates north-south between the City Centre Transit Terminal at Square One Shopping Centre in the north and the Port Credit GO Station in the south. Within the study area, this bus service operates along Hurontario Street. During peak hours, headways are 10 minutes or less. The express service of Hurontario operates north-south between Queensway at Confederation Parkway to the south and the Brampton Gateway Terminal to the north. During peak hours, headways are approximately 15 minutes. Both routes operate from Monday-Sunday.

- **MiWay Bus Route 53 Kennedy** – This bus service operates north-south between the Hurontario/Highway 407 Park & Ride in the north and the Cooksville GO Station in the south. Within the study area, this bus service operates along Hurontario Street from Monday-Friday. During peak hours, headways are approximately 15 minutes.

- **MiWay Bus Route 1 Dundas/101 Dundas Express** – This bus service operates east-west between the Kipling Bus Terminal in the east and Laird Road/Ridgeway Drive in the west. During peak hours, headways are 15 minutes or less. The Dundas Express service operates east-west between the Kipling Bus Terminal in the east and South Common Centre in the west. During peak hours, headways are approximately 15 minutes or less. Both routes operate from Monday-Sunday along Dundas Street.

- **MiWay Bus Route 4 Sherway Gardens** – This bus service operates east-west between Sherway Gardens to the east and the Cooksville GO Station to the west. The bus operates from Monday-Sunday with headways of approximately 30 minutes during the peak periods.
-
- **MiWay Bus Route 28 Confederation** – This bus service operates north-south between the City Centre Transit Terminal at Square One Shopping Centre in the north and the Trillium Health Partners Mississauga Hospital at Hurontario Street and the Queensway in the south. During peak hours, the bus services the Cooksville GO Station. Within the study area, this bus service operates along Confederation Parkway. During the peak hours, headways are approximately 15 minutes or less.
-
- **MiWay Bus Route 38 Creditview** – This bus service operates north-south between the Meadowvale Town Centre in the north and the Cooksville GO Station in the south. Within the study area, this bus service operates along Creditview Road from Monday-Friday. During peak hours, headways are approximately 30 minutes.

4.2.2 Planned Transit Connections

Based on the *MiWay Five Year Transit Service Plan (2021-2025*) several improvements are proposed to the local transit network. As the City continues to grow and evolve, new policies and plans have been established to further guide and shape future goals. As such, the MiWay Transit Plan works in conjunction with the Transportation Master Plan, Climate Change Action Plan, Parking Master Plan, and more to meet the future transit demand.

The transit-related improvements within the local area include the following items described below.

Hurontario Light Rail Transit

The Hurontario Light Rail Transit (LRT) is a new and transformational transit service being introduced to the Region of Peel, primarily bridging the cities of Mississauga and Brampton. The LRT will provide 18 kilometres of higher-order transit and is proposed to run along Hurontario Street, between Port Credit (in the south) and Brampton (in the north). It will bring high quality and high frequency transit service to the Downtown Cooksville area, including the subject site.

The LRT route will also provide direct links to various other transit services, including GO Metrolinx (e.g., Port Credit station and Square One bus), the Mississauga Transitway, and key MiWay and Brampton Transit routes.

This new transit service will create a significant linkage to various businesses and residents along the Hurontario Street corridor; it also invites greater intensification and employment due to its rapid and reliable service operating in its own dedicated right-of-way.

Construction began in spring 2020 with anticipated completion in fall 2024. The nearest LRT station to the site is the Cooksville Station which is less than 100 metres, or a 2-minute walk, away.

Other Transit Service Improvements

In addition to the notable Hurontario LRT, there are additional (broader) in-progress transit improvements within the City of Mississauga, including:

- Development of the Kipling Mobility Hub;
- Improvement of GO transit services (e.g., Cooksville and Port Credit stations);
- Development of Dundas Street Bus Rapid Transit (e.g., BRT; Dundas Connects Master Plan);
- More service outside of weekday rush hours; and
- More express routes between key destinations and improved connectivity.

These improvements will increase the transit mode share and assist in encouraging the use of alternative modes of transportation (other than personal vehicles) to local residents and employees within the study area, particularly during the weekday morning and afternoon peak hours.

The existing and planned area transit network in proximity the site is shown in **Figure 6**.



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Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 6 EXISTING & FUTURE TRANSIT NETWORK

4.3 AREA ACTIVE TRANSPORTATION NETWORK

4.3.1 Pedestrian Connections

Pedestrian facilities are provided by means of sidewalks on both sides of all streets throughout the study area. Pedestrian signal heads and crosswalks are provided at all signalized intersections in the study area. There is a multi-use pathway along the north side of John Street, west of Hurontario Street. Destinations of note within 750 metres of the site include, but are not limited to: Stonebrook Park, Richard Jones Park, Cooksville GO Station, Anderson College Mississauga Campus, T.L. Kennedy Secondary School, and Thornwood Public School.

4.3.2 Cycling Connections

In addition to the general provision of sidewalks on both sides of the area roads, the Site is well serviced by the following active transportation routes and facilities within a 500-metre radius:

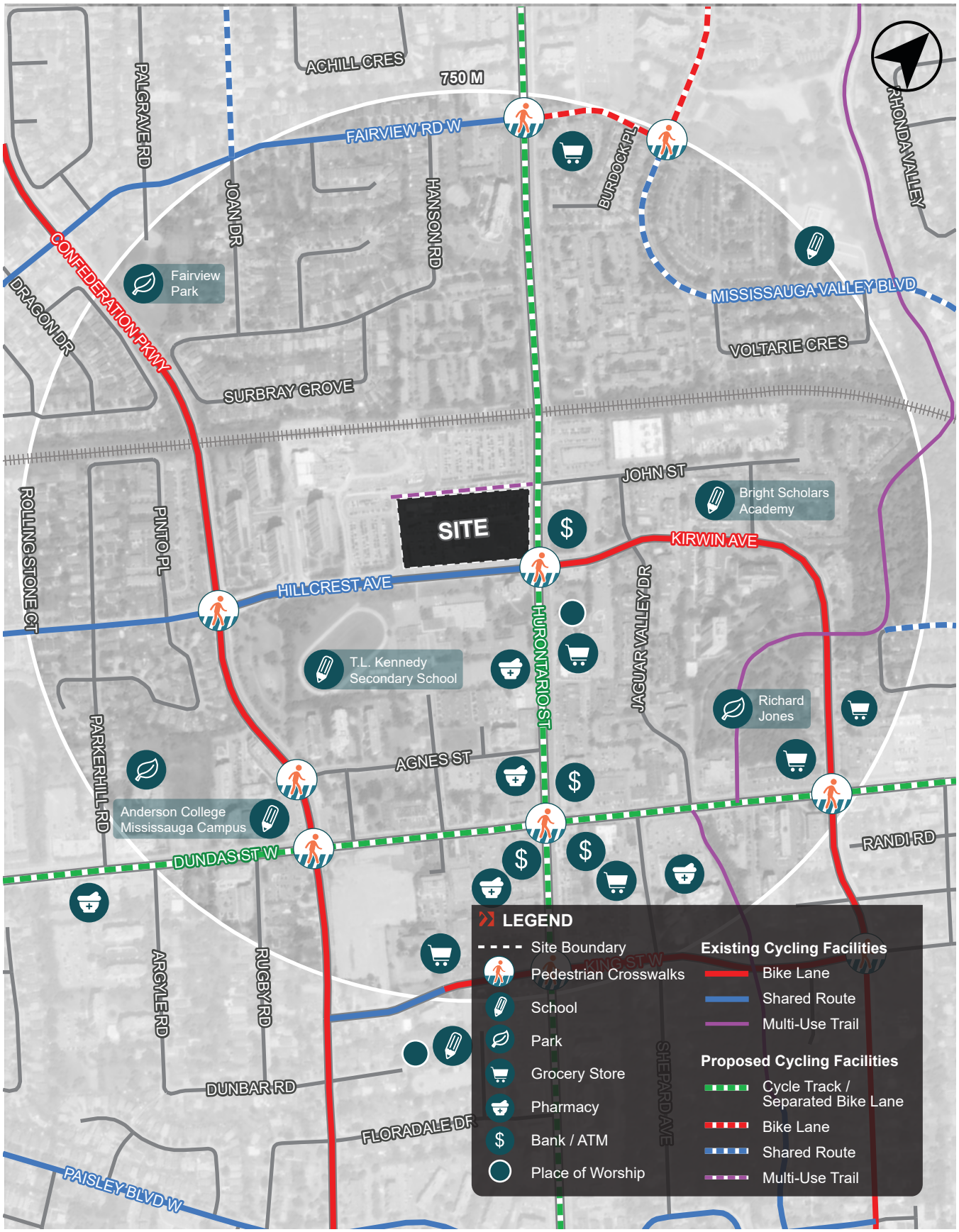
- Multi-use path along John Street;
- Bicycle lanes along Kirwin Avenue;
- Bicycle lanes along Confederation Parkway; and
- Shared route along Hillcrest Avenue.

In the future, based on the City's 2018 *Cycling Master Plan*, two cycling network improvements within a 500-metre radius of the site are planned, including:

- Cycle track / separated bike lane along Dundas Street; and
- Cycle track / separated bike lane along Hurontario Street.

The implementation of a bike share program is discussed in the *Mississauga Cycling Master Plan* and the City is also currently exploring how a shared micromobility system of bicycles, electric bicycles (e-bikes), and / or electric scooters could be used for travel in Mississauga.

The area active transportation context is illustrated in **Figure 7**.



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Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 7 AREA PEDESTRIAN & CYCLING CONTEXT

5.0 VEHICULAR PARKING CONSIDERATIONS

5.1 ZONING BY-LAW VEHICULAR PARKING REQUIREMENTS

Application of the Zoning By-law to the subject site results in the minimum requirement of 4,167 parking spaces, including 2,913 residential spaces (1.31 spaces per unit), 445 residential visitor spaces (0.20 spaces per unit), and 809 non-resident spaces. The parking requirements pertaining to these standards are summarized in **Table 2**.

TABLE 2 CITY OF MISSISSAUGA ZONING BY-LAW 0225-2007

Use	Units / GFA	Minimum Rate[2]	Minimum Requirement[3]
Residential			
1-Bedroom	1,592 units	1.25 spaces / unit	1,990 spaces
2-Bedroom	524 units	1.40 spaces / unit	734 spaces
3-Bedroom	108 units	1.75 spaces / unit	189 spaces
Resident Subtotal			*2,913 spaces*
Non-residential			
Residential Visitor	2,224 units	0.20 spaces / unit	445 spaces
Retail	6,270 m^2	4.00 spaces / 100 m^2 GFA	251 spaces
Commercial	8,692 m^2	3.20 spaces / 100 m^2 GFA	278 spaces
Community	6,216 m^2	4.50 spaces / 100 m^2 GFA	280 spaces
Non-resident Subtotal			*1,254 spaces*
Total Site Requirement			**4,167 spaces**

Notes:
1. Latest site statistics from SvN Architects and Planners received on May 30, 2022.
2. Parking rates as per City of Mississauga Zoning By-law 0225-2007.
3. Where the number of non-residential parking spaces and/or loading spaces is calculated on the basis of a rate or ratio and results in a numeric fraction, fractions of less than 0.5 shall be rounded down to the nearest whole number and fractions equal to or greater than 0.5 shall be rounded up to the nearest whole number (as per City of Mississauga Zoning By-law 0225-2007 section 3.1.1.1.4).

Based upon the site's proximity to a major transit facility (e.g., Cooksville GO Station and future Hurontario LRT), City Centre parking rates as per Zoning By-law 0225-2007 have been considered.

Application of the Zoning By-law to the subject site results in the minimum requirement of 3,052 parking spaces, including 2,224 residential spaces (1.0 space per unit) and 828 shared visitor / non-residential spaces (0.37 spaces per unit). The parking requirements pertaining to these standards are summarized in **Table 3**.

TABLE 3 CITY OF MISSISSAUGA ZONING BY-LAW 0225-2007 CITY CENTRE PARKING REQUIREMENTS

Use	Units / GFA	Minimum Rate[2]	Minimum Requirement[3]
Residential			
1-Bedroom	1,592 units	1.00 space / unit	1,592 spaces
2-Bedroom	524 units		524 spaces
3-Bedroom	108 units		108 space
Resident Subtotal			*2,224 spaces*
Non-residential			
Residential Visitor	2,224 units	0.15 spaces / unit	334 spaces
Retail	6,270 m^2	4.30 spaces / 100 m^2 GFA	270 spaces
Commercial	8,692 m^2	3.20 spaces / 100 m^2 GFA	278 spaces
Community	6,216 m^2	4.50 spaces / 100 m^2 GFA	280 spaces
Non-resident Subtotal (before sharing)			*1,162 spaces*
CC1-CC4 Shared Parking Arrangement[4]			*828 spaces*
Non-resident Subtotal (after sharing)			*828 spaces*
Total (with sharing)			**3,052 spaces**

Notes:
1. Latest site statistics from SvN Architects and Planners received on May 30, 2022.
2. Parking rates (within CC1 to CC4 zones) as per City of Mississauga Zoning By-law 0225-2007.
3. Where the number of non-residential parking spaces and/or loading spaces is calculated on the basis of a rate or ratio and results in a numeric fraction, fractions of less than 0.5 shall be rounded down to the nearest whole number and fractions equal to or greater than 0.5 shall be rounded up to the nearest whole number (as per City of Mississauga Zoning By-law 0225-2007 section 3.1.1.1.4).
4. As per Zoning By-law 0225-2007 - Part 3 (Table 3.1.2.1), a shared parking arrangement may be used for the calculation of required visitor/non-residential parking in accordance with the greater of 0.15 visitor spaces per unit or required non-residential parking (with the exception of restaurant use).

5.2 PROPOSED PARKING STANDARDS

It is proposed to provide a reduction to the as-of-right Zoning By-law requirements based on several transportation and land-use factors. Application of the proposed site-specific parking rates results in the minimum requirement of 1,992 parking spaces, including 1,450 residential (0.65 spaces per unit) and 542 shared visitor / non-residential (0.24 spaces per unit) spaces.

The parking requirements pertaining to these standards are summarized in **Table 4.**

TABLE 4 PROPOSED SITE-SPECIFIC MINIMUM PARKING REQUIREMENTS

Use	Units / GFA	Minimum Rate[2]	Minimum Requirement[3]
Residential			
1-Bedroom	1,592 units	0.62 spaces / unit	987 spaces
2-Bedroom	524 units	0.72 spaces / unit	377 spaces
3-Bedroom	108 units	0.80 spaces / unit	86 spaces
Resident Subtotal			*1,450 spaces*
Non-residential			
Residential Visitor	2,224 units	0.15 spaces / unit	334 spaces
Retail	6,270 m^2	3.00 spaces / 100 m^2 GFA	188 spaces
Commercial	8,692 m^2	2.00 spaces / 100 m^2 GFA	174 spaces
Community	6,216 m^2	2.90 spaces / 100 m^2 GFA	180 spaces
Non-resident Subtotal (before sharing)			*876 spaces*
CC1-CC4 Shared Parking Arrangement[4]			*542 spaces*
Non-resident Subtotal (after sharing)			*542 spaces*
Total (with sharing)			**1,992 spaces**

Notes:
1. Latest site statistics from SvN Architects and Planners received on May 30, 2022.
2. Visitor parking rates (within CC1 to CC4 zones) as per City of Mississauga Zoning By-law 0225-2007.
3. Where the number of non-residential parking spaces and/or loading spaces is calculated on the basis of a rate or ratio and results in a numeric fraction, fractions of less than 0.5 shall be rounded down to the nearest whole number and fractions equal to or greater than 0.5 shall be rounded up to the nearest whole number (as per City of Mississauga Zoning By-law 0225-2007 section 3.1.1.1.4).
4. As per Zoning By-law 0225-2007 - Part 3 (Table 3.1.2.1), a shared parking arrangement may be used for the calculation of required visitor/non-residential parking in accordance with the greater of 0.15 visitor spaces per unit or required non-residential parking (with the exception of restaurant use).

5.3 APPROPRIATENESS OF PARKING STANDARDS

It is proposed that the resident and non-resident requirements for the proposed development be reduced with consideration to the evolving transit and land use context, which will allow site users to rely less on automobile travel and favour more sustainable modes of transportation. The proposed parking reductions reflect trends in reduced parking standards experienced in comparable areas and centres in the City and on a regional scale, respectively. They also reflect the transit, transportation demand management, and parking management goals and objectives outlined in the Regional and City Official Plans, Downtown Local Area Plan, and various provincial land use planning policies. Finally, they recognize the complementary mix of uses, transportation demand management plan, and its unique transportation context at the confluence of the Hurontario LRT, Cooksville GO Station, and Dundas Street BRT services making this arguably the best transit-served area of the City and befitting of the lowest parking rates.

The following section discusses the appropriateness of the reduced residential and non-residential parking standards for the site.

5.3.1 Residential Parking

The in-force residential parking requirement of 1.00 space per unit, as per By-law 0225-2007, overstates the parking needs of contemporary developments in highly transit-accessible areas of Mississauga, such as the site.

The following residential standards are proposed for the site:

1-bedroom: 0.62 spaces per unit
2-bedroom: 0.72 spaces per unit
3-bedroom: 0.80 spaces per unit

As such, the following section discusses the appropriateness of the proposed (reduced) residential parking requirements based on the following considerations:

- Emergence of non-auto supportive regional and local policy directives;
- Existing and planned active transportation facilities afforded to the area;
- Increasing levels of transit reach;
- Observed precedence for residential parking;
- Review of other residential parking By-law standards; and
- Support from the site's TDM strategy for residents.

5.3.1.1 Regional and Local Policy Directives

As previously discussed in **Section 3.0**, Mississauga's transportation policy and planning regime is evolving such that it actively responds to the changing transportation needs of the City. Specifically, current policies and initiatives better reflect and prioritize the mobility and experience of people with less emphasis on the efficiency of car movement. Common themes across relevant transportation-related policies to the site area include:

Planning transit from a network perspective.
Public transit is being transformed to achieve an interconnected network of transit service. Planning and funding efforts are being undertaken on different scales (locally and regionally) to achieve this vision.

Designing streets and public realm for people.
While the efficient movement of automobiles has previously been the focus in transportation planning, this is no longer true. The enjoyment, safety, and efficiency of the pedestrian realm has become the new focus of mobility planning in the City of Mississauga, especially along corridors such as Hurontario Street.

Connecting and expanding active transportation infrastructure.
The City has been undertaking a greater expansion of cycling infrastructure through the Cycling Master Plan. The Plan aims to connect the gaps in the existing network of off-street multi-use paths and bicycle lanes, spanning across different neighbourhoods of the City. The Plan seeks to establish major corridors and expand the amount of protected cycling infrastructure.

Reducing parking in transit-accessible areas.
Support for public transit and active transportation facilities and usage has increased with the decreasing need / demand for excessive parking. Existing and new provincial and local plans have recognized the need to establish appropriate parking standards in response to the transportation advancements occurring in transit-focused areas, as well as the increasing number of rezoning and minor variance applications requested for new developments.

The proposed development and the design of its transportation components support these policy objectives including the concept of a 15-minute city and leverage the substantial transit investments made by the City, particularly along Hurontario Street and Dundas Street West. The availability of non-auto modes of travel with access to LRT, MiWay bus, GO train, provision of bike parking, future cycling facilities, etc. allows for a critical level of density that supports non-residential uses as well as a range and mix of housing opportunities. In addition to the range of bedroom types, the client is investigating the ability to provide both rental units and affordable units. This accommodates future residents of the Downtown Cooksville with a range of household sizes, income levels, life stages, and lifestyle preferences.

5.3.1.2 Active Transportation Facilities

The level of service for active transportation facilities is integral to influencing travelers to use these modes to / from the key destinations surrounding the site area. The site is situated in close proximity to a variety of active transportation routes that make up a robust network for existing and future users.

The collection of shared routes, bike lanes, and multi-use paths provide connections to multiple neighbourhoods within the City of Mississauga. As such, the site is within 100 metres from bike lanes along Confederation Parkway, shared route along Hillcrest Avenue, and future cycle tracks along Hurontario Street. With this, cyclists will have convenient access to a wide variety of retail, employment, cultural amenity uses.

The site is also directly connected with ample, continuous sidewalks, multi-use paths, and pedestrian crossings located at major intersections along Hurontario Street (e.g., Hillcrest / Kirwin Avenue and John Street) and Hillcrest Avenue (e.g., Hurontario Street and GO Access Road). Generally, the existing pedestrian infrastructure conditions provide enough comfort for diverse users. Additionally, the site is adjacent to the spacious Sgt. David

Yakichuk Park which is located immediately southwest of the site. This park can easily be accessed by pedestrians leaving the subject site via the existing sidewalks along Hillcrest Avenue.

Overall, the level of accessibility the site provides in regards to active transportation further encourages existing and future residents to make shorter daily trips by means of more active, non-auto travel modes.

5.3.1.3 Transit Reach Assessment

Existing Transit Travel Reach

In order to understand the changing transportation context, transit service area analyses for the existing and future transit network were conducted using Geographic Information Systems ("GIS"). These analyses look at the service area of a transit network that a visitor of the Site has access to in a given time range. This type of analysis is useful in understanding the transit accessibility and can be used to quantify the impact of transit service changes.

A 15, 30, and 45 minute transit reach from the Site during the weekday morning travel period was analysed for existing conditions as is illustrated in **Figure 8**. Transit travel times include walking time to and from transit stops, as well as the transit schedules during peak hour (i.e., service frequency and wait times), all of which are based upon existing transit service.

Future Transit Travel Reach

A review of projected transit travel times assumed the various public transit network improvements included in **Section 4.2** is illustrated in **Figure 9**. A comparison of areas that are reachable is provided in **Table 5** below.

TABLE 5 EXISTING AND FUTURE TRANSIT SERVICE AREA ANALYSIS COMPARISON

Transit Scenario	15-minute reach	30-minute reach	45-minute reach
Existing Conditions (Travel Away From Site)	• North along Hurontario St to just past Highway 403; • South along Hurontario St to Indian Valley Trl / Pinewood Trl (south of the QEW); • East along Dundas St E to just past Cawthra Rd; and • West along Dundas St W to just past Wolfedale Rd.	• North along Hurontario St to Highway 410; • South along Hurontario to the Waterfront; • East along Eglinton Ave W to nearly Orbitor Dr (East of Dixie Rd), along Dundas St W to just past Kipling Ave; and • West along Dundas St W to just past Erin Mills Pkwy.	• North along Hurontario St to just past Steeles Ave E, along Winston Churchill Blvd to just past Britannia Rd W; • South along Hurontario St, Erin Mills Pkwy and Dixie Rd to the Waterfront; • East along Eglinton Ave W to Islington Ave, along Bloor St W to nearly Keele St; and • West along Dundas St W to just past Trafalgar Rd, along Eglinton Ave W to nearly 9th Line.
Future Conditions (Travel Away From Site) *with the addition of Ontario Priority Projects, GO Expansion / RER, Hurontario LRT, Dundas BRT*	• North along Hurontario St to just past Highway 403; • South along Hurontario St to the Waterfront; • East along Dundas St E to just past Jarrow Ave (East of Dixie Rd); and • West along Dundas St W to just past Old Carriage Rd (West of Erindale Station Rd).	• North along Hurontario St to nearly Lancashire Ln (South of Steeles Ave W); • South along Hurontario St and Cawthra Rd to the Waterfront; • East along Eglinton Ave W to just past Renforth Dr, along Burnhamthorpe Rd to Highway 427, and along Dundas St W to Islington Ave; and • West along Highway 403 to past Winston Churchill Dr, along Dundas St W to nearly Highway 403.	• North along Hurontario St to nearly Rosedale Ave W (north of Queen Street E); • South along Southdown Rd, Hurontario St, and Royal York Rd to the Waterfront; • East along Steeles Ave E to nearly Torbram Rd, along Derry Rd E to just past Highway 27, along Eglinton Ave W to nearly Jane St, along Bloor Ave W to Runnymede Rd (West of Jane St), along the Gardiner Expy to nearly Keele St; and • West along Derry Rd E to Argentina Rd (East of Highway 401), along Eglinton Rd W to just past Highway 407, along Dundas St W to nearly Sixth Ln, along Highway 403 to nearly Regional Rd 25.

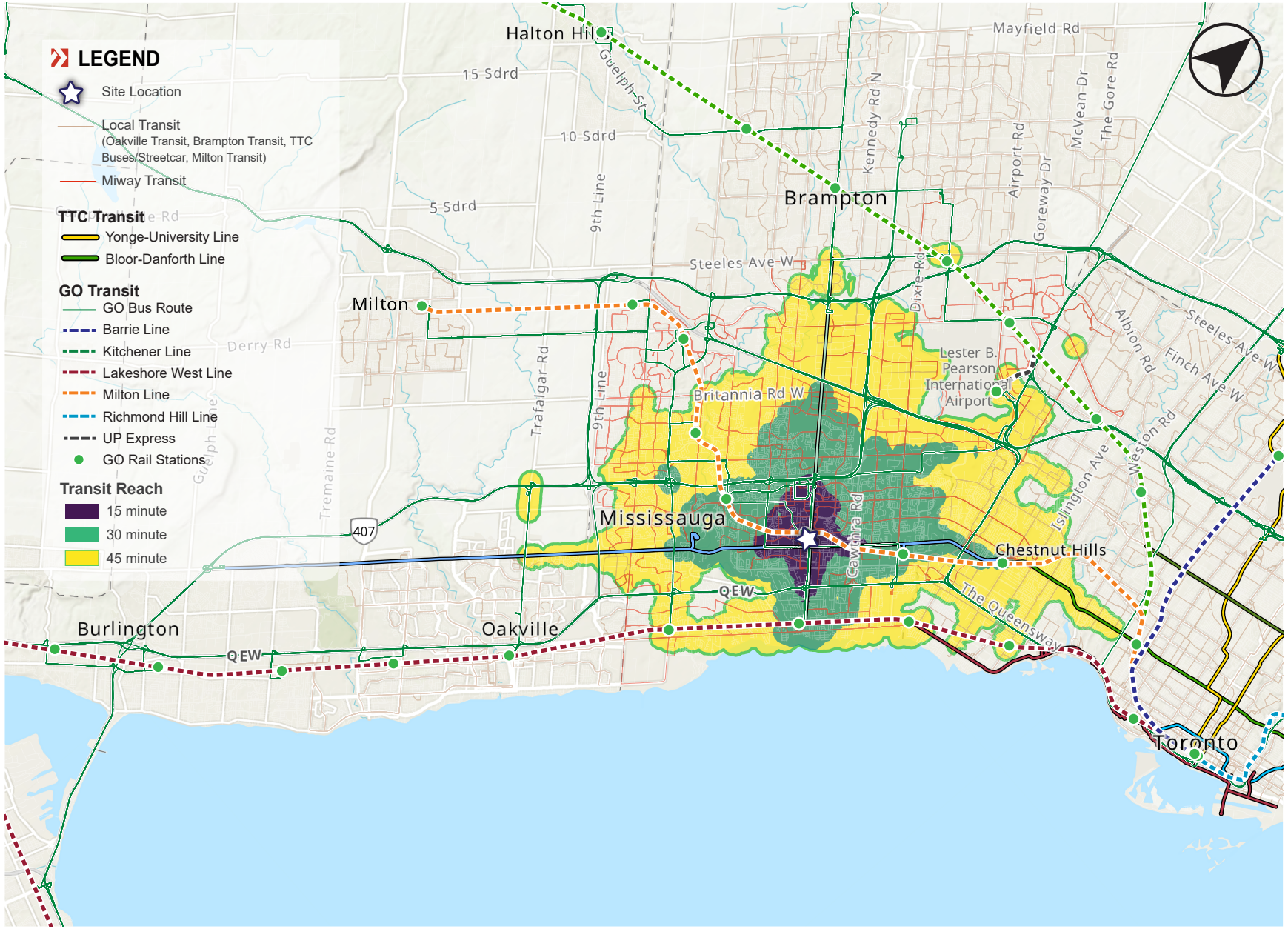
Notable findings include:

- Within 15 minutes, much of Cooksville and Fairview is accessible from the site under existing conditions with improvements to access along Dundas Street West, Hurontario Street, and Burnhamthorpe Road West corridors brought about by the Dundas BRT and Hurontario LRT.

- Within 30 minutes, the majority of central Mississauga are accessible from the site under existing conditions with improvements in the future along Hurontario Street, Dundas Street West, Eglinton Avenue East, and Lake Shore Road East brought about by the Dundas BRT, Hurontario LRT, and GO Smarttrack. Under future conditions Mimico GO Station, Oakville GO Station, and the intersection of Southdown Road are accessible due to the additions of the GO Expansion RER projects.

- Within 45 minutes under present conditions, a significant portion of Mississauga is accessible from the site, and extending into Oakville, Brampton, and Etobicoke. Under future conditions, reach extends further along into Toronto along the Gardiner Expressway, reaching Union Station due to GO Expansion RER Projects; Bronte, Appleby, Burlington, and Aldershot GO Stations will then be accessible due to the GO Expansion RER Projects; and reach extends further into Brampton due to the additions of the Hurontario LRT.

In summary, the site is easily accessible by transit under present conditions, with significant improvements to access expected as a result of GO Expansion and extensions to Toronto's and Mississauga's rapid transit network.



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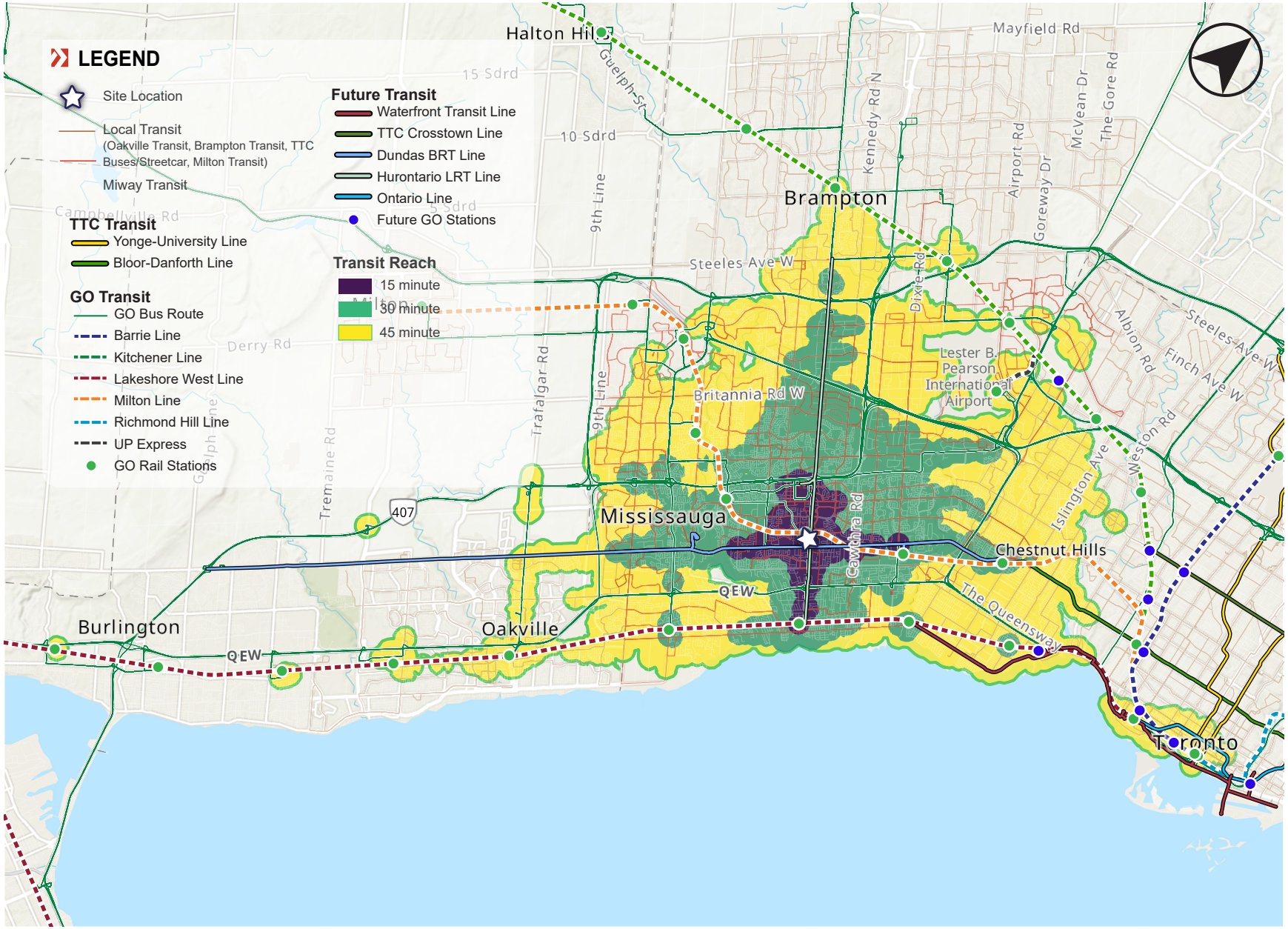
Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 8 EXISTING TRANSIT REACH



Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

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FIGURE 9 FUTURE TRANSIT REACH

5.3.1.4 Observed Parking Trends

As previously discussed, the City of Mississauga's Zoning By-law 0225-2007 is not consistent with the contemporary planning and policy regime that are guiding new development today and into the future. This holds true when looking at the By-Law currently in effect in contrast to more recent policies and discussions, specifically for parking within transit-oriented areas such as this site.

Based on recent policies introduced under the *Mississauga's Parking Matters Master Plan and Implementing Strategy* and *Parking Regulations Study*, it is clear that the residential parking requirements outlined in the current By-law have become conservatively high and outdated over time, with consideration to the parking reduction approvals and requests made for residential buildings within more urbanized / intensified areas within Mississauga. In fact, the City has never comprehensively updated its parking rates and has required relatively higher rates in key areas of intensification. This lack of amendment over time has become a barrier for new developments within the City with hundreds of requests for reduced parking rates being received and supported by staff, many in which ultimately lead to approval.

Nonetheless, a new precedent has been established at the **151 City Centre Drive** development, which forms a basis for the site-specific residential parking standards being proposed for the development. This precedent has obtained its latest parking variance from the Committee of Adjustment, file *"A" 355/21 (September 15, 2021)*. The Committee has approved the following residential parking rates:

- 1-bedroom: 0.62 spaces per unit
- 2-bedroom: 0.72 spaces per unit
- 3-bedroom: 0.80 spaces per unit

As such, the 151 City Centre development holds a new suitable precedent for highly transit accessible areas such as the subject site. This particular development possesses ideal urban characteristics with consideration to the following:

- Immediate access to higher order transit (e.g., future Hurontario LRT, City Centre GO Bus, Mississauga Transitway BRT);
- Access to a breadth of cycling and pedestrian facilities;
- Mixed use area and compact urban development (e.g., substantial employment, retail, recreational, institutional, and residential) that provides evolving employment and educational opportunities within the "heart" of the City Centre; and
- Extensive TDM program.

From a policy perspective, it is important to set parking supply rates with the future in mind. As a first step, this is best accomplished by adopting supply rates that, *at a minimum*, reflect the future travel mode split targets that are reasonable for the area. Although the site is not located directly within the City Centre and its accompanying uses, it is better connected to the transit network with the Cooksville GO Station and future Hurontario LRT and Dundas BRT within easy walking distance. This has been recognized with respect to the resident parking standards in the *Parking Regulations Study* introduced new "Precincts", specifying that 151 City Centre and the proposed development both fall under Precinct 1.

5.3.1.5 Review of Other Residential Parking Standards

Further evidence of relatively low (or decreasing) parking standards have been observed for other municipalities within the Greater Toronto and Hamilton Area for residential parking. A comprehensive Zoning By-law review was undertaken to analyze the differences (or similarities) of parking standards adopted across the Region. The selection of municipalities was primarily based on certain urban characteristics, including density and intensification patterns, conventionally auto-centric network, and diversity of transit services. **Table 6** summarizes the range of Zoning By-law parking standards by municipality.

TABLE 6 COMPARISON OF EVOLVING ZONING BY-LAW PARKING STANDARDS – RESIDENT

	Proposed Parking Standard	Mississauga	Vaughan	Toronto[3]		Brampton	St. Catharines	Kitchener
Zoning By-law	-	Parking Regulations Study (passed)	By-law 001-2021 (passed)	By-law 569-2013	By-law 89-2022 (passed)	By-law 270-2004	By-law 2013-283	By-law 2019-051
'Centre' Area	Downtown Cooksville	Precinct 1	VMC	Policy Area 2/3	Parking Area A	Central Area / Downtown	Downtown	Urban Growth Centre / Downtown
Nearby Transit Service	• MiWay Bus • GO Bus / Train • Future Hurontario LRT	• MiWay Bus • Mississauga Transitway • ZUM Rapid Bus • GO Bus • Future Hurontario LRT	• TTC Bus /Subway • GO Bus / Train • YRT Bus • YRT Viva BRT	• TTC Bus / Subway / Streetcar • GO Bus / Train • MiWay • Future TTC Subway • Future TTC Streetcar • Future TTC Steeles BRT		• GO Bus / Train • Brampton Bus • Brampton ZUM BRT • Future Metrolinx Hurontario LRT	• GO Bus / Train • St. Catharines Bus	• GO Bus / Train • Grand River Bus • Grand River ION LRT
Minimum Resident Parking Rate[1]	0.62 (1-Bed) 0.72 (2-Bed) 0.80 (3-Bed)[2]	0.80	0.40	0.60 (Studio) 0.70 (1-Bed) 0.90 (2-Bed) 1.0 (3-Bed)	0.00	0.00	0.00	0.00

Notes.
1. Parking rates as spaces per unit.
2. Proposed minimum residential parking rate, consistent with 151 City Centre Drive development.
3. Current City of Toronto parking requirements as per Zoning By-law 569-2013 are in review and have recently passed Zoning By-law 89-2022 in December 2021 (passed but not in effect).

The observed parking rate ranges for progressive Zoning By-law standards within other municipalities (either in effect or in progress) of the GTA are provided below:

- 0.00 - 1.00 spaces per unit (3-bedroom unit size)

It is noteworthy that almost half of the comparable municipalities observed have no minimum requirement. For example, the City of Brampton is a neighbouring municipality to the City of Mississauga, which undertook a substantial reduction to its downtown residential parking requirement. With consideration to the majority of transit services that both municipalities share (current and future), it is evident that Mississauga is currently providing an excessive residential parking rate for its area given the evolving transit context.

Specifically, the future operation of the Hurontario LRT and Dundas Street BRT will unlock a higher level of higher order transit accessibility that is comparable to the context presented for Kitchener (Downtown) and Toronto (Parking Area A). By that time, there will be a diverse range of transportation services for area residents: MiWay buses, GO bus / train, cycling lanes, shared roads, and multi-use paths. This particular finding between Mississauga and Kitchener indicates the potential to achieve a reduced parking as low as no minimum residential requirement for sites as progressive as the City Centre and Cooksville GO station area. Although the adoption of no parking minimum is currently not proposed, it is noteworthy that the City of Mississauga currently has conservatively high requirements compared to other municipalities within the region that do not reflect current parking trends and needs.

5.3.1.6 Proposed Residential TDM Strategies

As discussed in detail in **Section 8.0**, a TDM Plan for the site is proposed to guide the provision of viable alterative personal transportation options beyond the single-occupant, private automobile. The objective is to encourage the use of active and sustainable transportation modes, respond to the mobility needs of site residents, employees, and patrons, and reduce dependence on automobiles.

The future site context provides frequent, public transit services and improved pedestrian and cycling connectivity. The TDM Plan supplements and further leverages the physical infrastructure and attributes of the site area with a goal of reducing or minimizing auto-mode share. The proposed residential-based TDM strategies include, but are not limited to, provision of a reduced parking supply, abundant long-term bicycle parking supply, unbundling of units and parking spaces, provision of PRESTO card passes, provision of mixed uses on site, and promotional materials for transit services and bicycle events near the site.

It is noted that the diverse uses being proposed (e.g. residential, retail, commercial, and community) as well as the potential mixed housing options (e.g. market and affordable units, condominium and rental units) will support a reduced parking supply for residents through shorter trips (achieving a walkable 15-minute city) and increased dependency on affordable transportation options, such as public transit.

5.3.2 Non-residential Parking

It is our opinion that the in-force non-residential parking requirements as per By-law 0225-2007 overstate the parking needs of contemporary developments in highly transit-accessible areas of Mississauga, such as the site. The following non-residential standards are proposed for the site:

Residential Visitor: 0.15 spaces per unit
Retail: 3.00 spaces per 100 square metres GFA
Commercial: 2.00 spaces per 100 square metres GFA
Community: 2.90 spaces per 100 square metres GFA

The following section discusses the appropriateness of the proposed (reduced) non-residential parking requirements based on the following considerations:

- Emergence of non-auto supportive regional and local policy directives (Parking Regulations Study);
- Existing and planned active transportation facilities afforded to the area;
- Review of other residential visitor parking By-law standards;
- Observed precedence for residential visitor parking;
- Observed precedence for community parking; and
- Support from the site's TDM strategy for visitors.

5.3.2.1 Evolving Non-residential Standards as per City's Parking Regulations Study

As mentioned in **Section 5.3.1.1**, Mississauga's transportation-related policies and discussions are shifting towards the experience of people as opposed to auto use. The *Mississauga's Parking Matters Master Plan and Implementing Strategy* and the *Parking Regulations Study* were established to improve the efficiency and effectiveness of local parking as the City continues to evolve. The Strategy and Study indicated that managing parking supply as a key tool to achieving specific utilization, financial, and planning / development objectives. It recognized the need to manage issues by reducing minimum parking standards and encouraging the integration of TDM with parking and other non-auto strategies. General findings further imply that the City should strive to achieve a stronger balance between the parking and Mississauga's desire to be a true multi-modal City. The location of the site falls under Parking Precinct 1, which aims to adopt the lowest parking requirements in the City with the highest level of parking management strategies.

The most recent changes made by Council for the Parking Regulations Study specify the following non-residential rates that will be considered as part of the proposed development:

- Residential Visitor: 0.20 spaces per unit (proposed to be reduced)
- Retail: 3.00 spaces per 100 square metres GFA
- Commercial: 2.00 spaces per 100 square metres GFA
- Community: 4.50 spaces per 100 square metres GFA (proposed to be reduced)

It is expected that the proposed development be consistent (to a minimum) with these standards as it conforms to new plans, policies, and discussions held with City staff as well as other important stakeholders in the planning and development process.

For the residential visitor component, the Parking Regulations Study further proposed to adopt the City Centre shared parking arrangement as per Zoning By-law 0225-2007 for new developments in Precinct 1. Due to the excellent transportation context, this is suitable as it permits the efficiency of parking usage between all non-residential uses given their varying utilization patterns presented below in **Table** 7.

TABLE 7 NON-RESIDENTIAL SHARED PARKING FORMULA

	Weekday Period				Weekend Period			
	Morning	Noon	Afternoon	Evening	Morning	Noon	Afternoon	Evening
Residential Visitor	20%	20%	60%	100%	20%	20%	60%	100%
Retail	80%	90%	90%	90%	80%	100%	100%	70%
Commercial / Office	100%	90%	95%	10%	10%	10%	10%	10%
Community	100%	100%	100%	100%	100%	100%	100%	100%

Notes:
1. Mixed Use Development Shared Parking Formula as per City of Mississauga Zoning By-law 0225-2007, Table 3.1.2.3.
2. Shared parking formula for Community use was not specified; therefore, it is assumed that full occupancy was maintained over the weekday and weekend periods.

Reiterating the language of the By-law, the required visitor / non-residential parking requirement is a result of *"the greater of 0.15 visitor spaces per unit or parking required for all non-residential uses, located in the same building or on the same lot as the residential use […]"*. For the purposes of the proposed development, the required visitor parking count will be shared with the other non-residential uses. It is expected that all visitor parking can be appropriately accommodated as part of that supply (further discussed in **Section 0**).

In addition, it is noted that the proposed site-specific parking standard for the community use has been reduced to 2.90 spaces per 100 square metres. This is further discussed below in **Section 5.3.2.4**.

5.3.2.2 Review of Other Residential Visitor Parking Standards

Constraining parking supply is a highly, if not the most, effective tool in influencing vehicle travel, an approach that has been more widely adopted and embraced in more central or downtown areas of municipalities. Through the proposed development, local planning has the opportunity to apply a similar approach in the City Centre in a manner that will guide (reduce) future parking usage and limit automobile dependent travel.

Evidence of relatively low (or decreasing) parking standards have been observed for other municipalities within the Greater Toronto and Hamilton Area for residential visitor parking. A comprehensive Zoning By-law review was undertaken to analyze the differences (or similarities) of parking standards adopted across the Region. The selection of municipalities was primarily based on certain urban characteristics, including density and intensification patterns, conventionally auto-centric network, and diversity of transit services.

Table 8 summarizes the range of Zoning By-law parking standards by municipality.

TABLE 8 COMPARISON OF EVOLVING ZONING BY-LAW PARKING STANDARDS – VISITOR

	Proposed Parking Standard	Mississauga	Vaughan	Toronto[3]		Brampton	St. Catharines	Kitchener
Zoning By-law	-	Parking Regulations Study	By-law 001-2021 (passed)	By-law 569-2013	By-law 89-2022 (passed)	By-law 270-2004	By-law 2013-283	By-law 2019-051
'Centre' Area	Downtown Cooksville	Precinct 1	VMC	Policy Area 2/3	Parking Area A	Central Area / Downtown	Downtown	Urban Growth Centre / Downtown
Nearby Transit Service	• MiWay Bus • GO Bus / Train • Future Hurontario LRT	• MiWay Bus • Mississauga Transitway • ZUM Rapid Bus • GO Bus • Future Hurontario LRT	• TTC Bus / Subway • GO Bus / Train • YRT Bus • YRT Viva BRT	• TTC Bus / Subway / Streetcar • GO Bus / Train • MiWay • Future TTC Subway • Future TTC Streetcar • Future TTC Steeles BRT		• GO Bus / Train • Brampton Bus • Brampton ZUM BRT • Future Metrolinx Hurontario LRT	• GO Bus / Train • St. Catharines Bus	• GO Bus / Train • Grand River Bus • Grand River ION LRT
Minimum Resident Visitor Rate[1]	0.15	0.20	0.15	0.10	0.01, plus 2 spaces	0.20	0.00	0.00

Notes.
1. Parking rates as spaces per unit.
2. Current City of Toronto parking requirements as per Zoning By-law 569-2013 are in review and have recently passed Zoning By-law 89-2022 in December 2021 (passed but not in effect).

The observed parking rate ranges for progressive Zoning By-law standards within other municipalities (either in effect or in progress) of the GTA are provided below:

- Resident Visitor: 0.00 - 0.20 spaces per unit

Based on the above, the spread of visitor parking rates within central areas of the Region forms a relatively wide (but low and decreasing) range of standards. However, it is noteworthy that the majority of comparable municipalities fall within the 0.00 - 0.15 spaces per unit range. With consideration to the variety of transit services that these municipalities share and offer, it is evident that the City of Mississauga is currently not providing the most progressive minimum visitor parking requirements (e.g., 0.20 spaces per unit as per Zoning By-law 0225-2007). Particularly for evolving major transit areas such as the subject site, there is potential to reduce the parking rates even further. Nonetheless, from a Regional perspective, the proposed visitor rate of 0.15 spaces per unit is suitable and falls well within the range of standards observed for multiple municipalities with a comparable transit context.

5.3.2.3 Observed Parking Demand for Residential Visitor Use

As previously mentioned in **Section 5.3.1.4**, the City of Mississauga has recently granted permission to establish minimum site-specific parking standards below the prevailing By-law requirements. These approvals were granted by the City by way of Committee of Adjustment. These are for areas with less transit service than the site will have in the future and given the complementary mix of uses, the reduced visitor rate is appropriate.

BA Group conducted a review of relatively recent overnight resident visitor parking surveys at multiple existing condominium developments to better understand the recent parking demand within different areas of the City (e.g. City Centre and non-City Centre) during the week. It is important to note that the parking demand at the selected sites were not constrained by parking supply, thus, the parking demand was found to be lower than the available supply. As such, there is no unaccounted resident parking demand that would be occurring off-site.

The “composite” parking demand for most survey sites (unless otherwise specified) was collected, such that a residential visitor parking space occupied on one or more of the nights observed in each study was considered to be occupied as part of the overall demand. This ensured that the maximum parking demand was appropriately captured in the event that some of the resident vehicles were not in the garage for one or more of the days in each study.

Table 9 summarizes the peak composite residential parking demand observed for the multiple survey sites. The residential visitor parking demand data is also provided in **Appendix B**.

TABLE 9 OBSERVED RESIDENTIAL VISITOR PARKING DEMAND

Survey Site	Survey Details	Total Units	Visitor Parking Supply	Observed Peak Demand	Peak Demand Rate
The Craftsman Condominium[1] *1575-1578 Lakeshore Road West*	Tues. Oct 26, 2021 (8:00pm - 2:00am)	292 units (113 one-bed, 172 two-bed, 7 three-bed)	96 spaces	12 spaces	0.04 spaces / unit
	Thur. Oct 28, 2021 (8:00pm - 2:00am)		96 spaces	11 spaces	0.04 spaces / unit
	Tues. Nov 2, 2021 (8:00pm - 2:00am)		96 spaces	11 spaces	0.04 spaces / unit
	Thur. Nov 24, 2021 (8:00pm - 2:00am)		96 spaces	13 spaces	0.04 spaces / unit
Amber Condominium *5023-5025 Four Springs Avenue*	Tues. Feb 11 - Thurs. Feb 13, 2020 (3:00am)	438[2] units (243 one-bed, 184 two-bed, 17 three-bed, 2 four-bed total units)	67 spaces	29 spaces	0.07 spaces / unit
	Sat. Feb 22, 2020 (4:00pm - 11:00pm)		67 spaces	57 spaces	0.13 spaces / unit
Crystal Condominium *55-75 Eglinton Avenue West*	Tues. Feb 11 - Thurs. Feb 13, 2020 (3:00am)	461[2] units (252 one-bed, 165 two-bed, 46 three-bed total units)	69 spaces	54 spaces	0.12 spaces / unit
	Sat. Feb 22, 2020 (4:00pm - 11:00pm)		69 spaces	54 spaces	0.12 spaces per unit
Grand Park Towers *3975 Grand Park Drive*	Mon. Feb 10 - Tues. Feb 11, 2020 (10:00pm - 2:00am)	790 units[4]	122 spaces	49 spaces	0.11 - 0.16 spaces / unit[3]
	Thur. Feb 20 - Fri. Feb 21, 2020 (10:00pm - 2:00am)		122 spaces	36 spaces	0.10 - 0.15 spaces / unit[3]
	Sun. Feb 23 - Mon. Feb 24, 2020 (10:00pm - 2:00am)		122 spaces	45 spaces	0.11 - 0.16 spaces / unit[3]
Parkside Village *4011 Brickstone Mews and 510 Curran Place*	Tues. Feb 25 - Wed. Feb 26, 2020 (10:00pm - 2:00am)	1,008 units[4]	178 spaces	84 spaces	0.13 - 0.18 spaces / unit[3]
	Wed. Feb 26 - Thurs. Feb 27, 2020 (10:00pm - 2:00am)		178 spaces	94 spaces	0.14 - 0.19 spaces / unit[3]
	Thur. Feb 27 - Fri. Feb 28, 2020 (8:00pm - 3:00am)		178 spaces	92 spaces	0.14 - 0.19 spaces / unit[3]
Observed Residential Visitor Demand Range					**0.04 - 0.19 spaces / unit**

Notes:
1. Composite parking demand not analyzed.
2. Number of occupied units observed at the time that the parking surveys were conducted.
3. Composite parking demand estimated by increasing average overnight peak demand by range of 5%-10%.
4. Unit breakdown not available.

Based on the survey data presented above, the observed range of 0.04 - 0.19 spaces per unit provides evidence that the residential visitor parking demand has never been as high as the Zoning By-law 0225-2007 requirement of 0.20 spaces per unit. In fact, this would be the case for residential buildings within and not within the City Centre boundary. The subject site's proximity to higher order transit services (e.g., Cooksville GO station and future Hurontario LRT and Dundas BRT stops), among other non-auto transportation networks, is a major advantage and essential aspect that should be considered when establishing the appropriate visitor parking demand expected in the future.

Although the residential visitor parking supply will be shared with other non-residential parking, each specific use has its own typical utilization patterns over the course of the day, and it is likely that parking will be available due to the operation and relatively high turnover nature of each use. Moreover, the non-residential parking supply will maximize efficiency with this pooling, given that there is more flexibility among each use.

Thus, the minimum visitor parking requirement of 0.15 spaces per unit will appropriately be accommodated for the proposed development, particularly due to the future transit context and flexibility and pooling with other non-residential uses.

5.3.2.4 Observed Parking Demand for Community Use

As mentioned in **Sections 5.2** and **5.3.2.1**, it is proposed to reduce the community centre requirement to 2.90 spaces per 100 square metres, given the increasing level of transit accessibility and mixed use nature of the proposed development.

To further support this reduction, BA Group conducted a review of relatively recent parking surveys for several community centres within the City of Mississauga to understand the current parking demand and establish an appropriate supply for the proposed community use of the site. Survey sites with a comparable size containing typical community centre uses (e.g., an indoor pool, fitness centre and / or gymnasium) were selected for review.

Table 10 summarizes the community centre parking demand observed for the multiple survey sites. The community-based demand data is provided in **Appendix D**.

TABLE 10 OBSERVED COMMUNITY CENTRE PARKING DEMAND

Survey Site	Facilities Offered	Survey Details	Size / GFA	Parking Supply	Observed Peak Demand	Peak Demand Rate
Burnhamthorpe Community Centre *1500 Gulleden Drive*	• Arena • Gymnasium • Multipurpose room • Community rooms	Tues. Nov 26, 2019 (6:00am-12:00am)	5,335 sm	180 spaces	135 spaces	2.53 spaces / 100 sm
		Wed. Nov 27, 2019 (6:00am-12:00am)	5,335 sm	180 spaces	119 spaces	2.23 spaces / 100 sm
		Sat. Nov 30, 2019 (6:00am-12:00am)	5,335 sm	180 spaces	120 spaces	2.25 spaces / 100 sm
Huron Park Recreation Centre *830 Paisley Boulevard West*	• Indoor pool • Fitness Centre • Arena • Gymnasium • Multipurpose room • Community rooms	Tues. Dec 10, 2019 (6:00am-12:00am)	7,000 sm	350 spaces	106 spaces	1.51 spaces / 100 sm
		Sat. Dec 7, 2019 (6:00am-12:00am)	7,000 sm	350 spaces	130 spaces	1.86 spaces / 100 sm
Meadowview Community Centre[1] *6655 Glen Eden Drive*	• Indoor pool • Fitness Centre • Gymnasium • Library • Squash Courts • Multipurpose room • Small community rooms	Mon. June 18, 2018	7,400 sm	226 spaces	146 spaces	1.97 spaces / 100 sm
		Tues. June 19, 2018	7,400 sm	226 spaces	215 spaces	2.91 spaces / 100 sm
		Wed. June 20, 2018	7,400 sm	226 spaces	169 spaces	2.28 spaces / 100 sm
Observed Community Centre Demand Range						**1.51 - 2.91 spaces / 100 sm**

Notes:
1. Parking demand surveys obtained from the City of Mississauga.

Based on this review, the peak parking demand range observed for comparable community centres within the City of Mississauga is 1.51 - 2.91 spaces per 100 square metres GFA. This provides insight as to what is considered appropriate for the site development. In this case, it is considered suitable as it falls within the higher end of the range observed. As such, it is evident that the proposed community centre rate of 2.90 spaces per 100 square metres GFA can accommodate the anticipated community-related parking needs for the site.

5.3.2.5 Proposed Non-residential TDM Strategies

As discussed in detail in **Section 8.0**, a TDM Plan for the site is proposed to guide the provision of viable alterative personal transportation options beyond the single-occupant, private automobile. The objective is to encourage the use of active and sustainable transportation modes, respond to the mobility needs of site visitors, and reduce dependence on automobiles.

The future site context provides frequent, public transit services and improved pedestrian and cycling connectivity for visitors to be utilized throughout the day. The site-specific TDM Plan supplements and further leverages the physical infrastructure and attributes of the site area with a goal to reduce or minimize auto-mode share. The proposed non-residential TDM strategies include, but are not limited to, provision of an abundant short-term bicycle parking supply, provision of cycling and pedestrian-focused facilities, proximity to future Hurontario LRT and Cooksville GO station, and provision of promotional materials for transit services and bicycle events near the site.

5.4 VEHICLE PARKING SUPPLY

The total parking supply for the site is 1,994 spaces, including 1,452 resident (approximately 0.65 spaces per unit) and 542 shared visitor / non-residential (approximately 0.24 spaces per unit) parking spaces. The residential parking supply will be distributed within multiple levels between underground levels P1 to P4. The proposed parking supply represents a reduction of 2,173 spaces to the current in-force Zoning By-law requirement of 4,167 spaces.

There are two (2) parking ramps for the development from the ground floor: the first parking ramp will be provided to the east of the site at Building C and the second parking ramp will be provided to the west of the site at Building A. The accesses are illustrated in the reduced scale architectural plans **Appendix A**.

5.5 VEHICULAR PARKING SUMMARY

The development proposal comprises five (5) buildings comprising residential, retail, commercial, and community uses within the Downtown Cooksville area, which leverages planned investments to the Hurontario LRT. In addition to the citywide parking review undertaken by City staff, supporting such investments includes a reduced parking supply and enhancing the public realm / non-auto transportation context for new developments within the area.

It is our opinion that the current minimum Zoning By-law requirements exceed the needs of the proposed development and is now outdated and no longer applicable. Accordingly, the proposed reductions are justified by supportive policies, plans, and City discussions; area transit and active transportation context; comparably high standards to other comparable municipalities; observed parking demand for comparable proxy sites; parking reductions for new residential developments within the City Centre; and a comprehensive TDM plan. **Table 11** summarizes the ranges of parking ratios acknowledged throughout the rationale discussed above.

TABLE 11 SUMMARY OF PARKING RATIONALE RATIOS

Type	Residential Parking Rate (spaces / unit)	Residential Visitor Rate (spaces / unit)	Retail Rate (spaces / 100 sm)	Commercial Rate (spaces / 100 sm)	Community Rate (spaces / 100 sm)
Mississauga Zoning By-law 0225-2007	1.25 (1-bed) 1.40 (2-bed) 1.75 (3-bed)	0.20	4.00	3.20	4.50
Proposed Rates as per Parking Regulations Study	0.80 (all unit sizes)	0.20	3.00	2.00	4.50
Precedent Parking Reduction Approvals	0.62 (1-bed)[2] 0.72 (2-bed)[2] 0.80 (3-bed)[2]	0.15[2]	-	-	-
Recent Parking Demand Surveys	-	0.04 - 0.19[1]	-	-	1.51 - 2.91[1]
Other Comparable Zoning By-law Standards (Centres)	0.00 - 1.00 (varying unit sizes)	0.00 - 0.20	-	-	-
Proposed Parking Standard	0.62 (1-bed) 0.72 (2-bed) 0.80 (3-bed)	0.15	3.00	2.00	2.90

Notes:
1. Parking demand rates are expected to be further reduced over time as a result of major transit improvements (e.g. Hurontario LRT) and implementation of new, supportive policies.
2. Observed parking approval for the 151 City Centre Drive development.

6.0 BICYCLE PARKING CONSIDERATIONS

6.1 ZONING BY-LAW BICYCLE PARKING REQUIREMENTS

The City's Zoning By-law 0225-2007 currently does not provide bicycle parking requirements. This would result in no minimum bicycle parking requirements for the site.

The site development program was reviewed in the context of the proposed bicycle parking rates in the *Mississauga Parking Regulations Study*. This was initially based on the approved *Parking Master Plan and Implementation Strategy (June 2019)* to provide further action on reviewing and updating the off-street (e.g., privately owned) parking regulations in the City's Zoning By-law. Application of the Study's proposed bicycle parking rates requires a minimum of 2,102 bicycle parking spaces, including 1,827 long-term (Class A) and 275 short-term (Class B) spaces. A summary of the suggested minimum bicycle parking requirements is outlined below in **Table 12.**

TABLE 12 MISSISSAUGA PARKING REGULATIONS STUDY (CITY CENTRE)

Use		Units / GFA	Minimum Rate	Minimum Requirement[2]
Residential				
Residential	Long-term	2,224 units	0.80 spaces / unit	1,780 spaces
	Short-term		0.10 spaces / unit	223 spaces
Subtotal (LT)				1,780 spaces
Subtotal (ST)				223 spaces
Non-Residential				
Retail	Long-term	6,270 m²	0.15 spaces / 100 m² GFA	10 spaces
	Short-term		0.30 spaces / 100 m² GFA	19 spaces
Commercial	Long-term	8,692 m²	0.20 spaces / 100 m² GFA	18 spaces
	Short-term		0.15 spaces / 100 m² GFA	14 spaces
Community	Long-term	6,216 m²	0.30 spaces / 100 m² GFA	19 spaces
	Short-term		0.30 spaces / 100 m² GFA	19 spaces
Subtotal (LT)				47 spaces
Subtotal (ST)				52 spaces
Long-term				**1,827 spaces**
Short-term				**275 spaces**
Total				**2,102 spaces**

Notes:

1. Latest site statistics from SvN Architects and Planners received on May 30, 2022.
2. The proposed bicycle parking rates provided do not specify any standards for rounding when calculating the required bicycle spaces. For the purposes of this assessment, if the calculation of the required number of parking spaces results in a fraction, the number is rounded up to the nearest whole number.

6.2 BICYCLE PARKING SUPPLY AND ACCESS

The proposed plan provides 2,189 total bicycle spaces, including 1,914 long-term bicycle parking spaces and 275 bicycle rings for short-term use.

Bicycle parking access will be provided via driveways off the new private roads. All short-term spaces will be provided at-grade within the public realm of the site, while all long-term spaces will be provided within the P1 level of the underground parking garage.

It is noted that all long-term parking spaces will be secured within the garage for increased safety and accessibility by residents and employees of the proposed towers.

The proposed bicycle supply is considered appropriate for the site given the multi-modal goals and objectives of reducing peak hour single occupant private vehicle travel.

7.0 LOADING CONSIDERATIONS

7.1 ZONING BY-LAW LOADING REQUIREMENTS

The site is subject to the City of Mississauga Zoning By-law 0225-2007 loading standards. The application of the minimum Zoning By-law loading requirements requires eleven (11) loading spaces in total to service the proposed development. **Table 13** summarizes the minimum loading requirements for the site.

TABLE 13 ZONING BY-LAW 0225-2007 MINIMUM LOADING REQUIREMENTS

Building	Use	Units / GFA	Minimum Requirement
A & E[2]	Residential	858 units	1 space
	Retail	1,596 m^2	1 space
	Community	6,216 m^2	2 spaces
	Subtotal		4 spaces
B	Residential	482 units	1 space
	Retail	2,284 m^2	1 space
	Subtotal		2 spaces
C	Residential	444 units	1 space
	Retail	1,086 m^2	1 space
	Commercial	8,692 m^2	1 space
	Subtotal		3 spaces
D	Residential	440 units	1 space
	Retail	1,304 m^2	1 space
	Subtotal		2 spaces
Total			**11 spaces**

Notes:
1. Latest site statistics from SvN Architects and Planners received on May 30, 2022.
2. Buildings A and E will share loading facilities.

7.2 LOADING SUPPLY AND ACCESS

A total of 11 loading spaces are proposed at-grade and within consolidated loading facilities at Buildings A, B, C, D and E with vehicular access provided off the Private Roads via site driveway. Three (3) loading spaces are proposed at Building A, two (2) loading spaces are proposed at Building B, three (3) loading spaces are proposed at Building C, two (2) loading spaces are proposed at Building D and one (1) loading space is proposed at Building E. These consolidated loading facilities are proposed to meet both the non-residential and residential loading needs of the proposed development.

7.3 LOADING FACILITY ARRANGEMENTS

7.3.1 Operations and Manoeuvring

Turning movement diagrams have been developed demonstrating the ability for service delivery vehicles (i.e., TAC SU and TAC HSU) to manoeuvre appropriately within the site when accessing / departing each of the loading spaces proposed within the loading area.

The TAC Heavy Single Unit and TAC Single Unit Vehicle design vehicles have been used to assess the design arrangements of the proposed loading spaces.

Vehicle Manoeuvring Diagrams (VMD-01 to VMD-22) are provided in **Appendix E** and illustrate the turning movements for the design vehicles entering / departing the proposed loading spaces.

These diagrams confirm that the proposed loading arrangements are appropriate and will facilitate the manoeuvring needs of the vehicles that will make deliveries to the site.

7.3.2 Height Clearances

The loading area has been designed such that a minimum height clearance of 4.5 metres is maintained throughout the entire loading area.

7.4 LOADING SUMMARY

The proposed loading supply of eleven (11) loading spaces, as well as the arrangements, meet the minimum requirements as per By-law 0225-2007 and can appropriately accommodate the servicing needs of the site.

8.0 TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) plans are developed with a focus on reducing single occupant vehicle trips and supporting alternative modes of transportation including walking, cycling and transit.

The site is located within the Cooksville area, which is a mixed-use area with residential, employment / commercial / retail, and educational uses. These land uses allow for residents to potentially live and work in close proximity to each other, i.e. the walkable 15-minute city envisioned by various City policies. Around the site today, transit, sidewalks, and cycling paths are provided which make non-vehicular modes of travel a viable alternative. Notably, the Cooksville GO Station is steps away from the site along with the future Hurontario LRT and Dundas BRT stations within easy walking distance.

In the future, in accordance with the Official Plan, intensification of the area is encouraged for the City of Mississauga and the construction of new uses and transportation-related improvements will assist in supporting non-vehicular modes of travel for residents of the proposed development and the potential to provide affordable units.

The following initiatives will be implemented as part of the preliminary TDM plan for the proposed development (including residential, retail, commercial, and community uses):

Vehicular Travel Management

- Reduced vehicular parking supply from the City's current by-law rates.
- Condominium parking spaces will be unbundled (i.e., sold separately from the unit).
- Rough-in conduit for electric vehicles for 10% of all provided parking spaces.
- Provide on site pick-up / drop-off facilities central to the residential, retail, and community uses of the buildings to encourage carpooling or ridesharing.
- Explore options for the provision of car share spaces on site with car share operators.
- Explore options to provide ride hailing service discount passes (i.e., Uber) to first time residents of each dwelling unit that do not purchase a parking space as a one-time provision.

Transit Incentives

- Provide a pre-loaded PRESTO card pass to first-time residents of each dwelling unit that do not purchase a parking space as a one-time provision.
- Provide transit information screens in the lobbies of each residential building and community centre.
- Distribute or display MiWay promotional materials to provide information on transit service to residents, employees, and visitors.

Bicycle Parking and Services

- Provide an ample number of bicycle parking spaces for the overall development as per the City's Parking Regulations Study.
- Provide on-site bike repair stations central to the bicycle parking areas of each parking level.
- Provide information to residents and employees about City bike events.
- Provide copies of the City's Bikeway and Trails Map and Cyclists Handbook to residents and employees.

- Provide information about camps and “CAN-Bike” education / safety classes to residents and employees.

Micro-mobility Services

- In partnership with the City, support the provision of a shared micro-mobility system through the e-scooter pilot or other programs as they develop.

Pedestrian Access and Walkability

- Provide an improved public realm within and around the site, including enhancing the mid-block pedestrian crossing on John Street and permeable landscaped paths between the buildings.

Land Use and Infrastructure

- Provide a complementary mix of uses on site (e.g., residential, retail, commercial, and community).

9.0 MULTIMODAL TRAVEL DEMAND FORECASTING

The existing context to the site provides various opportunities for non-automobile modes of travel (i.e., cycling, walking, and transit). As part of this study, travel demand forecasts have been established for both auto-based and non-auto-based trips for the residential and non-residential land uses.

9.1 RESIDENTIAL TRAVEL DEMAND

9.1.1 Residential Person Trip Generation

The residential multi-modal travel demand is forecasted for the site based on several person trip surveys conducted for proximate developments and the Institute of Transportation Engineers' (ITE) Trip Generation Manual (11th Edition). A summary of the collected trip generation data and resulting trip rate is provided in **Table 14**.

Based on the selected trip rate, the residential uses on site expect in the order of 1,225 and 1,225 two-way person trips in the weekday morning and afternoon peak hours, respectively. It is noteworthy that a portion of these total person trips will be internal to the site (i.e., not impacting the external transportation network). Internal trip capture will be further discussed in **Section 9.5**. Of the total trips, 1,180 and 1,040 two-way persons are external trips during peak hours.

TABLE 14 RESIDENTIAL PROXIES AND SITE TRAVEL DEMAND

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
3504 Hurontario Street • Tuesday, January 28, 2020	0.07	0.33	0.40	0.25	0.15	0.40
3515 & 3525 Kariya Drive • Tuesday, January 28, 2020	0.05	0.50	0.55	0.31	0.14	0.45
ITE Land Use Code 2022 (Close to Rail Transit), Dense Multi-Use Urban	0.16	0.49	0.65	0.34	0.23	0.57
Average Rate	0.09	0.44	0.53	0.30	0.17	0.47
Selected Rate	0.05	0.50	0.55	0.35	0.20	0.55
Residential Person Site Trips [2,224 total residential units]	**110**	**1115**	**1225**	**780**	**445**	**1225**
Internal Trips	***0***	***-45***	***-45***	***-120***	***-65***	***-185***
External Trips	***110***	***1070***	***1180***	***660***	***380***	***1040***

Notes:
1. All site trips are rounded to the nearest five (5).
2. All trip rates are in trips per unit.

9.1.2 Residential Mode Splits

For the purposes of analysis, existing residential mode split data was adopted based on the 2016 Transportation of Tomorrow Survey (TTS). The TTS data outputs are provided in **Appendix F**.

Given the site's proximity to the GO station and the expected completion of the Hurontario LRT, the auto mode splits for travel to and from the site are decreased by 7%, while the transit mode split will increase by the same proportion. The existing and future site mode splits for the weekday morning and afternoon peak hours are summarized in **Table 15**.

TABLE 15 RESIDENTIAL TTS MODE SPLITS

Travel Mode	Directional Mode Splits			Difference	Future Adopted
	Inbound	Outbound	*Average*		
Auto Driver	50%	47%	*48%*	-5%	43%
Auto Passenger	14%	16%	*15%*	-2%	13%
Auto	**64%**	**63%**	***63%***	**-7%**	**56%**
Transit	21%	25%	*23%*	+7%	30%
Cycling	1%	1%	*1%*	--	1%
Walking	14%	11%	*13%*	--	13%
Non-Auto	**36%**	**37%**	***37%***	**+7%**	**44%**
Total	**100%**	**100%**	***100%***	**--**	**100%**

Notes:
1. Travel modes are based on home-based trips within TTS zones 3723, 3724, 3862, 3867, 3871 and 3872.
2. The data presented in the table above have been filtered to only include apartment types.

The 2016 data demonstrates that a large proportion of home-based trips in the area rely on non-auto modes. Given the site's proximity to the GO station and the presence of the future Hurontario LRT, the non-auto proportion is expected to increase. The future mode splits are applied to the external person trip generation to derive multimodal trip forecasts for the residential uses on site.

It should be noted that the adopted 30% transit mode share represents a conservative, (i.e., erring on the low side) assumption. In the *Hurontario / Main Street Corridor Master Plan (2010)* prepared by the City of Mississauga and City of Brampton as part of the Hurontario LRT development process, it identified significantly higher transit mode shares in the 2031 base LRT case with transit mode shares in excess of 60%. If these transit mode share assumptions were carried through the analysis, it would result in substantially fewer auto trips being generated.

9.1.3 Residential Multimodal Forecasts

Residential multi-modal trip forecasts are calculated based on the external person trip generation summarized in **Section 9.1.1** and the area mode splits summarized in **Section 9.1.2**.

The forecasts are provided in **Table 16**. Of the total person trips, 505 and 445 auto driver site trips are expected during the weekday morning and afternoon peak hours, respectively, to and from the residential uses. These trips will be analyzed on the area road network.

Approximately 355 and 310 transit site trips are expected during the weekday morning and afternoon peak hours, respectively.

TABLE 16 MULTIMODAL RESIDENTIAL SITE TRIPS

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**110**	**1070**	**1180**	**660**	**380**	**1040**
Auto Driver	45	460	505	285	160	445
Auto Passenger	15	140	155	85	50	135
Transit	35	320	355	195	115	310
Cycle	0	10	10	10	5	15
Walk	15	140	155	85	50	135

Notes:
1. All site trips are rounded to the nearest five (5).

9.2 RETAIL TRAVEL DEMAND

9.2.1 Retail Person Trip Generation

The retail multi-modal travel demand is forecasted based on person trip surveys for shopping plazas published in the ITE Trip Generation Manual (11th Edition) and a proxy retail trip generation survey. The proxy survey consisted of door counts at multiple restaurants, services such as banks or dry-cleaners, convenience stores, coffee shops, a grocery store, and general retail.

A summary of the collected trip generation data and resulting trip rate is provided in **Table 17**.

The retail uses on site expect in the order of 380 and 570 two-way person trips in the weekday morning and afternoon peak hours, respectively. It is noteworthy that a portion of these total person trips will be internal to the site (i.e., not impacting the external transportation network). Internal trip capture will be further discussed in **Section 9.5**. Of the total trips, 1,180 and 1,040 two-way persons are external trips during peak hours.

TABLE 17 RETAIL SITE TRAVEL DEMAND

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Proxy Survey – Shoppes on Steeles & 404						
Person Trip Rate (Thursday, June 6, 2019)	3.89	2.95	6.84	4.29	5.13	9.42
ITE Trip Surveys – Land Use Code 821 Shopping Plaza (Without Supermarket)						
Person Trip Rate (General Urban / Suburban) • **AM Peak:** Weekday, AM Peak Hour of Generator • **PM Peak:** Weekday, PM Peak Hour of Generator	3.36	3.37	6.73	6.03	5.80	11.83
Person Trip Rate (Dense Multi-Use Urban) • **AM Peak:** Weekday, AM Peak Hour of Generator • **PM Peak:** Weekday, PM Peak Hour of Generator	1.38	0.91	2.29	2.94	2.72	5.66
Person Trip Rate (Dense Multi-Use Urban) • **AM Peak:** Street Peak Data Not Available. • **PM Peak:** Peak Hour of Adjacent Street Traffic (Hour Between 4:00 p.m. to 6:00 p.m.)	No Data Available.			3.22	3.10	6.32
ITE Trip Surveys – Land Use Code 821 Shopping Plaza (With Supermarket)						
Person Trip Rate (General Urban / Suburban) • **AM Peak:** Weekday, AM Peak Hour of Generator • **PM Peak:** Weekday, PM Peak Hour of Generator	No Data Available.			5.94	6.18	12.12
Person Trip Rate (General Urban / Suburban) • **AM Peak:** Peak Hour of Adjacent Street Traffic (Hour Between 7:00 p.m. to 9:00 p.m.) • **PM Peak:** Peak Hour of Adjacent Street Traffic (Hour Between 4:00 p.m. to 6:00 p.m.)	4.80	4.62	9.42	7.01	7.31	14.32
Adopted Trip Rate						
Average Rate (Includes Data With Supermarkets)	3.36	2.96	6.32	4.91	5.04	9.95
Selected Rate	3.20	2.80	6.00	4.45	4.55	9.00
Retail Person Site Trips [6,322 m^2 total retail GFA]	**205**	**175**	**380**	**280**	**290**	**570**
Internal Trips	***-25***	***-15***	***-40***	***-90***	***-90***	***-180***
External Trips	***180***	***160***	***340***	***190***	***200***	***390***

Notes:
1. All site trips are rounded to the nearest five (5).
2. All trip rates are in trips per 100 m^2 gross leasable area (GLA).
3. For the purposes of a conservative analysis, the gross leasable area (GLA) is assumed to be analogous to the gross floor area (GFA).
4. Since the ITE trip generation manual provides rates in trips / 1000 ft^2 GFA, the trip rates were converted to trips / 100 m^2 GFA.

9.2.2 Existing Retail Mode Splits

Existing market / retail mode split data were obtained from the 2016 Transportation of Tomorrow Survey (TTS). The mode splits for the weekday morning and afternoon peak hours are summarized in **Table 18**. The TTS data outputs are provided in **Appendix F**.

TABLE 18 RETAIL TTS MODE SPLITS

Travel Mode	Directional Mode Splits		
	Inbound	Outbound	*Average*
Auto Driver	60%	64%	*62%*
Auto Passenger	17%	18%	*17%*
Auto	**77%**	**82%**	***79%***
Transit	16%	11%	*14%*
Cycling	0%	0%	*0%*
Walking	7%	7%	*7%*
Non-Auto	**23%**	**18%**	***21%***
Total	**100%**	**100%**	***100%***

Notes:
1. Travel modes are based on market-based trips within TTS zones 3723, 3724, 3862, 3867, 3871 and 3872.

9.2.3 Retail Multi-modal Forecasts

Retail multi-modal trip forecasts are calculated based on the total person trip generation summarized in **Section 9.2.1** and the area mode splits summarized in **Section 9.2.2**.

The forecasts are summarized in **Table 19**. Of the total person trips, 205 and 240 auto driver site trips are expected during the weekday morning and afternoon peak hours, respectively, to and from the retail uses. These trips will be analyzed on the area road network.

Approximately 50 and 55 transit site trips are expected during the weekday morning and afternoon peak hours, respectively.

TABLE 19 MULTI-MODAL RETAIL SITE TRIPS

Mode	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Persons / Total	**180**	**160**	**340**	**190**	**200**	**390**
Auto Driver	110	95	205	120	120	240
Auto Passenger	30	30	60	35	30	65
Transit	25	25	50	25	30	55
Cycling	0	0	0	0	5	5
Walking	15	10	25	10	15	25

Notes:
1. Retail site trips are rounded to the nearest five (5).

9.3 OFFICE TRAVEL DEMAND

9.3.1 Office Person Trip Generation

The office multi-modal travel demand is forecasted based on first principles methodology and an assumption of 1 employee per 20 m^2 gross leasable area. This assumption is conservative relative to ratios published in other studies:

- City of Vaughan's *Development Charges Background Study* (p. 58), dated May of 2018: 1 employee per 23 m^2
- York Region's *2018 Development Charges Background Study and By-law Amendment* (p. 24), dated May of 2018: 1 employee per 275 ft^2 (or 26 m^2)
- *Vaughan Promenade Centre Secondary Plan – Population and Employment Estimates* (p. 5), dated October 2019: 1 employee per 23 m^2

The methodology and resulting office travel demand are summarized in **Table 20**. It is noteworthy that a portion of these total person trips will be internal to the site (i.e., not impacting the external transportation network). Internal trip capture will be further discussed in **Section 9.5**. Of the total trips, 145 and 105 two-way persons are external trips during peak hours.

TABLE 20 FIRST PRINCIPLES OFFICE TRIP GENERATION

Parameter	Street Peak Hour Travel Characteristics					
	Weekday AM Peak Hour			Weekday PM Peak Hour		
	Inbound	Outbound	Two-Way	Inbound	Outbound	Two-Way
Gross Floor Area	8,692 m^2					
Gross Leasable Area	7,823 m^2 (Assumed as 90% of Gross Floor Area)					
Building Occupancy (persons) (Assume 1 employee / 20 m^2)	7,823 m^2 x 1 employee / 20 m^2 = 391 employees					
Assumed Attendance	90% x 391 employees = 350 employees					
Assumed Peak Hour Travel Proportion	50% x 350 employees = 175 employees			50% x 350 employees = 175 employees		
Directional Splits[1]	87%	13%	100%	15%	85%	100%
Office Person Site Trips	**150**	**25**	**175**	**25**	**150**	**175**
Internal Site Trips	***-20***	***-10***	***-30***	***-25***	***-45***	***-70***
External Site Trips	***130***	***15***	***145***	***0***	***105***	***105***

Notes:
1. Directional splits are taken from person trip surveys in the ITE Trip Generation Manual, 11th Edition for Land Use Code 710 (General Office Building).

9.3.2 Existing Office Mode Splits

Existing office mode split data were obtained from the 2016 Transportation of Tomorrow Survey (TTS). The mode splits for the weekday morning and afternoon peak hours are summarized in **Table 21**. The TTS data outputs are provided in **Appendix F**.

TABLE 21 OFFICE TTS MODE SPLITS

Travel Mode	Directional Mode Splits		
	Inbound	Outbound	*Average*
Auto Driver	83%	82%	*82%*
Auto Passenger	7%	8%	*8%*
Auto	**90%**	**90%**	***90%***
Transit	5%	5%	*5%*
Cycling	1%	1%	*1%*
Walking	4%	4%	*4%*
Non-Auto	**10%**	**10%**	***10%***
Total	**100%**	**100%**	***100%***

Notes:
1. Travel modes are based on market-based trips within TTS zones 3671, 3723, 3724, 3862, 3867, 3871 and 3872.

9.3.3 Office Multi-modal Forecasts

Office multi-modal trip forecasts are calculated based on the total person trip generation summarized in **Section 9.3.1** and the area mode splits summarized in **Section 9.3.2**.

The forecasts are summarized in **Table 22**. Of the total person trips, 145 and 105 auto driver site trips are expected during the weekday morning and afternoon peak hours, respectively, to and from the office uses. These trips will be analyzed on the area road network.

Approximately 10 and 5 transit site trips are expected during the weekday morning and afternoon peak hours, respectively.

TABLE 22 MULTI-MODAL OFFICE SITE TRIPS

Mode	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Persons / Total	**130**	**15**	**145**	**0**	**105**	**105**
Auto Driver	110	10	120	0	85	85
Auto Passenger	10	0	10	0	10	10
Transit	5	5	10	0	5	5
Cycling	0	0	0	0	0	0
Walking	5	0	5	0	5	5

Notes:
1. Office site trips are rounded to the nearest five (5).

9.4 COMMUNITY CENTRE TRAVEL DEMAND

9.4.1 Community Centre Person Trip Generation

The community centre multi-modal travel demand is forecasted based on person trip surveys published in the ITE Trip Generation Manual (11th Edition).

A summary of the ITE trip generation data and resulting trip rate is provided in **Table 17**.

The community centre uses on site expect in the order of 150 and 235 two-way person trips in the weekday morning and afternoon peak hours, respectively. It is noteworthy that a portion of these total person trips will be internal to the site (i.e., not impacting the external transportation network). Internal trip capture will be further discussed in **Section 9.5**. Of the total trips, 85 and 100 two-way persons are external trips during peak hours.

TABLE 23 COMMUNITY CENTRE SITE TRAVEL DEMAND

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
ITE Trip Surveys – Land Use Code 495 Recreational Community Centre						
Person Trip Rate (General Urban / Suburban) • **AM Peak:** Peak Hour of Adjacent Street Traffic (Hour Between 7:00 p.m. to 9:00 p.m.) • **PM Peak:** Peak Hour of Adjacent Street Traffic (Hour Between 4:00 p.m. to 6:00 p.m.)	1.85	0.65	2.50	1.62	2.14	3.76
Person Trip Rate (General Urban / Suburban) • **AM Peak:** Weekday, AM Peak Hour of Generator • **PM Peak:** Weekday, PM Peak Hour of Generator	1.60	0.75	2.36	1.62	2.14	3.76
Average / Selected Rate	1.73	0.70	2.43	1.62	2.14	3.76
Community Centre Person Site Trips [6,216 m^2 total retail GFA]	**105**	**45**	**150**	**100**	**135**	**235**
Internal Trips	***-45***	***-20***	***-65***	***-50***	***-85***	***-135***
External Trips	***60***	***25***	***85***	***50***	***50***	***100***

Notes:
1. All site trips are rounded to the nearest five (5).
2. All trip rates are in trips per 100 m^2 gross leasable area (GLA).
3. Since the ITE trip generation manual provides rates in trips / 1000 ft^2 GFA, the trip rates were converted to trips / 100 m^2 GFA.

9.4.2 Existing Community Centre Mode Splits

Community centre mode splits were assumed to be similar to existing retail mode split data that was summarized in **Table 18** under **Section 9.2.2**.

9.4.3 Community Centre Multi-modal Forecasts

Community centre multi-modal trip forecasts are calculated based on the total person trip generation summarized in **Section 9.4.1** and the area mode splits summarized in **Section 9.4.2**.

The forecasts are summarized in **Table 24**. Of the total person trips, 55 and 60 auto driver site trips are expected during the weekday morning and afternoon peak hours, respectively, to and from the office uses. These trips will be analyzed on the area road network.

Approximately 10 and 15 transit site trips are expected during the weekday morning and afternoon peak hours, respectively.

TABLE 24 MULTI-MODAL COMMUNITY CENTRE SITE TRIPS

Mode	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Persons / Total	**60**	**25**	**85**	**50**	**50**	**100**
Auto Driver	40	15	55	30	30	60
Auto Passenger	10	5	15	5	10	15
Transit	5	5	10	10	5	15
Cycling	0	0	0	5	0	5
Walking	5	0	5	0	5	5

Notes:
1. Community centre site trips are rounded to the nearest five (5).

9.5 INTERNAL TRIP CAPTURE

The presence of multiple land uses (i.e., the residential, retail, office, and community centre uses) within the proposed site development supports the potential for internal trips between these uses. These trips are not considered to be external to the site, but rather, will be made primarily by walking between the uses within the proposed development. As a result, the total external trip generation may be less than the sum of the trips that are generated by each discrete land use. The methodology for internal trip capture is described in detail in Chapter 6 of the ITE Trip Generation Handbook (3rd Edition).

These internal trips are removed from the trip generation potential of both the origin land use and the destination land use (i.e., from both "ends" of the "O-D" pairing). For example, one internal trip that originates from the office component and ends in the retail component of the site is equivalent to one outbound internal trip for the office component and one inbound internal trip for the retail component. If the office component is forecasted to generate 10 total outbound trips in an hour, 1 of those outbound trips would be internal, while the remaining 9 outbound trips would be external. It can also be stated in an equation as:

Total Trip Generation Potential of Each Land Use = Internal trips + External trips

Consequently, external site trips for each specific land use are equal to the total site trips for each land use subtracted by the internal site trips. The external site trips represent the trips that would ultimately be experienced on the area transportation network. In order to estimate the number of internal trips to and from each land use to another, the methodology outlined in Chapter 6 of the ITE Trip Generation Handbook was adopted. Detailed calculations are presented in **Appendix G**. The resulting internal trips are summarized in **Table 25**.

TABLE 25 INTERNAL SITE TRIP CAPTURE

Destination	Origin	AM Peak Hour	PM Peak Hour
To Residential	From Retail	0	75
	From Office	0	5
	From Community Centre	0	40
To Retail	From Residential	10	30
	From Office	5	20
	From Community Centre	10	40
To Office	From Residential	5	15
	From Retail	5	5
	From Community Centre	10	5
To Community Centre	From Residential	30	20
	From Retail	10	10
	From Office	5	20
Total Internal Trip Capture (One-Way Trips)		**90**	**285**

Notes:
1. Internal trips rounded to the nearest five (5).

A summary of the total, external, and internal site trips during the peak hours is provided in **Table 26**.

The site is expected to generate **1,930 and 2,205 two-way person trips** during the weekday morning and afternoon peak hours, respectively.

Of the total two-way trips, the site is expected to generate **180 and 570 internal trips** during the weekday morning and afternoon peak hours, respectively. These internal trips occur within the site development and do not cause any traffic-related impacts to the surrounding area road network.

The site is also expected to generate **1,750 and 1,635 external vehicle trips** during the weekday morning and afternoon peak hours, respectively. These external vehicle trips will be experienced by the surrounding area road network.

TABLE 26 EXTERNAL AND INTERNAL TRIP GENERATION SUMMARY

Land Use	Trip Type	AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
Residential	Total	110	1115	1225	780	445	1225
	Internal	0	-45	-45	-120	-65	-185
	External	110	1070	1180	660	380	1040
Retail	Total	205	175	380	280	290	570
	Internal	-25	-15	-40	-90	-90	-180
	External	180	160	340	190	200	390
Office	Total	150	25	175	25	150	175
	Internal	-20	-10	-30	-25	-45	-70
	External	130	15	145	0	105	105
Community Centre	Total	105	45	150	100	135	235
	Internal	-45	-20	-65	-50	-85	-135
	External	60	25	85	50	50	100
Total Composite	**Total**	**570**	**1360**	**1930**	**1185**	**1020**	**2205**
	Internal	**-90**	**-90**	**-180**	**-285**	**-285**	**-570**
	External	**480**	**1270**	**1750**	**900**	**735**	**1635**

Notes:
1. All site trips are rounded to the nearest five (5).

9.6 TOTAL EXTERNAL SITE TRAVEL DEMAND

The total site travel demand is summarized in **Table 27**. During the weekday morning and afternoon peak hours, the site is expected to generate:

- 885 and 830 auto driver trips;
- 240 and 225 auto passenger trips;
- 425 and 385 transit trips;
- 10 and 25 cycling trips; and
- 190 and 170 walking trips.

TABLE 27 TOTAL MULTIMODAL SITE TRIPS

Use	Mode	AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
Residential	**Persons / Total**	**110**	**1070**	**1180**	**660**	**380**	**1040**
	Auto Driver	45	460	505	285	160	445
	Auto Passenger	15	140	155	85	50	135
	Transit	35	320	355	195	115	310
	Cycling	0	10	10	10	5	15
	Walking	15	140	155	85	50	135
Retail	**Persons / Total**	**180**	**160**	**340**	**190**	**200**	**390**
	Auto Driver	110	95	205	120	120	240
	Auto Passenger	30	30	60	35	30	65
	Transit	25	25	50	25	30	55
	Cycling	0	0	0	0	5	5
	Walking	15	10	25	10	15	25
Office	**Persons / Total**	**130**	**15**	**145**	**0**	**105**	**105**
	Auto Driver	110	10	120	0	85	85
	Auto Passenger	10	0	10	0	10	10
	Transit	5	5	10	0	5	5
	Cycling	0	0	0	0	0	0
	Walking	5	0	5	0	5	5
Community Centre	**Persons / Total**	**60**	**25**	**85**	**50**	**50**	**100**
	Auto Driver	40	15	55	30	30	60
	Auto Passenger	10	5	15	5	10	15
	Transit	5	5	10	10	5	15
	Cycling	0	0	0	5	0	5
	Walking	5	0	5	0	5	5
Total Site	**Persons / Total**	**480**	**1270**	**1750**	**900**	**735**	**1635**
	Auto Driver	305	580	885	435	395	830
	Auto Passenger	65	175	240	125	100	225
	Transit	70	355	425	230	155	385
	Cycling	0	10	10	15	10	25
	Walking	40	150	190	95	75	170

10.0 VEHICULAR TRAFFIC VOLUME FORECASTING

10.1 EXISTING TRAFFIC VOLUMES

10.1.1 Recent Data Collection

On behalf of BA Group, Spectrum Traffic Inc. recently conducted turning movement counts (TMC) for the study area intersections in October of 2021. The counts were completed during the weekday morning and afternoon peak periods (the busiest hours of traffic are between 7:30 a.m. to 9:30 a.m. and 4:00 p.m. to 6:00 p.m., respectively).

10.1.2 Pre-Pandemic Volume Calibration

Given that the traffic counts were conducted during the COVID-19 pandemic, additional counts prior to the pandemic were also obtained dated 2019 (at Hurontario Street / Dundas Street) and 2020 (at Hurontario Street / Fairview Road). The pre-pandemic traffic counts serve as a reference for volume calibration within the study area. It is noteworthy that at the time of both of the obtained pre-pandemic counts, the Cooksville GO station was under construction and not fully operational.

Traffic count information adopted as the basis for the traffic operations analysis and undertaken to assess the operational impacts of the proposed development are summarized in **Table 28**. All count data is provided in **Appendix H**.

TABLE 28 TRAFFIC DATA INFORMATION

Intersection	Date of Count
Signals	
Hurontario Street / John Street	Wednesday, October 13, 2021
Hurontario Street / Hillcrest Avenue / Kirwin Avenue	
Hillcrest Avenue / GO Access Road	
Hillcrest Avenue / Private Access Road	
Confederation Parkway / Hillcrest Avenue	
Hurontario Street / Fairview Road East & West	Wednesday, January 22, 2020
Hurontario Street / Dundas Street East & West	Thursday, September 19, 2019
Unsignalized / "STOP" Control	
Hurontario Street / Agnes Street	Wednesday, October 13, 2021
Hurontario Street / Overflow GO Parking Lot	
Hurontario Street / Existing Site Access	
John Street / Existing Site Access	
GO Access Road / Two Existing Site Accesses	
Hillcrest Avenue / Existing Site Access / Private Driveway	
Hillcrest Avenue / Existing Site Access / School Driveway	
Hillcrest Avenue / Private Driveway	
Private Intersections on Metrolinx Lands	

Notes:
1. All counts were conducted during peak travel periods between 7:30 a.m. to 9:30 a.m. and 4:00 p.m. to 6:00 p.m.

10.1.3 Cooksville GO Traffic Forecasts

The construction of the Cooksville GO station was recently completed in September of 2020. However, given pandemic restrictions and an increase in working-from-home at the time of the October 2021 counts, travel flows to and from the GO station (including transit ridership numbers) do not represent typical conditions.

To forecast the appropriate quantity of GO-related vehicle trips under typical conditions, BA Group conducted a review of typical trip generation rates at other GO stations in similar contexts. The vehicle trip generation rates are summarized in **Table 29** below. The difference between the anticipated typical GO-related trips and the currently observed GO-related trips (in the order of 1,580 and 1,405 two-way trips in the peak hours) were then manually assigned onto the area road network based on existing travel patterns in the area.

TABLE 29 GO STATION VEHICLE TRIP RATES

		AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
Observed Trip Rates (Trips / Parking Supply)	Parking	0.51	0.03	0.54	0.08	0.40	0.48
	Pick-Up / Drop-Off	0.09	0.09	0.18	0.08	0.08	0.16
	Total	0.60	0.12	0.72	0.16	0.48	0.64
Cooksville GO (~2,500 spaces)	Parking	220	225	445	195	200	395
	Pick-Up / Drop-Off	1265	75	1340	200	990	1190
	Total	1485	300	1785	395	1190	1585
Existing GO Trips (October 2021 Count)	Parking	45	40	85	35	30	65
	Pick-Up / Drop-Off	95	25	120	30	85	115
	Total	140	65	205	65	115	180
Additional GO Trips (Assigned in this Study)	Parking	175	185	360	160	170	330
	Pick-Up / Drop-Off	1170	50	1220	170	905	1075
	Total	1345	235	1580	330	1075	1405

Notes:
1. All site trips are rounded to the nearest five (5).

10.1.4 Resultant Baseline Existing Traffic Volumes

The baseline existing traffic volumes therefore consist of the balanced count data in addition to the additional GO vehicle trips that are expected under typical conditions. All turning movement volumes were rounded to the nearest five (5) vehicles and were reviewed to ensure a general consistency in the traffic volumes on links between intersections. Where necessary, traffic volume adjustments were made to balance through traffic volumes between intersections to ensure consistency along the corridor.

The baseline existing traffic volumes for the weekday morning and afternoon peak hours adopted for the purposes of this analysis are illustrated in **Figure 10**.

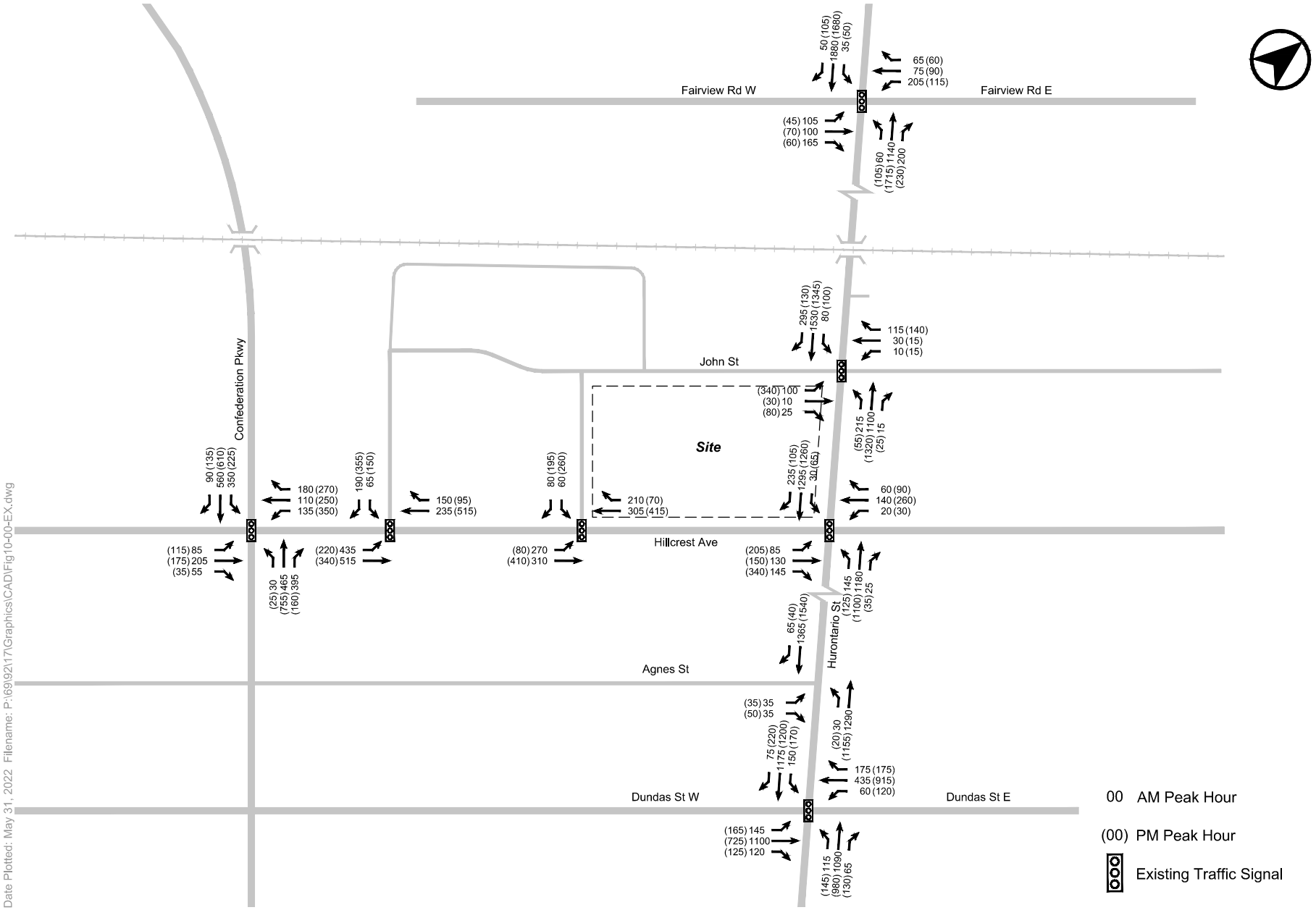

FIGURE 10 BASELINE EXISTING TRAFFIC VOLUMES - EXTERNAL

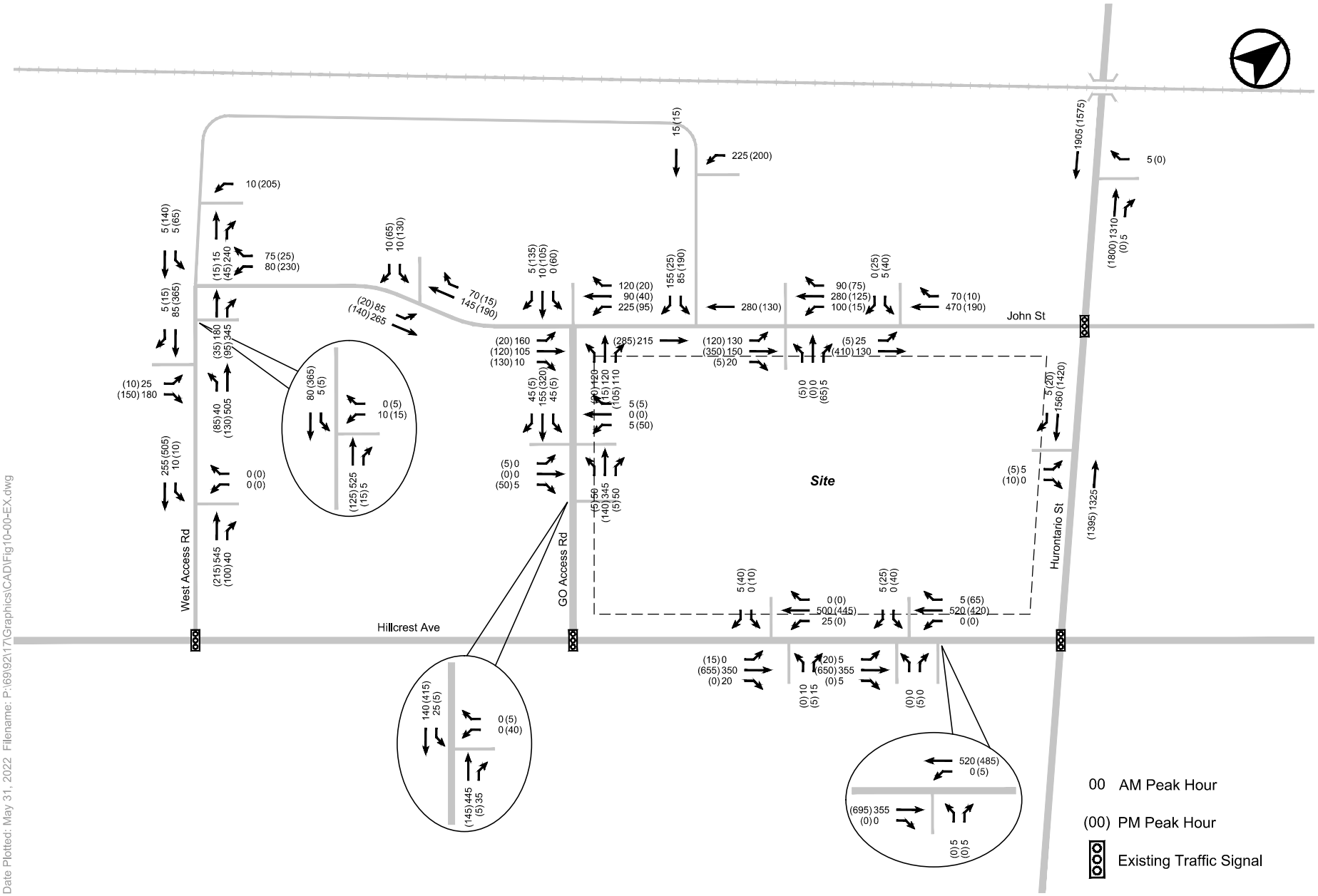

FIGURE 10 BASELINE EXISTING TRAFFIC VOLUMES - INTERNAL

10.2 FUTURE BACKGROUND TRAFFIC VOLUMES

10.2.1 Background Development Traffic Allowances

Allowances were made under future traffic conditions to account for new traffic generated by other development proposals in proximity to the proposed site that are either under construction, approved, being reviewed, or for which an application is expected to be submitted to the City of Mississauga in the near future.

Under the five-year horizon of the year 2027, the total development programme for the 16 background developments includes approximately 6,300 residential units and 5,000 m^2 non-residential GFA. **Table 30** summarizes the list of background developments considered in this study.

TABLE 30 BACKGROUND DEVELOPMENTS LIST

Development	Description	Report Source	Traffic Source
1 Fairview Road East	485 residential units 270 m^2 retail GFA	LEA	TIS Report
600 Lolita Gardens	270 residential units	WSP	TIS Report
3575 Kaneff Crescent	282 residential units	Nextrans	TIS Report
16 Elm Drive	1,365 residential units 492 m^2 daycare GFA 452 m^2 retail GFA	Poulos & Chung	TIS Report
86-90 Dundas Street East	336 residential units 300 m^2 retail GFA	GHD	TIS Report
100 Dundas Street West	140 residential units	Not available	
85-95 Dundas Street West	419 residential units 385 m^2 retail GFA	GHD	TIS Report
2512-2532 Argyle Road	101 residential units	Nextrans	TIS Report
2444 Hurontario Street	215 residential units 3 live-work units	IBI	TIS Report
2487 Camilla Road	24 residential units	Nextrans	TIS Report
2570 Argyle Road	255 residential units	BA	TIS Report
3420 Hurontario Street	680 residential units 2,000 m^2 retail GFA	Crozier	TIS Report
3606 Hurontario Street	821 residential units 956 m^2 non-residential GFA	BA	TIS Report
45 Agnes Street	268 residential units	Not available	
71 Agnes Street	264 residential units	Not available	
185 Enfield Place (Phase 1)	366 residential units 116 m^2 retail GFA 121 m^2 office GFA	BA	TIS Report

Notes:
1. Where the TIS excerpts did not include background development traffic volumes, trip generation and distribution parameters similar to those adopted in this report were assumed.

10.2.2 Corridor Growth Calibration

Corridor growth rates provided by City of Mississauga staff are summarized in **Table 31**. The total growth rates along Hurontario Street from the current year of 2022 to the year of 2026 represent the traffic reduction resulting from the construction of the Hurontario LRT and the removal of vehicular travel lanes.

TABLE 31 CORRIDOR GROWTH RATES

Corridor	Travel Direction	Existing 2022 to 2026		2026 to 2027	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Hurontario Street	Northbound	-20.5% *in total*	-20.5% *in total*	1.0% *per annum*	0.5% *per annum*
	Southbound	-23.5% *in total*	-17.5% *in total*	0.5% *per annum*	0.5% *per annum*
Confederation Parkway	Northbound	1.5% *per annum*	0.5% *per annum*	1.0% *per annum*	0.5% *per annum*
	Southbound	0.5% *per annum*	1.5% *per annum*	1.0% *per annum*	0.5% *per annum*
Dundas Street	Eastbound	0.0% *per annum*	0.5% *per annum*	0.0% *per annum*	0.0% *per annum*
	Westbound	1.0% *per annum*	0.0% *per annum*	0.0% *per annum*	0.0% *per annum*

Corridor volumes along Hurontario Street, Confederation Parkway, and Dundas Street at the 2027 horizon year were calibrated to the anticipated growth rates above.

10.2.3 Adjustments for Future Road Network

Several network changes in the site vicinity are planned alongside the construction of the Hurontario LRT and the Dundas BRT. These changes were incorporated into the analysis, including, but not limited to, the following:

- The removal of one through lane in either direction along Hurontario Street for the LRT;
- Hurontario Street / Agnes Street as a right-in / right-out (RIRO);
- Bus only-lanes at Hurontario Street / Dundas Street;
- Protected northbound and southbound left turn advance phases along Hurontario Street due to the LRT;
- Protected eastbound and westbound left turn advance phases along Dundas Street due to the BRT; and
- The prohibition of northbound left turns at Hurontario Street / Dundas Street.

As drivers continue to distribute along alternative routes and corridors to avoid congestion and extensive delays, notable shifts in travel patterns in the area are expected given the significant changes to the road network.

10.2.4 Resultant Future Background Traffic Volumes

Figure 11 illustrates the future traffic growth resulting from the summation of background development traffic allowances, the calibrated corridor growth trends, and the total traffic volume redistribution as a result of future network changes on the area road network.

Future background traffic volumes therefore comprise of the established baseline existing traffic volumes growth (**Figure 10**) and future traffic growth (**Figure 11**), and are illustrated in **Figure 12**.

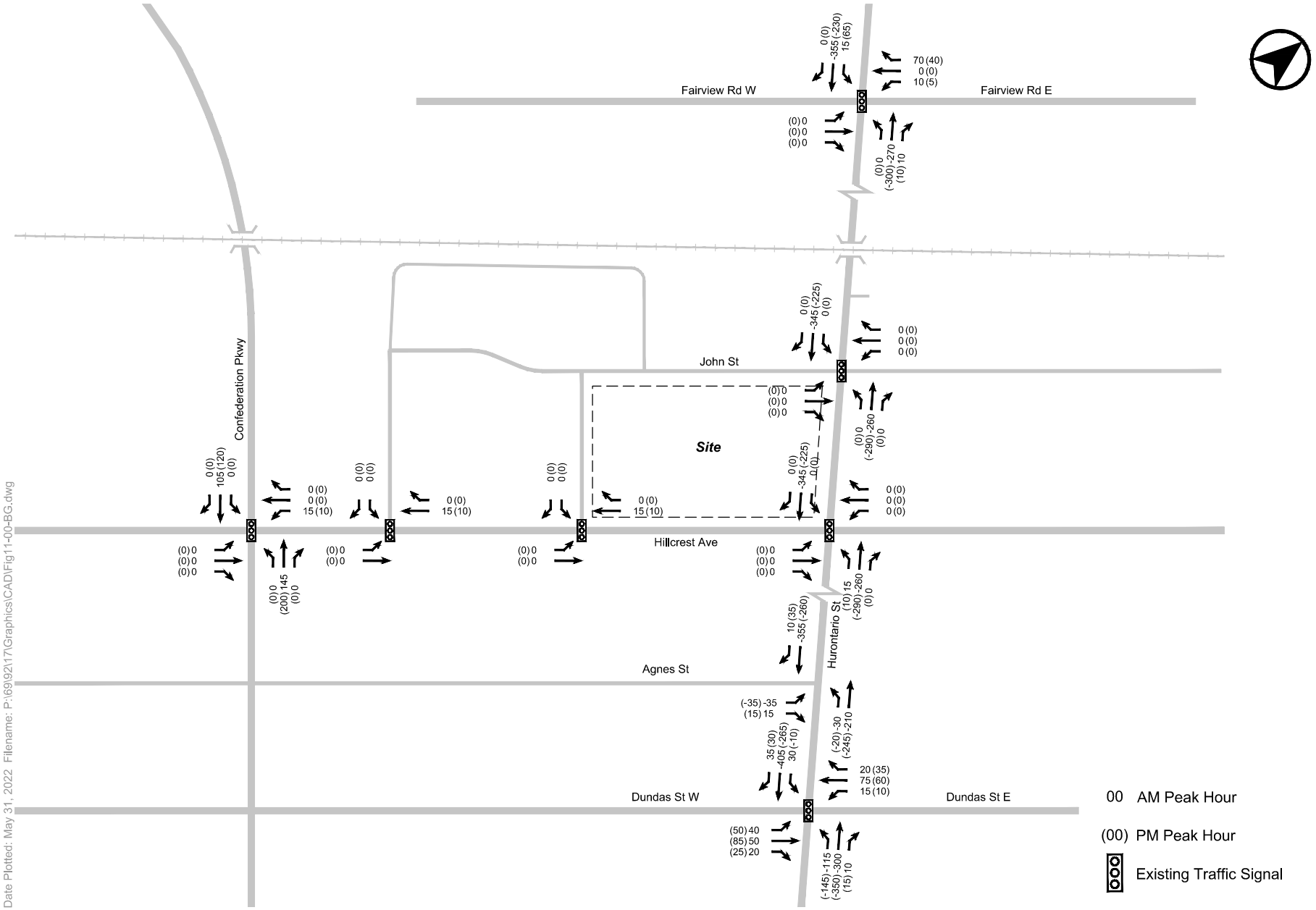

FIGURE 11 BACKGROUND GROWTH TRAFFIC VOLUMES - EXTERNAL

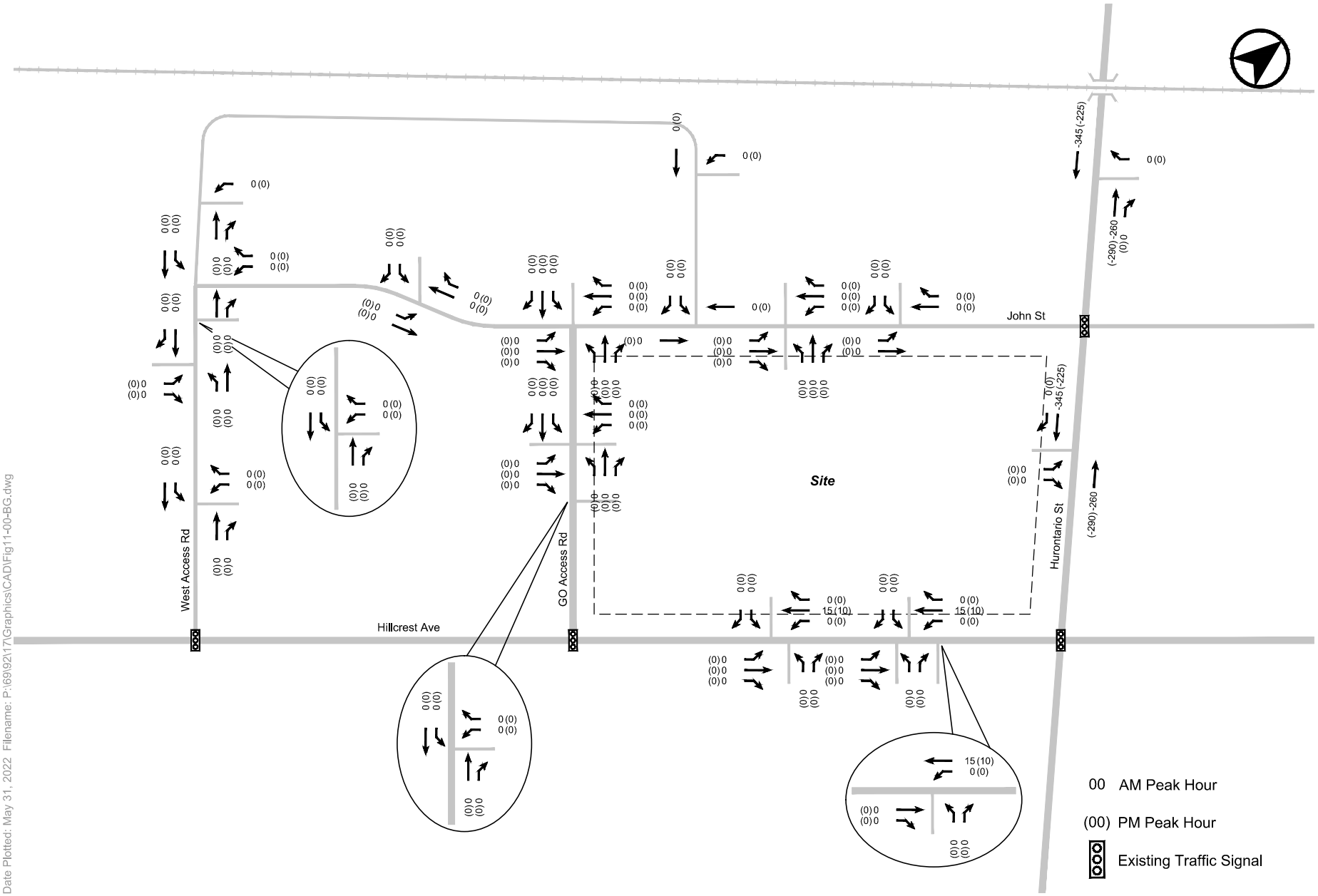

FIGURE 11 BACKGROUND GROWTH TRAFFIC VOLUMES - INTERNAL

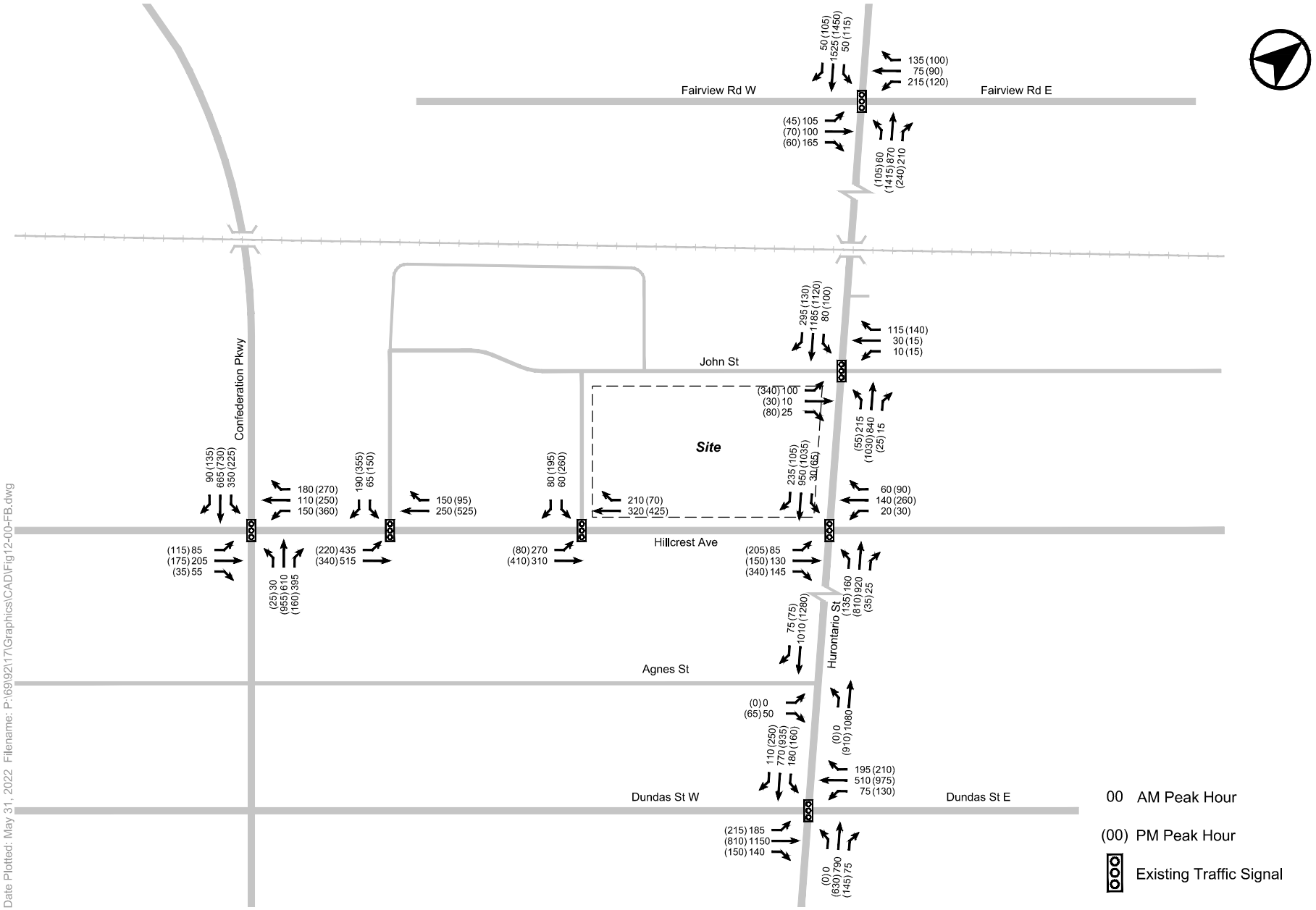

FIGURE 12 FUTURE BACKGROUND TRAFFIC VOLUMES - EXTERNAL

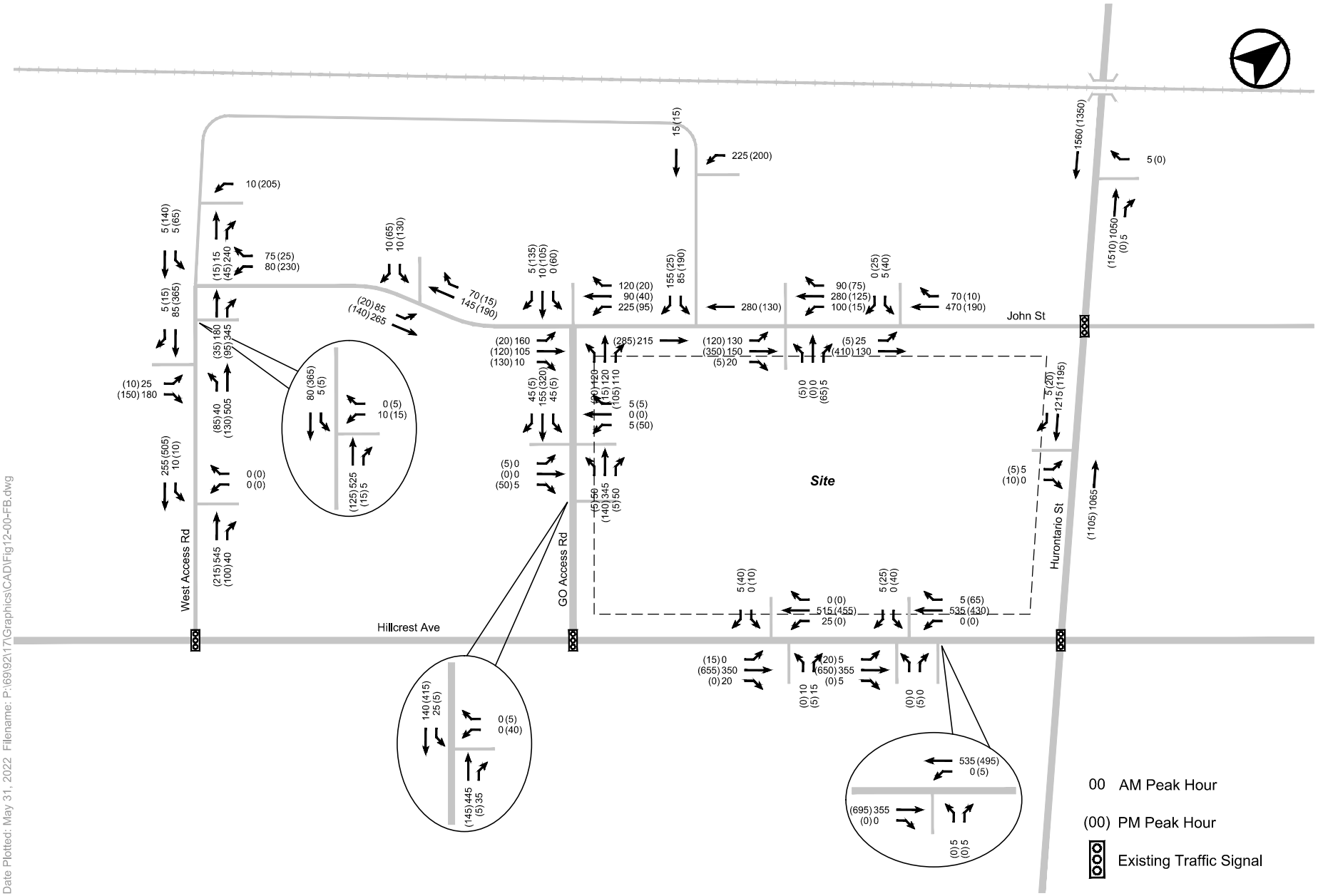

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FIGURE 12 FUTURE BACKGROUND TRAFFIC VOLUMES - INTERNAL

10.3 SITE TRAFFIC VOLUMES

10.3.1 Existing Site Traffic Volumes

The existing site consists of several retail uses and 390 surface parking spaces that serve the GO station. With the proposed redevelopment, the vehicular traffic to and from these uses will be removed from the area road network. There are 320 and 460 existing site trips during the weekday morning and afternoon peak hours, respectively, as summarized in **Table 32**.

TABLE 32 EXISTING SITE TRAFFIC VOLUMES

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Retail Site Trips	15	15	30	120	130	250
GO Parking Site Trips	275	15	290	40	170	210
Total Existing Site Trips (To Be Removed)	**290**	**30**	**320**	**160**	**300**	**460**

Notes:
1. All site trips are rounded to the nearest five (5).

10.3.2 Total Site Traffic Volumes

As previously discussed in **Section 9.6**, the site is expected to generate 885 and 830 two-way vehicle trips during the weekday morning and afternoon peak hours, respectively. These vehicle trips are summarized in **Table 33**.

TABLE 33 TOTAL SITE TRAFFIC VOLUMES

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Residential	45	460	505	285	160	445
Retail	110	95	205	120	120	240
Office	110	10	120	0	85	85
Community	40	15	55	30	30	60
Total	**305**	**580**	**885**	**435**	**395**	**830**

Notes:
1. All site trips are rounded to the nearest five (5).

It is noteworthy that a portion of the total retail trips are assumed to be pass-by trips, consistent with the data provided in the ITE Trip Generation Handbook, 3rd Edition (dated September 2017). The pass-by percentage, which was found to be dependent on retail gross leasable area, is approximately 43%. The breakdown of retail trips is summarized in **Table 34**.

TABLE 34 RETAIL PASS-BY AND PRIMARY SITE TRAFFIC VOLUMES

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Retail	110	95	205	120	120	240
Pass-by (43%)	*45*	*45*	*90*	*55*	*55*	*110*
Primary	*65*	*50*	*115*	*65*	*65*	*130*

10.3.3 Net New Site Traffic Volumes

Relative to existing conditions, the site redevelopment will generate an additional (or "net new") 565 and 370 two-way vehicle trips during the weekday morning and afternoon peak hours, respectively.

TABLE 35 NET NEW SITE TRAFFIC VOLUMES

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Existing Site Trips (To Be Removed)	290	30	320	160	300	460
Total Site Trips	305	580	885	435	395	830
Net New Site Trips	**15**	**550**	**565**	**275**	**95**	**370**

Notes:
1. All site trips are rounded to the nearest five (5).

10.3.4 Site Traffic Volume Figures

Figure 13, **Figure 14**, **Figure 15** and **Figure 16** illustrate the residential, retail, office, and community centre site traffic volumes on the study area road network, respectively.

Figure 17 and **Figure 18** illustrate the total and net new site traffic volumes on the study area road network, respectively.

10.3.5 Site Trip Distribution

10.3.5.1 Residential Trip Distribution

Residential vehicle site trips were assigned onto the area road network based upon a review of travel information provided by the 2016 Transportation Tomorrow Survey (TTS) for home-based trips in the site environs. The TTS queries are provided in **Appendix I**.

The residential site traffic distribution is summarized in **Table 36**.

TABLE 36 RESIDENTIAL SITE TRAFFIC DISTRIBUTION

To / From Cardinal Direction	Corridor	Inbound	Outbound
North	Hurontario Street	45%	40%
	Confederation Parkway	15%	15%
South	Hurontario Street	15%	25%
	Confederation Parkway	0%	0%
East	Dundas Street East	15%	10%
West	Hillcrest Avenue	5%	5%
	Dundas Street West	5%	5%
Total		**100%**	**100%**

Notes:
1. The studied 2006 TTS zones include 3723, 3724, 3862, 3867, 3871 and 3872.

10.3.5.2 Office Trip Distribution

Similar to residential vehicle site trips, office vehicle site trips were assigned onto the area road network based upon a review of travel information provided by the 2016 Transportation Tomorrow Survey (TTS) for work-based trips in the site environs. The TTS queries are provided in **Appendix I**.

The office site traffic distribution is summarized in **Table 37**.

TABLE 37 OFFICE SITE TRAFFIC DISTRIBUTION

To / From Cardinal Direction	Corridor	Inbound	Outbound
North	Hurontario Street	45%	35%
	Confederation Parkway	10%	10%
South	Hurontario Street	20%	20%
	Confederation Parkway	5%	5%
East	Dundas Street East	5%	5%
West	Hillcrest Avenue	5%	10%
	Dundas Street West	10%	15%
Total		**100%**	**100%**

Notes:
1. The studied 2006 TTS zones include 3671, 3723, 3724, 3862, 3867, 3871 and 3872.

10.3.5.3 Retail and Community Centre Trip Distribution

Retail and community centre vehicle site trips were assigned onto the area road network based upon a review of existing travel proportions and turning movements observed at the study area intersections.

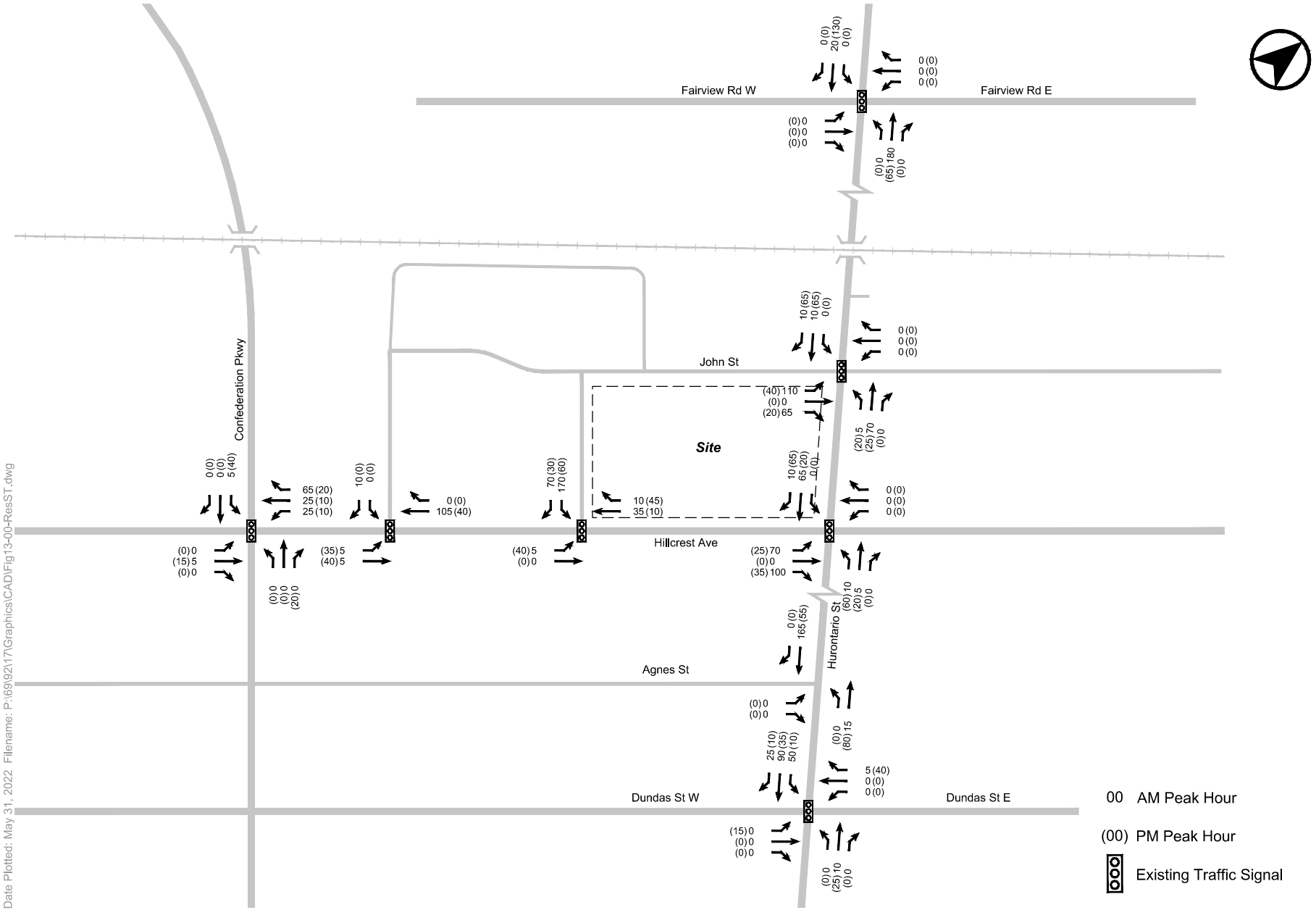

FIGURE 13 RESIDENTIAL SITE TRAFFIC VOLUMES - EXTERNAL

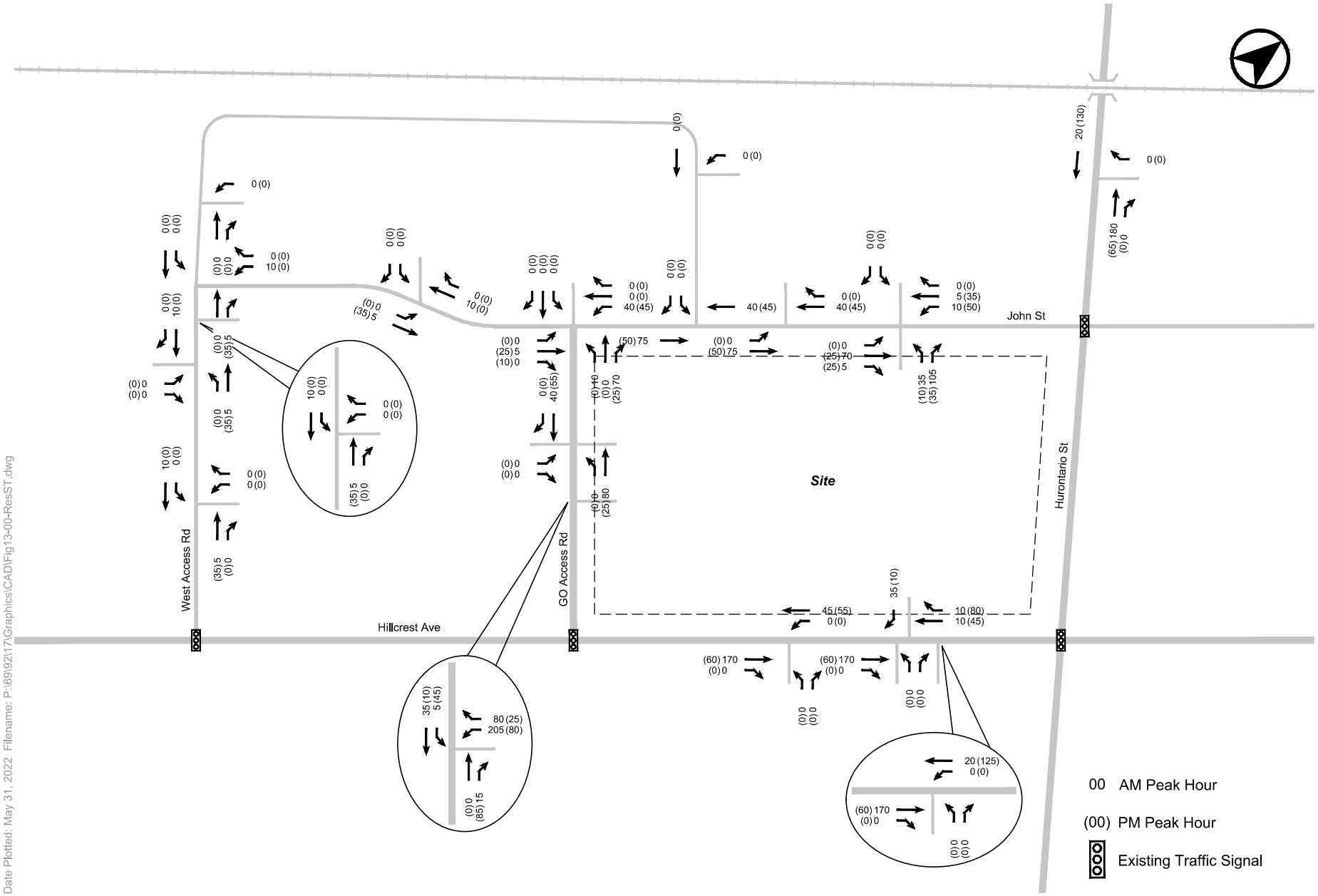

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FIGURE 13 RESIDENTIAL SITE TRAFFIC VOLUMES - INTERNAL

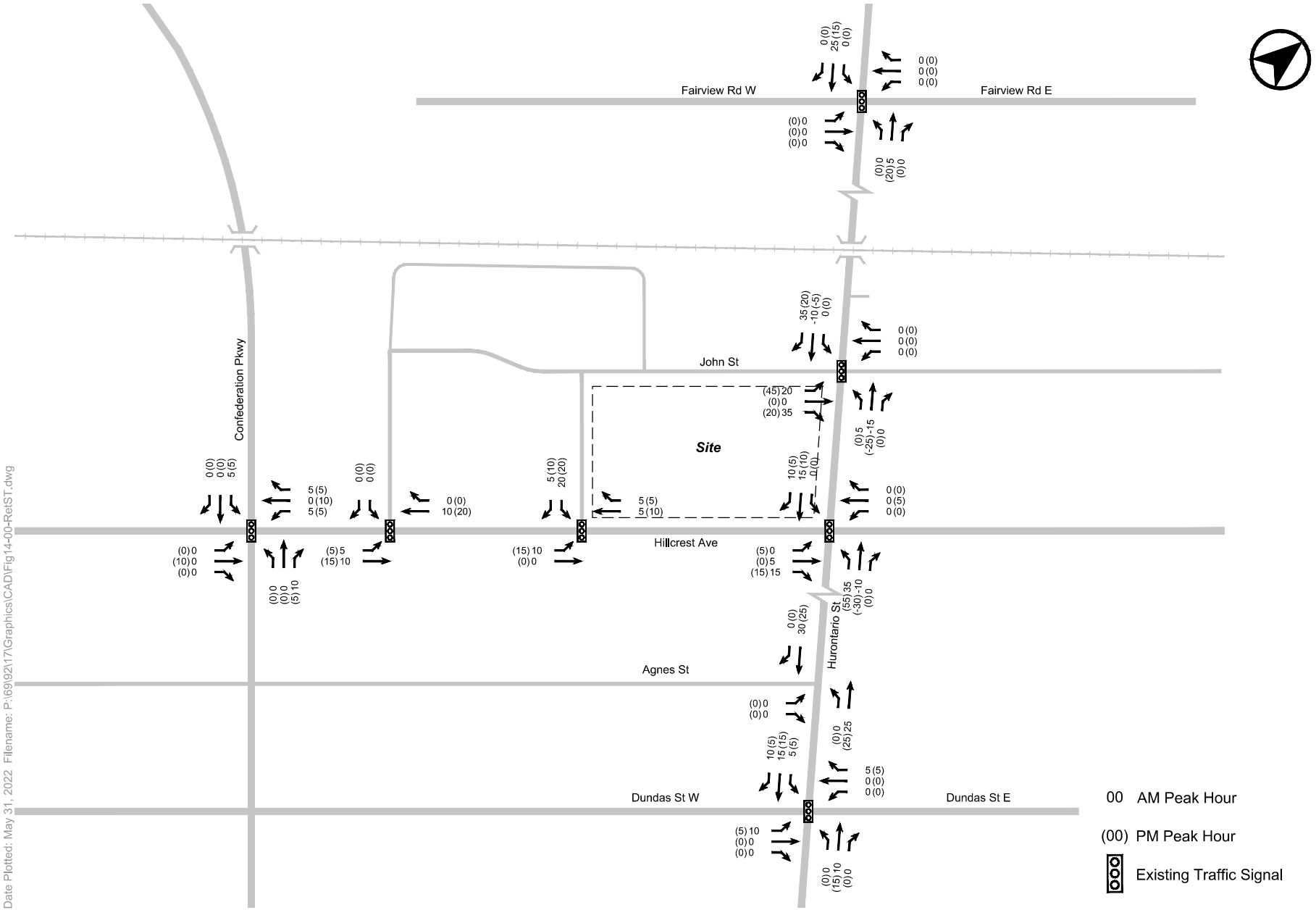

FIGURE 14 RETAIL SITE TRAFFIC VOLUMES - EXTERNAL

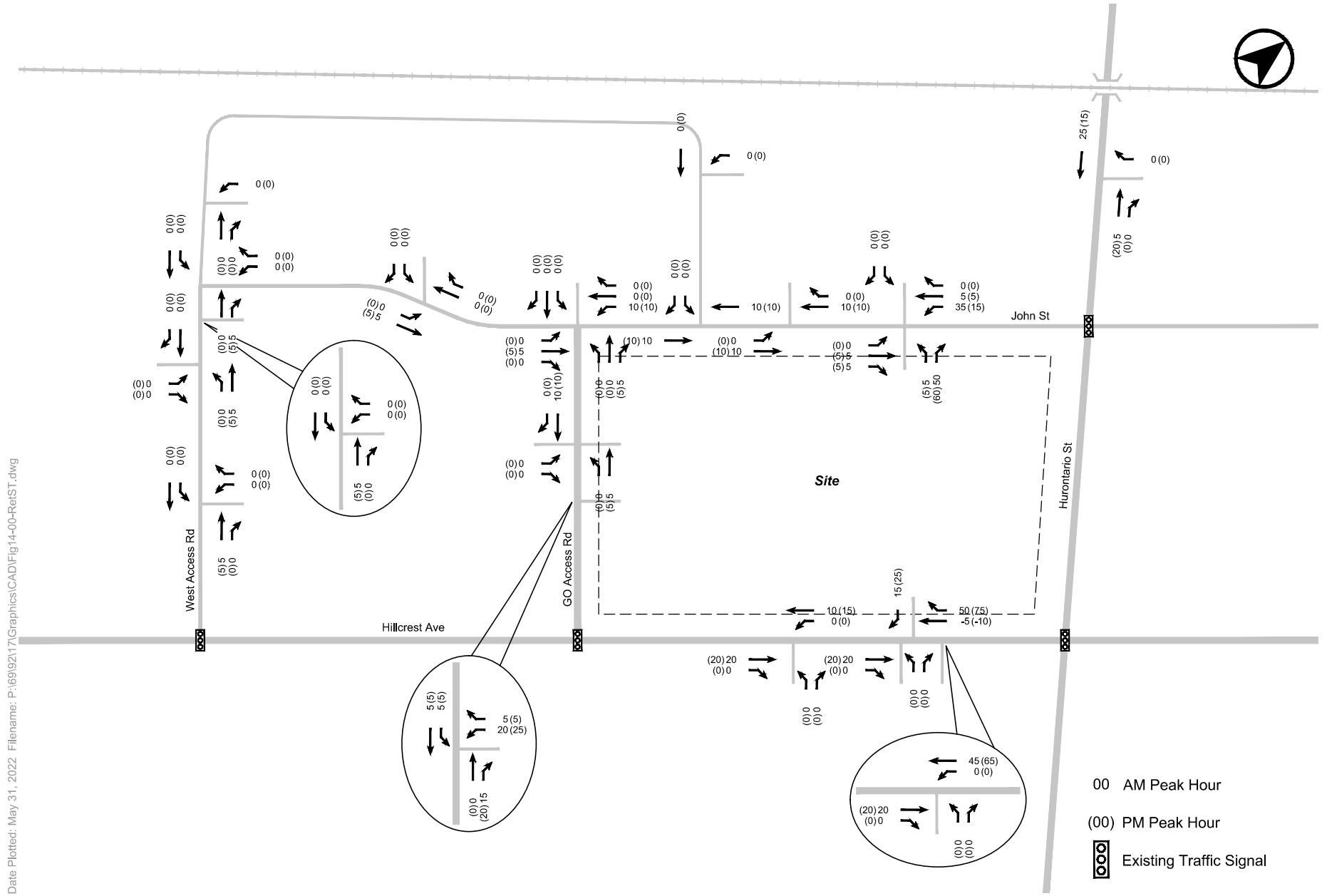

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FIGURE 14 RETAIL SITE TRAFFIC VOLUMES - INTERNAL

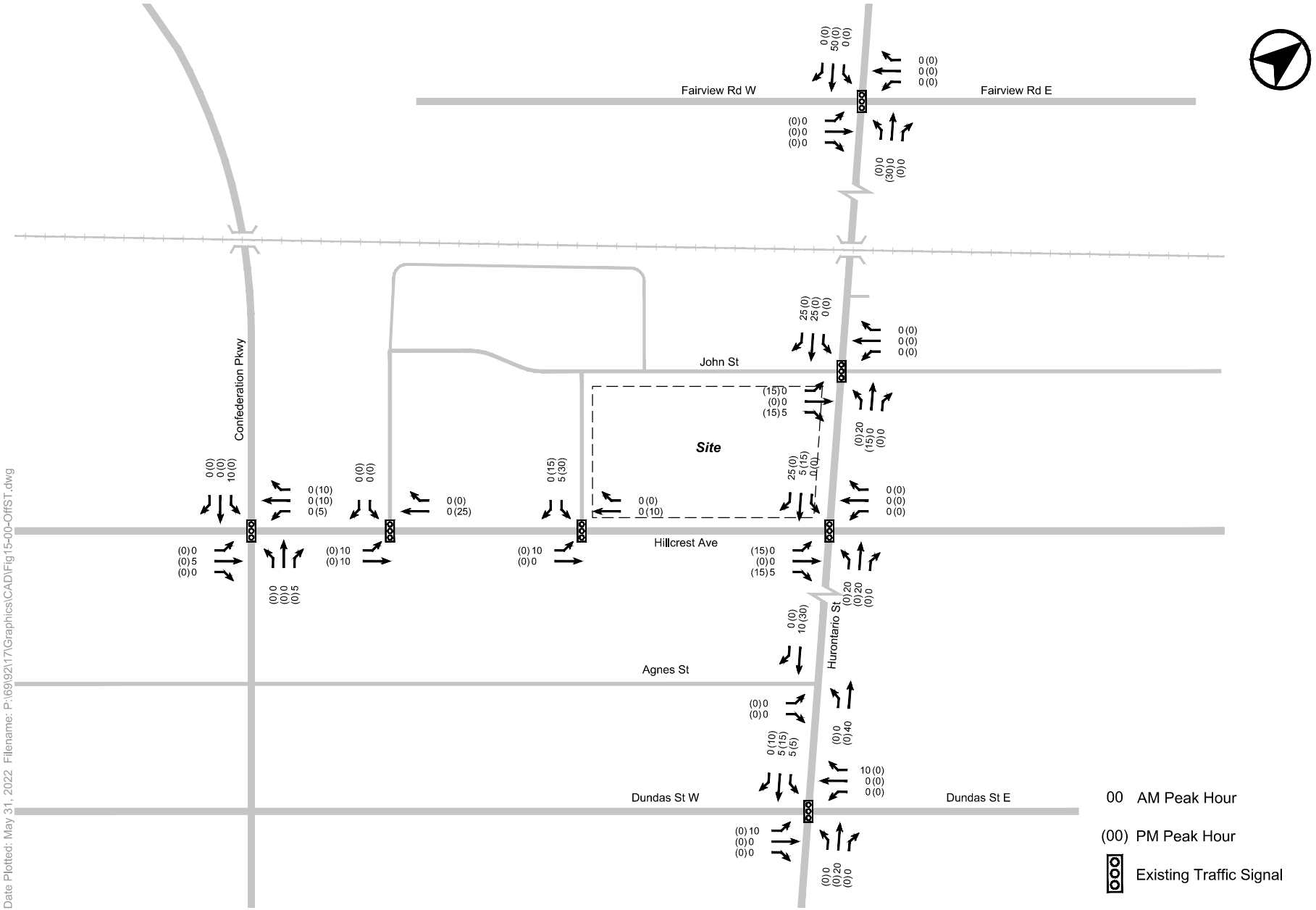

FIGURE 15 OFFICE SITE TRAFFIC VOLUMES - EXTERNAL

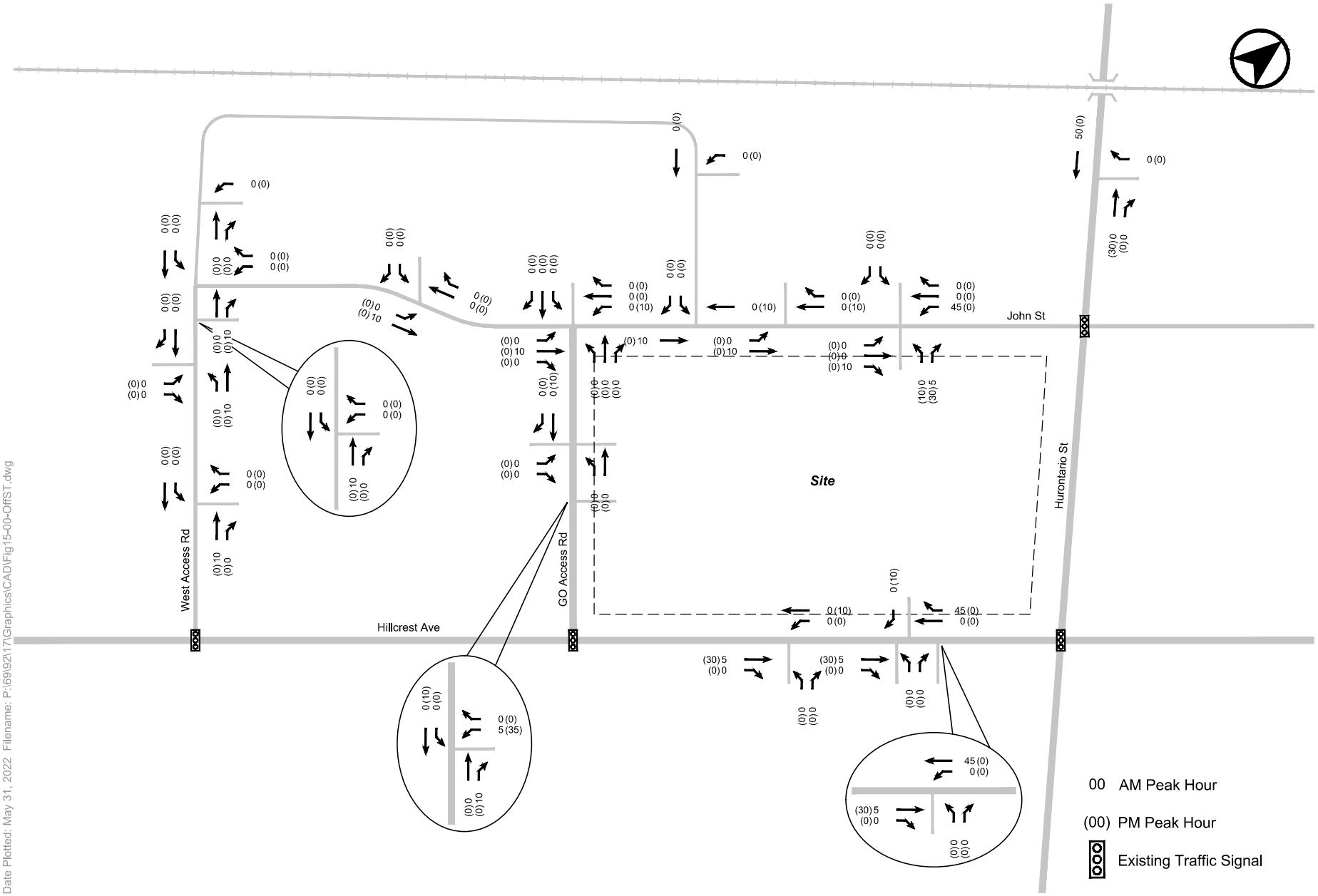

FIGURE 15 OFFICE SITE TRAFFIC VOLUMES - INTERNAL

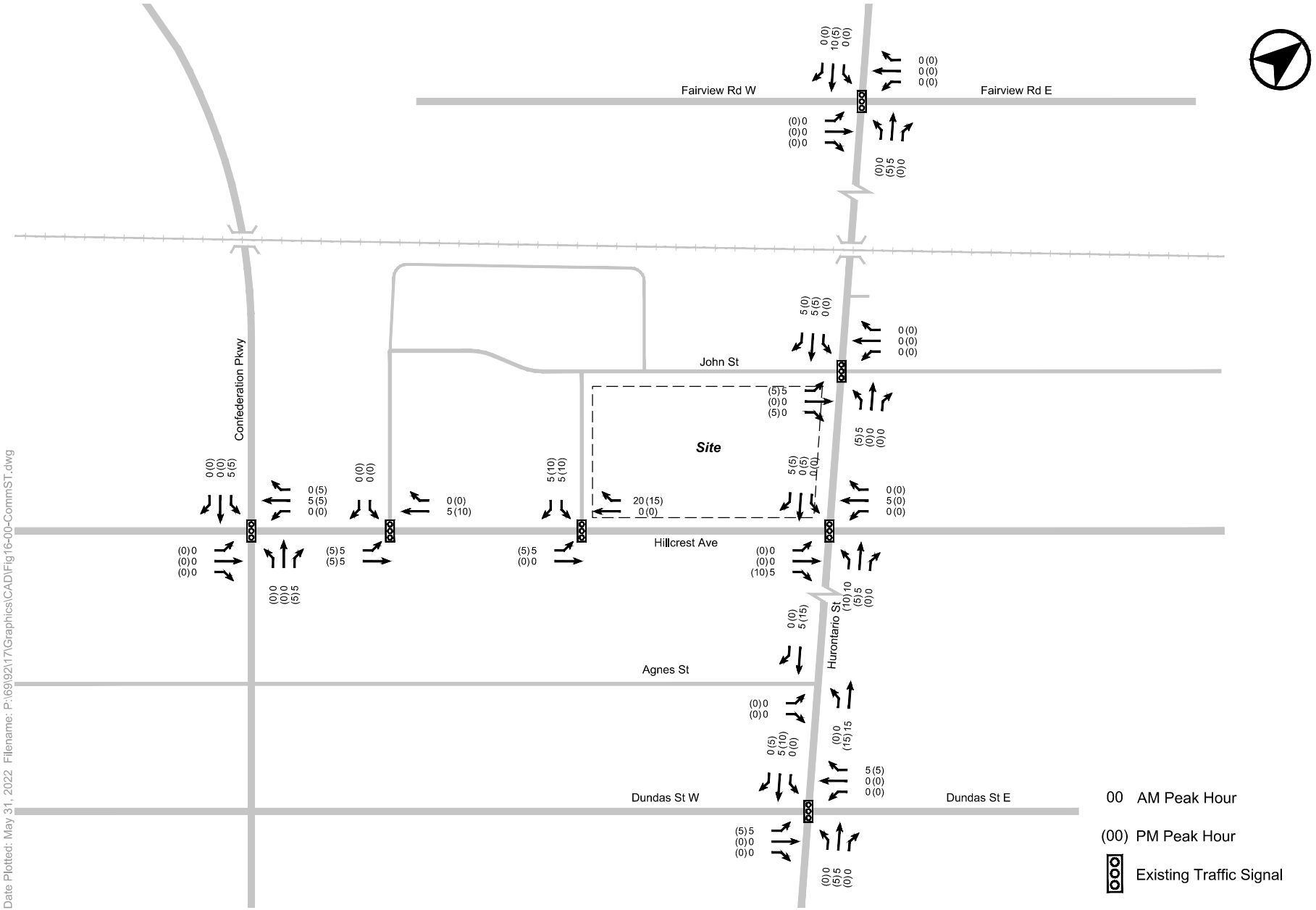

FIGURE 16 COMMUNITY CENTRE SITE TRAFFIC VOLUMES - EXTERNAL

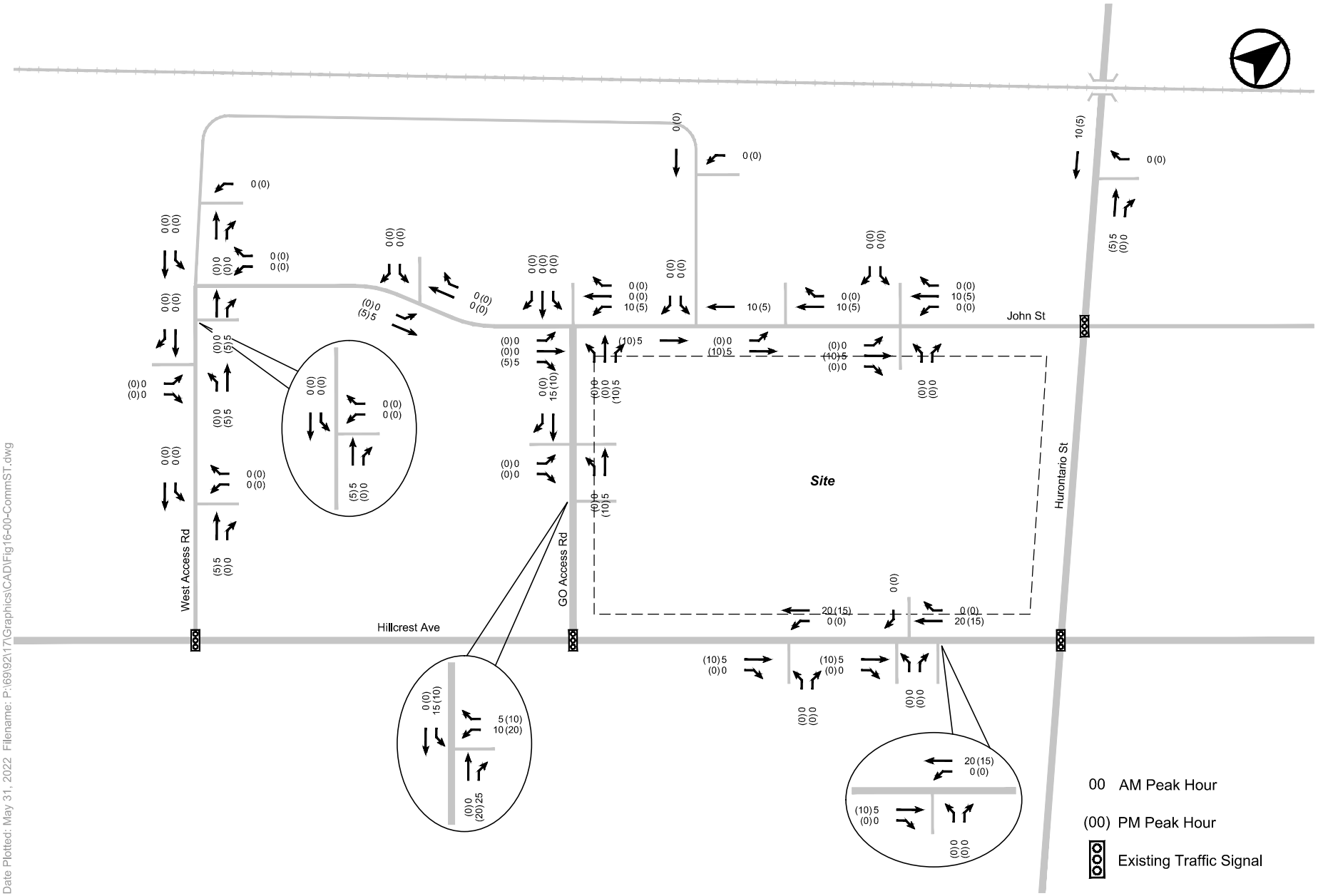

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FIGURE 16 COMMUNITY CENTRE SITE TRAFFIC VOLUMES - INTERNAL

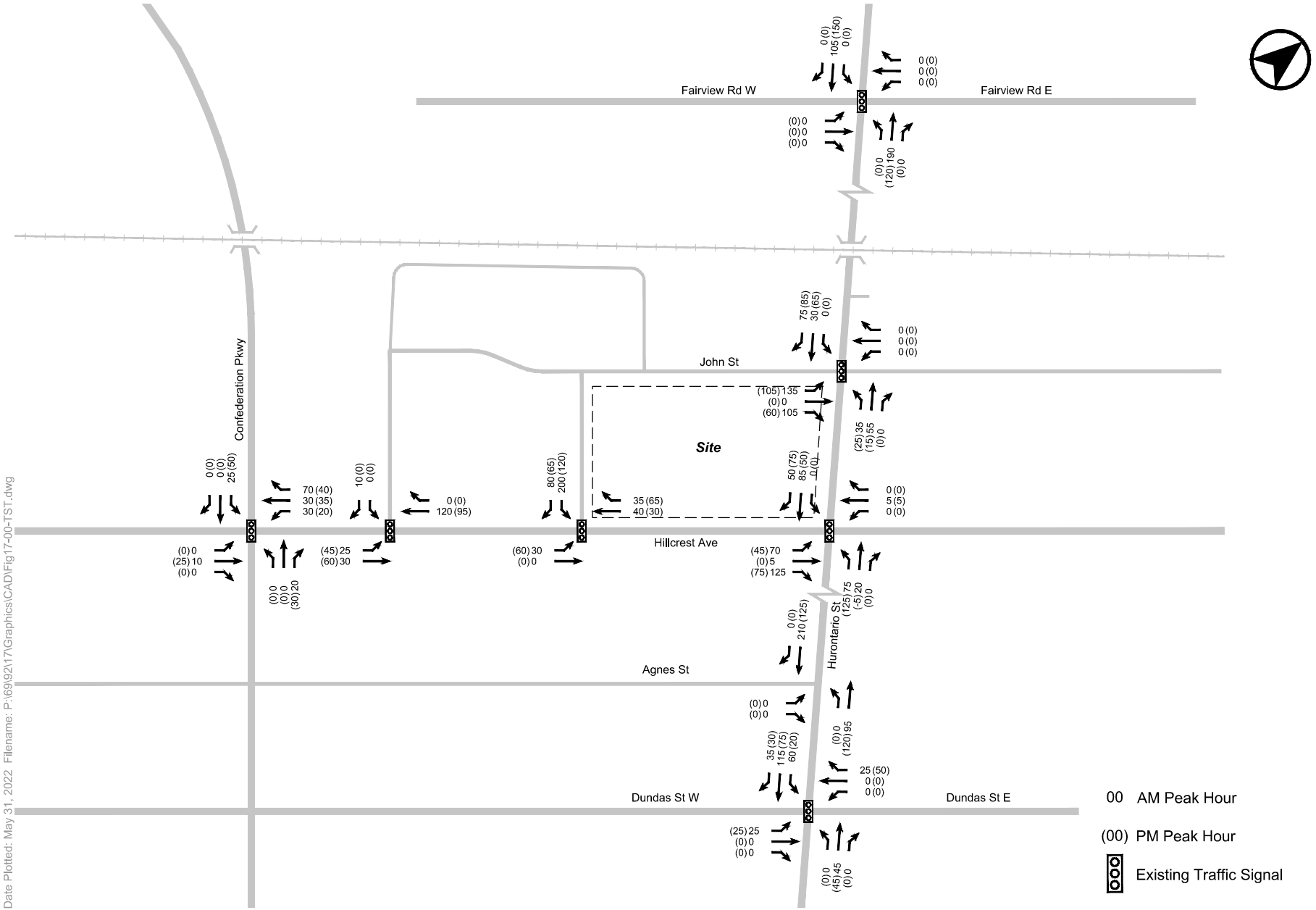

FIGURE 17 TOTAL SITE TRAFFIC VOLUMES - EXTERNAL

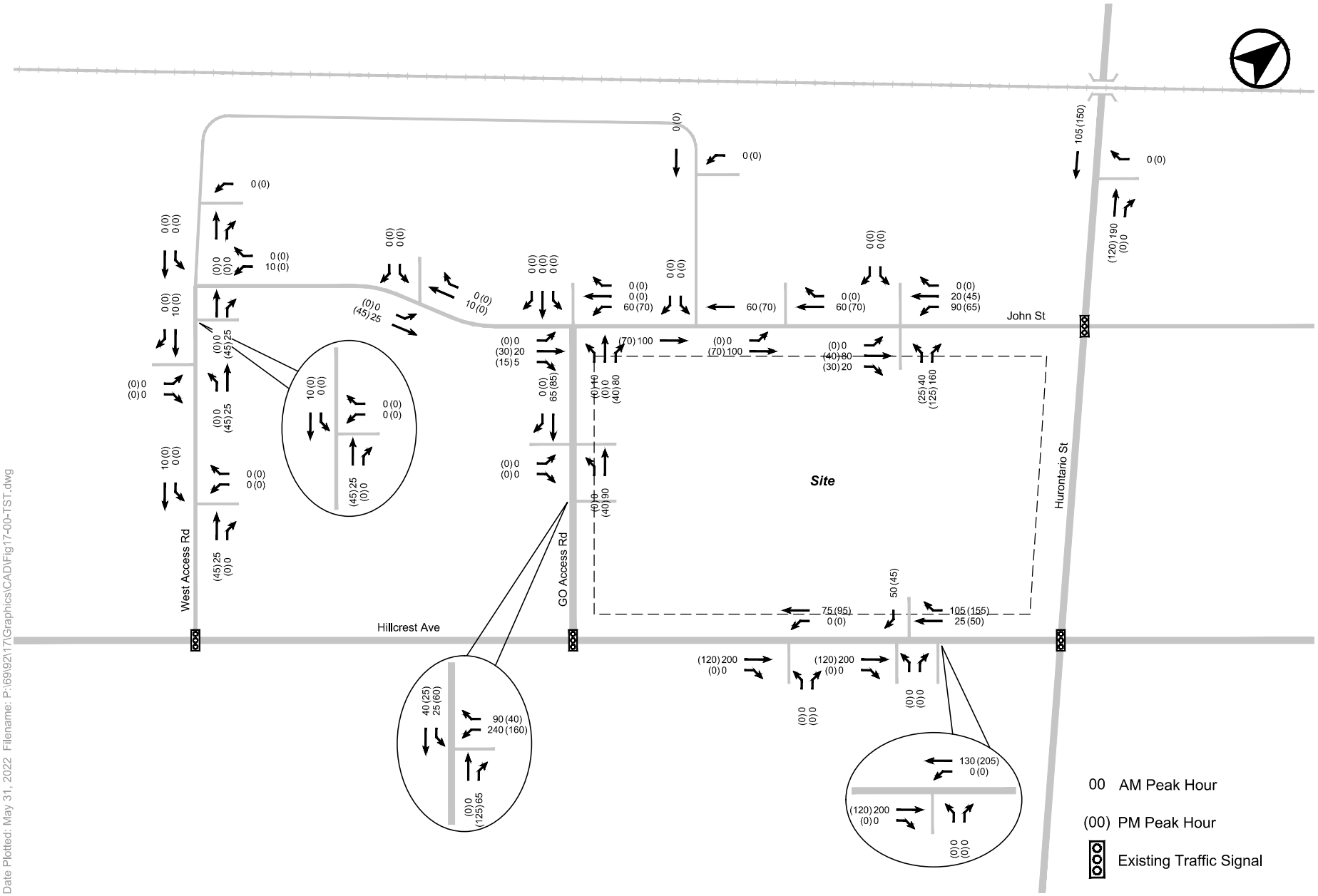

FIGURE 17 TOTAL SITE TRAFFIC VOLUMES - INTERNAL

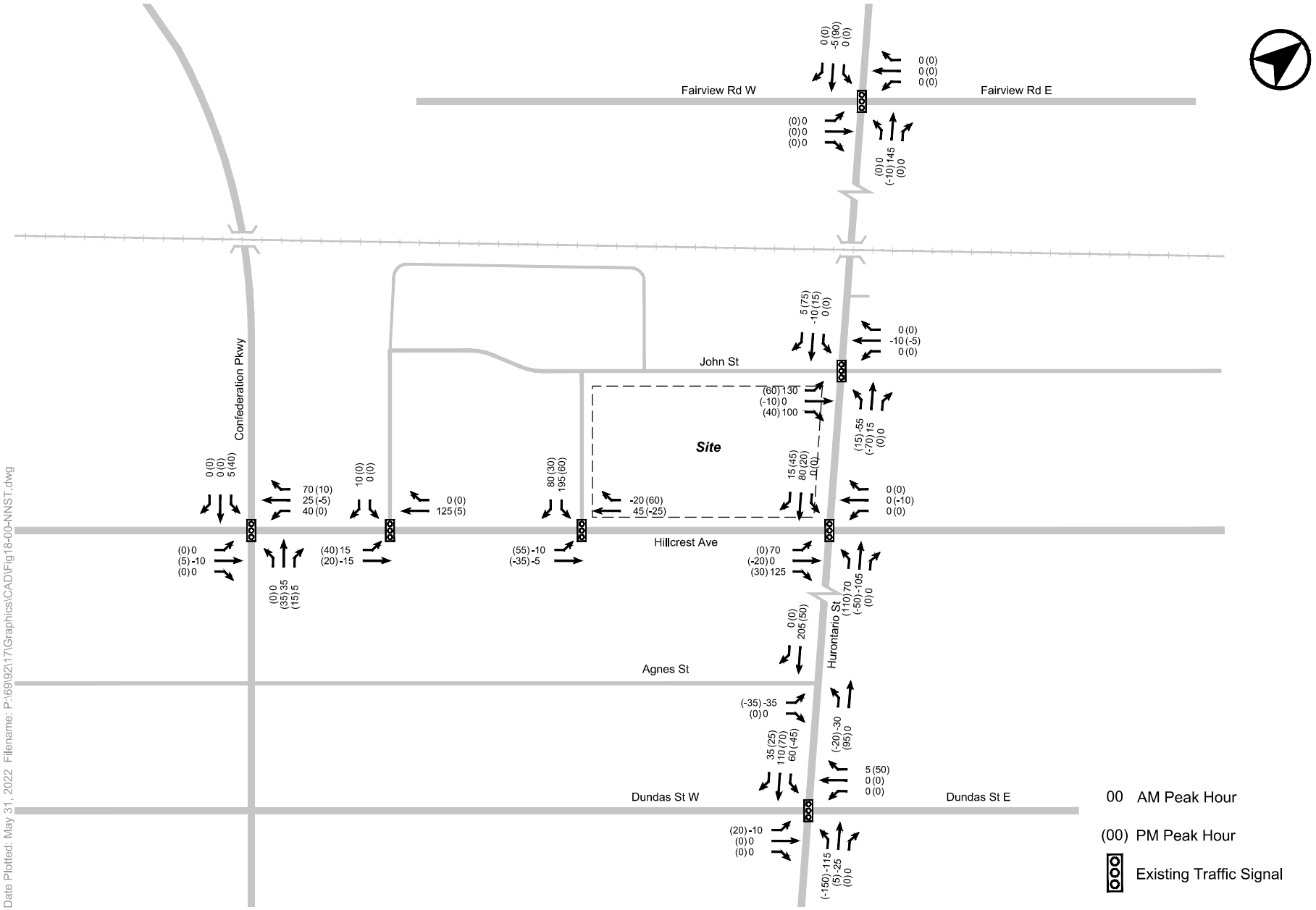

FIGURE 18 NET NEW SITE TRAFFIC VOLUMES - EXTERNAL

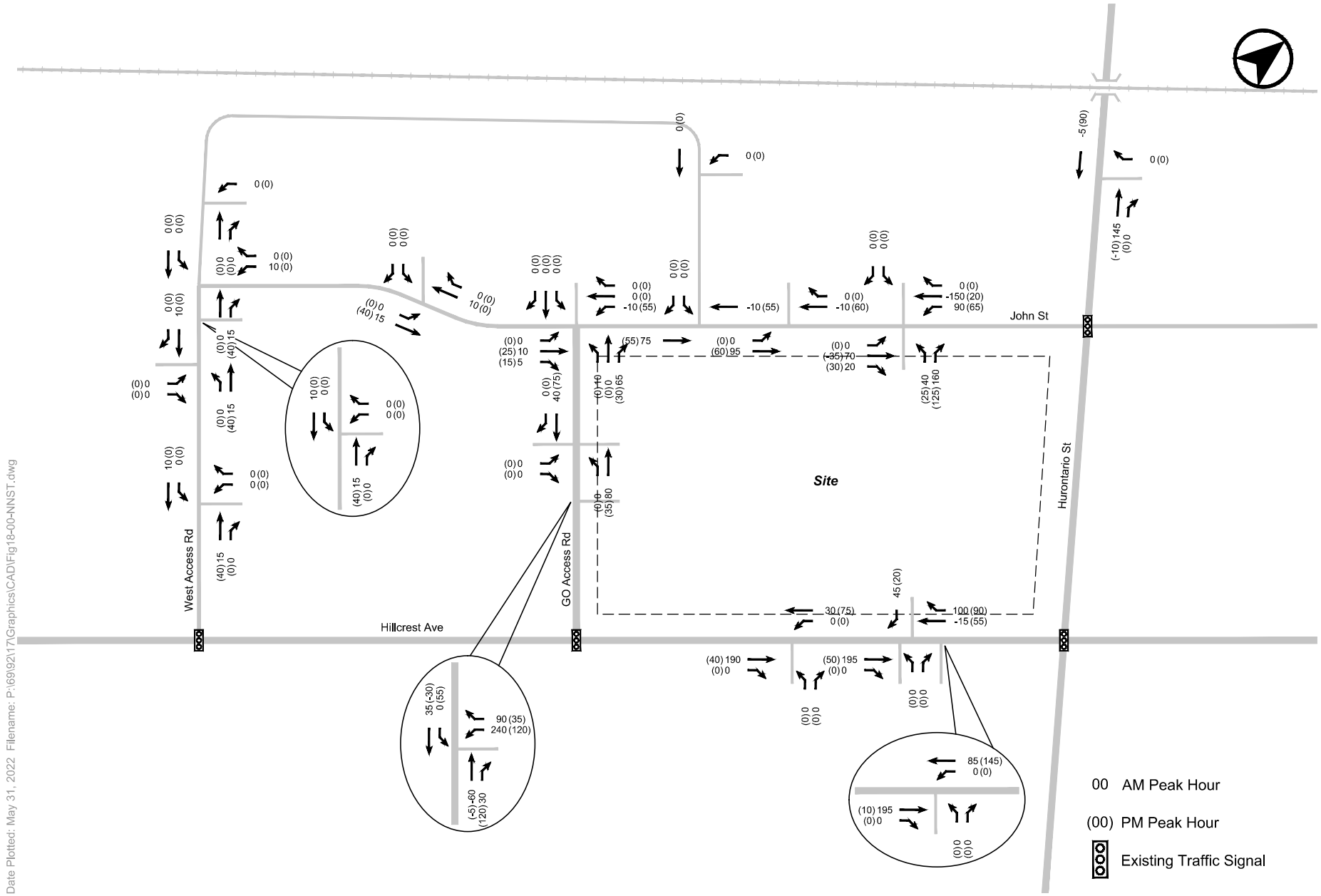

FIGURE 18 NET NEW SITE TRAFFIC VOLUMES - INTERNAL

10.4 FUTURE TOTAL TRAFFIC VOLUMES

Future total traffic volumes represent the summation of future background traffic volumes (**Figure 12**) and net new site traffic volumes (**Figure 18**), and are illustrated in **Figure 19**.

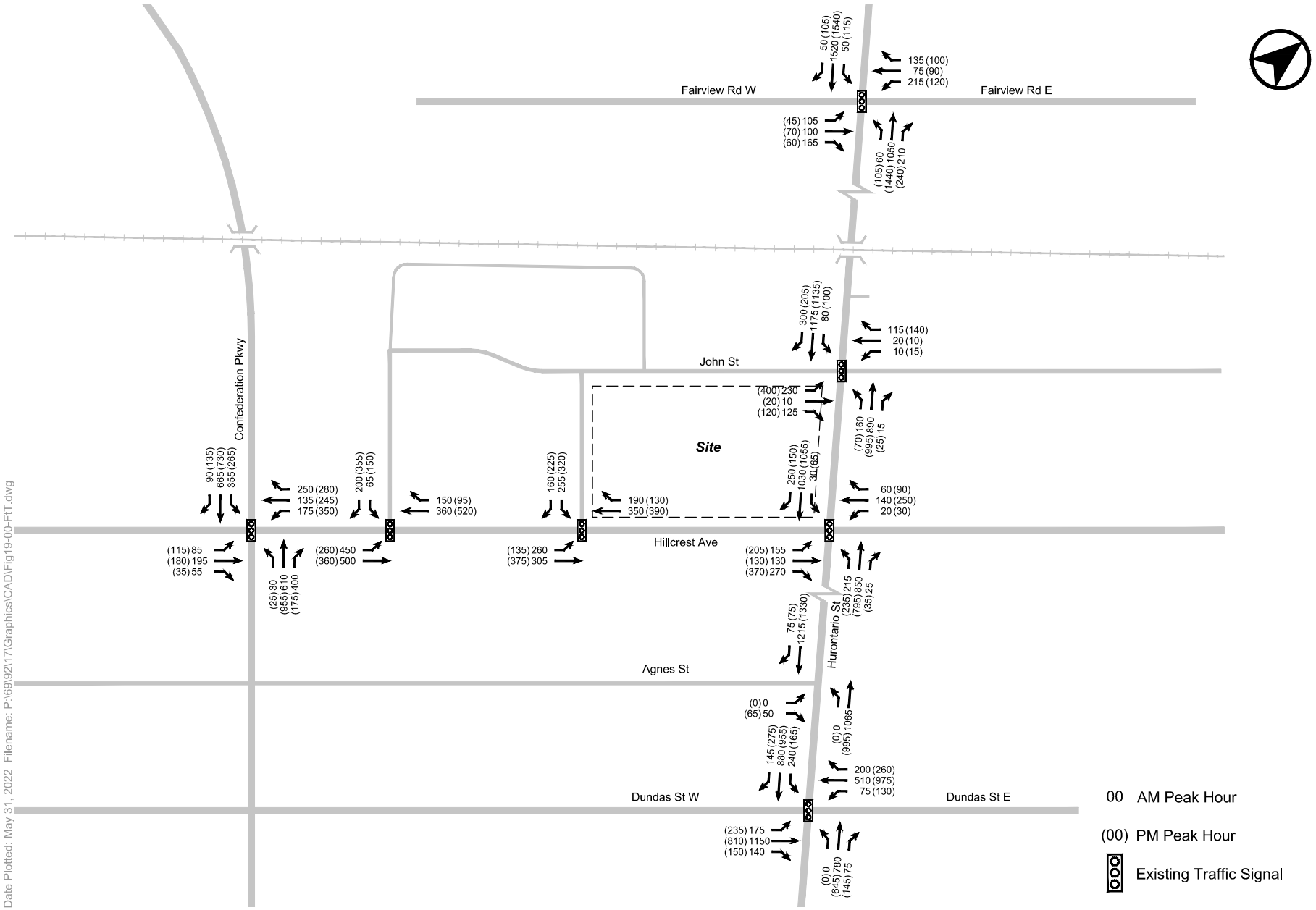

FIGURE 19 FUTURE TOTAL TRAFFIC VOLUMES - EXTERNAL

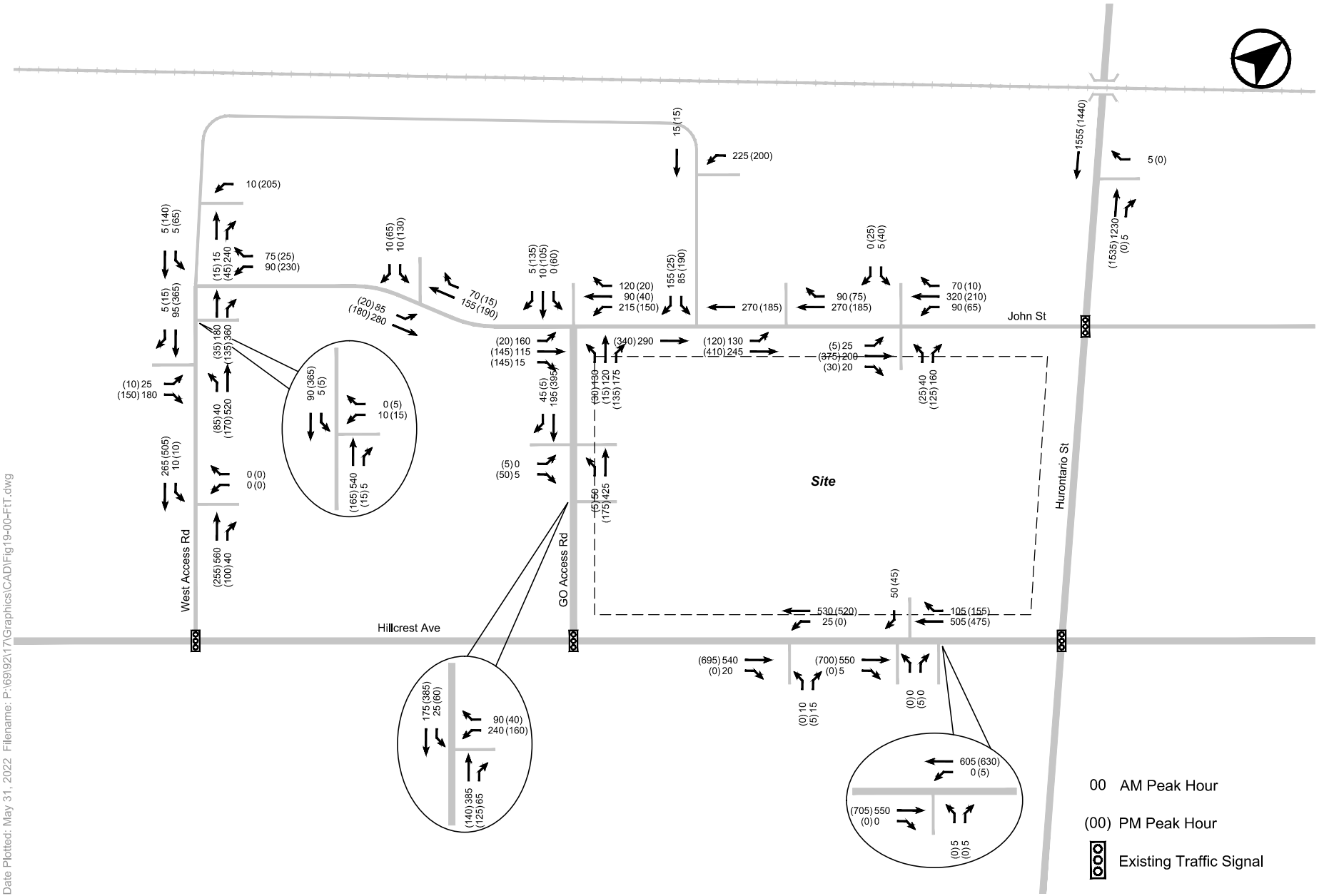

FIGURE 19 FUTURE TOTAL TRAFFIC VOLUMES - INTERNAL

11.0 TRAFFIC OPERATIONS ANALYSIS

11.1 ANALYSIS METHODOLOGY

The intersection capacity analysis was completed using Synchro Version 11.0 and the Highway Capacity Manual (HCM) methodology.

For signalized intersections, the volume-to-capacity ratio (v/c) is an indicator of the capacity utilization for the key movements in the intersection. A v/c of 1.00 indicates that certain governing traffic movements through the intersection are operating at or near maximum capacity. The primary overall level of service (LOS) indicator is delay, both on individual movements and expressed as an average for all vehicles processed. Many busy urban intersections operate at LOS D to E, which reflects average delays in the range of 35 to 80 seconds.

For unsignalized intersections, level of service (LOS) characterizes operational conditions for key movements in terms of delay within the traffic stream. LOS A represents a good level of service with short delays. LOS F represents a poor level of service with long delays. The volume to capacity ratio (v/c) is an indicator of the capacity utilization for key movements at the intersection and resultant residual capacity potential.

The LOS criteria provided by the HCM methodology is summarized as follows:

1. Signalized Intersection LOS

    a. LOS A: Control Delay ≤ 10s
    b. LOS B: 10s < Control Delay ≤ 20s
    c. LOS C: 20s < Control Delay ≤ 35s
    d. LOS D: 35s < Control Delay ≤ 55s
    e. LOS E: 55s < Control Delay ≤ 80s
    f. LOS F: Control Delay > 80s

2. Unsignalized Intersection LOS

    a. LOS A: Control Delay ≤ 10s
    b. LOS B: 10s < Control Delay ≤ 15s
    c. LOS C: 15s < Control Delay ≤ 25s
    d. LOS D: 25s < Control Delay ≤ 35s
    e. LOS E: 35s < Control Delay ≤ 50s
    f. LOS F: Control Delay > 50s

11.2 MODELLING INPUT AND CALIBRATION PARAMETERS

Road Network Configuration

Under existing traffic conditions, the Synchro models adopt the existing lane configurations as observed in the field at the time of the October 2021 traffic counts and the Cooksville GO's road layout master plan (provided by Metrolinx and attached in **Appendix J**).

Under future traffic conditions, the Synchro model adopted the network changes previously discussed in **Section 10.2.3** given the Hurontario Street LRT and the Dundas Street BRT. In the future total traffic model, with the redevelopment of the site, access configurations will also be updated based on the proposed plans.

Signal Timing Plans and Transit Signal Priority

The existing signal timing plans at the study area's signalized intersections were provided by the City of Mississauga. Input parameters such as minimum green times, cycle lengths, and pedestrian clearance times were adopted in the Synchro models. The signal timings are attached in **Appendix K.**

Any changes to these plans will be proposed as "signal timing optimization". It is noteworthy that in all future scenarios, all Hurontario Street intersections will require signal timing changes with the construction of the LRT. All northbound and southbound left turn phases were assumed to operate as protected-only phases. At Hurontario Street / Dundas Street, the eastbound and westbound left turn phases were also assumed to operate as protected-only phases given the planned BRT.

Lost Time Adjustment

For all signalized intersections in the study area, a Lost Time Adjustment (LTA) of -1.0 seconds was applied to account for vehicles traversing the intersection during amber or all-red time. This adjustment is also recommended in the City of Toronto's *Guidelines for Using Synchro 11* (dated January 15, 2021).

Protected Left Turn Factor

The protected left turn factor (LTF) in the Synchro model influences the headways between vehicles making a left turn movement on protected left turn green phases. Values closer to 1.00 represent vehicles making left turns with smaller headways.

Under future conditions, the operations of several left turn lanes are approaching capacity. Drivers modify their behaviour in near-capacity conditions and operate with reduced headways. As such, a protected LTF of 1.00 (rather than a default of 0.95) has been adopted for the left turning movements at the Hurontario Street / Dundas Street intersection in the weekday afternoon peak hour.

Peak Hour Factor (PHF)

Under existing conditions, the peak hour factors at all study area intersections are based on the collected traffic count data. Under future background and future total conditions, at the intersection of Hurontario Street / Dundas Street in the weekday afternoon peak hour, a peak hour factor of 0.99 was adopted especially given the planned transit priority routes traversing the intersection in the east-west and north-south travel directions. As urban intersections approach capacity, vehicle trips will begin to equalize their distribution across the different peak 15-minute periods within the peak hour. This shift would result in an increasingly even distribution of trips over the course of the peak hour as drivers make trips earlier or later to reduce delays. During the data collection process in October of 2021, the volume distribution at the Hurontario Street / Hillcrest Avenue intersection produced a peak hour factor of 0.99 during the weekday afternoon peak hour. A similar factor can therefore be expected at other study area intersections.

Other Data Inputs

Heavy vehicle percentages and pedestrian and bicycle crossing volumes were derived from existing traffic counts. However, all pedestrian crossing volumes at the study area intersections were doubled (or multiplied by a factor of 2) to account for the pandemic restrictions at the time of the counts.

Where field data was not available, default values in the Synchro models were adopted.

11.3 ANALYSIS SCENARIOS

The following analysis scenarios were reviewed for the weekday morning and afternoon peak hours:

1. 2022 Baseline existing traffic conditions (as illustrated in **Figure 10**);
2. 2027 Future background traffic conditions (as illustrated in **Figure 12**);
3. 2027 Future total traffic conditions (as illustrated in **Figure 19**);

All Synchro worksheets for the scenarios are provided in **Appendix L**.

11.4 SIGNALIZED INTERSECTION ANALYSIS

11.4.1 Hurontario Street / Fairview Road East & West

The intersection of Hurontario Street / Fairview Road operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 38** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.88 and 0.59 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, with the Hurontario LRT and intersection configuration changes, signal timings were optimized at the intersection during both peak hours. Northbound and southbound left turn advance phases were modelled with protected-only phase timings.

Under all future traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.93 and 0.79 or better during the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no other mitigation measures or improvements, aside from signal timing optimization, are recommended at this intersection.

TABLE 38 HURONTARIO STREET / FAIRVIEW ROAD CAPACITY RESULTS

Movement	2022 Existing		2027 Future Background		2027 Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.32 (0.27)	D I	0.54 (0.33)I(E)	0.54 (0.33)	E (E)	
EBTR	0.50 (0.35)	D (E)	0.86 (0.35)	F (E)	0.86 (0.35)	F (E)
WBL	0.96 (0.64)	F (E)	0.95 (0.66)	F (E)	0.95 (0.66)	F (E)
WBTR	0.25 (0.46)	D (E)	0.40 (0.55)	D (E)	0.40 (0.55)	D (E)
NBL	0.48 (0.50)	C (B)	0.84 (0.53)	F (F)	0.84 (0.53)	F (E)
NBTR	0.55 (0.57)	D (B)	0.69 (0.88)	D (C)	0.80 (0.90)	D (D)
SBL	0.34 (0.54)	C (C)	0.81 (0.52)	F (E)	0.81 (0.52)	F (E)
SBTR	0.87 (0.57)	D (B)	0.98 (0.78)	D (C)	0.97 (0.83)	D (C)
Overall	**0.88 (0.59)**	**D (C)**	**0.93 (0.78)**	**D (C)**	**0.93 (0.79)**	**D (D)**

Notes:
1. XX (XX) – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour).

11.4.2 Hurontario Street / John Street

The intersection of Hurontario Street / John Street operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 39** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.55 and 0.59 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, with the Hurontario LRT and intersection configuration changes, signal timings were optimized at the intersection during both peak hours. Northbound and southbound left turn advance phases were modelled with protected-only phase timings.

Under all future traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.75 and 0.73 or better during the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no other mitigation measures or improvements, aside from signal timing optimization, are recommended at this intersection.

TABLE 39 HURONTARIO STREET / JOHN STREET CAPACITY RESULTS

Movement	2022 Existing		2027 Future Background		2027 Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.38 (0.73)	D (D)	0.52 (0.77)	E (D)	0.87 (0.88)	F (E)
EBTR	0.04 (0.11)	D (C)	0.05 (0.12)	D (C)	0.11 (0.13)	D (C)
WBL	0.05 (0.07)	E (D)	0.05 (0.07)	D (D)	0.04 (0.07)	D (D)
WBTR	0.22 (0.15)	E (D)	0.10 (0.08)	D (D)	0.07 (0.07)	D (D)
NBL	0.70 (0.33)	E (B)	0.73 (0.51)	F (F)	0.76 (0.51)	F (F)
NBTR	0.41 (0.64)	A (B)	0.43 (0.71)	A (C)	0.50 (0.70)	B (C)
SBL	0.28 (0.51)	A (B)	0.57 (0.64)	F (E)	0.60 (0.64)	E (F)
SBT	0.64 (0.61)	B (C)	0.70 (0.70)	B (D)	0.70 (0.75)	C (C)
SBR	0.39 (0.17)	A (B)	0.38 (0.16)	A (D)	0.39 (0.30)	C (B)
Overall	**0.55 (0.59)**	**B (C)**	**0.67 (0.68)**	**C (D)**	**0.75 (0.73)**	**C (D)**

Notes:
1. XX (XX) – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour).
2. Intersection configuration is based on Hurontario LRT road plans.

11.4.3 Hurontario Street / Hillcrest Avenue / Kirwin Avenue

The intersection of Hurontario Street / Hillcrest Avenue / Kirwin Avenue operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 40** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.51 and 0.55 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, with the Hurontario LRT and intersection configuration changes, signal timings were optimized at the intersection during both peak hours. Northbound and southbound left turn advance phases were modelled with protected-only phase timings.

Under all future traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.81 and 0.70 or better during the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no other mitigation measures or improvements, aside from signal timing optimization, are recommended at this intersection.

TABLE 40 HURONTARIO STREET / HILLCREST AVENUE / KIRWIN AVENUE CAPACITY RESULTS

Movement	2022 Existing		2027 Future Background		2027 Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.20 (0.52)	C (D)	0.28 (0.62)	D (D)	0.50 (0.65)	E (E)
EBT / EBTR[2]	0.18 (0.21)	D (D)	0.19 (0.31)	E (D)	0.25 (0.34)	E (D)
EBR	0.11 (0.40)	F (D)				
WBL	0.06 (0.09)	D (D)	0.07 (0.13)	D (D)	0.09 (0.13)	D (D)
WBT / WBTR[2]	0.26 (0.51)	D (D)	0.18 (0.37)	D (D)	0.18 (0.36)	D (D)
WBR	0.04 (0.10)	D (D)				
NBL	0.58 (0.51)	E (D)	0.82 (0.68)	F (F)	0.96 (0.94)	E (F)
NBTR	0.54 (0.51)	B (B)	0.52 (0.51)	B (B)	0.48 (0.48)	C (B)
SBL	0.15 (0.27)	C (A)	0.48 (0.57)	F (F)	0.49 (0.57)	F (F)
SBT	0.78 (0.59)	C (B)	0.86 (0.76)	B (B)	0.98 (0.84)	D (B)
SBR	0.19 (0.07)	A (A)				
Overall	**0.51 (0.55)**	**C (C)**	**0.65 (0.62)**	**C (C)**	**0.81 (0.70)**	**D (D)**

Notes:
1. XX (XX) – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour).
2. Intersection configuration is based on Hurontario LRT road plans.

11.4.4 Hillcrest Avenue / GO Access Road

The intersection of Hillcrest Avenue / GO Access Road operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 41** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.34 and 0.40 during the weekday morning and afternoon peak hours, respectively.

Under all future traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.60 and 0.48 or better during the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no mitigation measures or improvements are recommended at this intersection.

TABLE 41 HILLCREST AVENUE / GO ACCESS ROAD CAPACITY RESULTS

Movement	2022 Existing		2027 Future Background		2027 Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.48 (0.21)	A (B)	0.49 (0.21)	A (B)	0.77 (0.39)	C (C)
EBT	0.12 (0.21)	A (B)	0.12 (0.21)	A (B)	0.19 (0.21)	C (C)
WBTR	0.27 (0.29)	B (C)	0.28 (0.29)	B (D)	0.50 (0.36)	D (D)
SBL	0.55 (0.58)	E (D)	0.55 (0.58)	E (D)	0.62 (0.62)	D (D)
SBR	0.08 (0.15)	E (C)	0.08 (0.15)	E (C)	0.16 (0.21)	C (C)
Overall	**0.34 (0.40)**	**B (C)**	**0.34 (0.40)**	**B (C)**	**0.60 (0.48)**	**C (C)**

Notes:
1. XX (XX) – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour).

11.4.5 Hillcrest Avenue / Private Access Road

The intersection of Hillcrest Avenue / Private Access Road (the signalized intersection west of the signal at GO Access Road) operates under signal control with cycle lengths of 105 seconds in both peak hours. **Table 42** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.35 and 0.40 during the weekday morning and afternoon peak hours, respectively.

Under all future traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.41 and 0.42 or better during the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no mitigation measures or improvements are recommended at this intersection.

TABLE 42 HILLCREST AVENUE / PRIVATE ACCESS ROAD CAPACITY RESULTS

Movement	2022 Existing		2027 Future Background		2027 Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.62 (0.44)	A (A)	0.63 (0.44)	A (A)	0.69 (0.51)	B (A)
EBT	0.24 (0.16)	A (A)	0.24 (0.16)	A (A)	0.23 (0.17)	A (A)
WBTR	0.25 (0.37)	B (B)	0.26 (0.38)	B (B)	0.39 (0.38)	C (B)
SBL	0.19 (0.36)	C (C)	0.19 (0.36)	C (C)	0.19 (0.36)	C (C)
SBR	0.14 (0.45)	C (C)	0.14 (0.46)	C (C)	0.15 (0.45)	C (C)
Overall	**0.35 (0.40)**	**B (B)**	**0.35 (0.41)**	**B (B)**	**0.41 (0.42)**	**B (B)**

Notes:
1. XX (XX) – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour).

11.4.6 Confederation Parkway / Hillcrest Avenue

The intersection of Confederation Parkway / Hillcrest Avenue operates under signal control with cycle lengths of 120 seconds in both peak hours. **Table 43** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.76 and 0.84 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, signal timings were optimized at the intersection during both peak hours.

Under all future traffic conditions, the intersection will continue to operate under capacity at overall v/c ratios of 0.92 and 0.80 or better during the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no other mitigation measures or improvements, aside from signal timing optimization, are recommended at this intersection.

TABLE 43 CONFEDERATION PARKWAY / HILLCREST AVENUE CAPACITY RESULTS

Movement	2022 Existing		2027 Future Background		2027 Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.27 (0.34)	C (C)	0.28 (0.45)	C (D)	0.27 (0.45)	C (D)
EBTR	0.54 (0.31)	D (C)	0.56 (0.48)	D (D)	0.50 (0.49)	D (D)
WBL	0.82 (0.97)	E (E)	0.95 (0.94)	F (E)	0.96 (0.93)	F (E)
WBT	0.23 (0.38)	C (C)	0.24 (0.38)	C (C)	0.28 (0.38)	C (C)
WBR	0.17 (0.34)	B (B)	0.21 (0.35)	B (B)	0.31 (0.35)	B (B)
NBL	0.14 (0.11)	C (C)	0.16 (0.12)	C (C)	0.16 (0.13)	C (C)
NBTR	0.69 (0.74)	C (D)	0.85 (0.91)	D (D)	0.88 (0.98)	D (E)
SBL	0.85 (0.74)	D (C)	0.90 (0.80)	E (D)	0.94 (0.82)	E (D)
SBTR	0.34 (0.44)	B (B)	0.39 (0.50)	B (B)	0.40 (0.50)	B (B)
Overall	**0.76 (0.84)**	**C (C)**	**0.89 (0.77)**	**D (D)**	**0.92 (0.80)**	**D (D)**

Notes:
1. XX (XX) – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour).

11.4.7 Hurontario Street / Dundas Street East & West

The intersection of Hurontario Street / Dundas Street operates under signal control with cycle lengths of 160 seconds in both peak hours. **Table 44** summarizes the results of the traffic operations analysis at the intersection.

Under existing traffic conditions, the intersection operates under capacity at overall v/c ratios of 0.78 and 0.87 during the weekday morning and afternoon peak hours, respectively.

Under future scenarios, with the Hurontario LRT, Dundas BRT and intersection configuration changes, signal timings were optimized at the intersection during both peak hours. All left turn advance phases were modelled with protected-only phase timings.

Under all future traffic conditions, the intersection will approach capacity in both the weekday peak hours. As post-pandemic travel conditions continue to evolve in conjunction with the planned implementation of significant transit improvements (i.e., the Hurontario LRT and the Dundas BRT), the operations at this intersection should continue to be monitored.

Based on the foregoing, no other mitigation measures or improvements, aside from signal timing optimization, are recommended at this intersection.

TABLE 44 HURONTARIO STREET / DUNDAS STREET CAPACITY RESULTS

Movement	2022 Existing		2027 Future Background		2027 Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.51 (0.86)	C (E)	0.90 (0.92)	F (F)	0.86 (1.00)	F (F)
EBT / EBTR[2]	0.91 (0.56)	E (D)	1.00 (0.73)	E (D)	1.00 (0.71)	E (D)
EBR	0.19 (0.21)	C (C)				
WBL	0.45 (0.43)	D (C)	0.91 (0.66)	F (E)	0.91 (0.66)	F (E)
WBTR	0.61 (0.94)	D (E)	0.74 (0.94)	D (E)	0.74 (0.98)	D (E)
NBL	0.63 (0.84)	C (E)				
NBTR	0.65 (0.64)	D (D)	0.96 (0.85)	E (E)	1.00 (0.89)	F (E)
SBL	0.72 (0.78)	F (E)	0.82 (0.91)	E (F)	0.99 (0.95)	F (F)
SBTR	0.70 (0.83)	F (E)	0.65 (0.94)	E (E)	0.76 (1.00)	B (F)
Overall	**0.78 (0.87)**	**E (E)**	**0.96 (0.94)**	**E (E)**	**1.00 (1.00)**	**E (E)**

Notes:
1. XX (XX) – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour).
2. Intersection configuration is based on Hurontario LRT and Dundas BRT road plans.

11.5 UNSIGNALIZED INTERSECTION ANALYSIS

Table 45 summarizes the analysis results for unsignalized intersections in the study area.

Under future traffic conditions, all movements operate acceptably in both peak hours at levels-of-service (LOS) E or better. No mitigation measures nor improvements are recommended.

TABLE 45 UNSIGNALIZED INTERSECTION CAPACITY RESULTS

Movement	2022 Existing		2027 Future Background		2027 Future Total	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Hurontario Street / Agnes Street						
EBLR / EBR[2]	B (C)	10.2 (17.7)	B (B)	10.5 (10.9)	B (B)	11.1 (10.9)
NBL[2]	B (B)	10.5 (13.3)				
Hurontario Street / Overflow GO Parking Lot						
WBR	A (A)	9.6 (0.0)	B (A)	12.6 (0.0)	B (A)	13.0 (0.0)
John Street / Parking Lot Access / **Future Site Access**						
EBLT	A (A)	3.4 (0.4)	A (A)	3.4 (0.4)	A (A)	1.8 (0.3)
WBLT[3]					A (A)	3.2 (3.8)
NBLTR[3]					B (C)	12.6 (16.0)
SBL	C (C)	17.0 (15.8)	C (C)	17.0 (15.8)	D (E)	33.1 (47.7)
SBR	A (A)	0.0 (9.8)	A (A)	0.0 (9.8)	A (A)	0.0 (9.9)
John Street / Kiss N' Ride Inbound Access / Site Access **(To Be Removed)**						
EBLT	A (A)	5.8 (4.1)	A (A)	5.8 (4.1)	A (A)	5.6 (4.7)
WBLT[4]	A (A)	3.7 (1.8)	A (A)	3.7 (1.8)		
NBLTR[4]	A (B)	9.0 (13.2)	A (B)	9.0 (13.2)		
Bus Loop / Kiss N' Ride Outbound Access						
WBL	A (B)	9.8 (10.1)	A (B)	9.8 (10.1)	A (B)	9.8 (10.1)
John Street / Bus Loop Outbound						
SBLR	B (C)	14.3 (15.8)	B (C)	14.3 (15.8)	B (C)	14.6 (19.0)

Movement	2022 Existing		2027 Future Background		2027 Future Total	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
John Street / GO Access Road / Parking Structure Access						
EBLT	C (B)	16.1 (11.6)	C (B)	16.1 (11.6)	C (B)	17.7 (13.9)
EBR	A (A)	7.7 (9.8)	A (A)	7.7 (9.8)	A (A)	8.0 (11.2)
WBLT	C (B)	21.6 (13.4)	C (B)	21.6 (13.4)	C (C)	22.3 (18.6)
WBR	A (A)	8.7 (8.2)	A (A)	8.7 (8.2)	A (A)	9.1 (8.6)
NBLT	B (A)	17.6 (10.9)	B (A)	17.6 (10.9)	C (B)	18.9 (11.8)
NBR	A (A)	9.2 (9.5)	A (A)	9.2 (9.5)	A (A)	10.5 (11.5)
SBLTR	B (C)	10.5 (19.0)	B (C)	10.5 (19.0)	B (C)	10.8 (23.3)
John Street / Parking Structure Access						
EBLT	A (A)	2.4 (1.2)	A (A)	2.4 (1.2)	A (A)	2.4 (1.1)
SBLR	B (D)	12.3 (25.4)	B (D)	12.3 (25.4)	B (D)	12.6 (29.3)
John Street / Private Access Road / Bus Loop Inbound						
WBLR	B (E)	13.9 (39.1)	B (E)	13.9 (39.1)	B (E)	14.2 (39.5)
SBTL	A (A)	4.6 (2.9)	A (A)	4.6 (2.9)	A (A)	4.6 (3.0)
Bus Loop / Parking Structure Access						
WBL	A (B)	9.5 (10.8)	A (B)	9.5 (10.8)	A (B)	9.5 (10.8)
Private Access Road / 115 Hillcrest Driveway						
WBLR	C (B)	17.6 (12.7)	C (B)	17.6 (12.7)	C (B)	18.0 (13.3)
SBTL	A (A)	1.7 (0.3)	A (A)	1.7 (0.3)	A (A)	1.6 (0.3)
Private Access Road / 135 & 145 & 155 Hillcrest Driveway						
EBLR	C (C)	17.7 (15.2)	C (C)	17.7 (15.2)	C (C)	18.0 (15.3)
NBTL	A (A)	2.1 (6.5)	A (A)	2.1 (6.5)	A (A)	2.1 (6.0)
Private Access Road / Condo Parking Garage Inbound						
SBTL	A (A)	1.0 (0.5)	A (A)	1.0 (0.5)	A (A)	1.0 (0.6)
Hillcrest Avenue / 3122 Hillcrest Loop						
WBTL	A (A)	0.0 (0.3)	A (A)	0.0 (0.3)	A (A)	0.0 (0.3)
NBLR	B (A)	12.7 (0.0)	B (A)	12.4 (0.0)	B (A)	13.7 (0.0)
Hillcrest Avenue / 3122 Hillcrest Driveway / **Site Access**						
EBLT[3]	A (A)	0.3 (0.7)	A (A)	0.3 (0.7)		
WBLT	A (A)	0.0 (0.0)	A (A)	0.0 (0.0)	A (A)	0.0 (0.0)
NBLTR / NBLR[3]	A (B)	0.0 (10.5)	A (B)	0.0 (10.5)	A (B)	0.0 (10.7)
SBLTR / SBR[3]	B (B)	10.3 (13.9)	A (B)	10.0 (12.3)	B (B)	10.7 (10.5)
Hillcrest Avenue / School Driveway / Site Access **(To Be Removed)**						

Movement	2022 Existing		2027 Future Background		2027 Future Total	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
EBL[4]	A (A)	0.0 (8.6)	A (A)	0.0 (8.5)		
WBL	A (A)	9.2 (0.0)	A (A)	9.2 (0.0)	B (A)	10.1 (0.0)
NBLTR / NBLR[4]	B (B)	14.2 (10.2)	B (B)	14.2 (10.2)	C (B)	15.0 (10.3)
SBLTR[4]	B (B)	11.4 (11.4)	B (B)	11.5 (10.7)		
GO Access Road / **Site Access**						
WBLR	A (B)	0.0 (11.4)	A (B)	0.0 (11.4)	D (C)	31.0 (18.1)
SBLT	A (A)	3.1 (0.3)	A (A)	3.1 (0.3)	A (A)	2.7 (2.8)
GO Access Road / Parking Lot Access / Site Access **(To Be Removed)**						
EBLTR / EBLR[4]	A (A)	8.9 (9.9)	A (A)	8.9 (9.9)	A (B)	9.0 (10.2)
WBLTR[4]	B (B)	13.3 (12.8)	B (B)	13.3 (12.8)		
NBLT	A (A)	2.0 (0.5)	A (A)	2.0 (0.5)	A (A)	2.3 (0.6)
SBLT[4]	A (A)	3.3 (0.2)	A (A)	3.3 (0.2)		
Hurontario Street / Site Access **(To Be Removed)**						
EBR[4,5]	B (B)	12.0 (10.7)	C (B)	16.6 (12.8)		

Notes:
1. XX (XX) – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour).
2. Hurontario Street / Agnes Street to become right-in / right-out, as shown on the Hurontario LRT road plans.
3. Future site access configuration.
4. These existing site access points will be removed with the site redevelopment.
5. Some left turns were observed during the October 2021 count, thus are included in the Synchro model. However, this access point is right-in / right-out only.

12.0 TRANSIT TRAVEL ASSESSMENT

12.1 AREA TRANSIT SERVICES

As outlined in **Section 4.2**, the site location provides a significant level of transit accessibility including services operated by MiWay and Metrolinx (GO Transit). The area transit network provides residents and visitors access to the Mississauga City Centre Transit Terminal and connections to key destinations in the Greater Toronto Area such as Toronto, Kitchener, Milton, and Brampton. Current transit mode share by area residents is in the order of 23 percent, which is expected to increase given the significant transit improvements in the proximate area.

Future transit routes available to residents and visitors of the proposed site development will include:

- MiWay Bus Route 1 Dundas / 101 Dundas Express;
- MiWay Bus Route 4 Sherway Gardens;
- MiWay Bus Route 28 Confederation;
- MiWay Bus Route 38 Creditview;
- MiWay Bus Route 53 Kennedy;
- GO Bus Route 21 Milton;
- GO Train Route *MI* Milton; and
- Hurontario Light Rail Transit (LRT)[1].

12.2 TRANSIT SITE TRIP ASSIGNMENT

12.2.1 Sensitivity Transit Mode Splits

Transit trips for the proposed development were projected based on the methodologies outlined in **Section 9.0**, and are summarized in **Table 46**.

TABLE 46 TRANSIT SITE TRIP GENERATION

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Residential	35	320	355	195	115	310
Retail	25	25	50	25	30	55
Office	5	5	10	0	5	5
Community Centre	5	5	10	10	5	15
Total Transit Persons	**70**	**355**	**425**	**230**	**155**	**385**

Notes:
1. All site trips are rounded to the nearest five (5).

[1] Assumed to replace the existing MiWay Bus Routes 2 Hurontario and 103 Hurontario Express.

The vehicular trip generation forecasting methodology previously assumed existing mode splits for all non-residential uses. Auto mode splits (i.e., the auto driver and auto passenger mode splits) pertaining to residential uses were decreased by 10%, while the transit mode splits were increased by the same proportion. This ensures a likely conservative analysis of the study area intersections in the Synchro models.

However, for the purposes of the transit analysis, a sensitivity analysis with a 20% mode shift from the auto to transit modes was assumed for all proposed uses.

12.2.2 Transit Site Trip Generation

The sensitivity transit site trip generation is summarized in **Table 47**. With the 20% mode shift, the total site anticipates 585 and 545 two-way transit trips during the weekday morning and afternoon peak hours, respectively.

TABLE 47 *SENSITIVITY* TRANSIT SITE TRIP GENERATION

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Residential	40	385	425	240	135	375
Retail	55	45	100	55	60	115
Office	30	5	35	0	25	25
Community Centre	20	5	25	20	10	30
Total Transit Persons	**145**	**440**	**585**	**315**	**230**	**545**

Notes:
1. All site trips are rounded to the nearest five (5).

12.2.3 Transit Site Trip Distribution

The distribution of transit site trips onto the surrounding area transit network is based on transit distribution data made available in the 2016 Transportation Tomorrow Survey (TTS) for each proposed land use. Note that the Hurontario LRT route was assumed to replace the 2 Hurontario and 103 Hurontario Express MiWay bus routes. Transit distribution to / from the site for the inbound and outbound directions is summarized in **Table 48**. The TTS data is presented in **Appendix M**.

TABLE 48 TRANSIT SITE TRIP DISTRIBUTION

General Route Travel Direction	Transit Route	Residential		Retail / Community		Office	
		In	Out	In	Out	In	Out
Northbound	28 Confederation	1%	4%		4%		10%
	38 Creditview	1%	3%				5%
	53 Kennedy		8%		25%		20%
	Hurontario LRT	15%	33%	2%	29%	5%	47%
Southbound	28 Confederation	9%	1%			18%	
	38 Creditview	2%		1%		4%	
	53 Kennedy	5%		32%		12%	
	Hurontario LRT	34%	17%	40%	3%	46%	
Eastbound	1 Dundas / 101 Dundas Express	3%	8%	18%			6%
	4 Sherway Gardens	1%		1%			
	21 Milton					2%	
	MI Milton		22%		4%	5%	6%
Westbound	1 Dundas / 101 Dundas Express	8%	3%	4%	27%	4%	
	4 Sherway Gardens				6%		
	21 Milton		1%				
	MI Milton	21%		2%	2%	4%	6%
Total		**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Notes:
1. All percentages are rounded to the nearest whole percentage value.

The resultant transit site trips onto each transit route are subsequently derived and summarized in **Table 49**.

TABLE 49 TRANSIT ROUTE ASSIGNMENT

General Route Travel Direction	Transit Route	AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
Northbound	28 Confederation	0	18	18	2	10	12
	38 Creditview	0	12	12	2	5	7
	53 Kennedy	0	44	44	0	32	32
	Hurontario LRT	10	145	155	38	77	115
Southbound	28 Confederation	9	4	13	22	1	23
	38 Creditview	3	0	3	6	0	6
	53 Kennedy	30	0	30	36	0	36
	Hurontario LRT	56	67	123	111	26	137
Eastbound	1 Dundas / 101 Dundas Express	15	31	46	21	13	34
	4 Sherway Gardens	2	0	2	3	0	3
	21 Milton	1	0	1	0	0	0
	MI Milton	2	86	88	1	34	35
Westbound	1 Dundas / 101 Dundas Express	7	25	32	22	23	45
	4 Sherway Gardens	0	3	3	0	5	5
	21 Milton	0	4	4	0	1	1
	MI Milton	10	1	11	51	3	54
Total		**145**	**440**	**585**	**315**	**230**	**545**

Notes:
1. Detailed breakdowns of the total transit trips into each proposed land use is provided in **Appendix N**.

12.3 TRANSIT CAPACITY REVIEW

Existing transit service frequencies for transit routes passing through the Cooksville GO station are summarized in **Table 50** below.

TABLE 50 TRANSIT SERVICE FREQUENCIES

Service Owner	Route Number	Approximate Headways[1]	Number of Vehicles Per Peak Hour
MiWay	28 Confederation	15 minutes	4 vehicles per hour
	38 Creditview	30 minutes	2 vehicles per hour
	53 Kennedy	15 minutes	4 vehicles per hour
	4 Sherway Gardens	30 minutes	2 vehicles per hour
	1 Dundas	15 minutes	4 vehicles per hour
	101 Dundas Express	15 minutes	4 vehicles per hour
Metrolinx	Hurontario LRT	Assumed 10 minutes	6 vehicles per hour
	21 Milton (GO Bus)	30 minutes	2 vehicles per hour
	MI Milton (GO Train)	30 minutes	2 vehicles per hour

Notes:
1. All frequencies are based on the available headways outlined in **Section 4.2.1**.

Based on these frequencies, the site-related transit trips per vehicle were calculated for the peak hours and summarized in **Table 51**.

TABLE 51 TRANSIT SITE TRIPS PER VEHICLE

General Route Travel Direction	Transit Route	AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
Northbound	28 Confederation	0	5	5	1	3	4
	38 Creditview	0	6	6	1	3	4
	53 Kennedy	0	11	11	0	8	8
	Hurontario LRT	2	25	27	7	13	20
Southbound	28 Confederation	3	1	4	6	1	7
	38 Creditview	2	0	2	3	0	3
	53 Kennedy	8	0	8	9	0	9
	Hurontario LRT	10	12	22	19	5	24
Eastbound	1 Dundas / 101 Dundas Express	2	4	6	3	2	5
	4 Sherway Gardens	1	0	1	2	0	2
	21 Milton (GO Bus)	1	0	1	0	0	0
	MI Milton (GO Train)	1	43	44	1	17	18
Westbound	1 Dundas / 101 Dundas Express	1	4	5	3	3	6
	4 Sherway Gardens	0	2	2	0	3	3
	21 Milton (GO Bus)	0	2	2	0	1	1
	MI Milton (GO Train)	5	1	6	26	2	28

12.4 ACCOMODATION OF TRANSIT TRIPS

The resultant transit site trips per vehicle are then compared to typical capacities of each transit type and summarized in **Table 52**.

Considering the variety of routing options available to prospective users and the minimal levels of transit trips per vehicle on any given route, it is anticipated that new transit trips can be appropriately accommodated within existing and projected capacities.

TABLE 52 CAPACITY UTILIZATION OF TRANSIT SITE TRIPS

General Route Travel Direction	Transit Route	Capacity	Maximum Trips Per Vehicle		Max. Percentage of Capacity	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Northbound	28 Confederation	50	5	3	10%	6%
	38 Creditview	50	6	3	12%	6%
	53 Kennedy	50	11	8	22%	16%
	Hurontario LRT	336 (2)	25	13	7%	4%
Southbound	28 Confederation	50	3	6	6%	12%
	38 Creditview	50	2	3	4%	6%
	53 Kennedy	50	8	9	16%	18%
	Hurontario LRT	336	12	19	4%	6%
Eastbound	1 Dundas / 101 Dundas Express	50	4	3	8%	6%
	4 Sherway Gardens	50	1	2	2%	4%
	21 Milton (GO Bus)	81 (3)	1	0	1%	0%
	MI Milton (GO Train)	1,620 (4)	43	17	3%	1%
Westbound	1 Dundas / 101 Dundas Express	50	4	3	8%	6%
	4 Sherway Gardens	50	2	3	4%	6%
	21 Milton (GO Bus)	81	2	1	2%	1%
	MI Milton (GO Train)	1,620	5	26	0%	2%

Notes:

1. Capacity assumed based on Toronto Transit Commission buses: https://www.ttc.ca/riding-the-ttc/Real-Time-Bus-Occupancy-Info#:~:text=Note%3A%20Standard%20buses%20hold%20approximately,while%20articulated%20buses%20hold%2077.
2. Capacity assumed from Metrolinx website: https://web.archive.org/web/20180701111611/http://www.metrolinx.com/en/projectsandprograms/lrv/lrv.aspx
3. Capacity assumed from Government of Ontario webpage, with no standing: https://news.ontario.ca/en/release/41128/ontario-unveils-new-accessible-double-decker-go-buses
4. Capacity assumed from GO Transit information package (10 bi-level coaches, each with 162 seats and no standing): https://transittoronto.ca/archives/maps/GoTransit/GO-quick-facts-2013-06.pdf

13.0 DEVELOPMENT PHASING

The proposed development has been divided into two (2) phases as described below:

- Phase 1: Blocks A, B, and E
- Phase 2: Blocks C and D

Phase 1 includes the following components of the development that make up Buildings A, B, and E:

- 1,340 residential units;
- 3,880 square metres of retail GFA; and
- 6,126 square metres of community GFA.

Application of the proposed parking rates for Phase 1 development would result in a minimum requirement of 1,170 parking spaces, including 874 resident spaces and 296 shared visitor / non-resident spaces. The architectural plans provide a supply of 1,430 total spaces, which meet the parking requirement for Buildings A, B, and E.

Application of the City's loading requirements for Phase 1 development would result in a minimum of 6 loading spaces (2 spaces for Building B and 4 shared spaces for Buildings A and E). The architectural plans provide a supply of 6 loading spaces at-grade, which meet the loading requirement for Phase 1 development.

As such, the vehicle parking and loading provisions at this stage will appropriately accommodate the needs of the new development.

Given that the full buildout of the development can be accommodated on the surrounding road network, the reduced volume of site-generated traffic associated with Phase 1 would also be expected to be accommodated on the surrounding road network.

14.0 SUMMARY AND CONCLUSIONS

The following provides a summary overview of the study findings of our assessment of the transportation related aspects of the proposed development.

Introduction

1. BA Group is retained by 33HC TAS LP, 33HC Corp., 3168HS LP and 3168HS Corp to provide transportation advisory services in support of their proposed mixed-use master plan development.

2. The proposed development comprises 2,224 residential units (mix of market and affordable units within 5 buildings), 6,270 m^2 of retail GFA, 8,692 m^2 of commercial GFA, and 6,216 m^2 of community GFA. The subject property currently has a surface parking lot and commercial uses.

Transportation Context

3. The site is located directly south of the existing Cooksville GO station and has a relatively strong level of transit, pedestrian, and cycling service.

4. Transportation improvements planned in the site include a new north-south private road for the required access and circulation, as well as new pick-up / drop-off facilities and an improved pedestrian crossing.

5. Notable transit-specific improvements, such as the new Hurontario LRT, will be built and operational by the fall of 2024, which will improve the overall transit service and accessibility to / from the site. The Dundas Street BRT will also put another higher order transit service station within walking distance of the site.

Transportation Demand Management Plan

6. A comprehensive TDM plan will be implemented to support the use of transit and active transportation while reducing the number of single-occupant vehicle trips during the peak hours.

7. Specific TDM strategies proposed include, but are not limited to, the provision of reduced residential parking supply and non-residential parking, dedication of electric vehicle (or rough in conduit) parking, provision of transit cards and ride-hailing discounts for new residents, consideration to provide a micro-mobility service, distribution of promotional transit service materials, and provision of abundant on-site bicycle parking with repair stations.

Vehicle Parking Considerations

8. Application of the parking standards outlined in Mississauga Zoning By-law 0255-2007 require a total requirement of 4,167 spaces (2,913 residential, 445 residential visitor, and 1,254 non-resident). This results in a residential parking requirement of 1.31 spaces per unit.

9. Reduced parking standards have been proposed for all uses, which would result in a minimum site-specific requirement of 1,992 spaces (1,450 residential and 542 shared residential visitor / non-resident)

to accommodate the overall site. This results in a reduced (blended) residential parking rate of 0.65 spaces per unit and shared residential visitor / non-resident rate of 0.24 spaces per unit.

10. The proposed development will include a total parking supply of 1,994 parking spaces, including 1,452 residential and 452 shared residential visitor / non-resident parking spaces, located within a 4-level underground parking garage. The proposed parking supply meets and slightly exceeds the minimum parking requirements and results in an effective resident parking rate of 0.65 spaces per unit and a shared residential visitor / non-resident parking rate of 0.24 spaces per unit.

11. Based on observed parking trends and demands, the evolving transportation and site context, review of parking requirements proposed by the City, and the TDM plan, the residential and shared residential visitor / non-resident proposed parking supplies considered appropriate for the development.

12. Vehicle parking access is provided off each Private Road via a ramp within Building A and a ramp within Building C.

Bicycle Parking Considerations

13. The City's Zoning By-law 0255-2007 indicates no minimum bicycle parking requirement for new developments.

14. The City's Parking Regulations Study requires a minimum provision of 2,102 bicycle parking spaces (1,827 long-term / Class A and 275 short-term / Class B).

15. The proposed development includes 2,189 spaces (1,914 long-term spaces and 275 bicycle rings for short-term use), which is considered an ample supply that also satisfies the Parking Regulations Study requirement.

16. All long-term and short-term bicycle parking will be provided at the P1 (upper and lower) and ground floor levels.

Loading Considerations

17. Application of the City's Zoning By-law results in a requirement of eleven (11) loading spaces for the new residential, retail, commercial, and community uses for buildings.

18. Eleven (11) loading spaces are proposed in total, which meets and accommodates the By-law requirement and the servicing needs of the site.

19. All loading spaces will be provided at-grade. Buildings B, C, and D will provide individual loading facilities, whereas Buildings A an E will provide a shared loading facility.

Multimodal Travel Demand Forecasting

20. The site is expected to generate 1,930 and 2,205 two-way person trips during the weekday morning and afternoon peak hours, respectively.

21. Of the total two-way trips, the site is expected to generate 180 and 570 internal trips during the weekday morning and afternoon peak hours, respectively. These internal trips occur within the site development and do not cause any traffic-related impacts to the surrounding area road network.

22. The site is also expected to generate 1,750 and 1,635 external vehicle trips during the weekday morning and afternoon peak hours, respectively. These external vehicle trips will be experienced by the surrounding area road network.

Baseline Existing Traffic Volumes

23. On behalf of BA Group, Spectrum Traffic Inc. recently conducted turning movement counts for the study area intersections in October of 2021.

24. Given that the traffic counts were conducted during the COVID-19 pandemic, additional counts prior to the pandemic were also obtained dated 2019 and 2020. The pre-pandemic traffic counts serve as a reference for volume calibration within the study area. It is noteworthy that at the time of both of the obtained pre-pandemic counts, the Cooksville GO station was under construction and not fully operational.

25. Given pandemic restrictions and an increase in working-from-home at the time of the October 2021 counts, travel flows to and from the GO station, including transit ridership numbers, do not represent typical conditions.

26. Based on a review of typical trip generation rates at other GO stations in similar contexts prior to the pandemic, the difference between the anticipated GO-related trips and the observed GO-related trips were manually assigned onto the area road network based on existing travel patterns in the area.

Background Traffic Growth

27. Allowances were made under future traffic conditions to account for new traffic generated by other development proposals in proximity to the proposed site that are either under construction, approved, being reviewed, or for which an application is expected to be submitted to the City of Mississauga in the near future.

28. Under the five-year horizon of the year 2027, the total development programme for the 16 background developments includes approximately 6,300 residential units and 5,000 m^2 non-residential GFA.

29. The City of Mississauga provided growth rates along Hurontario Street, Confederation Parkway, and Dundas Street. Corridor volumes along Hurontario Street, Confederation Parkway, and Dundas Street at the 2027 horizon year were calibrated to the provided growth rates.

30. Several network changes in the site vicinity are planned alongside the construction of the Hurontario LRT and the Dundas BRT. These changes were incorporated into the traffic models for analysis purposes.

31. Drivers are expected to redistribute along alternative routes and corridors to minimize delays given the significant changes to the road network such as the removal of a travel lane in each direction on Hurontario Street to accommodate the future LRT.

Site Traffic Volumes

32. The existing site consists of several retail uses and 390 surface parking spaces that serve the GO station. With the proposed redevelopment, the vehicular traffic to and from these uses will be removed from the area road network. There are 320 and 460 existing site trips during the weekday morning and afternoon peak hours, respectively.

33. The site is expected to generate 885 and 830 net new two-way vehicle trips during the weekday morning and afternoon peak hours, respectively.

Traffic Operations Analysis

34. Under existing traffic conditions, the Synchro models adopt the existing lane configurations as observed in the field at the time of the October 2021 traffic counts and the Cooksville GO's road layout master plan.

35. Under future traffic conditions, the Synchro models adopted network changes that are planned alongside the Hurontario Street LRT and the Dundas Street BRT. These network changes include:

    - The removal of one through lane in either travel direction along Hurontario Street for the LRT;
    - Hurontario Street / Agnes Street as a right-in / right-out (RIRO);
    - Bus only-lanes at Hurontario Street / Dundas Street;
    - Protected northbound and southbound left turn advance phases along Hurontario Street due to the LRT;
    - Protected eastbound and westbound left turn advance phases along Dundas Street due to the BRT; and
    - The prohibition of northbound left turns at Hurontario Street / Dundas Street.

36. All signalized intersections in the study area are expected to operate under capacity and accommodate site-related vehicular traffic. The intersection of Hurontario Street / Dundas Street is expected to approach capacity in both weekday peak hours. As post-pandemic travel conditions continue to evolve in conjunction with the planned implementation of significant transit improvements (i.e., the Hurontario LRT and the Dundas BRT), the operations at this intersection should continue to be monitored. No mitigation measures nor improvements are recommended aside from signal timing optimization at the following intersections:

    - Hurontario Street / Fairview Road East & West
    - Hurontario Street / John Street
    - Hurontario Street / Hillcrest Avenue / Kirwin Avenue
    - Confederation Parkway / Hillcrest Avenue
    - Hurontario Street / Dundas Street East & West

37. All movements at unsignalized intersections in the study area are expected to operate acceptably in both peak hours at levels-of-service (LOS) E or better. No mitigation measures nor improvements are recommended.

Transit Travel Assessment

38. The vehicular trip generation forecasting methodology assumed existing mode splits for all non-residential uses. Auto mode splits (i.e., the auto driver and auto passenger mode splits) pertaining to residential uses were decreased by 7%, while the transit mode splits were increased by the same proportion. This reflects a conservative traffic analysis of the study area intersections in the Synchro models. However, for the purposes of the transit analysis, a 20% mode shift from the auto to transit modes was assumed for all proposed uses.

39. With the 20% mode shift, the total site anticipates 585 and 545 two-way transit trips during the weekday morning and afternoon peak hours, respectively.

40. Considering the variety of routing options available to prospective users and the minimal levels of transit trips per vehicle on any given route, it is anticipated that new transit trips can be accommodated within existing and projected capacities.

Development Phasing

41. The proposed development will be building two phases:

    - Phase 1 – Buildings A, B, and E
    - Phase 2 – Buildings C and D

42. The parking and loading provisions will accommodate the interim requirements as part of Phase 1.

Overall

43. The proposed transportation-related elements of the development that accommodate traffic, vehicle and bicycle parking, and loading activity are appropriate.

APPENDIX A: REDUCED SCALE ARCHITECTURAL PLANS

Stats Summary

	(m²)	(ft²)	%
SITE AREA	21373	230059	
GCA TOTAL	189151.9	2036031	
NON RES GFA TOTAL	21177.8	227958	13%
RES GFA TOTAL	140093.0	1507961	87%
TOTAL GFA	161270.8	1735918.89	
SITE FSI	7.5		

UNIT SUMMARY		UNIT MIX
1B	1289	58%
1B+D	303	14%
2B	524	24%
3B	108	5%
TOTAL	**2224**	

Vehicular Parking

PARKING RATES	RATE	UNITS		SPACES REQUIRED	
RESIDENT		**PHASE 1**	**PHASE 2**	**PHASE 1**	**PHASE 2**
1B	0.62/UNIT	767	1289	476	799
1B+D	0.62/UNIT	193	303	120	187
2B	0.72/UNIT	316	524	228	377
3B	0.80/UNIT	64	108	51	86
SUBTOTAL		1340	2224	**874**	**1450**

	RATE	AREA (m²)		SPACES REQUIRED	
NON-RESIDENT		**PHASE 1**	**PHASE 2**	**PHASE 1**	**PHASE 2**
VISITOR	0.15/UNIT	1340	2224	201	334
COMMUNITY CENTRE	2.9/100m²	6215.8	6215.8	180	180
COMMERCIAL	2.0/100m²	-	8692.2	-	174
RETAIL	3.0/100m²	3879.7	6269.9	116	188
CCI-CC4 Sharing Arrangement (before Sharing)				497	876
CCI-CC4 Sharing Arrangement (after sharing)				**296**	**542**
TOTAL SITE REQUIREMENTS				**1170**	**1992**

LEVEL	SPACES PROVIDED	
	PHASE 1	**PHASE 2**
P1 UPPER	89	0
P1 LOWER	321	137
P2	358	143
P3	359	143
P4	298	146
SUB TOTAL	1425	569
TOTAL	**1994**	

Bicycle Parking

RESIDENTIAL	RATE	UNITS		SPACES REQUIRED	
		PHASE 1	**PHASE 2**	**PHASE 1**	**PHASE 2**
LONG TERM	0.80/UNIT	1340	2224	1072	1780
SHORT TERM	0.10/UNIT	1340	2224	134	223

	RATE	AREA (m²)		SPACES REQUIRED	
NON-RESIDENTIAL		**PHASE 1**	**PHASE 2**	**PHASE 1**	**PHASE 2**
COMMUNITY CENTRE (LT)	0.30/100m²	6215.8	6215.8	19	19
COMMUNITY CENTRE (ST)	0.30/100m²	6215.8	6215.8	19	19
RETAIL (LT)	0.15/100m²	3879.7	6269.9	6	10
RETAIL (ST)	0.30/100m²	3879.7	6269.9	12	19
COMMERCIAL (LT)	0.20/100m²	-	8692.2	-	18
COMMERCIAL (ST)	0.15/100m²	-	8692.2	-	14
SUBTOTAL LT				**1097**	**1827**
SUBTOTAL ST				**165**	**275**
TOTAL				**1262**	**2102**

LEVEL	LT SPACES PROVIDED		ST SPACES PROVIDED		
	PHASE 1	**PHASE 2**	**PHASE 1**	**PHASE 2**	
AT GRADE	-	-	165	110	
P1 UPPER	533	517	-	-	
P1 LOWER	621	243	-	-	
P2	-	-	-	-	
P3	-	-	-	-	
P4	-	-	-	-	
SUB TOTAL	1154	760	165	110	**GRAND TOTAL**
TOTAL	**1914**		**275**		**2189**

TOTAL AMENITY	(m²)	(ft²)
INDOOR AMENITY	7405.2	79710
OUTDOOR AMENITY	5135.2	55275
TOTAL PROVIDED	**12540.4**	134985
REQUIRED (10% of SHs)	2137.3	23006
REQUIRED (5.6m²/unit)	12454.4	134059

BELOW GRADE AREA	GCA	
LEVEL	(m²)	(ft²)
P1 UPPER	5659.3	60917
P1 LOWER	19543.3	210364
P2	19542.6	210357
P3	19542.8	210359
P4	17960	193321
TOTAL	**82248**	885317

Notes:
**ST refers to Short Term, LT refers to Long Term*
*** Amenity inclusive of both indoor and outdoor amenity*

Building A

LEVEL	GCA (m²)	GCA (ft²)	AMENITY** (m²)	AMENITY** (ft²)	GFA NON-RES (m²)	GFA NON-RES (ft²)	GFA RES (m²)	GFA RES (ft²)	1B	1B+D	2B	3B	
Ground	2132.9	22959	-	-	1202	12938	94.2	1014	0	0	0	0	
Level 2	1468.4	15806	1470	15823	-	-	764.9	8233	1	6	2	1	
Level 3	1366.8	14712	-	-	-	-	1280.8	13787	1	12	2	2	
Level 4	1256.7	13527	-	-	-	-	1170.7	12601	1	11	2	2	
Level 5	1108.7	11934	-	-	-	-	1022.7	11008	4	8	1	2	
Level 6	1000.2	10766	-	-	-	-	927.5	9984	5	4	1	3	
Level 7	804.6	8661	367.2	3953	-	-	544.4	5860	6	1	2	0	
Level 8	667.8	7188	48.9	526	-	-	544.4	5860	6	1	2	0	
Level 9	808.6	8704	-	-	-	-	734.5	7906	8	1	2	1	
Level 10	808.6	8704	-	-	-	-	734.5	7906	8	1	2	1	
Level 11	808.6	8704	-	-	-	-	734.5	7906	8	1	2	1	
Level 12	808.6	8704	-	-	-	-	734.5	7906	8	1	2	1	
Level 13	808.6	8704	-	-	-	-	734.5	7906	8	1	2	1	
Level 14	808.6	8704	-	-	-	-	734.5	7906	8	1	2	1	
Level 15	808.6	8704	-	-	-	-	734.5	7906	8	1	2	1	
Level 16	808.6	8704	283.4	3051	-	-	536.8	5778	6	1	2	0	
Level 17	610.9	6576	-	-	-	-	536.8	5778	6	1	2	0	
Level 18	808.6	8704	-	-	-	-	734.5	7906	8	1	2	1	
Level 19	808.6	8704	-	-	-	-	734.5	7906	8	1	2	1	
Level 20	808.6	8704	-	-	-	-	734.5	7906	8	1	2	1	
Level 21	808.6	8704	-	-	-	-	734.5	7906	8	1	2	1	
Level 22	808.6	8704	-	-	-	-	734.5	7906	8	1	2	1	
Level 23	808.6	8704	-	-	-	-	734.5	7906	8	1	2	1	
Level 24	808.6	8704	-	-	-	-	734.5	7906	8	1	2	1	
Level 25	808.6	8704	277.9	2991	-	-	545.5	5872	6	1	2	0	
Level 26	667.8	7188	48.9	526	-	-	544.4	5860	6	1	2	0	
Level 27	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 28	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 29	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 30	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 31	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 32	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 33	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 34	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 35	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 36	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 37	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 38	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 39	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 40	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 41	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
Level 42	808.6	8704	-	-	-	-	734.5	7906	7	1	4	0	
MPH	632.1	6804	-	-	-	-	-	-	-	-	-	-	TOTAL UNITS
TOTALS	**38,203.0**	**411,217**	**2,779.7**	**29,921**	**1,202.0**	**12938.33**	**30,887.2**	**332,470**	**277**	**78**	**112**	**24**	**491**
								MIX %	56%	16%	23%	5%	

BUILDING A	(m²)	(ft²)
TOTAL GCA	**38203**	411,217
TOTAL GFA	**32089.2**	345,408

AMENITY AREA	(m²)	(ft²)
INDOOR AMENITY	1485.1	16029
OUTDOOR AMENITY	1290.5	13891
TOTAL PROVIDED	**2775.6**	29920
AMENITY REQUIRED	2749.6	29597
(Greater of 5.6m unit or 10% of site area)		

LOADING	
# PROVIDED	3
# REQUIRED	2

(Includes shared loading space for Building E)

Building B

LEVEL	GCA (m²)	GCA (ft²)	AMENITY** (m²)	AMENITY** (ft²)	GFA NON-RES (m²)	GFA NON-RES (ft²)	GFA RES (m²)	GFA RES (ft²)	1B	1B+D	2B	3B	
Ground	2196.4	23642	-	-	1660.7	17876	120.6	1298	0	0	0	0	
Mezzanine	717.7	7725	-	-	623.2	6708	-	-	0	0	0	0	
Level 2	1627.2	17515	1503.8	16187	-	-	566.1	6094	1	5	0	1	
Level 3	1380.5	14860	-	-	-	-	1206	12981	4	8	1	3	
Level 4	1222.1	13155	-	-	-	-	1071.8	11537	2	6	1	4	
Level 5	1109.9	11947	-	-	-	-	1036.1	10830	2	8	2	2	
Level 6	793.2	8538	-	-	-	-	722.6	7778	7	1	4	0	
Level 7	793.2	8538	-	-	-	-	722.4	7776	8	1	2	1	
Level 8	793.2	8538	-	-	-	-	722.4	7776	8	1	2	1	
Level 9	793.2	8538	-	-	-	-	722.4	7776	8	1	2	1	
Level 10	793.2	8538	232.2	2499	-	-	546.7	5885	6	0	3	0	
Level 11	675.8	7274	58.4	629	-	-	546.7	5885	6	0	3	0	
Level 12	793.2	8538	-	-	-	-	722.4	7776	8	1	2	1	
Level 13	793.2	8538	-	-	-	-	722.4	7776	8	1	2	1	
Level 14	793.2	8538	-	-	-	-	722.4	7776	8	1	2	1	
Level 15	793.2	8538	-	-	-	-	722.4	7776	8	1	2	1	
Level 16	793.2	8538	-	-	-	-	722.4	7776	8	1	2	1	
Level 17	793.2	8538	-	-	-	-	722.4	7776	8	1	2	1	
Level 18	793.2	8538	-	-	-	-	722.4	7776	8	1	2	1	
Level 19	793.2	8538	-	-	-	-	722.4	7776	8	1	2	1	
Level 20	793.2	8538	259.6	2794	-	-	545.1	5867	6	1	2	0	
Level 21	672	7233	56.1	604	-	-	545.1	5867	6	1	2	0	
Level 22	793.2	8538	-	-	-	-	722.4	7776	8	1	2	1	
Level 23	793.2	8538	-	-	-	-	722.4	7776	8	1	2	1	
Level 24	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
Level 25	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
Level 26	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
Level 27	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
Level 28	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
Level 29	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
Level 30	793.2	8538	232.2	2499	-	-	546.7	5885	6	0	3	0	
Level 31	675.8	7274	58.4	629	-	-	546.7	5885	6	0	3	0	
Level 32	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
Level 33	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
Level 34	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
Level 35	793.2	8538	-	-	-	-	1006.1	10830	7	1	4	0	
Level 36	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
Level 37	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
Level 38	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
Level 39	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
Level 40	793.2	8538	259.6	2794	-	-	545.1	5867	6	1	2	0	
Level 41	672	7233	56.1	604	-	-	545.1	5867	6	1	2	0	
Level 42	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
Level 43	793.2	8538	-	-	-	-	722.4	7776	7	1	4	0	
MPH	624.7	6724	-	-	-	-	-	-	-	-	-	-	TOTAL UNITS
TOTALS	**38,542.9**	**414,876**	**2,716.4**	**29,239**	**2,283.9**	**24583.0**	**30,293.7**	**326,081**	**279**	**61**	**120**	**22**	**482**
								MIX %	58%	13%	25%	5%	

BUILDING B	(m²)	(ft²)
TOTAL GCA	38543.9	414,876
TOTAL GFA	32577.6	350,665

AMENITY AREA	(m²)	(ft²)
INDOOR AMENITY	1,919.6	20,663
OUTDOOR AMENITY	796.6	8,575
TOTAL PROVIDED	**2,716.2**	29237.18
AMENITY REQUIRED	2,699.2	29,054
(Greater of 5.6m unit or 10% of site area)		

LOADING	
# PROVIDED	2
# REQUIRED	2

Building C

LEVEL	GCA (m²)	GCA (ft²)	AMENITY** (m²)	AMENITY** (ft²)	GFA NON-RES (m²)	GFA NON-RES (ft²)	GFA RES (m²)	GFA RES (ft²)	1B	1B+D	2B	3B	
Ground	2241.9	24132	-	-	1240.7	13355	203.5	2190	0	0	0	0	
Level 2	2048.6	22051	-	-	1948.8	20977	-	-	0	0	0	0	
Level 3	2021.9	21764	-	-	1921.6	20684	-	-	0	0	0	0	
Level 4	1844.7	19856	-	-	1744.6	18779	-	-	0	0	0	0	
Level 5	1652.8	17791	-	-	1551.7	16702	-	-	0	0	0	0	
Level 6	1471.9	15844	-	-	1371	14757	-	-	0	0	0	0	
Level 7	803.8	8652	1453.5	15645	-	-	49.2	530	0	0	0	0	
Level 8	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 9	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 10	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 11	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 12	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 13	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 14	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 15	806.3	8679	228.7	2462	-	-	564.9	6081	5	1	3	0	
Level 16	700.5	7540	65.3	703	-	-	564.9	6081	5	1	3	0	
Level 17	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 18	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 19	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 20	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 21	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 22	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 23	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 24	806.3	8679	235.3	2533	-	-	561.1	6040	5	1	3	0	
Level 25	631.2	6794	-	-	-	-	561.1	6040	5	1	3	0	
Level 26	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 27	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 28	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 29	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 30	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 31	805.7	8673	-	-	-	-	736.1	7923	8	1	2	1	
Level 32	806.3	8679	228.7	2462	-	-	564.9	6081	5	1	3	0	
Level 33	700.5	7540	65.3	703	-	-	564.9	6081	5	1	3	0	
Level 34	805.7	8673	-	-	-	-	736.1	7923	7	1	4	0	
Level 35	805.7	8673	-	-	-	-	736.1	7923	7	1	4	0	
Level 36	805.7	8673	-	-	-	-	736.1	7923	7	1	4	0	
Level 37	805.7	8673	-	-	-	-	736.1	7923	7	1	4	0	
Level 38	805.7	8673	-	-	-	-	736.1	7923	7	1	4	0	
Level 39	805.7	8673	-	-	-	-	736.1	7923	7	1	4	0	
Level 40	806.3	8679	235.3	2533	-	-	561.1	6040	5	1	3	0	
Level 41	631.2	6794	-	-	-	-	561.1	6040	5	1	3	0	
Level 42	805.7	8673	-	-	-	-	736.1	7923	7	1	4	0	
Level 43	805.7	8673	-	-	-	-	736.1	7923	7	1	4	0	
Level 44	805.7	8673	-	-	-	-	736.1	7923	7	1	4	0	
Level 45	805.7	8673	-	-	-	-	736.1	7923	7	1	4	0	
Level 46	805.7	8673	-	-	-	-	736.1	7923	7	1	4	0	
MPH	602.3	6483	-	-	-	-	-	-	-	-	-	-	TOTAL UNITS
TOTAL	**43,553.2**	**468,807**	**2,512.1**	**27,040**	**9,778.4**	**105254.7**	**27,575.8**	**296,826**	**277**	**39**	**108**	**20**	**444**
								MIX %	62%	9%	24%	5%	

BUILDING C	(m²)	(ft²)
TOTAL GCA	43553.2	468,807
TOTAL GFA	37354.2	402,081

AMENITY AREA	(m²)	(ft²)
INDOOR AMENITY	1,451.1	15,620
OUTDOOR AMENITY	1,060.8	11,418
TOTAL PROVIDED	2,511.9	27,038
AMENITY REQUIRED	2486.4	26,764
(Greater of 5.6m unit or 10% of site area)		

LOADING	
# PROVIDED	3
# REQUIRED	3

Building D

LEVEL	GCA (m²)	GCA (ft²)	AMENITY** (m²)	AMENITY** (ft²)	GFA NON-RES (m²)	GFA NON-RES (ft²)	GFA RES (m²)	GFA RES (ft²)	1B	1B+D	2B	3B	
Ground	1919.1	20657	-	-	1304	14038	214.8	2312	0	0	0	0	
Level 2	1429.6	15388	1313.7	14141	-	-	450.8	4852	1	4	0	1	
Level 3	1501.1	16158	-	-	-	-	1359.6	14633	0	13	3	2	
Level 4	1326.6	14280	-	-	-	-	1226.1	13198	3	11	1	2	
Level 5	1088.6	11718	-	-	-	-	1017.8	10956	2	9	0	3	
Level 6	806.4	8680	298.9	3217	-	-	587.1	6320	5	1	2	1	
Level 7	660.8	7113	-	-	-	-	591.2	6364	5	1	2	1	
Level 8	806.4	8680	-	-	-	-	737.3	7936	8	1	2	1	
Level 9	806.4	8680	-	-	-	-	737.3	7936	8	1	2	1	
Level 10	806.4	8680	-	-	-	-	737.3	7936	8	1	2	1	
Level 11	806.4	8680	-	-	-	-	737.3	7936	8	1	2	1	
Level 12	806.4	8680	-	-	-	-	737.3	7936	8	1	2	1	
Level 13	806.4	8680	-	-	-	-	737.3	7936	8	1	2	1	
Level 14	806.4	8680	-	-	-	-	737.3	7936	8	1	2	1	
Level 15	806.9	8685	290.4	3126	-	-	540.5	5818	6	1	1	1	
Level 16	609.7	6563	-	-	-	-	540.5	5818	6	1	1	1	
Level 17	806.4	8680	-	-	-	-	737.3	7936	8	1	2	1	
Level 18	806.4	8680	-	-	-	-	737.3	7936	8	1	2	1	
Level 19	806.4	8680	-	-	-	-	737.3	7936	8	1	2	1	
Level 20	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 21	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 22	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 23	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 24	806.9	8685	273.1	2940	-	-	548	5899	6	1	2	0	
Level 25	660.9	7179	-	-	-	-	597	6426	7	1	2	0	
Level 26	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 27	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 28	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 29	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 30	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 31	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 32	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 33	806.9	8685	290.4	3126	-	-	540.5	5818	6	1	1	1	
Level 34	609.7	6563	-	-	-	-	540.5	5818	6	1	1	1	
Level 35	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 36	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 37	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 38	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
Level 39	806.4	8680	-	-	-	-	737.3	7936	7	1	4	0	
MPH	630.4	6786	-	-	-	-	-	-	-	-	-	-	TOTAL UNITS
TOTAL	**34,636.0**	**372,822**	**2,466.5**	**26,549**	**1,304.0**	**14038.20**	**27,924.2**	**300,576**	**245**	**71**	**100**	**24**	**440**
								MIX %	56%	16%	23%	5%	

	(m²)	(ft²)
TOTAL GCA	34636	372,822
TOTAL GFA	29228.2	314,612

AMENITY AREA	(m²)	(ft²)
INDOOR AMENITY	1,646.2	17,720
OUTDOOR AMENITY	820.3	8,830
TOTAL PROVIDED	2,466.5	26,549
AMENITY REQUIRED	2,464.0	26,522
(Greater of 5.6m unit or 10% of site area)		

LOADING	
# PROVIDED	2
# REQUIRED	2

Gross Floor Area (GFA) - Apartment Zone means the sum of the areas of each storey of a building above or below established grade, measured from the exterior of outside walls of the building including floor area occupied by interior walls but excluding any part of the building used for mechanical floor area, stairwells, elevators, motor vehicle parking, bicycle parking, storage lockers, below-grade storage, any enclosed area used for the collection or storage of disposable or recyclable waste generated within the building, common facilities for the use of the residents of the building, a day care and amenity area. (0174-2017)

Building E

LEVEL	GCA (m²)	GCA (ft²)	AMENITY** (m²)	AMENITY** (ft²)	GFA NON-RES (m²)	GFA NON-RES (ft²)	GFA RES (m²)	GFA RES (ft²)	1B	1B+D	2B	3B	
Ground	2623.5	28239	-	-	2091.2	22510	272.2	2930	0	0	0	0	
Level 2	3450.3	37139	-	-	3319.5	35731	-	-	0	0	0	0	
Level 3	1281.9	13798	-	-	1198.8	12904	-	-	0	0	0	0	
Level 4	1316.7	14173	1504	16189	-	-	738.6	7950	1	6	3	0	
Level 5	1226.2	13204	-	-	-	-	1151.3	12393	1	10	3	2	
Level 6	1151.8	12398	-	-	-	-	1082.4	11651	1	10	2	2	
Level 7	815.1	8774	-	-	-	-	744.9	8018	8	1	2	1	
Level 8	815.1	8774	-	-	-	-	744.9	8018	8	1	2	1	
Level 9	815.1	8774	-	-	-	-	744.9	8018	8	1	2	1	
Level 10	815.1	8774	-	-	-	-	744.9	8018	8	1	2	1	
Level 11	815.1	8774	-	-	-	-	744.9	8018	8	1	2	1	
Level 12	815.1	8774	-	-	-	-	744.9	8018	8	1	2	1	
Level 13	815.1	8774	-	-	-	-	744.9	8018	8	1	2	1	
Level 14	815.1	8774	-	-	-	-	744.9	8018	8	1	2	1	
Level 15	815.1	8774	274.4	2954	-	-	555.1	5975	6	1	2	0	
Level 16	675.1	7267	-	-	-	-	605.3	6515	7	1	2	0	
Level 17	815.1	8774	-	-	-	-	744.9	8018	8	1	2	1	
Level 18	815.1	8774	-	-	-	-	744.9	8018	8	1	2	1	
Level 19	815.1	8774	-	-	-	-	744.9	8018	8	1	2	1	
Level 20	815.1	8774	-	-	-	-	744.9	8018	8	1

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1	2022-04-22	ISSUED FOR ZBA/OPA DRAFT
2	2022-05-06	ISSUED FOR ZBA/OPA DRAFT
3	2022-05-30	ISSUED FOR ZBA/OPA DRAFT

NOTES

JOHN STREET

GO ACCESS ROAD

HURONTARIO STREET

HILLCREST AVENUE

PRIVATE ROAD

PRIVATE ROAD

SEPARATION BETWEEN PHASES

BUILDING A
43 STOREYS
138.4m (HEIGHT FROM AVERAGE GRADE)
+270.9m (MECH PENTHOUSE)
+264.5m (TOS)

BUILDING B
43 STOREYS
137.1m (HEIGHT FROM AVERAGE GRADE)
+258.6m (MECH PENTHOUSE)
+252.4m (TOS)

BUILDING C
46 STOREYS
147.4m (HEIGHT FROM AVERAGE GRADE)
+273.6m (MECH PENTHOUSE)
+266.6m (TOS)

BUILDING D
39 STOREYS
126.7m (HEIGHT FROM AVERAGE GRADE)
+260.7m (MECH PENTHOUSE)
+244.7m (TOS)

BUILDING E
34 STOREYS
115.0m (HEIGHT FROM AVERAGE GRADE)
+247.4m (MECH PENTHOUSE)
+237.4m (TOS)

PHASE 1
(BUILDING A, B, & E)

PHASE 2
(BUILDING C & D)

1 OVERALL SITE PLAN
A010 1 : 250

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CONNECTING COOKSVILLE
25 HILLCREST AVENUE & 3184
HURONTARIO, MISSISSAUGA, ON

TAS IMPACT

OVERALL SITE PLAN

PROJECT	42040	DRAWN	AN
SCALE	1 : 250	CHECKED	DW
PLOT DATE	2022-05-30 10:00:22 AM		

A010

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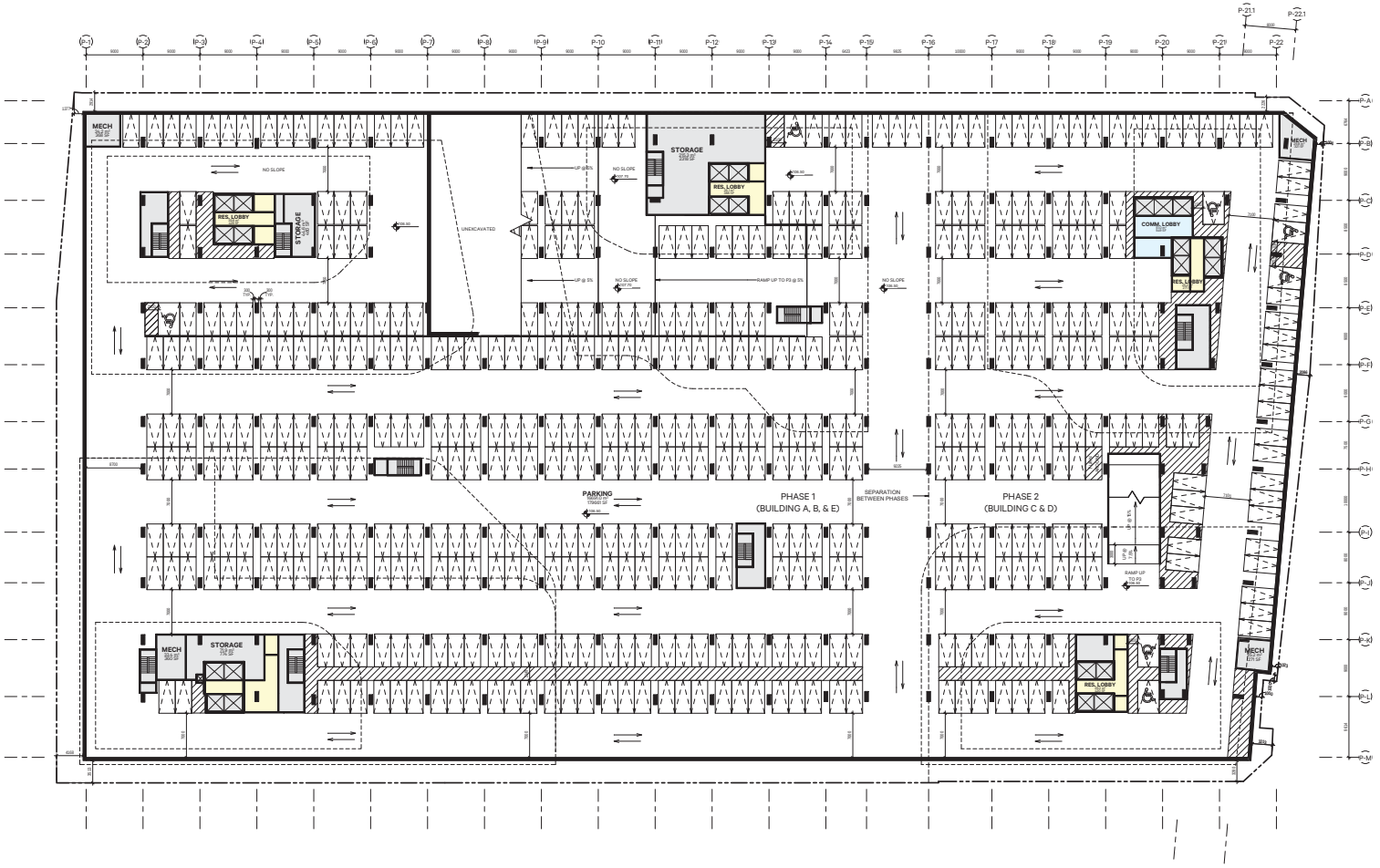
1	2022-04-22	ISSUED FOR ZBA/OPA DRAFT
2	2022-05-09	ISSUED FOR ZBA/OPA DRAFT
3	2022-05-30	ISSUED FOR ZBA/OPA DRAFT



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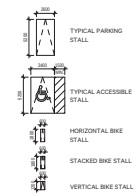

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PLAN - P4 LEVEL

PROJECT	42040	DRAWN	AN
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A101



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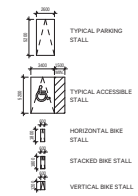
NO.	DATE	REVISION/COMMENT
1	2022-04-22	ISSUED FOR ZBA/OPA DRAFT
2	2022-05-09	ISSUED FOR ZBA/OPA DRAFT
3	2022-05-20	ISSUED FOR ZBA/OPA DRAFT

NOTES



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PLAN - P3 LEVEL

PROJECT	42040	DRAWN	AN
SCALE	1 : 250	CHECKED	DW
PLOT DATE	2022-05-20 10:00:45 AM		

A102

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NO.	DATE	REVISION/COMMENT
1	2022-04-22	ISSUED FOR ZBA/OPA DRAFT
2	2022-05-06	ISSUED FOR ZBA/OPA DRAFT
3	2022-05-30	ISSUED FOR ZBA/OPA DRAFT

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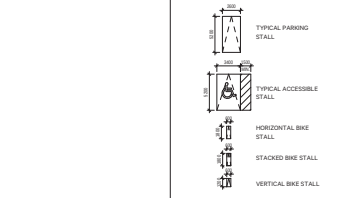



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PLAN - P2 LEVEL

PROJECT	42040	DRAWN	AN
SCALE	1:250	CHECKED	DW
PLOT DATE	2022-06-30 10:00:52 AM		

A103

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NO.	DATE	REVISION/COMMENT
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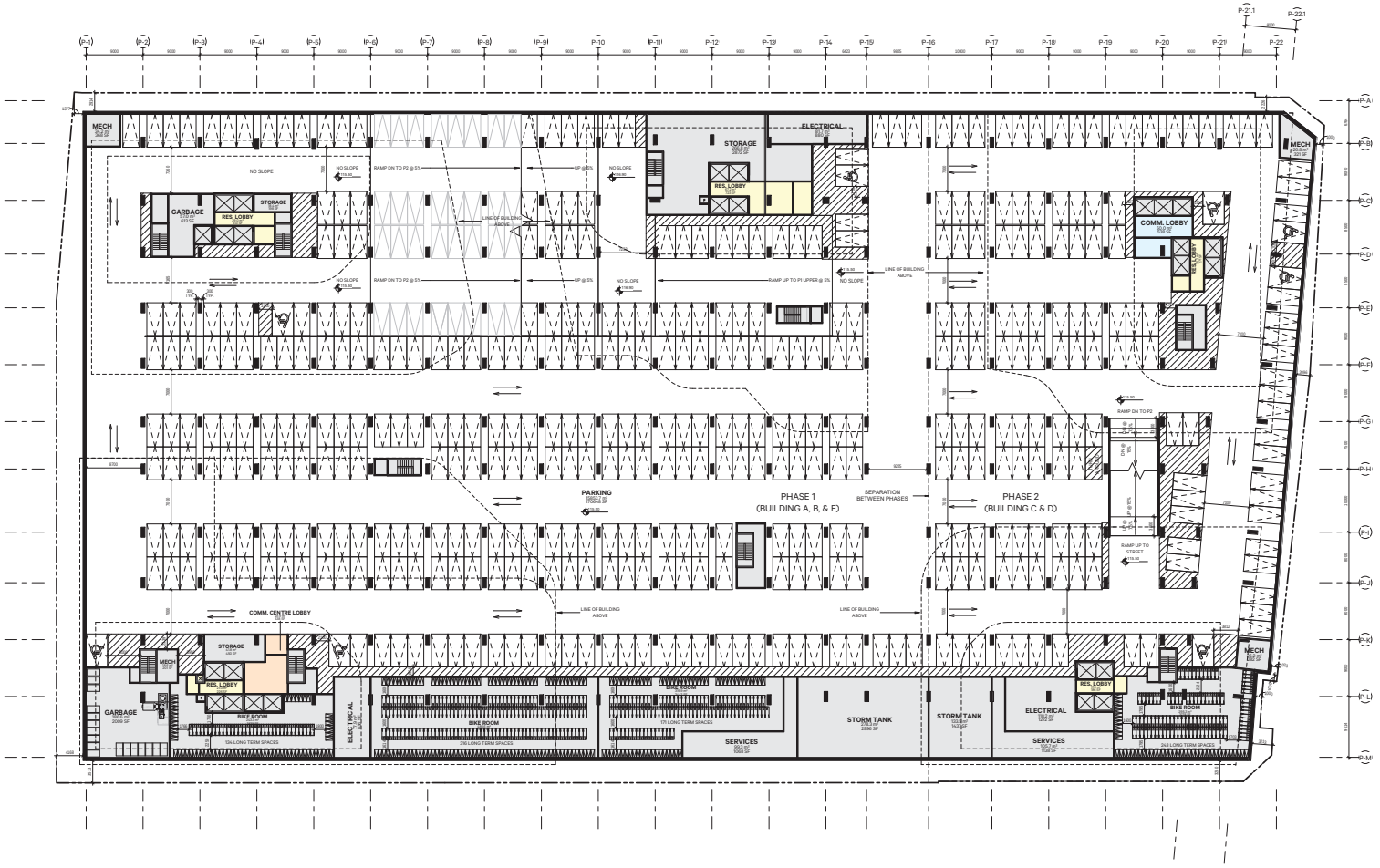
2	2022-05-09	ISSUED FOR ZBA/OPA DRAFT
3	2022-05-30	ISSUED FOR ZBA/OPA DRAFT



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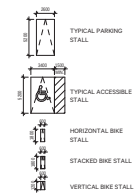

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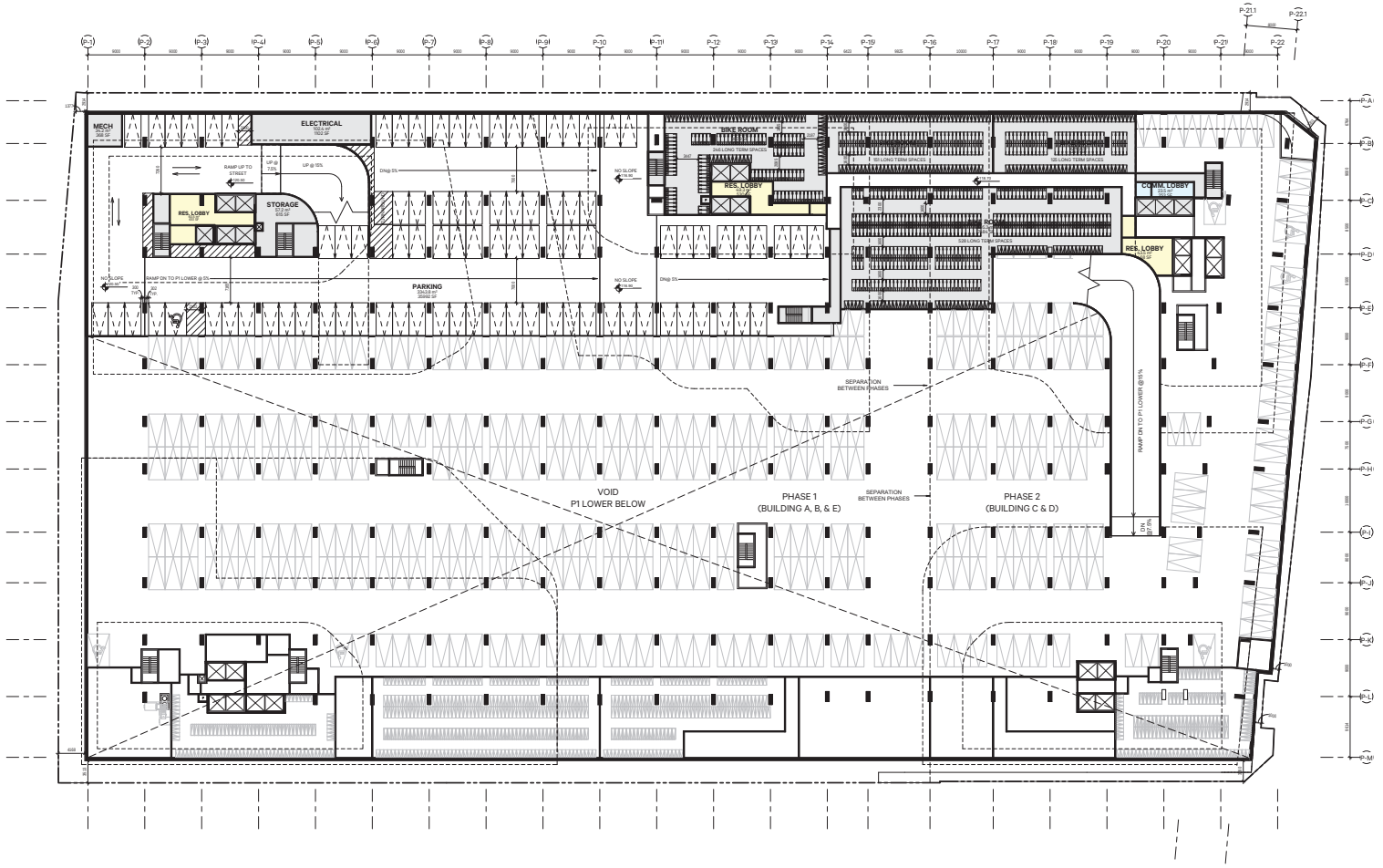
PLAN - P1 LOWER

PROJECT	42040	DRAWN	AN
SCALE	1 : 250	CHECKED	DW
PLOT DATE	2022-05-30 10:00:59 AM		

A104



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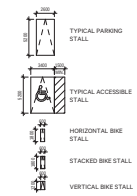
2	2022-05-09	ISSUED FOR ZBA/OPA DRAFT
3	2022-05-30	ISSUED FOR ZBA/OPA DRAFT

NOTES



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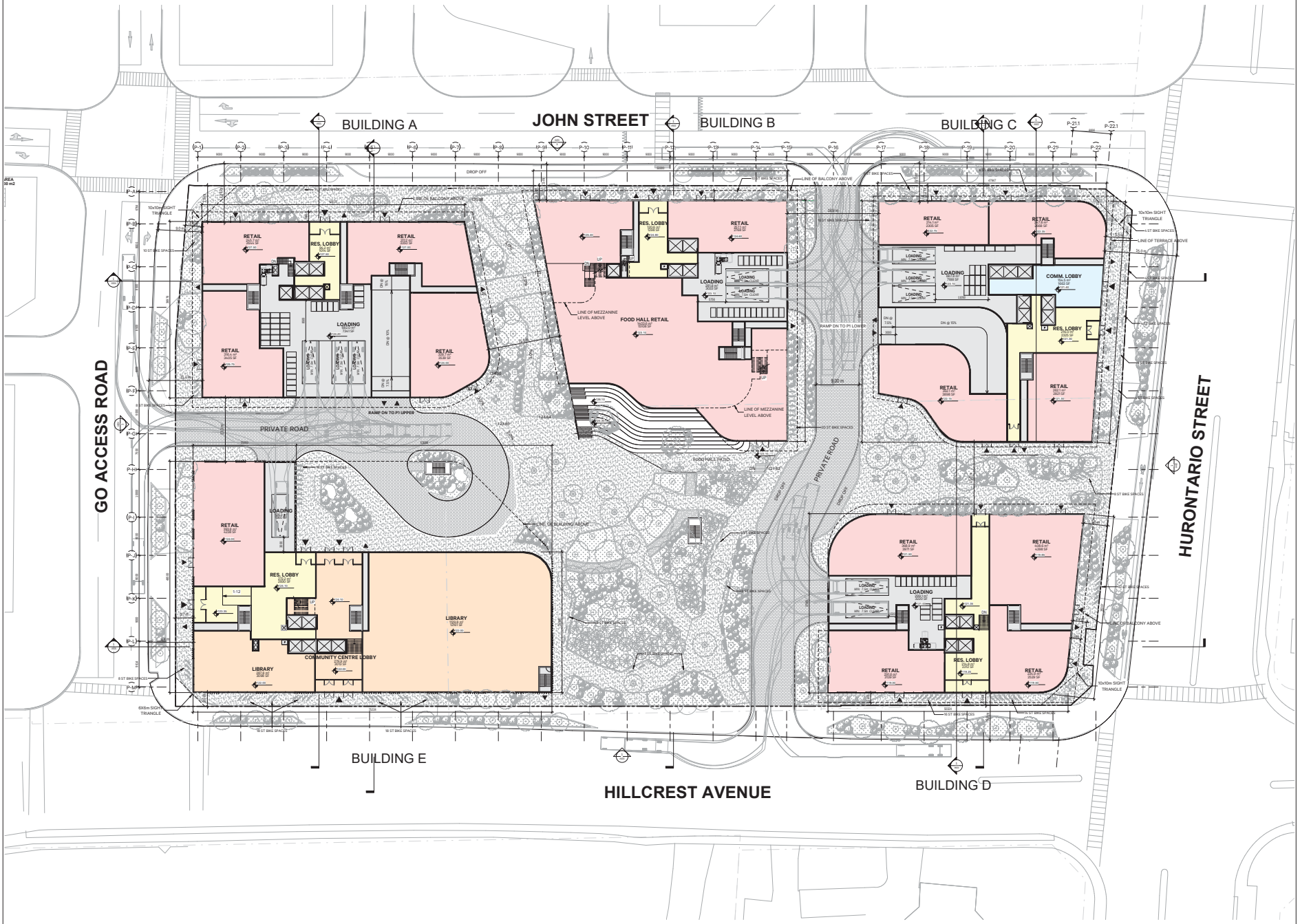
PLAN - P1 UPPER

PROJECT	42040	DRAWN	AN
SCALE	1 : 250	CHECKED	DW
PLOT DATE	2022-05-30 10:01:09 AM		

A105



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NO.	DATE	REVISION/COMMENT
1	2022-04-22	ISSUED FOR ZBA/OPA DRAFT
2	2022-05-03	ISSUED FOR ZBA/OPA DRAFT
3	2022-05-20	ISSUED FOR ZBA/OPA DRAFT

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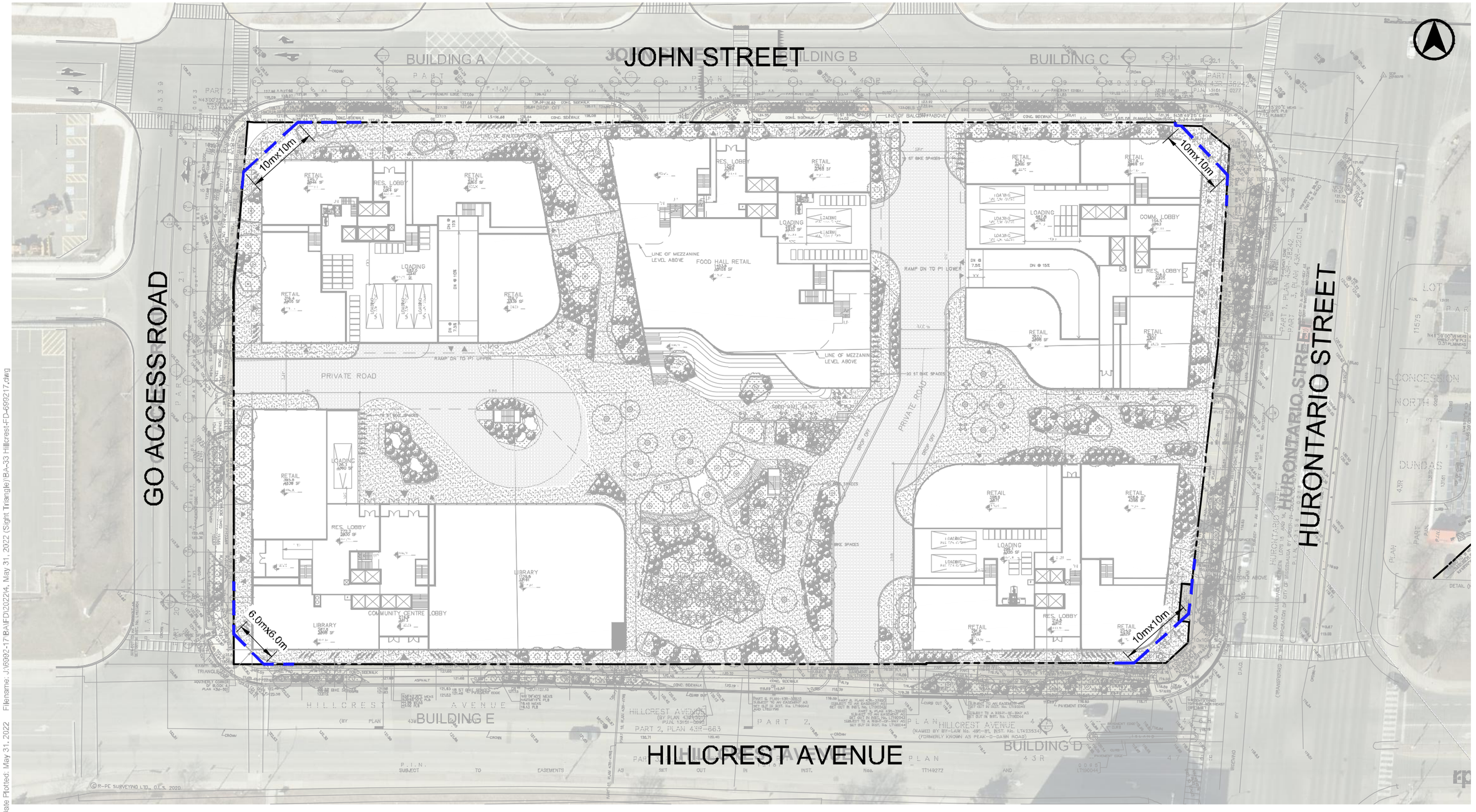
PLAN - GROUND FLOOR

PROJECT	42040	DRAWN	AN
SCALE	1:250	CHECKED	DW
PLOT DATE	2022-05-20 10:03:39 AM		

A201

APPENDIX B: SIGHT TRIANGLES



Date Plotted: May 31, 2022 Filename: J:\6992-17\BA\FD\20224, May 31, 2022 (Sight Triangle)\BA-33 Hillcrest-FD-699217.dwg

BA Group

33 Hillcrest Avenue

Sight Triangle

Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:750 (0, 15, 30m)

Drawing No. FD-01

APPENDIX C: VISITOR PARKING DEMAND DATA

Project: 33 Hillcrest
Project No: 6992-17
Location: Crystal Condos - 55 - 75 Eglinton Ave W
Date: February 11-13 2020

No. of Units

Tower 1:	251
Tower 2:	212
Total:	463
Occupied:	461

Composite Parking Demand Summary

Area	Visitor
	P1
Supply	69
Demand	59

0.13 sps/unit

3 AM Parking Study By Stall

P1 Visitor	
Stall No.	Occupied
1	1
2	1
3	1
4	1
5	1
6	
7	1
8	1
9	1
10	1
11	
12	
13	1

Location: Amber Condos - 5025 - 5023 Four Springs Ave
Date: February 11-13 2020

No. of Units

Tower 1:	234
Tower 2:	211
Total:	445
Occupied:	438

Composite Parking Demand Summary

Area	Visitor
	P1
Supply	67
Demand	29

0.07 sps/unit

3 AM Parking Study By Stall

P1 Visitor	
Stall No.	Occupied
1	1
2	1
3	
4	
5	1
6	
7	
8	
9	
10	1
11	1
12	
13	

3 AM Parking Study By Stall

P1 Visitor	
Stall No.	Occupied
14	1
15	
16	
17	1
18	1
19	1
20	1
21	
22	
23	
24	1
25	1
26	
27	1
28	1
29	1
30	1
31	1
32	1
33	1
34	1
35	1
36	1
37	1
38	1
39	1
40	1
41	1
42	1
43	1
44	1

3 AM Parking Study By Stall

P1 Visitor	
Stall No.	Occupied
14	1
15	
16	
17	
18	
19	1
20	
21	
22	1
23	
24	1
25	1
26	
27	1
28	1
29	1
30	
31	
32	
33	
34	1
35	1
36	1
37	1
38	
39	1
40	1
41	1
42	1
43	1
44	

3 AM Parking Study By Stall

P1 Visitor	
Stall No.	Occupied
45	1
46	1
47	1
48	1
49	
50	1
51	1
52	1
53	1
54	1
55	1
56	1
57	1
58	1
59	1
60	1
61	1
62	1
63	1
64	1
65	1
66	1
67	1
68	1
69	1

3 AM Parking Study By Stall

P1 Visitor	
Stall No.	Occupied
45	1
46	
47	1
48	1
49	
50	1
51	
52	
53	1
54	
55	1
56	
57	
58	
59	
60	1
61	
62	
63	
64	
65	
66	
67	

Project: **33 Hillcrest**
Project No: **6992-17**
Location: **Amber & Crystal Condos**
Date: **Saturday February 22, 2020**

No Of Occupied Units

Amber:	**438**
Crystal:	**461**

Visitor Parking Study

Area	Amber Visitor		Crystal Visitor	
Supply	**67**	**Rate**	**69**	**Rate**
16:00	48	0.11	41	0.09
17:00	46	0.11	40	0.09
18:00	48	0.11	44	0.10
19:00	45	0.10	49	0.11
20:00	46	0.11	40	0.09
21:00	50	0.11	51	0.11
22:00	57	0.13	54	0.12
23:00	53	0.12	50	0.11

Total Units		**Total Units**	
1-bedroom	243	1-bedroom	252
2-bedroom	184	2-bedroom	165
3-bedroom	17	3-bedroom	46
4-bedroom	2	4-bedroom	0
Total	446	Total	463

Project: 33 Hillcrest
Project No: 6992-17
Location: The Craftsman - 1575 Lake Shore West - Mississauga
Date: Tuesday October 26, 2021

Total Units: 292

The Craftsman - Parking Study

Area	Visitors					%	Unit Rate
Type	Surface	Surface HC	P1	P1 HC	Total	Visitor	Visitor
Supply	29	3	63	1	96	-	-
20:00	6	0	4	0	10	0.10	0.03
20:30	6	0	6	0	12	0.13	0.04
21:00	7	0	4	0	11	0.11	0.04
21:30	4	0	2	0	6	0.06	0.02
22:00	3	0	2	0	5	0.05	0.02
22:30	3	0	2	0	5	0.05	0.02
23:00	2	0	3	0	5	0.05	0.02
23:30	1	0	2	0	3	0.03	0.01
0:00	1	0	2	0	3	0.03	0.01
0:30	1	0	2	0	3	0.03	0.01
1:00	1	0	2	0	3	0.03	0.01
1:30	0	0	2	0	2	0.02	0.01
2:00	0	0	2	0	2	0.02	0.01

Location: The Craftsman - 1575 Lake Shore West - Mississauga
Date: Thursday October 28, 2021

Total Units: 292

The Craftsman - Parking Study

Area	Visitors					%	Unit Rate
Type	Surface	Surface HC	P1	P1 HC	Total	Visitor	Visitor
Supply	29	3	63	1	96	-	-
20:00	4	0	4	0	8	0.08	0.03
20:30	7	0	4	0	11	0.11	0.04
21:00	6	0	4	0	10	0.10	0.03
21:30	6	0	4	0	10	0.10	0.03
22:00	5	0	4	0	9	0.09	0.03
22:30	5	0	3	0	8	0.08	0.03
23:00	4	0	5	0	9	0.09	0.03
23:30	3	0	5	0	8	0.08	0.03
0:00	3	0	3	0	6	0.06	0.02
0:30	3	0	3	0	6	0.06	0.02
1:00	2	0	3	0	5	0.05	0.02
1:30	2	0	3	0	5	0.05	0.02
2:00	2	0	3	0	5	0.05	0.02

Units	
1 Bedroom	113
2 Bedroom	172
3 Bedroom	7
Total	**292**

Location: The Craftsman - 1575 Lake Shore West - Mississauga
Date: Tuesday November 2, 2021

Total Units: 292

The Craftsman - Parking Study

Area	Visitors					%	Unit Rate
Type	Surface	Surface HC	P1	P1 HC	Total	Visitor	Visitor
Supply	29	3	63	1	96	-	-
20:00	7	0	4	0	11	0.11	0.04
20:30	7	0	4	0	11	0.11	0.04
21:00	5	0	2	0	7	0.07	0.02
21:30	6	0	4	0	10	0.10	0.03
22:00	5	0	4	0	9	0.09	0.03
22:30	3	0	3	0	6	0.06	0.02
23:00	2	0	4	0	6	0.06	0.02
23:30	2	0	3	0	5	0.05	0.02
0:00	2	0	3	0	5	0.05	0.02
0:30	2	0	3	0	5	0.05	0.02
1:00	2	0	3	0	5	0.05	0.02
1:30	1	0	3	0	4	0.04	0.01
2:00	1	0	3	0	4	0.04	0.01

Location: The Craftsman - 1575 Lake Shore West - Mississauga
Date: Thursday November 4, 2021

Total Units: 292

The Craftsman - Parking Study

Area	Visitors					%	Unit Rate
Type	Surface	Surface HC	P1	P1 HC	Total	Visitor	Visitor
Supply	29	3	63	1	96	-	-
20:00	7	0	6	0	13	0.14	0.04
20:30	5	0	6	0	11	0.11	0.04
21:00	5	0	6	0	11	0.11	0.04
21:30	5	0	6	0	11	0.11	0.04
22:00	5	0	6	0	11	0.11	0.04
22:30	6	0	7	0	13	0.14	0.04
23:00	6	0	6	0	12	0.13	0.04
23:30	3	0	5	0	8	0.08	0.03
0:00	3	0	5	0	8	0.08	0.03
0:30	2	0	5	0	7	0.07	0.02
1:00	1	0	5	0	6	0.06	0.02
1:30	1	0	5	0	6	0.06	0.02
2:00	1	0	5	0	6	0.06	0.02

Project: 33 Hillcrest
Project No: 6992-17
Location: Grand Park Towers, City of Mississauga
No. of Units:
Pinnacle 321
Pinnacle 2 469
Total: 790 (unit breakdown not available)

Date: Monday Feb 10 - Tuesday Feb 11, 2020
Parking Demand Summary

Area	Visitor			Composite		
	P1	P1 - B.F.	Total		5%	10%
Supply	119	3	122	Vis Rate	Vis Rate	Vis Rate
22:00	48	1	49	0.06	0.11	0.16
22:30	44	1	45	0.06	0.11	0.16
23:00	43	1	44	0.06	0.11	0.16
23:30	38	1	39	0.05	0.10	0.15
0:00	36	1	37	0.05	0.10	0.15
0:30	33	1	34	0.04	0.09	0.14
1:00	33	1	34	0.04	0.09	0.14
1:30	32	1	33	0.04	0.09	0.14
2:00	31	1	32	0.04	0.09	0.14

Date: Thursday Feb 20 - Friday Feb 21, 2020
Parking Demand Summary

Area	Visitor			Composite		
	P1	P1 - B.F.	Total		5%	10%
Supply	119	3	122	Vis Rate	Vis Rate	Vis Rate
22:00	35	0	35	0.04	0.09	0.14
22:30	36	0	36	0.05	0.10	0.15
23:00	34	0	34	0.04	0.09	0.14
23:30	33	0	33	0.04	0.09	0.14
0:00	30	0	30	0.04	0.09	0.14
0:30	33	0	33	0.04	0.09	0.14
1:00	30	0	30	0.04	0.09	0.14
1:30	28	0	28	0.04	0.09	0.14
2:00	26	0	26	0.03	0.08	0.13

Date: Sunday Feb 23 - Monday Feb 24, 2020
Parking Demand Summary

Area	Visitor			Composite		
	P1	P1 - B.F.	Total		5%	10%
Supply	119	3	122	Vis Rate	Vis Rate	Vis Rate
22:00	44	1	45	0.06	0.11	0.16
22:30	38	1	39	0.05	0.10	0.15
23:00	25	1	26	0.03	0.08	0.13
23:30	24	1	25	0.03	0.08	0.13
0:00	24	1	25	0.03	0.08	0.13
0:30	24	1	25	0.03	0.08	0.13
1:00	27	1	28	0.04	0.09	0.14
1:30	26	1	27	0.03	0.08	0.13
2:00	26	1	27	0.03	0.08	0.13

Project: 33 Hillcrest
Project No: 6992-17
Location: Parkside Village, City of Mississauga
No. of Units:
PSV 1: 590
PSV 2: 418
Total: 1008 (unit breakdown not available)

Date: Tuesday Feb 25 - Wednesday Feb 26, 2020
Parking Demand Summary

Area	Visitor		Composite		
	P1	Total		5%	10%
Supply	178	178	Vis Rate	Vis Rate	Vis Rate
22:00	79	79	0.08	0.13	0.18
22:30	75	75	0.07	0.12	0.17
23:00	75	75	0.07	0.12	0.17
23:30	75	75	0.07	0.12	0.17
0:00	76	76	0.08	0.13	0.18
0:30	83	83	0.08	0.13	0.18
1:00	84	84	0.08	0.13	0.18
1:30	82	82	0.08	0.13	0.18
2:00	80	80	0.08	0.13	0.18

Date: Wednesday Feb 26 - Thursday Feb 27, 2020
Parking Demand Summary

Area	Visitor		Composite		
	P1	Total		5%	10%
Supply	178	178	Vis Rate	Vis Rate	Vis Rate
22:00	94	94	0.09	0.14	0.19
22:30	88	88	0.09	0.14	0.19
23:00	86	86	0.09	0.14	0.19
23:30	84	84	0.08	0.13	0.18
0:00	83	83	0.08	0.13	0.18
0:30	86	86	0.09	0.14	0.19
1:00	84	84	0.08	0.13	0.18
1:30	87	87	0.09	0.14	0.19
2:00	89	89	0.09	0.14	0.19

Date: Thursday Feb 27 - Friday Feb 28, 2020
Parking Demand Summary

Area	Visitor		Composite		
	P1	Total		5%	10%
Supply	178	178	Vis Rate	Vis Rate	Vis Rate
20:00	90	90	0.09	0.14	0.19
20:30	92	92	0.09	0.14	0.19
21:00	90	90	0.09	0.14	0.19
21:30	88	88	0.09	0.14	0.19
22:00	92	92	0.09	0.14	0.19
22:30	79	79	0.08	0.13	0.18
23:00	81	81	0.08	0.13	0.18
23:30	84	84	0.08	0.13	0.18
0:00	83	83	0.08	0.13	0.18
0:30	85	85	0.08	0.13	0.18
1:00	84	84	0.08	0.13	0.18
1:30	83	83	0.08	0.13	0.18
2:00	84	84	0.08	0.13	0.18
2:30	84	84	0.08	0.13	0.18
3:00	83	83	0.08	0.13	0.18

APPENDIX D: COMMUNITY PARKING DEMAND DATA

Project No.: 6509-27
Project Name: Burnhamthorpe Community Centre Expansion
Study Location: Burnhamthorpe Community Centre
Municipality: City of Mississauga
Study Date: Tuesday November 26, 2019
Study Time: 6:00 - 24:00

Parking Summary

Area	1	2	3	4	5	6	On Street	Total	
Supply	**11**	**36**	**54**	**22**	**46**	**11**	**-**	**180**	
6:00	0	0	2	0	0	2	0	4	0.02
7:00	0	0	2	0	0	7	0	9	0.05
8:00	0	0	2	0	5	7	0	14	0.08
9:00	1	8	4	0	8	6	1	28	0.16
10:00	**10**	**31**	**39**	**11**	**22**	**7**	**15**	**135**	**0.75**
11:00	11	27	37	11	24	7	16	133	0.74
12:00	9	22	30	8	23	7	15	114	0.63
13:00	8	15	11	0	13	7	4	58	0.32
14:00	11	22	14	0	16	7	5	75	0.42
15:00	10	24	13	2	13	8	2	72	0.40
16:00	1	5	7	6	8	3	7	37	0.21
17:00	3	5	3	1	7	2	10	31	0.17
18:00	6	19	10	1	13	3	7	59	0.33
19:00	8	23	33	12	21	2	7	106	0.59
20:00	5	24	30	13	21	2	9	104	0.58
21:00	7	27	26	6	25	2	6	99	0.55
22:00	2	12	14	5	10	2	5	50	0.28
23:00	1	2	2	5	2	2	0	14	0.08
0:00	0	0	1	0	2	0	0	3	0.02

Project No.: 6509-27
Project Name: Burnhamthorpe Community Centre Expansion
Study Location: Burnhamthorpe Community Centre
Municipality: City of Mississauga
Study Date: Wednesday November 27, 2019
Study Time: 6:00 - 24:00

Parking Summary

Area	1	2	3	4	5	6	On Street	Total	
Supply	**11**	**36**	**54**	**22**	**46**	**11**	**-**	**180**	
6:00	0	0	0	0	0	0	0	0	0.00
7:00	0	0	0	0	2	7	0	9	0.05
8:00	0	0	0	0	7	7	0	14	0.08
9:00	0	1	2	0	9	7	0	19	0.11
10:00	1	7	5	2	11	7	0	33	0.18
11:00	2	6	4	1	13	7	2	35	0.19
12:00	0	3	4	2	12	7	0	28	0.16
13:00	1	10	5	1	14	6	2	39	0.22
14:00	1	11	6	2	17	6	2	45	0.25
15:00	2	4	11	2	13	7	0	39	0.22
16:00	7	5	3	0	10	3	0	28	0.16
17:00	5	5	8	2	9	1	0	30	0.17
18:00	4	5	9	1	11	0	5	35	0.19
19:00	8	20	32	8	13	2	7	90	0.50
20:00	8	26	25	8	18	2	7	94	0.52
21:00	**8**	**32**	**39**	**13**	**17**	**2**	**8**	**119**	**0.66**
22:00	4	24	20	7	10	1	7	73	0.41
23:00	1	7	5	3	4	1	5	26	0.14
0:00	0	5	2	0	0	1	0	8	0.04

Project No.: 6509-27
Project Name: Burnhamthorpe Community Centre Expansion
Study Location: Burnhamthorpe Community Centre
Municipality: City of Mississauga
Study Date: Wednesday November 27, 2019
Study Time: 6:00 - 24:00

On Street Parking Study

Vehicle No.	Arrival Time	Departure Time	Duration of Stay (hh:mm)	Vehicle Type	C1 Type	C2 Type	B Type	A Type	G Type	Vehicle Classification	Vehicle Description	Delivery Destination	Parking Location
1	18:54	20:32	1:38	4	1					Type C1	White Van	Rec Centre	On Street
2	19:28	21:17	1:49	1	1					Type C1	Honda	Rec Centre	On Street
1	10:20	11:35	1:15	1	1					Type C1	Chrysler	Rec Centre	On Street
2	10:48	11:05	0:17	1	1					Type C1	Toyota	Rec Centre	On Street
3	12:45	14:54	2:09	1	1					Type C1	Ford Focus	Rec Centre	On Street
4	12:48	14:54	2:06	1	1					Type C1	White Honda	Rec Centre	On Street
5	14:53	14:55	0:02	1	1					Type C1	Red Mazda	Rec Centre	On Street
6	16:51	16:58	0:07	1	1					Type C1	Ford Flex	Rec Centre	On Street
7	16:54	16:55	0:01	1	1					Type C1	Honda CRV	Rec Centre	On Street
8	17:04	17:11	0:07	1	1					Type C1	Black Jeep	Rec Centre	On Street
9	17:04	18:37	1:33	1	1					Type C1	Silver Vibe	Rec Centre	On Street
10	17:10	17:26	0:16	1	1					Type C1	Black Buick	Rec Centre	On Street
11	17:34	18:07	0:33	1	1					Type C1	Black Acura	Rec Centre	On Street
12	17:48	18:42	0:54	1	1					Type C1	White Acura	Rec Centre	On Street
13	17:53	19:31	1:38	1	1					Type C1	Black Volvo	Rec Centre	On Street
14	17:56	19:31	1:35	1	1					Type C1	Black Tahoe	Rec Centre	On Street
15	18:01	19:18	1:17	1	1					Type C1	Grey Rogue	Rec Centre	On Street
16	18:06	18:39	0:33	1	1					Type C1	Black Buick	Rec Centre	On Street
17	18:14	18:30	0:16	1	1					Type C1	Black Jeep	Rec Centre	On Street
18	18:26	18:43	0:17	1	1					Type C1	Grey Civic	Rec Centre	On Street
19	18:38	19:39	1:01	1	1					Type C1	Grey VW	Rec Centre	On Street
20	18:27	18:40	0:13	1	1					Type C1	Red Car	Rec Centre	On Street
21	18:57	21:10	2:13	1	1					Type C1	White Civic	Rec Centre	On Street
22	18:59	20:07	1:08	1	1					Type C1	Black Juke	Rec Centre	On Street
23	19:07	20:30	1:23	1	1					Type C1	White Jeep	Rec Centre	On Street
24	19:41	19:55	0:14	1	1					Type C1	White Civic	Rec Centre	On Street
25	19:53	22:16	2:23	1	1					Type C1	Black Focus	Rec Centre	On Street
26	19:56	21:15	1:19	1	1					Type C1	Blue Subaru	Rec Centre	On Street
27	20:00	21:53	1:53	1	1					Type C1	Black VW	Rec Centre	On Street
28	20:04	21:31	1:27	1	1					Type C1	White Lexus	Rec Centre	On Street
29	20:11	21:39	1:28	1	1					Type C1	Black Acura	Rec Centre	On Street
30	20:23	21:54	1:31	1	1					Type C1	Black Accord	Rec Centre	On Street
31	20:52	20:59	0:07	1	1					Type C1	Black Taurus	Rec Centre	On Street
32	21:11	23:20	2:09	1	1					Type C1	Black Acura	Rec Centre	On Street
33	21:17	23:25	2:08	1	1					Type C1	Grey Jaguar	Rec Centre	On Street
34	21:19	23:21	2:02	1	1					Type C1	White Audi	Rec Centre	On Street
35	21:20	22:55	1:35	1	1					Type C1	Black Car	Rec Centre	On Street
37	21:33	23:12	1:39	1	1					Type C1	Grey Jeep	Rec Centre	On Street
38	21:41	23:35	1:54	1	1					Type C1	White Discovery	Rec Centre	On Street

		Total	C1 Type	C2 Type	B Type	A Type	G Type
Total Vehicles		**39**	**39**	**0**	**0**	**0**	**0**
Vehicle Type %		**100%**	**100%**	**0%**	**0%**	**0%**	**0%**
	(hh:mm)						
Minimum Duration	**0:01**		0:01	-	-	-	-
Average Duration	**1:11**		1:11	-	-	-	-
85th Percentile	**2:03**		2:03	-	-	-	-
95th Percentile	**2:09**		2:09	-	-	-	-
Maximum Duration	**2:23**		2:23	-	-	-	-

Vehicle Types as they relate to City of Toronto Loading Spaces	
Type C1	Passenger Car, Van, Pick-up (and modified pick-up truck), Security Van
Type C2	Cube Van, Step Van
Type B	Single Unit Truck
Type A	Tractor Trailer
Type G	Refuse Truck
Light Vehicles	Types C1, C2
Heavy Vehicles	Types B, A, G

Project No.: 6992-17
Project Name: 33 Hillcrest
Study Location: Burnhamthorpe Community Centre
Municipality: City of Mississauga
Study Date: Saturday November 30, 2019
Study Time: 6:00 - 24:00

Parking Summary

Area	1	2	3	4	5	6	On Street	Total	
Supply	**11**	**36**	**54**	**22**	**46**	**11**	**-**	**180**	
6:00	0	0	1	0	0	2	0	3	0.02
7:00	0	0	1	0	7	3	0	11	0.06
8:00	0	3	1	0	11	3	2	20	0.11
9:00	6	6	2	1	13	3	4	35	0.19
10:00	8	28	20	6	23	3	8	96	0.53
11:00	6	28	22	9	18	3	8	94	0.52
12:00	9	27	23	8	23	3	7	100	0.56
13:00	**9**	**31**	**32**	**11**	**26**	**3**	**8**	**120**	**0.67**
14:00	5	7	8	4	17	3	1	45	0.25
15:00	3	5	8	1	14	3	0	34	0.19
16:00	2	10	3	1	10	3	0	29	0.16
17:00	2	3	12	5	6	2	1	31	0.17
18:00	8	22	11	1	4	2	1	49	0.27
19:00	11	33	23	5	17	2	1	92	0.51
20:00	10	32	25	7	18	2	1	95	0.53
21:00	7	24	20	6	12	2	1	72	0.40
22:00	6	18	15	2	8	1	1	51	0.28
23:00	4	14	10	0	5	1	0	34	0.19
0:00	0	4	3	0	2	1	0	10	0.06

Project No.: 6509-27
Project Name: Burnhamthorpe Community Centre Expansion
Study Location: Burnhamthorpe Community Centre
Municipality: City of Mississauga
Study Date: Saturday November 30, 2019
Study Time: 6:00 - 24:00

On Street Parking Study

Vehicle No.	Arrival Time	Departure Time	Duration of Stay (hh:mm)	Vehicle Type	C1 Type	C2 Type	B Type	A Type	G Type	Vehicle Classification	Vehicle Description	Delivery Destination	Parking Location
1	9:56	13:17	3:21	1	1					Type C1	Blue Toyota	Rec Centre	On Street
2	12:07	13:10	1:03	3	1					Type C1	Red VW	Rec Centre	On Street
3	12:45	13:24	0:39	3	1					Type C1	Blue VW	Rec Centre	On Street
1	7:10	9:15	2:05	1	1					Type C1	Jeep	Rec Centre	On Street
2	7:15	8:05	0:50	1	1					Type C1	White Jaguar	Rec Centre	On Street
3	8:46	9:10	0:24	1	1					Type C1	Brown BMW	Rec Centre	On Street
4	8:50	9:45	0:55	1	1					Type C1	White Lexus	Rec Centre	On Street
5	8:50	9:34	0:44	1	1					Type C1	Grey Toyota	Rec Centre	On Street
6	9:10	9:44	0:34	1	1					Type C1	White Subaru	Rec Centre	On Street
7	9:49	10:00	0:11	1	1					Type C1	Black Honda	Rec Centre	On Street
8	9:50	10:10	0:20	1	1					Type C1	Green Lexus	Rec Centre	On Street
9	9:55	10:37	0:42	1	1					Type C1	Blue Chevrolet	Rec Centre	On Street
10	9:56	13:08	3:12	1	1					Type C1	Grey Audi	Rec Centre	On Street
11	9:53	10:05	0:12	1	1					Type C1	Black Dodge	Rec Centre	On Street
12	9:53	10:15	0:22	1	1					Type C1	Black Nissan	Rec Centre	On Street
13	9:59	13:06	3:07	1	1					Type C1	Green Ford	Rec Centre	On Street
14	10:00	10:05	0:05	1	1					Type C1	White Honda	Rec Centre	On Street
15	10:01	10:10	0:09	1	1					Type C1	Red Volvo	Rec Centre	On Street
17	10:05	10:12	0:07	1	1					Type C1	Grey Toyota	Rec Centre	On Street
18	10:16	11:25	1:09	1	1					Type C1	Black Chevy	Rec Centre	On Street
19	10:21	11:00	0:39	1	1					Type C1	Black Honda	Rec Centre	On Street
20	10:52	11:52	1:00	1	1					Type C1	Hyundai	Rec Centre	On Street
21	10:53	10:55	0:02	1	1					Type C1	Honda	Rec Centre	On Street
22	10:54	12:47	1:53	1	1					Type C1	Green SUV	Rec Centre	On Street
23	10:55	11:01	0:06	1	1					Type C1	Red Honda	Rec Centre	On Street
24	11:32	12:20	0:48	1	1					Type C1	Dodge Van	Rec Centre	On Street
25	11:35	13:50	2:15	1	1					Type C1	White SUV	Rec Centre	On Street
26	11:55	12:49	0:54	1	1					Type C1	Black Honda	Rec Centre	On Street
27	12:00	12:05	0:05	1	1					Type C1	Purple Honda	Rec Centre	On Street
28	12:06	12:56	0:50	1	1					Type C1	Black Toyota	Rec Centre	On Street
29	12:26	13:15	0:49	1	1					Type C1	Red Volvo	Rec Centre	On Street
30	12:30	12:33	0:03	1	1					Type C1	Black SUV	Rec Centre	On Street
31	12:43	14:00	1:17	1	1					Type C1	Black SUV	Rec Centre	On Street
32	13:01	13:16	0:15	1	1					Type C1	Purple VW	Rec Centre	On Street
33	16:57	17:28	0:31	1	1					Type C1	Ford	Rec Centre	On Street
34	17:00	19:26	2:26	1	1					Type C1	Honda	Rec Centre	On Street

		Total	C1 Type	C2 Type	B Type	A Type	G Type
Total Vehicles		**36**	**36**	**0**	**0**	**0**	**0**
Vehicle Type %		**100%**	**100%**	**0%**	**0%**	**0%**	**0%**
	(hh:mm)						
Minimum Duration	**0:02**		0:02	-	-	-	-
Average Duration	**0:56**		0:56	-	-	-	-
85th Percentile	**2:02**		2:02	-	-	-	-
95th Percentile	**3:08**		3:08	-	-	-	-
Maximum Duration	**3:21**		3:21	-	-	-	-

Vehicle Types as they relate to City of Toronto Loading Spaces	
Type C1	Passenger Car, Van, Pick-up (and modified pick-up truck), Security Van
Type C2	Cube Van, Step Van
Type B	Single Unit Truck
Type A	Tractor Trailer
Type G	Refuse Truck
Light Vehicles	Types C1, C2
Heavy Vehicles	Types B, A, G

Project: **33 Hillcrest**
Project No: **6992-17**
Location: **Huron Park Community Centre**
Date: **Saturday December 7, 2019**

Parking Summary

Area	A	A HC	B	B HC	C	C HC	D	E	Total
Supply	**219**	**6**	**23**	**2**	**81**	**3**	**4**	**12**	**350**
6:00	7	0	0	0	0	0	1	1	9
7:00	6	0	0	0	0	0	1	1	8
8:00	22	0	0	0	0	0	1	3	26
9:00	57	1	0	0	0	0	1	3	62
10:00	119	4	0	0	2	0	0	3	128
11:00	103	6	1	0	1	0	0	4	115
12:00	75	1	0	0	2	0	0	5	83
13:00	85	4	0	0	1	0	0	5	95
14:00	65	5	0	0	1	0	0	5	76
15:00	76	4	0	0	0	0	1	4	85
16:00	78	2	0	0	0	0	1	4	85
17:00	**122**	**3**	**1**	**0**	**0**	**0**	**1**	**3**	**130**
18:00	93	1	0	0	0	0	1	4	99
19:00	72	0	1	0	1	0	1	4	79
20:00	36	0	0	0	0	0	1	4	41
21:00	25	0	0	0	0	0	1	3	29
22:00	30	0	0	0	1	0	1	3	35
23:00	27	0	0	0	0	0	1	3	31
0:00	23	0	0	0	0	0	1	3	27

Project: **33 Hillcrest**
Project No: **6992-17**
Location: **Huron Park Community Centre**
Date: **Tuesday December 10, 2019**

Parking Summary

Area	A	A HC	B	B HC	C	C HC	D	E	Total
Supply	**219**	**6**	**23**	**2**	**81**	**3**	**4**	**12**	**350**
6:00	2	0	0	0	0	0	0	2	4
7:00	13	0	0	0	0	0	0	2	15
8:00	12	0	0	0	0	0	2	4	18
9:00	24	3	2	0	2	0	2	4	37
10:00	35	4	1	0	1	0	2	5	48
11:00	43	4	2	0	1	0	2	5	57
12:00	54	6	1	0	1	0	2	4	68
13:00	53	5	1	0	2	0	2	5	68
14:00	54	6	9	0	0	0	2	6	77
15:00	46	6	3	0	0	0	2	6	63
16:00	23	4	2	0	0	0	3	6	38
17:00	57	3	0	0	1	0	6	1	68
18:00	82	1	0	0	1	0	1	2	87
19:00	**101**	**1**	**0**	**0**	**1**	**0**	**2**	**1**	**106**
20:00	42	0	0	0	0	0	2	1	45
21:00	41	0	0	0	1	0	1	1	44
22:00	24	0	0	0	0	0	1	1	26
23:00	1	0	0	0	0	0	1	1	3
0:00	1	0	1	0	0	0	1	1	4

Meadowvale Community Centre & Library
Parking Tracking Log
June 2018

Date	Time	Total # of Vehicles including fringe	Number of Fringe Vehicles
Saturday June 16th	6am	3	2
Sunday June 17th	6am	2	1
Monday June 18th	9:40am	126	16
Monday June 18th	12pm	146	23
Monday June 18th	4pm	114	19
Tuesday June 19th	5:10am	3	2
Tuesday June 19th	11:30am	215	44
Wednesday June 20th	10:40am	160	28
Wednesday June 20th	1:25pm	169	28

The above noted hours of operation tracked are non-peak, although we do have Monday to Friday special events that take place occasionally i.e. senior's fair, customer service appreciation day, large private rentals etc. that do place stress on available parking.

Peak hours are during programs;

- Monday to Friday – 5pm to 9pm
- Saturday & Sunday – all day

Fringe parking #'s noted above are car count from the back row along the apartment strip and the strip facing Glen Erin Dr. only.

Estimated duration of average stay;

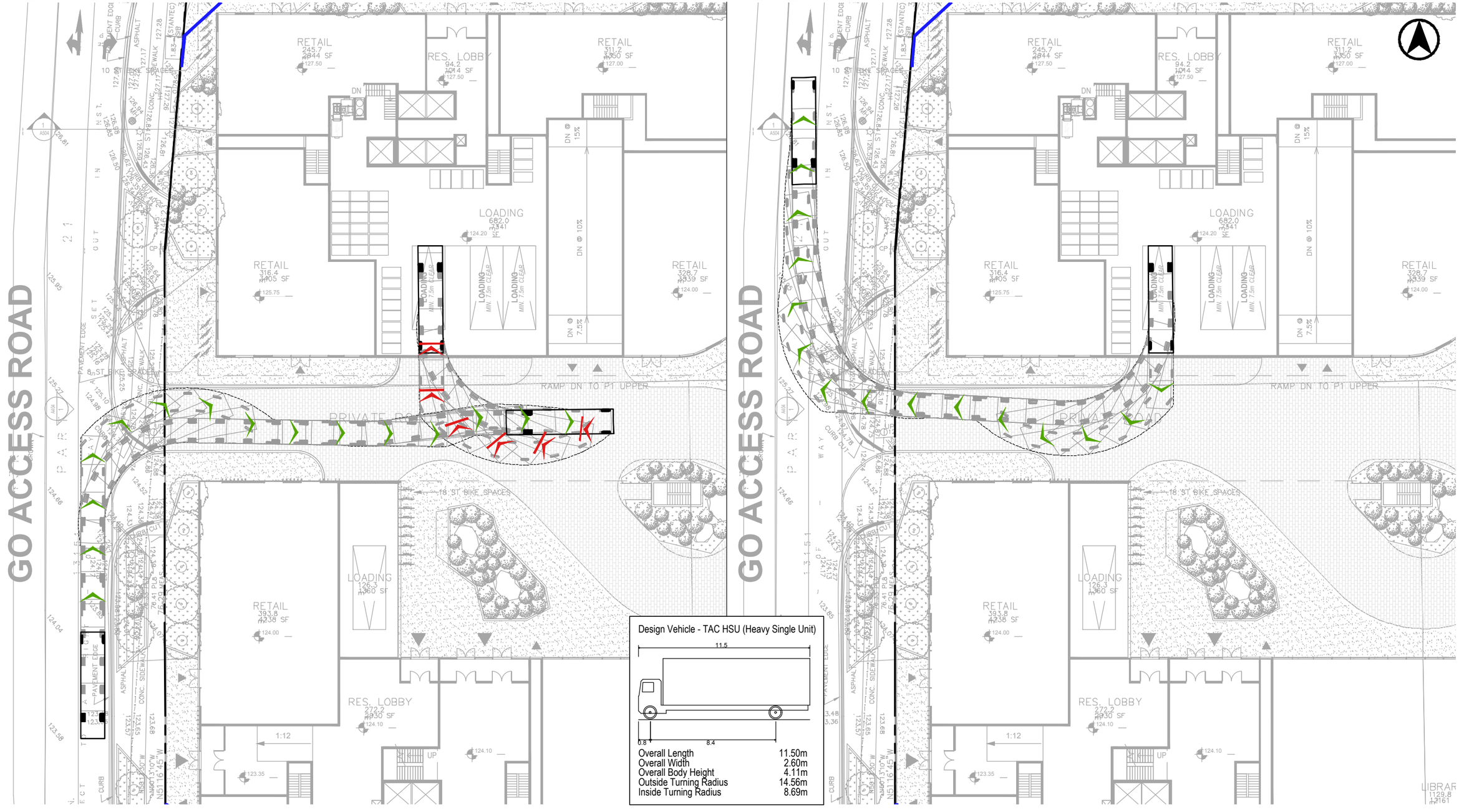
- Program & membership visits approximately 1.5 to 2 hours in length.
- Seniors' Groups approximately 3 hours per visit.
- Private rentals from 3 to 7 hours per visit.
- Library visits can range from 1 hour to 3 hours.

We would estimate the average stay as 2.5 hours per visit.

APPENDIX E: VEHICLE MANOEUVRING DIAGRAMS

INBOUND

OUTBOUND



Design Vehicle - TAC HSU (Heavy Single Unit)

Overall Length	11.50m
Overall Width	2.60m
Overall Body Height	4.11m
Outside Turning Radius	14.56m
Inside Turning Radius	8.69m

BA Group

33 Hillcrest Avenue

Block 'A'

Vehicle Manoeuvring Diagram

Heavy Single Unit Truck

Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

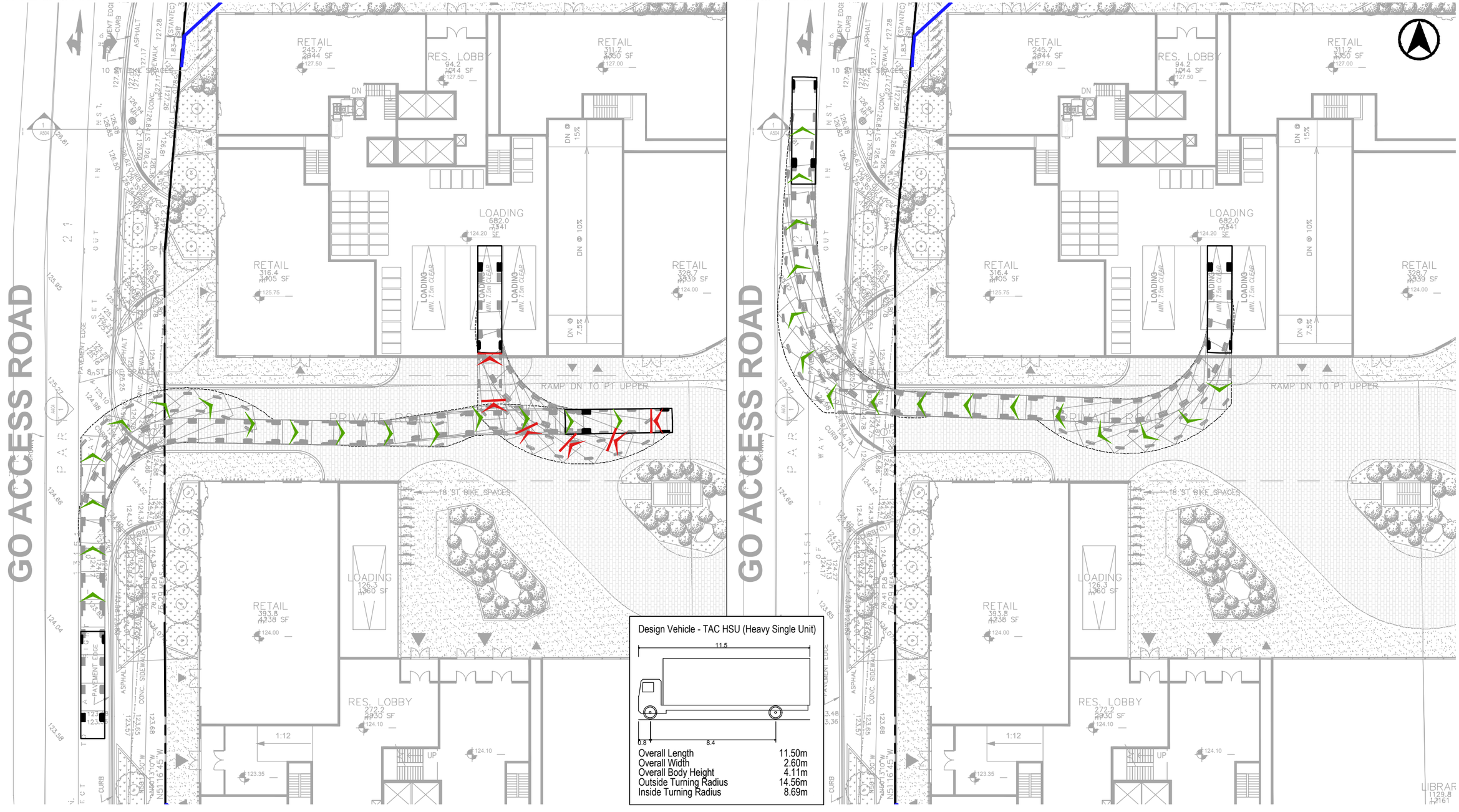
Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-01

Date Plotted: May 31, 2022 Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

INBOUND

OUTBOUND



Design Vehicle - TAC HSU (Heavy Single Unit)

Overall Length	11.50m
Overall Width	2.60m
Overall Body Height	4.11m
Outside Turning Radius	14.56m
Inside Turning Radius	8.69m

Date Plotted: May 31, 2022 Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-692217.dwg

BA Group

33 Hillcrest Avenue

Block 'A'

Vehicle Manoeuvring Diagram

Heavy Single Unit Truck

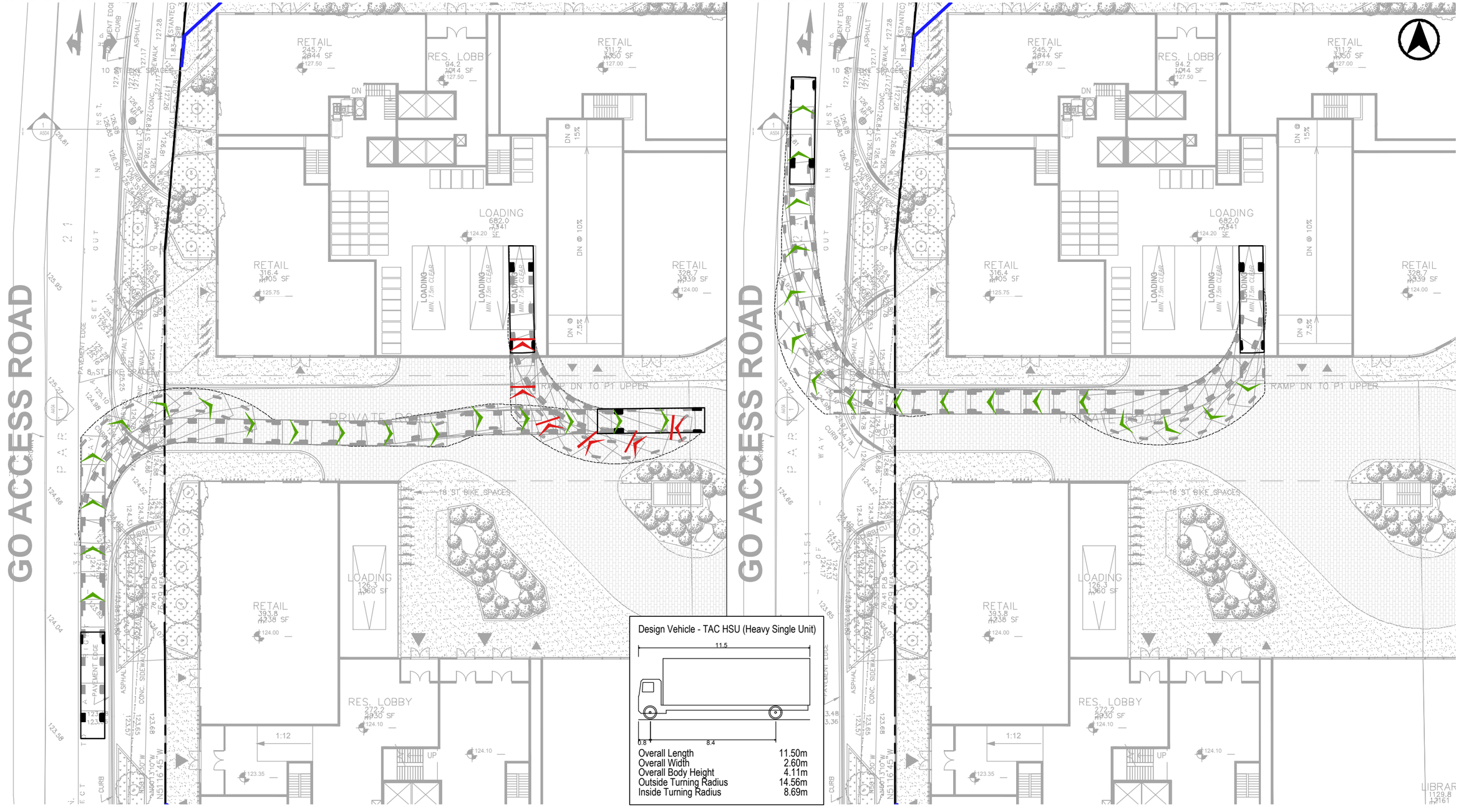
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-02

INBOUND

OUTBOUND



Design Vehicle - TAC HSU (Heavy Single Unit)

Overall Length	11.50m
Overall Width	2.60m
Overall Body Height	4.11m
Outside Turning Radius	14.56m
Inside Turning Radius	8.69m

Date Plotted: May 31, 2022 Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

BA Group

33 Hillcrest Avenue

Block 'A'

Vehicle Manoeuvring Diagram

Heavy Single Unit Truck

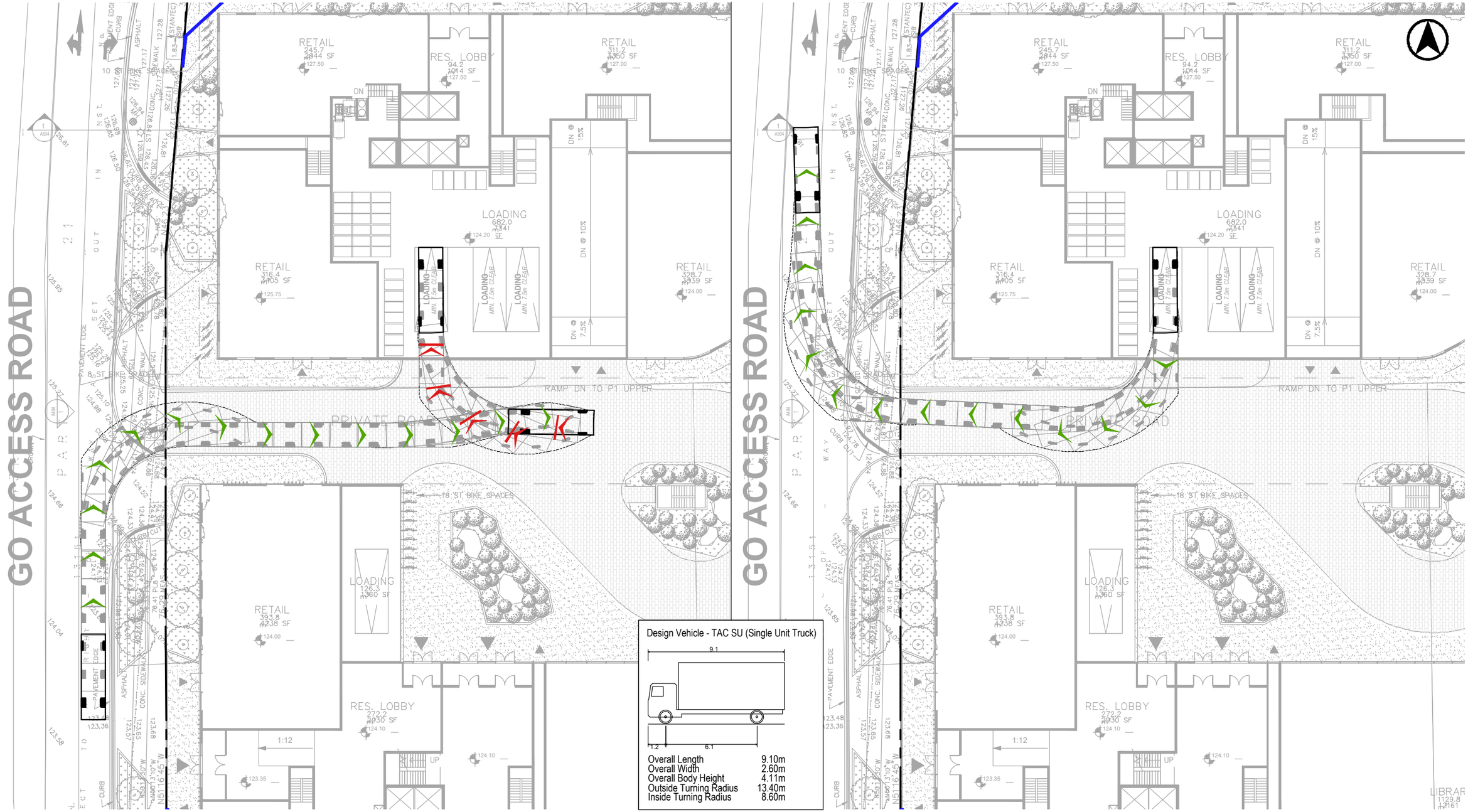
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-03

INBOUND

OUTBOUND



Date Plotted: May 31, 2022 Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

BA Group

33 Hillcrest Avenue

Block 'A'

Vehicle Manoeuvring Diagram

Single Unit Truck

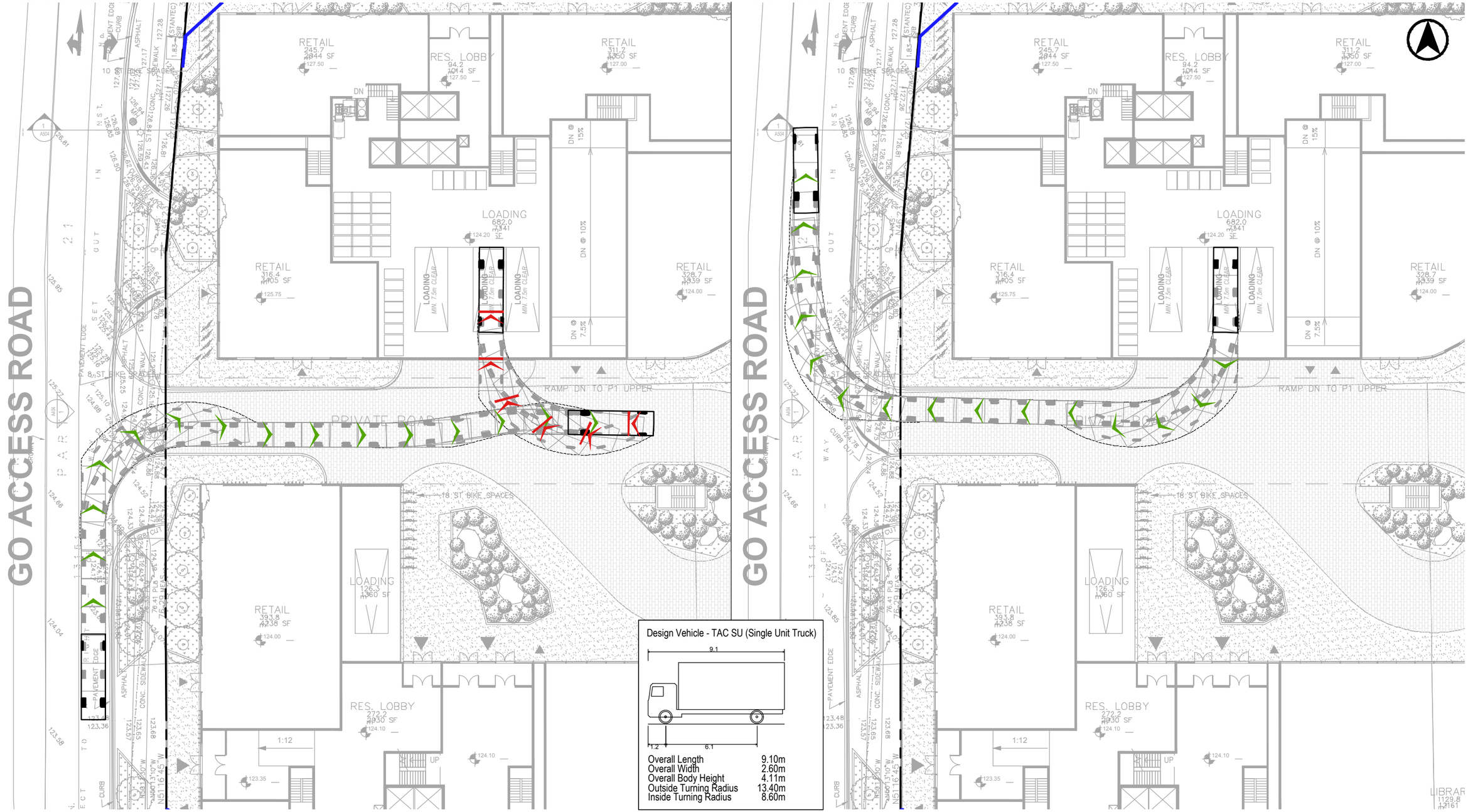
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-04

INBOUND

OUTBOUND



Date Plotted: May 31, 2022 Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

BA Group

33 Hillcrest Avenue

Block 'A'

Vehicle Manoeuvring Diagram

Single Unit Truck

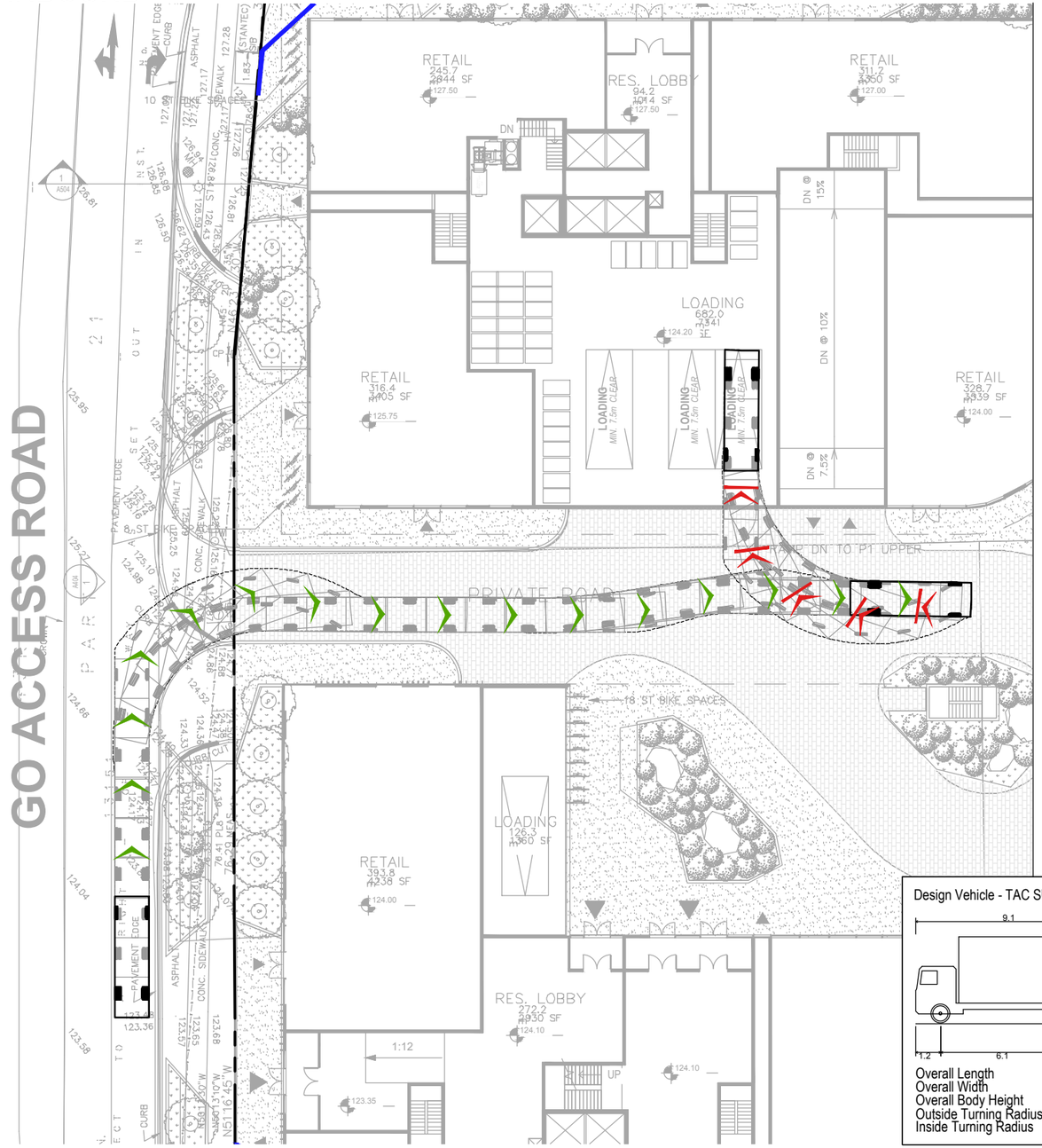
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-05

INBOUND

OUTBOUND



Date Plotted: May 31, 2022 Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

BA Group

33 Hillcrest Avenue

Block 'A'

Vehicle Manoeuvring Diagram

Single Unit Truck

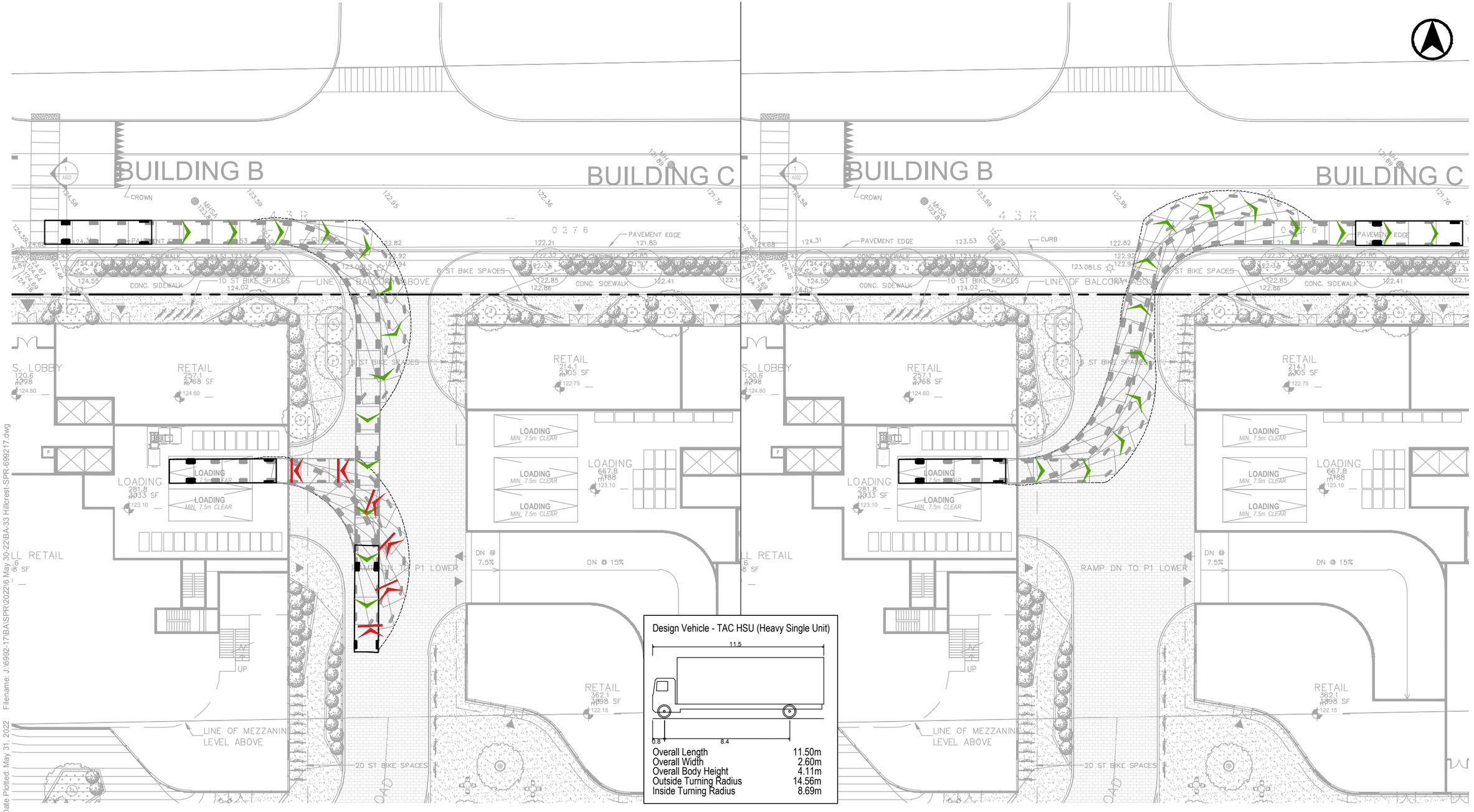
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-06

INBOUND

OUTBOUND



Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

Date Plotted: May 31, 2022

BA Group

33 Hillcrest Avenue

Block 'B'

Vehicle Manoeuvring Diagram

Heavy Single Unit Truck

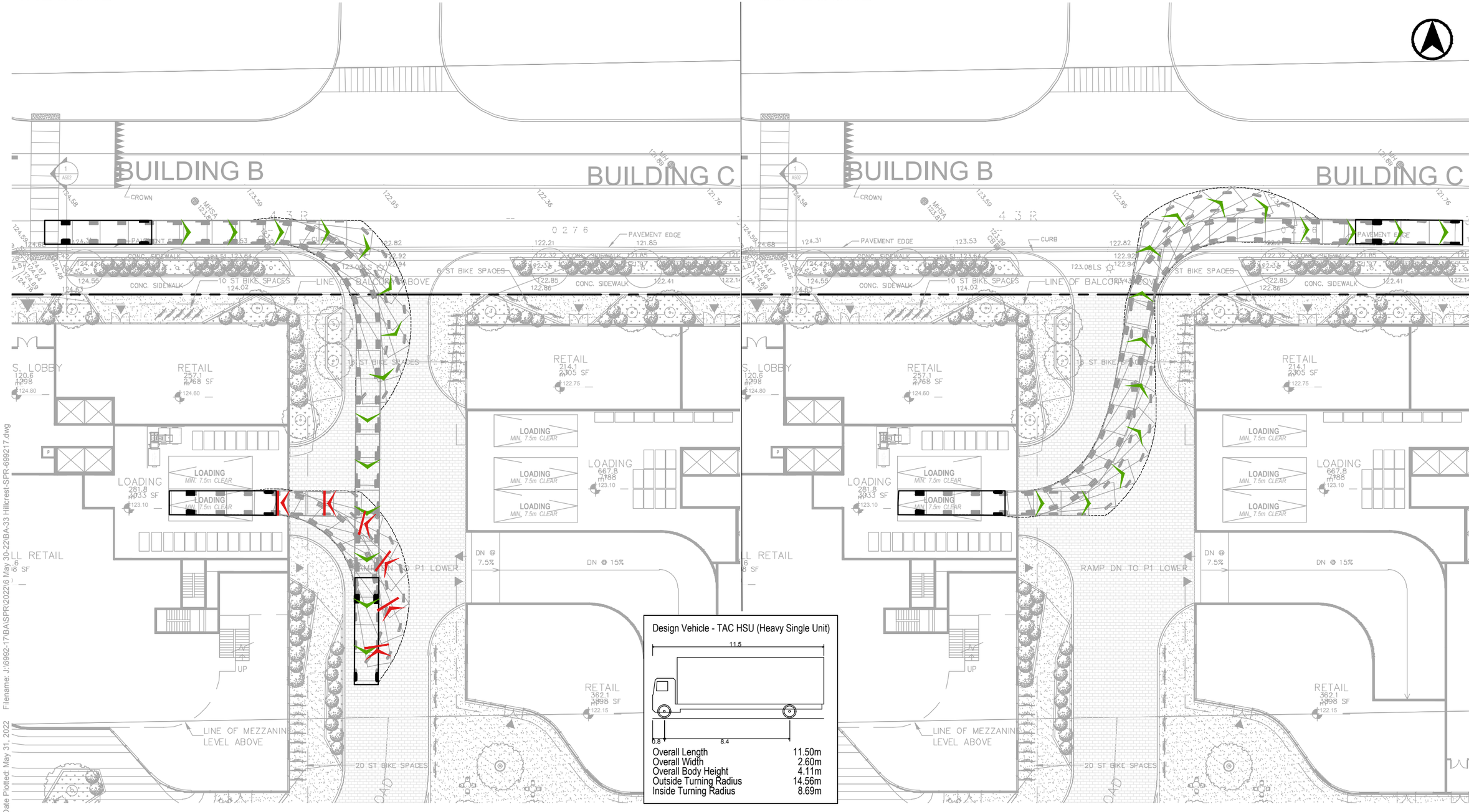
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-07

INBOUND

OUTBOUND



Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

Date Plotted: May 31, 2022

BA Group

33 Hillcrest Avenue

Block 'B'

Vehicle Manoeuvring Diagram

Heavy Single Unit Truck

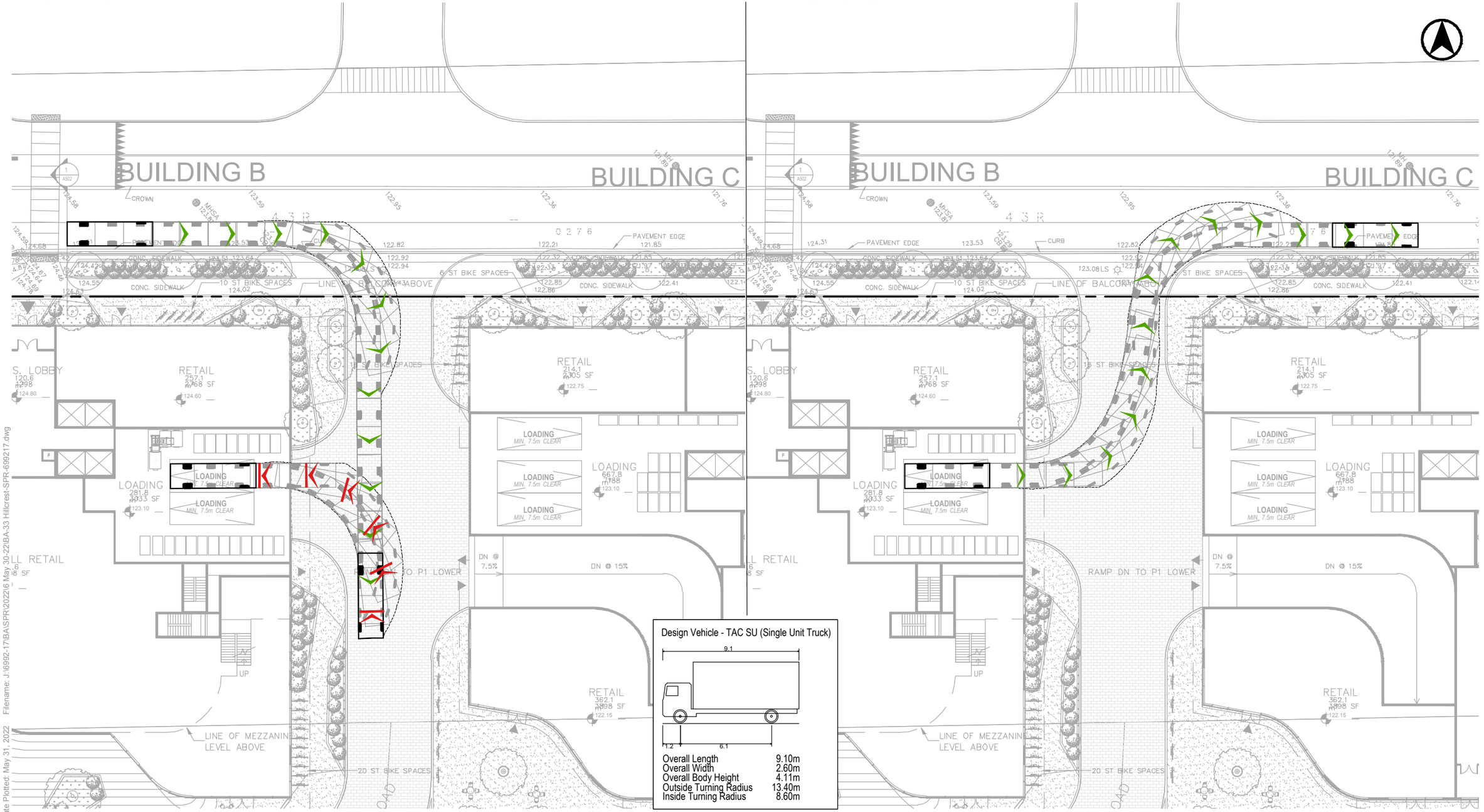
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-08

INBOUND

OUTBOUND



Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

Date Plotted: May 31, 2022

BA Group

33 Hillcrest Avenue

Block 'B'

Vehicle Manoeuvring Diagram

Single Unit Truck

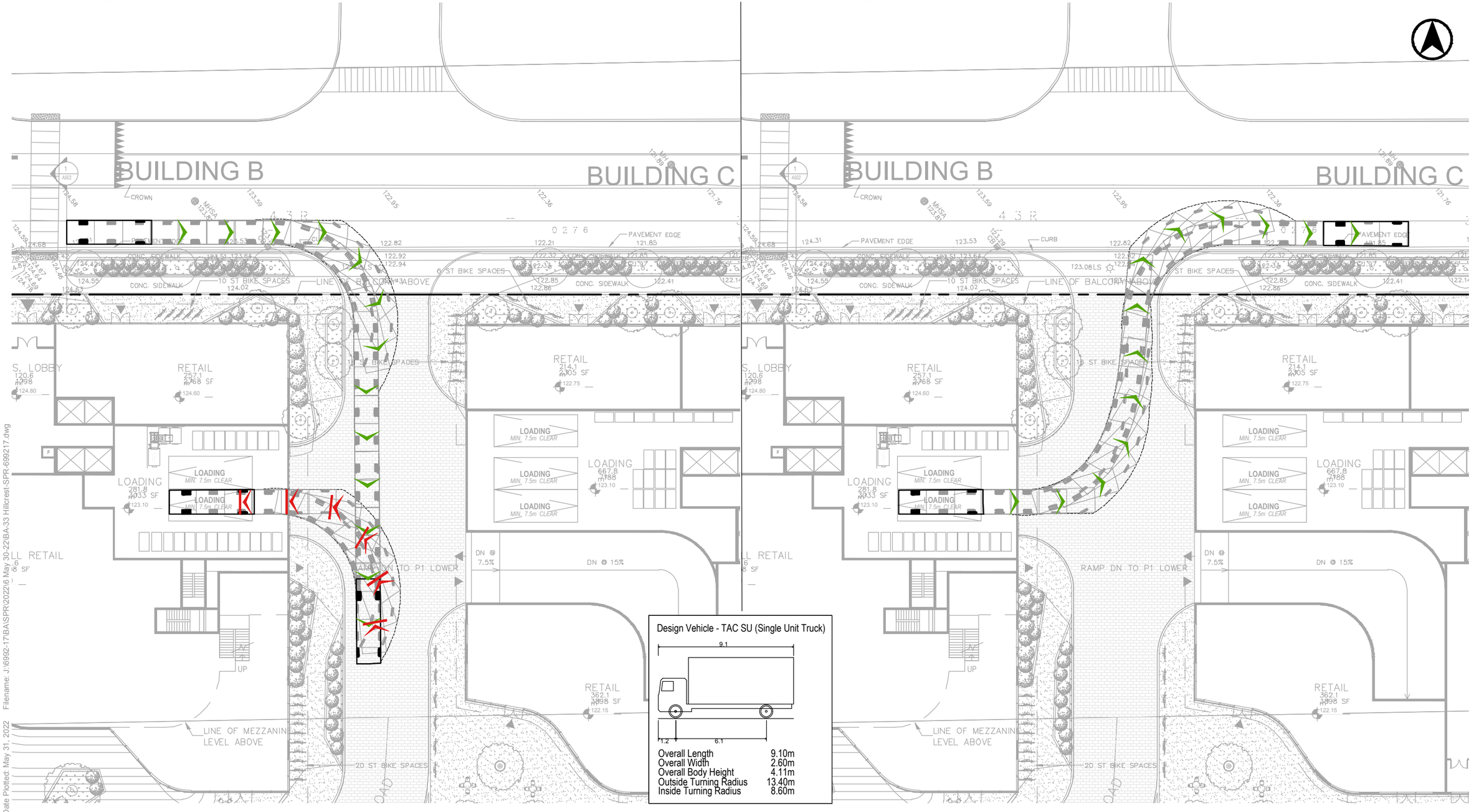
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-09

INBOUND

OUTBOUND



Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

Date Plotted: May 31, 2022

33 Hillcrest Avenue

Block 'B'

Vehicle Manoeuvring Diagram

Single Unit Truck

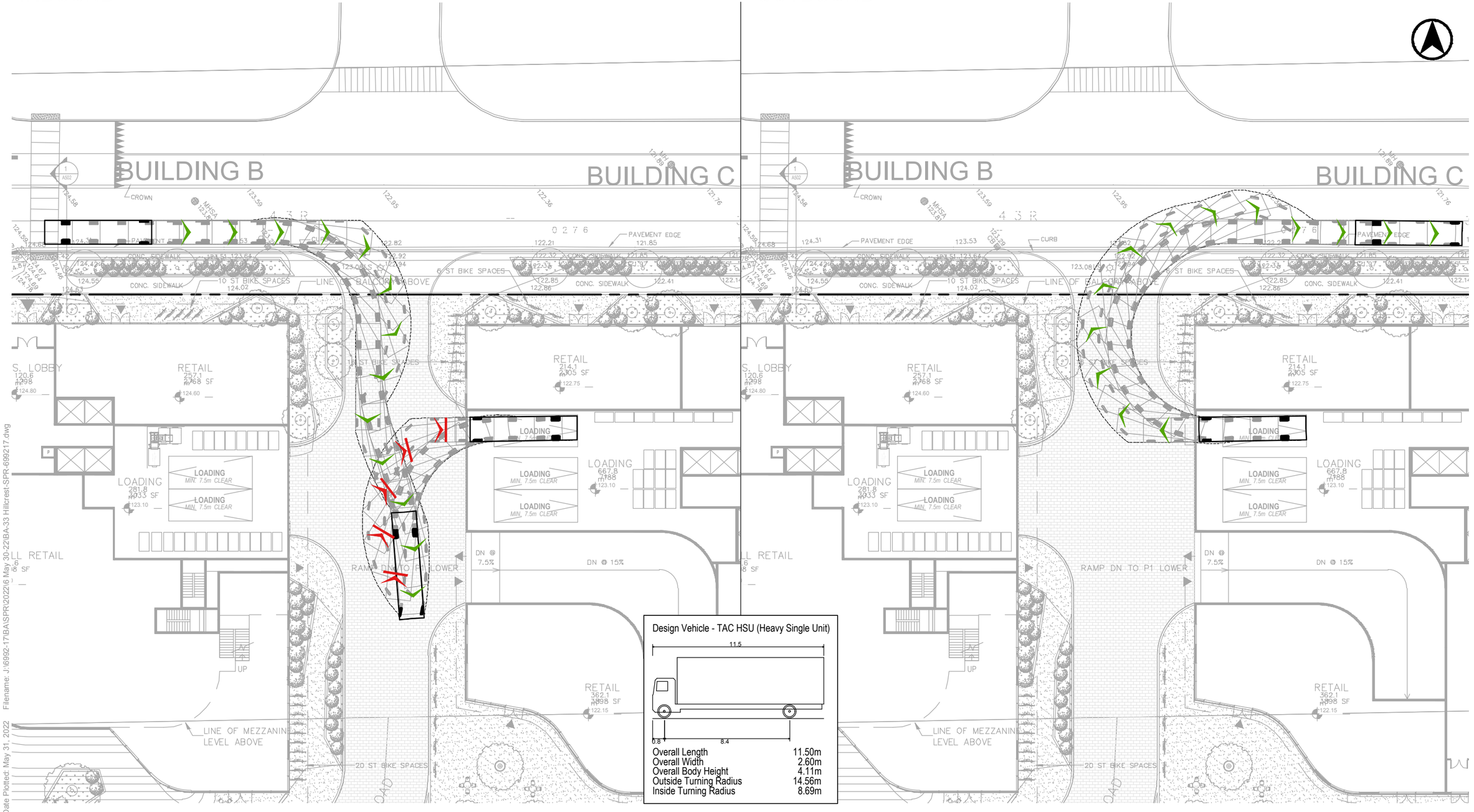
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-10

INBOUND

OUTBOUND



Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

Date Plotted: May 31, 2022

BA Group

33 Hillcrest Avenue

Block 'C'

Vehicle Manoeuvring Diagram

Heavy Single Unit Truck

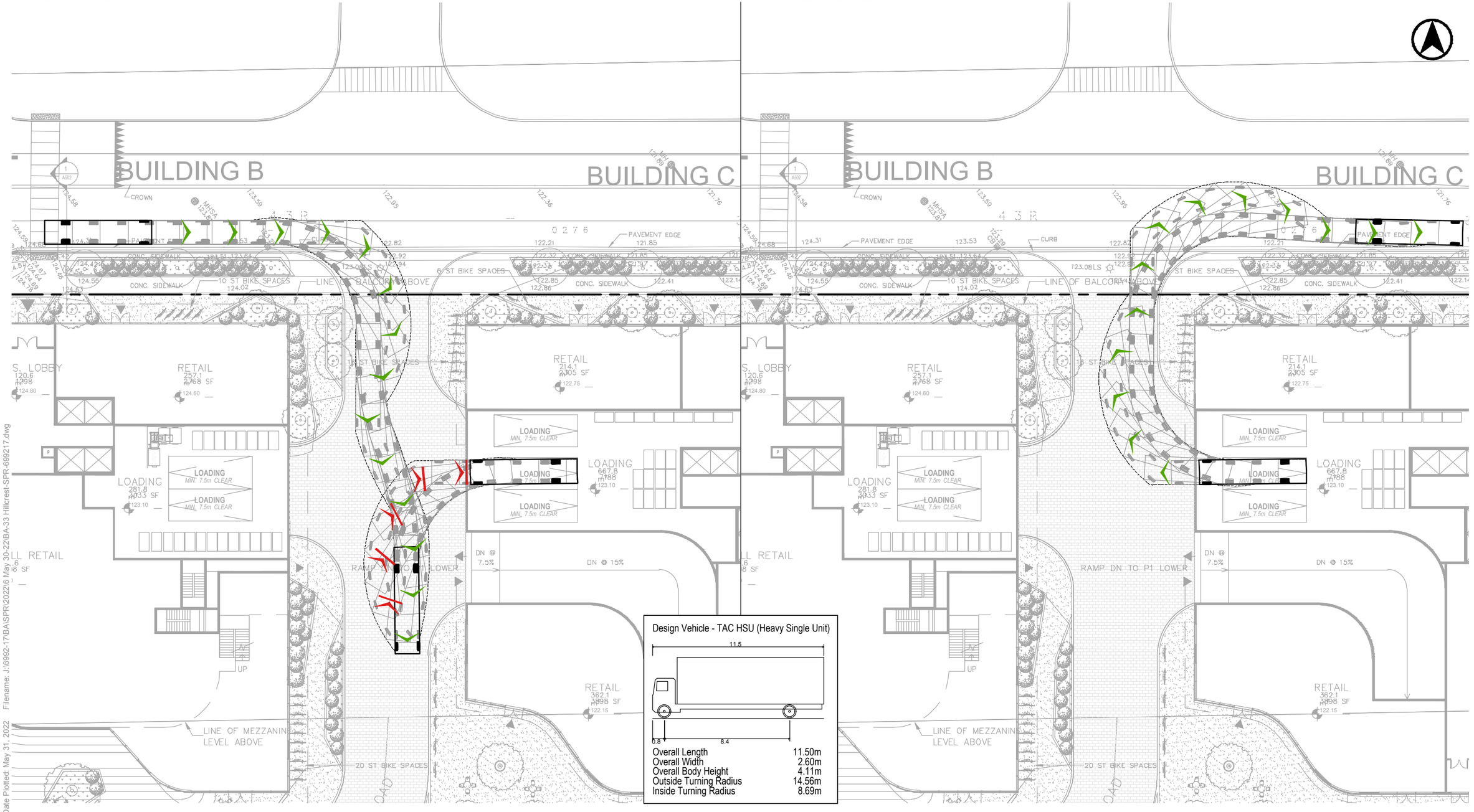
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-11

INBOUND

OUTBOUND



Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

Date Plotted: May 31, 2022

BA Group

33 Hillcrest Avenue

Block 'C'

Vehicle Manoeuvring Diagram

Heavy Single Unit Truck

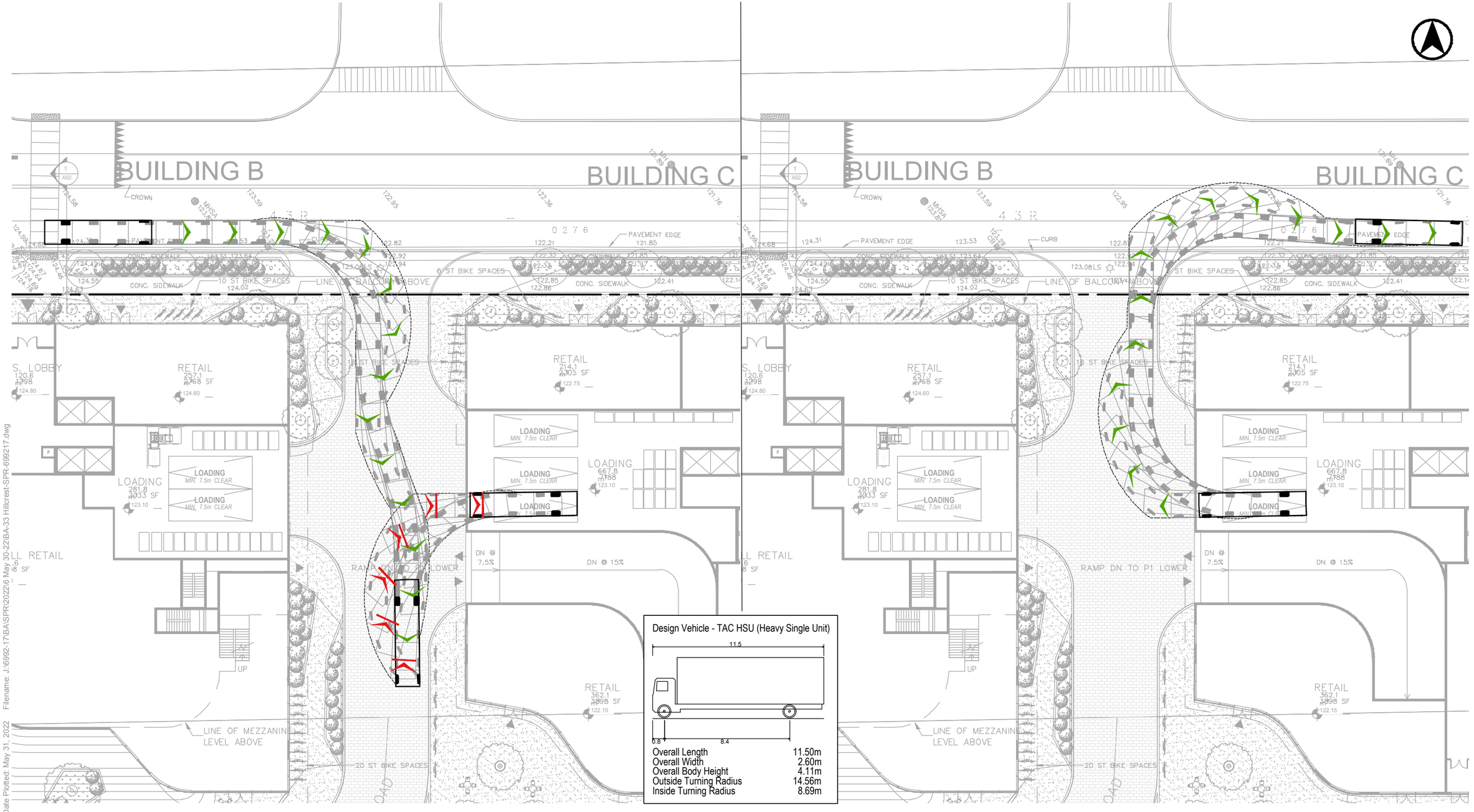
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-12

INBOUND

OUTBOUND



Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

Date Plotted: May 31, 2022

BA Group

33 Hillcrest Avenue

Block 'C'

Vehicle Manoeuvring Diagram

Heavy Single Unit Truck

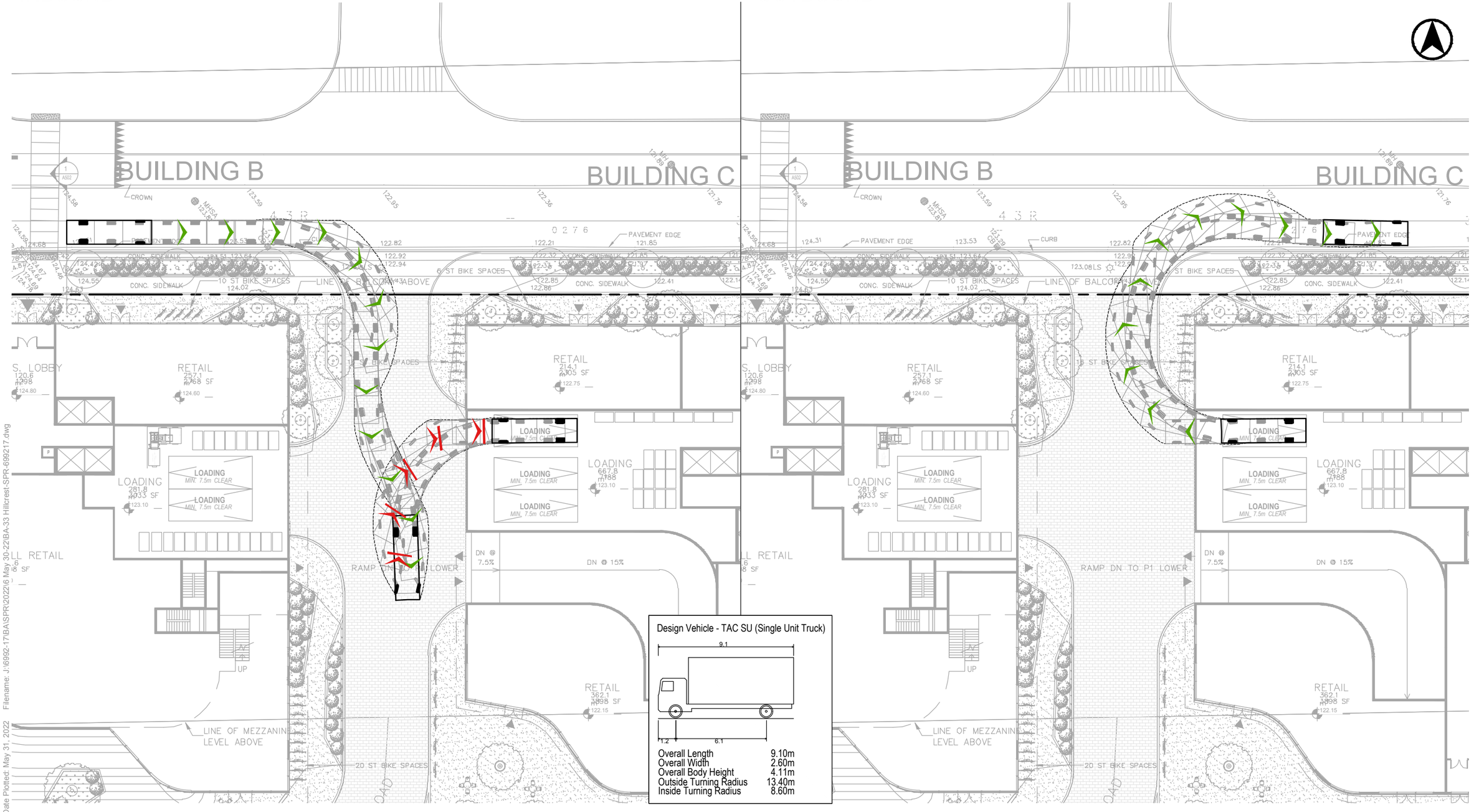
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-13

INBOUND

OUTBOUND



Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

Date Plotted: May 31, 2022

BA Group

33 Hillcrest Avenue

Block 'C'

Vehicle Manoeuvring Diagram

Single Unit Truck

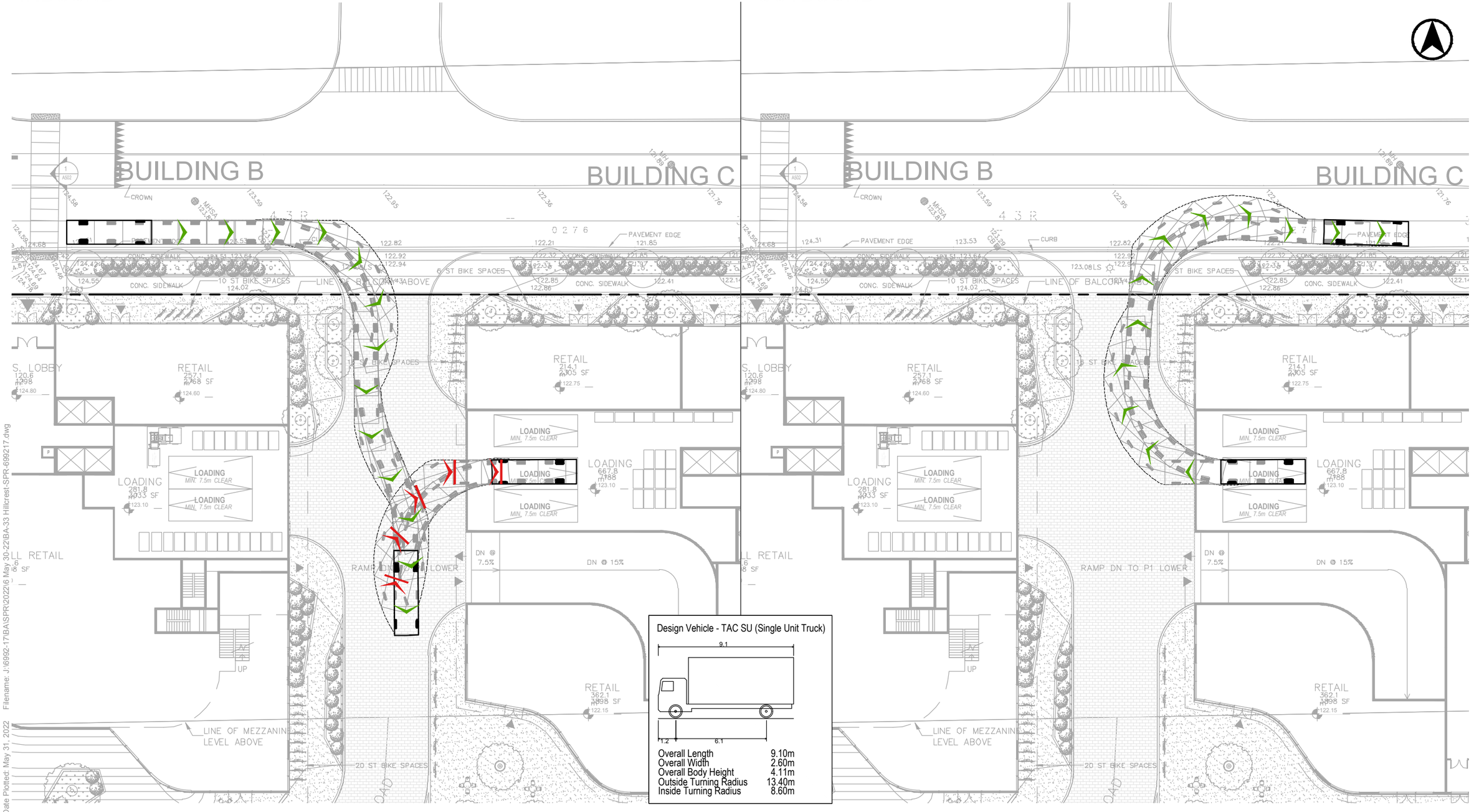
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-14

INBOUND

OUTBOUND



Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

Date Plotted: May 31, 2022

BA Group

33 Hillcrest Avenue

Block 'C'

Vehicle Manoeuvring Diagram

Single Unit Truck

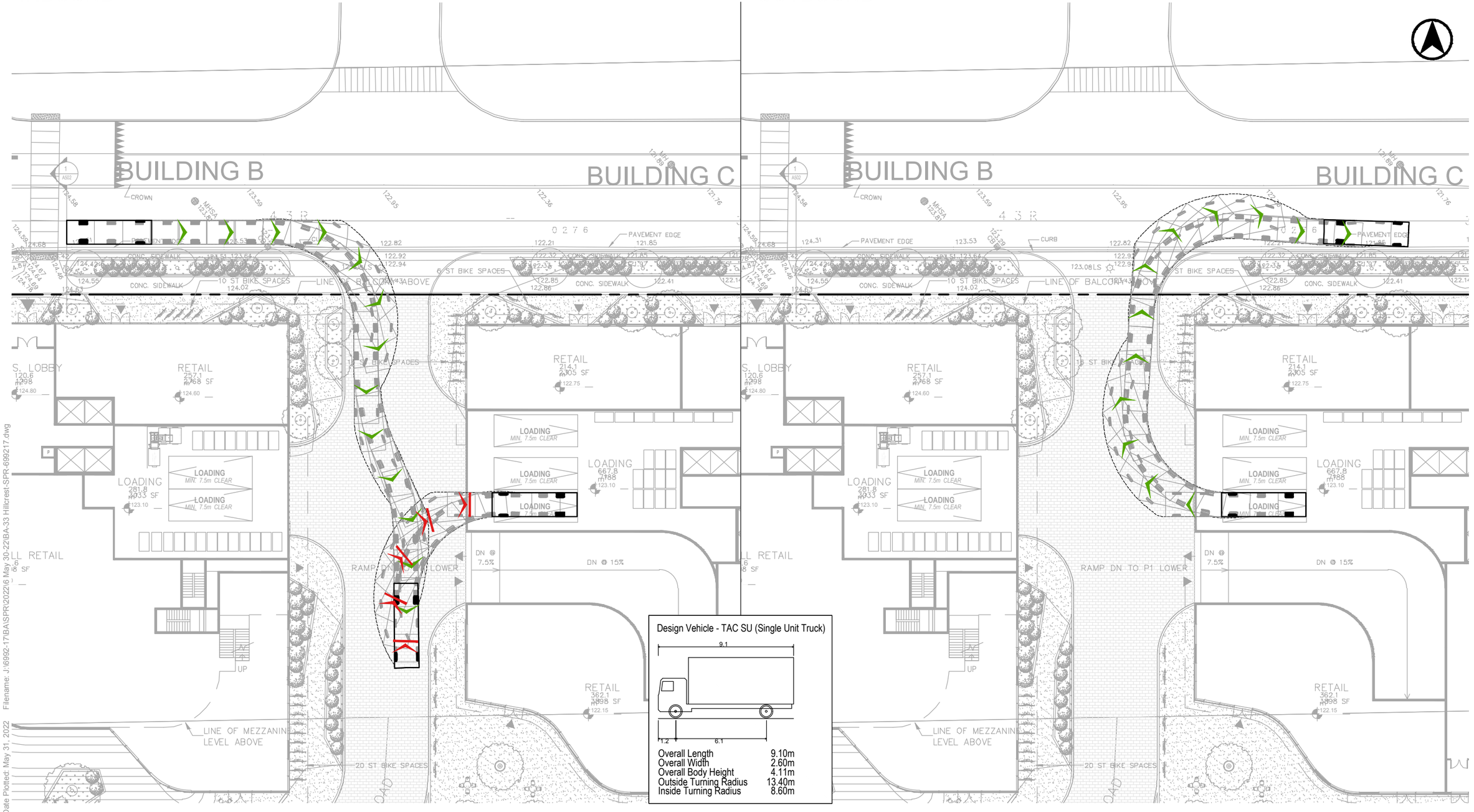
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-15

INBOUND

OUTBOUND



Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

Date Plotted: May 31, 2022

BA Group

33 Hillcrest Avenue

Block 'C'

Vehicle Manoeuvring Diagram

Single Unit Truck

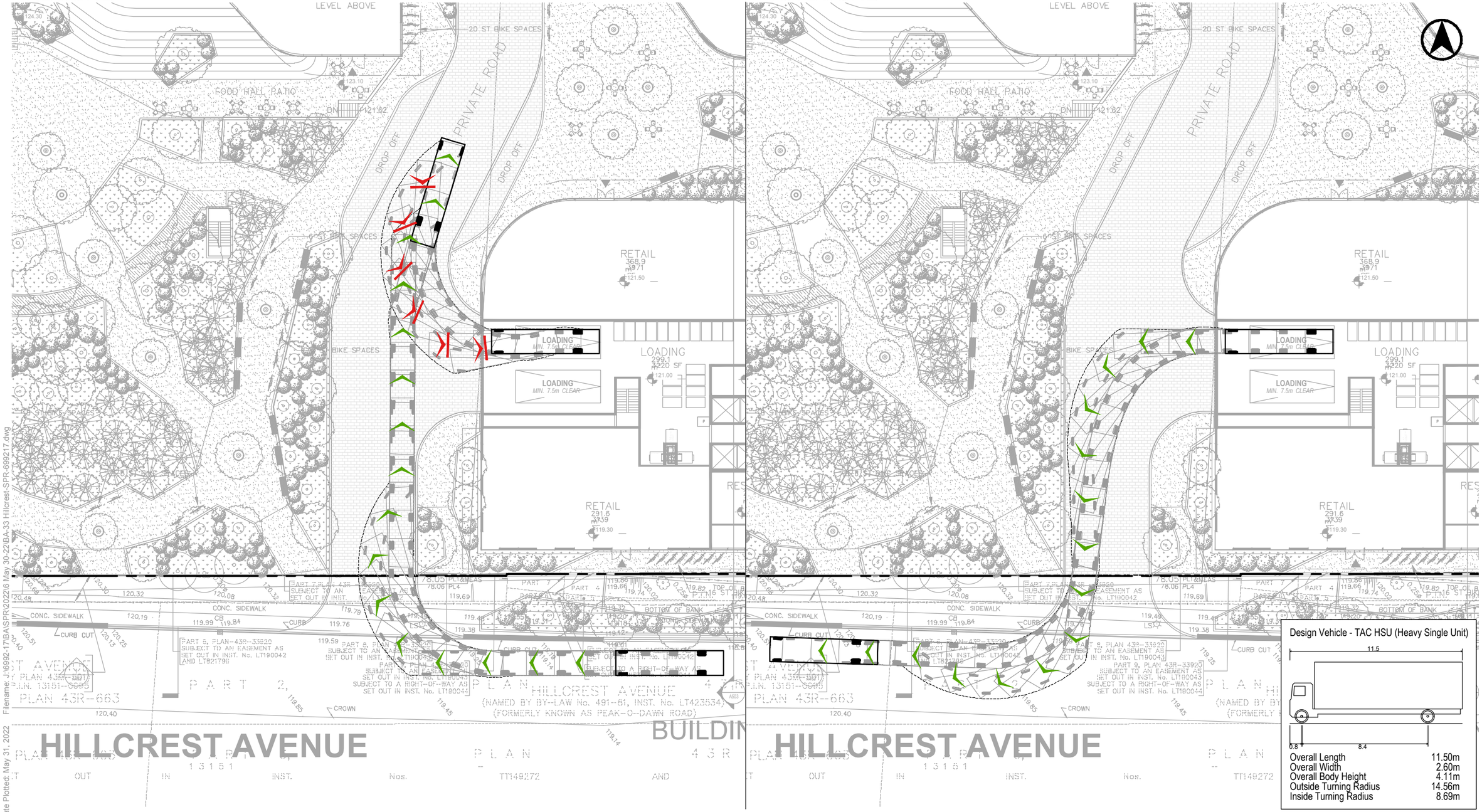
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-16

INBOUND

OUTBOUND



Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-698217.dwg
Date Plotted: May 31, 2022

BA Group

33 Hillcrest Avenue

Block 'D'

Vehicle Manoeuvring Diagram

Heavy Single Unit Truck

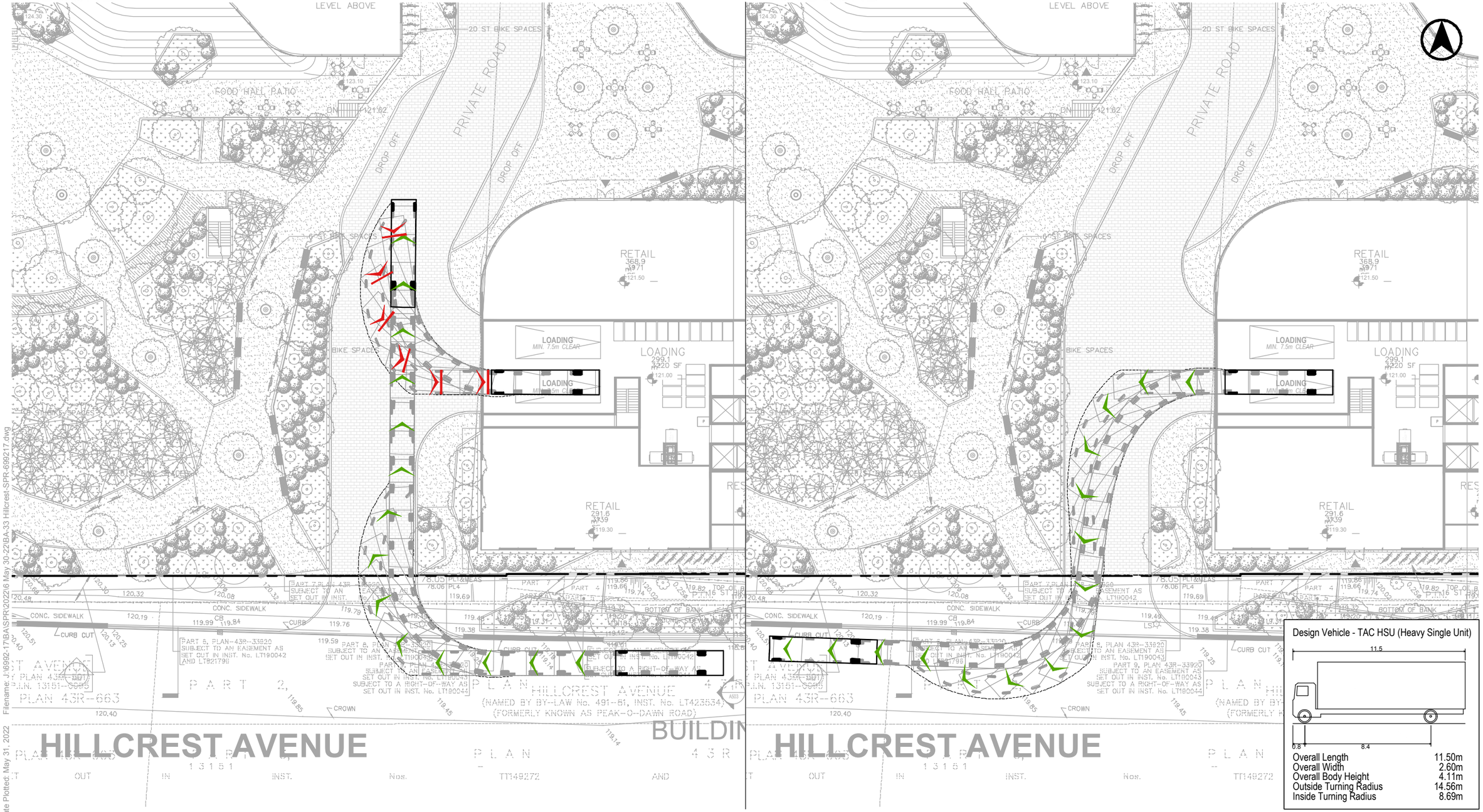
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-17

INBOUND

OUTBOUND



Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-698217.dwg
Date Plotted: May 31, 2022

BA Group

33 Hillcrest Avenue

Block 'D'

Vehicle Manoeuvring Diagram

Heavy Single Unit Truck

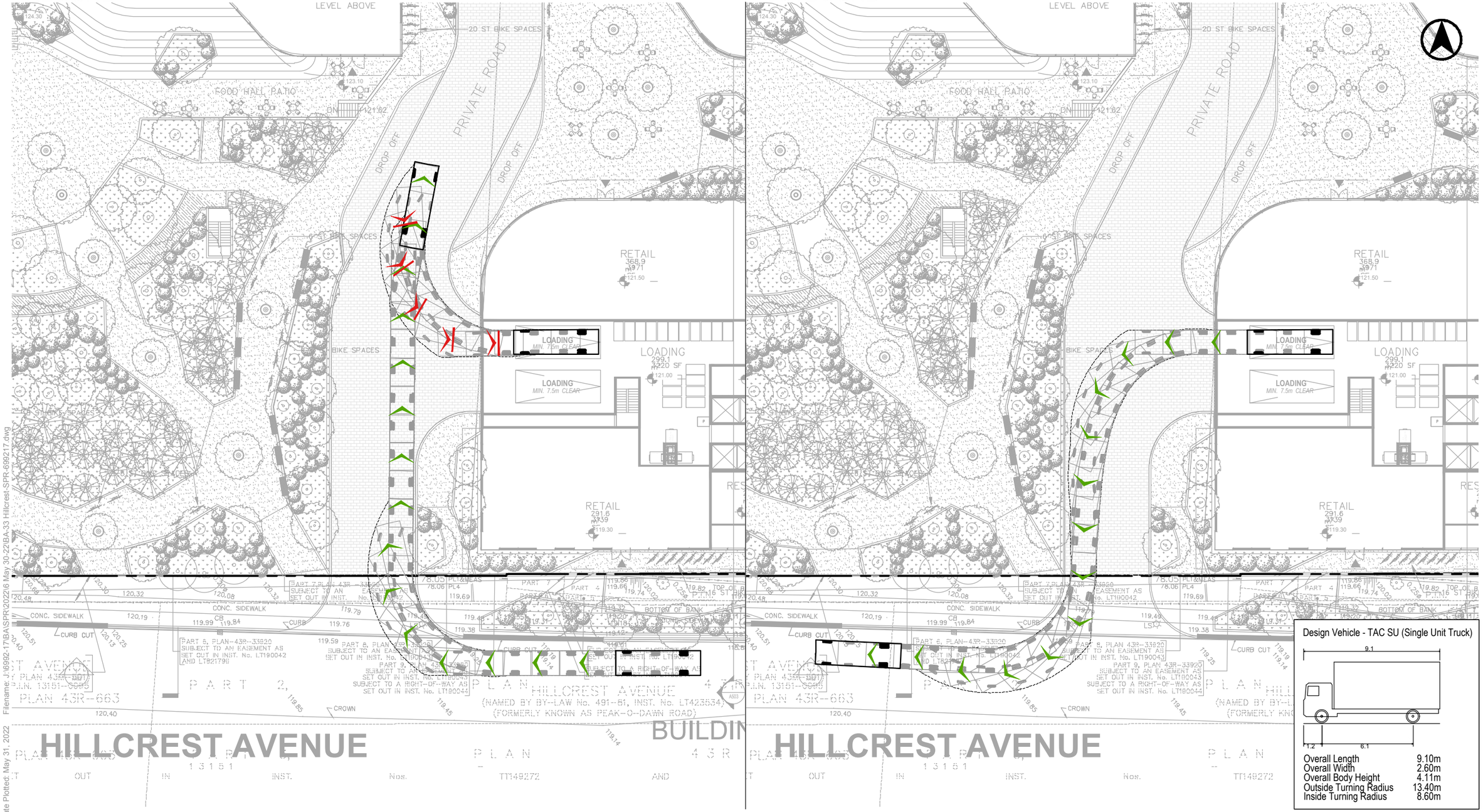
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-18

INBOUND

OUTBOUND



Design Vehicle - TAC SU (Single Unit Truck)

Overall Length	9.10m
Overall Width	2.60m
Overall Body Height	4.11m
Outside Turning Radius	13.40m
Inside Turning Radius	8.60m

BA Group

33 Hillcrest Avenue

Block 'D'

Vehicle Manoeuvring Diagram

Single Unit Truck

Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

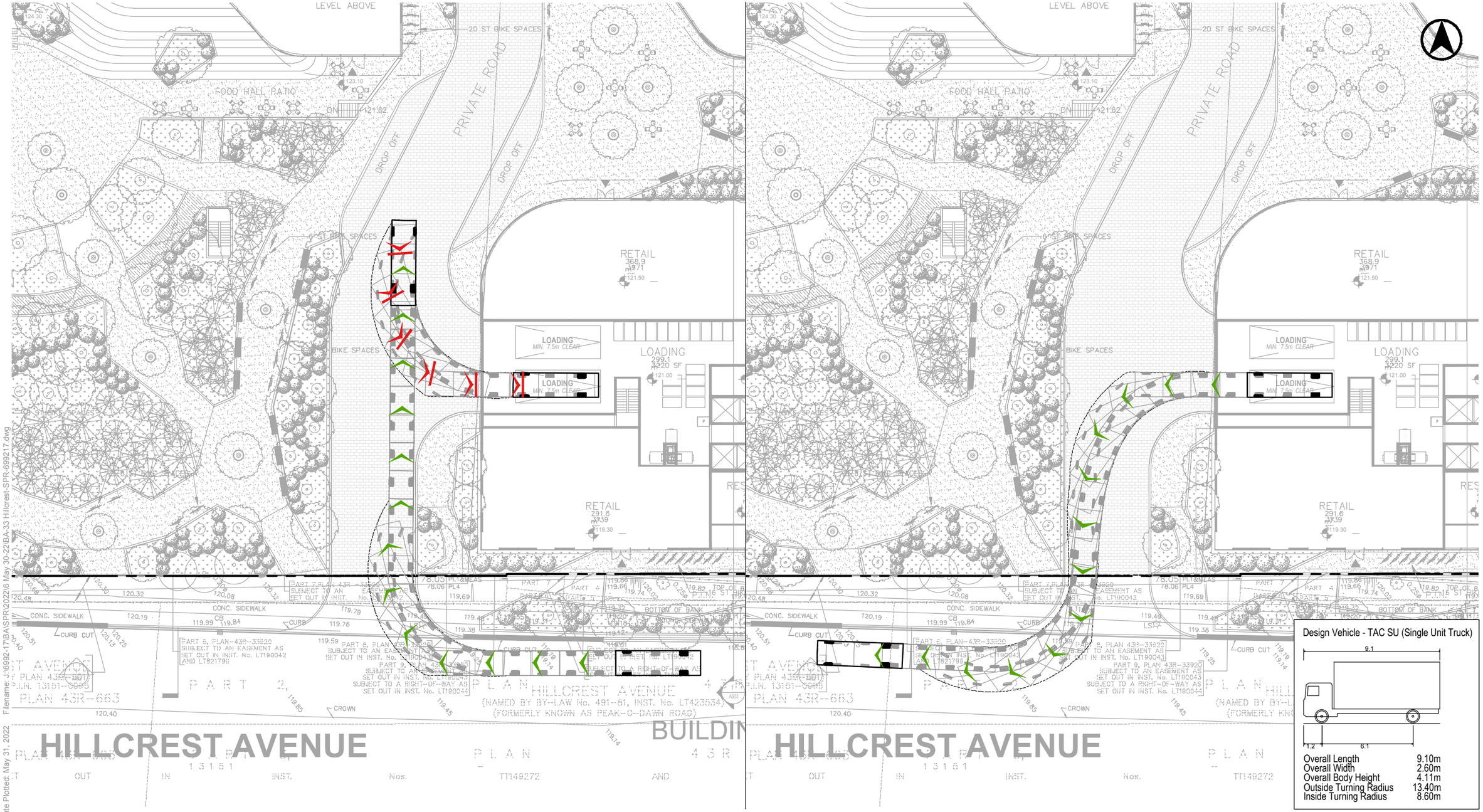
Drawing No. VMD-19

Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-698217.dwg

Date Plotted: May 31, 2022

INBOUND

OUTBOUND



Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-698217.dwg
Date Plotted: May 31, 2022

BA Group

33 Hillcrest Avenue

Block 'D'

Vehicle Manoeuvring Diagram

Single Unit Truck

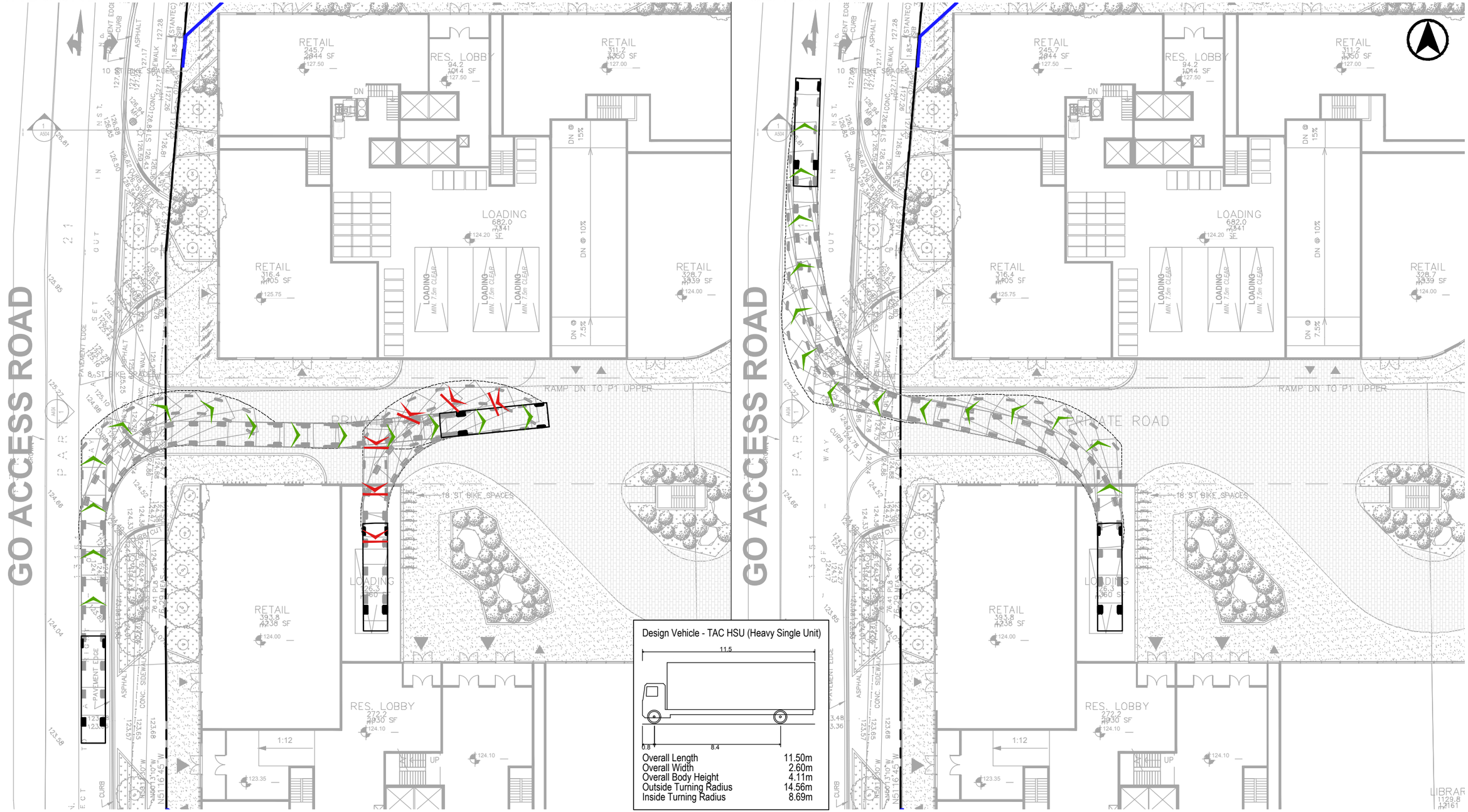
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-20

INBOUND

OUTBOUND



Design Vehicle - TAC HSU (Heavy Single Unit)

Overall Length	11.50m
Overall Width	2.60m
Overall Body Height	4.11m
Outside Turning Radius	14.56m
Inside Turning Radius	8.69m

Date Plotted: May 31, 2022 Filename: J:\6992-17\BA\SPR\2022\6 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

BA Group

33 Hillcrest Avenue

Block 'E'

Vehicle Manoeuvring Diagram

Heavy Single Unit Truck

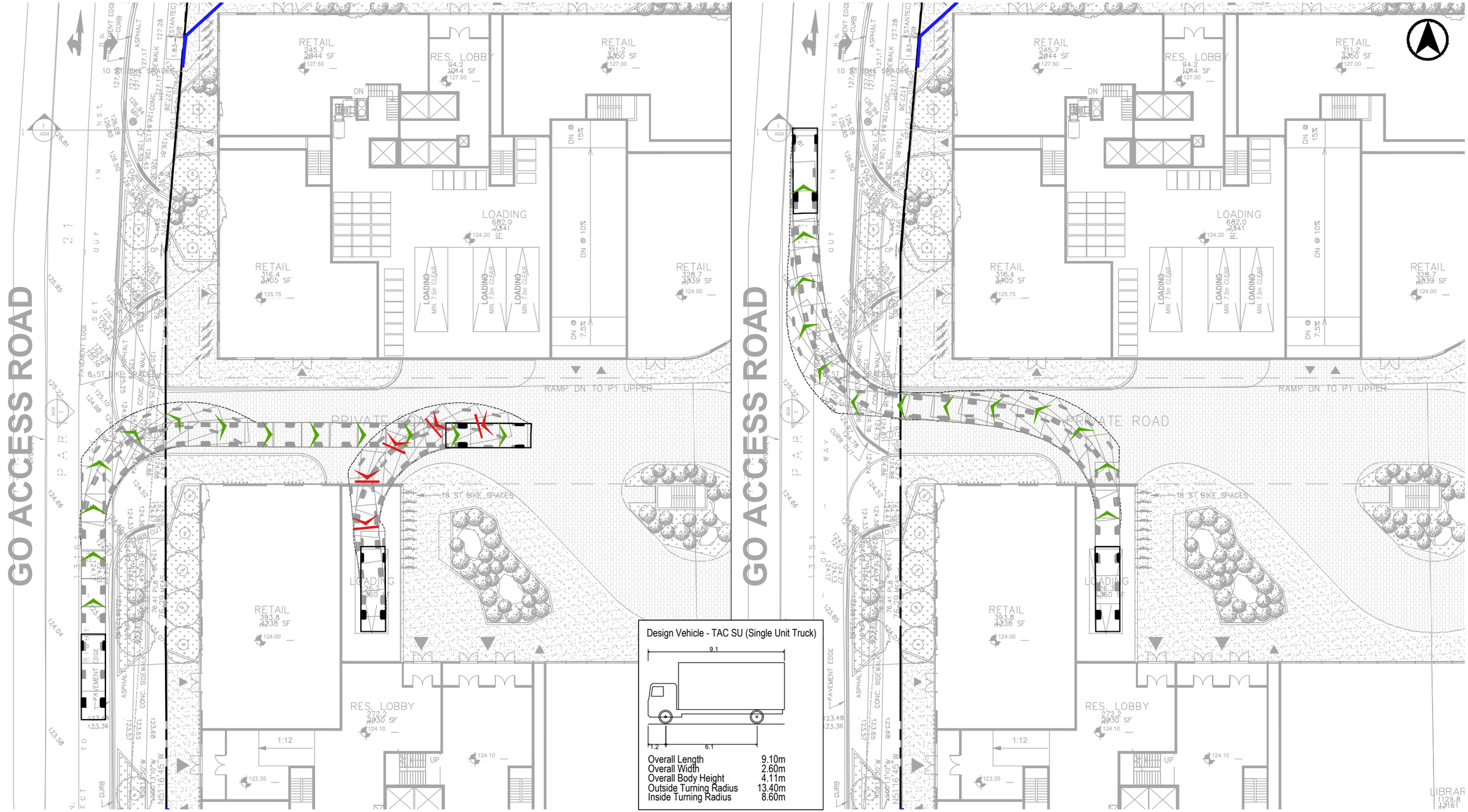
Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-21

INBOUND

OUTBOUND



Design Vehicle - TAC SU (Single Unit Truck)

Overall Length	9.10m
Overall Width	2.60m
Overall Body Height	4.11m
Outside Turning Radius	13.40m
Inside Turning Radius	8.60m

BA Group

33 Hillcrest Avenue

Block 'E'

Vehicle Manoeuvring Diagram

Single Unit Truck

Project:	33 Hillcrest Ave.
Project No.	6992-17
Date:	May 31, 2022
Revised:	--

Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-22

Date Plotted: May 31, 2022 Filename: J:\6992-17\BA\SPR\20220516 May 30-22\BA-33 Hillcrest-SPR-699217.dwg

APPENDIX F: TTS MODE SPLIT QUERIES

RESIDENTIAL

AM OUT

Thu Apr 07 2022 11:22:32 GMT-0400 (Eastern Daylight Time)

Frequency Distribution Query Form - Trip - 2016 v1.1

Field: Primary travel mode of trip - mode_prime

Filters:
(Start time of trip - start_time In 600-859
and
2006 GTA 3867 3871 3872 3723 3724
and
Trip purpose of origin - purp_orig In H
and
Type of dwelling unit - dwell_type In 2)

Table: Trip 2016

Row:	Count:	Expander	TOTAL
Transit ex	22	738	17.2%
Cycle	1	16	0.4%
Auto driv	69	2021	47.0%
GO rail or	10	279	6.5%
Joint GO	5	85	2.0%
Auto pass	13	433	10.1%
School bu	7	179	4.2%
Paid ride	2	76	1.8%
Walk	10	470	10.9%
Total:	139	4297	100.0%

	Exact	Used
Auto Driv	47.0%	**47%**
Auto Pas	16.0%	**16%**
Transit	25.6%	**25%**
Cycling	0.4%	**1%**
Walking	10.9%	**11%**
TOTAL	100%	**100%**

PM IN

Thu Apr 07 2022 11:24:51 GMT-0400 (Eastern Daylight Time)

Frequency Distribution Query Form - Trip - 2016 v1.1

Field: Primary travel mode of trip - mode_prime

Filters:
(Start time of trip - start_time In 1500-1759
and
2006 GTA 3867 3871 3872 3723 3724
and
Trip purpose of destination - purp_dest In H
and
Type of dwelling unit - dwell_type In 2)

Table: Trip 2016

Row:	Count:	Expander	TOTAL
Transit ex	21	606	16.2%
Cycle	1	16	0.4%
Auto driv	68	1877	50.0%
GO rail or	7	119	3.2%
Joint GO	4	58	1.5%
Auto pass	11	348	9.3%
School bu	3	79	2.1%
Paid ride	3	126	3.4%
Walk	14	523	13.9%
Total:	132	3752	100.0%

	Exact	Used
Auto Driv	50.0%	**50%**
Auto Pas	14.7%	**14%**
Transit	20.9%	**21%**
Cycling	0.4%	**1%**
Walking	13.9%	**14%**
TOTAL	100%	**100%**

AVERAGE

	Exact	Used
Auto Driv	48.5%	**48%**
Auto Pas	15.0%	**15%**
Transit	23.0%	**23%**
Cycling	1.0%	**1%**
Walking	12.5%	**13%**
TOTAL	100%	**100%**

OFFICE

AM IN

Mon May 02 2022 16:20:13 GMT-0400 (Eastern Daylight Time)

Frequency Distribution Query Form - Trip - 2016 v1.1

Field: Primary travel mode of trip - mode_prime

Filters:
(Start time of trip - start_time In 600-859
and
Trip purpose of destination - purp_dest In W
and
2006 GTA 3867 3871 3872 3723 3724 3671)

Table: Trip 2016

Row:	Count:	Expander	TOTAL
Transit ex	10	316	5.4%
Cycle	1	35	0.6%
Auto driv	189	4788	82.5%
Auto pass	13	381	6.6%
Paid ride	1	26	0.4%
Walk	8	259	4.5%
Total:	222	5806	100.0%

	Exact	Used
Auto Driv	82.5%	**83%**
Auto Pas	7.0%	**7%**
Transit	5.4%	**5%**
Cycling	0.6%	**1%**
Walking	4.5%	**4%**
TOTAL	100%	**100%**

PM OUT

Mon May 02 2022 16:21:02 GMT-0400 (Eastern Daylight Time)

Frequency Distribution Query Form - Trip - 2016 v1.1

Field: Primary travel mode of trip - mode_prime

Filters:
(Start time of trip - start_time In 1500-1759
and
Trip purpose of origin - purp_orig In W
and
2006 GTA 3867 3871 3872 3723 3724 3671)

Table: Trip 2016

Row:	Count:	Expander	TOTAL
Transit ex	8	249	5.1%
Cycle	1	37	0.8%
Auto driv	169	4023	82.2%
Auto pass	12	355	7.2%
Paid ride	1	26	0.5%
Walk	6	206	4.2%
Total:	197	4897	100.0%

	Exact	Used
Auto Driv	82.2%	**82%**
Auto Pas	7.8%	**8%**
Transit	5.1%	**5%**
Cycling	0.8%	**1%**
Walking	4.2%	**4%**
TOTAL	100%	**100%**

AVERAGE

	Exact	Used
Auto Driv	82.5%	**82%**
Auto Pas	7.5%	**8%**
Transit	5.0%	**5%**
Cycling	1.0%	**1%**
Walking	4.0%	**4%**
TOTAL	100%	**100%**

RETAIL / COMMUNITY CENTRE

DAILY IN

Mon May 02 2022 16:10:02 GMT-0400 (Eastern Daylight Time)

Frequency Distribution Query Form - Trip - 2016 v1.1

Field: Primary travel mode of trip - mode_prime

Filters:
(Start time of trip - start_time In 600-1759
and
Trip purp
and
2006 GTA 3867 3871 3872 3723 3724)

Table: Trip 2016

Row:	Count:	Expander	TOTAL
Transit ex	12	283	15.9%
Auto driv	66	1067	59.8%
Other			
Auto pass	21	302	16.9%
Paid ride	1	8	0.4%
Walk	5	124	7.0%
Total:	105	1784	100.0%

	Exact	Used
Auto Driv	59.8%	**60%**
Auto Pas	17.4%	**17%**
Transit	15.9%	**16%**
Cycling	0.0%	**0%**
Walking	7.0%	**7%**
TOTAL	100%	**100%**

DAILY OUT

Mon May 02 2022 16:11:28 GMT-0400 (Eastern Daylight Time)

Frequency Distribution Query Form - Trip - 2016 v1.1

Field: Primary travel mode of trip - mode_prime

Filters:
(Start time of trip - start_time In 600-1759
and
Trip purp
and
2006 GTA 3867 3871 3872 3723 3724)

Table: Trip 2016

Row:	Count:	Expander	TOTAL
Transit ex	8	173	11.2%
Auto driv	62	984	63.6%
Other			
Auto pass	20	265	17.1%
Taxi pass	1	10	0.6%
Paid ride	1	8	0.5%
Walk	3	107	6.9%
Total:	95	1547	100.0%

	Exact	Used
Auto Driv	63.6%	**64%**
Auto Pas	18.3%	**18%**
Transit	11.2%	**11%**
Cycling	0.0%	**0%**
Walking	6.9%	**7%**
TOTAL	100%	**100%**

AVERAGE

	Exact	Used
Auto Driv	62.0%	**62%**
Auto Pas	17.5%	**17%**
Transit	13.5%	**14%**
Cycling	0.0%	**0%**
Walking	7.0%	**7%**
TOTAL	100%	**100%**

*used in both peak hours

APPENDIX G: TRIP GENERATION AND INTERNAL TRIP CAPTURE CALCULATIONS

External Trip Generation

33 Hillcrest	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**480**	**1270**	**1750**	**900**	**735**	**1635**
Auto Driver	305	580	885	435	395	830
Auto Passenger	65	175	240	125	100	225
Transit	70	355	425	230	155	385
Cycle	0	10	10	15	10	25
Walk	40	150	190	95	75	170
Check	480	1270	1750	900	735	1635
	YES	YES	YES	YES	YES	YES

Building A	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**60**	**265**	**325**	**180**	**125**	**305**
Auto Driver	25	125	150	80	60	140
Auto Passenger	10	35	45	25	15	40
Transit	15	75	90	50	30	80
Cycle	0	0	0	0	5	5
Walk	10	30	40	25	15	40
Check	60	265	325	180	125	305
	YES	YES	YES	YES	YES	YES

Building B	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**95**	**285**	**380**	**215**	**150**	**365**
Auto Driver	55	130	185	100	80	180
Auto Passenger	15	40	55	35	20	55
Transit	15	80	95	50	35	85
Cycle	0	0	0	5	0	5
Walk	10	35	45	25	15	40
Check	95	285	380	215	150	365
	YES	YES	YES	YES	YES	YES

Building C	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**180**	**260**	**440**	**170**	**215**	**385**
Auto Driver	135	120	255	85	135	220
Auto Passenger	25	25	50	25	25	50
Transit	15	75	90	40	35	75
Cycle	0	5	5	5	0	5
Walk	5	35	40	15	20	35
Check	180	260	440	170	215	385
	YES	YES	YES	YES	YES	YES

Building D	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**55**	**250**	**305**	**170**	**115**	**285**
Auto Driver	30	110	140	85	55	140
Auto Passenger	5	40	45	25	15	40
Transit	15	65	80	45	30	75
Cycle	0	5	5	0	5	5
Walk	5	30	35	15	10	25
Check	55	250	305	170	115	285
	YES	YES	YES	YES	YES	YES

Building E	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**90**	**210**	**300**	**165**	**130**	**295**
Auto Driver	60	95	155	85	65	150
Auto Passenger	10	35	45	15	25	40
Transit	10	60	70	45	25	70
Cycle	0	0	0	5	0	5
Walk	10	20	30	15	15	30
Check	90	210	300	165	130	295
	YES	YES	YES	YES	YES	YES

CHECK	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**480**	**1270**	**1750**	**900**	**735**	**1635**
Auto Driver	305	580	885	435	395	830
Auto Passenger	65	175	240	125	100	225
Transit	70	355	425	230	155	385
Cycle	0	10	10	15	10	25
Walk	40	150	190	95	75	170
Check	480	1270	1750	900	735	1635
	YES	YES	YES	YES	YES	YES
Auto Driver	YES	YES	YES	YES	YES	YES
Auto Passenger	YES	YES	YES	YES	YES	YES
Transit	YES	YES	YES	YES	YES	YES
Cycle	YES	YES	YES	YES	YES	YES
Walk	YES	YES	YES	YES	YES	YES

VEHICLE TRIPS

Use	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
COMPOSITE						
Residential	45	460	505	285	160	445
Retail	110	95	205	120	120	240
Office	110	10	120	0	85	85
Community	40	15	55	30	30	60
Total	305	580	885	435	395	830
Building A						
Residential	5	105	110	60	35	95
Retail	20	20	40	20	25	45
Office	0	0	0	0	0	0
Community	0	0	0	0	0	0
Total	25	125	150	80	60	140
Building B						
Residential	10	100	110	60	35	95
Retail	45	30	75	40	45	85
Office	0	0	0	0	0	0
Community	0	0	0	0	0	0
Total	55	130	185	100	80	180
Building C						
Residential	10	90	100	60	30	90
Retail	15	20	35	25	20	45
Office	110	10	120	0	85	85
Community	0	0	0	0	0	0
Total	135	120	255	85	135	220
Building D						
Residential	10	90	100	60	30	90
Retail	20	20	40	25	25	50
Office	0	0	0	0	0	0
Community	0	0	0	0	0	0
Total	30	110	140	85	55	140
Building E						
Residential	10	75	85	45	30	75
Retail	10	5	15	10	5	15
Office	0	0	0	0	0	0
Community	40	15	55	30	30	60
Total	60	95	155	85	65	150
COMPOSITE (Check)						
Residential	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Retail	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Office	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Community	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Total	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*

VEHICLE TRIPS

Use	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
COMPOSITE						
Residential	45	460	505	285	160	445
Retail	110	95	205	120	120	240
Office	110	10	120	0	85	85
Community	40	15	55	30	30	60
Total	305	580	885	435	395	830

Passby %	43%	*assume same between AM / PM

*copy to traffic assignment sheet!

Retail	110	95	205	120	120	240
Passby	45	45	90	55	55	110
Primary	65	50	115	65	65	130

*copy to traffic assignment sheet!

Building A + E						
Residential	15	180	195	105	65	170
Retail	30	25	55	30	30	60
Office	0	0	0	0	0	0
Community	40	15	55	30	30	60
Total	85	220	305	165	125	290
Building B + C + D						
Residential	30	280	310	180	95	275
Retail	80	70	150	90	90	180
Office	110	10	120	0	85	85
Community	0	0	0	0	0	0
Total	220	360	580	270	270	540

Internal Trip Generation

WEEKDAY MORNING PEAK HOUR

Step 1: Determine if methodology is appropriate for the site
Step 2: Estimate trip generation for individual uses

Internal Trip Capture Estimation Tool			
Project Name:	33 Hillcrest	Organization:	BA Group
Project Location:	Hillcrest Avenue / Hurontario Street	Performed By:	NHY
Scenario Description:	Internal Trip Generation - SITE	Date:	2022-05-19
Analysis Year:	2022	Checked By:	
Analysis Period:	AM Peak Hour	Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (By Land Use)

Land Use	*Development Data*							
	Quantity	Units	Inbound Rate	Outbound Rate	Source	Inbound Persons	Outbound Persons	2-Way
Office					First Principles	150	25	175
Retail					ITE Rate	205	175	380
Restaurant								0
Cinema/Entertainment								0
Residential					Proxy Rate	110	1115	1225
Hotel								
Community Centre					ITE Rate	105	45	150
Total (All Land Uses)						**570**	**1360**	**1930**

Step 3: Estimate proximity between individual on-site land use pairs **(ONLY WEEKDAY PM PEAK HOUR)**

Table 3-A: Average Land Use Interchange Distances (Walking Distance Between Uses in FEET)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Community Centre						

Units = in feet

Notes:
*black cells = no proximity adjustment factors available for these pairs

Step 4: Estimate unconstrained internal trip capture rates with proximity adjustment
Step 4a: Estimate base unconstrained internal trip capture rates

[%]: Internal Vehicle-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		28%	63%	0%	1%	20%
Retail	29%		13%	0%	14%	10%
Restaurant	31%	14%		0%	4%	
Cinema/Entertainment	0%	0%	0%		0%	
Residential	2%	1%	20%	0%		5%
Community Centre	20%	20%			20%	

[%]: Internal Vehicle-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		32%	23%	0%	0%	10%
Retail	4%		50%	0%	2%	10%
Restaurant	14%	8%		0%	5%	
Cinema/Entertainment	0%	0%	0%		0%	
Residential	3%	17%	20%	0%		30%
Community Centre	5%	5%			50%	

Step 4b: Apply proximity-adjustment factors

Proximity Factors (Computed at Origin)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		1	1	1	1	1
Retail	1		1	1	1	1
Restaurant	1	1		1	1	1
Cinema/Entertainment	1	1	1		1	1
Residential	1	1	1	1		1
Community Centre	1	1	1	1	1	

Proximity Factors (Computed at Destination)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		1	1	1	1	1
Retail	1		1	1	1	1
Restaurant	1	1		1	1	1
Cinema/Entertainment	1	1	1		1	1
Residential	1	1	1	1		1
Community Centre	1	1	1	1	1	

Proximity Adjusted Factors (Computed at Origin)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		28%	63%	0%	1%	20%
Retail	29%		13%	0%	14%	10%
Restaurant	31%	14%		0%	4%	0%
Cinema/Entertainment	0%	0%	0%		0%	0%
Residential	2%	1%	20%	0%		5%
Community Centre	20%	20%	0%	0%	0%	

Proximity Adjusted Factors (Computed at Destination)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		32%	23%	0%	0%	10%
Retail	4%		50%	0%	2%	10%
Restaurant	14%	8%		0%	5%	0%
Cinema/Entertainment	0%	0%	0%		0%	0%
Residential	3%	17%	20%	0%		30%
Community Centre	5%	5%	0%	0%	50%	

Step 5: Estimate unconstrained demand between on-site land use pairs

TRIPS (Computed at Origin)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		5	15	0	0	5
Retail	50		25	0	25	20
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	20	10	225	0		55
Community Centre	10	10	0	0	0	

TRIPS (Computed at Destination)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		65	0	0	0	10
Retail	5		0	0	0	10
Restaurant	20	15		0	5	0
Cinema/Entertainment	0	0	0		0	0
Residential	5	35	0	0		30
Community Centre	10	10	0	0	55	

Step 6: Estimate balanced demand between on-site land use pairs
Step 7: Estimate Total Internal Trips

BALANCED INTERNAL TRIPS

Origin (From)	*Balanced / TO*						
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre	**∑Origins >**
Office		5	0	0	0	5	10
Retail	5		0	0	0	10	15
Restaurant	0	0		0	0	0	0
Cinema/Entertainment	0	0	0		0	0	0
Residential	5	10	0	0		30	45
Community Centre	10	10	0	0	0		20
∑Destinations v	20	25	0	0	0	45	OK

INTERACTIONS	In	Out	2-Way
Office	20	10	30
Retail	25	15	40
Residential	0	45	45
Community Centre	45	20	65

WEEKDAY AFTERNOON PEAK HOUR

Step 1: Determine if methodology is appropriate for the site
Step 2: Estimate trip generation for individual uses

Internal Trip Capture Estimation Tool			
Project Name:	33 Hillcrest	Organization:	BA Group
Project Location:	Hillcrest Avenue / Hurontario Street	Performed By:	NHY
Scenario Description:	Internal Trip Generation - SITE	Date:	2022-05-19
Analysis Year:	2022	Checked By:	
Analysis Period:	AM Peak Hour	Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (By Land Use)

Land Use	*Development Data*							
	Quantity	Units	Inbound Rate	Outbound Rate	Source	Inbound Persons	Outbound Persons	2-Way
Office					First Principles	25	175	200
Retail					ITE Rate	280	290	570
Restaurant					0			0
Cinema/Entertainment					0			0
Residential					Proxy Rate	780	445	1225
Hotel					0			0
Community Centre					ITE Rate	100	135	235
Total (All Land Uses)						**1185**	**1045**	**2230**

Step 3: Estimate proximity between individual on-site land use pairs **(ONLY WEEKDAY PM PEAK HOUR)**

Table 3-A: Average Land Use Interchange Distances (Walking Distance Between Uses in FEET)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		250			250	250
Retail	250				250	250
Restaurant						
Cinema/Entertainment						
Residential	250	250				250
Community Centre	250	250			250	

Units = in feet

Notes:
*black cells = no proximity adjustment factors available for these pairs

If the proposed uses are in close proximity, this table can be left empty

Step 4: Estimate unconstrained internal trip capture rates with proximity adjustment
Step 4a: Estimate base unconstrained internal trip capture rates

[%]: Internal Vehicle-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		20%	4%	0%	2%	10%
Retail	2%		29%	4%	26%	20%
Restaurant	3%	41%		8%	18%	
Cinema/Entertainment	2%	21%	31%		8%	
Residential	4%	42%	21%	0%		30%
Community Centre	10%	30%			30%	

[%]: Internal Vehicle-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		8%	2%	1%	4%	40%
Retail	31%		29%	26%	46%	10%
Restaurant	30%	50%		32%	16%	
Cinema/Entertainment	6%	4%	3%		4%	
Residential	57%	10%	14%	0%		20%
Community Centre	20%	20%			10%	

Step 4b: Apply proximity-adjustment factors

Proximity Factors (Computed at Origin)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		0.9823	1	1	1	1
Retail	1		1	1	1	1
Restaurant	1	1		1	1	1
Cinema/Entertainment	1	1	1		1	1
Residential	1	0.9823	1	1		1
Community Centre	1	1	1	1	1	

Proximity Factors (Computed at Destination)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		0.9823	1	1	1	1
Retail	1		1	1	1	1
Restaurant	1	1		1	1	1
Cinema/Entertainment	1	1	1		1	1
Residential	1	0.9823	1	1		1
Community Centre	1	1	1	1	1	

Proximity Adjusted Factors (Computed at Origin)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		20%	4%	0%	2%	10%
Retail	2%		29%	4%	26%	20%
Restaurant	3%	41%		8%	18%	0%
Cinema/Entertainment	2%	21%	31%		8%	0%
Residential	4%	41%	21%	0%		30%
Community Centre	10%	30%	0%	0%	30%	

Proximity Adjusted Factors (Computed at Destination)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		8%	2%	1%	4%	40%
Retail	31%		29%	26%	46%	10%
Restaurant	30%	50%		32%	16%	0%
Cinema/Entertainment	6%	4%	3%		4%	0%
Residential	57%	10%	14%	0%		20%
Community Centre	20%	20%	0%	0%	10%	

Step 5: Estimate unconstrained demand between on-site land use pairs

TRIPS (Computed at Origin)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		35	5	0	5	20
Retail	5		85	10	75	60
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	20	185	95	0		135
Community Centre	15	40	0	0	40	

TRIPS (Computed at Destination)

Origin (From)	*Destination (To)*					
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre
Office		20	0	0	30	40
Retail	10		0	0	360	10
Restaurant	10	140		0	125	0
Cinema/Entertainment	0	10	0		30	0
Residential	15	30	0	0		20
Community Centre	5	55	0	0	80	

Step 6: Estimate balanced demand between on-site land use pairs
Step 7: Estimate Total Internal Trips

BALANCED INTERNAL TRIPS

Origin (From)	*Balanced / TO*						
	Office	Retail	Restaurant	Cinema/Entertain	Residential	Community Centre	**∑Origins >**
Office		20	0	0	5	20	45
Retail	5		0	0	75	10	90
Restaurant	0	0		0	0	0	0
Cinema/Entertainment	0	0	0		0	0	0
Residential	15	30	0	0		20	65
Community Centre	5	40	0	0	40		85
∑Destinations v	25	90	0	0	120	50	OK

INTERACTIONS	In	Out	2-Way
Office	25	45	70
Retail	90	90	180
Residential	120	65	185
Community Centre	50	85	135

APPENDIX H: TURNING MOVEMENT COUNT DATA

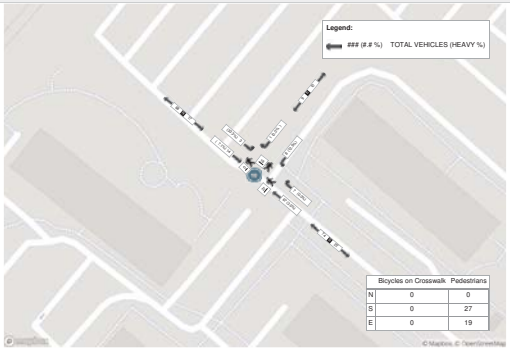
Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach 115 HILLCREST DRIVEWAY					E Approach LANEWAY					S Approach 115 HILLCREST DRIVEWAY					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
17:00:00	18	0	0	0	18	0	5	0	3	5	5	6	0	11	11	34
17:15:00	12	1	0	0	13	0	5	0	4	5	4	8	0	7	12	30
17:30:00	15	2	0	0	17	0	5	0	1	5	3	4	0	14	7	29
17:45:00	22	1	0	0	23	3	2	0	10	5	5	7	0	17	12	40
Grand Total	67	4	0	0	71	3	17	0	18	20	17	25	0	49	42	**133**
Approach%	94.4%	5.6%	0%			15%	85%	0%			40.5%	59.5%	0%			-
Totals %	50.4%	3%	0%		53.4%	2.3%	12.8%	0%		15%	12.8%	18.8%	0%		31.6%	-
PHF	0.76	0.5	0		0.77	0.25	0.85	0		1	0.85	0.78	0		0.88	-
Heavy	0	0	0		0	0	1	0		1	0	2	0		2	-
Heavy %	0%	0%	0%		0%	0%	5.9%	0%		5%	0%	8%	0%		4.8%	-
Lights	67	4	0		71	3	16	0		19	17	23	0		40	-
Lights %	100%	100%	0%		100%	100%	94.1%	0%		95%	100%	92%	0%		95.2%	-
Single-Unit Trucks	0	0	0		0	0	1	0		1	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	5.9%	0%		5%	0%	0%	0%		0%	-
Buses	0	0	0		0	0	0	0		0	0	2	0		2	-
Buses %	0%	0%	0%		0%	0%	0%	0%		0%	0%	8%	0%		4.8%	-
Pedestrians	-	-	-	0	-	-	-	-	17	-	-	-	-	48	-	-
Pedestrians%	-	-	-	0%		-	-	-	25.4%		-	-	-	71.6%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	1	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	1.5%		-	-	-	1.5%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Turning Movement Count (10 . 115 HILLCREST DRIVEWAY & LANEWAY)

Start Time	N Approach 115 HILLCREST DRIVEWAY					E Approach LANEWAY					S Approach 115 HILLCREST DRIVEWAY					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	UTurn S:S	Peds S:	Approach Total		
07:00:00	4	0	0	0	4	0	1	0	3	1	4	11	0	8	15	20	
07:15:00	4	1	0	0	5	1	2	0	3	3	2	14	0	1	16	24	
07:30:00	2	0	0	0	2	0	2	0	4	2	0	18	0	7	18	22	
07:45:00	4	2	0	0	6	0	4	0	7	4	4	14	0	9	18	28	94
08:00:00	4	0	0	0	4	0	0	0	5	0	1	21	0	10	22	26	100
08:15:00	7	0	0	0	7	0	1	0	5	1	1	8	0	8	9	17	93
08:30:00	1	0	0	0	1	0	4	0	1	4	2	8	0	6	10	15	86
08:45:00	7	0	0	2	7	0	0	0	1	0	1	11	0	4	12	19	77
09:00:00	5	1	0	0	6	0	1	0	2	1	3	6	0	4	9	16	67
09:15:00	0	0	0	0	0	0	1	0	0	1	4	5	0	7	9	10	60
09:30:00	3	0	0	0	3	0	2	0	2	2	1	6	0	3	7	12	57
09:45:00	2	1	0	0	3	0	6	0	2	6	5	12	0	4	17	26	64
BREAK																	
16:00:00	12	1	0	0	13	1	3	0	0	4	3	4	0	4	7	24	
16:15:00	12	1	0	0	13	0	3	0	2	3	5	5	0	4	10	26	
16:30:00	13	0	0	0	13	1	3	0	1	4	4	9	0	5	13	30	
16:45:00	10	1	0	0	11	0	5	0	3	5	3	9	0	5	12	28	108
17:00:00	18	0	0	0	18	0	5	0	3	5	5	6	0	11	11	34	118
17:15:00	12	1	0	0	13	0	5	0	4	5	4	8	0	7	12	30	122
17:30:00	15	2	0	0	17	0	5	0	1	5	3	4	0	14	7	29	121
17:45:00	22	1	0	0	23	3	2	0	10	5	5	7	0	17	12	40	133
18:00:00	9	0	0	0	9	1	6	0	5	7	6	4	0	18	10	26	125
18:15:00	14	1	0	0	15	1	4	0	6	5	2	10	1	19	13	33	128
18:30:00	8	2	0	0	10	0	4	0	12	4	4	2	0	19	6	20	119
18:45:00	11	2	0	0	13	1	4	0	2	5	3	8	0	20	11	29	108
Grand Total	199	17	0	2	216	9	73	0	84	82	75	210	1	214	286	**584**	-
Approach%	92.1%	7.9%	0%		-	11%	89%	0%		-	26.2%	73.4%	0.3%		-	-	-
Totals %	34.1%	2.9%	0%		37%	1.5%	12.5%	0%		14%	12.8%	36%	0.2%		49%	-	-
Heavy	1	1	0		-	0	2	0		-	1	8	0		-	-	-
Heavy %	0.5%	5.9%	0%		-	0%	2.7%	0%		-	1.3%	3.8%	0%		-	-	-
Bicycles	0	0	0		-	0	0	0		-	0	1	0		-	-	-
Bicycle %	0%	0%	0%		-	0%	0%	0%		-	0%	0.5%	0%		-	-	-

Peak Hour: 07:15 AM - 08:15 AM Weather: Broken Clouds (16.96 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	27
E	0	19

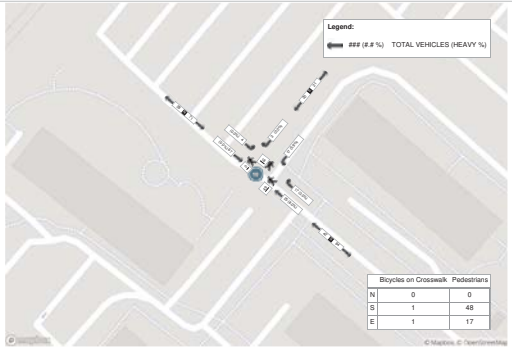
Peak Hour: 07:15 AM - 08:15 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach 115 HILLCREST DRIVEWAY					E Approach LANEWAY					S Approach 115 HILLCREST DRIVEWAY					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
07:15:00	4	1	0	0	5	1	2	0	3	3	2	14	0	1	16	24
07:30:00	2	0	0	0	2	0	2	0	4	2	0	18	0	7	18	22
07:45:00	4	2	0	0	6	0	4	0	7	4	4	14	0	9	18	28
08:00:00	4	0	0	0	4	0	0	0	5	0	1	21	0	10	22	26
Grand Total	14	3	0	0	17	1	8	0	19	9	7	67	0	27	74	**100**
Approach%	82.4%	17.6%	0%		-	11.1%	88.9%	0%		-	9.5%	90.5%	0%		-	-
Totals %	14%	3%	0%		17%	1%	8%	0%		9%	7%	67%	0%		74%	-
PHF	0.88	0.38	0		0.71	0.25	0.5	0		0.56	0.44	0.8	0		0.84	-
Heavy	1	1	0		2	0	1	0		1	0	2	0		2	-
Heavy %	7.1%	33.3%	0%		11.8%	0%	12.5%	0%		11.1%	0%	3%	0%		2.7%	-
Lights	13	2	0		15	1	7	0		8	7	65	0		72	-
Lights %	92.9%	66.7%	0%		88.2%	100%	87.5%	0%		88.9%	100%	97%	0%		97.3%	-
Single-Unit Trucks	0	1	0		1	0	1	0		1	0	0	0		0	-
Single-Unit Trucks %	0%	33.3%	0%		5.9%	0%	12.5%	0%		11.1%	0%	0%	0%		0%	-
Buses	1	0	0		1	0	0	0		0	0	2	0		2	-
Buses %	7.1%	0%	0%		5.9%	0%	0%	0%		0%	0%	3%	0%		2.7%	-
Pedestrians	-	-	-	0	-	-	-	-	19	-	-	-	-	27	-	-
Pedestrians%	-	-	-	0%		-	-	-	41.3%		-	-	-	58.7%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Turning Movement Count (11 . 135 & 145 & 155 HILLCREST DRIVEWAY & LANEWAY)

Start Time	N Approach LANEWAY					S Approach LANEWAY					W Approach 135 & 145 & 155 HILLCREST DRIVEWAY					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	0	5	0	8	5	11	3	0	0	14	20	3	0	5	23	42	
07:15:00	1	5	0	1	6	7	6	0	0	13	26	9	0	1	35	54	
07:30:00	1	3	0	7	4	6	11	1	0	18	38	12	0	6	50	72	
07:45:00	2	6	0	9	8	10	8	0	0	18	38	8	0	6	46	72	240
08:00:00	2	2	0	10	4	11	10	0	0	21	53	11	0	16	64	89	287
08:15:00	2	6	0	8	8	5	11	0	2	16	38	4	0	9	42	66	299
08:30:00	0	5	0	6	5	5	6	0	0	11	46	5	0	51	51	67	294
08:45:00	3	4	0	4	7	7	14	0	0	21	45	6	0	31	51	79	301
09:00:00	5	1	0	4	6	4	15	0	0	19	33	5	0	9	38	63	275
09:15:00	1	0	0	7	1	2	10	0	0	12	23	6	0	8	29	42	251
09:30:00	1	4	0	3	5	3	13	0	0	16	28	5	0	2	33	54	238
09:45:00	1	7	0	4	8	5	10	0	0	15	14	11	0	6	25	48	207
BREAK																	
16:00:00	3	12	0	4	15	3	15	1	0	19	35	4	0	10	39	73	
16:15:00	5	10	0	4	15	8	21	0	0	29	26	2	0	9	28	72	
16:30:00	4	12	0	5	16	8	18	2	0	28	31	5	0	5	36	80	
16:45:00	0	15	0	5	15	5	15	0	0	20	28	7	0	9	35	70	295
17:00:00	4	19	0	11	23	8	19	0	0	27	47	1	0	11	48	98	320
17:15:00	3	15	0	7	18	8	23	0	0	31	29	5	0	7	34	83	331
17:30:00	4	16	0	14	20	4	12	0	1	16	33	2	0	15	35	71	322
17:45:00	2	22	0	17	24	9	30	0	0	39	39	3	0	22	42	105	357
18:00:00	4	11	0	18	15	7	19	0	0	26	34	3	0	13	37	78	337
18:15:00	5	14	0	19	19	5	22	0	0	27	38	8	0	22	46	92	346
18:30:00	1	12	1	19	14	5	21	0	0	26	36	2	0	15	38	78	353
18:45:00	3	13	0	20	16	2	16	0	2	18	34	8	0	11	42	76	324
Grand Total	57	219	1	214	277	148	348	4	5	500	812	135	0	299	947	**1724**	-
Approach%	20.6%	79.1%	0.4%	-	-	29.6%	69.6%	0.8%	-	-	85.7%	14.3%	0%	-	-	-	-
Totals %	3.3%	12.7%	0.1%		16.1%	8.6%	20.2%	0.2%		29%	47.1%	7.8%	0%		54.9%	-	-
Heavy	2	1	0		-	9	12	0		-	13	0	0		-	-	-
Heavy %	3.5%	0.5%	0%		-	6.1%	3.4%	0%		-	1.6%	0%	0%		-	-	-
Bicycles	0	0	0		-	1	0	0		-	0	1	0		-	-	-
Bicycle %	0%	0%	0%		-	0.7%	0%	0%		-	0%	0.7%	0%		-	-	-

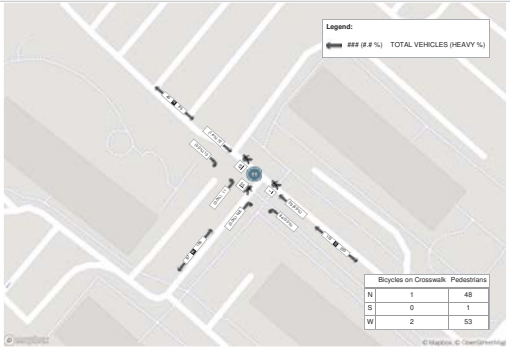
Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (21.66 °C)



Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach LANEWAY					S Approach LANEWAY					W Approach 135 & 145 & 155 HILLCREST DRIVEWAY					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
08:00:00	2	2	0	10	4	11	10	0	0	21	53	11	0	16	64	89
08:15:00	2	6	0	8	8	5	11	0	2	16	38	4	0	9	42	66
08:30:00	0	5	0	6	5	5	6	0	0	11	46	5	0	51	51	67
08:45:00	3	4	0	4	7	7	14	0	0	21	45	6	0	31	51	79
Grand Total	7	17	0	28	24	28	41	0	2	69	182	26	0	107	208	**301**
Approach%	29.2%	70.8%	0%		-	40.6%	59.4%	0%		-	87.5%	12.5%	0%		-	-
Totals %	2.3%	5.6%	0%		8%	9.3%	13.6%	0%		22.9%	60.5%	8.6%	0%		69.1%	-
PHF	0.58	0.71	0		0.75	0.64	0.73	0		0.82	0.86	0.59	0		0.81	-
Heavy	1	0	0		1	2	4	0		6	4	0	0		4	-
Heavy %	14.3%	0%	0%		4.2%	7.1%	9.8%	0%		8.7%	2.2%	0%	0%		1.9%	-
Lights	6	17	0		23	26	37	0		63	178	26	0		204	-
Lights %	85.7%	100%	0%		95.8%	92.9%	90.2%	0%		91.3%	97.8%	100%	0%		98.1%	-
Single-Unit Trucks	0	0	0		0	0	1	0		1	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	2.4%	0%		1.4%	0%	0%	0%		0%	-
Buses	1	0	0		1	2	3	0		5	4	0	0		4	-
Buses %	14.3%	0%	0%		4.2%	7.1%	7.3%	0%		7.2%	2.2%	0%	0%		1.9%	-
Pedestrians	-	-	-	28	-	-	-	-	2	-	-	-	-	107	-	-
Pedestrians%	-	-	-	20.4%		-	-	-	1.5%		-	-	-	78.1%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

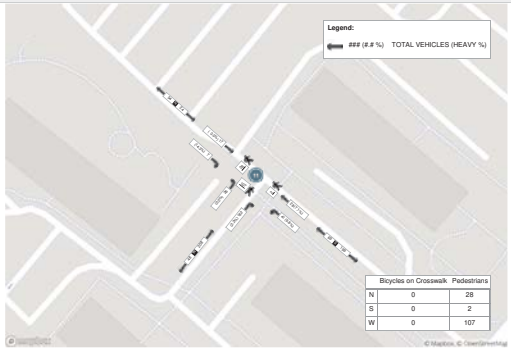
Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (21.66 °C)



Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach LANEWAY					S Approach LANEWAY					W Approach 135 & 145 & 155 HILLCREST DRIVEWAY					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
17:00:00	4	19	0	11	23	8	19	0	0	27	47	1	0	11	48	98
17:15:00	3	15	0	7	18	8	23	0	0	31	29	5	0	7	34	83
17:30:00	4	16	0	14	20	4	12	0	1	16	33	2	0	15	35	71
17:45:00	2	22	0	17	24	9	30	0	0	39	39	3	0	22	42	105
Grand Total	13	72	0	49	85	29	84	0	1	113	148	11	0	55	159	**357**
Approach%	15.3%	84.7%	0%			25.7%	74.3%	0%			93.1%	6.9%	0%			-
Totals %	3.6%	20.2%	0%		23.8%	8.1%	23.5%	0%		31.7%	41.5%	3.1%	0%		44.5%	-
PHF	0.81	0.82	0		0.89	0.81	0.7	0		0.72	0.79	0.55	0		0.83	-
Heavy	0	1	0		1	2	0	0		2	0	0	0		0	-
Heavy %	0%	1.4%	0%		1.2%	6.9%	0%	0%		1.8%	0%	0%	0%		0%	-
Lights	13	71	0		84	27	84	0		111	148	11	0		159	-
Lights %	100%	98.6%	0%		98.8%	93.1%	100%	0%		98.2%	100%	100%	0%		100%	-
Single-Unit Trucks	0	1	0		1	0	0	0		0	0	0	0		0	-
Single-Unit Trucks %	0%	1.4%	0%		1.2%	0%	0%	0%		0%	0%	0%	0%		0%	-
Buses	0	0	0		0	2	0	0		2	0	0	0		0	-
Buses %	0%	0%	0%		0%	6.9%	0%	0%		1.8%	0%	0%	0%		0%	-
Pedestrians	-	-	-	48	-	-	-	-	1	-	-	-	-	53	-	-
Pedestrians%	-	-	-	45.7%		-	-	-	1%		-	-	-	50.5%		-
Bicycles on Crosswalk	-	-	-	1	-	-	-	-	0	-	-	-	-	2	-	-
Bicycles on Crosswalk%	-	-	-	1%		-	-	-	0%		-	-	-	1.9%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	1	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.96 °C)



Spectrum

Turning Movement Count
Location Name: CONFEDERATION PARKWAY & HILLCREST AVE
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach CONFEDERATION PKWY						E Approach HILLCREST AVE						S Approach CONFEDERATION PKWY						W Approach HILLCREST AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:45:00	39	138	44	0	8	210	68	35	19	0	6	122	20	191	4	0	3	215	8	29	23	0	4	59	606
17:00:00	36	142	50	0	5	228	68	38	15	0	10	121	19	176	5	0	4	203	12	27	31	0	4	75	627
17:15:00	31	179	43	1	4	249	68	38	15	0	11	121	31	196	7	0	7	236	9	31	35	0	5	75	681
17:30:00	40	166	47	0	7	263	63	33	17	0	5	113	21	189	10	0	3	223	5	32	28	1	5	66	642
Grand Total	132	610	186	1	24	950	267	144	66	0	32	477	91	756	26	0	17	873	34	119	117	1	18	270	**3530**
Approach%	14.3%	65.6%	20%	0.1%			56%	30.2%	13.8%	0%			10.4%	86.6%	3%	0%			12.6%	43.7%	43.3%	0.4%			
Totals %	3.7%	23.8%	7.3%	0%		36.9%	10.5%	5.6%	2.6%	0%		18.7%	3.6%	29.6%	1%	0%		34.2%	1.3%	4.6%	4.6%	0%		10.4%	-
PHF	0.83	0.89	0.93	0.25		0.93	0.96	0.95	0.87	0		0.98	0.73	0.95	0.93	0		0.92	0.71	0.92	0.84	0.25		0.9	-
Heavy	0	7	1	0		8	6	3	3	0		12	7	1	0	0		8	0	2	0	0		2	-
Heavy %	0%	1.1%	0.5%	0%		0.9%	2.2%	2.1%	4.5%	0%		2.5%	7.7%	0.1%	0%	0%		0.9%	0%	1.7%	0%	0%		0.7%	-
Lights	133	602	185	1		922	260	141	62	0		463	84	750	26	0		860	34	116	117	1		268	-
Lights %	100%	98.9%	99.5%	100%		99.1%	97.8%	97.9%	95.5%	0%		97.5%	92.3%	99.9%	100%	0%		98.7%	100%	98.3%	100%	100%		98.3%	-
Single-Unit Trucks	0	2	1	0		3	2	0	0	0		2	0	0	0	0		0	0	0	0	0		0	-
Single-Unit Trucks %	0%	0.3%	0.5%	0%		0.3%	0.7%	0%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Buses	0	5	0	0		5	4	3	3	0		10	7	1	0	0		8	0	2	0	0		2	-
Buses %	0%	0.8%	0%	0%		0.5%	1.5%	2.1%	4.5%	0%		2.1%	7.7%	0.1%	0%	0%		0.9%	0%	1.7%	0%	0%		0.7%	-
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	22	-	-	-	-	-	29	-	-	-	-	-	16	-	-	-	-	-	17	-	-
Pedestrian%	-	-	-	-	24.2%	-	-	-	-	-	31.9%	-	-	-	-	-	17.6%	-	-	-	-	-	18.7%	-	-
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	2.2%	-	-	-	-	-	3.3%	-	-	-	-	-	1.1%	-	-	-	-	-	1.1%	-	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Spectrum

Turning Movement Count
Location Name: CONFEDERATION PARKWAY & HILLCREST AVE
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (6 . CONFEDERATION PARKWAY & HILLCREST AVE)

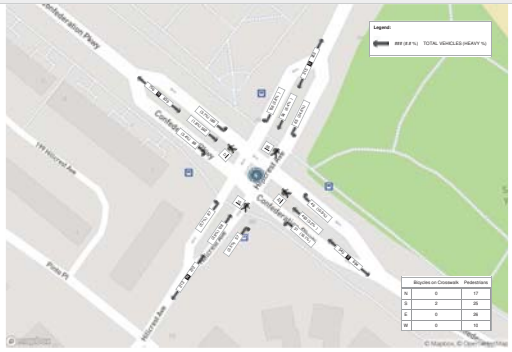
Start Time	N Approach CONFEDERATION PKWY						E Approach HILLCREST AVE						S Approach CONFEDERATION PKWY						W Approach HILLCREST AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:E	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:S	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	7	81	25	0	6	113	15	5	8	0	3	39	6	52	1	0	3	59	5	13	10	0	1	29	239	
07:15:00	11	80	23	0	3	114	22	6	13	0	2	42	7	54	0	0	0	61	8	18	13	0	2	39	256	
07:30:00	12	126	29	0	14	177	32	13	8	0	2	55	14	72	1	0	2	87	10	29	18	0	4	59	375	
07:45:00	11	165	39	0	6	215	33	16	18	0	0	67	14	87	5	0	5	106	19	21	25	0	3	64	452	1311
08:00:00	30	162	54	0	9	246	55	18	12	0	3	85	11	110	8	0	4	129	23	39	26	0	2	88	548	1621
08:15:00	22	158	66	0	4	246	45	18	14	0	9	77	11	141	9	0	9	161	14	25	18	0	2	57	541	1916
08:30:00	15	104	26	0	3	145	26	29	18	0	8	75	11	89	7	0	12	107	9	25	25	0	2	59	386	1927
08:45:00	21	138	43	0	5	202	26	29	21	0	6	76	13	123	7	0	2	143	11	39	19	0	4	68	491	1966
09:00:00	12	123	39	0	5	179	21	23	13	0	3	60	14	92	2	0	5	108	10	21	13	0	2	46	392	1800
09:15:00	10	113	32	0	5	155	27	9	5	0	5	41	14	81	6	0	2	101	13	24	23	0	2	60	357	1676
09:30:00	11	126	31	0	0	168	19	16	17	0	4	52	8	95	1	0	2	104	5	23	14	0	1	42	366	1596
09:45:00	8	121	22	1	4	160	39	11	5	0	1	56	11	77	3	0	3	91	10	23	17	0	0	47	355	1460
***BREAK**																										
16:00:00	22	161	41	0	1	225	62	31	16	0	3	109	19	164	5	0	1	209	9	36	29	0	12	76	636	
16:15:00	36	121	49	0	3	209	63	27	11	0	2	103	20	163	6	0	3	209	14	22	28	0	0	64	622	
16:30:00	34	148	43	0	8	233	74	28	18	0	13	133	18	163	7	0	3	188	9	28	23	0	2	60	633	
16:45:00	39	138	44	0	8	210	68	35	19	0	6	122	20	191	4	0	3	215	8	29	23	0	4	59	606	2437
17:00:00	36	142	50	0	5	228	68	38	15	0	10	121	19	176	5	0	4	203	12	27	31	0	4	70	621	2452
17:15:00	31	174	43	1	4	249	68	38	15	0	11	121	31	193	7	0	7	238	9	31	35	0	5	75	681	2511
17:30:00	40	166	47	0	7	260	63	33	17	0	5	113	21	189	10	0	3	223	5	32	28	1	5	66	642	2550
17:45:00	26	129	50	0	16	207	75	39	13	0	4	126	22	166	7	0	7	175	9	37	35	0	5	86	574	2518
18:00:00	42	133	47	0	9	232	76	45	16	0	12	137	12	164	4	0	7	180	9	48	21	0	5	78	617	2514
18:15:00	33	113	52	0	13	198	62	35	12	0	2	109	22	151	6	0	2	179	7	37	37	0	4	81	567	2450
18:30:00	30	105	41	0	9	186	54	28	13	0	11	95	21	159	5	0	4	185	14	38	19	0	3	74	540	2355
18:45:00	31	109	36	0	11	176	39	27	17	0	9	92	23	155	2	0	1	180	11	31	25	0	0	67	496	2217
Grand Total	572	3146	984	2	151	4714	1159	609	334	0	144	2096	382	3114	118	0	94	3814	252	691	539	1	79	1483	**11909**	-
Approach%	12.1%	66.7%	21.1%	0%		-	55.1%	29%	15.9%	0%		-	10.8%	89.2%	3.3%	0%		-	17%	46.6%	36.3%	0.1%		-	-	-
Totals %	4.8%	26.4%	8.3%	0%		39.6%	9.7%	5.1%	2.8%	0%		17.6%	3.2%	26.1%	1%	0%		32.3%	2.1%	5.8%	4.5%	0%		12.5%	-	-
Heavy	6	55	23	0		-	34	24	28	0		-	22	59	7	0		-	3	23	10	0		-	-	-
Heavy %	1%	1.7%	2.5%	0%		-	2.9%	3.9%	11.4%	0%		-	8.4%	1.8%	5.9%	0%		-	1.2%	3.3%	1.9%	0%		-	-	-
Bicycles	4	9	0	0		-	1	1	1	0		-	0	4	0	0		-	0	1	2	0		-	-	-
Bicycle %	0.7%	0.3%	0%	0%		-	0.1%	0.2%	0.3%	0%		-	0%	0.1%	0%	0%		-	0%	0.1%	0.4%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: CONFEDERATION PARKWAY & HILLCREST AVE
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.95 °C)



Spectrum

Turning Movement Count
Location Name: CONFEDERATION PARKWAY & HILLCREST AVE
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

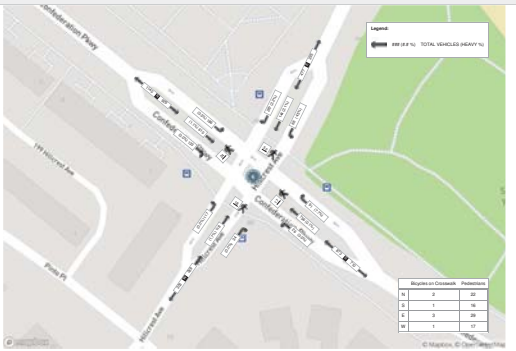
Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach CONFEDERATION PKWY						E Approach HILLCREST AVE						S Approach CONFEDERATION PKWY						W Approach HILLCREST AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	30	162	54	0	9	246	55	18	12	0	3	85	11	110	8	0	4	129	23	39	26	0	2	88	548
08:15:00	22	158	66	0	4	246	45	18	14	0	9	77	11	141	9	0	9	161	14	25	18	0	2	57	541
08:30:00	15	104	26	0	3	145	26	29	18	0	8	75	11	89	7	0	12	107	9	25	25	0	2	59	386
08:45:00	21	138	43	0	5	202	26	29	21	0	6	76	13	123	7	0	2	143	11	39	19	0	4	68	491
Grand Total	88	562	189	0	17	839	156	94	65	0	26	313	46	463	31	0	27	540	57	128	87	0	10	272	**1966**
Approach%	10.5%	67%	22.5%	0%			49.8%	29.9%	20.8%	0%			8.5%	85.7%	5.7%	0%			21%	47.1%	32%	0%			
Totals %	4.5%	28.6%	9.6%	0%		42.7%	7.9%	4.8%	3.3%	0%		16%	2.3%	23.6%	1.6%	0%		27.5%	2.9%	6.5%	4.4%	0%		13.8%	-
PHF	0.73	0.87	0.72	0		0.85	0.71	0.81	0.77	0		0.93	0.88	0.82	0.89	0		0.84	0.62	0.82	0.84	0		0.77	-
Heavy	3	10	7	0		20	6	6	16	0		28	5	15	5	0		25	2	5	5	0		12	-
Heavy %	3.4%	1.8%	3.7%	0%		2.4%	3.8%	6.4%	24.6%	0%		8.9%	10.9%	3.2%	16.1%	0%		4.6%	3.5%	3.9%	5.7%	0%		4.4%	-
Lights	85	552	182	0		819	150	88	49	0		287	41	448	26	0		515	55	122	82	0		259	-
Lights %	96.6%	98.2%	96.3%	0%		97.6%	96.2%	93.6%	75.4%	0%		91.7%	89.1%	96.8%	83.9%	0%		95.4%	96.5%	96.1%	94.3%	0%		95.6%	-
Single-Unit Trucks	2	2	0	0		4	0	0	0	0		0	0	3	0	0		3	1	2	1	0		4	-
Single-Unit Trucks %	2.3%	0.5%	0%	0%		0.8%	0%	0%	0%	0%		0%	0%	0.6%	0%	0%		0.6%	1.8%	0%	1.1%	0%		0.7%	-
Buses	1	7	7	0		15	6	6	16	0		28	5	11	5	0		21	1	5	4	0		10	-
Buses %	1.1%	1.2%	3.7%	0%		1.8%	3.8%	6.4%	24.6%	0%		8.9%	10.9%	2.4%	16.1%	0%		3.9%	1.8%	3.9%	4.6%	0%		3.7%	-
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	17	-	-	-	-	-	26	-	-	-	-	-	25	-	-	-	-	-	10	-	-
Pedestrian%	-	-	-	-	21.2%	-	-	-	-	-	33.5%	-	-	-	-	-	31.3%	-	-	-	-	-	12.5%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	2.5%	-	-	-	-	-	0%	-	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Turning Movement Count (24 . HILLCREST AVE & EAST SITE ACCESS / CONDO ACCESS)

Start Time	N Approach EAST SITE ACCESS							E Approach HILLCREST AVE							S Approach CONDO ACCESS							W Approach HILLCREST AVE							SE Approach CONDO ACCESS							Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	Hard Left N:SE	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Bear Left E:SE	Left E:S	UTurn E:E	Peds E:	Approach Total	Hard Right S:SE	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Bear Right W:SE	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total	Hard Right SE:S	Bear Right SE:N	Bear Left SE:S	Hard Left SE:W	UTurn SE:SE	Peds SE:	Approach Total		
07:00:00	0	0	1	0	0	4	1	0	20	1	0	0	0	21	0	0	0	1	0	1	1	0	0	29	0	0	0	29	0	0	0	0	0	0	0	52	
07:15:00	0	0	1	0	0	4	1	2	20	1	2	0	0	25	0	1	0	1	0	1	2	1	0	41	0	0	1	42	1	0	0	0	0	0	1	71	
07:30:00	1	0	1	0	0	6	2	1	30	0	0	0	0	31	0	0	0	0	0	2	0	0	0	60	2	0	0	62	2	0	0	0	0	1	2	97	
07:45:00	2	0	1	0	0	9	3	0	41	0	0	1	0	42	0	0	0	0	0	6	0	0	0	60	5	0	3	65	2	0	0	0	0	4	2	112	332
08:00:00	1	0	0	0	0	1	1	0	59	1	1	1	0	62	0	0	0	0	0	0	0	0	0	81	0	0	0	81	1	0	0	1	0	5	2	146	436
08:15:00	3	0	0	0	0	4	3	2	45	1	0	0	0	48	0	0	0	0	0	5	0	1	0	86	1	0	1	88	0	0	0	1	0	4	1	140	495
08:30:00	2	0	1	0	0	1	3	0	39	0	0	0	2	39	0	1	0	0	0	3	1	0	0	67	1	0	0	68	1	0	0	1	0	4	2	112	510
08:45:00	1	1	0	0	0	2	2	1	40	0	0	0	1	41	0	1	0	1	0	3	2	4	1	87	1	0	0	87	1	0	0	1	0	4	2	114	512
09:00:00	1	0	0	0	0	2	1	2	33	1	0	0	0	36	0	1	0	2	0	3	3	2	0	65	0	0	0	67	2	0	0	2	0	2	4	114	480
09:15:00	1	0	2	0	0	1	3	1	37	0	0	0	1	39	0	1	0	0	0	2	1	1	0	68	2	0	0	71	0	0	0	0	0	0	0	113	453
09:30:00	0	0	2	0	0	3	2	2	38	0	2	1	1	43	0	1	0	0	0	7	1	0	0	59	1	0	0	60	0	0	0	1	0	9	1	107	446
09:45:00	1	0	2	0	0	2	3	4	40	0	0	0	1	44	0	0	0	0	0	0	0	0	0	52	4	0	1	56	2	0	0	2	0	2	4	107	441
BREAK																																					
16:00:00	4	0	9	0	0	5	13	11	86	0	3	1	0	101	0	0	0	0	0	1	0	0	2	72	5	0	0	79	2	0	1	0	0	0	3	196	
16:15:00	2	0	10	0	0	10	12	7	89	0	1	1	2	99	0	1	0	2	0	4	3	0	0	72	4	0	1	76	1	0	0	0	0	4	1	196	
16:30:00	5	0	11	0	0	7	16	11	95	2	1	0	0	109	0	0	0	0	0	4	0	0	2	61	6	0	0	69	3	0	0	0	0	4	3	197	
16:45:00	2	0	6	0	0	7	8	8	99	0	0	0	4	106	1	1	0	0	0	5	2	1	1	71	4	0	2	77	1	0	0	0	0	7	1	194	777
17:00:00	7	0	12	0	0	9	19	13	74	1	1	0	1	91	0	0	0	2	0	1	2	1	0	74	5	0	0	80	1	0	0	0	0	1	1	193	774
17:15:00	4	0	10	0	0	8	14	11	79	1	2	0	2	95	0	0	0	1	0	4	1	2	1	72	5	0	0	80	2	0	0	1	0	3	3	198	772
17:30:00	4	0	9	0	0	12	13	9	80	0	1	0	2	92	0	1	0	0	0	2	1	2	0	67	5	0	0	74	1	0	0	1	0	2	2	180	755
17:45:00	5	0	11	0	0	13	16	13	85	0	0	0	2	98	0	2	0	0	0	4	2	1	0	68	10	0	1	79	0	0	0	0	0	4	0	195	756
18:00:00	7	0	8	0	0	7	15	13	95	1	2	0	3	111	0	1	0	0	0	7	1	0	0	74	3	0	0	77	1	2	0	0	0	6	3	207	779
18:15:00	7	0	6	0	0	7	13	12	72	1	3	0	4	92	0	1	0	0	0	4	1	0	1	82	5	0	1	89	0	0	0	1	0	5	1	201	783
18:30:00	5	0	14	0	0	10	19	17	64	0	1	1	4	83	0	0	0	0	0	3	0	0	1	74	3	0	0	78	0	0	0	0	0	4	0	180	783
18:45:00	3	0	16	0	0	9	19	13	59	2	1	0	9	75	0	4	0	1	0	2	5	1	0	64	5	0	0	70	1	0	0	0	0	3	1	170	768
Grand Total	68	1	133	0	0	143	202	163	1416	13	24	6	28	1622	1	17	0	11	0	79	29	17	9	1560	77	0	11	1683	25	2	1	12	0	79	40	3576	-
Approach%	33.7%	0.5%	65.8%	0%	0%		-	10%	87.3%	0.8%	1.5%	0.4%		-	3.4%	58.6%	0%	37.9%	0%		-	1%	0.5%	93.9%	4.6%	0%		-	63.5%	5%	2.5%	30%	0%		-	-	-
Totals %	1.9%	0%	3.7%	0%	0%		5.6%	4.6%	39.6%	0.4%	0.7%	0.2%		45.4%	0%	0.5%	0%	0.3%	0%		0.8%	0.5%	0.3%	44.2%	2.2%	0%		47.1%	0.7%	0.1%	0%	0.3%	0%		1.1%	-	-
Heavy	0	0	1	0	0		-	2	48	0	2	0		-	0	0	1	0		-	-	1	0	47	1	0		-	1	0	0	1	0		-	-	-
Heavy %	0%	0%	0.8%	0%	0%		-	1.2%	3.4%	0%	8.3%	0%		-	0%	0%	9.1%	0%		-	5.9%	0%	3%	1.3%	0%		-	4%	0%	0%	8.3%	0%		-	-	-
Bicycles	1	0	1	0	0		-	1	4	0	0	0		-	0	0	1	0	0		-	0	0	2	0	0		-	0	0	0	0	0		-	-	-
Bicycle %	1.5%	0%	0.8%	0%	0%		-	0.6%	0.3%	0%	0%	0%		-	0%	0%	9%	0%	0%		-	0%	0%	0.1%	0%	0%		-	0%	0%	0%	0%	0%		-	-	-

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (21.66 °C)



Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.95 °C)

Start Time	N Approach EAST SITE ACCESS							E Approach HILLCREST AVE							S Approach CONDO ACCESS							W Approach HILLCREST AVE							SE Approach CONDO ACCESS							Int. Total (15 min)
	Right	Thru	Left	Hard Left	UTurn	Peds	Approach Total	Right	Thru	Bear Left	Left	UTurn	Peds	Approach Total	Hard Right	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Bear Right	Thru	Left	UTurn	Peds	Approach Total	Hard Right	Bear Right	Bear Left	Hard Left	UTurn	Peds	Approach Total	
08:00:00	1	0	0	0	0	1	1	0	59	1	1	1	0	62	0	0	0	0	0	0	0	0	0	81	0	0	0	81	1	0	0	1	0	5	2	146
08:15:00	3	0	0	0	0	4	3	2	45	1	0	0	0	48	0	0	0	0	0	5	0	1	0	86	1	0	1	88	0	0	0	1	0	4	1	140
08:30:00	2	0	1	0	0	1	3	0	39	0	0	0	2	39	0	1	0	0	0	3	1	0	0	67	1	0	0	68	1	0	0	1	0	4	2	112
08:45:00	1	1	0	0	0	2	2	1	40	0	0	0	1	41	0	1	0	1	0	3	2	4	1	87	1	0	0	87	1	0	0	1	0	4	2	114
Grand Total	7	1	1	0	0	6	9	3	183	2	1	1	3	189	0	2	0	1	0	16	3	5	1	295	3	0	1	304	3	0	0	4	0	17	7	512
Approach%	77.8%	11.1%	11.1%	0%	0%		-	1.6%	96.3%	1.1%	0.5%	0.5%		-	0%	66.7%	0%	33.3%	0%		-	1.6%	0.3%	97%	1%	0%		-	42.9%	0%	0%	57.1%	0%		-	-	-
Totals %	1.4%	0.2%	0.2%	0%	0%		1.8%	0.6%	35.5%	0.4%	0.2%	0.2%		36.9%	0%	0.4%	0%	0.2%	0%		0.6%	1%	0.2%	57.6%	0.6%	0%		59.4%	0.6%	0%	0%	0.8%	0%		1.4%	-	-
PHF	0.58	0.25	0.25	0	0		0.75	0.38	0.77	0.5	0.25	0.25		0.76	0	0.5	0	0.25	0		0.38	0.31	0.25	0.86	0.75	0		0.86	0.75	0	0	1	0		0.88	-	-
Heavy	0	0	0	0	0		0	0	27	0	0	0		27	0	0	0	0	0		0	0	0	14	0	0		14	0	0	0	0	0		0	-	-
Heavy %	0%	0%	0%	0%	0%		0%	0%	14.8%	0%	0%	0%		14.3%	0%	0%	0%	0%	0%		0%	0%	0%	5.4%	0%	0%		5.3%	0%	0%	0%	0%	0%		0%	-	-
Lights	1	1	1	0	0		2	3	156	2	1	1		163	0	2	0	1	0		3	5	1	279	3	0		288	3	0	0	4	0		7	-	-
Lights %	100%	100%	100%	0%	0%		100%	100%	85.2%	100%	100%	100%		86.7%	0%	100%	0%	100%	0%		100%	100%	100%	94.6%	100%	0%		94.7%	100%	0%	0%	100%	0%		100%	-	-
Single-Unit Trucks	0	0	0	0	0		0	0	1	0	0	0		1	0	0	0	0	0		0	0	0	1	0	0		1	0	0	0	0	0		0	-	-
Single-Unit Trucks %	0%	0%	0%	0%	0%		0%	0%	0.5%	0%	0%	0%		0.5%	0%	0%	0%	0%	0%		0%	0%	0%	0.3%	0%	0%		0.3%	0%	0%	0%	0%	0%		0%	-	-
Buses	0	0	0	0	0		0	0	26	0	0	0		26	0	0	0	0	0		0	0	0	15	0	0		15	0	0	0	0	0		0	-	-
Buses %	0%	0%	0%	0%	0%		0%	0%	14.3%	0%	0%	0%		13.8%	0%	0%	0%	0%	0%		0%	0%	0%	5.1%	0%	0%		4.9%	0%	0%	0%	0%	0%		0%	-	-
Articulated Trucks	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	-	-
Articulated Trucks %	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%		0%	-	-
Pedestrians	-	-	-	-	-	6	-	-	-	-	-	-	3	-	-	-	-	-	-	16	-	-	-	-	-	1	-	-	-	-	-	-	17	-	-	-
Pedestrians%	-	-	-	-	-	14%	-	-	-	-	-	-	7%	-	-	-	-	-	-	37.2%	-	-	-	-	-	2.3%	-	-	-	-	-	-	39.5%	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-
Bicycles on Crosswalk%	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-
Bicycles on Road	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	-	-
Bicycles on Road%	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-

Peak Hour: 05:45 PM - 06:45 PM Weather: Overcast Clouds (21.66 °C)



Peak Hour: 05:45 PM - 06:45 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach EAST SITE ACCESS							E Approach HILLCREST AVE							S Approach CONDO ACCESS							W Approach HILLCREST AVE							SE Approach CONDO ACCESS							Int. Total (15 min)
	Right	Thru	Left	Hard Left	UTurn	Peds	Approach Total	Right	Thru	Bear Left	Left	UTurn	Peds	Approach Total	Hard Right	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Bear Right	Thru	Left	UTurn	Peds	Approach Total	Hard Right	Bear Right	Bear Left	Hard Left	UTurn	Peds	Approach Total	
17:45:00	5	0	11	0	0	13	16	13	85	0	0	0	2	99	0	2	0	0	0	4	2	1	0	68	10	0	1	79	0	0	0	0	0	4	0	195
18:00:00	7	0	6	0	0	7	13	13	95	1	2	0	3	111	0	1	0	0	0	7	1	0	0	76	3	0	0	77	1	2	0	0	0	6	3	207
18:15:00	7	0	6	0	0	7	13	22	72	1	3	0	4	98	0	1	0	0	0	4	1	0	1	82	5	0	1	89	0	0	0	1	0	5	1	201
18:30:00	5	0	14	0	0	10	19	17	64	0	1	1	4	83	0	0	0	0	0	3	0	0	1	79	3	0	0	79	0	0	0	0	0	4	0	180
Grand Total	24	0	39	0	0	37	63	65	316	2	6	1	13	390	0	4	0	0	0	18	4	1	2	296	21	0	2	322	1	2	0	1	0	19	4	783
Approach%	38.1%	0%	61.9%	0%	0%		-	16.7%	81%	0.5%	1.5%	0.3%			0%	100%	0%	0%	0%			0.3%	0.6%	92.5%	6.5%	0%			25%	50%	0%	25%	0%			
Totals %	3.1%	0%	5%	0%	0%		8%	8.3%	40.4%	0.3%	0.8%	0.1%		49.8%	0%	0.5%	0%	0%	0%		0.5%	0.1%	0.3%	38.1%	2.7%	0%		41.1%	0.1%	0.3%	0%	0.1%	0%		0.5%	-
PHF	0.89	0	0.7	0	0		0.83	0.74	0.83	0.5	0.5	0.25		0.88	0	0.5	0	0	0		0.5	0.25	0.5	0.91	0.53	0		0.91	0.25	0.25	0	0.25	0		0.33	-
Heavy	0	0	0	0	0		0	0	2	0	0	0		2	0	0	0	0	0		0	0	0	3	0	0		3	0	0	0	0	0		0	-
Heavy %	0%	0%	0%	0%	0%		0%	0%	0.6%	0%	0%	0%		0.5%	0%	0%	0%	0%	0%		0%	0%	0%	1.7%	0%	0%		1.6%	0%	0%	0%	0%	0%		0%	-
Lights	24	0	39	0	0		63	65	314	2	6	1		388	0	4	0	0	0		4	1	2	293	21	0		317	1	2	0	1	0		4	-
Lights %	100%	0%	100%	0%	0%		100%	100%	99.4%	100%	100%	100%		99.5%	0%	100%	0%	0%	0%		100%	100%	100%	98.3%	100%	0%		98.4%	100%	100%	0%	100%	0%		100%	-
Single-Unit Trucks	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%		0.6%	0%	0%	0%	0%	0%		0%	-
Buses	0	0	0	0	0		0	0	1	0	0	0		1	0	0	0	0	0		0	0	0	0	3	0	0		3	0	0	0	0	0		0	-
Buses %	0%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%	0%		0.3%	0%	0%	0%	0%	0%		0%	0%	0%	1%	0%	0%		0.9%	0%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	0	0	0	0		0	0	1	0	0	0		1	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%	0%		0.3%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	-	35	-	-	-	-	-	-	13	-	-	-	-	-	-	17	-	-	-	-	-	2	-	-	-	-	-	-	18	-	-
Pedestrians%	-	-	-	-	-	39.3%	-	-	-	-	-	-	14.6%	-	-	-	-	-	-	19.1%	-	-	-	-	-	2.2%	-	-	-	-	-	-	20.2%	-	-
Bicycles on Crosswalk	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	-	2.2%	-	-	-	-	-	-	0%	-	-	-	-	-	-	1.1%	-	-	-	-	-	0%	-	-	-	-	-	-	1.1%	-	-
Bicycles on Road	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	-	-
Bicycles on Road%	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.96 °C)



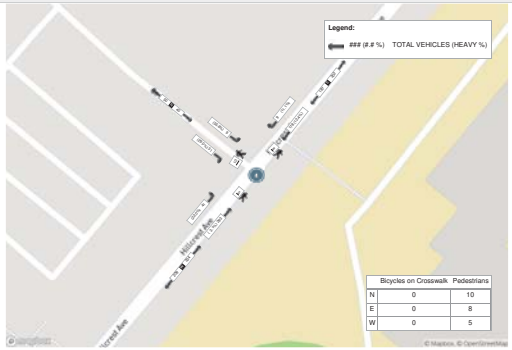
Peak Hour: 05:30 PM - 06:30 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach GO ACCESS					E Approach HILLCREST AVE					W Approach HILLCREST AVE					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
17:30:00	19	2	0	9	21	3	86	0	1	89	67	10	0	0	77	187
17:45:00	10	4	0	9	14	0	98	0	2	98	81	7	0	2	88	200
18:00:00	3	4	0	2	7	4	103	0	0	107	78	6	0	0	84	198
18:15:00	15	0	0	5	15	2	88	0	2	90	81	8	0	1	89	194
Grand Total	47	10	0	25	57	9	375	0	5	384	307	31	0	3	338	**779**
Approach%	82.5%	17.5%	0%		-	2.3%	97.7%	0%		-	90.8%	9.2%	0%		-	-
Totals %	6%	1.3%	0%		7.3%	1.2%	48.1%	0%		49.3%	39.4%	4%	0%		43.4%	-
PHF	0.62	0.63	0		0.68	0.56	0.91	0		0.9	0.95	0.78	0		0.95	-
Heavy	10	4	0		14	0	4	0		4	1	9	0		10	-
Heavy %	21.3%	40%	0%		24.6%	0%	1.1%	0%		1%	0.3%	29%	0%		3%	-
Lights	37	6	0		43	9	371	0		380	306	22	0		328	-
Lights %	78.7%	60%	0%		75.4%	100%	98.9%	0%		99%	99.7%	71%	0%		97%	-
Single-Unit Trucks	0	2	0		2	0	1	0		1	1	0	0		1	-
Single-Unit Trucks %	0%	20%	0%		3.5%	0%	0.3%	0%		0.3%	0.3%	0%	0%		0.3%	-
Buses	10	2	0		12	0	2	0		2	0	9	0		9	-
Buses %	21.3%	20%	0%		21.1%	0%	0.5%	0%		0.5%	0%	29%	0%		2.7%	-
Articulated Trucks	0	0	0		0	0	1	0		1	0	0	0		0	-
Articulated Trucks %	0%	0%	0%		0%	0%	0.3%	0%		0.3%	0%	0%	0%		0%	-
Pedestrians	-	-	-	22	-	-	-	-	5	-	-	-	-	2	-	-
Pedestrians%	-	-	-	66.7%		-	-	-	15.2%		-	-	-	6.1%		-
Bicycles on Crosswalk	-	-	-	3	-	-	-	-	0	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	9.1%		-	-	-	0%		-	-	-	3%		-
Bicycles on Road	0	0	0	0	-	0	1	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Turning Movement Count (4 . HILLCREST AVE & GO ACCESS)

Start Time	N Approach GO ACCESS					E Approach HILLCREST AVE					W Approach HILLCREST AVE					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	5	2	0	1	7	1	18	0	0	19	25	9	0	0	34	60	
07:15:00	9	0	0	1	9	1	18	1	1	20	47	5	1	1	53	82	
07:30:00	11	2	0	5	13	1	27	0	0	28	61	14	0	0	75	116	
07:45:00	12	4	0	8	16	5	32	0	3	37	69	6	0	1	75	128	386
08:00:00	9	1	0	4	10	3	50	0	3	53	86	13	0	3	99	162	488
08:15:00	6	2	0	2	8	3	47	0	1	50	81	11	0	0	92	150	556
08:30:00	6	3	0	2	9	0	39	0	4	39	62	7	0	0	69	117	557
08:45:00	10	3	0	2	13	3	42	0	0	45	64	10	0	2	74	132	561
09:00:00	3	0	0	0	3	0	38	0	0	38	68	2	0	2	70	111	510
09:15:00	4	2	0	0	6	0	36	0	0	36	69	2	0	0	71	113	473
09:30:00	7	1	0	2	8	0	40	0	0	40	58	2	0	6	60	108	464
09:45:00	2	0	0	4	2	0	43	0	1	43	64	3	0	1	67	112	444
BREAK																	
16:00:00	11	8	0	7	19	2	88	0	0	90	73	5	0	0	78	187	
16:15:00	8	1	0	7	9	2	106	0	2	108	74	7	0	0	81	198	
16:30:00	11	1	0	8	12	2	111	0	0	113	70	3	0	1	73	198	
16:45:00	9	3	0	3	12	3	86	0	0	89	70	6	0	0	76	177	760
17:00:00	10	0	0	10	10	1	99	0	0	100	83	3	0	0	86	196	769
17:15:00	7	1	0	8	8	2	89	0	2	91	85	6	0	0	91	190	761
17:30:00	19	2	0	9	21	3	86	0	1	89	67	10	0	0	77	187	750
17:45:00	10	4	0	9	14	0	98	0	2	98	81	7	0	2	88	200	773
18:00:00	3	4	0	2	7	4	103	0	0	107	78	6	0	0	84	198	775
18:15:00	15	0	0	5	15	2	88	0	2	90	81	8	0	1	89	194	779
18:30:00	2	1	0	7	3	3	71	0	1	74	72	6	0	3	78	155	747
18:45:00	9	2	0	11	11	1	60	0	2	61	69	5	1	0	75	147	694
Grand Total	198	47	0	117	245	42	1515	1	25	1558	1657	156	2	23	1815	**3618**	-
Approach%	80.8%	19.2%	0%		-	2.7%	97.2%	0.1%		-	91.3%	8.6%	0.1%		-	-	-
Totals %	5.5%	1.3%	0%		6.8%	1.2%	41.9%	0%		43.1%	45.8%	4.3%	0.1%		50.2%	-	-
Heavy	50	22	0		-	2	48	0		-	26	51	0		-	-	-
Heavy %	25.3%	46.8%	0%		-	4.8%	3.2%	0%		-	1.6%	32.7%	0%		-	-	-
Bicycles	1	0	0		-	0	3	0		-	3	1	0		-	-	-
Bicycle %	0.5%	0%	0%		-	0%	0.2%	0%		-	0.2%	0.6%	0%		-	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.96 °C)



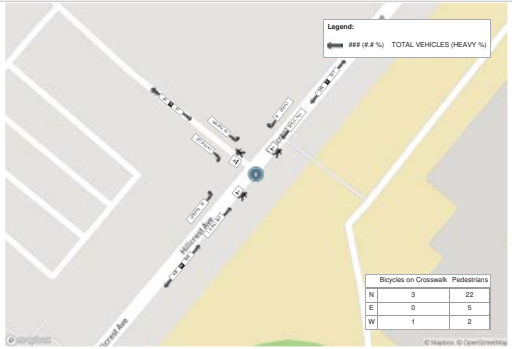
Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach GO ACCESS					E Approach HILLCREST AVE					W Approach HILLCREST AVE					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	9	1	0	4	10	3	50	0	3	53	86	13	0	3	99	162
08:15:00	6	2	0	2	8	3	47	0	1	50	81	11	0	0	92	150
08:30:00	6	3	0	2	9	0	39	0	4	39	62	7	0	0	69	117
08:45:00	10	3	0	2	13	3	42	0	0	45	64	10	0	2	74	132
Grand Total	31	9	0	10	40	9	178	0	8	187	293	41	0	5	334	**561**
Approach%	77.5%	22.5%	0%		-	4.8%	95.2%	0%		-	87.7%	12.3%	0%		-	-
Totals %	5.5%	1.6%	0%		7.1%	1.6%	31.7%	0%		33.3%	52.2%	7.3%	0%		59.5%	-
PHF	0.78	0.75	0		0.77	0.75	0.89	0		0.88	0.85	0.79	0		0.84	-
Heavy	9	5	0		14	1	22	0		23	9	9	0		18	-
Heavy %	29%	55.6%	0%		35%	11.1%	12.4%	0%		12.3%	3.1%	22%	0%		5.4%	-
Lights	22	4	0		26	8	156	0		164	284	32	0		316	-
Lights %	71%	44.4%	0%		65%	88.9%	87.6%	0%		87.7%	96.9%	78%	0%		94.6%	-
Single-Unit Trucks	0	1	0		1	0	1	0		1	0	0	0		0	-
Single-Unit Trucks %	0%	11.1%	0%		2.5%	0%	0.6%	0%		0.5%	0%	0%	0%		0%	-
Buses	9	4	0		13	1	21	0		22	9	9	0		18	-
Buses %	29%	44.4%	0%		32.5%	11.1%	11.8%	0%		11.8%	3.1%	22%	0%		5.4%	-
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	10	-	-	-	-	8	-	-	-	-	5	-	-
Pedestrians%	-	-	-	43.5%		-	-	-	34.8%		-	-	-	21.7%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	1	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Turning Movement Count (5 . HILLCREST AVE & LANEWAY)

Start Time	N Approach LANEWAY					E Approach HILLCREST AVE					W Approach HILLCREST AVE					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	12	10	0	1	22	5	14	0	0	19	25	14	0	0	39	80	
07:15:00	19	12	0	4	31	3	21	0	0	24	37	13	0	3	50	105	
07:30:00	25	14	0	8	39	7	29	0	0	36	65	14	0	3	79	154	
07:45:00	31	15	0	12	46	5	37	0	2	42	58	17	0	5	75	163	502
08:00:00	29	22	1	5	52	4	52	0	1	56	75	22	0	2	97	205	627
08:15:00	31	8	0	9	39	10	42	0	4	52	86	20	0	7	106	197	719
08:30:00	33	13	0	6	46	5	41	0	0	46	55	10	0	4	65	157	722
08:45:00	36	16	0	26	52	4	47	0	4	51	61	31	0	17	92	195	754
09:00:00	20	11	0	7	31	10	30	0	2	40	60	18	0	12	78	149	698
09:15:00	9	15	0	4	24	9	33	0	0	42	53	13	0	7	66	132	633
09:30:00	17	15	0	3	32	7	36	0	3	43	50	13	0	4	63	138	614
09:45:00	13	7	0	3	20	11	41	0	3	52	52	12	0	4	64	136	555
BREAK																	
16:00:00	30	9	0	5	39	10	79	0	0	89	69	26	0	2	95	223	
16:15:00	22	11	0	10	33	13	103	0	2	116	62	25	0	3	87	236	
16:30:00	27	12	0	10	39	11	91	0	3	102	64	26	0	10	90	231	
16:45:00	29	13	0	4	42	25	95	0	0	120	68	19	0	8	87	249	939
17:00:00	41	17	0	12	58	12	86	0	2	98	69	31	0	11	100	256	972
17:15:00	34	12	0	5	46	18	90	0	2	108	77	29	0	12	106	260	996
17:30:00	27	8	0	13	35	13	86	0	6	99	75	24	0	8	99	233	998
17:45:00	40	17	0	8	57	23	83	0	4	106	68	44	0	10	112	275	1024
18:00:00	36	11	0	3	47	20	86	0	2	106	64	29	0	6	93	246	1014
18:15:00	28	18	0	9	46	11	87	0	6	98	81	42	0	6	123	267	1021
18:30:00	24	17	0	6	41	17	66	0	3	83	63	32	0	16	95	219	1007
18:45:00	26	16	0	8	42	9	56	0	0	65	58	36	0	6	94	201	933
Grand Total	639	319	1	181	959	262	1431	0	49	1693	1495	560	0	166	2055	**4707**	-
Approach%	66.6%	33.3%	0.1%		-	15.5%	84.5%	0%		-	72.7%	27.3%	0%		-	-	-
Totals %	13.6%	6.8%	0%		20.4%	5.6%	30.4%	0%		36%	31.8%	11.9%	0%		43.7%	-	-
Heavy	11	3	0		-	14	84	0		-	72	7	0		-	-	-
Heavy %	1.7%	0.9%	0%		-	5.3%	5.9%	0%		-	4.8%	1.3%	0%		-	-	-
Bicycles	0	0	0		-	0	2	0		-	5	0	0		-	-	-
Bicycle %	0%	0%	0%		-	0%	0.1%	0%		-	0.3%	0%	0%		-	-	-

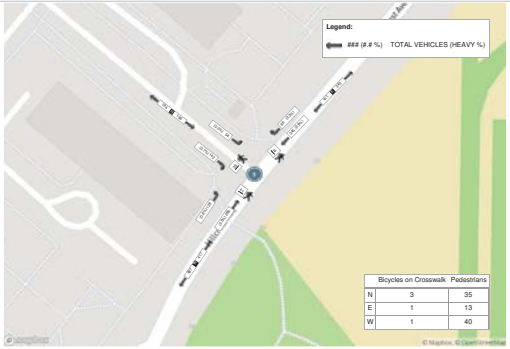
Peak Hour: 05:30 PM - 06:30 PM Weather: Overcast Clouds (21.66 °C)



Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach LANEWAY					E Approach HILLCREST AVE					W Approach HILLCREST AVE					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	29	22	1	5	52	4	52	0	1	56	75	22	0	2	97	205
08:15:00	31	8	0	9	39	10	42	0	4	52	86	20	0	7	106	197
08:30:00	33	13	0	6	46	5	41	0	0	46	55	10	0	4	65	157
08:45:00	36	16	0	26	52	4	47	0	4	51	61	31	0	17	92	195
Grand Total	129	59	1	46	189	23	182	0	9	205	277	83	0	30	360	**754**
Approach%	68.3%	31.2%	0.5%		-	11.2%	88.8%	0%		-	76.9%	23.1%	0%		-	-
Totals %	17.1%	7.8%	0.1%		25.1%	3.1%	24.1%	0%		27.2%	36.7%	11%	0%		47.7%	-
PHF	0.9	0.67	0.25		0.91	0.58	0.88	0		0.92	0.81	0.67	0		0.85	-
Heavy	3	1	0		4	5	25	0		30	16	0	0		16	-
Heavy %	2.3%	1.7%	0%		2.1%	21.7%	13.7%	0%		14.6%	5.8%	0%	0%		4.4%	-
Lights	126	58	1		185	18	157	0		175	261	83	0		344	-
Lights %	97.7%	98.3%	100%		97.9%	78.3%	86.3%	0%		85.4%	94.2%	100%	0%		95.6%	-
Single-Unit Trucks	0	0	0		0	1	0	0		1	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%		0%	4.3%	0%	0%		0.5%	0%	0%	0%		0%	-
Buses	3	1	0		4	4	25	0		29	16	0	0		16	-
Buses %	2.3%	1.7%	0%		2.1%	17.4%	13.7%	0%		14.1%	5.8%	0%	0%		4.4%	-
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	46	-	-	-	-	9	-	-	-	-	30	-	-
Pedestrians%	-	-	-	54.1%	-	-	-	-	10.6%	-	-	-	-	35.3%	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	1	0	0	0	-	-
Bicycles on Road%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

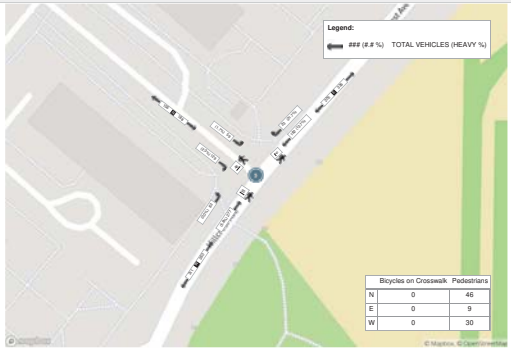
Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (21.66 °C)



Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach LANEWAY					E Approach HILLCREST AVE					W Approach HILLCREST AVE					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
17:00:00	41	17	0	12	58	12	86	0	2	98	69	31	0	11	100	256
17:15:00	34	12	0	5	46	18	90	0	2	108	77	29	0	12	106	260
17:30:00	27	8	0	13	35	13	86	0	6	99	75	24	0	8	99	233
17:45:00	40	17	0	8	57	23	83	0	4	106	68	44	0	10	112	275
Grand Total	142	54	0	38	196	66	345	0	14	411	289	128	0	41	417	**1024**
Approach%	72.4%	27.6%	0%			16.1%	83.9%	0%			69.3%	30.7%	0%			-
Totals %	13.9%	5.3%	0%		19.1%	6.4%	33.7%	0%		40.1%	28.2%	12.5%	0%		40.7%	-
PHF	0.87	0.79	0		0.84	0.72	0.96	0		0.95	0.94	0.73	0		0.93	-
Heavy	1	0	0		1	2	10	0		12	10	1	0		11	-
Heavy %	0.7%	0%	0%		0.5%	3%	2.9%	0%		2.9%	3.5%	0.8%	0%		2.6%	-
Lights	141	54	0		195	64	335	0		399	279	127	0		406	-
Lights %	99.3%	100%	0%		99.5%	97%	97.1%	0%		97.1%	96.5%	99.2%	0%		97.4%	-
Single-Unit Trucks	1	0	0		1	0	1	0		1	0	1	0		1	-
Single-Unit Trucks %	0.7%	0%	0%		0.5%	0%	0.3%	0%		0.2%	0%	0.8%	0%		0.2%	-
Buses	0	0	0		0	2	9	0		11	10	0	0		10	-
Buses %	0%	0%	0%		0%	3%	2.6%	0%		2.7%	3.5%	0%	0%		2.4%	-
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	35	-	-	-	-	13	-	-	-	-	40	-	-
Pedestrians%	-	-	-	37.6%		-	-	-	14%		-	-	-	43%		-
Bicycles on Crosswalk	-	-	-	3	-	-	-	-	1	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	3.2%		-	-	-	1.1%		-	-	-	1.1%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	1	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.96 °C)



Spectrum

Turning Movement Count
Location Name: HILLCREST AVE & WEST SITE ACCESS
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 05:15 PM - 06:15 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach WEST SITE ACCESS						E Approach HILLCREST AVE						S Approach BUILDING ACCESS						W Approach HILLCREST AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
17:15:00	13	0	2	0	7	15	0	87	0	0	2	87	2	0	0	0	3	2	0	79	4	1	0	84	188
17:30:00	5	0	2	0	6	7	0	83	1	0	3	84	1	0	0	0	6	1	1	67	5	0	0	73	165
17:45:00	6	0	6	0	16	11	1	91	0	0	3	92	3	0	0	0	5	0	0	76	4	0	0	80	183
18:00:00	14	0	1	0	4	15	1	98	0	0	3	99	0	0	0	0	5	0	1	72	4	0	0	77	191
Grand Total	**38**	**0**	**10**	**0**	**35**	**48**	**2**	**359**	**1**	**0**	**11**	**362**	**3**	**0**	**0**	**0**	**19**	**3**	**2**	**294**	**17**	**1**	**0**	**314**	**727**
Approach%	79.2%	0%	20.8%	0%			0.6%	99.2%	0.3%	0%			100%	0%	0%	0%			0.6%	93.6%	5.4%	0.3%			-
Totals %	5.2%	0%	1.4%	0%		6.6%	0.3%	49.4%	0.1%	0%		49.8%	0.4%	0%	0%	0%		0.4%	0.3%	40.4%	2.3%	0.1%		43.2%	-
PHF	0.68	0	0.5	0		0.8	0.5	0.92	0.25	0		0.91	0.38	0	0	0		0.38	0.5	0.93	0.85	0.25		0.93	-
Heavy	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	0	5	0	0		5	-
Heavy %	0%	0%	0%	0%		0%	0%	0.6%	0%	0%		0.6%	0%	0%	0%	0%		0%	0%	1.7%	0%	0%		1.6%	-
Lights	38	0	10	0		48	2	357	1	0		360	3	0	0	0		3	2	289	17	1		309	-
Lights %	100%	0%	100%	0%		100%	100%	99.4%	100%	0%		99.4%	100%	0%	0%	0%		100%	100%	98.3%	100%	100%		98.4%	-
Single-Unit Trucks	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	2	0	0		3	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	0%	0%	0%	0%		0%	0%	0.7%	0%	0%		0.9%	-
Buses	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	3	0	0		3	-
Buses %	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	0%	0%	0%	0%		0%	0%	1%	0%	0%		1%	-
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	31	-	-	-	-	-	11	-	-	-	-	-	17	-	-	-	-	-	0	-	-
Pedestrian%	-	-	-	-	47.7%	-	-	-	-	-	16.9%	-	-	-	-	-	26.2%	-	-	-	-	-	0%	-	-
Bicycles on Crosswalk	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	6.2%	-	-	-	-	-	0%	-	-	-	-	-	3.1%	-	-	-	-	-	0%	-	-
Bicycles on Road	0	0	0	0	0	-	0	1	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Spectrum

Turning Movement Count
Location Name: HILLCREST AVE & WEST SITE ACCESS
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (25 . HILLCREST AVE & WEST SITE ACCESS)

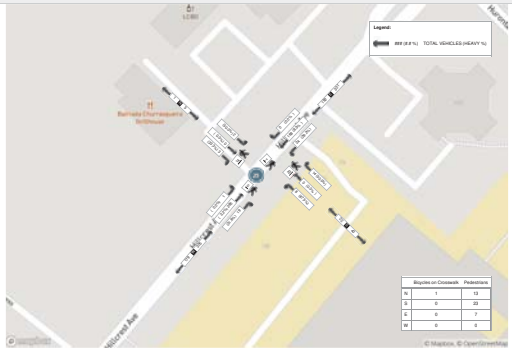
Start Time	N Approach WEST SITE ACCESS						E Approach HILLCREST AVE						S Approach BUILDING ACCESS						W Approach HILLCREST AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	0	0	0	0	4	0	0	22	1	0	0	23	0	0	0	1	0	1	0	29	0	0	0	30	53	
07:15:00	1	0	0	0	5	1	0	13	6	0	1	19	1	0	0	0	1	1	2	40	0	0	0	42	63	
07:30:00	0	0	0	0	8	0	0	0	30	3	0	33	4	0	0	0	2	4	4	57	3	0	0	64	101	
07:45:00	1	0	1	0	10	2	0	33	10	0	0	43	4	0	2	0	4	6	8	61	0	0	0	69	138	327
08:00:00	1	0	0	0	1	1	0	50	11	0	0	61	5	0	1	0	4	6	7	80	1	0	0	88	156	440
08:15:00	1	0	0	0	2	1	0	45	3	0	2	48	6	0	5	0	10	10	4	78	0	0	0	82	141	518
08:30:00	0	0	1	0	1	1	0	40	0	0	3	40	0	0	0	0	5	0	0	66	0	0	0	66	107	524
08:45:00	0	0	0	0	1	0	0	44	0	0	1	44	0	0	0	0	2	0	0	71	0	0	0	71	115	519
09:00:00	1	0	0	0	1	1	1	34	0	0	0	35	0	0	0	0	4	0	0	67	1	0	0	68	104	467
09:15:00	1	0	0	0	1	1	0	39	1	0	0	40	0	0	0	0	2	0	0	70	0	0	1	70	111	427
09:30:00	1	0	1	0	2	2	0	39	0	0	1	39	1	0	0	0	7	1	0	60	2	0	0	62	104	434
09:45:00	2	0	0	0	3	2	0	42	1	0	2	43	1	0	0	0	1	1	0	55	1	0	0	56	102	421
BREAK																										
16:00:00	9	0	6	0	2	14	0	86	0	0	0	86	0	0	0	0	2	0	0	73	8	0	0	81	181	
16:15:00	7	0	3	0	5	10	0	93	0	0	5	93	1	0	0	0	6	1	0	71	1	0	1	72	174	
16:30:00	2	0	1	0	6	4	0	103	0	0	0	103	0	0	0	0	4	0	0	69	2	0	0	71	178	
16:45:00	3	0	1	0	4	4	0	100	0	0	0	100	0	0	0	0	6	0	0	73	3	0	0	76	180	715
17:00:00	9	0	2	0	9	11	0	80	0	0	3	80	0	0	0	0	3	0	0	79	4	0	0	82	173	707
17:15:00	13	0	2	0	7	15	0	87	0	0	2	87	2	0	0	0	3	2	0	79	4	1	0	84	188	719
17:30:00	5	0	2	0	6	7	0	83	1	0	3	84	1	0	0	0	6	1	1	67	5	0	0	73	165	726
17:45:00	6	0	6	0	16	11	1	91	0	0	3	92	0	0	0	0	5	0	0	76	4	0	0	80	183	709
18:00:00	14	0	1	0	4	15	1	98	0	0	3	99	0	0	0	0	5	0	1	72	4	0	0	77	191	727
18:15:00	7	0	2	0	2	9	0	81	1	0	0	82	0	0	0	0	6	0	0	84	4	0	0	88	179	718
18:30:00	0	0	5	0	6	10	0	66	0	0	4	66	0	0	0	0	2	0	0	76	2	0	0	78	154	707
18:45:00	2	0	6	0	4	8	0	63	0	0	4	63	0	0	1	0	2	1	0	67	2	0	0	70	142	666
Grand Total	**91**	**0**	**39**	**0**	**111**	**150**	**3**	**1462**	**39**	**0**	**55**	**1503**	**25**	**0**	**9**	**0**	**92**	**34**	**26**	**1618**	**52**	**1**	**2**	**1705**	**3347**	-
Approach%	70%	0%	30%	0%		-	0.2%	97.3%	2.5%	0%		-	72.3%	0%	26.3%	0%		-	1.6%	95.2%	3.1%	0.1%		-	-	-
Totals %	2.7%	0%	1.2%	0%		2.9%	0.1%	43.4%	1.1%	0%		44.6%	0.7%	0%	0.3%	0%		1%	0.8%	48.1%	1.5%	0%		50.9%	-	-
Heavy	1	0	1	0		-	0	41	9	0		-	10	0	7	0		-	0	38	0	0		-	-	-
Heavy %	1.1%	0%	2.6%	0%		-	0%	2.8%	23.7%	0%		-	40%	0%	77.8%	0%		-	28.6%	2.3%	0%	0%		-	-	-
Bicycles	0	0	0	0		-	0	3	0	0		-	0	0	0	0		-	0	3	1	0		-	-	-
Bicycle %	0%	0%	0%	0%		-	0%	0.2%	0%	0%		-	0%	0%	0%	0%		-	0%	0.2%	1.9%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: HILLCREST AVE & WEST SITE ACCESS
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 07:45 AM - 08:45 AM Weather: Broken Clouds (16.95 °C)



Spectrum

Turning Movement Count
Location Name: HILLCREST AVE & WEST SITE ACCESS
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

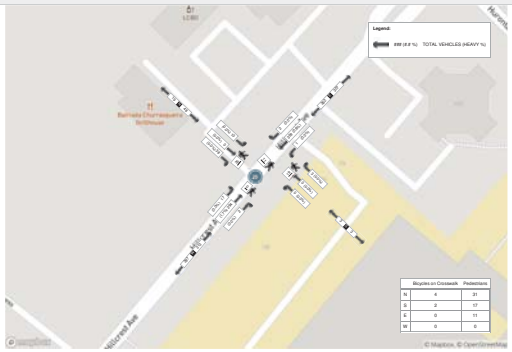
Peak Hour: 07:45 AM - 08:45 AM Weather: Broken Clouds (16.95 °C)

Start Time	N Approach WEST SITE ACCESS						E Approach HILLCREST AVE						S Approach BUILDING ACCESS						W Approach HILLCREST AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
07:45:00	1	0	1	0	10	2	0	33	10	0	2	43	4	0	2	0	4	6	8	61	0	0	0	69	120
08:00:00	1	0	0	0	1	1	0	50	11	0	0	61	5	0	1	0	4	6	7	80	1	0	0	88	156
08:15:00	1	0	0	0	2	1	0	45	3	0	2	48	6	0	5	0	10	10	4	78	0	0	0	82	141
08:30:00	0	0	1	0	1	1	0	40	0	0	3	40	0	0	0	0	5	0	0	66	0	0	0	66	107
Grand Total	**3**	**0**	**2**	**0**	**14**	**5**	**0**	**168**	**24**	**0**	**7**	**192**	**14**	**0**	**8**	**0**	**23**	**22**	**19**	**285**	**1**	**0**	**0**	**305**	**524**
Approach%	60%	0%	40%	0%			0%	87.5%	12.5%	0%			63.6%	0%	36.4%	0%			6.2%	93.4%	0.3%	0%			-
Totals %	0.6%	0%	0.4%	0%		1%	0%	32.1%	4.6%	0%		36.6%	2.7%	0%	1.5%	0%		4.2%	3.6%	54.4%	0.2%	0%		58.2%	-
PHF	0.75	0	0.5	0		0.63	0	0.84	0.55	0		0.79	0.7	0	0.4	0		0.55	0.59	0.89	0.25	0		0.87	-
Heavy	1	0	1	0		2	0	14	7	0		21	7	0	7	0		14	6	9	0	0		15	-
Heavy %	33.3%	0%	50%	0%		40%	0%	8.3%	29.2%	0%		10.9%	50%	0%	87.5%	0%		63.6%	31.6%	3.2%	0%	0%		4.9%	-
Lights	2	0	1	0		3	0	154	17	0		171	7	0	1	0		8	13	276	1	0		290	-
Lights %	66.7%	0%	50%	0%		60%	0%	91.7%	70.8%	0%		89.1%	50%	0%	12.5%	0%		36.4%	68.4%	96.8%	100%	0%		95.1%	-
Single-Unit Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	2	0	0		2	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0.7%	0%	0%		0.7%	-
Buses	1	0	1	0		2	0	14	7	0		21	7	0	7	0		14	6	7	0	0		13	-
Buses %	33.3%	0%	50%	0%		40%	0%	8.3%	29.2%	0%		10.9%	50%	0%	87.5%	0%		63.6%	31.6%	2.5%	0%	0%		4.3%	-
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	13	-	-	-	-	-	7	-	-	-	-	-	23	-	-	-	-	-	0	-	-
Pedestrian%	-	-	-	-	29.5%	-	-	-	-	-	15.9%	-	-	-	-	-	52.3%	-	-	-	-	-	0%	-	-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	2.3%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	1	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-

Turning Movement Count (7 . HURONTARIO ST & AGNES ST)

Start Time	N Approach HURONTARIO ST					S Approach HURONTARIO ST					W Approach AGNES ST					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	3	137	0	0	140	112	2	0	0	114	5	4	0	0	9	263	
07:15:00	2	151	0	1	153	154	0	0	0	154	8	3	0	4	11	318	
07:30:00	1	136	0	1	137	152	5	0	0	157	6	9	0	8	15	309	
07:45:00	10	174	0	3	184	153	4	0	1	157	3	6	0	3	9	350	1240
08:00:00	9	188	0	3	197	177	3	0	1	180	13	15	0	10	28	405	1382
08:15:00	3	167	0	0	170	156	2	0	0	158	19	31	0	10	50	378	1442
08:30:00	4	162	0	0	166	172	0	0	1	172	12	17	0	10	29	367	1500
08:45:00	17	193	0	0	210	179	8	0	1	187	9	9	0	8	18	415	1565
09:00:00	18	200	0	1	218	176	5	0	0	181	5	11	0	10	16	415	1575
09:15:00	17	150	0	0	167	162	9	0	1	171	10	6	0	6	16	354	1551
09:30:00	13	187	0	0	200	169	6	0	1	175	12	7	0	7	19	394	1578
09:45:00	14	185	0	1	199	148	5	0	0	153	10	6	0	10	16	368	1531
BREAK																	
16:00:00	8	218	1	2	227	222	4	0	1	226	9	12	0	12	21	474	
16:15:00	15	220	0	4	235	223	6	0	1	229	15	10	0	13	25	489	
16:30:00	8	202	0	1	210	220	4	0	0	224	10	11	0	14	21	455	
16:45:00	10	227	0	0	237	195	8	1	1	204	12	8	0	13	20	461	1879
17:00:00	7	237	0	0	244	211	4	1	1	216	14	8	0	23	22	482	1887
17:15:00	11	218	0	1	229	216	2	0	1	218	17	9	0	15	26	473	1871
17:30:00	19	219	0	1	238	198	5	0	1	203	11	10	0	17	21	462	1878
17:45:00	17	218	0	0	235	188	3	2	1	193	12	9	0	17	21	449	1856
18:00:00	8	221	0	0	229	219	7	1	0	227	14	17	0	10	31	487	1871
18:15:00	15	231	0	1	246	201	6	1	0	208	7	10	0	13	17	471	1869
18:30:00	7	218	0	0	225	202	9	0	1	211	7	5	0	19	12	448	1855
18:45:00	9	230	0	1	239	192	2	0	1	194	10	11	0	6	21	454	1860
Grand Total	245	4689	1	21	4935	4397	109	6	15	4512	250	244	0	258	494	**9941**	-
Approach%	5%	95%	0%		-	97.5%	2.4%	0.1%		-	50.6%	49.4%	0%		-	-	-
Totals %	2.5%	47.2%	0%		49.6%	44.2%	1.1%	0.1%		45.4%	2.5%	2.5%	0%		5%	-	-
Heavy	8	207	0		-	228	1	0		-	3	3	0		-	-	-
Heavy %	3.3%	4.4%	0%		-	5.2%	0.9%	0%		-	1.2%	1.2%	0%		-	-	-
Bicycles	0	3	0		-	1	0	0		-	0	0	0		-	-	-
Bicycle %	0%	0.1%	0%		-	0%	0%	0%		-	0%	0%	0%		-	-	-

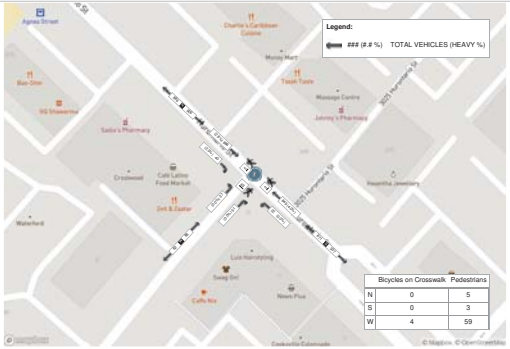
Peak Hour: 05:15 PM - 06:15 PM Weather: Overcast Clouds (21.66 °C)



Peak Hour: 08:45 AM - 09:45 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach HURONTARIO ST					S Approach HURONTARIO ST					W Approach AGNES ST					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
08:45:00	17	193	0	0	210	179	8	0	1	187	9	9	0	8	18	415
09:00:00	18	200	0	1	218	176	5	0	0	181	5	11	0	10	16	415
09:15:00	17	150	0	0	167	162	9	0	1	171	10	6	0	6	16	354
09:30:00	13	187	0	0	200	169	6	0	1	175	12	7	0	7	19	394
Grand Total	65	730	0	1	795	686	28	0	3	714	36	33	0	31	69	**1578**
Approach%	8.2%	91.8%	0%		-	96.1%	3.9%	0%		-	52.2%	47.8%	0%		-	-
Totals %	4.1%	46.3%	0%		50.4%	43.5%	1.8%	0%		45.2%	2.3%	2.1%	0%		4.4%	-
PHF	0.9	0.91	0		0.91	0.96	0.78	0		0.95	0.75	0.75	0		0.91	-
Heavy	3	47	0		50	50	0	0		50	1	0	0		1	-
Heavy %	4.6%	6.4%	0%		6.3%	7.3%	0%	0%		7%	2.8%	0%	0%		1.4%	-
Lights	62	683	0		745	636	28	0		664	35	33	0		68	-
Lights %	95.4%	93.6%	0%		93.7%	92.7%	100%	0%		93%	97.2%	100%	0%		98.6%	-
Single-Unit Trucks	2	22	0		24	24	0	0		24	0	0	0		0	-
Single-Unit Trucks %	3.1%	3%	0%		3%	3.5%	0%	0%		3.4%	0%	0%	0%		0%	-
Buses	1	22	0		23	25	0	0		25	1	0	0		1	-
Buses %	1.5%	3%	0%		2.9%	3.6%	0%	0%		3.5%	2.8%	0%	0%		1.4%	-
Articulated Trucks	0	3	0		3	1	0	0		1	0	0	0		0	-
Articulated Trucks %	0%	0.4%	0%		0.4%	0.1%	0%	0%		0.1%	0%	0%	0%		0%	-
Pedestrians	-	-	-	1	-	-	-	-	3	-	-	-	-	31	-	-
Pedestrians%	-	-	-	2.9%		-	-	-	8.6%		-	-	-	88.6%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

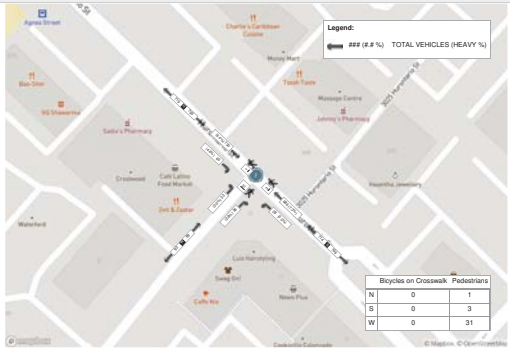
Peak Hour: 04:15 PM - 05:15 PM Weather: Overcast Clouds (21.66 °C)



Peak Hour: 04:15 PM - 05:15 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach HURONTARIO ST					S Approach HURONTARIO ST					W Approach AGNES ST					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
16:15:00	15	220	0	4	235	223	6	0	1	229	15	10	0	13	25	489
16:30:00	8	202	0	1	210	220	4	0	0	224	10	11	0	14	21	455
16:45:00	10	227	0	0	237	195	8	1	1	204	12	8	0	13	20	461
17:00:00	7	237	0	0	244	211	4	1	1	216	14	8	0	23	22	482
Grand Total	40	886	0	5	926	849	22	2	3	873	51	37	0	63	88	**1887**
Approach%	4.3%	95.7%	0%			97.3%	2.5%	0.2%			58%	42%	0%			-
Totals %	2.1%	47%	0%		49.1%	45%	1.2%	0.1%		46.3%	2.7%	2%	0%		4.7%	-
PHF	0.67	0.93	0		0.95	0.95	0.69	0.5		0.95	0.85	0.84	0		0.88	-
Heavy	1	25	0		26	34	0	0		34	0	0	0		0	-
Heavy %	2.5%	2.8%	0%		2.8%	4%	0%	0%		3.9%	0%	0%	0%		0%	-
Lights	39	861	0		900	815	22	2		839	51	37	0		88	-
Lights %	97.5%	97.2%	0%		97.2%	96%	100%	100%		96.1%	100%	100%	0%		100%	-
Single-Unit Trucks	1	8	0		9	15	0	0		15	0	0	0		0	-
Single-Unit Trucks %	2.5%	0.9%	0%		1%	1.8%	0%	0%		1.7%	0%	0%	0%		0%	-
Buses	0	17	0		17	18	0	0		18	0	0	0		0	-
Buses %	0%	1.9%	0%		1.8%	2.1%	0%	0%		2.1%	0%	0%	0%		0%	-
Articulated Trucks	0	0	0		0	1	0	0		1	0	0	0		0	-
Articulated Trucks %	0%	0%	0%		0%	0.1%	0%	0%		0.1%	0%	0%	0%		0%	-
Pedestrians	-	-	-	5	-	-	-	-	3	-	-	-	-	59	-	-
Pedestrians%	-	-	-	7%		-	-	-	4.2%		-	-	-	83.1%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	4	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	5.6%		-
Bicycles on Road	0	3	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 08:45 AM - 09:45 AM Weather: Broken Clouds (16.96 °C)



Peak Hour: 05:15 PM - 06:15 PM Weather: Broken Clouds (22.74 °C)

Start Time	N Approach HURONTARIO ST						E Approach DUNDAS ST						S Approach HURONTARIO ST						W Approach DUNDAS ST						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
17:15:00	28	262	38	0	32	328	35	262	38	0	65	335	24	248	36	1	34	309	34	173	36	0	54	243	1215
17:30:00	25	294	40	0	37	359	31	185	31	0	42	247	37	217	39	0	46	293	29	193	36	1	81	259	1158
17:45:00	35	238	41	0	23	314	31	245	26	0	56	302	37	227	34	0	37	298	28	184	37	0	69	249	1163
18:00:00	35	196	38	0	18	269	34	223	25	0	43	282	33	248	34	0	26	315	33	177	35	0	45	245	1111
Grand Total	123	990	157	0	110	1270	131	915	120	0	206	1166	131	940	143	1	143	1215	124	727	144	1	249	996	**4647**
Approach%	9.7%	78%	12.4%	0%		-	11.2%	78.5%	10.3%	0%		-	10.8%	77.4%	11.8%	0.1%		-	12.4%	73%	14.5%	0.1%		-	-
Totals %	2.6%	21.3%	3.4%	0%		27.3%	2.8%	19.7%	2.6%	0%		25.1%	2.8%	20.2%	3.1%	0%		26.1%	2.7%	15.6%	3.1%	0%		21.4%	-
PHF	0.88	0.84	0.96	0		0.88	0.94	0.87	0.79	0		0.87	0.89	0.95	0.92	0.25		0.96	0.91	0.94	0.97	0.25		0.96	-
Heavy	0	19	3	0		22	1	22	2	0		25	1	22	4	0		27	2	20	0	0		22	-
Heavy %	0%	1.9%	1.9%	0%		1.7%	0.8%	2.4%	1.7%	0%		2.1%	0.8%	2.3%	2.8%	0%		2.2%	1.6%	2.8%	0%	0%		2.2%	-
Lights	123	971	154	0		1248	129	893	118	0		1140	130	918	139	1		1188	122	707	144	1		974	-
Lights %	100%	98.1%	98.1%	0%		98.3%	98.5%	97.6%	98.3%	0%		97.8%	99.2%	97.7%	97.2%	100%		97.8%	98.4%	97.2%	100%	100%		97.8%	-
Single-Unit Trucks	0	3	1	0		4	1	10	1	0		12	0	5	4	0		9	2	5	0	0		7	-
Single-Unit Trucks %	0%	0.3%	0.6%	0%		0.3%	0.8%	1.1%	0.8%	0%		1%	0%	0.5%	2.8%	0%		0.7%	1.6%	0.7%	0%	0%		0.7%	-
Buses	0	16	2	0		18	0	11	0	0		11	0	16	0	0		16	0	11	0	0		11	-
Buses %	0%	1.6%	1.3%	0%		1.4%	0%	1.2%	0%	0%		0.9%	0%	1.7%	0%	0%		1.3%	0%	1.5%	0%	0%		1.1%	-
Articulated Trucks	0	0	0	0		0	0	1	1	0		2	1	1	0	0		2	0	4	0	0		4	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.1%	0.8%	0%		0.2%	0.8%	0.1%	0%	0%		0.2%	0%	0.6%	0%	0%		0.4%	-
Bicycles on Road	0	0	0	0		0	1	0	0	0		1	0	0	0	0		0	0	0	0	0		0	-
Bicycles on Road %	0%	0%	0%	0%		0%	0.8%	0%	0%	0%		0.1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	107	-	-	-	-	-	204	-	-	-	-	-	143	-	-	-	-	-	245	-	-
Pedestrians%	-	-	-	-	15.1%		-	-	-	-	28.8%		-	-	-	-	20.2%		-	-	-	-	34.6%		-
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	4	-	-
Bicycles on Crosswalk%	-	-	-	-	0.4%		-	-	-	-	0.3%		-	-	-	-	0%		-	-	-	-	0.6%		-

Turning Movement Count (1 . HURONTARIO ST & DUNDAS ST)

Start Time	N Approach HURONTARIO ST						E Approach DUNDAS ST						S Approach HURONTARIO ST						W Approach DUNDAS ST						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	9	158	21	0	12	188	10	55	6	0	13	71	12	130	16	0	7	158	15	204	11	0	11	230	647	
07:15:00	9	175	20	0	12	204	7	69	7	0	15	83	16	170	27	0	19	213	20	227	14	0	36	261	761	
07:30:00	7	186	26	0	9	219	8	95	16	0	19	119	21	212	26	0	14	259	16	278	16	0	21	310	907	
07:45:00	14	219	33	1	8	267	8	85	18	0	17	111	13	212	31	0	17	256	23	274	13	0	26	310	944	3259
08:00:00	17	194	46	0	19	257	15	91	15	0	23	121	17	231	22	0	23	270	26	270	16	0	43	312	960	3572
08:15:00	6	248	31	0	22	285	15	105	21	0	23	141	13	235	29	0	14	277	30	319	22	0	33	371	1074	3885
08:30:00	14	202	30	0	13	246	14	106	12	0	23	132	15	217	29	0	15	261	33	285	18	0	32	336	975	3953
08:45:00	17	182	22	0	22	221	22	135	13	0	28	170	22	269	33	0	17	324	29	227	27	0	31	283	998	4007
09:00:00	17	168	30	0	22	215	17	102	21	0	39	140	9	232	30	0	21	271	27	260	25	0	43	312	938	3985
09:15:00	17	166	27	0	19	210	17	102	19	0	45	138	18	203	33	0	25	254	22	236	42	0	34	300	902	3813
09:30:00	22	168	25	1	24	216	19	116	18	0	38	153	27	217	26	0	27	270	23	192	25	0	38	240	879	3717
09:45:00	17	194	38	0	14	249	17	122	25	0	34	164	19	207	32	0	31	258	26	186	29	0	51	241	912	3631
BREAK																										
16:00:00	26	197	43	1	32	267	36	237	25	0	40	298	25	202	28	0	41	255	32	156	21	0	45	209	1029	
16:15:00	24	251	36	1	22	312	35	187	27	1	48	250	24	278	42	0	36	344	37	171	33	0	67	241	1147	
16:30:00	33	209	30	0	44	272	32	258	24	1	48	316	29	216	43	0	48	288	33	186	36	0	82	255	1131	
16:45:00	25	266	31	1	35	323	21	260	22	0	41	303	20	194	40	1	44	255	28	218	29	0	52	275	1156	4463
17:00:00	40	254	29	0	33	323	38	214	23	0	68	275	28	230	34	0	43	292	29	159	32	0	77	220	1110	4544
17:15:00	28	262	38	0	32	328	35	262	38	0	65	335	24	248	36	1	34	309	34	173	36	0	54	243	1215	4612
17:30:00	25	294	40	0	37	359	31	185	31	0	42	247	37	217	39	0	46	293	29	193	36	1	81	259	1158	4639
17:45:00	35	238	41	0	23	314	31	245	26	0	56	302	37	227	34	0	37	298	28	184	37	0	69	249	1163	4646
18:00:00	35	196	38	0	18	269	34	223	25	0	43	282	33	248	34	0	26	315	33	177	35	0	45	245	1111	4647
18:15:00	31	252	48	2	32	333	31	187	40	0	49	258	21	216	44	0	36	281	28	188	43	0	78	259	1131	4563
18:30:00	32	219	49	0	31	300	41	207	38	0	44	286	20	240	32	0	36	292	36	146	29	0	59	211	1089	4494
18:45:00	25	214	46	1	28	286	41	183	32	0	51	256	19	250	42	0	43	311	42	164	32	0	59	238	1091	4422
Grand Total	525	5112	818	8	563	6463	575	3831	542	2	913	4951	519	5301	782	2	700	6604	679	5073	657	1	1167	6410	**24428**	-
Approach%	8.1%	79.1%	12.7%	0.1%		-	11.6%	77.4%	10.9%	0%		-	7.9%	80.3%	11.8%	0%		-	10.6%	79.1%	10.2%	0%		-	-	-
Totals %	2.1%	20.9%	3.3%	0%		26.5%	2.4%	15.7%	2.2%	0%		20.3%	2.1%	21.7%	3.2%	0%		27%	2.8%	20.8%	2.7%	0%		26.2%	-	-
Heavy	15	182	19	0		-	28	168	9	0		-	14	189	34	0		-	20	175	13	0		-	-	-
Heavy %	2.9%	3.6%	2.3%	0%		-	4.9%	4.4%	1.7%	0%		-	2.7%	3.6%	4.3%	0%		-	2.9%	3.4%	2%	0%		-	-	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Few Clouds (13.17 °C)



Peak Hour: 08:00 AM - 09:00 AM Weather: Few Clouds (13.17 °C)

Start Time	N Approach HURONTARIO ST						E Approach DUNDAS ST						S Approach HURONTARIO ST						W Approach DUNDAS ST						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
08:00:00	17	194	46	0	19	257	15	91	15	0	23	121	17	231	22	0	23	270	26	270	16	0	43	312	960
08:15:00	6	248	31	0	22	285	15	105	21	0	23	141	13	235	29	0	14	277	30	319	22	0	33	371	1074
08:30:00	14	202	30	0	13	246	14	106	12	0	23	132	15	217	29	0	15	261	33	285	18	0	32	336	975
08:45:00	17	182	22	0	22	221	22	135	13	0	28	170	22	269	33	0	17	324	29	227	27	0	31	283	998
Grand Total	54	826	129	0	76	1009	66	437	61	0	97	564	67	952	113	0	69	1132	118	1101	83	0	139	1302	**4007**
Approach%	5.4%	81.9%	12.8%	0%		-	11.7%	77.5%	10.8%	0%		-	5.9%	84.1%	10%	0%		-	9.1%	84.6%	6.4%	0%		-	-
Totals %	1.3%	20.6%	3.2%	0%		25.2%	1.6%	10.9%	1.5%	0%		14.1%	1.7%	23.8%	2.8%	0%		28.3%	2.9%	27.5%	2.1%	0%		32.5%	-
PHF	0.79	0.83	0.7	0		0.89	0.75	0.81	0.73	0		0.83	0.76	0.88	0.86	0		0.87	0.89	0.86	0.77	0		0.88	-
Heavy	2	37	6	0		45	8	38	1	0		47	3	46	7	0		56	7	34	4	0		45	-
Heavy %	3.7%	4.5%	4.7%	0%		4.5%	12.1%	8.7%	1.6%	0%		8.3%	4.5%	4.8%	6.2%	0%		4.9%	5.9%	3.1%	4.8%	0%		3.5%	-
Lights	52	789	123	0		964	58	399	60	0		517	64	906	106	0		1076	111	1067	79	0		1257	-
Lights %	96.3%	95.5%	95.3%	0%		95.5%	87.9%	91.3%	98.4%	0%		91.7%	95.5%	95.2%	93.8%	0%		95.1%	94.1%	96.9%	95.2%	0%		96.5%	-
Single-Unit Trucks	0	9	3	0		12	0	12	1	0		13	2	10	5	0		17	3	14	2	0		19	-
Single-Unit Trucks %	0%	1.1%	2.3%	0%		1.2%	0%	2.7%	1.6%	0%		2.3%	3%	1.1%	4.4%	0%		1.5%	2.5%	1.3%	2.4%	0%		1.5%	-
Buses	2	26	2	0		30	7	22	0	0		29	1	34	1	0		36	3	16	2	0		21	-
Buses %	3.7%	3.1%	1.6%	0%		3%	10.6%	5%	0%	0%		5.1%	1.5%	3.6%	0.9%	0%		3.2%	2.5%	1.5%	2.4%	0%		1.6%	-
Articulated Trucks	0	2	1	0		3	1	4	0	0		5	0	2	1	0		3	1	4	0	0		5	-
Articulated Trucks %	0%	0.2%	0.8%	0%		0.3%	1.5%	0.9%	0%	0%		0.9%	0%	0.2%	0.9%	0%		0.3%	0.8%	0.4%	0%	0%		0.4%	-
Bicycles on Road	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	-
Bicycles on Road %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	75	-	-	-	-	-	97	-	-	-	-	-	69	-	-	-	-	-	138	-	-
Pedestrians%	-	-	-	-	19.7%		-	-	-	-	25.5%		-	-	-	-	18.1%		-	-	-	-	36.2%		-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	0.3%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0.3%		-

Spectrum

Turning Movement Count
Location Name: HURONTARIO ST & FAIRVIEW RD
Date: Wed, Jan 22, 2020 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (8 . HURONTARIO ST & FAIRVIEW RD)

Start Time	N Approach HURONTARIO ST						E Approach FAIRVIEW RD						S Approach HURONTARIO ST						W Approach FAIRVIEW RD						Int. Total (15 min)	Int. Total (1 hr)
	Right N/R	Thru N/S	Left N/L	U-Turn N/N	Peds N	Approach Total	Right E/N	Thru E/W	Left E/S	U-Turn E/E	Peds E	Approach Total	Right S/E	Thru S/N	Left S/W	U-Turn S/S	Peds S	Approach Total	Right W/S	Thru W/E	Left W/N	U-Turn W/W	Peds W	Approach Total		
07:00:00	7	345	2	0	2	356	11	1	19	0	3	31	19	140	4	0	0	162	24	10	22	0	5	56	605	
07:15:00	7	370	6	1	2	386	11	7	19	0	5	37	26	231	5	0	3	268	14	8	27	0	6	49	630	
07:30:00	15	314	5	0	5	334	27	11	33	0	4	71	29	256	6	0	7	291	21	17	32	0	6	70	766	
07:45:00	10	397	7	1	3	418	22	16	39	0	6	79	38	267	9	0	9	314	32	27	32	0	5	91	898	2819
08:00:00	20	479	7	1	2	504	10	27	42	0	10	79	41	323	11	0	5	375	22	27	23	0	10	83	1041	3337
08:15:00	12	344	10	1	2	367	12	16	47	0	5	75	63	260	18	0	6	346	25	26	24	0	3	75	857	3362
08:30:00	8	368	13	0	0	379	21	14	26	0	5	61	55	245	16	0	5	316	23	19	27	0	10	68	824	3620
08:45:00	17	312	4	0	4	333	16	11	37	0	6	64	69	315	12	0	4	376	16	18	33	0	4	59	832	3554
BREAK																										
16:00:00	19	333	13	0	9	364	16	19	17	0	7	52	49	334	15	0	5	397	9	22	15	0	6	46	859	
16:15:00	24	377	12	0	3	416	14	17	25	0	11	66	52	343	21	0	1	416	13	13	10	0	7	28	924	
16:30:00	23	379	12	0	4	418	14	14	34	0	5	62	41	286	18	1	3	348	10	21	8	0	6	29	855	
16:45:00	19	363	12	0	10	394	16	26	32	0	5	74	61	354	26	0	5	421	9	8	12	0	15	29	918	3566
17:00:00	26	426	11	2	4	469	17	26	24	0	8	67	45	295	15	2	8	357	9	15	9	0	8	33	931	3628
17:15:00	24	417	16	1	3	459	13	29	33	0	9	75	44	370	14	0	4	438	17	19	12	0	8	49	1039	3713
17:30:00	29	394	14	0	7	437	10	18	21	0	9	58	49	377	14	0	7	446	11	16	8	0	10	25	966	3915
17:45:00	27	377	11	0	2	416	21	14	26	0	7	61	52	341	20	1	3	414	14	18	18	0	12	62	940	3932
Grand Total	**268**	**5792**	**156**	**7**	**68**	**6233**	**252**	**367**	**474**	**0**	**107**	**963**	**690**	**4799**	**224**	**4**	**75**	**5677**	**278**	**285**	**304**	**0**	**121**	**868**	**13771**	-
Approach%	4.4%	92.9%	2.5%	0.1%		-	26.4%	38.9%	47.7%	0%		-	12.2%	83.8%	3.9%	0.1%		-	32.1%	32.8%	35%	0%		-	-	-
Totals %	2.1%	43%	1.1%	0.1%		45.3%	1.8%	1.9%	3.4%	0%		7.2%	5%	34.6%	1.6%	0%		41.2%	3%	2.1%	2.2%	0%		6.3%	-	-
Heavy	10	165	2	2		-	20	7	19	0		-	23	139	4	0		-	9	7	9	0		-	-	-
Heavy %	3.9%	2.5%	1.3%	28.6%		-	7.9%	2.4%	3.4%	0%		-	3.6%	2.8%	1.8%	0%		-	3.2%	2.5%	3%	0%		-	-	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-

Spectrum

Turning Movement Count
Location Name: HURONTARIO ST & DUNDAS ST
Date: Thu, Sep 19, 2019 Deployment Lead: David Chu

Peak Hour: 05:15 PM - 06:15 PM Weather: Broken Clouds (22.74 °C)


Legend:
888 (0.0 %) TOTAL VEHICLES (HEAVY %)
Hurontario St
Dundas St W
Dundas St
Hurontario Street
Dundas Street
Dundas Street
Dundas St W
Dundas St W
Dundas St W

Peak Hour: 05:00 PM - 06:00 PM Weather: Light Rain (-0.07 °C)



Peak Hour: 05:00 PM - 06:00 PM Weather: Light Rain (-0.07 °C)

Start Time	N Approach HURONTARIO ST						E Approach FAIRVIEW RD						S Approach HURONTARIO ST						W Approach FAIRVIEW RD						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
17:00:00	39	436	11	2	4	465	17	26	24	0	8	67	45	266	15	2	9	337	8	15	9	0	6	32	901
17:15:00	24	417	16	1	3	458	13	28	33	0	9	75	48	270	14	0	4	336	17	10	13	0	6	46	1009
17:30:00	29	396	14	0	7	437	10	19	21	0	9	60	48	277	14	0	7	446	11	16	8	0	10	35	992
17:45:00	27	377	11	0	2	415	21	14	26	0	7	61	52	341	20	1	3	414	14	19	18	0	12	50	940
Grand Total	106	1614	52	3	16	1775	61	88	104	0	33	253	190	1383	63	3	22	1639	50	68	47	0	34	165	**3832**
Approach%	6%	90.9%	2.9%	0.2%			24.1%	34.8%	41.1%	0%			11.6%	84.4%	3.8%	0.2%			30.3%	41.2%	28.5%	0%			
Totals %	2.8%	42.1%	1.4%	0.1%		46.3%	1.6%	2.3%	2.7%	0%		6.6%	5%	36.1%	1.6%	0.1%		42.8%	1.3%	1.8%	1.2%	0%		4.3%	-
PHF	0.91	0.95	0.81	0.38		0.95	0.73	0.78	0.79	0		0.84	0.91	0.92	0.78	0.38		0.93	0.74	0.69	0.65	0		0.82	-
Heavy	0	21	0	0		21	4	0	1	0		5	1	27	0	0		28	0	0	0	0		0	-
Heavy %	0%	1.3%	0%	0%		1.2%	6.6%	0%	1%	0%		2%	0.5%	2%	0%	0%		1.7%	0%	0%	0%	0%		0%	-
Lights	106	1593	52	3		1754	57	88	103	0		248	189	1356	63	3		1611	50	68	47	0		165	-
Lights %	100%	98.7%	100%	100%		98.8%	93.4%	100%	99%	0%		98%	99.5%	98%	100%	100%		98.3%	100%	100%	100%	0%		100%	-
Single-Unit Trucks	0	8	0	0		8	1	0	0	0		1	0	11	0	0		11	0	0	0	0		0	-
Single-Unit Trucks %	0%	0.4%	0%	0%		0.3%	1.6%	0%	0%	0%		0.4%	0%	0.8%	0%	0%		0.7%	0%	0%	0%	0%		0%	-
Buses	0	13	0	0		13	3	0	1	0		4	1	15	0	0		16	0	0	0	0		0	-
Buses %	0%	0.8%	0%	0%		0.8%	4.9%	0%	1%	0%		1.6%	0.5%	1.1%	0%	0%		1%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0.1%	0%	0%		0.1%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	16	-	-	-	-	-	33	-	-	-	-	-	22	-	-	-	-	-	39	-	-
Pedestrians%	-	-	-	-	14.7%	-	-	-	-	-	30.3%	-	-	-	-	-	20.2%	-	-	-	-	-	34.9%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Peak Hour: 07:45 AM - 08:45 AM Weather: Scattered Clouds (-5.72 °C)



Spectrum

Turning Movement Count
Location Name: HURONTARIO ST & HILLCREST AVE / KIRWIN AVE
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 04:00 PM - 05:00 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach HURONTARIO ST						E Approach KIRWIN AVE						S Approach HURONTARIO ST						W Approach HILLCREST AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:00:00	34	172	15	0	6	211	29	56	15	0	7	100	8	209	15	1	6	233	22	28	19	0	10	79	623
16:15:00	21	207	8	0	10	236	24	54	3	0	11	91	12	184	22	0	5	218	29	32	25	0	7	93	638
16:30:00	12	183	16	0	3	211	16	76	6	0	17	100	10	206	24	0	7	242	23	38	13	0	9	74	627
16:45:00	28	167	14	0	8	229	23	63	8	0	9	94	6	195	16	0	3	217	28	31	21	0	11	80	620
Grand Total	85	749	53	0	27	887	92	251	32	0	44	375	36	794	77	1	23	910	101	129	78	0	38	326	**2490**
Approach%	9.6%	84.4%	6%	0%			24.5%	66.9%	8.5%	0%			4%	87.5%	8.5%	0.1%			31.9%	40.7%	24.5%	0%			-
Totals %	3.4%	30.1%	2.1%	0%		35.6%	3.7%	10.1%	1.3%	0%		15.1%	1.4%	32%	3.1%	0%		36.5%	4.1%	5.2%	3.1%	0%		12.8%	-
PHF	0.76	0.9	0.83	0		0.94	0.79	0.8	0.53	0		0.94	0.75	0.95	0.8	0.25		0.94	0.9	0.91	0.78	0		0.94	-
Heavy	1	26	1	0		28	2	2	0	0		4	0	39	2	0		41	0	2	3	0		5	-
Heavy %	1.2%	3.5%	1.9%	0%		3.2%	2.2%	0.8%	0%	0%		1.1%	0%	4.9%	2.6%	0%		4.5%	0%	1.6%	3.8%	0%		1.6%	-
Lights	84	722	52	0		859	90	249	32	0		371	36	757	75	1		869	101	127	75	0		313	-
Lights %	98.8%	96.5%	98.1%	0%		96.8%	97.8%	99.2%	100%	0%		98.9%	100%	95.1%	97.4%	100%		95.5%	100%	98.4%	96.2%	0%		96.4%	-
Single-Unit Trucks	0	10	1	0		11	0	1	0	0		1	0	15	0	0		15	0	1	1	0		2	-
Single-Unit Trucks %	0%	1.3%	1.9%	0%		1.2%	0%	0.4%	0%	0%		0.3%	0%	1.9%	0%	0%		1.6%	0%	0.7%	1.3%	0%		0.6%	-
Buses	1	16	0	0		17	2	1	0	0		3	0	22	2	0		24	0	1	2	0		3	-
Buses %	1.2%	2.1%	0%	0%		1.9%	2.2%	0.4%	0%	0%		0.8%	0%	2.8%	2.6%	0%		2.6%	0%	0.7%	2.6%	0%		0.9%	-
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.2%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	24	-	-	-	-	-	41	-	-	-	-	-	21	-	-	-	-	-	38	-	-
Pedestrian%	-	-	-	-	19%	-	-	-	-	-	30.8%	-	-	-	-	-	15.9%	-	-	-	-	-	28.6%	-	-
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	2.3%	-	-	-	-	-	2.3%	-	-	-	-	-	1.5%	-	-	-	-	-	0.8%	-	-
Bicycles on Road	0	0	0	0	0	-	0	1	0	0	0	-	0	1	0	0	0	-	0	2	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Spectrum

Turning Movement Count
Location Name: HURONTARIO ST & HILLCREST AVE / KIRWIN AVE
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (3 . HURONTARIO ST & HILLCREST AVE / KIRWIN AVE)

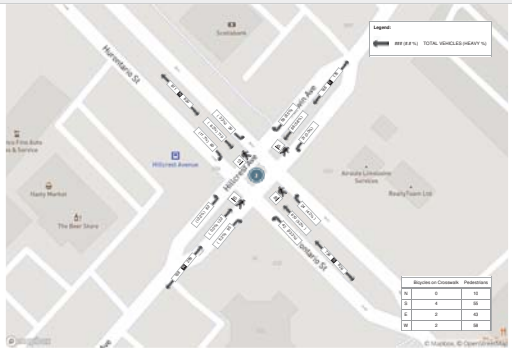
Start Time	N Approach HURONTARIO ST						E Approach KIRWIN AVE						S Approach HURONTARIO ST						W Approach HILLCREST AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right N:N	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	7	131	2	0	4	146	17	10	2	0	4	29	2	106	6	0	1	114	15	10	11	0	2	31	314	
07:15:00	9	135	4	0	6	148	4	8	4	0	5	16	2	127	6	0	0	135	19	15	14	0	5	45	344	
07:30:00	15	113	6	0	2	134	17	10	2	0	1	31	1	159	6	1	1	167	23	18	20	0	4	60	392	
07:45:00	15	163	5	0	7	206	14	10	6	0	5	35	5	147	18	0	13	166	22	18	23	0	3	66	498	1016
08:00:00	22	165	5	0	3	212	11	27	5	0	19	43	4	159	13	0	26	176	21	29	23	0	21	83	514	1716
08:15:00	19	171	4	0	4	193	16	22	6	0	17	44	5	177	8	0	23	190	25	38	21	0	25	84	511	1685
08:30:00	10	162	9	0	1	201	9	17	4	0	4	30	7	165	13	0	5	182	14	29	29	0	7	71	484	1677
08:45:00	10	172	12	0	2	194	22	20	6	0	5	49	8	168	11	0	5	188	25	26	10	0	7	61	492	2001
09:00:00	13	163	9	0	3	204	17	10	7	0	10	39	9	163	7	0	2	179	24	28	20	0	5	73	495	1982
09:15:00	13	150	10	0	3	173	14	12	5	0	5	32	9	155	13	0	4	173	19	23	20	0	5	62	440	1911
09:30:00	22	149	8	0	1	177	12	16	11	0	5	39	9	148	7	0	10	163	24	26	20	0	2	70	449	1876
09:45:00	14	176	12	0	4	222	13	22	15	0	7	48	8	138	7	0	4	154	12	22	14	0	8	56	480	1844
---BREAK---																										
16:00:00	24	172	15	0	6	211	29	56	15	0	7	100	8	209	15	1	6	233	22	28	19	0	10	79	623	
16:15:00	21	207	8	0	10	236	24	54	3	0	11	91	12	184	22	0	5	218	29	32	25	0	7	93	638	
16:30:00	12	183	16	0	3	211	16	76	6	0	17	100	10	206	24	0	7	242	23	38	13	0	9	74	627	
16:45:00	28	167	14	0	8	229	23	63	8	0	9	94	6	195	16	0	3	217	28	31	21	0	11	80	620	2490
17:00:00	29	200	12	1	10	252	14	37	6	0	9	57	7	164	21	0	7	192	29	37	23	0	22	89	600	2467
17:15:00	22	184	10	2	11	216	21	53	7	0	12	93	9	208	21	0	7	238	22	32	26	0	10	90	617	2444
17:30:00	28	200	6	0	4	238	24	49	8	0	10	91	9	173	16	1	5	199	13	45	25	0	15	78	590	2427
17:45:00	29	218	19	0	13	292	21	50	10	0	10	91	10	155	23	0	7	193	29	35	21	0	19	85	611	2416
18:00:00	34	168	14	0	9	212	28	52	11	0	20	91	9	214	26	0	10	249	21	33	25	0	9	79	631	2469
18:15:00	27	211	19	1	4	257	19	47	3	0	9	69	8	173	23	0	5	209	26	34	23	0	5	93	619	2451
18:30:00	24	199	14	0	12	238	21	40	6	0	11	67	8	173	20	0	4	205	24	34	21	0	5	84	593	2454
18:45:00	20	173	10	0	7	209	35	36	9	0	10	91	7	198	16	0	9	231	29	32	23	0	9	93	592	2435
Grand Total	456	4351	241	4	139	4692	442	812	199	0	227	1413	166	4642	352	3	171	4563	668	710	481	0	227	1759	**12706**	-
Approach%	9.2%	85.8%	4.9%	0.1%		-	31.3%	57.5%	11.3%	0%		-	3.6%	88.7%	7.7%	0.1%		-	31.7%	40.4%	27.9%	0%		-	-	-
Totals %	3.6%	33.5%	1.9%	0%		39%	3.5%	6.4%	1.3%	0%		11.1%	1.3%	33%	2.8%	0%		36.1%	4.4%	5.6%	3.9%	0%		13.8%	-	-
Heavy	18	193	5	0		-	10	13	5	0		-	4	196	21	0		-	12	6	32	0		-	-	-
Heavy %	3.9%	4.6%	2.1%	0%		-	2.3%	1.2%	3.1%	0%		-	2.4%	4.8%	6%	0%		-	2.2%	0.7%	6.8%	0%		-	-	-
Bicycles	0	0	0	0		-	0	2	0	0		-	1	1	0	0		-	0	2	0	0		-	-	-
Bicycle %	0%	0%	0%	0%		-	0%	0.2%	0%	0%		-	0.6%	0%	0%	0%		-	0%	0.3%	0%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: HURONTARIO ST & HILLCREST AVE / KIRWIN AVE
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.95 °C)



Spectrum

Turning Movement Count
Location Name: HURONTARIO ST & HILLCREST AVE / KIRWIN AVE
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.95 °C)

Start Time	N Approach HURONTARIO ST						E Approach KIRWIN AVE						S Approach HURONTARIO ST						W Approach HILLCREST AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	22	165	5	0	3	212	11	27	5	0	19	43	4	159	13	0	26	176	21	29	23	0	21	83	514
08:15:00	19	171	4	0	4	193	16	22	6	0	17	44	5	177	8	0	23	190	25	38	21	0	25	84	511
08:30:00	10	162	9	0	1	201	9	17	4	0	4	30	7	165	13	0	5	182	14	29	29	0	7	71	484
08:45:00	10	172	12	0	2	194	22	20	6	0	5	49	8	168	11	0	5	188	25	26	10	0	7	61	492
Grand Total	60	710	30	0	10	800	59	86	21	0	45	166	24	670	42	0	59	736	85	122	82	0	60	299	**2001**
Approach%	7.5%	88.8%	3.8%	0%			35.5%	51.8%	12.7%	0%			3.3%	91%	5.7%	0%			21.9%	40.8%	27.4%	0%			-
Totals %	3%	35.5%	1.5%	0%		40%	2.9%	4.3%	1%	0%		8.3%	1.2%	33.5%	2.1%	0%		36.8%	4.2%	6.1%	4.1%	0%		14.9%	-
PHF	0.68	0.99	0.63	0		0.94	0.64	0.8	0.69	0		0.85	0.75	0.96	0.81	0		0.97	0.77	0.8	0.72	0		0.89	-
Heavy	7	44	1	0		52	5	5	0	0		10	1	35	14	0		50	5	3	10	0		18	-
Heavy %	11.7%	6.2%	3.3%	0%		6.5%	8.5%	5.8%	0%	0%		6%	4.2%	5.2%	33.3%	0%		6.8%	5.9%	0%	12.2%	0%		9%	-
Lights	53	666	29	0		748	54	81	21	0		156	23	635	28	0		686	80	122	72	0		284	-
Lights %	88.3%	93.8%	96.7%	0%		93.5%	91.5%	94.2%	100%	0%		94%	95.8%	94.8%	66.7%	0%		93.2%	94.1%	100%	87.8%	0%		95%	-
Single-Unit Trucks	0	19	1	0		17	1	1	0	0		2	0	13	0	0		13	0	0	1	0		1	-
Single-Unit Trucks %	0%	2.3%	3.3%	0%		2.1%	1.7%	1.2%	0%	0%		1.2%	0%	1.9%	0%	0%		1.8%	0%	0%	1.2%	0%		0.3%	-
Buses	7	25	0	0		32	4	4	0	0		8	1	20	14	0		35	5	0	9	0		14	-
Buses %	11.7%	3.5%	0%	0%		4%	6.8%	4.7%	0%	0%		4.8%	4.2%	3%	33.3%	0%		4.8%	5.9%	0%	11%	0%		4.7%	-
Articulated Trucks	0	3	0	0		3	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	-
Articulated Trucks %	0%	0.4%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	10	-	-	-	-	-	43	-	-	-	-	-	55	-	-	-	-	-	58	-	-
Pedestrian%	-	-	-	-	6.7%	-	-	-	-	-	24.7%	-	-	-	-	-	31.8%	-	-	-	-	-	33.3%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	4	-	-	-	-	-	2	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	1.1%	-	-	-	-	-	2.3%	-	-	-	-	-	1.1%	-	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Turning Movement Count (2 . HURONTARIO ST & JOHN ST)

Start Time	N Approach HURONTARIO ST						E Approach JOHN ST						S Approach HURONTARIO ST						W Approach JOHN ST						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	15	141	10	1	4	167	12	0	1	0	0	13	2	130	0	0	1	132	3	0	10	0	1	15	327	
07:15:00	13	124	10	2	1	150	18	1	4	0	1	23	1	132	0	0	4	133	3	0	16	0	5	19	324	
07:30:00	22	138	21	0	5	186	34	0	1	0	1	35	3	200	1	0	2	204	1	0	15	0	3	19	439	
07:45:00	15	168	11	2	2	218	23	1	2	0	4	23	1	163	2	0	0	166	3	0	12	0	4	15	442	1329
08:00:00	16	215	14	0	5	245	27	1	2	0	25	30	3	179	1	0	8	193	3	2	17	0	13	22	490	1692
08:15:00	21	167	26	0	4	234	33	0	0	0	15	33	1	221	1	0	0	233	1	1	10	0	12	12	512	1868
08:30:00	10	192	13	1	5	216	29	0	5	0	3	34	8	186	0	0	0	194	0	0	12	0	6	12	456	1868
08:45:00	15	194	29	0	3	238	25	0	3	0	7	28	4	192	0	0	2	196	4	0	9	0	9	13	475	1903
09:00:00	7	185	21	2	0	225	24	2	1	0	7	27	7	202	0	0	2	210	0	1	9	0	3	10	472	1915
09:15:00	8	168	21	0	0	195	24	1	4	0	5	29	10	173	1	1	3	185	3	0	9	0	5	12	421	1924
09:30:00	7	182	21	0	1	210	17	1	1	0	3	19	4	202	0	0	1	206	1	1	5	0	4	7	442	1910
09:45:00	9	198	20	1	4	232	28	0	4	0	3	20	2	155	0	0	0	158	3	0	14	0	4	17	423	1763
BREAK																										
14:00:00	13	226	25	0	7	274	41	2	6	0	8	49	3	264	2	0	5	259	3	1	9	0	14	13	595	
14:15:00	12	195	27	0	5	234	38	1	5	0	8	44	5	257	1	0	4	263	2	0	4	0	5	6	547	
14:30:00	12	227	19	0	5	258	34	1	2	0	8	37	5	196	0	0	5	203	2	1	14	0	6	17	515	
14:45:00	14	212	32	3	1	261	27	1	5	0	9	33	5	258	0	0	5	263	3	3	13	0	17	19	576	2233
17:00:00	13	245	19	0	9	277	47	1	5	0	7	53	8	200	1	0	8	209	1	1	12	0	11	14	553	2191
17:15:00	16	245	27	0	6	288	31	0	2	0	8	33	8	230	1	1	7	240	2	1	8	0	11	11	572	2316
17:30:00	22	196	16	0	4	237	45	2	6	0	6	53	8	223	0	0	5	231	3	1	8	0	11	12	550	2321
17:45:00	14	253	26	1	14	308	29	2	3	0	14	34	6	177	1	1	4	185	4	1	23	0	10	28	543	2188
18:00:00	11	235	25	1	5	272	40	0	4	0	12	44	4	263	0	0	3	267	3	0	8	0	12	11	584	2239
18:15:00	14	217	19	0	2	252	31	0	5	0	9	36	6	225	0	0	8	241	2	0	10	0	10	12	539	2205
18:30:00	10	235	26	0	1	271	33	1	4	0	7	38	8	195	0	0	1	204	2	1	12	0	5	16	521	2157
18:45:00	13	231	16	0	2	262	30	3	0	0	5	33	0	242	1	1	12	244	3	0	3	0	11	8	547	2261
Grand Total	323	4857	522	14	95	5696	700	19	80	0	183	768	113	4901	13	4	90	5031	66	15	267	0	196	227	**11682**	-
Approach%	5.7%	85.3%	9.8%	0.2%		-	87.7%	2.3%	10%	0%		-	2.2%	97.4%	0.3%	0.1%		-	16.3%	4.5%	79.2%	0%		-	-	-
Totals %	2.7%	40.9%	4.2%	0.1%		48%	5.9%	0.2%	0.7%	0%		6.7%	1%	41.3%	0.1%	0%		42.4%	0.5%	0.1%	2.3%	0%		2.8%	-	-
Heavy	44	206	6	0		-	10	0	4	0		-	3	223	2	0		-	9	0	22	0		-	-	-
Heavy %	13.6%	4.2%	1.2%	0%		-	1.4%	0%	5%	0%		-	2.7%	4.8%	15.4%	0%		-	16.4%	0%	8.2%	0%		-	-	-
Bicycles	1	1	0	0		-	0	0	2	0		-	0	0	0	0		-	0	0	0	0		-	-	-
Bicycle %	0.3%	0%	0%	0%		-	0%	0%	2.5%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	-	-

Peak Hour: 04:00 PM - 05:00 PM Weather: Overcast Clouds (21.66 °C)



Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.96 °C)

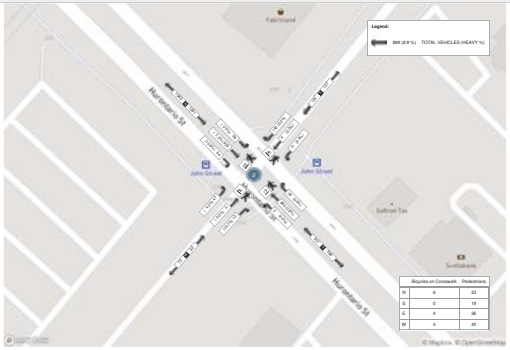
Start Time	N Approach HURONTARIO ST						E Approach JOHN ST						S Approach HURONTARIO ST						W Approach JOHN ST						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	16	215	14	0	5	245	27	1	2	0	25	30	3	179	1	0	8	193	3	2	17	0	13	22	490
08:15:00	21	167	26	0	4	234	33	0	0	0	15	33	1	221	1	0	0	233	1	1	10	0	12	12	512
08:30:00	10	192	13	1	5	216	29	0	5	0	3	34	8	186	0	0	0	194	0	0	12	0	6	12	456
08:45:00	15	194	29	0	3	238	25	0	3	0	7	28	4	192	0	0	2	196	4	0	9	0	9	13	475
Grand Total	62	799	82	1	17	933	114	1	10	0	50	125	16	788	2	0	10	806	8	3	48	0	40	59	**1923**
Approach%	6.6%	84.5%	8.6%	0.1%			91.2%	0.8%	8%	0%			2%	97.8%	0.2%	0%			13.6%	5.1%	81.4%	0%				-
Totals %	3.2%	41%	4.3%	0.1%		48.5%	5.9%	0.1%	0.5%	0%		6.5%	0.8%	41%	0.1%	0%		41.9%	0.4%	0.3%	2.5%	0%		3.1%		-
PHF	0.74	0.92	0.71	0.25		0.98	0.86	0.25	0.5	0		0.92	0.5	0.85	0.5	0		0.88	0.5	0.38	0.71	0		0.67		-
Heavy	8	51	5	0		64	1	0	1	0		2	0	51	0	0		51	0	0	4	0		4		-
Heavy %	12.9%	6.5%	6.1%	0%		6.9%	0.9%	0%	10%	0%		1.6%	0%	6.5%	0%	0%		6.3%	0%	0%	8.3%	0%		6.8%		-
Lights	54	737	77	1		869	113	1	9	0		123	16	737	2	0		755	8	3	44	0		55		-
Lights %	87.1%	93.5%	93.9%	100%		93.1%	99.1%	100%	90%	0%		98.4%	100%	93.5%	100%	0%		93.7%	100%	100%	91.7%	0%		93.2%		-
Single-Unit Trucks	4	16	0	0		22	0	0	1	0		1	0	16	0	0		16	0	0	3	0		3		-
Single-Unit Trucks %	6.5%	2.2%	0%	0%		2.4%	0%	0%	10%	0%		0.8%	0%	2%	0%	0%		2%	0%	0%	6.3%	0%		5.1%		-
Buses	4	30	5	0		39	0	0	0	0		0	0	33	0	0		33	0	0	1	0		1		-
Buses %	6.5%	3.8%	6.1%	0%		4.2%	0%	0%	0%	0%		0%	0%	4.2%	0%	0%		4.1%	0%	0%	2.1%	0%		1.7%		-
Articulated Trucks	0	2	0	0		3	1	0	0	0		1	0	2	0	0		2	0	0	0	0		0		-
Articulated Trucks %	0%	0.4%	0%	0%		0.3%	0.9%	0%	0%	0%		0.8%	0%	0.3%	0%	0%		0.3%	0%	0%	0%	0%		0%		-
Pedestrians	-	-	-	-	14	-	-	-	-	-	47	-	-	-	-	-	10	-	-	-	-	-	39	-		-
Pedestrian%	-	-	-	-	12%	-	-	-	-	-	40.2%	-	-	-	-	-	9.5%	-	-	-	-	-	33.9%	-		-
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	2	-		-
Bicycles on Crosswalk%	-	-	-	-	2.6%		-	-	-	-	2.6%		-	-	-	-	0%		-	-	-	-	1.7%			-
Bicycles on Road	0	0	0	0	0	-	0	0	1	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-		-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%			-

Spectrum

Turning Movement Count
Location Name: HURONTARIO ST & JOHN ST
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 05:15 PM - 06:15 PM Weather: Overcast Clouds (21.66 °C)


Legend:
(#.# %) TOTAL VEHICLES (HEAVY %)
Fabricland
Hurontario St
John Street
John Street
Sobeys
Sobeys
Sobeys

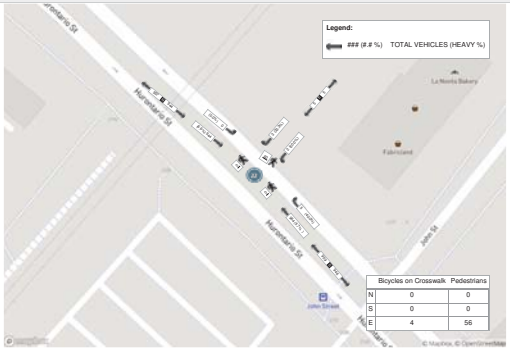
Peak Hour: 05:30 PM - 06:30 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach HURONTARIO ST					E Approach NORTH PARKING LOT ACCESS					S Approach HURONTARIO ST					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
17:30:00	261	0	0	0	261	0	2	0	8	2	0	272	0	0	272	535
17:45:00	300	0	0	0	300	0	0	0	10	0	0	232	0	0	232	532
18:00:00	249	0	0	0	249	0	0	0	11	0	0	309	0	0	309	558
18:15:00	278	0	0	0	278	0	0	0	10	0	0	277	0	0	277	555
Grand Total	1088	0	0	0	1088	0	2	0	39	2	0	1090	0	0	1090	**2180**
Approach%	100%	0%	0%			0%	100%	0%			0%	100%	0%			-
Totals %	49.9%	0%	0%		49.9%	0%	0.1%	0%		0.1%	0%	50%	0%		50%	-
PHF	0.91	0	0		0.91	0	0.25	0		0.25	0	0.88	0		0.88	-
Heavy	28	0	0		28	0	2	0		2	0	29	0		29	-
Heavy %	2.6%	0%	0%		2.6%	0%	100%	0%		100%	0%	2.7%	0%		2.7%	-
Lights	1060	0	0		1060	0	0	0		0	0	1061	0		1061	-
Lights %	97.4%	0%	0%		97.4%	0%	0%	0%		0%	0%	97.3%	0%		97.3%	-
Single-Unit Trucks	7	0	0		7	0	2	0		2	0	12	0		12	-
Single-Unit Trucks %	0.6%	0%	0%		0.6%	0%	100%	0%		100%	0%	1.1%	0%		1.1%	-
Buses	18	0	0		18	0	0	0		0	0	15	0		15	-
Buses %	1.7%	0%	0%		1.7%	0%	0%	0%		0%	0%	1.4%	0%		1.4%	-
Articulated Trucks	3	0	0		3	0	0	0		0	0	2	0		2	-
Articulated Trucks %	0.3%	0%	0%		0.3%	0%	0%	0%		0%	0%	0.2%	0%		0.2%	-
Pedestrians	-	-	-	0	-	-	-	-	36	-	-	-	-	0	-	-
Pedestrians%	-	-	-	0%		-	-	-	92.3%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	3	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	7.7%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Turning Movement Count (22 . HURONTARIO ST & NORTH PARKING LOT ACCESS)

Start Time	N Approach HURONTARIO ST					E Approach NORTH PARKING LOT ACCESS					S Approach HURONTARIO ST					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	UTurn S:S	Peds S:	Approach Total		
07:00:00	162	0	0	0	162	0	0	0	3	0	0	157	0	1	157	319	
07:15:00	181	1	0	0	182	0	0	0	2	0	0	171	0	0	171	353	
07:30:00	171	0	0	0	171	1	0	0	3	1	3	248	0	0	251	423	
07:45:00	223	1	0	0	224	0	0	0	8	0	2	215	0	0	217	441	1536
08:00:00	247	0	0	0	247	1	0	0	29	1	0	224	0	0	224	472	1689
08:15:00	235	0	0	0	235	0	0	0	14	0	0	275	0	0	275	510	1846
08:30:00	216	0	0	0	216	0	0	0	8	0	2	231	0	0	233	449	1872
08:45:00	246	0	0	0	246	2	2	0	9	4	3	224	0	0	227	477	1908
09:00:00	229	0	0	0	229	0	0	0	13	0	0	238	0	0	238	467	1903
09:15:00	192	0	0	0	192	0	0	0	6	0	0	205	0	0	205	397	1790
09:30:00	211	0	0	0	211	1	2	0	3	3	0	224	0	0	224	438	1779
09:45:00	223	1	0	0	224	0	0	0	6	0	1	194	0	0	195	419	1721
BREAK																	
16:00:00	253	0	0	0	253	0	0	0	9	0	0	306	0	0	306	559	
16:15:00	263	0	0	0	263	0	0	0	7	0	0	299	0	0	299	562	
16:30:00	254	0	0	0	254	0	0	0	9	0	0	248	0	0	248	502	
16:45:00	238	0	0	0	238	0	0	0	9	0	0	302	0	0	302	540	2163
17:00:00	280	0	0	0	280	0	0	0	8	0	0	258	0	0	258	538	2142
17:15:00	273	0	0	0	273	0	0	0	6	0	2	265	0	0	267	540	2120
17:30:00	261	0	0	0	261	0	2	0	8	2	0	272	0	0	272	535	2153
17:45:00	300	0	0	0	300	0	0	0	10	0	0	232	0	0	232	532	2145
18:00:00	249	0	0	0	249	0	0	0	11	0	0	309	0	0	309	558	2165
18:15:00	278	0	0	0	278	0	0	0	10	0	0	277	0	0	277	555	2180
18:30:00	268	0	0	0	268	0	0	0	9	0	0	235	0	0	235	503	2148
18:45:00	252	0	0	0	252	0	0	0	5	0	0	275	0	0	275	527	2143
Grand Total	5705	3	0	0	5708	5	6	0	205	11	13	5884	0	1	5897	**11616**	-
Approach%	99.9%	0.1%	0%		-	45.5%	54.5%	0%		-	0.2%	99.8%	0%		-	-	-
Totals %	49.1%	0%	0%		49.1%	0%	0.1%	0%		0.1%	0.1%	50.7%	0%		50.8%	-	-
Heavy	253	2	0		-	3	3	0		-	4	261	0		-	-	-
Heavy %	4.4%	66.7%	0%		-	60%	50%	0%		-	30.8%	4.4%	0%		-	-	-
Bicycles	3	0	0		-	0	0	0		-	0	0	0		-	-	-
Bicycle %	0.1%	0%	0%		-	0%	0%	0%		-	0%	0%	0%		-	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.96 °C)



Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach HURONTARIO ST					E Approach NORTH PARKING LOT ACCESS					S Approach HURONTARIO ST					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
08:00:00	247	0	0	0	247	1	0	0	29	1	0	224	0	0	224	472
08:15:00	235	0	0	0	235	0	0	0	14	0	0	275	0	0	275	510
08:30:00	216	0	0	0	216	0	0	0	8	0	2	231	0	0	233	449
08:45:00	246	0	0	0	246	2	2	0	9	4	3	224	0	0	227	477
Grand Total	944	0	0	0	944	3	2	0	60	5	5	954	0	0	959	**1908**
Approach%	100%	0%	0%		-	60%	40%	0%		-	0.5%	99.5%	0%		-	-
Totals %	49.5%	0%	0%		49.5%	0.2%	0.1%	0%		0.3%	0.3%	50%	0%		50.3%	-
PHF	0.96	0	0		0.96	0.38	0.25	0		0.31	0.42	0.87	0		0.87	-
Heavy	62	0	0		62	1	1	0		2	2	54	0		56	-
Heavy %	6.6%	0%	0%		6.6%	33.3%	50%	0%		40%	40%	5.7%	0%		5.8%	-
Lights	882	0	0		882	2	1	0		3	3	900	0		903	-
Lights %	93.4%	0%	0%		93.4%	66.7%	50%	0%		60%	60%	94.3%	0%		94.2%	-
Single-Unit Trucks	21	0	0		21	1	1	0		2	2	18	0		20	-
Single-Unit Trucks %	2.2%	0%	0%		2.2%	33.3%	50%	0%		40%	40%	1.9%	0%		2.1%	-
Buses	38	0	0		38	0	0	0		0	0	33	0		33	-
Buses %	4%	0%	0%		4%	0%	0%	0%		0%	0%	3.5%	0%		3.4%	-
Articulated Trucks	3	0	0		3	0	0	0		0	0	3	0		3	-
Articulated Trucks %	0.3%	0%	0%		0.3%	0%	0%	0%		0%	0%	0.3%	0%		0.3%	-
Pedestrians	-	-	-	0	-	-	-	-	56	-	-	-	-	0	-	-
Pedestrians%	-	-	-	0%		-	-	-	93.3%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	4	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	6.7%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Spectrum

Turning Movement Count
Location Name: HURONTARIO ST & NORTH SITE ACCESS
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (23 . HURONTARIO ST & NORTH SITE ACCESS)

Start Time	N Approach HURONTARIO ST						S Approach NORTH SITE ACCESS						S Approach HURONTARIO ST						W Approach WEST DRIVEWAY						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:E	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	2	147	0	0	0	149	0	0	0	0	0	0	0	131	0	0	0	131	1	0	0	0	4	1	281	
07:15:00	1	148	0	0	0	149	1	0	0	0	3	1	0	146	0	0	0	146	0	0	1	0	9	1	297	
07:30:00	1	135	0	0	0	136	0	0	0	0	0	0	0	192	0	0	0	192	0	0	0	0	6	0	328	
07:45:00	0	198	0	0	0	198	2	0	0	0	9	2	0	189	0	0	0	189	1	0	0	0	6	1	390	1296
08:00:00	2	210	0	0	0	212	2	0	0	0	19	2	0	194	0	0	0	194	0	0	0	0	13	0	408	1423
08:15:00	3	201	0	0	0	204	0	0	0	0	18	0	0	211	0	0	0	211	0	0	0	0	13	0	415	1541
08:30:00	1	196	0	0	0	197	0	0	0	0	5	0	0	202	0	0	0	202	0	0	5	0	5	5	404	1617
08:45:00	0	191	0	0	0	191	0	0	0	0	12	0	0	191	0	0	0	191	0	0	0	0	5	0	382	1609
09:00:00	2	210	0	0	0	212	1	0	0	0	8	1	0	213	0	0	0	213	0	0	0	0	3	0	426	1627
09:15:00	1	173	0	0	0	174	0	0	0	0	4	0	0	188	0	0	0	188	1	0	0	0	5	1	363	1575
09:30:00	1	161	0	0	0	162	0	0	0	0	3	0	0	182	0	0	0	182	0	0	0	0	2	0	364	1535
09:45:00	2	202	0	0	0	204	0	0	0	0	5	0	0	169	0	0	1	169	1	0	0	0	7	1	374	1527
BREAK																										
14:00:00	6	218	0	0	2	224	1	0	0	0	9	1	1	252	0	0	0	253	0	0	0	0	11	0	478	
14:15:00	4	229	0	0	1	233	0	0	0	0	11	0	0	239	0	0	0	239	3	0	0	0	9	3	475	
14:30:00	3	225	0	0	0	228	3	0	0	0	15	3	0	226	0	0	1	226	1	0	0	0	6	1	470	
14:45:00	6	213	0	0	1	219	0	0	0	0	13	0	0	228	0	0	0	228	2	0	0	0	13	2	469	1972
17:00:00	3	255	0	0	2	258	1	0	0	0	11	1	0	216	0	0	1	216	0	0	1	0	15	1	476	1870
17:15:00	4	236	0	0	0	240	0	0	1	0	16	1	1	256	0	0	0	257	2	0	2	0	9	4	502	1997
17:30:00	8	217	0	0	0	225	0	0	0	0	6	0	0	204	0	0	0	204	4	0	0	0	11	4	433	1960
17:45:00	4	257	0	0	0	261	0	0	0	0	9	0	0	212	0	0	0	212	3	0	0	0	9	3	476	1987
18:00:00	3	220	0	0	0	223	1	0	0	0	15	1	0	267	0	0	0	267	1	0	1	0	6	2	493	1964
18:15:00	6	242	0	0	2	248	1	0	0	0	10	1	0	217	0	0	1	217	6	0	1	0	6	7	473	1975
18:30:00	7	232	0	0	0	239	0	0	0	0	7	0	0	221	0	0	1	221	1	0	0	0	9	1	461	1903
18:45:00	11	213	0	0	0	224	2	0	0	0	3	2	0	245	0	0	0	245	2	0	1	0	8	3	474	1961
Grand Total	81	4949	0	0	9	5039	15	0	1	0	216	16	2	5053	0	0	5	5055	39	0	12	0	191	41	**10082**	-
Approach%	1.6%	98.4%	0%	0%		-	93.8%	0%	6.3%	0%		-	0%	100%	0%	0%		-	75.7%	0%	29.3%	0%		-	-	-
Totals %	0.8%	49%	0%	0%		49.8%	0.1%	0%	0%	0%		0.2%	0%	49.8%	0%	0%		49.8%	0.3%	0%	0.1%	0%		0.4%	-	-
Heavy	0	221	0	0		-	0	0	0	0		-	0	241	0	0		-	0	0	0	0		-	-	-
Heavy %	0%	4.5%	0%	0%		-	0%	0%	0%	0%		-	0%	4.8%	0%	0%		-	0%	0%	0%	0%		-	-	-
Bicycles	3	3	0	0		-	0	0	0	0		-	0	1	0	0		-	0	0	0	0		-	-	-
Bicycle %	3.7%	0.1%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: HURONTARIO ST & NORTH SITE ACCESS
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:15 AM - 09:15 AM Weather: Broken Clouds (16.96 °C)

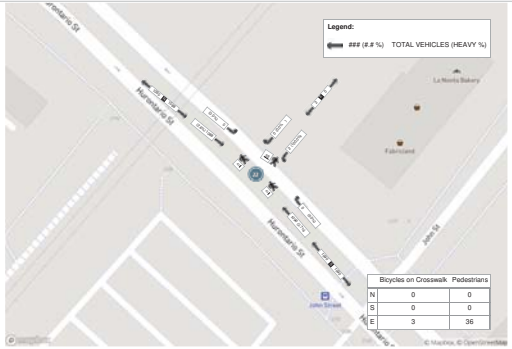
Start Time	N Approach HURONTARIO ST						S Approach NORTH SITE ACCESS						S Approach HURONTARIO ST						W Approach WEST DRIVEWAY						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:15:00	3	201	0	0	0	204	0	0	0	0	18	0	0	211	0	0	0	211	0	0	0	0	13	0	415
08:30:00	1	196	0	0	0	197	0	0	0	0	5	0	0	202	0	0	0	202	0	0	5	0	5	5	404
08:45:00	0	191	0	0	0	191	0	0	0	0	12	0	0	191	0	0	0	191	0	0	0	0	5	0	382
09:00:00	2	210	0	0	0	212	1	0	0	0	8	1	0	213	0	0	0	213	0	0	0	0	3	0	426
Grand Total	6	798	0	0	0	804	1	0	0	0	43	1	0	817	0	0	0	817	0	0	5	0	26	5	**1627**
Approach%	0.7%	99.3%	0%	0%			100%	0%	0%	0%			0%	100%	0%	0%			0%	0%	100%	0%			-
Totals %	0.4%	49%	0%	0%		49.4%	0.1%	0%	0%	0%		0.1%	0%	50.2%	0%	0%		50.2%	0%	0%	0.3%	0%		0.3%	-
PHF	0.5	0.96	0	0		0.95	0.25	0	0	0		0.25	0	0.98	0	0		0.96	0	0	0.25	0		0.25	-
Heavy	0	49	0	0		49	0	0	0	0		0	0	49	0	0		49	0	0	0	0		0	-
Heavy %	0%	6.1%	0%	0%		6.1%	0%	0%	0%	0%		0%	0%	6%	0%	0%		6%	0%	0%	0%	0%		0%	-
Lights	6	749	0	0		755	1	0	0	0		1	0	768	0	0		768	0	0	5	0		5	-
Lights %	100%	93.9%	0%	0%		93.9%	100%	0%	0%	0%		100%	0%	94%	0%	0%		94%	0%	0%	100%	0%		100%	-
Single-Unit Trucks	0	21	0	0		21	0	0	0	0		0	0	16	0	0		16	0	0	0	0		0	-
Single-Unit Trucks %	0%	2.6%	0%	0%		2.6%	0%	0%	0%	0%		0%	0%	2%	0%	0%		2%	0%	0%	0%	0%		0%	-
Buses	0	25	0	0		25	0	0	0	0		0	0	31	0	0		31	0	0	0	0		0	-
Buses %	0%	3.1%	0%	0%		3.1%	0%	0%	0%	0%		0%	0%	3.8%	0%	0%		3.8%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	3	0	0		3	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	-
Articulated Trucks %	0%	0.4%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	43	-	-	-	-	-	0	-	-	-	-	-	26	-	-
Pedestrian%	-	-	-	-	0%	-	-	-	-	-	60.9%	-	-	-	-	-	0%	-	-	-	-	-	37.7%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	1.4%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-
Bicycles on Road	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Spectrum

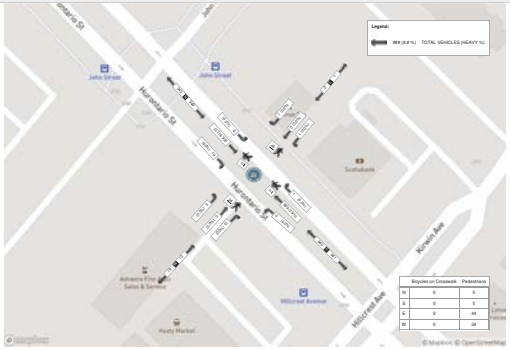
Turning Movement Count
Location Name: HURONTARIO ST & NORTH PARKING LOT ACCESS
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 05:30 PM - 06:30 PM Weather: Overcast Clouds (21.66 °C)



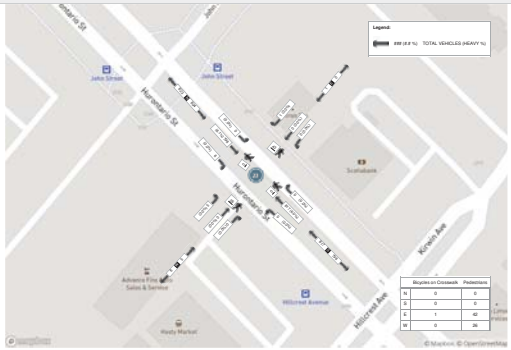
Peak Hour: 05:15 PM - 06:15 PM Weather: Overcast Clouds (21.66 °C)



Peak Hour: 05:15 PM - 06:15 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach HURONTARIO ST						S Approach NORTH SITE ACCESS						S Approach HURONTARIO ST						W Approach WEST DRIVEWAY						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
17:15:00	4	228	0	0	0	240	0	0	1	0	16	1	1	238	0	0	0	237	2	0	2	0	8	4	502
17:30:00	8	217	0	0	0	225	0	0	0	0	4	0	0	234	0	0	0	234	4	0	0	0	11	4	463
17:45:00	4	257	0	0	0	261	0	0	0	0	9	0	0	212	0	0	0	212	3	0	0	0	9	3	476
18:00:00	3	220	0	0	0	223	1	0	0	0	15	1	0	297	0	0	0	297	1	0	1	0	6	2	493
Grand Total	19	930	0	0	0	949	1	0	1	0	46	2	1	939	0	0	0	940	10	0	3	0	34	13	**1934**
Approach%	2%	98%	0%	0%			50%	0%	50%	0%			0.1%	99.9%	0%	0%			76.9%	0%	23.1%	0%			-
Totals %	1%	48.8%	0%	0%		49.8%	0.1%	0%	0.1%	0%		0.1%	0.1%	48.2%	0%	0%		48.4%	0.5%	0%	0.2%	0%		0.7%	-
PHF	0.59	0.9	0	0		0.91	0.25	0	0.25	0		0.5	0.25	0.88	0	0		0.98	0.63	0	0.38	0		0.81	-
Heavy	0	25	0	0		25	0	0	0	0		0	0	27	0	0		27	0	0	0	0		0	-
Heavy %	0%	2.7%	0%	0%		2.6%	0%	0%	0%	0%		0%	0%	2.9%	0%	0%		2.9%	0%	0%	0%	0%		0%	-
Lights	19	905	0	0		924	1	0	1	0		2	1	912	0	0		913	10	0	3	0		13	-
Lights %	100%	97.3%	0%	0%		97.4%	100%	0%	100%	0%		100%	100%	97.1%	0%	0%		97.1%	100%	0%	100%	0%		100%	-
Single-Unit Trucks	0	7	0	0		7	0	0	0	0		0	0	10	0	0		10	0	0	0	0		0	-
Single-Unit Trucks %	0%	0.8%	0%	0%		0.7%	0%	0%	0%	0%		0%	0%	1.1%	0%	0%		1.1%	0%	0%	0%	0%		0%	-
Buses	0	16	0	0		16	0	0	0	0		0	0	16	0	0		16	0	0	0	0		0	-
Buses %	0%	1.7%	0%	0%		1.7%	0%	0%	0%	0%		0%	0%	1.7%	0%	0%		1.7%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	2	0	0		2	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	-
Articulated Trucks %	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0.1%	0%	0%		0.1%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	44	-	-	-	-	-	0	-	-	-	-	-	34	-	-
Pedestrians%	-	-	-	-	0%	-	-	-	-	-	55%	-	-	-	-	-	0%	-	-	-	-	-	48.6%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	2.5%		-	-	-	-	0%		-	-	-	-	0%		-
Bicycles on Road	0	1	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 08:15 AM - 09:15 AM Weather: Broken Clouds (16.96 °C)



Spectrum

Turning Movement Count
Location Name: JOHN ST & GO ACCESS / PARKING STRUCTURE EAST ACCESS
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 05:30 PM - 06:30 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach PARKING STRUCTURE EAST ACCESS						E Approach JOHN ST						S Approach GO ACCESS						W Approach JOHN ST						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
17:30:00	0	4	5	0	11	9	1	13	16	0	1	30	11	2	2	0	5	15	1	4	0	0	1	5	59
17:45:00	0	1	3	0	5	4	1	14	11	0	2	28	2	1	4	0	0	7	2	16	0	0	2	18	55
18:00:00	0	0	1	0	4	1	1	8	6	0	1	15	5	0	1	0	11	6	1	4	0	0	2	6	27
18:15:00	0	3	4	0	4	7	2	10	10	0	2	22	7	1	4	0	1	12	0	9	0	0	1	9	50
Grand Total	0	8	13	0	24	21	5	45	43	0	6	93	25	4	11	0	17	40	4	33	0	0	6	37	**191**
Approach%	0%	38.1%	61.9%	0%		-	5.4%	48.4%	46.2%	0%		-	62.5%	10%	27.5%	0%		-	10.8%	89.2%	0%	0%		-	-
Totals %	0%	4.2%	6.8%	0%		11%	2.6%	23.6%	22.5%	0%		48.7%	13.1%	2.1%	5.8%	0%		20.9%	2.1%	17.3%	0%	0%		19.4%	-
PHF	0	0.5	0.65	0		0.58	0.63	0.8	0.67	0		0.78	0.57	0.5	0.69	0		0.67	0.5	0.52	0	0		0.51	-
Heavy	0	0	0	0		0	0	3	14	0		17	0	0	9	0		9	0	0	0	0		0	-
Heavy %	0%	0%	0%	0%		0%	0%	6.7%	32.6%	0%		18.3%	0%	0%	81.8%	0%		22.5%	0%	0%	0%	0%		0%	-
Lights	0	8	13	0		21	5	42	29	0		76	25	4	2	0		31	4	33	0	0		37	-
Lights %	0%	100%	100%	0%		100%	100%	93.3%	67.4%	0%		81.7%	100%	100%	18.2%	0%		77.5%	100%	100%	0%	0%		100%	-
Single-Unit Trucks	0	0	0	0		0	0	0	2	0		2	0	0	0	0		0	0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	4.7%	0%		2.2%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Buses	0	0	0	0		0	0	3	12	0		15	0	0	9	0		9	0	0	0	0		0	-
Buses %	0%	0%	0%	0%		0%	0%	6.7%	27.9%	0%		16.1%	0%	0%	81.8%	0%		22.5%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	24	-	-	-	-	-	6	-	-	-	-	-	15	-	-	-	-	-	6	-	-
Pedestrians%	-	-	-	-	45.3%	-	-	-	-	-	11.3%	-	-	-	-	-	28.3%	-	-	-	-	-	11.3%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	3.8%	-	-	-	-	-	0%	-	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	1	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Spectrum

Turning Movement Count
Location Name: JOHN ST & GO ACCESS / PARKING STRUCTURE EAST ACCESS
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (16 . JOHN ST & GO ACCESS / PARKING STRUCTURE EAST ACCESS)

Start Time	N Approach PARKING STRUCTURE EAST ACCESS						E Approach JOHN ST						S Approach GO ACCESS						W Approach JOHN ST						Int. Total (15 min)	Int. Total (1 hr)
	Right N/W	Thru N/E	Left N/E	UTurn N/N	Peds N/	Approach Total	Right E/N	Thru E/W	Left E/S	UTurn E/E	Peds E/	Approach Total	Right S/E	Thru S/N	Left S/W	UTurn S/S	Peds S/	Approach Total	Right W/S	Thru W/E	Left W/N	UTurn W/W	Peds W/	Approach Total		
07:00:00	0	1	0	0	1	1	7	2	5	0	0	14	4	3	3	0	2	10	0	7	0	0	0	7	32	
07:15:00	0	1	0	0	1	1	3	6	9	0	0	18	3	3	3	0	1	9	0	12	0	0	0	12	40	
07:30:00	0	1	0	0	1	1	5	4	9	0	1	18	5	4	3	0	1	13	1	10	0	0	0	11	43	
07:45:00	0	1	0	0	4	1	3	6	10	0	2	19	4	4	5	0	3	13	2	10	0	0	2	12	46	163
08:00:00	0	0	1	0	4	1	7	4	9	0	3	20	8	3	3	0	0	14	0	13	1	0	1	14	49	160
08:15:00	0	2	1	0	5	3	9	6	8	0	0	23	10	4	2	0	0	16	0	4	0	0	2	6	46	189
08:30:00	0	0	0	0	2	0	4	1	9	0	1	14	1	1	3	0	3	5	2	4	0	0	0	6	27	168
08:45:00	0	1	1	0	0	2	4	5	10	0	0	19	6	5	5	0	0	15	2	4	0	0	0	6	44	164
09:00:00	0	1	0	0	6	1	0	8	2	0	0	10	1	0	1	0	1	2	1	5	0	0	1	6	19	136
09:15:00	0	0	0	0	4	0	0	1	6	0	0	7	1	0	1	0	2	2	0	5	0	0	0	5	14	104
09:30:00	0	1	0	0	6	1	0	3	7	0	1	10	1	2	0	0	1	3	0	5	0	0	0	5	19	84
09:45:00	0	1	1	0	4	2	0	5	6	0	0	11	0	0	2	1	1	3	0	11	0	0	0	11	21	73
BREAK																										
16:00:00	0	5	6	0	1	11	1	10	6	0	0	17	1	3	1	0	0	5	4	4	0	0	0	8	41	
16:15:00	0	3	0	0	0	3	1	11	8	0	3	20	3	0	6	0	1	9	1	2	0	0	0	3	34	
16:30:00	0	4	6	0	2	10	0	9	9	0	0	18	2	1	2	0	0	5	0	10	0	0	1	10	43	
16:45:00	1	0	1	0	2	2	0	7	11	0	0	18	4	1	3	0	0	8	0	12	0	0	0	12	40	158
17:00:00	0	1	2	0	9	3	0	8	9	0	0	17	2	0	3	0	1	6	0	3	0	0	3	3	29	146
17:15:00	0	1	2	0	9	3	0	13	7	0	1	20	3	0	3	0	0	6	0	4	0	0	3	4	33	145
17:30:00	0	4	5	0	11	9	1	10	16	0	1	28	11	2	2	0	5	15	1	4	0	0	1	5	56	161
17:45:00	0	1	3	0	5	4	1	14	11	0	2	28	2	1	4	0	0	7	2	16	0	0	2	18	55	174
18:00:00	0	0	1	0	4	1	1	8	6	0	1	15	5	0	1	0	11	6	1	4	0	0	2	5	27	174
18:15:00	0	3	4	0	4	7	2	10	10	0	2	22	7	1	4	0	1	12	0	9	0	0	1	9	50	191
18:30:00	0	0	1	0	0	1	0	9	5	1	0	14	3	0	4	0	10	7	0	4	0	0	1	4	26	158
18:45:00	0	1	0	0	4	1	0	5	9	0	1	15	2	1	4	0	6	8	1	9	0	0	1	10	32	155
Grand Total	1	33	35	0	97	68	49	167	190	1	27	407	91	41	88	1	55	201	19	175	1	0	31	195	**871**	-
Approach%	1.5%	47.1%	51.5%	0%		-	12%	41%	46.7%	0.2%		-	45.3%	20.4%	33.8%	0.5%		-	9.7%	89.7%	0.5%	0%		-	-	-
Totals %	0.1%	3.7%	4%	0%		7.8%	5.6%	19.2%	21.8%	0.1%		46.7%	10.4%	4.7%	7.8%	0.1%		23.1%	2.2%	20.1%	0.1%	0%		22.4%	-	-
Heavy	0	0	0	0		-	0	22	70	0		-	0	0	50	0		-	0	0	0	0		-	-	-
Heavy %	0%	0%	0%	0%		-	0%	13.2%	36.8%	0%		-	0%	0%	75%	0%		-	0%	0%	0%	0%		-	-	-
Bicycles	0	0	0	0		-	0	0	0	0		-	0	0	2	0		-	3	0	0	0		-	-	-
Bicycle %	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	2.9%	0%		-	15.8%	0%	0%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: JOHN ST & GO ACCESS / PARKING STRUCTURE EAST ACCESS
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (16.95 °C)



Spectrum

Turning Movement Count
Location Name: JOHN ST & GO ACCESS / PARKING STRUCTURE EAST ACCESS
Date: Wed, Oct 13, 2021 Deployment Lead: Theo Daglis

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (16.95 °C)

Start Time	N Approach PARKING STRUCTURE EAST ACCESS						E Approach JOHN ST						S Approach GO ACCESS						W Approach JOHN ST						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
07:30:00	0	1	0	0	1	1	5	4	9	0	1	18	6	6	3	0	1	15	1	10	0	0	0	11	45
07:45:00	0	1	0	0	4	1	3	6	10	0	2	19	4	4	5	0	3	13	3	10	0	0	2	13	46
08:00:00	0	0	1	0	4	1	7	4	9	0	3	20	8	3	3	0	0	14	0	13	1	0	1	14	49
08:15:00	0	2	1	0	5	3	9	6	8	0	0	23	10	4	2	0	0	16	0	4	0	0	2	6	48
Grand Total	0	4	2	0	14	6	24	20	36	0	6	80	28	17	13	0	5	58	4	37	1	0	5	42	**186**
Approach%	0%	66.7%	33.3%	0%		-	30%	25%	45%	0%		-	48.3%	29.3%	22.4%	0%		-	9.5%	88.1%	2.4%	0%		-	-
Totals %	0%	2.2%	1.1%	0%		3.2%	12.9%	10.8%	19.4%	0%		43%	15.1%	9.1%	7%	0%		31.2%	2.2%	19.9%	0.5%	0%		22.6%	-
PHF	0	0.5	0.5	0		0.5	0.67	0.83	0.9	0		0.87	0.7	0.71	0.65	0		0.91	0.33	0.71	0.25	0		0.75	-
Heavy	0	0	0	0		0	0	3	12	0		15	0	0	10	0		10	0	0	0	0		0	-
Heavy %	0%	0%	0%	0%		0%	0%	15%	33.3%	0%		18.8%	0%	0%	76.9%	0%		17.2%	0%	0%	0%	0%		0%	-
Lights	0	4	2	0		6	24	17	24	0		65	28	17	3	0		48	4	37	1	0		42	-
Lights %	0%	100%	100%	0%		100%	100%	85%	66.7%	0%		81.3%	100%	100%	23.1%	0%		82.8%	100%	100%	100%	0%		100%	-
Single-Unit Trucks	0	0	0	0		0	0	0	2	0		2	0	0	0	0		0	0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	5.6%	0%		2.5%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Buses	0	0	0	0		0	0	3	10	0		13	0	0	10	0		10	0	0	0	0		0	-
Buses %	0%	0%	0%	0%		0%	0%	15%	27.8%	0%		16.3%	0%	0%	76.9%	0%		17.2%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	14	-	-	-	-	-	6	-	-	-	-	-	8	-	-	-	-	-	4	-	-
Pedestrians%	-	-	-	-	41.2%	-	-	-	-	-	17.6%	-	-	-	-	-	23.5%	-	-	-	-	-	11.8%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	2.9%	-	-	-	-	-	2.9%	-	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

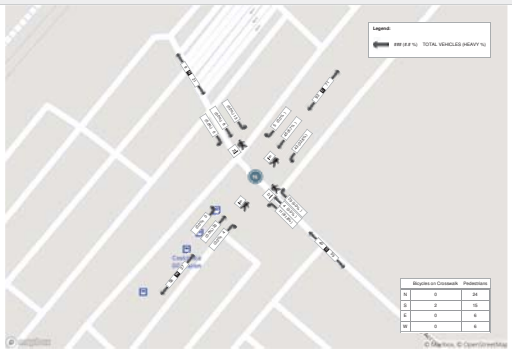
Turning Movement Count (14 - JOHN ST & KISS & RIDE ACCESS)

Start Time	N Approach KISS & RIDE ACCESS						E Approach JOHN ST						S Approach PARKING LOT						W Approach JOHN ST						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	0	0	0	0	5	0	6	8	0	0	2	16	0	0	0	0	5	0	0	14	4	0	1	19	33	
07:15:00	0	0	0	0	5	0	5	8	0	0	2	13	0	0	0	0	3	0	0	19	2	0	0	21	34	
07:30:00	0	0	0	0	1	0	8	11	0	0	1	19	0	0	0	0	4	0	0	14	6	0	0	22	41	
07:45:00	0	0	0	0	3	0	2	11	0	0	1	13	0	0	0	0	2	0	0	12	6	1	0	19	32	139
08:00:00	0	0	0	0	4	0	3	11	0	0	0	14	0	0	0	0	3	0	0	19	9	0	0	27	41	148
08:15:00	0	0	0	0	2	0	3	16	0	0	0	19	0	0	0	0	3	0	1	14	8	0	0	23	42	156
08:30:00	0	0	0	0	1	0	1	7	0	0	1	9	0	0	0	0	0	0	0	9	1	0	0	10	19	133
08:45:00	0	0	0	0	0	0	2	11	0	1	0	14	0	0	0	0	2	0	0	10	4	0	0	14	28	129
09:00:00	0	0	0	0	9	0	0	10	0	0	0	10	0	0	0	0	1	0	0	8	0	0	0	8	18	106
09:15:00	0	0	0	0	6	0	0	5	0	0	1	5	0	0	0	0	4	0	0	7	0	0	2	7	12	78
09:30:00	0	0	0	0	8	0	0	7	0	0	0	7	0	0	1	0	1	1	1	5	0	0	0	6	14	73
09:45:00	0	0	0	0	5	0	1	5	0	0	0	6	1	0	0	0	1	1	0	14	0	0	0	14	23	67
BREAK																										
16:00:00	0	0	0	0	1	0	0	14	0	0	1	14	0	0	0	0	1	0	0	11	1	0	0	12	26	
16:15:00	0	0	0	0	4	0	1	13	0	0	0	14	0	0	0	0	0	0	0	4	2	0	0	6	20	
16:30:00	0	0	0	0	5	0	0	12	0	0	0	12	0	0	0	0	0	0	1	15	3	0	0	19	31	
16:45:00	0	0	1	0	3	1	4	8	0	0	2	12	1	0	0	0	0	1	0	14	5	0	0	19	33	110
17:00:00	0	0	0	0	6	0	3	10	0	0	6	13	0	0	0	0	3	0	0	6	3	0	0	9	22	106
17:15:00	0	0	0	0	10	0	3	13	0	1	1	17	0	0	0	0	4	0	1	9	2	0	1	12	29	115
17:30:00	0	0	0	0	12	0	4	35	0	1	4	25	1	0	0	0	7	1	0	13	11	0	1	24	50	124
17:45:00	0	0	1	0	3	1	2	14	0	0	1	16	0	0	0	0	6	0	0	20	6	0	0	26	43	144
18:00:00	0	0	0	0	5	0	0	11	0	0	0	11	0	0	0	0	4	0	0	7	3	0	0	10	21	143
18:15:00	1	0	0	0	7	1	1	13	0	0	0	14	0	0	0	0	12	0	0	19	5	0	0	21	36	150
18:30:00	0	0	0	0	5	0	3	7	0	0	2	9	0	0	0	0	9	0	0	4	3	0	0	12	21	121
18:45:00	0	0	0	0	7	0	3	11	0	0	0	14	0	0	0	0	16	0	0	12	3	0	0	15	29	107
Grand Total	1	0	2	0	121	3	64	256	0	3	32	313	3	0	1	0	93	4	4	284	87	1	5	376	**696**	-
Approach%	33.3%	0%	66.7%	0%		-	17.3%	81.8%	0%	1%		-	75%	0%	25%	0%		-	1.1%	75.9%	23.1%	0.3%		-	-	-
Totals %	0.1%	0%	0.3%	0%		0.4%	7.8%	36.8%	0%	0.4%		45%	0.4%	0%	0.1%	0%		0.6%	0.6%	40.8%	12.5%	0.1%		54%	-	-
Heavy	0	0	0	0		-	0	30	0	1		-	0	0	0	0		-	0	13	0	0		-	-	-
Heavy %	0%	0%	0%	0%		-	0%	11.7%	0%	33.3%		-	0%	0%	0%	0%		-	0%	4.6%	0%	0%		-	-	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-

Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (16.95 °C)

Start Time	N Approach KISS & RIDE ACCESS						E Approach JOHN ST						S Approach PARKING LOT						W Approach JOHN ST						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
07:30:00	0	0	0	0	1	0	8	11	0	0	1	19	0	0	0	0	4	0	0	14	6	0	0	22	41
07:45:00	0	0	0	0	3	0	2	11	0	0	1	13	0	0	0	0	2	0	0	12	6	1	0	19	32
08:00:00	0	0	0	0	4	0	3	11	0	0	0	14	0	0	0	0	3	0	0	19	9	0	0	27	41
08:15:00	0	0	0	0	2	0	3	16	0	0	0	19	0	0	0	0	3	0	1	14	8	0	0	23	42
Grand Total	0	0	0	0	14	0	16	49	0	0	2	65	0	0	0	0	12	0	1	60	29	1	0	91	**156**
Approach%	0%	0%	0%	0%			24.6%	75.4%	0%	0%			0%	0%	0%	0%			1.1%	65.9%	31.9%	1.1%			-
Totals %	0%	0%	0%	0%		0%	10.3%	31.4%	0%	0%		41.7%	0%	0%	0%	0%		0%	0.6%	38.5%	18.6%	0.6%		58.3%	-
PHF	0	0	0	0		0	0.5	0.77	0	0		0.86	0	0	0	0		0	0.25	0.83	0.81	0.25		0.84	-
Heavy	0	0	0	0		0	0	5	0	0		5	0	0	0	0		0	0	1	0	0		1	-
Heavy %	0%	0%	0%	0%		0%	0%	10.2%	0%	0%		7.7%	0%	0%	0%	0%		0%	0%	1.7%	0%	0%		1.1%	-
Lights	0	0	0	0		0	16	44	0	0		60	0	0	0	0		0	1	59	29	1		90	-
Lights %	0%	0%	0%	0%		0%	100%	89.8%	0%	0%		92.3%	0%	0%	0%	0%		0%	100%	98.3%	100%	100%		98.9%	-
Single-Unit Trucks	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	4.1%	0%	0%		3.1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Buses	0	0	0	0		0	0	3	0	0		3	0	0	0	0		0	0	1	0	0		1	-
Buses %	0%	0%	0%	0%		0%	0%	6.1%	0%	0%		4.6%	0%	0%	0%	0%		0%	0%	1.7%	0%	0%		1.1%	-
Pedestrians	-	-	-	-	14	-	-	-	-	-	2	-	-	-	-	-	12	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	50%	-	-	-	-	-	7.1%	-	-	-	-	-	42.9%	-	-	-	-	-	0%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 05:30 PM - 06:30 PM Weather: Overcast Clouds (21.66 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	24
S	2	15
E	0	9
W	0	4

Peak Hour: 05:30 PM - 06:30 PM Weather: Overcast Clouds (21.66 °C)



Peak Hour: 05:30 PM - 06:30 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach KISS & RIDE ACCESS						E Approach JOHN ST						S Approach PARKING LOT						W Approach JOHN ST						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
17:30:00	0	0	0	0	12	0	4	20	0	1	4	25	1	0	0	0	7	1	0	13	11	0	1	24	50
17:45:00	0	0	1	0	3	1	3	14	0	0	1	18	0	0	0	0	6	0	0	20	6	0	0	26	45
18:00:00	0	0	0	0	5	0	0	11	0	0	0	11	0	0	0	0	4	0	0	7	3	0	0	10	21
18:15:00	1	0	0	0	7	1	1	13	0	0	3	14	0	0	0	0	12	0	0	16	5	0	0	21	36
Grand Total	1	0	1	0	27	2	7	58	0	1	8	68	1	0	0	0	29	1	0	56	25	0	1	81	**150**
Approach%	50%	0%	50%	0%		-	10.6%	87.9%	0%	1.5%		-	100%	0%	0%	0%		-	0%	69.1%	30.9%	0%		-	-
Totals %	0.7%	0%	0.7%	0%		1.3%	4.7%	38.7%	0%	0.7%		44%	0.7%	0%	0%	0%		0.7%	0%	37.3%	16.7%	0%		54%	-
PHF	0.25	0	0.25	0		0.5	0.44	0.73	0	0.25		0.66	0.25	0	0	0		0.25	0	0.7	0.57	0		0.78	-
Heavy	0	0	0	0		0	0	5	0	0		5	0	0	0	0		0	0	1	0	0		1	-
Heavy %	0%	0%	0%	0%		0%	0%	8.6%	0%	0%		7.4%	0%	0%	0%	0%		0%	0%	1.8%	0%	0%		1.2%	-
Lights	1	0	1	0		2	7	53	0	1		61	1	0	0	0		1	0	55	25	0		80	-
Lights %	100%	0%	100%	0%		100%	100%	91.4%	0%	100%		92.4%	100%	0%	0%	0%		100%	0%	98.2%	100%	0%		98.8%	-
Single-Unit Trucks	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	3.4%	0%	0%		3%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Buses	0	0	0	0		0	0	2	0	0		3	0	0	0	0		0	0	1	0	0		1	-
Buses %	0%	0%	0%	0%		0%	0%	3.4%	0%	0%		4.5%	0%	0%	0%	0%		0%	0%	1.8%	0%	0%		1.2%	-
Pedestrians	-	-	-	-	26	-	-	-	-	-	8	-	-	-	-	-	29	-	-	-	-	-	1	-	-
Pedestrians%	-	-	-	-	40%	-	-	-	-	-	12.3%	-	-	-	-	-	44.6%	-	-	-	-	-	1.5%	-	-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	1.5%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (16.96 °C)



Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach NORTHEAST PARKING LOT ACCESS					E Approach JOHN ST					W Approach JOHN ST					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
17:00:00	0	2	0	7	2	1	12	1	0	14	6	0	0	0	6	22
17:15:00	0	1	0	12	1	0	17	0	0	17	10	0	0	0	10	28
17:30:00	0	3	0	9	3	0	23	0	0	23	14	0	0	0	14	40
17:45:00	0	2	0	4	2	0	19	1	0	20	22	0	0	0	22	44
Grand Total	0	8	0	32	8	1	71	2	0	74	52	0	0	0	52	**134**
Approach%	0%	100%	0%		-	1.4%	95.9%	2.7%		-	100%	0%	0%		-	-
Totals %	0%	6%	0%		6%	0.7%	53%	1.5%		55.2%	38.8%	0%	0%		38.8%	-
PHF	0	0.67	0		0.67	0.25	0.77	0.5		0.8	0.59	0	0		0.59	-
Heavy	0	1	0		1	0	4	1		5	3	0	0		3	-
Heavy %	0%	12.5%	0%		12.5%	0%	5.6%	50%		6.8%	5.8%	0%	0%		5.8%	-
Lights	0	7	0		7	1	67	1		69	49	0	0		49	-
Lights %	0%	87.5%	0%		87.5%	100%	94.4%	50%		93.2%	94.2%	0%	0%		94.2%	-
Single-Unit Trucks	0	1	0		1	0	2	1		3	1	0	0		1	-
Single-Unit Trucks %	0%	12.5%	0%		12.5%	0%	2.8%	50%		4.1%	1.9%	0%	0%		1.9%	-
Buses	0	0	0		0	0	2	0		2	2	0	0		2	-
Buses %	0%	0%	0%		0%	0%	2.8%	0%		2.7%	3.8%	0%	0%		3.8%	-
Pedestrians	-	-	-	32	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians%	-	-	-	100%		-	-	-	0%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Turning Movement Count (13 . JOHN ST & NORTHEAST PARKING LOT ACCESS)

Start Time	N Approach NORTHEAST PARKING LOT ACCESS					E Approach JOHN ST					W Approach JOHN ST					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	0	1	0	3	1	1	18	0	0	19	12	1	0	0	13	33	
07:15:00	0	1	0	3	1	1	13	0	0	14	18	1	0	0	19	34	
07:30:00	0	0	0	0	0	2	18	0	0	20	17	0	0	0	17	37	
07:45:00	0	2	0	4	2	5	13	1	0	19	12	0	0	0	12	33	137
08:00:00	0	1	0	7	1	2	14	2	0	18	17	0	0	0	17	36	140
08:15:00	0	0	0	3	0	3	20	0	0	23	14	1	0	0	15	38	144
08:30:00	0	1	0	2	1	0	8	1	0	9	8	0	0	0	8	18	125
08:45:00	0	1	0	1	1	1	13	0	0	14	12	0	0	0	12	27	119
09:00:00	0	2	0	7	2	0	10	1	0	11	7	1	0	0	8	21	104
09:15:00	0	5	0	5	5	4	5	0	0	9	6	0	0	0	6	20	86
09:30:00	0	1	0	8	1	0	6	0	0	6	5	1	0	0	6	13	81
09:45:00	0	0	0	3	0	1	8	1	0	10	18	0	0	0	18	28	82
****BREAK****																	
16:00:00	0	3	0	2	3	3	14	0	0	17	11	0	0	0	11	31	
16:15:00	1	1	0	4	2	1	12	1	0	14	3	1	0	0	4	20	
16:30:00	1	2	0	4	3	1	11	0	0	12	15	0	0	0	15	30	
16:45:00	0	4	0	6	4	1	13	2	0	16	17	0	0	0	17	37	118
17:00:00	0	2	0	7	2	1	12	1	0	14	6	0	0	0	6	22	109
17:15:00	0	1	0	12	1	0	17	0	0	17	10	0	0	0	10	28	117
17:30:00	0	3	0	9	3	0	23	0	0	23	14	0	0	0	14	40	127
17:45:00	0	2	0	4	2	0	19	1	0	20	22	0	0	0	22	44	134
18:00:00	0	1	0	5	1	0	11	1	0	12	7	0	0	0	7	20	132
18:15:00	0	0	0	7	0	0	12	1	1	13	16	0	0	0	16	29	133
18:30:00	1	1	0	3	2	1	10	1	0	12	9	0	0	0	9	23	116
18:45:00	0	0	0	4	0	0	11	1	0	12	12	0	0	0	12	24	96
Grand Total	3	35	0	113	38	28	311	15	1	354	288	6	0	0	294	**686**	-
Approach%	7.9%	92.1%	0%		-	7.9%	87.9%	4.2%		-	98%	2%	0%		-	-	-
Totals %	0.4%	5.1%	0%		5.5%	4.1%	45.3%	2.2%		51.6%	42%	0.9%	0%		42.9%	-	-
Heavy	0	5	0		-	4	30	12		-	15	0	0		-	-	-
Heavy %	0%	14.3%	0%		-	14.3%	9.6%	80%		-	5.2%	0%	0%		-	-	-
Bicycles	-	-	-		-	-	-	-		-	-	-	-		-	-	-
Bicycle %	-	-	-		-	-	-	-		-	-	-	-		-	-	-

Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (16.96 °C)



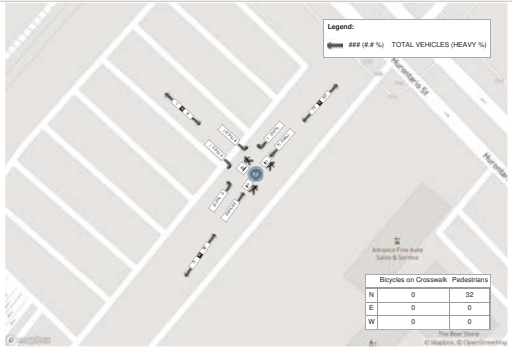
Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach NORTHEAST PARKING LOT ACCESS					E Approach JOHN ST					W Approach JOHN ST					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
07:30:00	0	0	0	0	0	2	18	0	0	20	17	0	0	0	17	37
07:45:00	0	2	0	4	2	5	13	1	0	19	12	0	0	0	12	33
08:00:00	0	1	0	7	1	2	14	2	0	18	17	0	0	0	17	36
08:15:00	0	0	0	3	0	3	20	0	0	23	14	1	0	0	15	38
Grand Total	0	3	0	14	3	12	65	3	0	80	60	1	0	0	61	**144**
Approach%	0%	100%	0%		-	15%	81.3%	3.8%		-	98.4%	1.6%	0%		-	-
Totals %	0%	2.1%	0%		2.1%	8.3%	45.1%	2.1%		55.6%	41.7%	0.7%	0%		42.4%	-
PHF	0	0.38	0		0.38	0.6	0.81	0.38		0.87	0.88	0.25	0		0.9	-
Heavy	0	1	0		1	2	5	3		10	1	0	0		1	-
Heavy %	0%	33.3%	0%		33.3%	16.7%	7.7%	100%		12.5%	1.7%	0%	0%		1.6%	-
Lights	0	2	0		2	10	60	0		70	59	1	0		60	-
Lights %	0%	66.7%	0%		66.7%	83.3%	92.3%	0%		87.5%	98.3%	100%	0%		98.4%	-
Single-Unit Trucks	0	1	0		1	2	2	3		7	0	0	0		0	-
Single-Unit Trucks %	0%	33.3%	0%		33.3%	16.7%	3.1%	100%		8.8%	0%	0%	0%		0%	-
Buses	0	0	0		0	0	3	0		3	1	0	0		1	-
Buses %	0%	0%	0%		0%	0%	4.6%	0%		3.8%	1.7%	0%	0%		1.6%	-
Pedestrians	-	-	-	14	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians%	-	-	-	100%		-	-	-	0%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Turning Movement Count (9 . JOHN ST & PARKING STRUCTURE ACCESS)

Start Time	N Approach JOHN ST					E Approach PARKING STRUCTURE ACCESS					S Approach JOHN ST					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	UTurn S:S	Peds S:	Approach Total		
07:00:00	0	0	0	0	0	4	4	0	6	8	6	5	0	8	11	19	
07:15:00	1	0	0	0	1	2	4	0	3	6	13	1	0	1	14	21	
07:30:00	1	0	0	0	1	4	1	0	9	5	13	5	0	6	18	24	
07:45:00	0	0	0	0	0	2	5	0	5	7	9	5	0	4	14	21	85
08:00:00	0	0	0	0	0	3	4	0	7	7	16	5	0	8	21	28	94
08:15:00	0	0	0	0	0	3	6	0	0	9	6	1	1	7	8	17	90
08:30:00	0	0	0	0	0	3	1	0	4	4	7	1	0	6	8	12	78
08:45:00	0	0	0	2	0	4	7	0	3	11	11	2	0	5	13	24	81
09:00:00	0	0	0	0	0	3	6	0	1	9	4	0	0	2	4	13	66
09:15:00	0	0	0	0	0	2	0	0	0	2	5	0	0	4	5	7	56
09:30:00	0	0	0	1	0	1	3	0	2	4	5	1	0	2	6	10	54
09:45:00	0	0	0	1	0	3	3	0	2	6	11	1	0	3	12	18	48
BREAK																	
16:00:00	3	0	0	0	3	3	10	0	3	13	4	1	0	4	5	21	
16:15:00	0	0	0	1	0	5	13	0	0	18	2	3	0	5	5	23	
16:30:00	1	0	0	2	1	1	12	0	5	13	9	1	0	6	10	24	
16:45:00	1	0	0	0	1	5	10	0	4	15	8	0	0	2	8	24	92
17:00:00	3	0	0	2	3	1	16	0	6	17	2	4	0	9	6	26	97
17:15:00	2	0	0	3	2	6	11	0	5	17	5	3	0	6	8	27	101
17:30:00	0	0	0	3	0	2	16	0	6	18	4	0	0	11	4	22	99
17:45:00	0	0	0	3	0	4	24	1	1	29	8	2	0	17	10	39	114
18:00:00	0	0	0	0	0	3	8	0	2	11	4	0	1	14	5	16	104
18:15:00	0	0	0	2	0	3	15	0	7	18	10	0	0	14	10	28	105
18:30:00	1	0	0	0	1	5	9	0	3	14	1	1	0	18	2	17	100
18:45:00	1	0	0	2	1	2	12	0	1	14	9	0	0	15	9	24	85
Grand Total	14	0	0	22	14	74	200	1	85	275	172	42	2	177	216	**505**	-
Approach%	100%	0%	0%		-	26.9%	72.7%	0.4%		-	79.6%	19.4%	0.9%		-	-	-
Totals %	2.8%	0%	0%		2.8%	14.7%	39.6%	0.2%		54.5%	34.1%	8.3%	0.4%		42.8%	-	-
Heavy	0	0	0		-	70	2	0		-	0	8	0		-	-	-
Heavy %	0%	0%	0%		-	94.6%	1%	0%		-	0%	19%	0%		-	-	-
Bicycles	0	0	0		-	0	1	2		-	3	0	0		-	-	-
Bicycle %	0%	0%	0%		-	0%	0.5%	200%		-	1.7%	0%	0%		-	-	-

Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (21.66 °C)

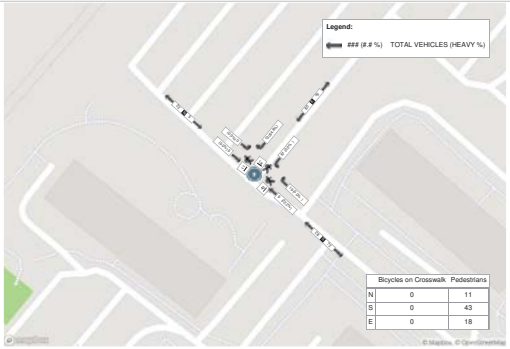


	Bicycles on Crosswalk	Pedestrians
N	0	32
E	0	0
W	0	0

Peak Hour: 07:15 AM - 08:15 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach JOHN ST					E Approach PARKING STRUCTURE ACCESS					S Approach JOHN ST					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
07:15:00	1	0	0	0	1	2	4	0	3	6	13	1	0	1	14	21
07:30:00	1	0	0	0	1	4	1	0	9	5	13	5	0	6	18	24
07:45:00	0	0	0	0	0	2	5	0	5	7	9	5	0	4	14	21
08:00:00	0	0	0	0	0	3	4	0	7	7	16	5	0	8	21	28
Grand Total	2	0	0	0	2	11	14	0	24	25	51	16	0	19	67	**94**
Approach%	100%	0%	0%		-	44%	56%	0%		-	76.1%	23.9%	0%		-	-
Totals %	2.1%	0%	0%		2.1%	11.7%	14.9%	0%		26.6%	54.3%	17%	0%		71.3%	-
PHF	0.5	0	0		0.5	0.69	0.7	0		0.89	0.8	0.8	0		0.8	-
Heavy	0	0	0		0	10	2	0		12	0	2	0		2	-
Heavy %	0%	0%	0%		0%	90.9%	14.3%	0%		48%	0%	12.5%	0%		3%	-
Lights	2	0	0		2	1	12	0		13	51	14	0		65	-
Lights %	100%	0%	0%		100%	9.1%	85.7%	0%		52%	100%	87.5%	0%		97%	-
Single-Unit Trucks	0	0	0		0	0	1	0		1	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	7.1%	0%		4%	0%	0%	0%		0%	-
Buses	0	0	0		0	10	1	0		11	0	2	0		2	-
Buses %	0%	0%	0%		0%	90.9%	7.1%	0%		44%	0%	12.5%	0%		3%	-
Pedestrians	-	-	-	0	-	-	-	-	24	-	-	-	-	19	-	-
Pedestrians%	-	-	-	0%		-	-	-	55.8%		-	-	-	44.2%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	2	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

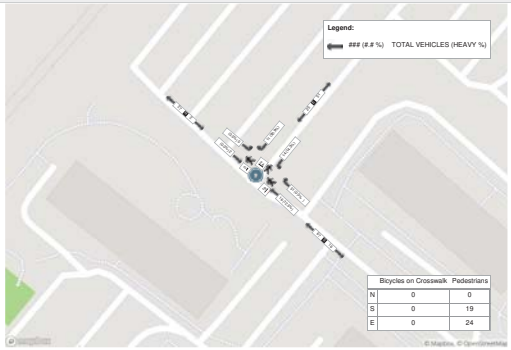
Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (21.66 °C)



Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach JOHN ST					E Approach PARKING STRUCTURE ACCESS					S Approach JOHN ST					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
17:00:00	3	0	0	2	3	1	16	0	6	17	2	4	0	9	6	26
17:15:00	2	0	0	3	2	6	11	0	5	17	5	3	0	6	8	27
17:30:00	0	0	0	3	0	2	16	0	6	18	4	0	0	11	4	22
17:45:00	0	0	0	3	0	4	24	1	1	29	8	2	0	17	10	39
Grand Total	5	0	0	11	5	13	67	1	18	81	19	9	0	43	28	**114**
Approach%	100%	0%	0%		-	16%	82.7%	1.2%		-	67.9%	32.1%	0%		-	-
Totals %	4.4%	0%	0%		4.4%	11.4%	58.8%	0.9%		71.1%	16.7%	7.9%	0%		24.6%	-
PHF	0.42	0	0		0.42	0.54	0.7	0.25		0.7	0.59	0.56	0		0.7	-
Heavy	0	0	0		0	11	0	0		11	0	2	0		2	-
Heavy %	0%	0%	0%		0%	84.6%	0%	0%		13.6%	0%	22.2%	0%		7.1%	-
Lights	5	0	0		5	2	67	1		70	19	7	0		26	-
Lights %	100%	0%	0%		100%	15.4%	100%	100%		86.4%	100%	77.8%	0%		92.9%	-
Single-Unit Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Buses	0	0	0		0	11	0	0		11	0	2	0		2	-
Buses %	0%	0%	0%		0%	84.6%	0%	0%		13.6%	0%	22.2%	0%		7.1%	-
Pedestrians	-	-	-	11	-	-	-	-	18	-	-	-	-	43	-	-
Pedestrians%	-	-	-	15.3%		-	-	-	25%		-	-	-	59.7%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	1	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 07:15 AM - 08:15 AM Weather: Broken Clouds (16.96 °C)



Peak Hour: 05:30 PM - 06:30 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach PARKING STRUCTURE LOOP					E Approach JOHN ST					W Approach JOHN ST					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
17:30:00	12	4	0	8	16	0	18	0	1	18	17	0	0	0	17	51
17:45:00	8	5	0	3	13	0	16	0	0	16	24	0	0	0	24	53
18:00:00	6	0	0	6	6	0	10	1	0	11	9	0	1	0	10	27
18:15:00	9	1	0	1	10	0	13	0	0	13	20	0	0	1	20	43
Grand Total	35	10	0	18	45	0	57	1	1	58	70	0	1	1	71	**174**
Approach%	77.8%	22.2%	0%		-	0%	98.3%	1.7%		-	98.6%	0%	1.4%		-	-
Totals %	20.1%	5.7%	0%		25.9%	0%	32.8%	0.6%		33.3%	40.2%	0%	0.6%		40.8%	-
PHF	0.73	0.5	0		0.7	0	0.79	0.25		0.81	0.73	0	0.25		0.74	-
Heavy	12	1	0		13	0	5	0		5	0	0	0		0	-
Heavy %	34.3%	10%	0%		28.9%	0%	8.8%	0%		8.6%	0%	0%	0%		0%	-
Lights	23	9	0		32	0	52	1		53	70	0	1		71	-
Lights %	65.7%	90%	0%		71.1%	0%	91.2%	100%		91.4%	100%	0%	100%		100%	-
Single-Unit Trucks	0	0	0		0	0	2	0		2	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	3.5%	0%		3.4%	0%	0%	0%		0%	-
Buses	12	1	0		13	0	3	0		3	0	0	0		0	-
Buses %	34.3%	10%	0%		28.9%	0%	5.3%	0%		5.2%	0%	0%	0%		0%	-
Pedestrians	-	-	-	17	-	-	-	-	1	-	-	-	-	1	-	-
Pedestrians%	-	-	-	85%		-	-	-	5%		-	-	-	5%		-
Bicycles on Crosswalk	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	5%		-	-	-	0%		-	-	-	0%		-

Turning Movement Count (15 . JOHN ST & PARKING STRUCTURE LOOP)

Start Time	N Approach PARKING STRUCTURE LOOP					E Approach JOHN ST					W Approach JOHN ST					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	4	6	0	3	10	0	10	0	1	10	11	0	0	0	11	31	
07:15:00	10	5	0	3	15	0	8	0	0	8	15	0	0	0	15	38	
07:30:00	6	7	0	1	13	0	11	0	0	11	16	0	0	0	16	40	
07:45:00	9	5	0	5	14	0	11	0	0	11	14	0	0	0	14	39	148
08:00:00	8	5	0	2	13	0	11	0	0	11	21	0	0	0	21	45	162
08:15:00	7	8	0	2	15	0	17	0	0	17	15	0	0	0	15	47	171
08:30:00	7	3	0	1	10	0	7	0	0	7	6	0	0	0	6	23	154
08:45:00	9	2	0	0	11	0	10	1	0	11	14	0	0	0	14	36	151
09:00:00	1	1	0	9	2	0	9	1	0	10	6	0	0	0	6	18	124
09:15:00	2	1	0	8	3	0	5	0	2	5	5	0	0	0	5	13	90
09:30:00	2	1	0	8	3	0	7	0	0	7	5	0	0	0	5	15	82
09:45:00	1	2	0	4	3	0	6	1	0	7	14	0	0	0	14	24	70
BREAK																	
16:00:00	4	1	0	1	5	0	13	0	0	13	12	0	0	0	12	30	
16:15:00	7	1	0	2	8	0	13	0	0	13	5	0	0	0	5	26	
16:30:00	6	1	0	5	7	0	12	0	0	12	16	0	0	0	16	35	
16:45:00	9	3	0	2	12	0	9	0	2	9	19	0	0	2	19	40	131
17:00:00	8	1	0	4	9	0	9	0	0	9	8	0	0	0	8	26	127
17:15:00	7	3	0	11	10	0	13	0	1	13	9	0	0	0	9	32	133
17:30:00	12	4	0	8	16	0	18	0	1	18	17	0	0	0	17	51	149
17:45:00	8	5	0	3	13	0	16	0	0	16	24	0	0	0	24	53	162
18:00:00	6	0	0	6	6	0	10	1	0	11	9	0	1	0	10	27	163
18:15:00	9	1	0	1	10	0	13	0	0	13	20	0	0	1	20	43	174
18:30:00	5	3	0	6	8	0	9	0	0	9	9	0	0	0	9	26	149
18:45:00	6	3	0	6	9	0	7	0	0	7	11	0	0	0	11	27	123
Grand Total	153	72	0	101	225	0	254	4	7	258	301	0	1	3	302	**785**	
Approach%	68%	32%	0%		-	0%	98.4%	1.6%		-	99.7%	0%	0.3%		-	-	-
Totals %	19.5%	9.2%	0%		28.7%	0%	32.4%	0.5%		32.9%	38.3%	0%	0.1%		38.5%	-	-
Heavy	63	14	0		-	0	29	0		-	0	0	0		-	-	-
Heavy %	41.2%	19.4%	0%		-	0%	11.4%	0%		-	0%	0%	0%		-	-	-
Bicycles	-	-	-		-	-	-	-		-	-	-	-		-	-	-
Bicycle %	-	-	-		-	-	-	-		-	-	-	-		-	-	-

Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (16.96 °C)



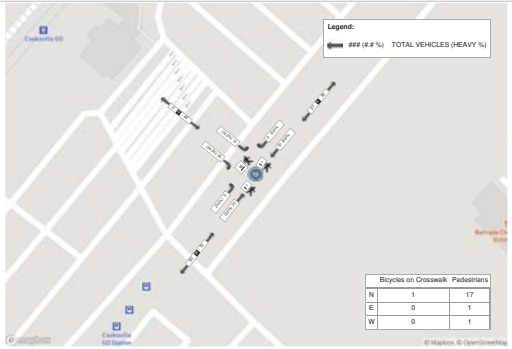
Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach PARKING STRUCTURE LOOP					E Approach JOHN ST					W Approach JOHN ST					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
07:30:00	6	7	0	1	13	0	11	0	0	11	16	0	0	0	16	40
07:45:00	9	5	0	5	14	0	11	0	0	11	14	0	0	0	14	39
08:00:00	8	5	0	2	13	0	11	0	0	11	21	0	0	0	21	45
08:15:00	7	8	0	2	15	0	17	0	0	17	15	0	0	0	15	47
Grand Total	30	25	0	10	55	0	50	0	0	50	66	0	0	0	66	**171**
Approach%	54.5%	45.5%	0%		-	0%	100%	0%		-	100%	0%	0%		-	-
Totals %	17.5%	14.6%	0%		32.2%	0%	29.2%	0%		29.2%	38.6%	0%	0%		38.6%	-
PHF	0.83	0.78	0		0.92	0	0.74	0		0.74	0.79	0	0		0.79	-
Heavy	10	1	0		11	0	5	0		5	0	0	0		0	-
Heavy %	33.3%	4%	0%		20%	0%	10%	0%		10%	0%	0%	0%		0%	-
Lights	20	24	0		44	0	45	0		45	66	0	0		66	-
Lights %	66.7%	96%	0%		80%	0%	90%	0%		90%	100%	0%	0%		100%	-
Single-Unit Trucks	0	0	0		0	0	2	0		2	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	4%	0%		4%	0%	0%	0%		0%	-
Buses	10	1	0		11	0	3	0		3	0	0	0		0	-
Buses %	33.3%	4%	0%		20%	0%	6%	0%		6%	0%	0%	0%		0%	-
Pedestrians	-	-	-	10	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians%	-	-	-	100%		-	-	-	0%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Turning Movement Count (19 . JOHN ST & PARKING STRUCTURE SOUTH ACCESS)

Start Time	N Approach PARKING STRUCTURE SOUTH ACCESS					E Approach JOHN ST					W Approach JOHN ST					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	1	0	0	2	1	0	5	0	0	5	7	2	0	0	9	15	
07:15:00	1	1	0	0	2	2	6	0	0	8	11	3	0	0	14	24	
07:30:00	0	1	0	1	1	2	6	0	0	8	10	1	0	0	11	20	
07:45:00	1	2	0	3	3	1	10	0	1	11	11	2	0	1	13	27	86
08:00:00	1	1	0	3	2	1	7	0	2	8	13	3	0	0	16	26	97
08:15:00	1	0	0	0	1	0	7	0	1	7	4	2	0	1	6	14	87
08:30:00	0	2	0	1	2	0	5	0	4	5	6	1	0	0	7	14	81
08:45:00	1	1	0	3	2	0	10	0	0	10	7	3	0	1	10	22	76
09:00:00	0	1	0	3	1	0	9	0	1	9	5	0	0	0	5	15	65
09:15:00	0	0	0	2	0	0	2	0	0	2	5	0	0	0	5	7	58
09:30:00	1	0	0	3	1	0	2	0	3	2	4	0	0	0	4	7	51
09:45:00	0	0	0	1	0	1	7	0	4	8	12	0	0	0	12	20	49
BREAK																	
16:00:00	1	5	0	2	6	0	11	0	1	11	4	0	0	0	4	21	
16:15:00	1	1	0	0	2	0	17	0	0	17	1	1	0	0	2	21	
16:30:00	3	3	0	2	6	0	11	0	0	11	7	1	0	0	8	25	
16:45:00	3	3	0	0	6	0	11	0	1	11	9	1	0	0	10	27	94
17:00:00	8	1	0	6	9	2	9	0	0	11	2	0	0	1	2	22	95
17:15:00	2	0	0	9	2	1	15	0	1	16	4	0	0	0	4	22	96
17:30:00	4	2	0	9	6	0	15	0	4	15	3	1	0	2	4	25	96
17:45:00	11	9	0	2	20	1	16	0	0	17	9	1	0	2	10	47	116
18:00:00	1	1	0	2	2	0	10	0	4	10	4	0	0	0	4	16	110
18:15:00	5	2	0	2	7	0	14	0	1	14	8	1	0	0	9	30	118
18:30:00	2	1	0	5	3	1	11	0	9	12	3	0	0	0	3	18	111
18:45:00	5	1	0	5	6	0	9	0	1	9	9	0	0	0	9	24	88
Grand Total	53	38	0	66	91	12	225	0	38	237	158	23	0	8	181	**509**	-
Approach%	58.2%	41.8%	0%		-	5.1%	94.9%	0%		-	87.3%	12.7%	0%		-	-	-
Totals %	10.4%	7.5%	0%		17.9%	2.4%	44.2%	0%		46.6%	31%	4.5%	0%		35.6%	-	-
Heavy	0	0	0		-	0	73	0		-	0	0	0		-	-	-
Heavy %	0%	0%	0%		-	0%	32.4%	0%		-	0%	0%	0%		-	-	-
Bicycles	0	0	0		-	0	3	0		-	10	0	0		-	-	-
Bicycle %	0%	0%	0%		-	0%	1.3%	0%		-	6.3%	0%	0%		-	-	-

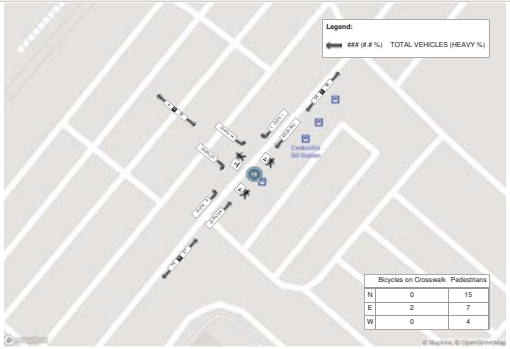
Peak Hour: 05:30 PM - 06:30 PM Weather: Overcast Clouds (21.66 °C)



Peak Hour: 07:15 AM - 08:15 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach PARKING STRUCTURE SOUTH ACCESS					E Approach JOHN ST					W Approach JOHN ST					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
07:15:00	1	1	0	0	2	2	6	0	0	8	11	3	0	0	14	24
07:30:00	0	1	0	1	1	2	6	0	0	8	10	1	0	0	11	20
07:45:00	1	2	0	3	3	1	10	0	1	11	11	2	0	1	13	27
08:00:00	1	1	0	3	2	1	7	0	2	8	13	3	0	0	16	26
Grand Total	3	5	0	7	8	6	29	0	3	35	45	9	0	1	54	**97**
Approach%	37.5%	62.5%	0%		-	17.1%	82.9%	0%		-	83.3%	16.7%	0%		-	-
Totals %	3.1%	5.2%	0%		8.2%	6.2%	29.9%	0%		36.1%	46.4%	9.3%	0%		55.7%	-
PHF	0.75	0.63	0		0.67	0.75	0.73	0		0.8	0.87	0.75	0		0.84	-
Heavy	0	0	0		0	0	14	0		14	0	0	0		0	-
Heavy %	0%	0%	0%		0%	0%	48.3%	0%		40%	0%	0%	0%		0%	-
Lights	3	5	0		8	6	15	0		21	45	9	0		54	-
Lights %	100%	100%	0%		100%	100%	51.7%	0%		60%	100%	100%	0%		100%	-
Single-Unit Trucks	0	0	0		0	0	1	0		1	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	3.4%	0%		2.9%	0%	0%	0%		0%	-
Buses	0	0	0		0	0	13	0		13	0	0	0		0	-
Buses %	0%	0%	0%		0%	0%	44.8%	0%		37.1%	0%	0%	0%		0%	-
Pedestrians	-	-	-	7	-	-	-	-	3	-	-	-	-	1	-	-
Pedestrians%	-	-	-	63.6%		-	-	-	27.3%		-	-	-	9.1%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	3	0	0	-	2	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 05:30 PM - 06:30 PM Weather: Overcast Clouds (21.66 °C)

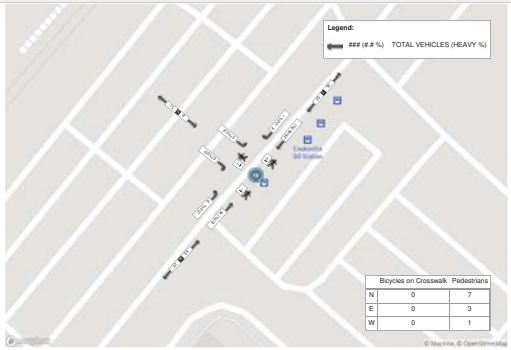


	Bicycles on Crosswalk	Pedestrians
N	0	15
E	2	7
W	0	4

Peak Hour: 05:30 PM - 06:30 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach PARKING STRUCTURE SOUTH ACCESS					E Approach JOHN ST					W Approach JOHN ST					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
17:30:00	4	2	0	9	6	0	15	0	4	15	3	1	0	2	4	25
17:45:00	11	9	0	2	20	1	16	0	0	17	9	1	0	2	10	47
18:00:00	1	1	0	2	2	0	10	0	4	10	4	0	0	0	4	16
18:15:00	5	2	0	2	7	0	14	0	1	14	8	1	0	0	9	30
Grand Total	21	14	0	15	35	1	55	0	9	56	24	3	0	4	27	**118**
Approach%	60%	40%	0%			1.8%	98.2%	0%			88.9%	11.1%	0%			-
Totals %	17.8%	11.9%	0%		29.7%	0.8%	46.6%	0%		47.5%	20.3%	2.5%	0%		22.9%	-
PHF	0.48	0.39	0		0.44	0.25	0.86	0		0.82	0.67	0.75	0		0.68	-
Heavy	0	0	0		0	0	12	0		12	0	0	0		0	-
Heavy %	0%	0%	0%		0%	0%	21.8%	0%		21.4%	0%	0%	0%		0%	-
Lights	21	14	0		35	1	43	0		44	24	3	0		27	-
Lights %	100%	100%	0%		100%	100%	78.2%	0%		78.6%	100%	100%	0%		100%	-
Single-Unit Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Buses	0	0	0		0	0	12	0		12	0	0	0		0	-
Buses %	0%	0%	0%		0%	0%	21.8%	0%		21.4%	0%	0%	0%		0%	-
Pedestrians	-	-	-	15	-	-	-	-	7	-	-	-	-	4	-	-
Pedestrians%	-	-	-	53.6%		-	-	-	25%		-	-	-	14.3%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	2	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	7.1%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	3	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 07:15 AM - 08:15 AM Weather: Broken Clouds (16.96 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	7
E	0	3
W	0	1

Peak Hour: 05:45 PM - 06:45 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach LANEWAY					E Approach PARKING GARAGE					S Approach LANEWAY					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
17:45:00	55	5	0	0	60	1	0	0	3	1	29	38	0	0	67	128
18:00:00	45	0	0	0	45	0	0	0	0	0	27	26	0	0	53	98
18:15:00	47	4	1	0	52	0	0	0	5	0	22	26	0	0	48	100
18:30:00	43	3	0	0	46	0	0	0	2	0	23	26	0	1	49	95
Grand Total	190	12	1	0	203	1	0	0	10	1	101	116	0	1	217	**421**
Approach%	93.6%	5.9%	0.5%			100%	0%	0%			46.5%	53.5%	0%			-
Totals %	45.1%	2.9%	0.2%		48.2%	0.2%	0%	0%		0.2%	24%	27.6%	0%		51.5%	-
PHF	0.86	0.6	0.25		0.85	0.25	0	0		0.25	0.87	0.76	0		0.81	-
Heavy	0	0	0		0	0	0	0		0	0	1	0		1	-
Heavy %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0.9%	0%		0.5%	-
Lights	190	12	1		203	1	0	0		1	101	115	0		216	-
Lights %	100%	100%	100%		100%	100%	0%	0%		100%	100%	99.1%	0%		99.5%	-
Single-Unit Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Buses	0	0	0		0	0	0	0		0	0	1	0		1	-
Buses %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0.9%	0%		0.5%	-
Pedestrians	-	-	-	0	-	-	-	-	9	-	-	-	-	1	-	-
Pedestrians%	-	-	-	0%		-	-	-	81.8%		-	-	-	9.1%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	9.1%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Turning Movement Count (12 . PARKING GARAGE & LANEWAY)

Start Time	N Approach LANEWAY					E Approach PARKING GARAGE					S Approach LANEWAY					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	UTurn S:S	Peds S:	Approach Total		
07:00:00	23	2	0	0	25	0	0	0	0	0	8	14	0	0	22	47	
07:15:00	30	0	0	0	30	0	0	0	2	0	0	13	0	1	13	43	
07:30:00	41	1	0	3	42	0	0	0	6	0	4	18	0	1	22	64	
07:45:00	44	0	0	0	44	0	0	0	1	0	5	18	0	0	23	67	221
08:00:00	53	1	1	0	55	0	0	0	0	0	8	20	0	0	28	83	257
08:15:00	42	3	0	1	45	0	0	0	5	0	14	16	0	3	30	75	289
08:30:00	48	0	0	0	48	0	0	0	5	0	3	12	0	0	15	63	288
08:45:00	47	4	0	0	51	0	0	0	6	0	16	20	0	1	36	87	308
09:00:00	34	0	0	0	34	0	0	0	3	0	9	19	0	0	28	62	287
09:15:00	23	0	0	0	23	0	0	0	0	0	9	12	0	0	21	44	256
09:30:00	31	1	0	0	32	0	0	0	2	0	6	16	0	0	22	54	247
09:45:00	18	2	0	0	20	0	0	0	3	0	6	14	0	1	20	40	200
BREAK																	
16:00:00	42	5	0	0	47	0	0	0	3	0	17	19	0	0	36	83	
16:15:00	33	3	0	0	36	0	0	0	2	0	12	27	0	0	39	75	
16:30:00	37	6	0	0	43	0	0	0	0	0	12	28	0	0	40	83	
16:45:00	41	3	0	0	44	0	0	0	0	0	26	20	0	0	46	90	331
17:00:00	57	6	1	0	64	0	1	0	2	1	16	26	0	0	42	107	355
17:15:00	40	4	0	0	44	0	0	0	1	0	17	30	0	0	47	91	371
17:30:00	43	7	0	1	50	0	0	0	0	0	25	16	0	0	41	91	379
17:45:00	55	5	0	0	60	1	0	0	3	1	29	38	0	0	67	128	417
18:00:00	45	0	0	0	45	0	0	0	0	0	27	26	0	0	53	98	408
18:15:00	47	4	1	0	52	0	0	0	5	0	22	26	0	0	48	100	417
18:30:00	43	3	0	0	46	0	0	0	2	0	23	26	0	1	49	95	421
18:45:00	44	4	0	0	48	0	0	0	0	0	27	18	0	8	45	93	386
Grand Total	961	64	3	5	1028	1	1	0	51	2	341	492	0	16	833	**1863**	-
Approach%	93.5%	6.2%	0.3%		-	50%	50%	0%		-	40.9%	59.1%	0%		-	-	-
Totals %	51.6%	3.4%	0.2%		55.2%	0.1%	0.1%	0%		0.1%	18.3%	26.4%	0%		44.7%	-	-
Heavy	14	0	0		-	0	0	0		-	0	21	0		-	-	-
Heavy %	1.5%	0%	0%		-	0%	0%	0%		-	0%	4.3%	0%		-	-	-
Bicycles	0	0	0		-	0	2	0		-	0	0	0		-	-	-
Bicycle %	0%	0%	0%		-	0%	200%	0%		-	0%	0%	0%		-	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.96 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	1
S	0	4
E	0	16

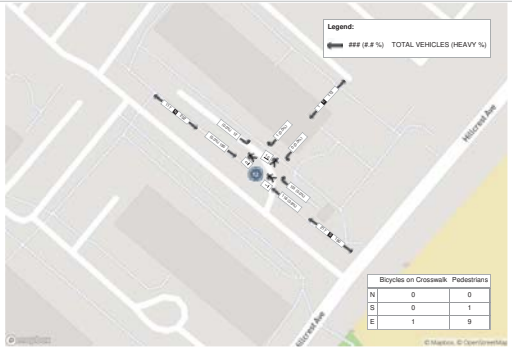
Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach LANEWAY					E Approach PARKING GARAGE					S Approach LANEWAY					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
08:00:00	53	1	1	0	55	0	0	0	0	0	8	20	0	0	28	83
08:15:00	42	3	0	1	45	0	0	0	5	0	14	16	0	3	30	75
08:30:00	48	0	0	0	48	0	0	0	5	0	3	12	0	0	15	63
08:45:00	47	4	0	0	51	0	0	0	6	0	16	20	0	1	36	87
Grand Total	190	8	1	1	199	0	0	0	16	0	41	68	0	4	109	**308**
Approach%	95.5%	4%	0.5%		-	0%	0%	0%		-	37.6%	62.4%	0%		-	-
Totals %	61.7%	2.6%	0.3%		64.6%	0%	0%	0%		0%	13.3%	22.1%	0%		35.4%	-
PHF	0.9	0.5	0.25		0.9	0	0	0		0	0.64	0.85	0		0.76	-
Heavy	4	0	0		4	0	0	0		0	0	6	0		6	-
Heavy %	2.1%	0%	0%		2%	0%	0%	0%		0%	0%	8.8%	0%		5.5%	-
Lights	186	8	1		195	0	0	0		0	41	62	0		103	-
Lights %	97.9%	100%	100%		98%	0%	0%	0%		0%	100%	91.2%	0%		94.5%	-
Single-Unit Trucks	0	0	0		0	0	0	0		0	0	1	0		1	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	1.5%	0%		0.9%	-
Buses	4	0	0		4	0	0	0		0	0	5	0		5	-
Buses %	2.1%	0%	0%		2%	0%	0%	0%		0%	0%	7.4%	0%		4.6%	-
Pedestrians	-	-	-	1	-	-	-	-	16	-	-	-	-	4	-	-
Pedestrians%	-	-	-	4.8%		-	-	-	76.2%		-	-	-	19%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Turning Movement Count (20 . PARKING STRUCTURE LOOP & KISS & RIDE ACCESS)

Start Time	N Approach PARKING STRUCTURE LOOP					E Approach KISS & RIDE ACCESS					S Approach PARKING STRUCTURE LOOP					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	UTurn S:S	Peds S:	Approach Total		
07:00:00	2	0	0	1	2	0	12	0	0	12	0	0	0	0	0	14	
07:15:00	4	0	0	2	4	0	8	0	1	8	0	0	0	0	0	12	
07:30:00	2	0	0	0	2	0	13	0	1	13	0	0	0	0	0	15	
07:45:00	6	0	0	3	6	0	8	0	0	8	0	0	0	0	0	14	55
08:00:00	3	0	0	4	3	0	12	0	4	12	0	0	0	1	0	15	56
08:15:00	1	0	0	4	1	0	10	0	0	10	0	0	0	0	0	11	55
08:30:00	5	0	0	0	5	0	3	0	0	3	0	0	0	0	0	8	48
08:45:00	4	0	0	4	4	0	7	0	0	7	0	0	0	0	0	11	45
09:00:00	1	0	0	1	1	0	0	0	3	0	0	0	0	1	0	1	31
09:15:00	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	23
09:30:00	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	18
09:45:00	3	0	0	2	3	0	0	0	0	0	0	0	0	0	0	3	10
BREAK																	
16:00:00	2	0	0	3	2	0	4	0	0	4	0	0	0	0	0	6	
16:15:00	5	0	0	2	5	0	2	0	2	2	0	0	0	0	0	7	
16:30:00	4	0	0	2	4	0	3	0	0	3	0	0	0	0	0	7	
16:45:00	3	0	0	1	3	0	9	0	4	9	0	0	0	0	0	12	32
17:00:00	4	0	0	4	4	0	5	0	1	5	0	0	0	0	0	9	35
17:15:00	6	0	0	0	6	0	5	0	0	5	0	0	0	0	0	11	39
17:30:00	4	0	0	4	4	0	13	0	2	13	0	0	0	0	0	17	49
17:45:00	3	0	0	1	3	0	9	0	1	9	0	0	0	0	0	12	49
18:00:00	4	0	0	0	4	0	1	0	0	1	0	0	0	0	0	5	45
18:15:00	3	0	0	12	3	0	8	0	3	8	0	0	0	0	0	11	45
18:30:00	3	0	0	5	3	0	4	0	3	4	0	0	0	0	0	7	35
18:45:00	4	0	0	5	4	0	5	0	0	5	0	0	0	0	0	9	32
Grand Total	82	0	0	60	82	0	141	0	25	141	0	0	0	2	0	**223**	-
Approach%	100%	0%	0%		-	0%	100%	0%		-	0%	0%	0%		-	-	-
Totals %	36.8%	0%	0%		36.8%	0%	63.2%	0%		63.2%	0%	0%	0%		0%	-	-
Heavy	74	0	0		-	0	0	0		-	0	0	0		-	-	-
Heavy %	90.2%	0%	0%		-	0%	0%	0%		-	0%	0%	0%		-	-	-
Bicycles	-	-	-		-	-	-	-		-	-	-	-		-	-	-
Bicycle %	-	-	-		-	-	-	-		-	-	-	-		-	-	-

Peak Hour: 05:45 PM - 06:45 PM Weather: Overcast Clouds (21.66 °C)

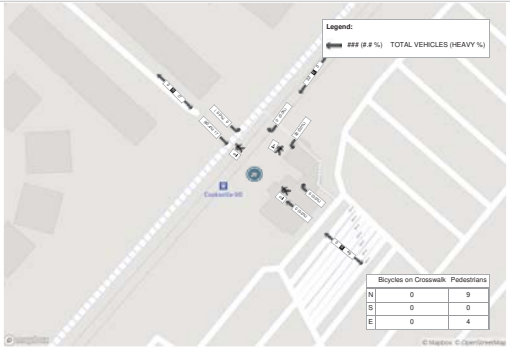


	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	1
E	1	9

Peak Hour: 07:15 AM - 08:15 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach PARKING STRUCTURE LOOP					E Approach KISS & RIDE ACCESS					S Approach PARKING STRUCTURE LOOP					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
07:15:00	4	0	0	2	4	0	8	0	1	8	0	0	0	0	0	12
07:30:00	2	0	0	0	2	0	13	0	1	13	0	0	0	0	0	15
07:45:00	6	0	0	3	6	0	8	0	0	8	0	0	0	0	0	14
08:00:00	3	0	0	4	3	0	12	0	4	12	0	0	0	1	0	15
Grand Total	15	0	0	9	15	0	41	0	6	41	0	0	0	1	0	**56**
Approach%	100%	0%	0%		-	0%	100%	0%		-	0%	0%	0%		-	-
Totals %	26.8%	0%	0%		26.8%	0%	73.2%	0%		73.2%	0%	0%	0%		0%	-
PHF	0.63	0	0		0.63	0	0.79	0		0.79	0	0	0		0	-
Heavy	14	0	0		14	0	0	0		0	0	0	0		0	-
Heavy %	93.3%	0%	0%		93.3%	0%	0%	0%		0%	0%	0%	0%		0%	-
Lights	1	0	0		1	0	41	0		41	0	0	0		0	-
Lights %	6.7%	0%	0%		6.7%	0%	100%	0%		100%	0%	0%	0%		0%	-
Buses	14	0	0		14	0	0	0		0	0	0	0		0	-
Buses %	93.3%	0%	0%		93.3%	0%	0%	0%		0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	9	-	-	-	-	6	-	-	-	-	1	-	-
Pedestrians%	-	-	-	56.3%		-	-	-	37.5%		-	-	-	6.3%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

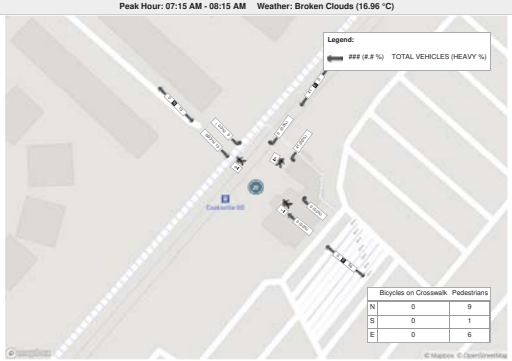
Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (21.66 °C)



Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach PARKING STRUCTURE LOOP					E Approach KISS & RIDE ACCESS					S Approach PARKING STRUCTURE LOOP					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
17:00:00	4	0	0	4	4	0	5	0	1	5	0	0	0	0	0	9
17:15:00	6	0	0	0	6	0	5	0	0	5	0	0	0	0	0	11
17:30:00	4	0	0	4	4	0	13	0	2	13	0	0	0	0	0	17
17:45:00	3	0	0	1	3	0	9	0	1	9	0	0	0	0	0	12
Grand Total	17	0	0	9	17	0	32	0	4	32	0	0	0	0	0	**49**
Approach%	100%	0%	0%		-	0%	100%	0%			0%	0%	0%		-	-
Totals %	34.7%	0%	0%		34.7%	0%	65.3%	0%		65.3%	0%	0%	0%		0%	-
PHF	0.71	0	0		0.71	0	0.62	0		0.62	0	0	0		0	-
Heavy	14	0	0		14	0	0	0		0	0	0	0		0	-
Heavy %	82.4%	0%	0%		82.4%	0%	0%	0%		0%	0%	0%	0%		0%	-
Lights	3	0	0		3	0	32	0		32	0	0	0		0	-
Lights %	17.6%	0%	0%		17.6%	0%	100%	0%		100%	0%	0%	0%		0%	-
Buses	14	0	0		14	0	0	0		0	0	0	0		0	-
Buses %	82.4%	0%	0%		82.4%	0%	0%	0%		0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	9	-	-	-	-	4	-	-	-	-	0	-	-
Pedestrians%	-	-	-	69.2%		-	-	-	30.8%		-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		-

Peak Hour: 07:15 AM - 08:15 AM Weather: Broken Clouds (16.96 °C)



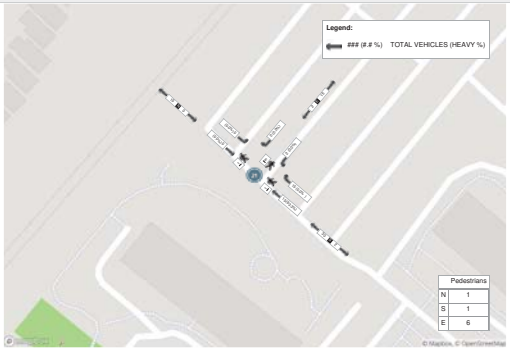
Peak Hour: 04:30 PM - 05:30 PM Weather: Overcast Clouds (21.66 °C)

Start Time	N Approach PARKING STRUCTURE LOOP					E Approach PARKING STRUCTURE WEST ACCESS					S Approach PARKING STRUCTURE LOOP					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
16:30:00	0	0	0	0	0	0	0	0	1	0	1	2	0	1	3	3
16:45:00	0	0	0	0	0	0	2	0	1	2	0	4	0	0	4	6
17:00:00	0	0	0	0	0	0	3	0	1	3	3	3	0	0	6	9
17:15:00	0	0	0	0	0	0	2	0	2	2	2	7	0	0	9	11
Grand Total	0	0	0	0	0	0	7	0	5	7	6	16	0	1	22	**29**
Approach%	0%	0%	0%			0%	100%	0%			27.3%	72.7%	0%			-
Totals %	0%	0%	0%		0%	0%	24.1%	0%		24.1%	20.7%	55.2%	0%		75.9%	-
PHF	0	0	0		0	0	0.58	0		0.58	0.5	0.57	0		0.61	-
Heavy	0	0	0		0	0	0	0		0	0	13	0		13	-
Heavy %	0%	0%	0%		0%	0%	0%	0%		0%	0%	81.3%	0%		59.1%	-
Lights	0	0	0		0	0	7	0		7	6	3	0		9	-
Lights %	0%	0%	0%		0%	0%	100%	0%		100%	100%	18.8%	0%		40.9%	-
Buses	0	0	0		0	0	0	0		0	0	13	0		13	-
Buses %	0%	0%	0%		0%	0%	0%	0%		0%	0%	81.3%	0%		59.1%	-
Pedestrians	-	-	-	0	-	-	-	-	5	-	-	-	-	1	-	-
Pedestrians%	-	-	-	0%		-	-	-	83.3%		-	-	-	16.7%		-

Turning Movement Count (21 , PARKING STRUCTURE LOOP & PARKING STRUCTURE WEST ACCESS)

Start Time	N Approach PARKING STRUCTURE LOOP					E Approach PARKING STRUCTURE WEST ACCESS					S Approach PARKING STRUCTURE LOOP					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	UTurn S:S	Peds S:	Approach Total		
07:00:00	0	0	0	0	0	0	0	0	1	0	4	3	0	0	7	7	
07:15:00	0	0	0	0	0	0	1	0	2	1	1	4	0	0	5	6	
07:30:00	0	0	0	0	0	0	1	0	0	1	5	4	0	1	9	10	
07:45:00	0	0	0	0	0	0	0	0	1	0	3	4	0	0	7	7	30
08:00:00	0	0	0	1	0	0	0	0	3	0	6	3	0	0	9	9	32
08:15:00	0	0	0	0	0	0	0	0	0	0	1	3	0	2	4	4	30
08:30:00	0	0	0	0	0	0	0	0	1	0	0	4	0	0	4	4	24
08:45:00	0	0	0	1	0	0	0	0	1	0	1	4	0	0	5	5	22
09:00:00	0	0	0	0	0	0	0	0	2	0	0	4	0	0	4	4	17
09:15:00	0	0	0	0	0	0	0	0	2	0	0	2	0	0	2	2	15
09:30:00	0	0	0	0	0	0	0	0	4	0	0	1	0	0	1	1	12
09:45:00	0	0	0	0	0	0	0	0	2	0	0	5	0	0	5	5	12
BREAK																	
16:00:00	0	0	0	0	0	0	3	0	0	3	1	2	0	0	3	6	
16:15:00	0	0	0	0	0	0	0	0	1	0	1	7	0	4	8	8	
16:30:00	0	0	0	0	0	0	0	0	1	0	1	2	0	1	3	3	
16:45:00	0	0	0	0	0	0	2	0	1	2	0	4	0	0	4	6	23
17:00:00	0	0	0	0	0	0	3	0	1	3	3	3	0	0	6	9	26
17:15:00	0	0	0	0	0	0	2	0	2	2	2	7	0	0	9	11	29
17:30:00	0	0	0	0	0	0	0	0	3	0	0	2	0	0	2	2	28
17:45:00	0	0	0	0	0	0	0	0	2	0	1	5	0	0	6	6	28
18:00:00	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	2	21
18:15:00	0	0	0	0	0	0	0	0	3	0	0	4	0	2	4	4	14
18:30:00	0	0	0	0	0	0	1	0	3	1	1	4	0	3	5	6	18
18:45:00	0	0	0	0	0	0	1	0	1	1	0	3	0	1	3	4	16
Grand Total	0	0	0	2	0	0	14	0	37	14	31	86	0	16	117	**131**	-
Approach%	0%	0%	0%		-	0%	100%	0%		-	26.5%	73.5%	0%		-	-	-
Totals %	0%	0%	0%		0%	0%	10.7%	0%		10.7%	23.7%	65.6%	0%		89.3%	-	-
Heavy	0	0	0		-	0	0	0		-	0	79	0		-	-	-
Heavy %	0%	0%	0%		-	0%	0%	0%		-	0%	91.9%	0%		-	-	-
Bicycles	-	-	-		-	-	-	-		-	-	-	-		-	-	-
Bicycle %	-	-	-		-	-	-	-		-	-	-	-		-	-	-

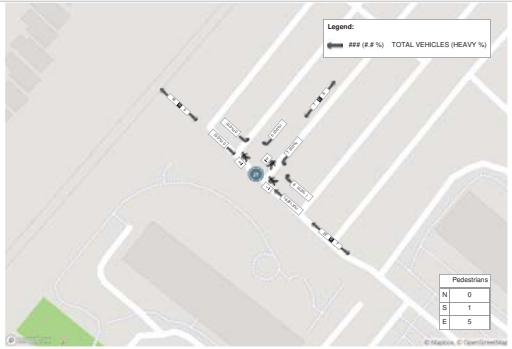
Peak Hour: 07:15 AM - 08:15 AM Weather: Broken Clouds (16.96 °C)



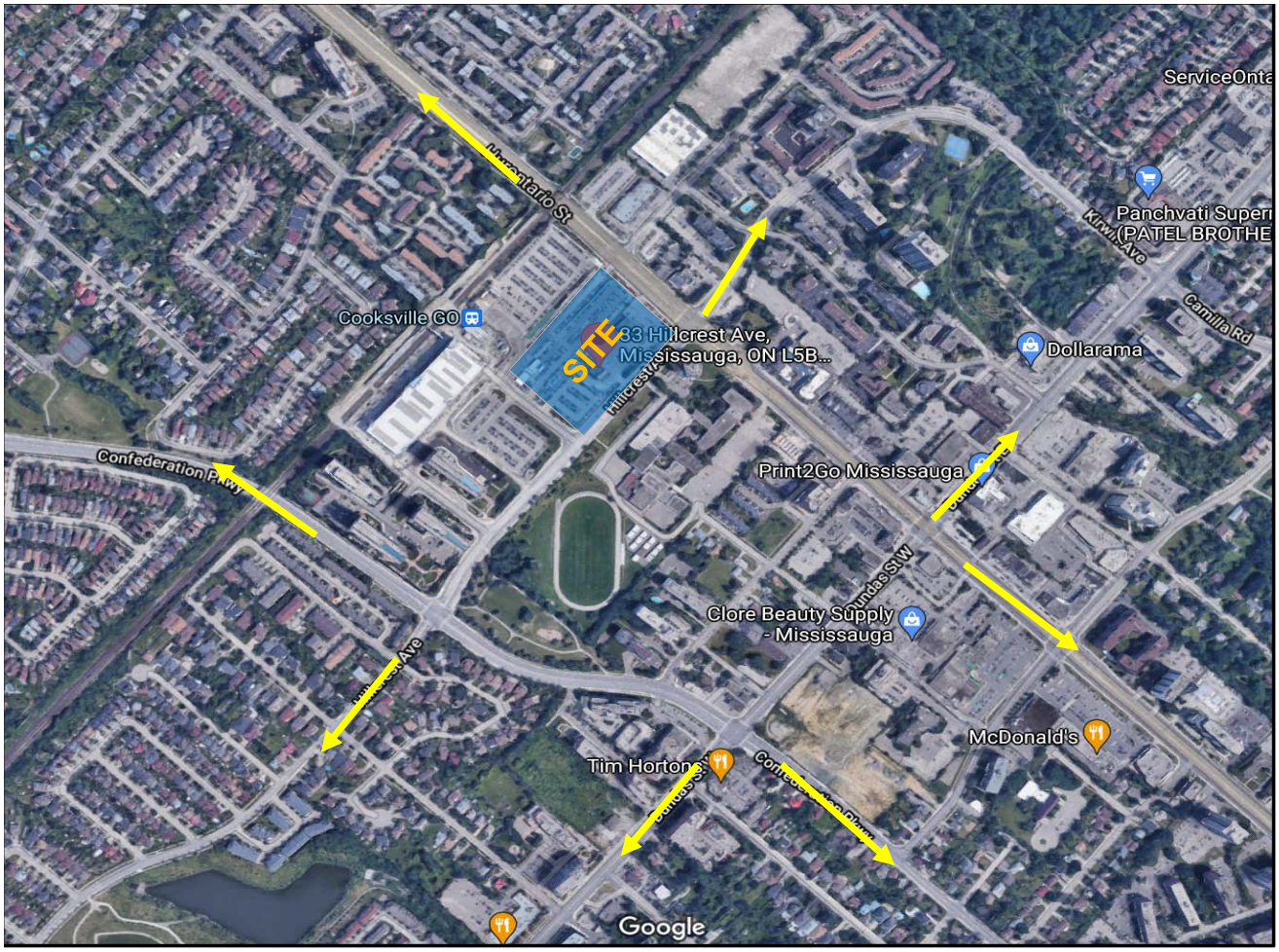
Peak Hour: 07:15 AM - 08:15 AM Weather: Broken Clouds (16.96 °C)

Start Time	N Approach PARKING STRUCTURE LOOP					E Approach PARKING STRUCTURE WEST ACCESS					S Approach PARKING STRUCTURE LOOP					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
07:15:00	0	0	0	0	0	0	1	0	2	1	1	4	0	0	5	6
07:30:00	0	0	0	0	0	0	1	0	0	1	5	4	0	1	9	10
07:45:00	0	0	0	0	0	0	0	0	1	0	3	4	0	0	7	7
08:00:00	0	0	0	1	0	0	0	0	3	0	6	3	0	0	9	9
Grand Total	0	0	0	1	0	0	2	0	6	2	15	15	0	1	30	**32**
Approach%	0%	0%	0%		-	0%	100%	0%		-	50%	50%	0%		-	-
Totals %	0%	0%	0%		0%	0%	6.3%	0%		6.3%	46.9%	46.9%	0%		93.8%	-
PHF	0	0	0		0	0	0.5	0		0.5	0.63	0.94	0		0.83	-
Heavy	0	0	0		0	0	0	0		0	0	14	0		14	-
Heavy %	0%	0%	0%		0%	0%	0%	0%		0%	0%	93.3%	0%		46.7%	-
Lights	0	0	0		0	0	2	0		2	15	1	0		16	-
Lights %	0%	0%	0%		0%	0%	100%	0%		100%	100%	6.7%	0%		53.3%	-
Buses	0	0	0		0	0	0	0		0	0	14	0		14	-
Buses %	0%	0%	0%		0%	0%	0%	0%		0%	0%	93.3%	0%		46.7%	-
Pedestrians	-	-	-	1	-	-	-	-	6	-	-	-	-	1	-	-
Pedestrians%	-	-	-	12.5%		-	-	-	75%		-	-	-	12.5%		-

Peak Hour: 04:30 PM - 05:30 PM Weather: Overcast Clouds (21.66 °C)



APPENDIX I: TTS VEHICLE TRIP DISTRIBUTION QUERIES


Hurontario St
Cooksville GO
SITE
33 Hillcrest Ave,
Mississauga, ON L5B...
Hillcrest Ave
Confederation Pkwy
Print2Go Mississauga
Dollarama
Camilla Rd
Kirwin Ave
Panchvati Superi
(PATEL BROTHE
ServiceOnta
Clore Beauty Supply
- Mississauga
Tim Hortons
McDonald's
Google

Residential Trip Distribution

Fri Jul 23 2021 10:21:40 GMT-0400 (Eastern Daylight Time) - Run Time: 3123ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of destination - pd_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
(Start time of trip - start_time In 600-859
and
Trip purpose of origin - purp_orig In H
and
2006 GTA zone of origin - gta06_orig In 3862 3867 3871 3872 3723 3724
and
Primary travel mode of trip - mode_prime In D M P T U)

Trip 2016
Table:

	3723	3724	3862	3867	3872	TOTAL
PD 1 of Toronto	0	0	32	48	0	**80**
PD 3 of Toronto	0	60	0	0	0	**60**
PD 5 of Toronto	0	12	0	0	0	**12**
PD 7 of Toronto	0	0	0	13	0	**13**
PD 8 of Toronto	7	0	0	21	0	**28**
PD 9 of Toronto	0	25	19	49	0	**93**
PD 10 of Toronto	0	0	32	0	12	**44**
PD 11 of Toronto	0	8	0	0	0	**8**
PD 16 of Toronto	0	0	24	0	0	**24**
Markham	0	0	21	34	0	**55**
Vaughan	0	12	0	0	27	**39**
Brampton	0	48	0	57	27	**132**
Mississauga	339	572	259	1000	211	**2381**
Oakville	0	39	49	75	0	**163**
Burlington	12	38	0	0	47	**97**
Stoney Creek	0	0	0	12	0	**12**
Barrie	0	0	0	16	0	**16**
Brantford	0	0	24	0	0	**24**

Fri Jul 23 2021 11:09:39 GMT-0400 (Eastern Daylight Time) - Run Time: 2644ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: 2006 GTA zone of destination - gta06_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
(Start time of trip - start_time In 600-859
and
Trip purpose of origin - purp_orig In H
and
2006 GTA zone of origin - gta06_orig In 3862 3867 3871 3872 3723 3724
and
Primary travel mode of trip - mode_prime In D M P T U
and
Planning district of destination - pd_dest In 36)

Trip 2016
Table:

	3723	3724	3862	3867	3872	TOTAL
3606	0	54	0	0	0	**54**
3608	0	45	0	0	0	**45**
3609	0	0	0	0	65	**65**
3612	0	0	0	33	0	**33**
3613	0	13	0	0	0	**13**
3614	0	0	0	0	19	**19**
3618	0	0	0	56	0	**56**
3621	0	25	0	0	0	**25**
3626	0	0	0	28	0	**28**
3632	0	19	0	8	18	**45**
3634	0	0	0	45	0	**45**
3635	0	16	0	0	0	**16**
3639	0	0	18	0	0	**18**
3643	0	0	48	0	0	**48**
3648	0	0	0	58	0	**58**
3649	0	82	64	0	0	**146**
3656	0	0	0	65	0	**65**
3657	0	0	15	0	0	**15**
3659	0	0	0	0	11	**11**
3660	0	0	0	40	0	**40**
3662	0	0	46	0	0	**46**
3671	131	38	0	175	0	**344**
3673	0	94	0	0	0	**94**
3677	0	0	0	0	39	**39**
3686	0	12	0	0	0	**12**
3693	23	0	0	133	0	**156**
3700	0	13	0	0	0	**13**
3701	0	0	0	0	25	**25**
3702	0	0	0	59	0	**59**
3703	0	0	0	20	0	**20**
3704	0	0	25	0	0	**25**
3705	0	0	0	8	0	**8**
3710	32	0	0	42	0	**74**
3721	0	14	0	54	0	**68**
3724	0	22	0	0	0	**22**
3820	0	17	0	0	0	**17**
3822	0	0	0	0	11	**11**
3834	0	22	0	0	0	**22**
3847	0	0	0	0	12	**12**
3850	0	0	0	85	0	**85**
3851	0	0	0	55	0	**55**
3853	100	0	32	0	0	**132**
3859	0	0	0	35	0	**35**
3863	0	54	0	0	0	**54**
3864	52	0	0	0	0	**52**
3867	0	22	11	0	0	**33**
3870	0	10	0	0	0	**10**
3874	0	0	0	0	11	**11**

Fri Jul 23 2021 11:12:34 GMT-0400 (Eastern Daylight Time) - Run Time: 2816ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of origin - pd_orig
Column: 2006 GTA zone of destination - gta06_dest

Filters:
(Start time of trip - start_time In 1500-1759
and
Trip purpose of destination - purp_dest In H
and
2006 GTA 3867 3871 3872 3723 3724
and
Primary tr M P T U)

Trip 2016
Table:

	3723	3724	3862	3867	3872	TOTAL
PD 1 of T	0	0	32	0	0	**32**
PD 5 of T	0	28	0	0	0	**28**
PD 8 of T	0	0	96	0	39	**135**
PD 9 of T	0	25	19	0	0	**44**
PD 10 of	0	0	32	36	0	**68**
PD 11 of	0	21	0	0	0	**21**
PD 16 of	0	12	24	0	0	**36**
Vaughan	0	0	0	0	27	**27**
Brampton	0	22	0	77	27	**126**
Mississau	273	519	324	1128	202	**2446**
Milton	57	0	0	0	0	**57**
Oakville	11	13	24	0	0	**48**
Burlington	12	0	0	0	0	**12**
Stoney Cr	0	0	0	12	0	**12**

Fri Jul 23 2021 11:11:47 GMT-0400 (Eastern Daylight Time) - Run Time:

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: 2006 GTA zone of origin - gta06_orig
Column: 2006 GTA zone of destination - gta06_dest

Filters:
(Start time of trip - start_time In 1500-1759
and
Trip purpose of destination - purp_dest In H
and
2006 GTA 3867 3871 3872 3723 3724
and
Primary tr M P T U
and
Planning ( )

Trip 2016
Table:

	3723	3724	3862	3867	3872	TOTAL
3608	22	45	0	0	0	**67**
3609	0	0	0	0	18	**18**
3610	0	22	0	0	0	**22**
3611	0	25	0	0	0	**25**
3612	0	0	0	33	0	**33**
3614	0	0	0	0	19	**19**
3618	0	0	0	36	0	**36**
3621	0	45	0	0	0	**45**
3626	0	0	0	28	0	**28**
3632	0	7	0	0	0	**7**
3634	0	19	0	45	0	**64**
3635	0	16	0	0	0	**16**
3639	0	0	18	0	0	**18**
3641	0	0	0	0	12	**12**
3643	0	0	48	0	0	**48**
3648	0	0	0	38	0	**38**
3649	0	14	0	0	33	**47**
3653	0	0	0	21	0	**21**
3655	0	22	0	0	0	**22**
3656	0	0	0	46	0	**46**
3659	0	0	0	0	11	**11**
3660	0	0	0	40	0	**40**
3662	0	0	46	0	0	**46**
3665	48	0	0	0	0	**48**
3670	0	0	0	0	12	**12**
3671	64	0	0	109	0	**173**
3673	0	94	0	0	0	**94**
3677	0	0	0	0	39	**39**
3680	0	0	10	0	0	**10**
3685	0	14	0	0	0	**14**
3692	0	0	34	0	0	**34**
3693	23	13	0	58	0	**94**
3696	0	0	0	20	0	**20**
3700	0	13	0	0	0	**13**
3701	0	0	0	25	25	**50**
3702	0	0	18	49	0	**67**
3709	0	47	0	0	0	**47**
3710	32	0	0	0	0	**32**
3721	0	14	0	54	0	**68**
3816	0	47	0	0	0	**47**
3822	0	0	0	0	11	**11**
3834	0	22	0	0	0	**22**
3843	0	0	0	0	10	**10**
3847	0	27	0	54	0	**81**
3850	0	0	0	106	0	**106**
3851	0	6	0	78	0	**84**
3853	50	0	32	0	0	**82**
3858	0	0	64	0	0	**64**
3859	0	0	0	35	0	**35**
3861	0	6	0	39	0	**45**
3863	0	0	0	85	0	**85**
3864	35	0	0	0	0	**35**
3867	0	0	11	22	0	**33**
3868	0	0	0	20	0	**20**
3874	0	0	43	72	11	**126**
3877	0	0	0	16	0	**16**

AM	RESIDENTIAL VEHICLE TRIP DISTRIBUTION
Outbound	Traffic Volume Allocation
2022-05-19	

Zone	Trips	%	NORTH Hurontario Street	NORTH Confederation Parkway	SOUTH Hurontario Street	SOUTH Confederation Parkway	EAST Dundas Street East	WEST Hillcrest Avenue	WEST Dundas Street West	TOTAL
PD 1 of Toronto	80	2%			80%		20%			100.00%
PD 3 of Toronto	60	2%	50%		40%		10%			100.00%
PD 5 of Toronto	12	0%	50%		40%		10%			100.00%
PD 7 of Toronto	13	0%			90%		10%			100.00%
PD 8 of Toronto	28	1%	40%		40%		20%			100.00%
PD 9 of Toronto	93	3%	50%		40%		10%			100.00%
PD 10 of Toronto	44	1%	50%		40%		10%			100.00%
PD 11 of Toronto	8	0%	50%		40%		10%			100.00%
PD 16 of Toronto	24	1%	50%		30%		20%			100.00%
Markham	55	2%	50%		30%		20%			100.00%
Vaughan	39	1%	80%		20%					100.00%
Brampton	132	4%	100%							100.00%
Oakville	163	5%			80%				20%	100.00%
Burlington	97	3%			100%					100.00%
Stoney Creek	12	0%			100%					100.00%
Barrie	16	0%	50%		20%		30%			100.00%
Brantford	24	1%			100%					100.00%
3606	54	2%	10%	90%						100.00%
3608	45	1%	10%	90%						100.00%
3609	65	2%	100%							100.00%
3612	33	1%		100%						100.00%
3613	13	0%		100%						100.00%
3614	19	1%			40%	30%			30%	100.00%
3618	56	2%	50%	50%						100.00%
3621	25	1%	90%				10%			100.00%
3626	28	1%	100%							100.00%
3632	45	1%			100%					100.00%
3634	45	1%	30%	30%					40%	100.00%
3635	16	0%	30%	30%					40%	100.00%
3639	18	1%			40%	30%			30%	100.00%
3643	48	1%			50%		50%			100.00%
3648	58	2%			100%					100.00%
3649	146	4%			50%		50%			100.00%
3656	65	2%			20%				80%	100.00%
3657	15	0%			50%	50%				100.00%
3659	11	0%			50%		50%			100.00%
3660	40	1%			30%		70%			100.00%
3662	46	1%	30%	30%					40%	100.00%
3671	344	10%		30%				70%		100.00%
3673	94	3%	50%				50%			100.00%
3677	39	1%	50%	50%						100.00%
3686	12	0%	50%	50%						100.00%
3693	156	5%	100%							100.00%
3700	13	0%	100%							100.00%
3701	25	1%	100%							100.00%
3702	59	2%	100%							100.00%
3703	20	1%	100%							100.00%
3704	25	1%	100%							100.00%
3705	8	0%	100%							100.00%
3710	74	2%	100%							100.00%
3721	68	2%	100%							100.00%
3724	22	1%	100%							100.00%
3820	17	1%	100%							100.00%
3822	11	0%	100%							100.00%
3834	22	1%	50%	50%						100.00%
3847	12	0%	50%	50%						100.00%
3850	85	3%	50%	50%						100.00%
3851	55	2%	50%	50%						100.00%
3853	132	4%	50%	50%						100.00%
3859	35	1%	50%				50%			100.00%
3863	54	2%	100%							100.00%
3864	52	2%	50%	50%						100.00%
3867	33	1%	50%	50%						100.00%
3870	10	0%							100%	100.00%
3874	11	0%					100%			100.00%
	3279	100%								

Route Split Totals

NORTH Hurontario Street	NORTH Confederation Parkway	SOUTH Hurontario Street	SOUTH Confederation Parkway	EAST Dundas Street East	WEST Hillcrest Avenue	WEST Dundas Street West	TOTAL
0.00%	0.00%	1.95%	0.00%	0.49%	0.00%	0.00%	2.4%
0.91%	0.00%	0.73%	0.00%	0.18%	0.00%	0.00%	1.8%
0.18%	0.00%	0.15%	0.00%	0.04%	0.00%	0.00%	0.4%
0.00%	0.00%	0.36%	0.00%	0.04%	0.00%	0.00%	0.4%
0.34%	0.00%	0.34%	0.00%	0.17%	0.00%	0.00%	0.9%
1.42%	0.00%	1.13%	0.00%	0.28%	0.00%	0.00%	2.8%
0.67%	0.00%	0.54%	0.00%	0.13%	0.00%	0.00%	1.3%
0.12%	0.00%	0.10%	0.00%	0.02%	0.00%	0.00%	0.2%
0.37%	0.00%	0.22%	0.00%	0.15%	0.00%	0.00%	0.7%
0.84%	0.00%	0.50%	0.00%	0.34%	0.00%	0.00%	1.7%
0.95%	0.00%	0.24%	0.00%	0.00%	0.00%	0.00%	1.2%
4.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.0%
0.00%	0.00%	3.98%	0.00%	0.00%	0.00%	0.99%	5.0%
0.00%	0.00%	2.96%	0.00%	0.00%	0.00%	0.00%	3.0%
0.00%	0.00%	0.37%	0.00%	0.00%	0.00%	0.00%	0.4%
0.24%	0.00%	0.10%	0.00%	0.15%	0.00%	0.00%	0.5%
0.00%	0.00%	0.73%	0.00%	0.00%	0.00%	0.00%	0.7%
0.16%	1.48%	0.00%	0.00%	0.00%	0.00%	0.00%	1.6%
0.14%	1.24%	0.00%	0.00%	0.00%	0.00%	0.00%	1.4%
1.98%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.0%
0.00%	1.01%	0.00%	0.00%	0.00%	0.00%	0.00%	1.0%
0.00%	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
0.00%	0.00%	0.23%	0.17%	0.00%	0.00%	0.17%	0.6%
0.85%	0.85%	0.00%	0.00%	0.00%	0.00%	0.00%	1.7%
0.69%	0.00%	0.00%	0.00%	0.08%	0.00%	0.00%	0.8%
0.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.9%
0.00%	0.00%	1.37%	0.00%	0.00%	0.00%	0.00%	1.4%
0.41%	0.41%	0.00%	0.00%	0.00%	0.00%	0.55%	1.4%
0.15%	0.15%	0.00%	0.00%	0.00%	0.00%	0.20%	0.5%
0.00%	0.00%	0.22%	0.16%	0.00%	0.00%	0.16%	0.5%
0.00%	0.00%	0.73%	0.00%	0.73%	0.00%	0.00%	1.5%
0.00%	0.00%	1.77%	0.00%	0.00%	0.00%	0.00%	1.8%
0.00%	0.00%	2.23%	0.00%	2.23%	0.00%	0.00%	4.5%
0.00%	0.00%	0.40%	0.00%	0.00%	0.00%	1.59%	2.0%
0.00%	0.00%	0.23%	0.23%	0.00%	0.00%	0.00%	0.5%
0.00%	0.00%	0.17%	0.00%	0.17%	0.00%	0.00%	0.3%
0.00%	0.00%	0.37%	0.00%	0.85%	0.00%	0.00%	1.2%
0.42%	0.42%	0.00%	0.00%	0.00%	0.00%	0.56%	1.4%
0.00%	3.15%	0.00%	0.00%	0.00%	7.34%	0.00%	10.5%
1.43%	0.00%	0.00%	0.00%	1.43%	0.00%	0.00%	2.9%
0.59%	0.59%	0.00%	0.00%	0.00%	0.00%	0.00%	1.2%
0.18%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
4.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.8%
0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
0.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.8%
1.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.8%
0.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
0.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.8%
0.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.2%
2.26%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.3%
2.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.1%
0.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5%
0.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
0.34%	0.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.18%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
1.30%	1.30%	0.00%	0.00%	0.00%	0.00%	0.00%	2.6%
0.84%	0.84%	0.00%	0.00%	0.00%	0.00%	0.00%	1.7%
2.01%	2.01%	0.00%	0.00%	0.00%	0.00%	0.00%	4.0%
0.53%	0.00%	0.00%	0.00%	0.53%	0.00%	0.00%	1.1%
1.65%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.6%
0.79%	0.79%	0.00%	0.00%	0.00%	0.00%	0.00%	1.6%
0.50%	0.50%	0.00%	0.00%	0.00%	0.00%	0.00%	1.0%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.3%
0.00%	0.00%	0.00%	0.00%	0.34%	0.00%	0.00%	0.3%
41.3%	**15.8%**	**22.1%**	**0.6%**	**8.3%**	**7.3%**	**4.5%**	**100.0%**

40.00%	**15.00%**	**25.00%**	**0.00%**	**10.00%**	**5.00%**	**5.00%**	100%

PM	RESIDENTIAL VEHICLE TRIP DISTRIBUTION
Inbound	Traffic Volume Allocation
2022-05-19	

Zone	Trips	%	NORTH Hurontario Street	NORTH Confederation Parkway	SOUTH Hurontario Street	SOUTH Confederation Parkway	EAST Dundas Street East	WEST Hillcrest Avenue	WEST Dundas Street West	TOTAL
PD 1 of Toronto	32	1%			80%		20%			100.00%
PD 5 of Toronto	28	1%	50%		40%		10%			100.00%
PD 8 of Toronto	135	4%	40%		40%		20%			100.00%
PD 9 of Toronto	44	1%	50%		40%		10%			100.00%
PD 10 of Toronto	68	2%	50%		40%		10%			100.00%
PD 11 of Toronto	21	1%	50%		40%		10%			100.00%
PD 16 of Toronto	36	1%	50%		30%		20%			100.00%
Vaughan	27	1%	80%		20%					100.00%
Brampton	126	4%	100%							100.00%
Milton	57	2%	100%							100.00%
Oakville	48	2%			80%				20%	100.00%
Burlington	12	0%			100%					100.00%
Stoney Creek	12	0%			100%					100.00%
3608	67	2%	10%	90%						100.00%
3609	18	1%	100%							100.00%
3610	22	1%	50%				50%			100.00%
3611	25	1%	100%							100.00%
3612	33	1%		100%						100.00%
3614	19	1%			40%	30%			30%	100.00%
3618	36	1%	50%	50%						100.00%
3621	45	1%	90%				10%			100.00%
3626	28	1%	100%							100.00%
3632	7	0%			100%					100.00%
3634	64	2%	30%	30%					40%	100.00%
3635	16	1%	30%	30%					40%	100.00%
3639	18	1%			40%	30%			30%	100.00%
3641	12	0%			100%					100.00%
3643	48	2%			50%		50%			100.00%
3648	38	1%			100%					100.00%
3649	47	2%			50%		50%			100.00%
3653	21	1%			100%					100.00%
3655	22	1%			50%				50%	100.00%
3656	46	1%			20%				80%	100.00%
3659	11	0%			50%		50%			100.00%
3660	40	1%			30%		70%			100.00%
3662	46	1%	30%	30%					40%	100.00%
3665	48	2%						100%		100.00%
3670	12	0%					100%			100.00%
3671	173	6%		30%				70%		100.00%
3673	94	3%	50%				50%			100.00%
3677	39	1%	50%	50%						100.00%
3680	10	0%	100%							100.00%
3685	14	0%	50%	50%						100.00%
3692	34	1%	100%							100.00%
3693	94	3%	100%							100.00%
3696	20	1%	100%							100.00%
3700	13	0%	100%							100.00%
3701	50	2%	100%							100.00%
3702	67	2%	100%							100.00%
3709	47	2%	60%		40%					100.00%
3710	32	1%	100%							100.00%
3721	68	2%	100%							100.00%
3816	47	2%	100%							100.00%
3822	11	0%	100%							100.00%
3834	22	1%	100%							100.00%
3843	10	0%		100%						100.00%
3847	81	3%	50%	50%						100.00%
3850	106	3%	50%	50%						100.00%
3851	84	3%	50%	50%						100.00%
3853	82	3%	50%	50%						100.00%
3858	64	2%	50%				50%			100.00%
3859	35	1%	50%				50%			100.00%
3861	45	1%					100%			100.00%
3863	85	3%	100%							100.00%
3864	35	1%	50%	50%						100.00%
3867	33	1%	50%	50%						100.00%
3868	20	1%	10%	10%	5%	5%		20%	50%	100.00%
3874	126	4%					100%			100.00%
3877	16	1%			100%					100.00%
	3092	100%								

Route Split Totals

NORTH Hurontario Street	NORTH Confederation Parkway	SOUTH Hurontario Street	SOUTH Confederation Parkway	EAST Dundas Street East	WEST Hillcrest Avenue	WEST Dundas Street West	TOTAL
0.00%	0.00%	0.83%	0.00%	0.21%	0.00%	0.00%	1.0%
0.45%	0.00%	0.36%	0.00%	0.09%	0.00%	0.00%	0.9%
1.75%	0.00%	1.75%	0.00%	0.87%	0.00%	0.00%	4.4%
0.71%	0.00%	0.57%	0.00%	0.14%	0.00%	0.00%	1.4%
1.10%	0.00%	0.88%	0.00%	0.22%	0.00%	0.00%	2.2%
0.34%	0.00%	0.27%	0.00%	0.07%	0.00%	0.00%	0.7%
0.58%	0.00%	0.35%	0.00%	0.23%	0.00%	0.00%	1.2%
0.70%	0.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.9%
4.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.1%
1.84%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.8%
0.00%	0.00%	1.24%	0.00%	0.00%	0.00%	0.31%	1.6%
0.00%	0.00%	0.39%	0.00%	0.00%	0.00%	0.00%	0.4%
0.00%	0.00%	0.39%	0.00%	0.00%	0.00%	0.00%	0.4%
0.22%	1.95%	0.00%	0.00%	0.00%	0.00%	0.00%	2.2%
0.58%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
0.36%	0.00%	0.00%	0.00%	0.36%	0.00%	0.00%	0.7%
0.81%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.8%
0.00%	1.07%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
0.00%	0.00%	0.25%	0.18%	0.00%	0.00%	0.18%	0.6%
0.58%	0.58%	0.00%	0.00%	0.00%	0.00%	0.00%	1.2%
1.31%	0.00%	0.00%	0.00%	0.15%	0.00%	0.00%	1.5%
0.91%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.9%
0.00%	0.00%	0.23%	0.00%	0.00%	0.00%	0.00%	0.2%
0.62%	0.62%	0.00%	0.00%	0.00%	0.00%	0.83%	2.1%
0.16%	0.16%	0.00%	0.00%	0.00%	0.00%	0.21%	0.5%
0.00%	0.00%	0.23%	0.17%	0.00%	0.00%	0.17%	0.6%
0.00%	0.00%	0.39%	0.00%	0.00%	0.00%	0.00%	0.4%
0.00%	0.00%	0.78%	0.00%	0.78%	0.00%	0.00%	1.6%
0.00%	0.00%	1.23%	0.00%	0.00%	0.00%	0.00%	1.2%
0.00%	0.00%	0.76%	0.00%	0.76%	0.00%	0.00%	1.5%
0.00%	0.00%	0.68%	0.00%	0.00%	0.00%	0.00%	0.7%
0.00%	0.00%	0.36%	0.00%	0.00%	0.00%	0.36%	0.7%
0.00%	0.00%	0.30%	0.00%	0.00%	0.00%	1.19%	1.5%
0.00%	0.00%	0.18%	0.00%	0.18%	0.00%	0.00%	0.4%
0.00%	0.00%	0.39%	0.00%	0.91%	0.00%	0.00%	1.3%
0.45%	0.45%	0.00%	0.00%	0.00%	0.00%	0.60%	1.5%
0.00%	0.00%	0.00%	0.00%	0.00%	1.55%	0.00%	1.6%
0.00%	0.00%	0.00%	0.00%	0.39%	0.00%	0.00%	0.4%
0.00%	1.68%	0.00%	0.00%	0.00%	3.92%	0.00%	5.6%
1.52%	0.00%	0.00%	0.00%	1.52%	0.00%	0.00%	3.0%
0.63%	0.63%	0.00%	0.00%	0.00%	0.00%	0.00%	1.3%
0.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
0.23%	0.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5%
1.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
3.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.0%
0.65%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
1.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.6%
2.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.2%
0.91%	0.00%	0.61%	0.00%	0.00%	0.00%	0.00%	1.5%
1.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.0%
2.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.2%
1.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.5%
0.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
0.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.00%	0.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
1.31%	1.31%	0.00%	0.00%	0.00%	0.00%	0.00%	2.6%
1.71%	1.71%	0.00%	0.00%	0.00%	0.00%	0.00%	3.4%
1.36%	1.36%	0.00%	0.00%	0.00%	0.00%	0.00%	2.7%
1.33%	1.33%	0.00%	0.00%	0.00%	0.00%	0.00%	2.7%
1.03%	0.00%	0.00%	0.00%	1.03%	0.00%	0.00%	2.1%
0.57%	0.00%	0.00%	0.00%	0.57%	0.00%	0.00%	1.1%
0.00%	0.00%	0.00%	0.00%	1.46%	0.00%	0.00%	1.5%
2.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.7%
0.57%	0.57%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
0.53%	0.53%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
0.06%	0.06%	0.03%	0.03%	0.00%	0.13%	0.32%	0.6%
0.00%	0.00%	0.00%	0.00%	4.08%	0.00%	0.00%	4.1%
0.00%	0.00%	0.52%	0.00%	0.00%	0.00%	0.00%	0.5%
47.2%	**14.6%**	**14.1%**	**0.4%**	**14.0%**	**5.6%**	**4.2%**	**100.0%**

45.00%	**15.00%**	**15.00%**	**0.00%**	**15.00%**	**5.00%**	**5.00%**	100%

Office Trip Distribution

Mon May 02 2022 12:06:40 GMT-0400 (Eastern Daylight Time) - Run Time: 2523m

Cross Tabulation Query Form - Trip - 2016 v1.

Row: Planning district of origin - pd_ori
Column: 2006 GTA zone of destination - gta06_des

Filters:
(Start time of trip - start_time In 600-85
and
Trip purpose of destination - purp_dest In V R
and
2006 GTA zone of destination - gta06_dest In 386 3867 3871 3872 3723 3724 3671
and
Primary travel mode of trip - mode_prime In M P T U)

Trip 2016
Table:

	3671	3723	3724	3862	3867	3871	3872	TOTAL
PD 1 of Toronto	28	0	0	0	13	0	0	**41**
PD 2 of Toronto	16	0	0	0	0	0	11	**27**
PD 3 of Toronto	49	0	0	0	0	0	0	**49**
PD 6 of Toronto	46	0	0	0	0	0	0	**46**
PD 7 of Toronto	116	16	0	40	0	0	0	**172**
PD 8 of Toronto	180	0	0	0	0	0	0	**180**
PD 9 of Toronto	17	0	0	0	0	0	0	**17**
PD 10 of Toronto	19	0	0	0	0	0	0	**19**
PD 11 of Toronto	26	0	0	0	23	15	0	**64**
PD 12 of Toronto	35	0	0	0	0	0	0	**35**
PD 13 of Toronto	54	0	0	0	0	0	0	**54**
Richmond Hill	39	0	0	0	0	0	0	**39**
Markham	32	0	0	0	0	0	0	**32**
King	7	0	0	0	0	0	0	**7**
Vaughan	47	0	0	14	42	0	0	**103**
Caledon	82	0	0	0	0	0	0	**82**
Brampton	732	0	65	0	124	36	11	**968**
Mississauga	1674	34	29	57	147	82	58	**2081**
Halton Hills	45	0	0	0	15	0	0	**60**
Milton	150	0	30	0	41	0	0	**221**
Oakville	274	30	0	17	0	9	60	**390**
Burlington	86	0	46	0	0	0	0	**132**
Flamborough	36	0	0	0	0	0	0	**36**
Hamilton	159	0	0	0	0	0	44	**203**
Niagara-on-the-Lake	16	0	0	0	0	0	0	**16**
Cambridge	36	36	0	0	0	0	0	**72**
Centre Wellington	0	0	0	0	14	0	0	**14**
Erin	32	0	0	0	0	0	0	**32**
Orangeville	60	0	0	0	0	0	0	**60**
External	25	0	0	0	0	0	0	**25**

Mon May 02 2022 12:11:59 GMT-0400 (Eastern Daylight Time) - Run Time: 2507m

Cross Tabulation Query Form - Trip - 2016 v1.

Row: 2006 GTA zone of origin - gta06_ori
Column: 2006 GTA zone of destination - gta06_des

Filters:
(Start time of trip - start_time In 600-85
and
Trip purpc R
and
2006 GTA 3867 3871 3872 3723 3724 3671
and
Primary tr M P T U
and
Planning ( )

Trip 2016
Table:

	3671	3723	3724	3862	3867	3871	3872	TOTAL
3602	25	0	0	0	3	0	0	**28**
3607	33	0	0	0	0	0	0	**33**
3609	29	0	0	0	0	0	0	**29**
3615	0	0	0	0	0	0	21	**21**
3617	39	0	0	0	0	0	0	**39**
3618	37	0	0	0	0	0	0	**37**
3619	59	0	0	0	0	0	0	**59**
3620	22	0	0	0	0	22	0	**44**
3629	8	0	0	0	0	0	0	**8**
3635	16	0	0	0	0	0	0	**16**
3637	11	0	0	0	0	0	0	**11**
3641	39	0	0	0	0	0	0	**39**
3643	43	0	0	0	0	0	0	**43**
3644	0	34	0	0	0	0	0	**34**
3647	25	0	0	0	0	0	0	**25**
3649	15	0	0	0	0	0	0	**15**
3650	61	0	0	0	0	0	0	**61**
3651	49	0	0	0	0	0	0	**49**
3653	16	0	0	0	0	21	0	**37**
3657	8	0	0	24	0	0	0	**32**
3663	18	0	0	0	0	0	0	**18**
3664	107	0	0	0	35	0	0	**142**
3667	20	0	0	0	0	0	0	**20**
3668	93	0	0	0	0	0	0	**93**
3670	42	0	0	0	0	0	0	**42**
3671	18	0	0	0	15	0	0	**33**
3672	0	0	0	0	0	0	37	**37**
3673	0	0	18	0	15	0	0	**33**
3674	37	0	0	0	0	0	0	**37**
3675	29	0	0	0	0	0	0	**29**
3677	0	0	11	0	0	0	0	**11**
3678	24	0	0	0	0	0	0	**24**
3680	24	0	0	0	0	0	0	**24**
3681	18	0	0	0	0	0	0	**18**
3682	10	0	0	0	0	0	0	**10**
3683	24	0	0	0	0	0	0	**24**
3685	35	0	0	0	0	0	0	**35**
3686	14	0	0	0	0	0	0	**14**
3688	6	0	0	0	0	0	0	**6**
3690	26	0	0	0	11	42	0	**79**
3691	51	0	0	0	0	0	0	**51**
3693	36	0	0	0	0	0	0	**36**
3694	0	0	0	28	0	0	0	**28**
3697	34	0	0	0	0	0	0	**34**
3714	70	0	0	0	5	0	0	**75**
3716	35	0	0	0	0	0	0	**35**
3717	35	0	0	0	0	0	0	**35**
3718	0	0	0	5	0	0	0	**5**
3719	35	0	0	0	0	0	0	**35**
3724	0	0	0	0	22	0	0	**22**
3809	32	0	0	0	0	0	0	**32**
3811	26	0	0	0	0	0	0	**26**
3814	31	0	0	0	0	0	0	**31**
3820	107	0	0	0	0	0	0	**107**
3827	0	0	0	0	0	17	0	**17**
3841	12	0	0	0	0	0	0	**12**
3856	31	0	0	0	0	0	0	**31**
3857	16	0	0	0	0	0	0	**16**
3858	9	0	0	0	0	0	0	**9**
3863	0	0	0	0	19	0	0	**19**
3866	18	0	0	0	0	0	0	**18**
3877	14	0	0	0	0	0	0	**14**
3879	4	0	0	0	0	0	0	**4**

Mon May 02 2022 12:09:05 GMT-0400 (Eastern Daylight Time) - Run Time: 2530ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of destination - pd_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
(Start time of trip - start_time In 1500-1759
and
Trip purpose of origin - purp_orig In W R
and
2006 GTA zone of origin - gta06_orig In 3862 3867 3871 3872 3723 3724 3671
and
Primary travel mode of trip - mode_prime In D M P T U)

Trip 2016
Table:

	3671	3723	3724	3862	3867	3871	3872	TOTAL
PD 1 of Toronto	17	0	0	0	13	0	0	**30**
PD 2 of Toronto	41	0	0	0	0	0	0	**41**
PD 4 of Toronto	0	0	0	0	23	0	0	**23**
PD 5 of Toronto	15	0	0	0	0	0	0	**15**
PD 6 of Toronto	24	0	0	0	0	0	0	**24**
PD 7 of Toronto	97	0	0	40	0	0	12	**149**
PD 8 of Toronto	169	0	0	0	0	0	0	**169**
PD 10 of Toronto	44	0	0	0	0	0	0	**44**
PD 11 of Toronto	9	0	0	0	0	0	0	**9**
PD 13 of Toronto	72	0	0	0	0	0	0	**72**
Richmond Hill	39	0	0	0	0	0	0	**39**
King	7	0	0	0	0	0	0	**7**
Vaughan	14	0	0	0	16	0	0	**30**
Caledon	82	0	0	0	0	0	0	**82**
Brampton	567	0	65	0	76	0	6	**714**
Mississauga	1502	66	35	84	170	88	58	**2003**
Halton Hills	59	0	0	0	15	0	0	**74**
Milton	107	0	30	0	0	0	0	**137**
Oakville	206	0	0	0	0	0	60	**266**
Burlington	125	0	0	0	0	0	0	**125**
Flamborough	36	0	0	0	0	0	0	**36**
Hamilton	128	0	46	0	0	0	44	**218**
Cambridge	15	0	0	0	0	0	0	**15**
City of Guelph	15	0	0	0	0	0	0	**15**
Centre Wellington	0	0	0	0	14	0	0	**14**
Erin	32	0	0	0	0	0	0	**32**
Barrie	22	0	0	0	0	0	0	**22**

Mon May 02 2022 12:10:03 GMT-0400 (Eastern Daylight Time) - Run Time: 2375ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: 2006 GTA zone of destination - gta06_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
(Start time of trip - start_time In 1500-1759
and
Trip purpose of origin - purp_orig In W,R
and
2006 GTA zone of origin - gta06_orig In 3862,3867,3871,3872,3723,3724,3671
and
Primary travel mode of trip - mode_prime In D, M, P, T, U
and
Planning district of destination - pd_dest In 36,)

Trip 2016
Table:

	3671	3723	3724	3862	3867	3871	3872	TOTAL
3602	47	0	0	0	3	0	0	**50**
3603	25	0	0	0	0	0	0	**25**
3607	73	0	0	0	0	0	0	**73**
3609	29	0	0	0	0	0	0	**29**
3611	0	0	0	0	26	0	0	**26**
3614	43	0	0	0	0	0	0	**43**
3615	14	0	0	0	0	0	21	**35**
3617	39	0	0	0	0	0	0	**39**
3619	12	0	0	0	0	0	0	**12**
3620	22	0	0	0	0	0	0	**22**
3631	0	0	0	0	48	0	0	**48**
3636	57	0	0	0	0	0	0	**57**
3637	23	0	0	0	0	0	0	**23**
3641	39	0	0	0	0	0	0	**39**
3643	15	0	0	0	0	0	0	**15**
3644	0	34	0	0	0	0	0	**34**
3647	25	0	0	0	0	0	0	**25**
3648	0	0	0	18	0	0	0	**18**
3650	22	0	0	0	0	0	0	**22**
3651	49	0	0	0	0	0	0	**49**
3653	16	0	0	0	0	0	0	**16**
3654	36	0	0	0	0	0	0	**36**
3656	0	32	0	0	0	0	0	**32**
3657	28	0	0	0	0	0	0	**28**
3662	17	0	0	0	0	0	0	**17**
3663	31	0	0	0	0	0	0	**31**
3664	110	0	0	0	0	0	0	**110**
3665	0	0	0	0	0	29	0	**29**
3667	32	0	0	0	0	0	0	**32**
3668	93	0	0	0	0	0	0	**93**
3671	9	0	0	0	15	0	0	**24**
3673	0	0	0	0	15	0	0	**15**
3674	0	0	0	7	0	0	0	**7**
3677	10	0	11	54	0	0	0	**75**
3680	24	0	0	0	0	0	0	**24**
3682	10	0	0	0	0	0	0	**10**
3683	24	0	0	0	0	0	0	**24**
3685	49	0	0	0	0	0	0	**49**
3688	30	0	0	0	0	0	0	**30**
3690	26	0	0	0	13	42	0	**81**
3691	0	0	0	0	3	0	0	**3**
3693	20	0	0	0	0	0	0	**20**
3694	62	0	0	0	0	0	0	**62**
3714	87	0	0	0	5	0	0	**92**
3715	18	0	0	0	0	0	0	**18**
3716	22	0	0	0	0	0	0	**22**
3718	0	0	0	5	0	0	0	**5**
3719	21	0	0	0	0	0	0	**21**
3809	32	0	0	0	0	0	0	**32**
3827	0	0	0	0	0	17	0	**17**
3841	12	0	0	0	0	0	0	**12**
3851	30	0	0	0	0	0	0	**30**
3857	16	0	0	0	0	0	0	**16**
3858	9	0	0	0	0	0	0	**9**
3863	0	0	0	0	19	0	0	**19**
3864	29	0	0	0	0	0	0	**29**
3865	0	0	24	0	0	0	0	**24**
3867	0	0	0	0	22	0	0	**22**
3868	50	0	0	0	0	0	37	**87**
3877	14	0	0	0	0	0	0	**14**

AM	OFFICE VEHICLE TRIP DISTRIBUTION
Inbound	Traffic Volume Allocation
2022-05-19	

Zone	Trips	%	NORTH Hurontario Street	NORTH Confederation Parkway	SOUTH Hurontario Street	SOUTH Confederation Parkway	EAST Dundas Street East	WEST Hillcrest Avenue	WEST Dundas Street West	TOTAL
PD 1 of Toronto	41	1%			80%		20%			100.00%
PD 2 of Toronto	27	1%			50%		50%			100.00%
PD 3 of Toronto	49	1%	40%		40%		20%			100.00%
PD 6 of Toronto	46	1%			80%		20%			100.00%
PD 7 of Toronto	172	3%			60%	20%	20%			100.00%
PD 8 of Toronto	180	3%	40%		40%		20%			100.00%
PD 9 of Toronto	17	0%	50%		40%		10%			100.00%
PD 10 of Toronto	19	0%	50%		40%		10%			100.00%
PD 11 of Toronto	64	1%	50%		40%		10%			100.00%
PD 12 of Toronto	35	1%	100%							100.00%
PD 13 of Toronto	54	1%			100%					100.00%
Richmond Hill	39	1%	100%							100.00%
Markham	32	1%	100%							100.00%
King	7	0%	100%							100.00%
Vaughan	103	2%	80%		20%					100.00%
Caledon	82	2%	100%							100.00%
Brampton	968	18%	100%							100.00%
Halton Hills	60	1%	40%					20%	40%	100.00%
Milton	221	4%	100%							100.00%
Oakville	390	7%			80%				20%	100.00%
Burlington	132	3%			100%					100.00%
Flamborough	36	1%			100%					100.00%
Hamilton	203	4%			100%					100.00%
Niagara-on-the-Lake	16	0%			100%					100.00%
Cambridge	72	1%	50%						50%	100.00%
Centre Wellington	14	0%	50%						50%	100.00%
Erin	32	1%	100%							100.00%
Orangeville	60	1%	100%							100.00%
3602	28	1%	20%	40%				40%		100.00%
3607	33	1%	20%	80%						100.00%
3609	29	1%	100%							100.00%
3615	21	0%	20%	40%				20%	20%	100.00%
3617	39	1%	20%	40%				20%	20%	100.00%
3618	37	1%	50%	50%						100.00%
3619	59	1%	20%	40%				40%		100.00%
3620	44	1%						100%		100.00%
3629	8	0%	40%				60%			100.00%
3635	16	0%		60%				20%	20%	100.00%
3637	11	0%		80%					20%	100.00%
3641	39	1%			100%					100.00%
3643	43	1%				50%		50%		100.00%
3644	34	1%		40%				20%	40%	100.00%
3647	25	0%			100%					100.00%
3649	15	0%			50%		50%			100.00%
3650	61	1%							100%	100.00%
3651	49	1%						20%	80%	100.00%
3653	37	1%			100%					100.00%
3657	32	1%			50%	50%				100.00%
3663	18	0%						20%	80%	100.00%
3664	142	3%						40%	60%	100.00%
3667	20	0%					100%			100.00%
3668	93	2%	20%				80%			100.00%
3670	42	1%					100%			100.00%
3671	33	1%		30%				70%		100.00%
3672	37	1%		100%						100.00%
3673	33	1%	50%				50%			100.00%
3674	37	1%	100%							100.00%
3675	29	1%	100%							100.00%
3677	11	0%	50%	50%						100.00%
3678	24	0%		80%				20%		100.00%
3680	24	0%	100%							100.00%
3681	18	0%	100%							100.00%
3682	10	0%	100%							100.00%
3683	24	0%		80%				20%		100.00%
3685	35	1%	50%	50%						100.00%
3686	14	0%		100%						100.00%
3688	6	0%		80%				20%		100.00%
3690	79	2%	100%							100.00%
3691	51	1%		80%				20%		100.00%
3693	36	1%	100%							100.00%
3694	28	1%		60%				40%		100.00%
3697	34	1%	20%	80%						100.00%
3714	75	1%		40%				20%	40%	100.00%
3716	35	1%		40%				20%	40%	100.00%
3717	35	1%		40%				20%	40%	100.00%
3718	5	0%		50%				50%		100.00%
3719	35	1%		40%				20%	40%	100.00%
3724	22	0%	80%	20%						100.00%
3809	32	1%		20%				20%	60%	100.00%
3811	26	0%		20%				20%	60%	100.00%
3814	31	1%		50%				50%		100.00%
3820	107	2%	20%	40%				20%	20%	100.00%
3827	17	0%	100%							100.00%
3841	12	0%	100%							100.00%
3856	31	1%	100%							100.00%
3857	16	0%	100%							100.00%
3858	9	0%	50%				50%			100.00%
3863	19	0%	100%							100.00%
3866	18	0%		100%						100.00%
3877	14	0%			100%					100.00%
3879	4	0%			100%					100.00%
	5252	100%								

Route Split Totals

NORTH Hurontario Street	NORTH Confederation Parkway	SOUTH Hurontario Street	SOUTH Confederation Parkway	EAST Dundas Street East	WEST Hillcrest Avenue	WEST Dundas Street West	TOTAL
0.00%	0.00%	0.62%	0.00%	0.16%	0.00%	0.00%	0.8%
0.00%	0.00%	0.26%	0.00%	0.26%	0.00%	0.00%	0.5%
0.37%	0.00%	0.37%	0.00%	0.19%	0.00%	0.00%	0.9%
0.00%	0.00%	0.70%	0.00%	0.18%	0.00%	0.00%	0.9%
0.00%	0.00%	1.96%	0.65%	0.65%	0.00%	0.00%	3.3%
1.37%	0.00%	1.37%	0.00%	0.69%	0.00%	0.00%	3.4%
0.16%	0.00%	0.13%	0.00%	0.03%	0.00%	0.00%	0.3%
0.18%	0.00%	0.14%	0.00%	0.04%	0.00%	0.00%	0.4%
0.61%	0.00%	0.49%	0.00%	0.12%	0.00%	0.00%	1.2%
0.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.00%	0.00%	1.03%	0.00%	0.00%	0.00%	0.00%	1.0%
0.74%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
1.57%	0.00%	0.39%	0.00%	0.00%	0.00%	0.00%	2.0%
1.56%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.6%
18.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.4%
0.46%	0.00%	0.00%	0.00%	0.00%	0.23%	0.46%	1.1%
4.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.2%
0.00%	0.00%	5.94%	0.00%	0.00%	0.00%	1.49%	7.4%
0.00%	0.00%	2.51%	0.00%	0.00%	0.00%	0.00%	2.5%
0.00%	0.00%	0.69%	0.00%	0.00%	0.00%	0.00%	0.7%
0.00%	0.00%	3.87%	0.00%	0.00%	0.00%	0.00%	3.9%
0.00%	0.00%	0.30%	0.00%	0.00%	0.00%	0.00%	0.3%
0.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.69%	1.4%
0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.13%	0.3%
0.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
1.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
0.11%	0.21%	0.00%	0.00%	0.00%	0.21%	0.00%	0.5%
0.13%	0.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
0.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
0.08%	0.16%	0.00%	0.00%	0.00%	0.08%	0.08%	0.4%
0.15%	0.30%	0.00%	0.00%	0.00%	0.15%	0.15%	0.7%
0.35%	0.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.22%	0.45%	0.00%	0.00%	0.00%	0.45%	0.00%	1.1%
0.00%	0.00%	0.00%	0.00%	0.00%	0.84%	0.00%	0.8%
0.06%	0.00%	0.00%	0.00%	0.09%	0.00%	0.00%	0.2%
0.00%	0.18%	0.00%	0.00%	0.00%	0.06%	0.06%	0.3%
0.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.04%	0.2%
0.00%	0.00%	0.74%	0.00%	0.00%	0.00%	0.00%	0.7%
0.00%	0.00%	0.00%	0.41%	0.00%	0.41%	0.00%	0.8%
0.00%	0.26%	0.00%	0.00%	0.00%	0.13%	0.26%	0.6%
0.00%	0.00%	0.48%	0.00%	0.00%	0.00%	0.00%	0.5%
0.00%	0.00%	0.14%	0.00%	0.14%	0.00%	0.00%	0.3%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.16%	1.2%
0.00%	0.00%	0.00%	0.00%	0.00%	0.19%	0.75%	0.9%
0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.7%
0.00%	0.00%	0.30%	0.30%	0.00%	0.00%	0.00%	0.6%
0.00%	0.00%	0.00%	0.00%	0.00%	0.07%	0.27%	0.3%
0.00%	0.00%	0.00%	0.00%	0.00%	1.08%	1.62%	2.7%
0.00%	0.00%	0.00%	0.00%	0.38%	0.00%	0.00%	0.4%
0.35%	0.00%	0.00%	0.00%	1.42%	0.00%	0.00%	1.8%
0.00%	0.00%	0.00%	0.00%	0.80%	0.00%	0.00%	0.8%
0.00%	0.19%	0.00%	0.00%	0.00%	0.44%	0.00%	0.6%
0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.31%	0.00%	0.00%	0.00%	0.31%	0.00%	0.00%	0.6%
0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
0.10%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.2%
0.00%	0.37%	0.00%	0.00%	0.00%	0.09%	0.00%	0.5%
0.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5%
0.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
0.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.2%
0.00%	0.37%	0.00%	0.00%	0.00%	0.09%	0.00%	0.5%
0.33%	0.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.00%	0.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
0.00%	0.09%	0.00%	0.00%	0.00%	0.02%	0.00%	0.1%
1.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.5%
0.00%	0.78%	0.00%	0.00%	0.00%	0.19%	0.00%	1.0%
0.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.00%	0.32%	0.00%	0.00%	0.00%	0.21%	0.00%	0.5%
0.13%	0.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
0.00%	0.57%	0.00%	0.00%	0.00%	0.29%	0.57%	1.4%
0.00%	0.27%	0.00%	0.00%	0.00%	0.13%	0.27%	0.7%
0.00%	0.27%	0.00%	0.00%	0.00%	0.13%	0.27%	0.7%
0.00%	0.05%	0.00%	0.00%	0.00%	0.05%	0.00%	0.1%
0.00%	0.27%	0.00%	0.00%	0.00%	0.13%	0.27%	0.7%
0.34%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
0.00%	0.12%	0.00%	0.00%	0.00%	0.12%	0.37%	0.6%
0.00%	0.10%	0.00%	0.00%	0.00%	0.10%	0.30%	0.5%
0.00%	0.30%	0.00%	0.00%	0.00%	0.30%	0.00%	0.6%
0.41%	0.81%	0.00%	0.00%	0.00%	0.41%	0.41%	2.0%
0.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
0.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.2%
0.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
0.09%	0.00%	0.00%	0.00%	0.09%	0.00%	0.00%	0.2%
0.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
0.00%	0.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
0.00%	0.00%	0.27%	0.00%	0.00%	0.00%	0.00%	0.3%
0.00%	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.1%
43.6%	**9.8%**	**23.5%**	**1.4%**	**5.5%**	**6.6%**	**9.6%**	**100.0%**

45.00%	**10.00%**	**20.00%**	**5.00%**	**5.00%**	**5.00%**	**10.00%**	100%

PM	OFFICE VEHICLE TRIP DISTRIBUTION
Outbound	Traffic Volume Allocation
2022-05-19	

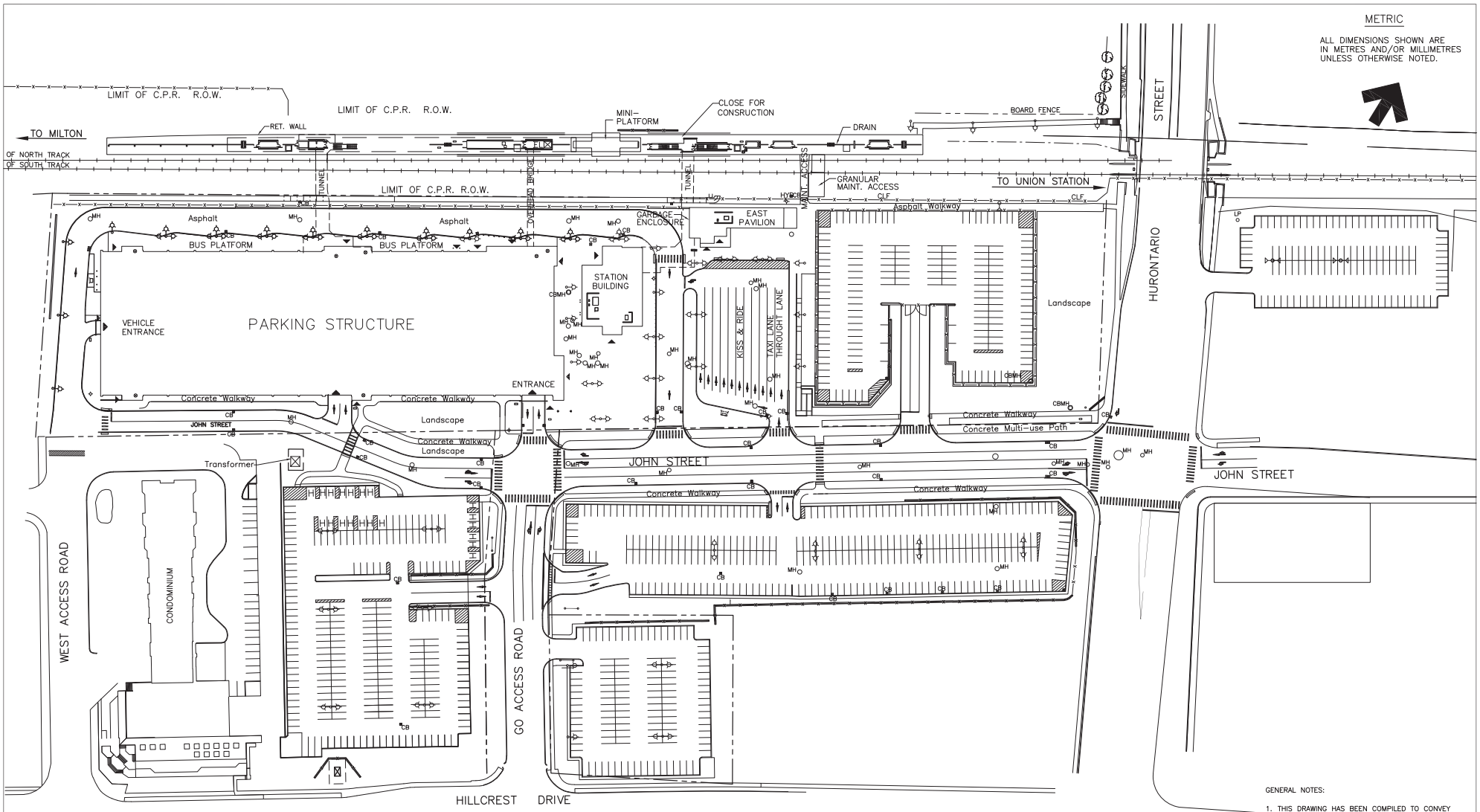
Zone	Trips	%	NORTH Hurontario Street	NORTH Confederation Parkway	SOUTH Hurontario Street	SOUTH Confederation Parkway	EAST Dundas Street East	WEST Hillcrest Avenue	WEST Dundas Street West	TOTAL
PD 1 of Toronto	30	1%			80%		20%			100.00%
PD 2 of Toronto	41	1%			50%		50%			100.00%
PD 4 of Toronto	23	1%	50%		40%		10%			100.00%
PD 5 of Toronto	15	0%	50%		40%		10%			100.00%
PD 6 of Toronto	24	1%			80%		20%			100.00%
PD 7 of Toronto	149	3%			90%		10%			100.00%
PD 8 of Toronto	169	4%	40%		40%		20%			100.00%
PD 10 of Toronto	44	1%	50%		40%		10%			100.00%
PD 11 of Toronto	9	0%	50%		40%		10%			100.00%
PD 13 of Toronto	72	2%			100%					100.00%
Richmond Hill	39	1%	50%		30%		20%			100.00%
King	7	0%	100%							100.00%
Vaughan	30	1%	80%		20%					100.00%
Caledon	82	2%	100%							100.00%
Brampton	714	16%	100%							100.00%
Halton Hills	74	2%	40%					20%	40%	100.00%
Milton	137	3%	100%							100.00%
Oakville	266	6%			80%				20%	100.00%
Burlington	125	3%			100%					100.00%
Flamborough	36	1%			100%					100.00%
Hamilton	218	5%			100%					100.00%
Cambridge	15	0%	50%						50%	100.00%
City of Guelph	15	0%	50%						50%	100.00%
Centre Wellington	14	0%	50%						50%	100.00%
Erin	32	1%	100%							100.00%
Barrie	22	0%	50%		20%		30%			100.00%
3602	50	1%	20%	40%				40%		100.00%
3603	25	1%		50%					50%	100.00%
3607	73	2%	20%	80%						100.00%
3609	29	1%	100%							100.00%
3611	26	1%		50%					50%	100.00%
3614	43	1%			40%	30%			30%	100.00%
3615	35	1%	20%	40%				20%	20%	100.00%
3617	39	1%	20%	40%				20%	20%	100.00%
3619	12	0%	20%	40%				40%		100.00%
3620	22	0%						100%		100.00%
3631	48	1%						20%	80%	100.00%
3636	57	1%	20%	20%					60%	100.00%
3637	23	1%		80%					20%	100.00%
3641	39	1%			100%					100.00%
3643	15	0%				50%		50%		100.00%
3644	34	1%		40%				20%	40%	100.00%
3647	25	1%			100%					100.00%
3648	18	0%			100%					100.00%
3650	22	0%							100%	100.00%
3651	49	1%						20%	80%	100.00%
3653	16	0%			100%					100.00%
3654	36	1%					100%			100.00%
3656	32	1%			20%				80%	100.00%
3657	28	1%			50%	50%				100.00%
3662	17	0%	30%	30%					40%	100.00%
3663	31	1%						20%	80%	100.00%
3664	110	2%						40%	60%	100.00%
3665	29	1%						100%		100.00%
3667	32	1%					100%			100.00%
3668	93	2%		30%				70%		100.00%
3671	24	1%	50%				50%			100.00%
3673	15	0%	50%				50%			100.00%
3674	7	0%	100%							100.00%
3677	75	2%	50%	50%						100.00%
3680	24	1%	100%							100.00%
3682	10	0%	100%							100.00%
3683	24	1%		80%				20%		100.00%
3685	49	1%	50%	50%						100.00%
3688	30	1%		80%				20%		100.00%
3690	81	2%	100%							100.00%
3691	3	0%		80%				20%		100.00%
3693	20	0%	100%							100.00%
3694	62	1%		60%				40%		100.00%
3714	92	2%		40%				20%	40%	100.00%
3715	18	0%		20%					80%	100.00%
3716	22	0%		40%				20%	40%	100.00%
3718	5	0%		50%				50%		100.00%
3719	21	0%		40%				20%	40%	100.00%
3809	32	1%		20%				20%	60%	100.00%
3827	17	0%	100%							100.00%
3841	12	0%	100%							100.00%
3851	30	1%	50%	50%						100.00%
3857	16	0%	100%							100.00%
3858	9	0%	50%				50%			100.00%
3863	19	0%	100%							100.00%
3864	29	1%	50%	50%						100.00%
3865	24	1%	20%	80%						100.00%
3867	22	0%	50%	50%						100.00%
3868	87	2%						20%	80%	100.00%
3877	14	0%			100%					100.00%
	4403	100%								

Route Split Totals

NORTH Hurontario Street	NORTH Confederation Parkway	SOUTH Hurontario Street	SOUTH Confederation Parkway	EAST Dundas Street East	WEST Hillcrest Avenue	WEST Dundas Street West	TOTAL
0.00%	0.00%	0.55%	0.00%	0.14%	0.00%	0.00%	0.7%
0.00%	0.00%	0.47%	0.00%	0.47%	0.00%	0.00%	0.9%
0.26%	0.00%	0.21%	0.00%	0.05%	0.00%	0.00%	0.5%
0.17%	0.00%	0.14%	0.00%	0.03%	0.00%	0.00%	0.3%
0.00%	0.00%	0.44%	0.00%	0.11%	0.00%	0.00%	0.5%
0.00%	0.00%	3.05%	0.00%	0.34%	0.00%	0.00%	3.4%
1.54%	0.00%	1.54%	0.00%	0.77%	0.00%	0.00%	3.8%
0.50%	0.00%	0.40%	0.00%	0.10%	0.00%	0.00%	1.0%
0.10%	0.00%	0.08%	0.00%	0.02%	0.00%	0.00%	0.2%
0.00%	0.00%	1.64%	0.00%	0.00%	0.00%	0.00%	1.6%
0.44%	0.00%	0.27%	0.00%	0.18%	0.00%	0.00%	0.9%
0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.2%
0.55%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.7%
1.86%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.9%
16.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.2%
0.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.34%	1.7%
3.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.1%
0.00%	0.00%	4.83%	0.00%	0.00%	0.00%	1.21%	6.0%
0.00%	0.00%	2.84%	0.00%	0.00%	0.00%	0.00%	2.8%
0.00%	0.00%	0.82%	0.00%	0.00%	0.00%	0.00%	0.8%
0.00%	0.00%	4.95%	0.00%	0.00%	0.00%	0.00%	5.0%
0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.17%	0.3%
0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.17%	0.3%
0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.16%	0.3%
0.73%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.25%	0.00%	0.10%	0.00%	0.15%	0.00%	0.00%	0.5%
0.23%	0.45%	0.00%	0.00%	0.00%	0.45%	0.00%	1.1%
0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.28%	0.6%
0.33%	1.33%	0.00%	0.00%	0.00%	0.00%	0.00%	1.7%
0.66%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.00%	0.30%	0.00%	0.00%	0.00%	0.00%	0.30%	0.6%
0.00%	0.00%	0.39%	0.29%	0.00%	0.00%	0.29%	1.0%
0.16%	0.32%	0.00%	0.00%	0.00%	0.16%	0.16%	0.8%
0.18%	0.35%	0.00%	0.00%	0.00%	0.18%	0.18%	0.9%
0.05%	0.11%	0.00%	0.00%	0.00%	0.11%	0.00%	0.3%
0.00%	0.00%	0.00%	0.00%	0.00%	0.50%	0.00%	0.5%
0.00%	0.00%	0.00%	0.00%	0.00%	0.22%	0.87%	1.1%
0.26%	0.26%	0.00%	0.00%	0.00%	0.00%	0.78%	1.3%
0.00%	0.42%	0.00%	0.00%	0.00%	0.00%	0.10%	0.5%
0.00%	0.00%	0.89%	0.00%	0.00%	0.00%	0.00%	0.9%
0.00%	0.00%	0.00%	0.17%	0.00%	0.17%	0.00%	0.3%
0.00%	0.31%	0.00%	0.00%	0.00%	0.15%	0.31%	0.8%
0.00%	0.00%	0.57%	0.00%	0.00%	0.00%	0.00%	0.6%
0.00%	0.00%	0.41%	0.00%	0.00%	0.00%	0.00%	0.4%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.50%	0.5%
0.00%	0.00%	0.00%	0.00%	0.00%	0.22%	0.89%	1.1%
0.00%	0.00%	0.36%	0.00%	0.00%	0.00%	0.00%	0.4%
0.00%	0.00%	0.00%	0.00%	0.82%	0.00%	0.00%	0.8%
0.00%	0.00%	0.15%	0.00%	0.00%	0.00%	0.58%	0.7%
0.00%	0.00%	0.32%	0.32%	0.00%	0.00%	0.00%	0.6%
0.12%	0.12%	0.00%	0.00%	0.00%	0.00%	0.15%	0.4%
0.00%	0.00%	0.00%	0.00%	0.00%	0.14%	0.56%	0.7%
0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	1.50%	2.5%
0.00%	0.00%	0.00%	0.00%	0.00%	0.66%	0.00%	0.7%
0.00%	0.00%	0.00%	0.00%	0.73%	0.00%	0.00%	0.7%
0.00%	0.63%	0.00%	0.00%	0.00%	1.48%	0.00%	2.1%
0.27%	0.00%	0.00%	0.00%	0.27%	0.00%	0.00%	0.5%
0.17%	0.00%	0.00%	0.00%	0.17%	0.00%	0.00%	0.3%
0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.2%
0.85%	0.85%	0.00%	0.00%	0.00%	0.00%	0.00%	1.7%
0.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5%
0.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.2%
0.00%	0.44%	0.00%	0.00%	0.00%	0.11%	0.00%	0.5%
0.56%	0.56%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
0.00%	0.55%	0.00%	0.00%	0.00%	0.14%	0.00%	0.7%
1.84%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.8%
0.00%	0.05%	0.00%	0.00%	0.00%	0.01%	0.00%	0.1%
0.45%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5%
0.00%	0.84%	0.00%	0.00%	0.00%	0.56%	0.00%	1.4%
0.00%	0.84%	0.00%	0.00%	0.00%	0.42%	0.84%	2.1%
0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.33%	0.4%
0.00%	0.20%	0.00%	0.00%	0.00%	0.10%	0.20%	0.5%
0.00%	0.06%	0.00%	0.00%	0.00%	0.06%	0.00%	0.1%
0.00%	0.19%	0.00%	0.00%	0.00%	0.10%	0.19%	0.5%
0.00%	0.15%	0.00%	0.00%	0.00%	0.15%	0.44%	0.7%
0.39%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
0.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
0.34%	0.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
0.10%	0.00%	0.00%	0.00%	0.10%	0.00%	0.00%	0.2%
0.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
0.33%	0.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.11%	0.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5%
0.25%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5%
0.00%	0.00%	0.00%	0.00%	0.00%	0.40%	1.58%	2.0%
0.00%	0.00%	0.32%	0.00%	0.00%	0.00%	0.00%	0.3%
36.7%	**11.0%**	**25.8%**	**0.8%**	**4.4%**	**7.8%**	**13.4%**	**100.0%**

35.00%	**10.00%**	**20.00%**	**5.00%**	**5.00%**	**10.00%**	**15.00%**	100%

APPENDIX J: GO ROAD LAYOUT MASTER PLAN



GENERAL NOTES:

1. THIS DRAWING HAS BEEN COMPILED TO CONVEY A GENERAL OVERVIEW OF RESPECTIVE FACILITY; SCALE IS APPROXIMATE ONLY.
2. DRAWING SHOULD BE USED AS REFERENCE ONLY AND MUST NOT BE USED IN THE PREPARATION OF CONTRACT DRAWINGS.
3. RESPECTIVE 'AS CONSTRUCTED' REFERENCE DRAWINGS CAN BE REQUISITIONED THROUGH ENGINEERING & DESIGN STANDARDS OFICE.

REFERENCE DRAWINGS		ISSUE			REVISIONS		
		1	20.10.08	GENERAL UPDATE			
DWG NO.	TITLE	REV.	DATE	ISSUED FOR	REV.	DATE	

DRAWN BY:	DESIGNED BY:
I.K.	
CHECKED BY:	APPROVED BY:
SCALE: N.T.S.	LEDGER SIZE ONLY

COOKSVILLE STATION

MASTER SITE PLAN

GENERAL LAYOUT

3210 Hurontario St., Mississauga, ON

DWG. NO.	REV.	SHEET
Cooksville_Master	0	

APPENDIX K: EXISTING SIGNAL TIMING PLANS

Signal Timing Report

Runtime: 2021-08-04 08:47:54

Device: 2216

Region: Mississauga **Signal ID:** 2216 **Location:** CONFEDERATION PARKWAY N at Hillcrest Avenue

Phase	Units	1	2	3	4	5	6	7	8
Walk	Sec	0	13	0	12	0	0	0	0
Ped Clear	Sec	0	28	0	26	0	0	0	0
Min Green	Sec	5	8	0	8	0	0	0	0
Passage	Sec	2.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0
Maximum 1	Sec	10	36	0	30	0	0	0	0
Maximum 2	Sec	10	36	0	30	0	0	0	0
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0
Red Clearance	Sec	0.0	3.0	0.0	3.5	0.0	0.0	0.0	0.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Act Rest In Walk	0	Enabled Non Lock Det	0	0	0	0
[P2] Ring	Ring	1	1	0	1	0	0	0	0
[P2] Concurrency	Phase (,)	()	()	()	()	()	()	()	()

Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	120	110	110	0	0	0	0	0
Offset	Sec	81	91	71	0	0	0	0	0
Split	Split	1	2	3	0	0	0	0	0
Sequence	Sequence	1	1	1	0	0	0	0	0

Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	21	53	0	46	0	0	0	0
Split 1 - Coord	Enum	false	true	false	false	false	false	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	11	51	0	48	0	0	0	0
Split 2 - Coord	Enum	false	true	false	false	false	false	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	14	48	0	48	0	0	0	0
Split 3 - Coord	Enum	false	true	false	false	false	false	false	false

TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J----------	-F---------	---A--------	----M-------	------J-----
Day of Week	Bit	-MTWTF-	-----S	S------	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234567890123456789011	12345678901234567890123456789011	12345678901234567890123456789011	1---------- -------	----------5--------- -------	-2---------- ---------	---------- -----4-	1---------- -------
Day Plan	Number	1	2	3	3	3	3	3	3

TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	--------A----	--------S---	---------O--	----------D	----------D	----------D	0	0
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	-2---------- -------	-----6---------- ------	---------1---------- ------	---------- -7----	---------- --8---	---------- 4-------	0	0
Day Plan	Number	3	3	3	3	3	3	0	0

TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	7	9	16	18	21	3	0
Plan 1 Minute	Min	0	0	0	0	30	30	0	0
Plan 1 Action	Number	8	1	2	3	2	8	7	0
Plan 2 Hour	Hour	0	9	21	0	0	0	3	0
Plan 2 Minute	Min	0	0	30	0	0	0	0	0
Plan 2 Action	Number	8	2	8	0	0	0	7	0
Plan 3 Hour	Hour	0	10	18	0	0	0	3	0
Plan 3 Minute	Min	0	0	30	0	0	0	0	0
Plan 3 Action	Number	8	2	8	0	0	0	7	0

TB Action	Units	1	2	3	4	5	6	7	8
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Interconnect	Interconnect	Interconnect	Free	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

Signal Timing Report

Runtime: 2021-08-04 09:05:26

Device: 1401

Region: Mississauga **Signal ID:** 1401 **Location:** HURONTARIO STREET N at Dundas Street E

Phase	Units	1	2	3	4	5	6	7	8
Walk	Sec	0	14	0	16	0	14	0	16
Ped Clear	Sec	0	20	0	22	0	20	0	22
Min Green	Sec	5	8	5	8	5	8	5	8
Passage	Sec	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Maximum 1	Sec	10	15	10	40	10	15	10	40
Maximum 2	Sec	10	15	10	40	10	15	10	40
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	0.0	3.0	0.0	3.5	0.0	3.0	0.0	3.5
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	phaseNotOn	phaseNotOn	phaseNotOn	redClear	phaseNotOn	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	Enabled Non Lock Det	Enabled Ped Recall Dual Entry	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	Enabled Non Lock Det	Enabled Ped Recall Dual Entry
[P2] Ring	Ring	1	1	1	1	2	2	2	2
[P2] Concurrency	Phase (,)	(5,6)	(5,6)	(7,8)	(7,8)	(1,2)	(1,2)	(3,4)	(3,4)

Phase	Units	9	10	11	12	13	14	15	16
Walk	Sec	0	0	0	0	0	0	0	0
Ped Clear	Sec	0	0	0	0	0	0	0	0
Min Green	Sec	0	0	1	1	1	1	1	1
Passage	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum 1	Sec	0	0	0	0	0	0	0	0
Maximum 2	Sec	0	0	0	0	0	0	0	0
Yellow Change	Sec	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clearance	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	other	other	other	other	other	other	other	other
[P2] Options	Bit	0	0	0	0	0	0	0	0
[P2] Ring	Ring	0	0	0	0	0	0	0	0
[P2] Concurrency	Phase (,)	()	()	()	()	()	()	()	()

Veh Detector	Units	1	2	3	4	5	6	7	8
Options	Bit	Passage Call	0	Passage Call	Passage Call	Passage Call	0	Passage Call	Passage Call
Call Phase	Phase	1	0	3	4	5	0	7	8
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	60	0	60	60	60	0	60	60
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	255	0	255	255	255	0	255	255

Veh Detector	Units	9	10	11	12	13	14	15	16
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0

Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Vol/Occ	**Units**	**Value**							
Period	Sec	0							

Ped Detector	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Call Phase	Phase	0	2	0	4	0	6	0	8
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	1	0	0	0	1
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Unit Param	**Units**	**Value**							
Start Up Flash	Sec	0							
Auto Ped Clear	Enum	enable							
Back Up Time	Sec	300							
Red Revert	Sec	0.0							
Coord Param	**Units**	**Value**							
Operational Mode	Enum	Automatic							
Correction Mode	Enum	shortway							
Maximum Mode	Enum	maxInhibit							
Force Mode	Enum	other							
Coord Pattern	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Cycle Time	Sec	160	160	160	0	0	0	0	0
Offset	Sec	72	88	130	0	0	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	1	1	1	1	1	1	1	1
Coord Pattern	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Cycle Time	Sec	0	0	0	0	0	0	0	0
Offset	Sec	0	0	0	0	0	0	0	0
Split	Split	9	10	11	12	13	14	15	16
Sequence	Sequence	1	1	1	1	1	1	1	1
Coord Split	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	14	66	14	66	14	66	14	66
Split 1 - Coord	Enum	false	true	false	false	false	true	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	18	61	16	65	18	61	16	65
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	14	61	14	71	14	61	14	71
Split 3 - Coord	Enum	false	true	false	false	false	true	false	false
Split 4 - Mode	Enum	none	none	none	none	none	none	none	none
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	none	none	none	none	none	none	none	none
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	none	none	none	none	none	none	none	none
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	none	none	none	none	none	none	none	none
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	none	none	none	none	none	none	none	none
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	0	0	0	0	0	0	0	0
Split 10 - Coord	Enum	false	false	false	false	false	false	false	false
Split 11 - Mode	Enum	none	none	none	none	none	none	none	none
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	none	none	none	none	none	none	none	none
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	none	none	none	none	none	none	none	none
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false
Coord Split	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	0	0	0	0	0	0	0	0
Split 1 - Coord	Enum	false	false	false	false	false	false	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	0	0	0	0	0	0	0	0
Split 2 - Coord	Enum	false	false	false	false	false	false	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	0	0	0	0	0	0	0	0
Split 3 - Coord	Enum	false	false	false	false	false	false	false	false
Split 4 - Mode	Enum	none	none	none	none	none	none	none	none
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	none	none	none	none	none	none	none	none
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	none	none	none	none	none	none	none	none
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	none	none	none	none	none	none	none	none
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	none	none	none	none	none	none	none	none
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	0	0	0	0	0	0	0	0
Split 10 - Coord	Enum	false	false	false	false	false	false	false	false
Split 11 - Mode	Enum	none	none	none	none	none	none	none	none
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	none	none	none	none	none	none	none	none
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	none	none	none	none	none	none	none	none
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false

TB Param	Units	Value
Daylight Saving	Enum	3
Standard Time Zone	Sec	-18000
Pattern Sync	Sec	0

TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J-----------	-F----------	J-----------	-F----------	---A--------
Day of Week	Bit	-MTWTF-	S------	------S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	1234567890123456789012345678901	1234567890123456789012345678901	1234567890123456789012345678901	-2-----------------------------	-------------------0-----------	-2-----------------------------	-------------------0-----------	-------------4-----------------
Day Plan	Number	1	3	2	3	3	3	3	3

TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	----M-------	------J-----	-------A----	--------S---	---------O--	-----------D	-----------D	-----------D
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	---------------------2---------	--3----------------------------	------7------------------------	---4---------------------------	--------9----------------------	------------------------5------	-------------------------6-----	--------------------------7----
Day Plan	Number	3	3	3	3	3	3	3	3

TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	6	9	15	19	3	0	0
Plan 1 Minute	Min	0	0	30	0	30	0	0	0
Plan 1 Action	Number	8	1	2	3	2	7	0	0
Plan 2 Hour	Hour	0	7	3	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	2	7	0	0	0	0	0
Plan 3 Hour	Hour	0	8	23	3	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	2	8	7	0	0	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0

Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

TB Dayplan	Units	9	10	11	12	13	14	15	16
Plan 1 Hour	Hour	0	0	0	0	0	0	0	0
Plan 1 Minute	Min	0	0	0	0	0	0	0	0
Plan 1 Action	Number	0	0	0	0	0	0	0	0
Plan 2 Hour	Hour	0	0	0	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	0	0	0	0	0	0	0	0
Plan 3 Hour	Hour	0	0	0	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	0	0	0	0	0	0	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

TB Action	Units	1	2	3	4	5	6	7	8
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Pattern 7	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

TB Action	Units	9	10	11	12	13	14	15	16
Pattern	Enum	Pattern 9	Pattern 10	Interconnect	Interconnect	Interconnect	Interconnect	Interconnect	Interconnect
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

TB DST	Units	Value
Begin Month	Enum	
Begin Occurrence	Enum	
Begin DOW	Enum	
Begin DOM	Date	
End Occurrence	Enum	
End DOW	Enum	
End DOM	Date	
End Seconds	Sec	
Adjustment	Sec	

Preempt Param	Units	1	2	3	4	5	6
Control	Bit	0	0	0	0	0	0
Link	Preempt	0	0	0	0	0	0
Delay	Sec	0	0	0	0	0	0
Min Duration	Sec	0	0	0	0	0	0
Min Green	Sec	255	255	255	255	255	255
Min Walk	Sec	255	255	255	255	255	255
Enter Ped Clear	Sec	255	255	255	255	255	255
Track Green	Sec	0	0	0	0	0	0
Min Dwell	Sec	5	5	5	5	5	5
Max Presence	Sec	0	0	0	0	0	0
[P2] Track Phase	Phase (,)	()	()	()	()	()	()
[P2] Dwell Phase	Phase (,)	()	()	(2,6)	(4,8)	()	()
[P2] Dwell Ped	Phase (,)	()	()	()	()	()	()
[P2] Exit Phase	Phase (,)	()	()	()	()	()	()
[S] State	Enum						
[P2] Track Overlap	Phase (,)	()	()	()	()	()	()
[P2] Dwell Overlap	Phase (,)	()	()	()	()	()	()

[P2] Cycling Phase	Phase (,)	()	()	()	()	()	()		
[P2] Cycling Ped	Phase (,)	()	()	()	()	()	()		
[P2] Cycling Overlap	Phase (,)	()	()	()	()	()	()		
Enter Yellow Change	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Enter Red Clear	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Track Yellow	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Track Red Clear	Sec	25.5	25.5	25.5	25.5	25.5	25.5		

Ring	**Units**	**1**	**2**	**3**	**4**
[P2] Sequence 1	Phase (,)	()	()	()	()
[P2] Sequence 2	Phase (,)	()	()	()	()
[P2] Sequence 3	Phase (,)	()	()	()	()
[P2] Sequence 4	Phase (,)	()	()	()	()

Channel Param	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Control Source	Phase or Overlap	1	2	3	4	5	6	7	8
Control Type	Enum	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle
Flash	Bit	0	Flash Red	0	Flash Red Half Hertz	0	Flash Red	0	Flash Red Half Hertz
Dimming	Bit	0	0	0	0	0	0	0	0

Channel Param	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Control Source	Phase or Overlap	2	4	6	8	0	0	0	0
Control Type	Enum	phasePedestrian	phasePedestrian	phasePedestrian	phasePedestrian	other	other	other	other
Flash	Bit	0	0	0	0	0	0	0	0
Dimming	Bit	0	0	0	0	0	0	0	0

Overlap	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
[P2] Type	Enum	other	other	other	other	other	other	other	other
[P2] Included	Phase (,)	()	()	()	()	()	()	()	()
[P2] Modifier Phases	Phase (,)	()	()	()	()	()	()	()	()
Trail Green	Sec	0	0	0	0	0	0	0	0
Trail Yellow	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trail Red	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
[P2] Type	Enum	other	other	other	other	other	other	other	other
[P2] Included	Phase (,)	()	()	()	()	()	()	()	()
[P2] Modifier Phases	Phase (,)	()	()	()	()	()	()	()	()
Trail Green	Sec	0	0	0	0	0	0	0	0
Trail Yellow	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trail Red	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Signal Timing Report

Runtime: 2021-08-03 15:56:08

Device: 2217

Region: Mississauga **Signal ID:** 2217 **Location:** HILLCREST AVENUE E at GO West Access

Phase	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Walk	Sec	0	10	0	9	0	0	0	0
Ped Clear	Sec	0	21	0	16	0	0	0	0
Min Green	Sec	5	8	0	8	0	0	0	0
Passage	Sec	2.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0
Maximum 1	Sec	10	31	0	25	0	0	0	0
Maximum 2	Sec	10	31	0	25	0	0	0	0
Yellow Change	Sec	3.0	4.0	0.0	4.0	0.0	0.0	0.0	0.0
Red Clearance	Sec	0.0	3.5	0.0	2.5	0.0	0.0	0.0	0.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Act Rest In Walk	0	Enabled Non Lock Det	0	0	0	0
[P2] Ring	Ring	1	1	0	1	0	0	0	0
[P2] Concurrency	Phase (,)	()	()	()	()	()	()	()	()

Phase	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Walk	Sec	0	0	0	0	0	0	0	0
Ped Clear	Sec	0	0	0	0	0	0	0	0
Min Green	Sec	1	1	1	1	1	1	1	1
Passage	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum 1	Sec	0	0	0	0	0	0	0	0
Maximum 2	Sec	0	0	0	0	0	0	0	0
Yellow Change	Sec	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clearance	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn
[P2] Options	Bit	0	0	0	0	0	0	0	0
[P2] Ring	Ring	0	0	0	0	0	0	0	0
[P2] Concurrency	Phase (,)	()	()	()	()	()	()	()	()

Veh Detector	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Options	Bit	Passage Call	0	0	Passage Call	0	0	0	0
Call Phase	Phase	1	0	0	4	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	60	0	0	60	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	255	0	0	255	0	0	0	0

Veh Detector	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
Options	Bit	0	0	Volume Occupancy	Volume Occupancy	0	0	0	0
Call Phase	Phase	0	0	2	2	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0
Veh Detector	**Units**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**
Options	Bit	0	0	0	0	0	0	0	0
Call Phase	Phase	0	0	0	0	0	0	0	0
Switch Phase	Phase	0	0	0	0	0	0	0	0
Delay	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Extend	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	Sec	0	0	0	0	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	0	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0
Fail Time	Sec	0	0	0	0	0	0	0	0

Veh Vol/Occ	**Units**	**Value**
Period	Sec	60

Ped Detector	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Call Phase	Phase	0	2	0	4	0	0	0	0
No Activity	Min	0	0	0	0	0	0	0	0
Max Presence	Min	0	0	0	1	0	0	0	0
Erratic Counts	Counts/Min	0	0	0	0	0	0	0	0

Unit Param	**Units**	**Value**
Start Up Flash	Sec	0
Auto Ped Clear	Enum	enable
Back Up Time	Sec	300
Red Revert	Sec	0.0

Coord Param	**Units**	**Value**
Operational Mode	Enum	Automatic
Correction Mode	Enum	shortway
Maximum Mode	Enum	maxInhibit
Force Mode	Enum	fixed

Coord Pattern	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Cycle Time	Sec	105	0	110	0	0	0	0	0
Offset	Sec	90	0	109	0	0	0	0	0
Split	Split	1	2	3	1	1	1	1	1
Sequence	Sequence	1	1	1	1	1	1	1	1
Coord Pattern	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Cycle Time	Sec	0	100	0	0	0	0	0	0
Offset	Sec	0	76	0	0	0	0	0	0
Split	Split	1	10	1	1	1	1	1	1
Sequence	Sequence	1	1	1	1	1	1	1	1

Coord Split	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	10	62	0	33	0	0	0	0
Split 1 - Coord	Enum	false	true	false	false	false	false	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	0	0	0	0	0	0	0	0
Split 2 - Coord	Enum	false	false	false	false	false	false	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	10	53	0	47	0	0	0	0
Split 3 - Coord	Enum	false	true	false	false	false	false	false	false
Split 4 - Mode	Enum	none	none	none	none	none	none	none	none
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	none	none	none	none	none	none	none	none
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	none	none	none	none	none	none	none	none
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	none	none	none	none	none	none	none	none
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	none	none	none	none	none	none	none	none
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	12	33	0	55	0	0	0	0
Split 10 - Coord	Enum	false	true	false	false	false	false	false	false
Split 11 - Mode	Enum	none	none	none	none	none	none	none	none
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	none	none	none	none	none	none	none	none
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	none	none	none	none	none	none	none	none
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false

Coord Split	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	0	0	0	0	0	0	0	0
Split 1 - Coord	Enum	false	false	false	false	false	false	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	0	0	0	0	0	0	0	0
Split 2 - Coord	Enum	false	false	false	false	false	false	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	0	0	0	0	0	0	0	0
Split 3 - Coord	Enum	false	false	false	false	false	false	false	false
Split 4 - Mode	Enum	none	none	none	none	none	none	none	none
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	none	none	none	none	none	none	none	none
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	none	none	none	none	none	none	none	none
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	none	none	none	none	none	none	none	none
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	none	none	none	none	none	none	none	none
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	0	0	0	0	0	0	0	0
Split 10 - Coord	Enum	false	false	false	false	false	false	false	false
Split 11 - Mode	Enum	none	none	none	none	none	none	none	none
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	none	none	none	none	none	none	none	none
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	none	none	none	none	none	none	none	none
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false

TB Param	**Units**	**Value**
Daylight Saving	Enum	3
Standard Time Zone	Sec	-18000
Pattern Sync	Sec	0

TB Schedule	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J----------	-F---------	---A-------	----M------	------J----
Day of Week	Bit	-MTWTF-	------S	S------	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234567890 1	12345678901234567890 1	12345678901234567890 1	1-------	----------5---------	-2-------	----------4-	1-------
Day Plan	Number	1	2	3	3	3	3	3	3

TB Schedule	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Month	Bit	--------A----	--------S---	---------O--	----------D	----------D	----------D	0	0
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	-2-------	-----6----------	---------1----------	----------	----------	----------	0	0
Day Plan	Number	3	3	3	3	3	3	0	0

TB Dayplan	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Plan 1 Hour	Hour	0	7	8	16	18	3	0	0
Plan 1 Minute	Min	0	30	30	30	30	0	0	0
Plan 1 Action	Number	8	1	8	3	8	7	0	0
Plan 2 Hour	Hour	0	0	0	0	0	3	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	0	0	0	0	7	0	0
Plan 3 Hour	Hour	0	0	0	0	0	3	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	0	0	0	0	7	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

TB Dayplan	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Plan 1 Hour	Hour	0	0	0	0	0	0	0	0
Plan 1 Minute	Min	0	0	0	0	0	0	0	0
Plan 1 Action	Number	0	0	0	0	0	0	0	0
Plan 2 Hour	Hour	0	0	0	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	0	0	0	0	0	0	0	0
Plan 3 Hour	Hour	0	0	0	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	0	0	0	0	0	0	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

TB Action	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Interconnect	Interconnect	Interconnect	Free	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

TB Action	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Pattern	Enum	Interconnect	Interconnect	Interconnect	Interconnect	Interconnect	Interconnect	Interconnect	Interconnect
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

TB DST	**Units**	**Value**
Begin Month	Enum	
Begin Occurrence	Enum	
Begin DOW	Enum	
Begin DOM	Date	
End Occurrence	Enum	
End DOW	Enum	
End DOM	Date	
End Seconds	Sec	
Adjustment	Sec	

Preempt Param	**Units**	**1**	**2**	**3**	**4**	**5**	**6**
Control	Bit	0	0	0	0	0	0
Link	Preempt	0	0	0	0	0	0
Delay	Sec	0	0	0	0	0	0
Min Duration	Sec	0	0	0	0	0	0
Min Green	Sec	255	255	255	255	255	255
Min Walk	Sec	255	255	255	255	255	255
Enter Ped Clear	Sec	255	255	255	255	255	255
Track Green	Sec	0	0	0	0	0	0
Min Dwell	Sec	1	1	1	1	1	1
Max Presence	Sec	0	0	0	0	0	0
[P2] Track Phase	Phase (,)	()	()	()	()	()	()
[P2] Dwell Phase	Phase (,)	()	()	(2)	(4)	()	()
[P2] Dwell Ped	Phase (,)	()	()	()	()	()	()
[P2] Exit Phase	Phase (,)	()	()	(2)	(2)	()	()
[S] State	Enum						
[P2] Track Overlap	Phase (,)	()	()	()	()	()	()
[P2] Dwell Overlap	Phase (,)	()	()	(1)	()	()	()

[P2] Cycling Phase	Phase (,)	()	()	()	()	()	()		
[P2] Cycling Ped	Phase (,)	()	()	()	()	()	()		
[P2] Cycling Overlap	Phase (,)	()	()	()	()	()	()		
Enter Yellow Change	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Enter Red Clear	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Track Yellow	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Track Red Clear	Sec	25.5	25.5	25.5	25.5	25.5	25.5		
Ring	**Units**	**1**		**2**		**3**		**4**	
[P2] Sequence 1	Phase (,)	(1,2,4)		()		()		()	
[P2] Sequence 2	Phase (,)	()		()		()		()	
[P2] Sequence 3	Phase (,)	()		()		()		()	
[P2] Sequence 4	Phase (,)	()		()		()		()	
Channel Param	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Control Source	Phase or Overlap	1	2	0	4	0	0	0	0
Control Type	Enum	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle	phaseVehicle
Flash	Bit	Flash Red	Flash Red	Flash Red Half Hertz	Flash Red Half Hertz	0	0	0	0
Dimming	Bit	0	0	0	0	0	0	0	0
Channel Param	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Control Source	Phase or Overlap	2	4	0	0	1	0	0	0
Control Type	Enum	phasePedestrian	phasePedestrian	phasePedestrian	phasePedestrian	overlap	overlap	overlap	overlap
Flash	Bit	0	0	0	0	Flash Red	Flash Red	Flash Red	Flash Yellow Half Hertz
Dimming	Bit	0	0	0	0	0	0	0	0
Overlap	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
[P2] Type	Enum	normal	normal	normal	normal	normal	normal	normal	normal
[P2] Included	Phase (,)	(1,2)	()	()	()	()	()	()	()
[P2] Modifier Phases	Phase (,)	()	()	()	()	()	()	()	()
Trail Green	Sec	0	0	0	0	0	0	0	0
Trail Yellow	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trail Red	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overlap	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
[P2] Type	Enum	normal	normal	normal	normal	normal	normal	normal	normal
[P2] Included	Phase (,)	()	()	()	()	()	()	()	()
[P2] Modifier Phases	Phase (,)	()	()	()	()	()	()	()	()
Trail Green	Sec	0	0	0	0	0	0	0	0
Trail Yellow	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trail Red	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Signal Timing Report

Runtime: 2021-08-03 15:52:42

Device: 2218

Region: Mississauga **Signal ID:** 2218 **Location:** HILLCREST AVENUE E at GO East

Phase	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Walk	Sec	0	9	0	8	0	0	0	0
Ped Clear	Sec	0	17	0	12	0	0	0	0
Min Green	Sec	5	8	0	8	0	0	0	0
Passage	Sec	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0
Maximum 1	Sec	25	32	0	45	0	0	0	0
Maximum 2	Sec	25	32	0	45	0	0	0	0
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	0.0	3.5	0.0	2.0	0.0	0.0	0.0	0.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	other	redClear	other	phaseNotOn	other	other	other	other
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Act Rest In Walk	0	Enabled Non Lock Det	0	0	0	0
[P2] Ring	Ring	1	1	0	1	0	0	0	0
[P2] Concurrency	Phase (,)	()	()	()	()	()	()	()	()
Coord Pattern	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Cycle Time	Sec	0	0	160	0	0	0	0	0
Offset	Sec	0	0	74	0	0	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	1	1	1	1	1	1	1	1
Coord Split	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	0	0	0	0	0	0	0	0
Split 1 - Coord	Enum	false	true	false	false	false	false	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	0	0	0	0	0	0	0	0
Split 2 - Coord	Enum	false	true	false	false	false	false	false	false
Split 3 - Mode	Enum	none	none	none	pedRecall	none	none	none	none
Split 3 - Time	Sec	10	77	0	73	0	0	0	0
Split 3 - Coord	Enum	false	true	false	false	false	false	false	false
TB Schedule	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J----------	-F---------	---A-------	----M------	-----J-----
Day of Week	Bit	-MTWTF-	S------	------S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234567890 1	12345678901234567890 1	12345678901234567890 1	1-------------------	----------5---------	-2-----------------	----------4-	1-------------------
					-------	-------	---------	-----	-------
Day Plan	Number	1	3	2	3	3	3	3	3
TB Schedule	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Month	Bit	-------A---	-------S---	--------O--	----------D	----------D	----------D	0	0
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	-2-----------------	----6----------	---------1----------	-------------------	-------------------	-------------------	0	0
		-------	------	------	-7----	--8---	4-------		
Day Plan	Number	3	3	3	3	3	3	0	0
TB Dayplan	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Plan 1 Hour	Hour	0	3	16	19	0	0	0	0
Plan 1 Minute	Min	0	0	30	30	0	0	0	0
Plan 1 Action	Number	8	7	3	8	0	0	0	0
Plan 2 Hour	Hour	0	0	0	3	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	0	0	7	0	0	0	0
Plan 3 Hour	Hour	0	0	0	3	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	0	0	7	0	0	0	0
TB Action	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Free	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

Signal Timing Audit Report

Runtime: 2021-08-03 15:26:05

Device: 2114

Region : Mississauga **Signal ID:** 2114 **Location:** HURONTARIO STREET N at Fairview Road E

Phase	Units	1	2	3	4	5	6	7	8
Walk	Sec	0	9	0	14	0	9	0	14
Ped Clear	Sec	0	13	0	19	0	13	0	19
Min Green	Sec	5	8	0	8	0	8	5	8
Passage	Sec	2.0	3.0	0.0	3.0	0.0	3.0	2.0	3.0
Maximum 1	Sec	12	39	0	30	0	39	10	30
Maximum 2	Sec	12	39	0	30	0	39	10	30
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	other	phaseNotOn	other	redClear	phaseNotOn	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	0	Enabled Non Lock Det Dual Entry	0	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	Enabled Max Veh Recall	Enabled Non Lock Det Dual Entry
[P2] Ring	Ring	1	1	0	1	0	2	2	2
[P2] Concurrency	Phase (,)	(6)	(6)	()	(7,8)	()	(1,2)	(4)	(4)

Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	160	160	160	0	0	0	0	0
Offset	Sec	35	18	106	0	0	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	1	1	1	1	1	1	1	1

Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	13	88	0	59	0	101	0	59
Split 1 - Coord	Enum	false	true	false	false	false	true	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	14	90	0	56	0	104	0	56
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	16	91	0	53	0	107	0	53
Split 3 - Coord	Enum	false	true	false	false	false	true	false	false

TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J-----------	-F----------	---A--------	----M-------	------J-----
Day of Week	Bit	-MTWTF-	S------	------S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234 56789012345678 901	12345678901234 56789012345678 901	12345678901234 56789012345678 901	1--------------------- --------	--------------5-------- --------	-2------------------ ----------	---------------------- 4-------	1--------------------- --------
Day Plan	Number	1	3	2	3	3	3	3	3

TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	-------A----	--------S---	---------O--	-----------D	-----------D	-----------D	0	0
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	-2-------------------- --------	-----6----------------- -------	----------1----------- --------	---------------------- --7----	---------------------- ---8---	--------------------- -4-------	0	0
Day Plan	Number	3	3	3	3	3	3	0	0

TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	6	9	15	19	3	0	0
Plan 1 Minute	Min	0	0	30	0	30	0	0	0
Plan 1 Action	Number	8	1	2	3	2	7	0	0
Plan 2 Hour	Hour	0	7	3	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	2	7	0	0	0	0	0
Plan 3 Hour	Hour	0	8	23	3	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	2	8	7	0	0	0	0

TB Action	Units	1	2	3	4	5	6	7	8
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Free	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

Signal Timing Report

Runtime: 2021-08-03 15:45:04

Device: 2115

Region: Mississauga **Signal ID:** 2115 **Location:** HURONTARIO STREET N at Hillcrest Avenue / Kirwin Avenue

Phase	Units	1	2	3	4	5	6	7	8
Walk	Sec	0	14	0	15	0	14	0	15
Ped Clear	Sec	0	30	0	33	0	30	0	33
Min Green	Sec	7	8	5	8	5	8	0	8
Passage	Sec	2.0	3.0	2.0	3.0	2.0	3.0	0.0	3.0
Maximum 1	Sec	15	35	15	25	15	35	0	25
Maximum 2	Sec	15	35	15	25	15	35	0	25
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	0.0	3.5	0.0	4.0	0.0	3.5	0.0	4.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	phaseNotOn	phaseNotOn	phaseNotOn	redClear	other	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	Enabled Non Lock Det	Enabled Non Lock Det Dual Entry	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In W…	Enabled Non Lock Det	Enabled Non Lock Det Dual Entry
[P2] Ring	Ring	1	1	1	1	2	2	0	2
[P2] Concurrency	Phase (,)	(5,6)	(5,6)	(8)	(8)	(1,2)	(1,2)	()	(3,4)

Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	160	160	160	160	160	0	0	0
Offset	Sec	99	93	107	62	104	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	1	1	1	1	1	1	1	1

Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	13	62	21	64	13	62	0	85
Split 1 - Coord	Enum	false	true	false	false	false	true	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	13	78	13	56	13	78	0	69
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	16	54	26	64	16	54	0	90
Split 3 - Coord	Enum	false	true	false	false	false	true	false	false
Split 4 - Mode	Enum	none	none	none	pedRecall	none	none	none	pedRecall
Split 4 - Time	Sec	13	62	21	64	13	62	0	85
Split 4 - Coord	Enum	false	true	false	false	false	true	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	13	78	13	56	13	78	0	69
Split 5 - Coord	Enum	false	true	false	false	false	true	false	false

TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J-----------	-F----------	---A--------	----M-------	------J-----
Day of Week	Bit	-MTWTF-	S------	------S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234 56789012345678 901	123456789012345 678901234567890 1	123456789012345 678901234567890 1	1---------------------- ------	--------------5--------- ------	-2------------------- --------	-----------------------4 -----	1---------------------- ------
Day Plan	Number	1	3	2	3	3	3	3	3

TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	-------A----	--------S---	---------O--	-----------D	-----------D	-----------D	0	0
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	-2-------------------- ------	-----6------------------ -----	----------1------------- -----	----------------------- 7----	----------------------- -8---	--------------------- 4-------	0	0
Day Plan	Number	3	3	3	3	3	3	0	0

TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	6	7	9	9	15	3	16
Plan 1 Minute	Min	0	0	0	0	30	0	0	0
Plan 1 Action	Number	8	1	4	1	2	5	7	3
Plan 2 Hour	Hour	0	7	0	0	0	0	3	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	2	0	0	0	0	7	0
Plan 3 Hour	Hour	0	8	23	0	0	0	3	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	2	8	0	0	0	7	0

TB Action	Units	1	2	3	4	5	6	7	8
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Free	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

Signal Timing Report

Runtime: 2021-08-03 15:38:08

Device: 2117

Region: Mississauga **Signal ID:** 2117 **Location:** HURONTARIO STREET N at John Street

Phase	Units	1	2	3	4	5	6	7	8
Walk	Sec	0	10	0	12	0	10	0	12
Ped Clear	Sec	0	21	0	26	0	21	0	26
Min Green	Sec	5	8	5	8	5	8	0	8
Passage	Sec	2.0	3.0	2.0	3.0	2.0	3.0	0.0	3.0
Maximum 1	Sec	15	30	15	35	15	30	0	35
Maximum 2	Sec	15	30	15	35	15	30	0	35
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	0.0	3.0	0.0	4.0	0.0	3.0	0.0	4.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	phaseNotOn	phaseNotOn	phaseNotOn	redClear	other	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In Walk	Enabled Non Lock Det	Enabled Non Lock Det Dual Entry	Enabled Non Lock Det	Enabled Non-Actuated 1 Max Veh Recall Ped Recall Dual Entry Act Rest In	0	Enabled Non Lock Det Dual Entry
[P2] Ring	Ring	1	1	1	1	2	2	0	2
[P2] Concurrency	Phase (,)	(5,6)	(5,6)	(8)	(8)	(1,2)	(1,2)	()	(3,4)

Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	160	160	160	160	160	0	0	0
Offset	Sec	107	102	115	107	115	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	1	1	1	1	1	1	1	1

Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	20	79	15	46	20	79	0	61
Split 1 - Coord	Enum	false	true	false	false	false	true	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	20	79	15	46	20	79	0	61
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	20	74	20	46	20	74	0	66
Split 3 - Coord	Enum	false	true	false	false	false	true	false	false
Split 4 - Mode	Enum	none	none	none	pedRecall	none	none	none	pedRecall
Split 4 - Time	Sec	20	79	15	46	20	79	0	61
Split 4 - Coord	Enum	false	true	false	false	false	true	false	false
Split 5 - Mode	Enum	none	none	none	pedRecall	none	none	none	pedRecall
Split 5 - Time	Sec	20	74	20	46	20	74	0	66
Split 5 - Coord	Enum	false	true	false	false	false	true	false	false

TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J----------	-F---------	---A-------	----M------	-----J----
Day of Week	Bit	-MTWTF-	S------	------S	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234567890123456789012345678901	12345678901234567890123456789012345678901	12345678901234567890123456789012345678901	1---------- ---------- ----------	---------- ---------- ----------	-2---------- ---------- ----------	---------- ---------- ---------- -4	1---------- ---------- ----------
Day Plan	Number	1	3	2	3	3	3	3	3

TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	-------A----	--------S---	--------O--	----------D	----------D	----------D	0	0
Day of Week	Bit	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	-2---------- ----------	-----6---------- ----------	---------1---------- ----------	---------- ---------- 7----	---------- ---------- -8---	---------- ---------- 4-------	0	0
Day Plan	Number	3	3	3	3	3	3	0	0

TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	6	7	9	9	15	16	18
Plan 1 Minute	Min	0	0	0	0	30	0	30	30
Plan 1 Action	Number	8	1	4	1	2	3	5	3
Plan 2 Hour	Hour	0	7	0	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	8	2	0	0	0	0	0	0
Plan 3 Hour	Hour	0	8	23	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	8	2	8	0	0	0	0	0

TB Action	Units	1	2	3	4	5	6	7	8
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Pattern 7	Free
Aux. Functions	Bit	0	0	0	0	0	0	0	0
Spec. Functions	Bit	0	0	0	0	0	0	0	0

APPENDIX L: SYNCHRO OUTPUT WORKSHEETS

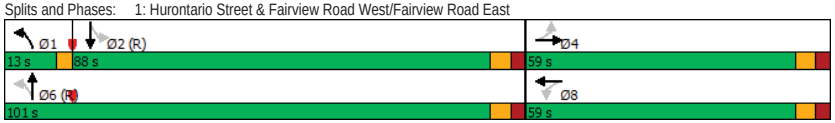
Existing Traffic Conditions (2022)

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	100	205	75	60	1140	35	1880
Future Volume (vph)	105	100	205	75	60	1140	35	1880
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA
Protected Phases		4		8	1	6		2
Permitted Phases	4		8		6		2	
Detector Phase	4	4	8	8	1	6	2	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	8.0	8.0
Minimum Split (s)	40.0	40.0	40.0	40.0	8.0	29.0	29.0	29.0
Total Split (s)	59.0	59.0	59.0	59.0	13.0	101.0	88.0	88.0
Total Split (%)	36.9%	36.9%	36.9%	36.9%	8.1%	63.1%	55.0%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	2.0	6.0	6.0	6.0
Lead/Lag					Lead		Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	55.3	55.3	55.3	55.3	96.7	92.7	81.6	81.6
Actuated g/C Ratio	0.35	0.35	0.35	0.35	0.60	0.58	0.51	0.51
v/c Ratio	0.32	0.53	0.96	0.28	0.48	0.56	0.34	0.87
Control Delay	42.2	38.2	97.5	33.0	28.6	35.5	33.1	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	38.2	97.5	33.0	28.6	35.5	33.1	39.4
LOS	D	D	F	C	C	D	C	D
Approach Delay		39.3		71.3		35.2		39.3
Approach LOS		D		E		D		D

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 35 (22%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 40.6 — Intersection LOS: D
Intersection Capacity Utilization 97.1% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 1: Hurontario Street & Fairview Road West/Fairview Road East

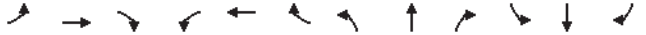




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	121	305	236	161	69	1540	40	2218
v/c Ratio	0.32	0.53	0.96	0.28	0.48	0.56	0.34	0.87
Control Delay	42.2	38.2	97.5	33.0	28.6	35.5	33.1	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	38.2	97.5	33.0	28.6	35.5	33.1	39.4
Queue Length 50th (m)	30.5	68.5	79.0	32.5	15.5	167.8	7.5	227.7
Queue Length 95th (m)	48.2	96.6	#132.6	50.9	23.7	171.9	18.5	240.2
Internal Link Dist (m)		78.1		66.2		510.0		77.3
Turn Bay Length (m)	75.0		40.0		120.0		50.0	
Base Capacity (vph)	384	578	247	582	165	2841	118	2571
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.53	0.96	0.28	0.42	0.54	0.34	0.86

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	100	165	205	75	65	60	1140	200	35	1880	50
Future Volume (vph)	105	100	165	205	75	65	60	1140	200	35	1880	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		2.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.95		1.00	0.98		1.00	0.97		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		0.96	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.91		1.00	0.93		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1748	1567		1641	1631		1719	4757		1694	4978	
Flt Permitted	0.60	1.00		0.41	1.00		0.05	1.00		0.13	1.00	
Satd. Flow (perm)	1112	1567		716	1631		87	4757		231	4978	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	121	115	190	236	86	75	69	1310	230	40	2161	57
RTOR Reduction (vph)	0	37	0	0	19	0	0	16	0	0	1	0
Lane Group Flow (vph)	121	268	0	236	142	0	69	1524	0	40	2217	0
Confl. Peds. (#/hr)	20		50	50		20	60		50	50		60
Heavy Vehicles (%)	1%	3%	5%	6%	4%	9%	5%	3%	6%	5%	3%	10%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	54.3	54.3		54.3	54.3		91.7	91.7		80.6	80.6	
Effective Green, g (s)	55.3	55.3		55.3	55.3		92.7	92.7		81.6	81.6	
Actuated g/C Ratio	0.35	0.35		0.35	0.35		0.58	0.58		0.51	0.51	
Clearance Time (s)	7.0	7.0		7.0	7.0		3.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	384	541		247	563		143	2756		117	2538	
v/s Ratio Prot		0.17			0.09		0.03	c0.32			c0.45	
v/s Ratio Perm	0.11			c0.33			0.25			0.17		
v/c Ratio	0.32	0.50		0.96	0.25		0.48	0.55		0.34	0.87	
Uniform Delay, d1	38.4	41.3		51.1	37.5		29.4	20.8		23.3	34.6	
Progression Factor	1.00	1.00		1.00	1.00		0.97	1.72		1.00	1.00	
Incremental Delay, d2	0.5	0.7		44.6	0.2		2.4	0.8		7.8	4.5	
Delay (s)	38.9	42.1		95.7	37.8		30.8	36.6		31.1	39.2	
Level of Service	D	D		F	D		C	D		C	D	
Approach Delay (s)		41.2			72.2			36.3			39.0	
Approach LOS		D			E			D			D	

Intersection Summary					
HCM 2000 Control Delay	41.1	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.88				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	14.0		
Intersection Capacity Utilization	97.1%	ICU Level of Service	F		
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	100	10	10	30	215	1100	80	1530	295
Future Volume (vph)	100	10	10	30	215	1100	80	1530	295
Turn Type	pm+pt	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	3	8		4	1	6	5	2	
Permitted Phases	8		4		6		2		2
Detector Phase	3	8	4	4	1	6	5	2	2
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	8.0
Minimum Split (s)	8.0	46.0	46.0	46.0	8.0	38.0	8.0	38.0	38.0
Total Split (s)	15.0	61.0	46.0	46.0	20.0	79.0	20.0	79.0	79.0
Total Split (%)	9.4%	38.1%	28.8%	28.8%	12.5%	49.4%	12.5%	49.4%	49.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	4.0	4.0	4.0	0.0	3.0	0.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	2.0	6.0	2.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	45.9	40.9	27.0	27.0	110.1	94.6	96.2	82.8	82.8
Actuated g/C Ratio	0.29	0.26	0.17	0.17	0.69	0.59	0.60	0.52	0.52
v/c Ratio	0.35	0.09	0.05	0.42	0.70	0.41	0.28	0.64	0.44
Control Delay	43.4	16.5	48.3	18.9	63.4	4.5	7.1	20.7	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	43.4	16.5	48.3	18.9	63.4	4.6	7.1	20.7	6.7
LOS	D	B	D	B	E	A	A	C	A
Approach Delay		36.3		20.9		14.1		17.9	
Approach LOS		D		C		B		B	

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 107 (67%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 17.3 — Intersection LOS: B
Intersection Capacity Utilization 88.5% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 2: Hurontario Street & John Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	106	38	11	154	229	1186	85	1628	314
v/c Ratio	0.35	0.09	0.05	0.42	0.70	0.41	0.28	0.64	0.44
Control Delay	43.4	16.5	48.3	18.9	63.4	4.5	7.1	20.7	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	43.4	16.5	48.3	18.9	63.4	4.6	7.1	20.7	6.7
Queue Length 50th (m)	24.3	2.5	2.8	10.8	38.4	9.8	4.4	191.1	37.8
Queue Length 95th (m)	39.2	11.5	8.7	31.8	#85.6	48.6	m5.0	m196.7	m43.8
Internal Link Dist (m)		69.2		56.1		37.7		43.8	
Turn Bay Length (m)					15.0		30.0		40.0
Base Capacity (vph)	308	575	300	477	328	2881	397	2584	722
Starvation Cap Reductn	0	0	0	0	0	552	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.07	0.04	0.32	0.70	0.51	0.21	0.63	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	10	25	10	30	115	215	1100	15	80	1530	295
Future Volume (vph)	100	10	25	10	30	115	215	1100	15	80	1530	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	7.0		7.0	7.0		2.0	6.0		2.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.96		1.00	1.00		1.00	1.00	0.87
Flpb, ped/bikes	0.99	1.00		0.98	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.89		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1650	1653		1602	1609		1805	4871		1690	4893	1250
Flt Permitted	0.49	1.00		0.73	1.00		0.08	1.00		0.22	1.00	1.00
Satd. Flow (perm)	851	1653		1235	1609		160	4871		388	4893	1250
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	106	11	27	11	32	122	229	1170	16	85	1628	314
RTOR Reduction (vph)	0	20	0	0	94	0	0	1	0	0	0	63
Lane Group Flow (vph)	106	18	0	11	60	0	229	1185	0	85	1628	251
Confl. Peds. (#/hr)	30		20	20		30	80		90	90		80
Heavy Vehicles (%)	8%	0%	0%	10%	0%	0%	0%	6%	0%	6%	6%	12%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	39.9	39.9		26.0	26.0		105.1	93.7		90.2	81.8	81.8
Effective Green, g (s)	40.9	40.9		27.0	27.0		106.1	94.7		92.2	82.8	82.8
Actuated g/C Ratio	0.26	0.26		0.17	0.17		0.66	0.59		0.58	0.52	0.52
Clearance Time (s)	3.0	8.0		8.0	8.0		3.0	7.0		3.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	276	422		208	271		325	2883		300	2532	646
v/s Ratio Prot	c0.03	0.01			c0.04		c0.09	0.24		0.02	c0.33	
v/s Ratio Perm	0.07			0.01			0.37			0.15		0.20
v/c Ratio	0.38	0.04		0.05	0.22		0.70	0.41		0.28	0.64	0.39
Uniform Delay, d1	47.6	44.8		55.8	57.4		33.6	17.6		15.2	27.9	23.3
Progression Factor	1.00	1.00		1.00	1.00		1.92	0.20		0.51	0.65	0.36
Incremental Delay, d2	0.9	0.0		0.1	0.4		6.1	0.4		0.3	0.6	0.9
Delay (s)	48.5	44.9		55.9	57.8		70.6	3.9		7.9	18.9	9.2
Level of Service	D	D		E	E		E	A		A	B	A
Approach Delay (s)		47.5			57.7			14.7			16.9	
Approach LOS		D			E			B			B	

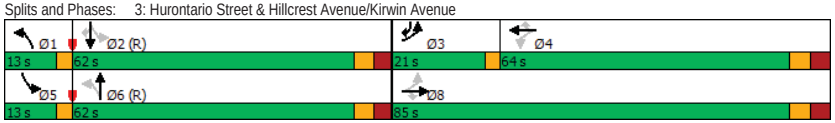
Intersection Summary				
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.0	
Intersection Capacity Utilization	88.5%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	85	130	145	20	140	60	145	1180	30	1295	235
Future Volume (vph)	85	130	145	20	140	60	145	1180	30	1295	235
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	3	8			4		1	6	5	2	3
Permitted Phases	8		8	4		4	6		2		2
Detector Phase	3	8	8	4	4	4	1	6	5	2	3
Switch Phase											
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	5.0
Minimum Split (s)	8.0	56.0	56.0	56.0	56.0	56.0	8.0	51.5	8.0	51.5	8.0
Total Split (s)	21.0	85.0	85.0	64.0	64.0	64.0	13.0	62.0	13.0	62.0	21.0
Total Split (%)	13.1%	53.1%	53.1%	40.0%	40.0%	40.0%	8.1%	38.8%	8.1%	38.8%	13.1%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	3.0
All-Red Time (s)	0.0	4.0	4.0	4.0	4.0	4.0	0.0	3.5	0.0	3.5	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	7.0	7.0	2.0	6.5	2.0	6.5	2.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	None
Act Effct Green (s)	67.9	62.9	62.9	49.0	49.0	49.0	88.1	75.4	68.4	56.1	72.6
Actuated g/C Ratio	0.42	0.39	0.39	0.31	0.31	0.31	0.55	0.47	0.43	0.35	0.45
v/c Ratio	0.19	0.18	0.24	0.06	0.26	0.13	0.57	0.54	0.14	0.78	0.34
Control Delay	30.3	37.9	11.9	40.0	43.4	6.6	72.6	15.4	18.2	31.7	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.2
Total Delay	30.3	37.9	11.9	40.0	43.4	6.6	72.6	15.4	18.2	32.6	1.7
LOS	C	D	B	D	D	A	E	B	B	C	A
Approach Delay		25.6			33.1			21.5		27.6	
Approach LOS		C			C			C		C	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 99 (62%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 25.4		Intersection LOS: C	
Intersection Capacity Utilization 110.9%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	88	134	149	21	144	62	149	1242	31	1335	242
v/c Ratio	0.19	0.18	0.24	0.06	0.26	0.13	0.57	0.54	0.14	0.78	0.34
Control Delay	30.3	37.9	11.9	40.0	43.4	6.6	72.6	15.4	18.2	31.7	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.2
Total Delay	30.3	37.9	11.9	40.0	43.4	6.6	72.6	15.4	18.2	32.6	1.7
Queue Length 50th (m)	18.4	31.6	0.0	5.0	36.5	0.0	38.4	41.1	2.6	57.1	0.0
Queue Length 95th (m)	32.2	46.2	20.3	12.5	56.6	9.4	64.2	48.7	m5.6	75.7	0.0
Internal Link Dist (m)		32.2			62.6			277.3		54.3	
Turn Bay Length (m)	50.0			50.0		10.0	75.0		65.0		
Base Capacity (vph)	500	926	736	412	644	562	260	2315	256	1718	768
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	150	150
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	0.18	0.14	0.20	0.05	0.22	0.11	0.57	0.54	0.12	0.85	0.39

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	130	145	20	140	60	145	1180	25	30	1295	235
Future Volume (vph)	85	130	145	20	140	60	145	1180	25	30	1295	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	7.0	7.0	7.0	7.0	7.0	2.0	6.5		2.0	6.5	2.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.88	1.00	1.00	0.97	1.00	1.00		1.00	1.00	0.88
Flpb, ped/bikes	0.99	1.00	1.00	0.91	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1597	1900	1354	1640	1810	1448	1357	4907		1745	4893	1287
Flt Permitted	0.60	1.00	1.00	0.67	1.00	1.00	0.08	1.00		0.20	1.00	1.00
Satd. Flow (perm)	1016	1900	1354	1159	1810	1448	114	4907		366	4893	1287
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	134	149	21	144	62	149	1216	26	31	1335	242
RTOR Reduction (vph)	0	0	90	0	0	43	0	1	0	0	0	139
Lane Group Flow (vph)	88	134	59	21	144	19	149	1241	0	31	1335	103
Confl. Peds. (#/hr)	20		110	110		20	120		90	90		120
Heavy Vehicles (%)	12%	0%	5%	0%	5%	8%	33%	5%	4%	3%	6%	11%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	3	8			4		1	6		5	2	3
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	61.9	61.9	61.9	48.0	48.0	48.0	82.6	73.9		60.9	55.2	66.1
Effective Green, g (s)	62.9	62.9	62.9	49.0	49.0	49.0	83.6	74.9		62.9	56.2	68.1
Actuated g/C Ratio	0.39	0.39	0.39	0.31	0.31	0.31	0.52	0.47		0.39	0.35	0.43
Clearance Time (s)	3.0	8.0	8.0	8.0	8.0	8.0	3.0	7.5		3.0	7.5	3.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	442	746	532	354	554	443	256	2297		201	1718	547
v/s Ratio Prot	c0.01	0.07			c0.08		c0.09	0.25		0.01	c0.27	0.01
v/s Ratio Perm	0.06		0.04	0.02		0.01	0.21			0.05		0.07
v/c Ratio	0.20	0.18	0.11	0.06	0.26	0.04	0.58	0.54		0.15	0.78	0.19
Uniform Delay, d1	31.3	31.7	30.8	39.2	41.8	39.0	35.2	30.3		30.0	46.3	28.7
Progression Factor	1.06	1.19	2.68	1.00	1.00	1.00	2.01	0.48		0.93	0.62	0.17
Incremental Delay, d2	0.2	0.1	0.1	0.1	0.3	0.0	2.7	0.7		0.3	2.8	0.1
Delay (s)	33.4	37.8	82.7	39.3	42.1	39.1	73.6	15.2		28.2	31.4	5.0
Level of Service	C	D	F	D	D	D	E	B		C	C	A
Approach Delay (s)		54.8			41.0			21.4			27.4	
Approach LOS		D			D			C			C	

Intersection Summary				
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.51			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.5	
Intersection Capacity Utilization	110.9%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	270	310	305	60	80
Future Volume (vph)	270	310	305	60	80
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	1	6	2	4	
Permitted Phases	6				4
Detector Phase	1	6	2	4	4
Switch Phase					
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	33.5	33.5	26.0	26.0
Total Split (s)	28.0	134.0	106.0	26.0	26.0
Total Split (%)	17.5%	83.8%	66.3%	16.3%	16.3%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	3.5	3.5	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	5.0	5.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	135.7	131.2	102.8	17.3	17.3
Actuated g/C Ratio	0.85	0.82	0.64	0.11	0.11
v/c Ratio	0.47	0.12	0.30	0.55	0.43
Control Delay	5.1	3.3	11.5	82.7	17.4
Queue Delay	0.7	0.0	0.0	0.0	0.0
Total Delay	5.8	3.3	11.5	82.7	17.4
LOS	A	A	B	F	B
Approach Delay		4.5	11.5	45.4	
Approach LOS		A	B	D	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 12.1		Intersection LOS: B	
Intersection Capacity Utilization 59.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Hillcrest Avenue & Go Access Road



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	310	356	592	69	92
v/c Ratio	0.47	0.12	0.30	0.55	0.43
Control Delay	5.1	3.3	11.5	82.7	17.4
Queue Delay	0.7	0.0	0.0	0.0	0.0
Total Delay	5.8	3.3	11.5	82.7	17.4
Queue Length 50th (m)	19.2	12.2	25.4	21.7	0.0
Queue Length 95th (m)	27.7	16.4	49.0	38.0	16.2
Internal Link Dist (m)		144.9	84.1	44.8	
Turn Bay Length (m)	70.0				
Base Capacity (vph)	681	2881	2057	154	240
Starvation Cap Reductn	146	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.58	0.12	0.29	0.45	0.38

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	270	310	305	210	60	80
Future Volume (vph)	270	310	305	210	60	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.5	6.5		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98		1.00	0.96
Flpb, ped/bikes	0.99	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.94		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1472	3505	2978		1165	1207
Flt Permitted	0.40	1.00	1.00		0.95	1.00
Satd. Flow (perm)	617	3505	2978		1165	1207
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	310	356	351	241	69	92
RTOR Reduction (vph)	0	0	72	0	0	82
Lane Group Flow (vph)	310	356	520	0	69	10
Confl. Peds. (#/hr)	20			20	20	10
Heavy Vehicles (%)	22%	3%	12%	11%	55%	29%
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6					4
Actuated Green, G (s)	130.2	130.2	101.8		16.3	16.3
Effective Green, g (s)	131.2	131.2	102.8		17.3	17.3
Actuated g/C Ratio	0.82	0.82	0.64		0.11	0.11
Clearance Time (s)	3.0	7.5	7.5		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	647	2874	1913		125	130
v/s Ratio Prot	c0.08	0.10	c0.17		c0.06	
v/s Ratio Perm	0.31					0.01
v/c Ratio	0.48	0.12	0.27		0.55	0.08
Uniform Delay, d1	3.6	2.9	12.4		67.7	64.2
Progression Factor	1.00	1.00	1.18		1.00	1.00
Incremental Delay, d2	0.6	0.1	0.3		5.2	0.3
Delay (s)	4.2	3.0	15.0		72.9	64.4
Level of Service	A	A	B		E	E
Approach Delay (s)		3.5	15.0		68.0	
Approach LOS		A	B		E	

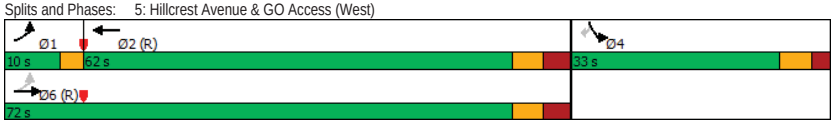
Intersection Summary				
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.34			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	59.0%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	435	515	235	65	190
Future Volume (vph)	435	515	235	65	190
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	1	6	2	4	
Permitted Phases	6				4
Detector Phase	1	6	2	4	4
Switch Phase					
Minimum Initial (s)	5.0	8.0	8.0	4.0	4.0
Minimum Split (s)	8.0	38.5	38.5	31.5	31.5
Total Split (s)	10.0	72.0	62.0	33.0	33.0
Total Split (%)	9.5%	68.6%	59.0%	31.4%	31.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	3.5	3.5	2.5	2.5
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	5.5	5.5
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	75.3	70.8	48.9	22.2	22.2
Actuated g/C Ratio	0.72	0.67	0.47	0.21	0.21
v/c Ratio	0.60	0.24	0.30	0.19	0.44
Control Delay	10.0	7.7	12.5	32.9	7.7
Queue Delay	1.1	0.0	0.0	0.0	0.0
Total Delay	11.1	7.7	12.5	32.9	7.7
LOS	B	A	B	C	A
Approach Delay		9.3	12.5	14.1	
Approach LOS		A	B	B	

Intersection Summary			
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 90 (86%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 10.8		Intersection LOS: B	
Intersection Capacity Utilization 81.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 5: Hillcrest Avenue & GO Access (West)





Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	473	560	418	71	207
v/c Ratio	0.60	0.24	0.30	0.19	0.44
Control Delay	10.0	7.7	12.5	32.9	7.7
Queue Delay	1.1	0.0	0.0	0.0	0.0
Total Delay	11.1	7.7	12.5	32.9	7.7
Queue Length 50th (m)	39.2	25.0	17.1	12.0	0.0
Queue Length 95th (m)	57.0	33.4	32.3	24.1	18.2
Internal Link Dist (m)		22.5	144.9	35.6	
Turn Bay Length (m)	30.0				
Base Capacity (vph)	794	2318	1635	468	531
Starvation Cap Reductn	137	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.72	0.24	0.26	0.15	0.39

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	435	515	235	150	65	190
Future Volume (vph)	435	515	235	150	65	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.5	6.5		5.5	5.5
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.96		1.00	0.91
Flpb, ped/bikes	0.98	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.94		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1766	3438	2811		1787	1447
Flt Permitted	0.47	1.00	1.00		0.95	1.00
Satd. Flow (perm)	882	3438	2811		1787	1447
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	473	560	255	163	71	207
RTOR Reduction (vph)	0	0	87	0	0	163
Lane Group Flow (vph)	473	560	331	0	71	44
Confl. Peds. (#/hr)	90			90	20	60
Heavy Vehicles (%)	0%	5%	13%	21%	1%	2%
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6					4
Actuated Green, G (s)	69.8	69.8	47.9		21.2	21.2
Effective Green, g (s)	70.8	70.8	48.9		22.2	22.2
Actuated g/C Ratio	0.67	0.67	0.47		0.21	0.21
Clearance Time (s)	3.0	7.5	7.5		6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	762	2318	1309		377	305
v/s Ratio Prot	c0.12	0.16	0.12		c0.04	
v/s Ratio Perm	0.30					0.03
v/c Ratio	0.62	0.24	0.25		0.19	0.14
Uniform Delay, d1	7.7	6.7	17.0		34.0	33.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.6	0.2	0.5		0.2	0.2
Delay (s)	9.3	6.9	17.5		34.2	33.9
Level of Service	A	A	B		C	C
Approach Delay (s)		8.0	17.5		34.0	
Approach LOS		A	B		C	

Intersection Summary				
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.35			
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	81.8%	ICU Level of Service	D	
Analysis Period (min)	15			

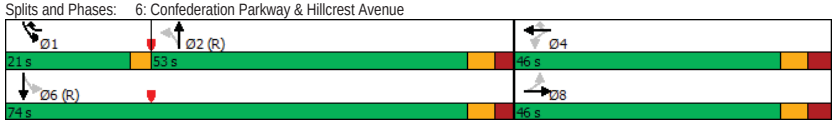
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	85	205	135	110	180	30	465	350	560
Future Volume (vph)	85	205	135	110	180	30	465	350	560
Turn Type	Perm	NA	Perm	NA	pm+ov	Perm	NA	pm+pt	NA
Protected Phases		8		4	1		2	1	6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	1	2	2	1	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	45.5	45.5	45.5	45.5	8.0	48.0	48.0	8.0	48.0
Total Split (s)	46.0	46.0	46.0	46.0	21.0	53.0	53.0	21.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	17.5%	44.2%	44.2%	17.5%	61.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	3.5	3.5	3.5	3.5	0.0	3.0	3.0	0.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	2.0	6.0	6.0	2.0	6.0
Lead/Lag					Lead	Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	35.1	35.1	35.1	35.1	63.2	46.8	46.8	76.4	72.4
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.53	0.39	0.39	0.64	0.60
v/c Ratio	0.27	0.55	0.82	0.23	0.23	0.14	0.72	0.84	0.34
Control Delay	32.9	37.6	71.7	31.8	5.1	27.6	28.2	39.4	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.9	37.6	71.7	31.8	5.1	27.6	28.2	39.4	12.9
LOS	C	D	E	C	A	C	C	D	B
Approach Delay		36.4		33.1			28.2		22.2
Approach LOS		D		C			C		C

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 27.8 — Intersection LOS: C
Intersection Capacity Utilization 108.7% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 6: Confederation Parkway & Hillcrest Avenue



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	94	289	150	122	200	33	956	389	722
v/c Ratio	0.27	0.55	0.82	0.23	0.23	0.14	0.72	0.84	0.34
Control Delay	32.9	37.6	71.7	31.8	5.1	27.6	28.2	39.4	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.9	37.6	71.7	31.8	5.1	27.6	28.2	39.4	12.9
Queue Length 50th (m)	17.0	55.0	32.9	21.8	6.5	5.6	88.8	61.9	46.5
Queue Length 95th (m)	31.3	82.4	#67.5	37.3	19.2	13.2	108.3	#129.0	60.2
Internal Link Dist (m)		72.4		67.3			99.6		86.6
Turn Bay Length (m)	25.0		35.0			35.0		30.0	
Base Capacity (vph)	394	588	206	589	868	256	1413	465	2102
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.49	0.73	0.21	0.23	0.13	0.68	0.84	0.34

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	205	55	135	110	180	30	465	395	350	560	90
Future Volume (vph)	85	205	55	135	110	180	30	465	395	350	560	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	2.0	6.0	6.0		2.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	0.97		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		0.97	1.00	1.00	0.99	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.93		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1678	1764		1415	1792	1531	1539	3085		1751	3467	
Flt Permitted	0.68	1.00		0.42	1.00	1.00	0.38	1.00		0.15	1.00	
Satd. Flow (perm)	1199	1764		627	1792	1531	611	3085		276	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	228	61	150	122	200	33	517	439	389	622	100
RTOR Reduction (vph)	0	8	0	0	0	69	0	128	0	0	10	0
Lane Group Flow (vph)	94	281	0	150	122	131	33	828	0	389	712	0
Confl. Peds. (#/hr)	30		50	50		30	20		50	50		20
Heavy Vehicles (%)	5%	3%	3%	24%	6%	3%	16%	3%	10%	3%	1%	3%
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		pm+pt	NA	
Protected Phases		8			4	1		2		1	6	
Permitted Phases	8			4		4	2			6		
Actuated Green, G (s)	34.1	34.1		34.1	34.1	56.7	45.8	45.8		71.4	71.4	
Effective Green, g (s)	35.1	35.1		35.1	35.1	58.7	46.8	46.8		72.4	72.4	
Actuated g/C Ratio	0.29	0.29		0.29	0.29	0.49	0.39	0.39		0.60	0.60	
Clearance Time (s)	7.5	7.5		7.5	7.5	3.0	7.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	350	515		183	524	748	238	1203		456	2091	
v/s Ratio Prot		0.16			0.07	0.03		c0.27		c0.17	0.21	
v/s Ratio Perm	0.08			c0.24		0.05	0.05			0.35		
v/c Ratio	0.27	0.54		0.82	0.23	0.17	0.14	0.69		0.85	0.34	
Uniform Delay, d1	32.6	35.7		39.5	32.2	17.1	23.6	30.5		26.0	11.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	1.2		24.0	0.2	0.1	1.2	3.2		14.3	0.4	
Delay (s)	33.0	36.9		63.5	32.5	17.2	24.8	33.7		40.3	12.3	
Level of Service	C	D		E	C	B	C	C		D	B	
Approach Delay (s)		35.9			35.9			33.4			22.1	
Approach LOS		D			D			C			C	

Intersection Summary				
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.5	
Intersection Capacity Utilization	108.7%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	35	35	30	1290	1365	65
Future Volume (Veh/h)	35	35	30	1290	1365	65
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	37	37	32	1358	1437	68
Pedestrians	60			10		
Lane Width (m)	3.6			3.6		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	5			1		
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (m)				123	301	
pX, platoon unblocked	0.86	0.76	0.76			
vC, conflicting volume	2048	583	1565			
vC1, stage 1 conf vol	1531					
vC2, stage 2 conf vol	517					
vCu, unblocked vol	134	0	658			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	95	95			
cM capacity (veh/h)	741	780	682			

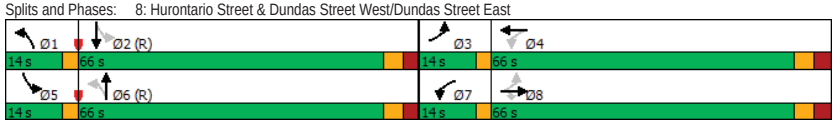
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	74	32	453	453	453	575	575	355
Volume Left	37	32	0	0	0	0	0	0
Volume Right	37	0	0	0	0	0	0	68
cSH	760	682	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.10	0.05	0.27	0.27	0.27	0.34	0.34	0.21
Queue Length 95th (m)	2.6	1.2	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	10.2	10.5	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B						
Approach Delay (s)	10.2	0.2				0.0		
Approach LOS	B							

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	41.8%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	145	1100	120	60	435	115	1090	150	1175
Future Volume (vph)	145	1100	120	60	435	115	1090	150	1175
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8		7	4	1	6	5	2
Permitted Phases	8		8	4		6		2	
Detector Phase	3	8	8	7	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	8.0	45.5	45.5	8.0	45.5	8.0	41.0	8.0	41.0
Total Split (s)	14.0	66.0	66.0	14.0	66.0	14.0	66.0	14.0	66.0
Total Split (%)	8.8%	41.3%	41.3%	8.8%	41.3%	8.8%	41.3%	8.8%	41.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	3.5	3.5	0.0	3.5	0.0	3.0	0.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	2.0	6.5	2.0	6.0	2.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	73.7	59.4	59.4	68.8	54.3	79.3	63.3	80.6	63.9
Actuated g/C Ratio	0.46	0.37	0.37	0.43	0.34	0.50	0.40	0.50	0.40
v/c Ratio	0.50	0.91	0.25	0.40	0.63	0.61	0.64	0.71	0.69
Control Delay	30.2	58.4	17.4	29.8	43.6	36.7	42.1	72.5	83.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.2	58.4	17.4	29.8	43.6	36.7	42.1	72.5	83.8
LOS	C	E	B	C	D	D	D	E	F
Approach Delay		51.8			42.4		41.6		82.6
Approach LOS		D			D		D		F

Intersection Summary		
Cycle Length: 160		
Actuated Cycle Length: 160		
Offset: 72 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.91		
Intersection Signal Delay: 56.9	Intersection LOS: E	
Intersection Capacity Utilization 93.3%	ICU Level of Service F	
Analysis Period (min) 15		

Splits and Phases: 8: Hurontario Street & Dundas Street West/Dundas Street East



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	156	1183	129	65	656	124	1242	161	1344
v/c Ratio	0.50	0.91	0.25	0.40	0.63	0.61	0.64	0.71	0.69
Control Delay	30.2	58.4	17.4	29.8	43.6	36.7	42.1	72.5	83.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.2	58.4	17.4	29.8	43.6	36.7	42.1	72.5	83.8
Queue Length 50th (m)	28.8	192.8	13.2	11.4	88.3	22.7	132.1	52.1	171.6
Queue Length 95th (m)	44.4	#231.0	30.8	20.8	107.8	38.5	144.3	m68.7	180.2
Internal Link Dist (m)		110.1			127.8		99.4		99.2
Turn Bay Length (m)	35.0		25.0	25.0		40.0		65.0	
Base Capacity (vph)	311	1331	517	184	1137	209	1976	231	1979
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.89	0.25	0.35	0.58	0.59	0.63	0.70	0.68

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
8: Hurontario Street & Dundas Street West/Dundas Street East

2022 Existing AM
05-11-2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	1100	120	60	435	175	115	1090	65	150	1175	75
Future Volume (vph)	145	1100	120	60	435	175	115	1090	65	150	1175	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.5	6.5	2.0	6.5		2.0	6.0		2.0	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.81	1.00	0.94		1.00	0.98		1.00	0.98	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1714	3505	1253	1787	2986		1700	4869		1732	4849	
Flt Permitted	0.26	1.00	1.00	0.07	1.00		0.10	1.00		0.12	1.00	
Satd. Flow (perm)	465	3505	1253	137	2986		180	4869		219	4849	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	156	1183	129	65	468	188	124	1172	70	161	1263	81
RTOR Reduction (vph)	0	0	43	0	28	0	0	4	0	0	4	0
Lane Group Flow (vph)	156	1183	86	65	628	0	124	1238	0	161	1340	0
Confl. Peds. (#/hr)	150		140	140		150	280		190	190		280
Heavy Vehicles (%)	4%	3%	5%	1%	8%	12%	6%	4%	4%	4%	4%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4			6			2		
Actuated Green, G (s)	69.1	58.4	58.4	61.5	53.8		72.7	61.7		74.1	62.4	
Effective Green, g (s)	70.1	59.4	59.4	63.5	54.8		74.7	62.7		76.1	63.4	
Actuated g/C Ratio	0.44	0.37	0.37	0.40	0.34		0.47	0.39		0.48	0.40	
Clearance Time (s)	3.0	7.5	7.5	3.0	7.5		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	307	1301	465	144	1022		198	1908		224	1921	
v/s Ratio Prot	c0.04	c0.34		0.02	0.21		0.05	0.25		c0.06	c0.28	
v/s Ratio Perm	0.18		0.07	0.15			0.24			0.28		
v/c Ratio	0.51	0.91	0.19	0.45	0.61		0.63	0.65		0.72	0.70	
Uniform Delay, d1	29.5	47.7	34.0	36.4	43.8		28.8	39.7		28.3	40.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		2.57	2.00	
Incremental Delay, d2	1.3	9.5	0.2	2.2	1.1		6.1	1.7		7.8	1.6	
Delay (s)	30.8	57.2	34.2	38.7	44.9		34.9	41.4		80.5	82.0	
Level of Service	C	E	C	D	D		C	D		F	F	
Approach Delay (s)		52.4			44.3			40.8			81.9	
Approach LOS		D			D			D			F	

Intersection Summary				
HCM 2000 Control Delay	56.9	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	16.5	
Intersection Capacity Utilization	93.3%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
9: GO Access (West)/Bus Loop & John Street

2022 Existing AM
05-11-2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	80	75	180	345	5	5
Future Volume (Veh/h)	80	75	180	345	5	5
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	95	89	214	411	6	6
Pedestrians	50		40			
Lane Width (m)	3.6		3.6			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	4		3			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			158			
pX, platoon unblocked						
vC, conflicting volume	322	264			675	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	322	264			675	
tC, single (s)	6.5	7.1			4.1	
tC, 2 stage (s)						
tF (s)	3.6	4.1			2.2	
p0 queue free %	84	85			99	
cM capacity (veh/h)	596	578			887	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	184	214	411	12
Volume Left	95	0	0	6
Volume Right	89	0	411	0
cSH	587	1700	1700	887
Volume to Capacity	0.31	0.13	0.24	0.01
Queue Length 95th (m)	10.7	0.0	0.0	0.2
Control Delay (s)	13.9	0.0	0.0	4.6
Lane LOS	B			A
Approach Delay (s)	13.9	0.0		4.6
Approach LOS	B			

Intersection Summary				
Average Delay	3.2			
Intersection Capacity Utilization	35.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	0	525	5	5	80
Future Volume (Veh/h)	10	0	525	5	5	80
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	11	0	590	6	6	90
Pedestrians	40		60			
Lane Width (m)	3.6		3.6			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	3		5			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			142			
pX, platoon unblocked						
vC, conflicting volume	750	338			636	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	750	338			636	
tC, single (s)	7.0	6.9			4.8	
tC, 2 stage (s)						
tF (s)	3.6	3.3			2.5	
p0 queue free %	96	100			99	
cM capacity (veh/h)	298	642			736	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	11	393	203	36	60
Volume Left	11	0	0	6	0
Volume Right	0	0	6	0	0
cSH	298	1700	1700	736	1700
Volume to Capacity	0.04	0.23	0.12	0.01	0.04
Queue Length 95th (m)	0.9	0.0	0.0	0.2	0.0
Control Delay (s)	17.6	0.0	0.0	1.7	0.0
Lane LOS	C			A	
Approach Delay (s)	17.6	0.0		0.6	
Approach LOS	C				

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	24.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	180	40	505	85	5
Future Volume (Veh/h)	25	180	40	505	85	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	29	212	47	594	100	6
Pedestrians	210				60	
Lane Width (m)	3.6				3.6	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	18				5	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				124		
pX, platoon unblocked						
vC, conflicting volume	764	263	316			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	764	263	316			
tC, single (s)	6.8	6.9	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	89	65	95			
cM capacity (veh/h)	257	607	983			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	241	245	396	67	39
Volume Left	29	47	0	0	0
Volume Right	212	0	0	0	6
cSH	521	983	1700	1700	1700
Volume to Capacity	0.46	0.05	0.23	0.04	0.02
Queue Length 95th (m)	19.3	1.2	0.0	0.0	0.0
Control Delay (s)	17.7	2.1	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	17.7	0.8		0.0	
Approach LOS	C				

Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	37.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	545	40	10	255
Future Volume (Veh/h)	0	0	545	40	10	255
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	0	612	45	11	287
Pedestrians	30		10			
Lane Width (m)	0.0		3.6			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	0		1			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			60			
pX, platoon unblocked						
vC, conflicting volume	840	358			687	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	840	358			687	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			99	
cM capacity (veh/h)	302	644			916	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	408	249	107	191
Volume Left	0	0	11	0
Volume Right	0	45	0	0
cSH	1700	1700	916	1700
Volume to Capacity	0.24	0.15	0.01	0.11
Queue Length 95th (m)	0.0	0.0	0.3	0.0
Control Delay (s)	0.0	0.0	1.0	0.0
Lane LOS			A	
Approach Delay (s)	0.0		0.4	
Approach LOS				

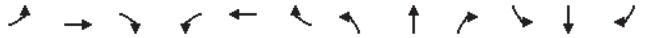
Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	19.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	130	470	70	5	0
Future Volume (Veh/h)	25	130	470	70	5	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	26	137	495	74	5	0
Pedestrians					30	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			93			
pX, platoon unblocked						
vC, conflicting volume	599				682	314
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	599				682	314
tC, single (s)	4.1				7.5	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.8	3.3
p0 queue free %	97				98	100
cM capacity (veh/h)	963				305	670

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	72	91	330	239	5	0
Volume Left	26	0	0	0	5	0
Volume Right	0	0	0	74	0	0
cSH	963	1700	1700	1700	305	1700
Volume to Capacity	0.03	0.05	0.19	0.14	0.02	0.00
Queue Length 95th (m)	0.7	0.0	0.0	0.0	0.4	0.0
Control Delay (s)	3.4	0.0	0.0	0.0	17.0	0.0
Lane LOS	A				C	A
Approach Delay (s)	1.5		0.0		17.0	
Approach LOS					C	

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	31.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	150	20	100	280	90	0	0	5	0	0	0
Future Volume (Veh/h)	130	150	20	100	280	90	0	0	5	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	137	158	21	105	295	95	0	0	5	0	0	0
Pedestrians								20			30	
Lane Width (m)								3.6			0.0	
Walking Speed (m/s)								1.2			1.2	
Percent Blockage								2			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					149							
pX, platoon unblocked												
vC, conflicting volume	420			199			820	1092	110	940	1056	225
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	420			199			820	1092	110	940	1056	225
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	88			92			100	100	99	100	100	100
cM capacity (veh/h)	1150			1362			225	173	914	186	182	784

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	216	100	252	242	5
Volume Left	137	0	105	0	0
Volume Right	0	21	0	95	5
cSH	1150	1700	1362	1700	914
Volume to Capacity	0.12	0.06	0.08	0.14	0.01
Queue Length 95th (m)	3.2	0.0	2.0	0.0	0.1
Control Delay (s)	5.8	0.0	3.7	0.0	9.0
Lane LOS	A		A		A
Approach Delay (s)	4.0		1.9		9.0
Approach LOS					A

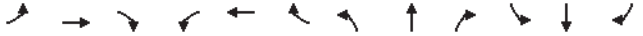
Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	38.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	215	280	0	85	155
Future Volume (Veh/h)	0	215	280	0	85	155
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	236	308	0	93	170
Pedestrians					20	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					2	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			205			
pX, platoon unblocked						
vC, conflicting volume	328				446	174
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	328				446	174
tC, single (s)	4.1				6.9	7.6
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.6
p0 queue free %	100				82	77
cM capacity (veh/h)	1222				527	738

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	118	118	154	154	263
Volume Left	0	0	0	0	93
Volume Right	0	0	0	0	170
cSH	1700	1700	1700	1700	646
Volume to Capacity	0.07	0.07	0.09	0.09	0.41
Queue Length 95th (m)	0.0	0.0	0.0	0.0	15.8
Control Delay (s)	0.0	0.0	0.0	0.0	14.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		14.3
Approach LOS					B

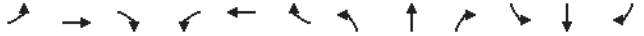
Intersection Summary				
Average Delay	4.7			
Intersection Capacity Utilization	31.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	160	105	10	225	90	120	120	120	110	0	10	5
Future Volume (vph)	160	105	10	225	90	120	120	120	110	0	10	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	168	111	11	237	95	126	126	126	116	0	11	5

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	279	11	332	126	252	116	16
Volume Left (vph)	168	0	237	0	126	0	0
Volume Right (vph)	0	11	0	126	0	116	5
Hadj (s)	0.30	-0.70	0.83	-0.70	0.90	-0.70	-0.19
Departure Headway (s)	6.8	5.8	7.1	5.6	7.6	6.0	7.3
Degree Utilization, x	0.53	0.02	0.66	0.20	0.53	0.19	0.03
Capacity (veh/h)	504	581	492	616	451	568	431
Control Delay (s)	16.1	7.7	21.6	8.7	17.6	9.2	10.5
Approach Delay (s)	15.8		18.1		14.9		10.5
Approach LOS	C		C		B		B

Intersection Summary							
Delay			16.4				
Level of Service			C				
Intersection Capacity Utilization			50.1%		ICU Level of Service		A
Analysis Period (min)			15				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	5	0	5	50	345	50	45	155	45
Future Volume (Veh/h)	0	0	5	5	0	5	50	345	50	45	155	45
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	5	5	0	5	54	375	54	49	168	49
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								108				
pX, platoon unblocked												
vC, conflicting volume	591	828	108	697	825	214	217			429		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	591	828	108	697	825	214	217			429		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	98	100	99	96			96		
cM capacity (veh/h)	368	284	931	309	285	797	1365			1141		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	5	10	242	242	133	133
Volume Left	0	5	54	0	49	0
Volume Right	5	5	0	54	0	49
cSH	931	446	1365	1700	1141	1700
Volume to Capacity	0.01	0.02	0.04	0.14	0.04	0.08
Queue Length 95th (m)	0.1	0.6	1.0	0.0	1.1	0.0
Control Delay (s)	8.9	13.3	2.0	0.0	3.3	0.0
Lane LOS	A	B	A		A	
Approach Delay (s)	8.9	13.3	1.0		1.6	
Approach LOS	A	B				

Intersection Summary							
Average Delay			1.4				
Intersection Capacity Utilization			34.7%		ICU Level of Service		A
Analysis Period (min)			15				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	445	35	25	140
Future Volume (Veh/h)	0	0	445	35	25	140
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	484	38	27	152
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			69			
pX, platoon unblocked						
vC, conflicting volume	633	261			522	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	633	261			522	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			97	
cM capacity (veh/h)	406	744			1055	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	323	199	78	101
Volume Left	0	0	0	27	0
Volume Right	0	0	38	0	0
cSH	1700	1700	1700	1055	1700
Volume to Capacity	0.00	0.19	0.12	0.03	0.06
Queue Length 95th (m)	0.0	0.0	0.0	0.6	0.0
Control Delay (s)	0.0	0.0	0.0	3.1	0.0
Lane LOS	A			A	
Approach Delay (s)	0.0	0.0		1.3	
Approach LOS	A				

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	24.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	265	145	70	10	10
Future Volume (Veh/h)	85	265	145	70	10	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	94	294	161	78	11	11
Pedestrians			10		10	
Lane Width (m)			3.6		3.6	
Walking Speed (m/s)			1.2		1.2	
Percent Blockage			1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	249				702	210
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	249				702	210
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				97	99
cM capacity (veh/h)	1317				372	828

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	388	239	22
Volume Left	94	0	11
Volume Right	0	78	11
cSH	1317	1700	513
Volume to Capacity	0.07	0.14	0.04
Queue Length 95th (m)	1.8	0.0	1.1
Control Delay (s)	2.4	0.0	12.3
Lane LOS	A		B
Approach Delay (s)	2.4	0.0	12.3
Approach LOS			B

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	44.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	225	0	0	0	0	15
Future Volume (Veh/h)	225	0	0	0	0	15
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	242	0	0	0	0	16
Pedestrians	10					20
Lane Width (m)	3.6					3.6
Walking Speed (m/s)	1.2					1.2
Percent Blockage	1					2
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	26	30			10	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	26	30			10	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	75	100			100	
cM capacity (veh/h)	986	1024			1609	

Direction, Lane #	WB 1	SB 1
Volume Total	242	16
Volume Left	242	0
Volume Right	0	0
cSH	986	1700
Volume to Capacity	0.25	0.01
Queue Length 95th (m)	7.7	0.0
Control Delay (s)	9.8	0.0
Lane LOS	A	
Approach Delay (s)	9.8	0.0
Approach LOS	A	

Intersection Summary				
Average Delay	9.2			
Intersection Capacity Utilization	22.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	0	15	240	0	0
Future Volume (Veh/h)	10	0	15	240	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	0	19	300	0	0
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			201			
pX, platoon unblocked						
vC, conflicting volume	179	179			329	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	179	179			329	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	808	862			1232	

Direction, Lane #	WB 1	NB 1
Volume Total	12	319
Volume Left	12	0
Volume Right	0	300
cSH	808	1700
Volume to Capacity	0.01	0.19
Queue Length 95th (m)	0.4	0.0
Control Delay (s)	9.5	0.0
Lane LOS	A	
Approach Delay (s)	9.5	0.0
Approach LOS	A	

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	26.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	5	1310	5	0	1905
Future Volume (Veh/h)	0	5	1310	5	0	1905
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	5	1394	5	0	2027
Pedestrians	110					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	9					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			68			
pX, platoon unblocked	0.87	0.87			0.87	
vC, conflicting volume	2182	577			1509	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1841	0			1069	
tC, single (s)	7.8	7.6			4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.6			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	31	785			522	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	5	558	558	284	676	676	676
Volume Left	0	0	0	0	0	0	0
Volume Right	5	0	0	5	0	0	0
cSH	785	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.33	0.33	0.17	0.40	0.40	0.40
Queue Length 95th (m)	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	9.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.6	0.0			0.0		
Approach LOS	A						

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	40.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	0	0	1325	1560	5
Future Volume (Veh/h)	5	0	0	1325	1560	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	0	0	1395	1642	5
Pedestrians	50					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	4					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				78	62	
pX, platoon unblocked	0.85	0.76	0.76			
vC, conflicting volume	2157	597	1697			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	335	0	816			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	521	795	598			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	5	465	465	465	547	547	547	5
Volume Left	5	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	5
cSH	521	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.27	0.27	0.27	0.32	0.32	0.32	0.00
Queue Length 95th (m)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B							
Approach Delay (s)	12.0	0.0			0.0			
Approach LOS	B							

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	Err%	ICU Level of Service	H	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	355	5	0	520	5	0	0	0	0	0	5
Future Volume (Veh/h)	5	355	5	0	520	5	0	0	0	0	0	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	6	403	6	0	591	6	0	0	0	0	0	6
Pedestrians					10			30			10	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					1			3			1	
Right turn flare (veh)												
Median type		TWLTL			None							
Median storage veh)		2										
Upstream signal (m)		151			79							
pX, platoon unblocked												
vC, conflicting volume	607			439			750	1055	244	828	1055	308
vC1, stage 1 conf vol							448	448		604	604	
vC2, stage 2 conf vol							302	607		224	451	
vCu, unblocked vol	607			439			750	1055	244	828	1055	308
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	100	100	99
cM capacity (veh/h)	973			1103			480	404	737	423	407	688

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	208	208	296	302	0	6
Volume Left	6	0	0	0	0	0
Volume Right	0	6	0	6	0	6
cSH	973	1700	1103	1700	1700	688
Volume to Capacity	0.01	0.12	0.00	0.18	0.00	0.01
Queue Length 95th (m)	0.1	0.0	0.0	0.0	0.0	0.2
Control Delay (s)	0.3	0.0	0.0	0.0	0.0	10.3
Lane LOS	A				A	B
Approach Delay (s)	0.2		0.0		0.0	10.3
Approach LOS					A	B

Intersection Summary					
Average Delay	0.1				
Intersection Capacity Utilization	27.4%	ICU Level of Service		A	
Analysis Period (min)	15				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	350	20	25	500	0	10	0	15	0	0	5
Future Volume (Veh/h)	0	350	20	25	500	0	10	0	15	0	0	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	0	417	24	30	595	0	12	0	18	0	0	6
Pedestrians					10			50			30	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					1			4			3	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (m)		108			121							
pX, platoon unblocked				0.99			0.99	0.99	0.99	0.99	0.99	
vC, conflicting volume	625			491			842	1164	280	922	1176	328
vC1, stage 1 conf vol							479	479		685	685	
vC2, stage 2 conf vol							364	685		236	491	
vCu, unblocked vol	625			461			817	1142	248	897	1154	328
tC, single (s)	4.1			4.7			9.2	6.5	7.9	8.5	6.5	7.6
tC, 2 stage (s)							8.2	5.5		7.5	5.5	
tF (s)	2.2			2.5			4.4	4.0	3.8	4.0	4.0	3.6
p0 queue free %	100			97			96	100	97	100	100	99
cM capacity (veh/h)	942			878			298	364	587	273	356	571

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	0	278	163	30	397	198	30	6
Volume Left	0	0	0	30	0	0	12	0
Volume Right	0	0	24	0	0	0	18	6
cSH	1700	1700	1700	878	1700	1700	422	571
Volume to Capacity	0.00	0.16	0.10	0.03	0.23	0.12	0.07	0.01
Queue Length 95th (m)	0.0	0.0	0.0	0.8	0.0	0.0	1.8	0.3
Control Delay (s)	0.0	0.0	0.0	9.2	0.0	0.0	14.2	11.4
Lane LOS				A			B	B
Approach Delay (s)	0.0			0.4			14.2	11.4
Approach LOS							B	B

Intersection Summary					
Average Delay	0.7				
Intersection Capacity Utilization	37.2%	ICU Level of Service		A	
Analysis Period (min)	15				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	355	0	0	520	5	5
Future Volume (Veh/h)	355	0	0	520	5	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	403	0	0	591	6	6
Pedestrians				10	30	
Lane Width (m)				3.6	3.6	
Walking Speed (m/s)				1.2	1.2	
Percent Blockage				1	3	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	173			56		
pX, platoon unblocked						
vC, conflicting volume			433		728	242
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			433		728	242
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	99
cM capacity (veh/h)			1109		353	740

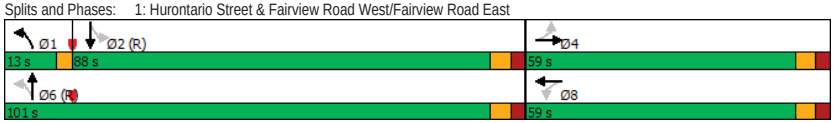
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	269	134	197	394	12
Volume Left	0	0	0	0	6
Volume Right	0	0	0	0	6
cSH	1700	1700	1109	1700	478
Volume to Capacity	0.16	0.08	0.00	0.23	0.03
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.6
Control Delay (s)	0.0	0.0	0.0	0.0	12.7
Lane LOS					B
Approach Delay (s)	0.0		0.0		12.7
Approach LOS					B

Intersection Summary				
Average Delay		0.2		
Intersection Capacity Utilization		27.2%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	45	70	115	90	105	1715	50	1680
Future Volume (vph)	45	70	115	90	105	1715	50	1680
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA
Protected Phases		4		8	1	6		2
Permitted Phases	4		8		6		2	
Detector Phase	4	4	8	8	1	6	2	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	8.0	8.0
Minimum Split (s)	40.0	40.0	40.0	40.0	8.0	29.0	29.0	29.0
Total Split (s)	59.0	59.0	59.0	59.0	13.0	101.0	88.0	88.0
Total Split (%)	36.9%	36.9%	36.9%	36.9%	8.1%	63.1%	55.0%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	2.0	6.0	6.0	6.0
Lead/Lag					Lead		Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	30.0	30.0	30.0	30.0	122.0	118.0	104.8	104.8
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.76	0.74	0.66	0.66
v/c Ratio	0.27	0.40	0.64	0.48	0.49	0.57	0.52	0.57
Control Delay	57.3	46.8	74.5	57.3	14.5	16.4	41.5	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.3	46.8	74.5	57.3	14.5	16.4	41.5	17.2
LOS	E	D	E	E	B	B	D	B
Approach Delay		49.4		64.8		16.4		17.9
Approach LOS		D		E		B		B

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 35 (22%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 21.3		Intersection LOS: C	
Intersection Capacity Utilization 94.8%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: Hurontario Street & Fairview Road West/Fairview Road East



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	47	137	121	158	111	2047	53	1879
v/c Ratio	0.27	0.40	0.64	0.48	0.49	0.57	0.52	0.57
Control Delay	57.3	46.8	74.5	57.3	14.5	16.4	41.5	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.3	46.8	74.5	57.3	14.5	16.4	41.5	17.2
Queue Length 50th (m)	13.2	30.9	36.7	42.7	14.8	202.0	9.5	128.7
Queue Length 95th (m)	26.6	52.9	60.8	67.1	m13.6	208.7	#36.7	156.6
Internal Link Dist (m)		78.1		66.2		510.0		77.3
Turn Bay Length (m)	75.0		40.0		120.0		50.0	
Base Capacity (vph)	313	586	335	573	240	3580	101	3279
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	0.15	0.23	0.36	0.28	0.46	0.57	0.52	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	70	60	115	90	60	105	1715	230	50	1680	105
Future Volume (vph)	45	70	60	115	90	60	105	1715	230	50	1680	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		2.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.97		1.00	0.98		1.00	0.97		1.00	0.98	
Flpb, ped/bikes	0.97	1.00		0.96	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.93		1.00	0.94		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1748	1713		1707	1707		1805	4847		1785	5001	
Flt Permitted	0.51	1.00		0.56	1.00		0.08	1.00		0.08	1.00	
Satd. Flow (perm)	946	1713		1014	1707		147	4847		152	5001	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	74	63	121	95	63	111	1805	242	53	1768	111
RTOR Reduction (vph)	0	24	0	0	10	0	0	7	0	0	3	0
Lane Group Flow (vph)	47	113	0	121	148	0	111	2040	0	53	1876	0
Confl. Peds. (#/hr)	30		40	40		30	80		70	70		80
Heavy Vehicles (%)	0%	0%	0%	1%	0%	6%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	29.0	29.0		29.0	29.0		117.0	117.0		103.8	103.8	
Effective Green, g (s)	30.0	30.0		30.0	30.0		118.0	118.0		104.8	104.8	
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.74	0.74		0.65	0.65	
Clearance Time (s)	7.0	7.0		7.0	7.0		3.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	177	321		190	320		224	3574		99	3275	
v/s Ratio Prot		0.07			0.09		0.03	c0.42			0.38	
v/s Ratio Perm	0.05			c0.12			0.33			0.35		
v/c Ratio	0.27	0.35		0.64	0.46		0.50	0.57		0.54	0.57	
Uniform Delay, d1	55.6	56.6		60.0	57.8		12.1	9.5		14.7	15.2	
Progression Factor	1.00	1.00		1.00	1.00		0.90	1.56		1.00	1.00	
Incremental Delay, d2	0.8	0.7		6.8	1.1		1.5	0.6		19.2	0.7	
Delay (s)	56.4	57.2		66.8	58.9		12.4	15.5		33.9	16.0	
Level of Service	E	E		E	E		B	B		C	B	
Approach Delay (s)		57.0			62.3			15.3			16.5	
Approach LOS		E			E			B			B	

Intersection Summary				
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	94.8%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	340	30	15	15	55	1320	100	1345	130
Future Volume (vph)	340	30	15	15	55	1320	100	1345	130
Turn Type	pm+pt	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	3	8		4	1	6	5	2	
Permitted Phases	8		4		6		2		2
Detector Phase	3	8	4	4	1	6	5	2	2
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	8.0
Minimum Split (s)	8.0	46.0	46.0	46.0	8.0	38.0	8.0	38.0	38.0
Total Split (s)	15.0	61.0	46.0	46.0	20.0	79.0	20.0	79.0	79.0
Total Split (%)	9.4%	38.1%	28.8%	28.8%	12.5%	49.4%	12.5%	49.4%	49.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	4.0	4.0	4.0	0.0	3.0	0.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	2.0	6.0	2.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	68.1	63.1	33.0	33.0	83.8	70.7	87.9	74.6	74.6
Actuated g/C Ratio	0.43	0.39	0.21	0.21	0.52	0.44	0.55	0.47	0.47
v/c Ratio	0.69	0.19	0.07	0.38	0.30	0.64	0.50	0.60	0.22
Control Delay	40.4	9.9	47.4	11.8	16.3	20.2	18.4	27.8	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	40.4	9.9	47.4	11.8	16.3	20.3	18.4	27.8	9.1
LOS	D	A	D	B	B	C	B	C	A
Approach Delay		33.0		14.9		20.2		25.7	
Approach LOS		C		B		C		C	

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 107 (67%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 23.9 — Intersection LOS: C
Intersection Capacity Utilization 96.2% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 2: Hurontario Street & John Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	362	117	16	165	59	1431	106	1431	138
v/c Ratio	0.69	0.19	0.07	0.38	0.30	0.64	0.50	0.60	0.22
Control Delay	40.4	9.9	47.4	11.8	16.3	20.2	18.4	27.8	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	40.4	9.9	47.4	11.8	16.3	20.3	18.4	27.8	9.1
Queue Length 50th (m)	78.8	6.0	4.2	4.1	4.2	92.6	14.5	150.1	18.9
Queue Length 95th (m)	116.1	20.3	11.1	24.9	7.5	139.8	21.6	171.5	33.2
Internal Link Dist (m)		69.2		56.1		37.7		43.8	
Turn Bay Length (m)					15.0		30.0		40.0
Base Capacity (vph)	526	649	287	486	293	2469	281	2545	674
Starvation Cap Reductn	0	0	0	0	0	158	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	0.69	0.18	0.06	0.34	0.20	0.62	0.38	0.56	0.20

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	30	80	15	15	140	55	1320	25	100	1345	130
Future Volume (vph)	340	30	80	15	15	140	55	1320	25	100	1345	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	7.0		7.0	7.0		2.0	6.0		2.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	0.96		1.00	0.93		1.00	1.00		1.00	1.00	0.87
Flpb, ped/bikes	0.98	1.00		0.96	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1698	1449		1645	1533		1804	5054		1805	5085	1272
Flt Permitted	0.51	1.00		0.68	1.00		0.11	1.00		0.10	1.00	1.00
Satd. Flow (perm)	906	1449		1181	1533		209	5054		182	5085	1272
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	362	32	85	16	16	149	59	1404	27	106	1431	138
RTOR Reduction (vph)	0	51	0	0	118	0	0	1	0	0	0	40
Lane Group Flow (vph)	362	66	0	16	47	0	59	1430	0	106	1431	98
Confl. Peds. (#/hr)	50		40	40		50	80		70	70		80
Heavy Vehicles (%)	4%	0%	16%	5%	0%	0%	0%	2%	0%	0%	2%	10%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	62.1	62.1		32.0	32.0		76.6	69.7		82.9	73.0	73.0
Effective Green, g (s)	63.1	63.1		33.0	33.0		78.6	70.7		83.9	74.0	74.0
Actuated g/C Ratio	0.39	0.39		0.21	0.21		0.49	0.44		0.52	0.46	0.46
Clearance Time (s)	3.0	8.0		8.0	8.0		3.0	7.0		3.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	496	571		243	316		181	2233		209	2351	588
v/s Ratio Prot	c0.13	0.05			0.03		0.02	c0.28		c0.04	0.28	
v/s Ratio Perm	0.16			0.01			0.14			0.23		0.08
v/c Ratio	0.73	0.11		0.07	0.15		0.33	0.64		0.51	0.61	0.17
Uniform Delay, d1	37.6	30.7		51.1	52.0		24.0	34.8		24.1	32.2	25.0
Progression Factor	1.00	1.00		1.00	1.00		0.66	0.51		0.59	0.78	0.61
Incremental Delay, d2	5.3	0.1		0.1	0.2		1.0	1.3		1.7	1.0	0.5
Delay (s)	42.9	30.8		51.2	52.2		16.9	19.2		15.9	26.2	15.7
Level of Service	D	C		D	D		B	B		B	C	B
Approach Delay (s)		40.0			52.1			19.1			24.7	
Approach LOS		D			D			B			C	

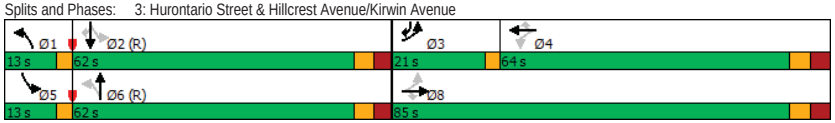
Intersection Summary				
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.0	
Intersection Capacity Utilization	96.2%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	205	150	340	30	260	90	125	1100	65	1260	105
Future Volume (vph)	205	150	340	30	260	90	125	1100	65	1260	105
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	3	8			4		1	6	5	2	3
Permitted Phases	8		8	4		4	6		2		2
Detector Phase	3	8	8	4	4	4	1	6	5	2	3
Switch Phase											
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	5.0
Minimum Split (s)	8.0	56.0	56.0	56.0	56.0	56.0	8.0	51.5	8.0	51.5	8.0
Total Split (s)	21.0	85.0	85.0	64.0	64.0	64.0	13.0	62.0	13.0	62.0	21.0
Total Split (%)	13.1%	53.1%	53.1%	40.0%	40.0%	40.0%	8.1%	38.8%	8.1%	38.8%	13.1%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	3.0
All-Red Time (s)	0.0	4.0	4.0	4.0	4.0	4.0	0.0	3.5	0.0	3.5	0.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	7.0	7.0	2.0	6.5	2.0	6.5	2.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min	None
Act Effct Green (s)	67.8	62.8	62.8	43.3	43.3	43.3	88.2	72.3	82.5	68.6	90.6
Actuated g/C Ratio	0.42	0.39	0.39	0.27	0.27	0.27	0.55	0.45	0.52	0.43	0.57
v/c Ratio	0.50	0.21	0.49	0.09	0.51	0.20	0.50	0.51	0.26	0.59	0.12
Control Delay	36.5	36.5	23.7	40.6	51.9	13.3	38.4	18.8	9.6	15.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	36.5	36.5	23.7	40.6	51.9	13.3	38.4	18.9	9.6	15.4	0.2
LOS	D	D	C	D	D	B	D	B	A	B	A
Approach Delay		30.3			41.9			20.8		14.0	
Approach LOS		C			D			C		B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 99 (62%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 22.1		Intersection LOS: C	
Intersection Capacity Utilization 107.9%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	207	152	343	30	263	91	126	1146	66	1273	106
v/c Ratio	0.50	0.21	0.49	0.09	0.51	0.20	0.50	0.51	0.26	0.59	0.12
Control Delay	36.5	36.5	23.7	40.6	51.9	13.3	38.4	18.8	9.6	15.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	36.5	36.5	23.7	40.6	51.9	13.3	38.4	18.9	9.6	15.4	0.2
Queue Length 50th (m)	43.5	34.3	45.0	7.2	71.2	4.5	18.8	53.3	3.2	28.6	0.0
Queue Length 95th (m)	66.7	53.9	77.4	16.3	100.5	19.0	m34.4	m52.4	0.0	36.5	0.2
Internal Link Dist (m)		32.2			62.6			277.3		54.3	
Turn Bay Length (m)	50.0			50.0		10.0	75.0		65.0		
Base Capacity (vph)	427	916	835	432	676	575	258	2235	275	2158	895
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	153	0
Spillback Cap Reductn	0	0	0	0	0	1	0	123	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.17	0.41	0.07	0.39	0.16	0.49	0.54	0.24	0.63	0.12

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	150	340	30	260	90	125	1100	35	65	1260	105
Future Volume (vph)	205	150	340	30	260	90	125	1100	35	65	1260	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	7.0	7.0	7.0	7.0	7.0	2.0	6.5		2.0	6.5	2.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.94	1.00	1.00		1.00	1.00	0.92
Flpb, ped/bikes	0.99	1.00	1.00	0.97	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1734	1881	1532	1747	1900	1486	1768	4946		1781	5036	1474
Flt Permitted	0.40	1.00	1.00	0.66	1.00	1.00	0.13	1.00		0.18	1.00	1.00
Satd. Flow (perm)	729	1881	1532	1214	1900	1486	234	4946		336	5036	1474
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	207	152	343	30	263	91	126	1111	35	66	1273	106
RTOR Reduction (vph)	0	0	104	0	0	53	0	2	0	0	0	49
Lane Group Flow (vph)	207	152	239	30	263	38	126	1144	0	66	1273	57
Confl. Peds. (#/hr)	50		40	40		50	80		80	80		80
Confl. Bikes (#/hr)						1			1			2
Heavy Vehicles (%)	3%	1%	0%	0%	0%	2%	2%	4%	0%	1%	3%	1%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	3	8			4		1	6		5	2	3
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	61.8	61.8	61.8	42.3	42.3	42.3	82.7	71.3		75.9	67.5	84.0
Effective Green, g (s)	62.8	62.8	62.8	43.3	43.3	43.3	83.7	72.3		77.9	68.5	86.0
Actuated g/C Ratio	0.39	0.39	0.39	0.27	0.27	0.27	0.52	0.45		0.49	0.43	0.54
Clearance Time (s)	3.0	8.0	8.0	8.0	8.0	8.0	3.0	7.5		3.0	7.5	3.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	396	738	601	328	514	402	248	2234		248	2156	792
v/s Ratio Prot	c0.06	0.08			c0.14		c0.04	0.23		0.02	c0.25	0.01
v/s Ratio Perm	0.15		0.16	0.02		0.03	0.22			0.11		0.03
v/c Ratio	0.52	0.21	0.40	0.09	0.51	0.10	0.51	0.51		0.27	0.59	0.07
Uniform Delay, d1	34.4	32.1	35.0	43.6	49.4	43.7	23.1	31.3		22.9	35.0	17.8
Progression Factor	1.13	1.18	1.35	1.00	1.00	1.00	1.68	0.54		0.38	0.38	0.00
Incremental Delay, d2	1.2	0.1	0.4	0.1	0.9	0.1	1.2	0.6		0.5	1.0	0.0
Delay (s)	40.0	38.1	47.7	43.8	50.3	43.8	40.0	17.6		9.2	14.3	0.0
Level of Service	D	D	D	D	D	D	D	B		A	B	A
Approach Delay (s)		43.3			48.2			19.9			13.0	
Approach LOS		D			D			B			B	

Intersection Summary				
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.5	
Intersection Capacity Utilization	107.9%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	80	410	415	260	195
Future Volume (vph)	80	410	415	260	195
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	1	6	2	4	
Permitted Phases	6				4
Detector Phase	1	6	2	4	4
Switch Phase					
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	33.5	33.5	26.0	26.0
Total Split (s)	28.0	134.0	106.0	26.0	26.0
Total Split (%)	17.5%	83.8%	66.3%	16.3%	16.3%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	3.5	3.5	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	5.0	5.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	95.4	90.9	78.7	57.6	57.6
Actuated g/C Ratio	0.60	0.57	0.49	0.36	0.36
v/c Ratio	0.20	0.21	0.29	0.58	0.33
Control Delay	13.0	16.4	30.4	51.2	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	16.4	30.4	51.2	6.6
LOS	B	B	C	D	A
Approach Delay		15.9	30.4	32.1	
Approach LOS		B	C	C	

Intersection Summary		
Cycle Length: 160		
Actuated Cycle Length: 160		
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Green		
Natural Cycle: 70		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.58		
Intersection Signal Delay: 25.9	Intersection LOS: C	
Intersection Capacity Utilization 53.4%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 4: Hillcrest Avenue & Go Access Road



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	82	423	500	268	201
v/c Ratio	0.20	0.21	0.29	0.58	0.33
Control Delay	13.0	16.4	30.4	51.2	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	16.4	30.4	51.2	6.6
Queue Length 50th (m)	10.0	31.5	58.0	77.5	0.0
Queue Length 95th (m)	16.2	37.3	73.7	117.6	20.9
Internal Link Dist (m)		144.9	84.1	44.8	
Turn Bay Length (m)	70.0				
Base Capacity (vph)	482	2876	2158	464	609
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	0.17	0.15	0.23	0.58	0.33

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	80	410	415	70	260	195
Future Volume (vph)	80	410	415	70	260	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.5	6.5		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	0.99	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1383	3610	3459		1289	1335
Flt Permitted	0.41	1.00	1.00		0.95	1.00
Satd. Flow (perm)	603	3610	3459		1289	1335
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	82	423	428	72	268	201
RTOR Reduction (vph)	0	0	11	0	0	129
Lane Group Flow (vph)	82	423	489	0	268	72
Confl. Peds. (#/hr)	40			40	10	
Heavy Vehicles (%)	29%	0%	1%	0%	40%	21%
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6					4
Actuated Green, G (s)	89.9	89.9	77.7		56.6	56.6
Effective Green, g (s)	90.9	90.9	78.7		57.6	57.6
Actuated g/C Ratio	0.57	0.57	0.49		0.36	0.36
Clearance Time (s)	3.0	7.5	7.5		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	392	2050	1701		464	480
v/s Ratio Prot	c0.01	0.12	c0.14		c0.21	
v/s Ratio Perm	0.11					0.05
v/c Ratio	0.21	0.21	0.29		0.58	0.15
Uniform Delay, d1	16.2	16.9	24.1		41.4	34.6
Progression Factor	1.00	1.00	1.35		1.00	1.00
Incremental Delay, d2	0.3	0.2	0.4		1.7	0.1
Delay (s)	16.4	17.1	32.9		43.1	34.8
Level of Service	B	B	C		D	C
Approach Delay (s)		17.0	32.9		39.5	
Approach LOS		B	C		D	

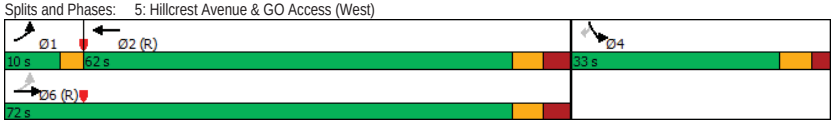
Intersection Summary				
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.40			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	53.4%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	220	340	515	150	355
Future Volume (vph)	220	340	515	150	355
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	1	6	2	4	
Permitted Phases	6				4
Detector Phase	1	6	2	4	4
Switch Phase					
Minimum Initial (s)	5.0	8.0	8.0	4.0	4.0
Minimum Split (s)	8.0	38.5	38.5	31.5	31.5
Total Split (s)	10.0	72.0	62.0	33.0	33.0
Total Split (%)	9.5%	68.6%	59.0%	31.4%	31.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	3.5	3.5	2.5	2.5
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	5.5	5.5
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	71.2	66.7	53.1	26.3	26.3
Actuated g/C Ratio	0.68	0.64	0.51	0.25	0.25
v/c Ratio	0.42	0.16	0.38	0.36	0.66
Control Delay	8.7	8.1	16.2	35.0	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.7	8.1	16.2	35.0	14.6
LOS	A	A	B	D	B
Approach Delay		8.3	16.2	20.7	
Approach LOS		A	B	C	

Intersection Summary			
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 90 (86%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 71.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 5: Hillcrest Avenue & GO Access (West)





Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	237	366	656	161	382
v/c Ratio	0.42	0.16	0.38	0.36	0.66
Control Delay	8.7	8.1	16.2	35.0	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.7	8.1	16.2	35.0	14.6
Queue Length 50th (m)	16.7	15.3	40.8	28.7	14.8
Queue Length 95th (m)	27.5	22.4	60.0	47.3	47.7
Internal Link Dist (m)		22.5	144.9	35.6	
Turn Bay Length (m)	30.0				
Base Capacity (vph)	563	2227	1820	472	594
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	0.42	0.16	0.36	0.34	0.64

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	220	340	515	95	150	355
Future Volume (vph)	220	340	515	95	150	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.5	6.5		5.5	5.5
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00	0.89
Flpb, ped/bikes	0.99	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1791	3505	3408		1805	1436
Flt Permitted	0.35	1.00	1.00		0.95	1.00
Satd. Flow (perm)	651	3505	3408		1805	1436
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	237	366	554	102	161	382
RTOR Reduction (vph)	0	0	15	0	0	222
Lane Group Flow (vph)	237	366	641	0	161	160
Confl. Peds. (#/hr)	70			70	30	80
Heavy Vehicles (%)	0%	3%	2%	3%	0%	0%
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6					4
Actuated Green, G (s)	65.7	65.7	52.0		25.3	25.3
Effective Green, g (s)	66.7	66.7	53.0		26.3	26.3
Actuated g/C Ratio	0.64	0.64	0.50		0.25	0.25
Clearance Time (s)	3.0	7.5	7.5		6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	540	2226	1720		452	359
v/s Ratio Prot	c0.05	0.10	c0.19		0.09	
v/s Ratio Perm	0.23					c0.11
v/c Ratio	0.44	0.16	0.37		0.36	0.45
Uniform Delay, d1	8.5	7.8	15.9		32.4	33.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6	0.2	0.6		0.5	0.9
Delay (s)	9.0	8.0	16.5		32.9	34.1
Level of Service	A	A	B		C	C
Approach Delay (s)		8.4	16.5		33.7	
Approach LOS		A	B		C	

Intersection Summary				
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.40			
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	71.3%	ICU Level of Service	C	
Analysis Period (min)	15			

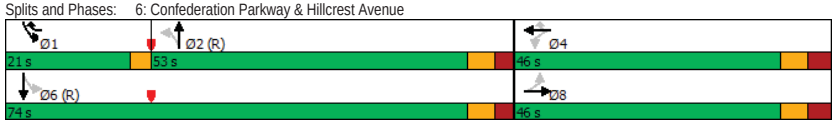
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	115	175	350	250	270	25	755	225	610
Future Volume (vph)	115	175	350	250	270	25	755	225	610
Turn Type	Perm	NA	Perm	NA	pm+ov	Perm	NA	pm+pt	NA
Protected Phases		8		4	1		2	1	6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	1	2	2	1	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	45.5	45.5	45.5	45.5	8.0	48.0	48.0	8.0	48.0
Total Split (s)	46.0	46.0	46.0	46.0	21.0	53.0	53.0	21.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	17.5%	44.2%	44.2%	17.5%	61.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	3.5	3.5	3.5	3.5	0.0	3.0	3.0	0.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	2.0	6.0	6.0	2.0	6.0
Lead/Lag					Lead	Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	45.6	45.6	45.6	45.6	65.0	45.0	45.0	65.9	61.9
Actuated g/C Ratio	0.38	0.38	0.38	0.38	0.54	0.38	0.38	0.55	0.52
v/c Ratio	0.34	0.32	0.97	0.38	0.34	0.11	0.75	0.72	0.44
Control Delay	31.7	28.0	77.9	30.2	13.7	25.1	35.6	30.7	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	31.7	28.0	77.9	30.2	13.8	25.1	35.6	30.7	17.7
LOS	C	C	E	C	B	C	D	C	B
Approach Delay		29.3		44.3			35.3		20.7
Approach LOS		C		D			D		C

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 32.6 — Intersection LOS: C
Intersection Capacity Utilization 109.5% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 6: Confederation Parkway & Hillcrest Avenue



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	122	223	372	266	287	27	973	239	793
v/c Ratio	0.34	0.32	0.97	0.38	0.34	0.11	0.75	0.72	0.44
Control Delay	31.7	28.0	77.9	30.2	13.7	25.1	35.6	30.7	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	31.7	28.0	77.9	30.2	13.8	25.1	35.6	30.7	17.7
Queue Length 50th (m)	21.6	37.5	91.0	47.9	31.1	4.2	104.3	28.8	58.2
Queue Length 95th (m)	41.9	62.8	#167.5	76.9	50.2	11.1	128.6	52.1	66.7
Internal Link Dist (m)		72.4		67.3			99.6		86.6
Turn Bay Length (m)	25.0		35.0			35.0		30.0	
Base Capacity (vph)	360	698	383	707	898	259	1366	383	1967
Starvation Cap Reductn	0	0	0	0	137	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.32	0.97	0.38	0.38	0.10	0.71	0.62	0.40

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	175	35	350	250	270	25	755	160	225	610	135
Future Volume (vph)	115	175	35	350	250	270	25	755	160	225	610	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	2.0	6.0	6.0		2.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		0.98	1.00	1.00	0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1762	1825		1701	1863	1525	1779	3434		1804	3443	
Flt Permitted	0.51	1.00		0.56	1.00	1.00	0.35	1.00		0.13	1.00	
Satd. Flow (perm)	949	1825		1011	1863	1525	659	3434		252	3443	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	122	186	37	372	266	287	27	803	170	239	649	144
RTOR Reduction (vph)	0	6	0	0	0	22	0	16	0	0	18	0
Lane Group Flow (vph)	122	217	0	372	266	265	27	957	0	239	775	0
Confl. Peds. (#/hr)	40		30	30		40	30		60	60		30
Heavy Vehicles (%)	0%	1%	0%	4%	2%	2%	0%	0%	7%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		pm+pt	NA	
Protected Phases		8			4	1		2		1	6	
Permitted Phases	8			4		4	2			6		
Actuated Green, G (s)	44.6	44.6		44.6	44.6	58.5	44.0	44.0		60.9	60.9	
Effective Green, g (s)	45.6	45.6		45.6	45.6	60.5	45.0	45.0		61.9	61.9	
Actuated g/C Ratio	0.38	0.38		0.38	0.38	0.50	0.38	0.38		0.52	0.52	
Clearance Time (s)	7.5	7.5		7.5	7.5	3.0	7.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	360	693		384	707	768	247	1287		322	1776	
v/s Ratio Prot		0.12			0.14	0.04		c0.28		c0.09	0.23	
v/s Ratio Perm	0.13			c0.37		0.13	0.04			0.29		
v/c Ratio	0.34	0.31		0.97	0.38	0.34	0.11	0.74		0.74	0.44	
Uniform Delay, d1	26.5	26.2		36.5	26.9	17.9	24.4	32.5		21.1	18.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.3		37.3	0.3	0.3	0.9	3.9		8.9	0.8	
Delay (s)	27.0	26.4		73.8	27.2	18.1	25.3	36.4		30.0	18.9	
Level of Service	C	C		E	C	B	C	D		C	B	
Approach Delay (s)		26.7			43.1			36.1			21.5	
Approach LOS		C			D			D			C	

Intersection Summary				
HCM 2000 Control Delay	32.5	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.5	
Intersection Capacity Utilization	109.5%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	35	50	20	1155	1540	40
Future Volume (Veh/h)	35	50	20	1155	1540	40
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	36	52	21	1203	1604	42
Pedestrians	120			10	10	
Lane Width (m)	3.6			3.6	3.6	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	10			1	1	
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (m)				123	301	
pX, platoon unblocked	0.90	0.81	0.81			
vC, conflicting volume	2198	686	1766			
vC1, stage 1 conf vol	1745					
vC2, stage 2 conf vol	453					
vCu, unblocked vol	622	0	1132			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	83	93	95			
cM capacity (veh/h)	210	790	456			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	88	21	401	401	401	642	642	363
Volume Left	36	21	0	0	0	0	0	0
Volume Right	52	0	0	0	0	0	0	42
cSH	371	456	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.24	0.05	0.24	0.24	0.24	0.38	0.38	0.21
Queue Length 95th (m)	7.3	1.2	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	17.7	13.3	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	B						
Approach Delay (s)	17.7	0.2				0.0		
Approach LOS	C							

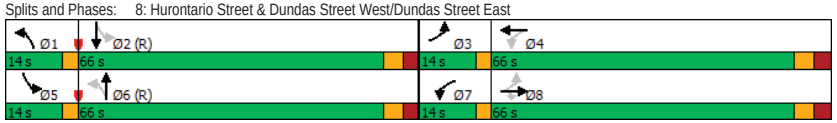
Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	45.3%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	165	725	125	120	915	145	980	170	1200
Future Volume (vph)	165	725	125	120	915	145	980	170	1200
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8		7	4	1	6	5	2
Permitted Phases	8		8	4		6		2	
Detector Phase	3	8	8	7	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	8.0	45.5	45.5	8.0	45.5	8.0	41.0	8.0	41.0
Total Split (s)	14.0	66.0	66.0	14.0	66.0	14.0	66.0	14.0	66.0
Total Split (%)	8.8%	41.3%	41.3%	8.8%	41.3%	8.8%	41.3%	8.8%	41.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	3.5	3.5	0.0	3.5	0.0	3.0	0.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	2.0	6.5	2.0	6.0	2.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	77.4	60.6	60.6	74.0	58.2	75.6	59.5	75.6	59.5
Actuated g/C Ratio	0.48	0.38	0.38	0.46	0.36	0.47	0.37	0.47	0.37
v/c Ratio	0.84	0.56	0.29	0.43	0.94	0.83	0.64	0.77	0.83
Control Delay	70.5	41.4	18.4	27.1	62.7	69.4	43.0	69.9	68.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.5	41.4	18.4	27.1	62.7	69.4	43.0	69.9	68.8
LOS	E	D	B	C	E	E	D	E	E
Approach Delay		43.3			59.2		46.0		69.0
Approach LOS		D			E		D		E

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 72 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 55.8 — Intersection LOS: E
Intersection Capacity Utilization 96.1% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 8: Hurontario Street & Dundas Street West/Dundas Street East



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	172	755	130	125	1135	151	1156	177	1479
v/c Ratio	0.84	0.56	0.29	0.43	0.94	0.83	0.64	0.77	0.83
Control Delay	70.5	41.4	18.4	27.1	62.7	69.4	43.0	69.9	68.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.5	41.4	18.4	27.1	62.7	69.4	43.0	69.9	68.8
Queue Length 50th (m)	39.7	105.3	13.7	22.4	188.1	33.0	116.1	48.2	161.5
Queue Length 95th (m)	#89.8	127.9	32.0	36.1	#231.1	#73.2	131.6	#88.3	191.6
Internal Link Dist (m)		110.1			127.8		99.4		99.2
Turn Bay Length (m)	35.0		25.0	25.0		40.0		65.0	
Base Capacity (vph)	204	1342	455	301	1239	183	1831	231	1811
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	0.84	0.56	0.29	0.42	0.92	0.83	0.63	0.77	0.82

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	725	125	120	915	175	145	980	130	170	1200	220
Future Volume (vph)	165	725	125	120	915	175	145	980	130	170	1200	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.5	6.5	2.0	6.5		2.0	6.0		2.0	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.68	1.00	0.95		1.00	0.96		1.00	0.94	
Flpb, ped/bikes	1.00	1.00	1.00	0.98	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3539	1089	1757	3307		1770	4797		1780	4724	
Flt Permitted	0.07	1.00	1.00	0.24	1.00		0.07	1.00		0.14	1.00	
Satd. Flow (perm)	126	3539	1089	452	3307		125	4797		253	4724	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	172	755	130	125	953	182	151	1021	135	177	1250	229
RTOR Reduction (vph)	0	0	42	0	10	0	0	11	0	0	16	0
Lane Group Flow (vph)	172	755	88	125	1125	0	151	1145	0	177	1463	0
Confl. Peds. (#/hr)	220		290	290		220	500		410	410		500
Heavy Vehicles (%)	0%	2%	1%	1%	2%	0%	2%	2%	0%	1%	1%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4			6			2		
Actuated Green, G (s)	72.3	59.6	59.6	67.5	57.2		69.5	58.5		69.7	58.6	
Effective Green, g (s)	73.9	60.6	60.6	69.5	58.2		71.5	59.5		71.7	59.6	
Actuated g/C Ratio	0.46	0.38	0.38	0.43	0.36		0.45	0.37		0.45	0.37	
Clearance Time (s)	3.0	7.5	7.5	3.0	7.5		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	201	1340	412	288	1202		179	1783		228	1759	
v/s Ratio Prot	c0.07	0.21		0.03	c0.34		c0.06	0.24		c0.06	c0.31	
v/s Ratio Perm	0.32		0.08	0.16			0.31			0.29		
v/c Ratio	0.86	0.56	0.21	0.43	0.94		0.84	0.64		0.78	0.83	
Uniform Delay, d1	44.6	39.3	33.6	29.0	49.1		40.5	41.5		30.3	45.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		2.12	1.43	
Incremental Delay, d2	28.2	0.5	0.3	1.1	13.3		28.7	1.8		13.3	4.1	
Delay (s)	72.7	39.8	33.8	30.0	62.4		69.2	43.3		77.6	69.3	
Level of Service	E	D	C	C	E		E	D		E	E	
Approach Delay (s)		44.4			59.2			46.3			70.2	
Approach LOS		D			E			D			E	

Intersection Summary				
HCM 2000 Control Delay	56.5	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.87			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	16.5	
Intersection Capacity Utilization	96.1%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	230	25	35	95	65	140
Future Volume (Veh/h)	230	25	35	95	65	140
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	315	34	48	130	89	192
Pedestrians	40		90			20
Lane Width (m)	3.6		3.6			3.6
Walking Speed (m/s)	1.2		1.2			1.2
Percent Blockage	3		8			2
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			158			
pX, platoon unblocked						
vC, conflicting volume	548	108			218	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	548	108			218	
tC, single (s)	6.4	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.1			2.2	
p0 queue free %	25	95			93	
cM capacity (veh/h)	418	725			1318	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	349	48	130	281
Volume Left	315	0	0	89
Volume Right	34	0	130	0
cSH	436	1700	1700	1318
Volume to Capacity	0.80	0.03	0.08	0.07
Queue Length 95th (m)	57.9	0.0	0.0	1.7
Control Delay (s)	39.1	0.0	0.0	2.9
Lane LOS	E			A
Approach Delay (s)	39.1	0.0		2.9
Approach LOS	E			

Intersection Summary				
Average Delay	17.9			
Intersection Capacity Utilization	38.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	5	125	15	5	365
Future Volume (Veh/h)	15	5	125	15	5	365
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	18	6	151	18	6	440
Pedestrians	30		100			
Lane Width (m)	3.6		3.6			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	3		8			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			142			
pX, platoon unblocked						
vC, conflicting volume	522	114			199	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	522	114			199	
tC, single (s)	6.9	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	99			100	
cM capacity (veh/h)	424	900			1351	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	24	101	68	153	293
Volume Left	18	0	0	6	0
Volume Right	6	0	18	0	0
cSH	489	1700	1700	1351	1700
Volume to Capacity	0.05	0.06	0.04	0.00	0.17
Queue Length 95th (m)	1.2	0.0	0.0	0.1	0.0
Control Delay (s)	12.7	0.0	0.0	0.3	0.0
Lane LOS	B			A	
Approach Delay (s)	12.7	0.0		0.1	
Approach LOS	B				

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	23.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	150	85	130	365	15
Future Volume (Veh/h)	10	150	85	130	365	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	12	176	100	153	429	18
Pedestrians	110				100	
Lane Width (m)	3.6				3.6	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	9				8	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				124		
pX, platoon unblocked						
vC, conflicting volume	924	334	557			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	924	334	557			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	71	89			
cM capacity (veh/h)	202	607	930			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	188	151	102	286	161
Volume Left	12	100	0	0	0
Volume Right	176	0	0	0	18
cSH	538	930	1700	1700	1700
Volume to Capacity	0.35	0.11	0.06	0.17	0.09
Queue Length 95th (m)	12.4	2.9	0.0	0.0	0.0
Control Delay (s)	15.2	6.5	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	15.2	3.9		0.0	
Approach LOS	C				

Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	39.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	215	100	10	505
Future Volume (Veh/h)	0	0	215	100	10	505
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	0	0	262	122	12	616
Pedestrians	20					
Lane Width (m)	0.0					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			60			
pX, platoon unblocked						
vC, conflicting volume	675	212			404	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	675	212			404	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			99	
cM capacity (veh/h)	388	800			1166	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	175	209	217	411
Volume Left	0	0	12	0
Volume Right	0	122	0	0
cSH	1700	1700	1166	1700
Volume to Capacity	0.10	0.12	0.01	0.24
Queue Length 95th (m)	0.0	0.0	0.2	0.0
Control Delay (s)	0.0	0.0	0.5	0.0
Lane LOS			A	
Approach Delay (s)	0.0		0.2	
Approach LOS				

Intersection Summary				
Average Delay			0.1	
Intersection Capacity Utilization			24.4%	ICU Level of Service
Analysis Period (min)			15	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	410	190	10	40	25
Future Volume (Veh/h)	5	410	190	10	40	25
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	7	539	250	13	53	33
Pedestrians					60	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					5	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			93			
pX, platoon unblocked						
vC, conflicting volume	323				600	192
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	323				600	192
tC, single (s)	4.1				7.0	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	99				86	96
cM capacity (veh/h)	1186				387	783

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	187	359	167	96	53	33
Volume Left	7	0	0	0	53	0
Volume Right	0	0	0	13	0	33
cSH	1186	1700	1700	1700	387	783
Volume to Capacity	0.01	0.21	0.10	0.06	0.14	0.04
Queue Length 95th (m)	0.1	0.0	0.0	0.0	3.8	1.1
Control Delay (s)	0.4	0.0	0.0	0.0	15.8	9.8
Lane LOS	A				C	A
Approach Delay (s)	0.1		0.0		13.5	
Approach LOS					B	

Intersection Summary				
Average Delay			1.4	
Intersection Capacity Utilization			24.9%	ICU Level of Service
Analysis Period (min)			15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	350	5	15	125	75	5	0	65	0	0	0
Future Volume (Veh/h)	120	350	5	15	125	75	5	0	65	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	160	467	7	20	167	100	7	0	87	0	0	0
Pedestrians					20			60			50	
Lane Width (m)					3.6			3.6			0.0	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					2			5			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					149							
pX, platoon unblocked												
vC, conflicting volume	317			534			974	1208	317	968	1161	184
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	317			534			974	1208	317	968	1161	184
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	87			98			96	100	86	100	100	100
cM capacity (veh/h)	1255			992			170	150	640	154	160	834

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	394	240	104	184	94
Volume Left	160	0	20	0	7
Volume Right	0	7	0	100	87
cSH	1255	1700	992	1700	530
Volume to Capacity	0.13	0.14	0.02	0.11	0.18
Queue Length 95th (m)	3.5	0.0	0.5	0.0	5.1
Control Delay (s)	4.1	0.0	1.8	0.0	13.2
Lane LOS	A		A		B
Approach Delay (s)	2.5		0.7		13.2
Approach LOS					B

Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	45.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	285	130	0	190	25
Future Volume (Veh/h)	0	285	130	0	190	25
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	0	348	159	0	232	30
Pedestrians					30	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			205			
pX, platoon unblocked						
vC, conflicting volume	189				363	110
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	189				363	110
tC, single (s)	4.1				7.0	7.6
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.6
p0 queue free %	100				60	96
cM capacity (veh/h)	1362				574	809

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	174	174	80	80	262
Volume Left	0	0	0	0	232
Volume Right	0	0	0	0	30
cSH	1700	1700	1700	1700	594
Volume to Capacity	0.10	0.10	0.05	0.05	0.44
Queue Length 95th (m)	0.0	0.0	0.0	0.0	18.0
Control Delay (s)	0.0	0.0	0.0	0.0	15.8
Lane LOS					C
Approach Delay (s)	0.0		0.0		15.8
Approach LOS					C

Intersection Summary				
Average Delay	5.4			
Intersection Capacity Utilization	28.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	20	120	130	95	40	20	30	15	105	60	105	135
Future Volume (vph)	20	120	130	95	40	20	30	15	105	60	105	135
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	25	148	160	117	49	25	37	19	130	74	130	167

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	173	160	166	25	56	130	371
Volume Left (vph)	25	0	117	0	37	0	74
Volume Right (vph)	0	160	0	25	0	130	167
Hadj (s)	0.07	-0.70	0.77	-0.70	1.24	-0.70	-0.23
Departure Headway (s)	6.7	5.9	7.6	6.1	8.0	6.0	6.1
Degree Utilization, x	0.32	0.26	0.35	0.04	0.12	0.22	0.63
Capacity (veh/h)	504	567	440	538	417	542	565
Control Delay (s)	11.6	9.8	13.4	8.2	10.9	9.5	19.0
Approach Delay (s)	10.8		12.7		9.9		19.0
Approach LOS	B		B		A		C

Intersection Summary							
Delay			13.8				
Level of Service			B				
Intersection Capacity Utilization			52.2%		ICU Level of Service		
Analysis Period (min)			15				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	50	50	0	5	5	140	5	5	320	5
Future Volume (Veh/h)	5	0	50	50	0	5	5	140	5	5	320	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	0	54	54	0	5	5	152	5	5	348	5
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								108				
pX, platoon unblocked												
vC, conflicting volume	452	528	176	402	528	78	353			157		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	452	528	176	402	528	78	353			157		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	94	89	100	99	100			100		
cM capacity (veh/h)	491	455	842	500	455	973	1217			1435		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	59	59	81	81	179	179
Volume Left	5	54	5	0	5	0
Volume Right	54	5	0	5	0	5
cSH	794	521	1217	1700	1435	1700
Volume to Capacity	0.07	0.11	0.00	0.05	0.00	0.11
Queue Length 95th (m)	1.9	3.0	0.1	0.0	0.1	0.0
Control Delay (s)	9.9	12.8	0.5	0.0	0.2	0.0
Lane LOS	A	B	A		A	
Approach Delay (s)	9.9	12.8	0.3		0.1	
Approach LOS	A	B				

Intersection Summary							
Average Delay			2.2				
Intersection Capacity Utilization			29.0%		ICU Level of Service		
Analysis Period (min)			15				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	40	5	145	5	5	415
Future Volume (Veh/h)	40	5	145	5	5	415
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	5	158	5	5	451
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			69			
pX, platoon unblocked						
vC, conflicting volume	396	82			163	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	396	82			163	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	99			100	
cM capacity (veh/h)	584	968			1428	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	48	105	58	155	301
Volume Left	43	0	0	5	0
Volume Right	5	0	5	0	0
cSH	610	1700	1700	1428	1700
Volume to Capacity	0.08	0.06	0.03	0.00	0.18
Queue Length 95th (m)	2.0	0.0	0.0	0.1	0.0
Control Delay (s)	11.4	0.0	0.0	0.3	0.0
Lane LOS	B			A	
Approach Delay (s)	11.4	0.0		0.1	
Approach LOS	B				

Intersection Summary				
Average Delay	0.9			
Intersection Capacity Utilization	25.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	140	190	15	130	65
Future Volume (Veh/h)	20	140	190	15	130	65
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.63	0.63	0.63	0.63	0.63	0.63
Hourly flow rate (vph)	32	222	302	24	206	103
Pedestrians		10	10		30	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		1	1		3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	356				640	354
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	356				640	354
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				51	85
cM capacity (veh/h)	1184				417	671

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	254	326	309
Volume Left	32	0	206
Volume Right	0	24	103
cSH	1184	1700	477
Volume to Capacity	0.03	0.19	0.65
Queue Length 95th (m)	0.7	0.0	36.3
Control Delay (s)	1.2	0.0	25.4
Lane LOS	A		D
Approach Delay (s)	1.2	0.0	25.4
Approach LOS			D

Intersection Summary				
Average Delay	9.2			
Intersection Capacity Utilization	42.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	200	0	0	0	0	15
Future Volume (Veh/h)	200	0	0	0	0	15
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	278	0	0	0	0	21
Pedestrians	10					20
Lane Width (m)	3.6					3.6
Walking Speed (m/s)	1.2					1.2
Percent Blockage	1					2
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	31	30			10	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	31	30			10	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	72	100			100	
cM capacity (veh/h)	980	1024			1609	

Direction, Lane #	WB 1	SB 1
Volume Total	278	21
Volume Left	278	0
Volume Right	0	0
cSH	980	1700
Volume to Capacity	0.28	0.01
Queue Length 95th (m)	9.4	0.0
Control Delay (s)	10.1	0.0
Lane LOS	B	
Approach Delay (s)	10.1	0.0
Approach LOS	B	

Intersection Summary				
Average Delay	9.4			
Intersection Capacity Utilization	22.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	205	0	15	45	0	0
Future Volume (Veh/h)	205	0	15	45	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Hourly flow rate (vph)	311	0	23	68	0	0
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			201			
pX, platoon unblocked						
vC, conflicting volume	67	67			101	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	67	67			101	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	67	100			100	
cM capacity (veh/h)	935	994			1492	

Direction, Lane #	WB 1	NB 1
Volume Total	311	91
Volume Left	311	0
Volume Right	0	68
cSH	935	1700
Volume to Capacity	0.33	0.05
Queue Length 95th (m)	11.7	0.0
Control Delay (s)	10.8	0.0
Lane LOS	B	
Approach Delay (s)	10.8	0.0
Approach LOS	B	

Intersection Summary				
Average Delay	8.3			
Intersection Capacity Utilization	24.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1800	0	0	1575
Future Volume (Veh/h)	0	0	1800	0	0	1575
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	0	0	1837	0	0	1607
Pedestrians	70					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	6					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			68			
pX, platoon unblocked	0.78	0.78			0.78	
vC, conflicting volume	2443	682			1907	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1871	0			1186	
tC, single (s)	8.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	4.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	16	804			439	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	0	735	735	367	536	536	536
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.43	0.43	0.22	0.32	0.32	0.32
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	0.0	0.0			0.0		
Approach LOS	A						

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	38.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	10	0	1395	1420	20
Future Volume (Veh/h)	5	10	0	1395	1420	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	11	0	1468	1495	21
Pedestrians	70					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	6					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				78	62	
pX, platoon unblocked	0.87	0.79	0.79			
vC, conflicting volume	2054	568	1586			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	442	0	815			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	99	100			
cM capacity (veh/h)	450	812	611			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	16	489	489	489	498	498	498	21
Volume Left	5	0	0	0	0	0	0	0
Volume Right	11	0	0	0	0	0	0	21
cSH	649	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.02	0.29	0.29	0.29	0.29	0.29	0.29	0.01
Queue Length 95th (m)	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	10.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B							
Approach Delay (s)	10.7	0.0			0.0			
Approach LOS	B							

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	Err%	ICU Level of Service	H	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	650	0	0	420	65	0	0	5	40	0	25
Future Volume (Veh/h)	20	650	0	0	420	65	0	0	5	40	0	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	21	684	0	0	442	68	0	0	5	42	0	26
Pedestrians					30			40			70	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					3			3			6	
Right turn flare (veh)												
Median type		TWLTL			None							
Median storage veh)		2										
Upstream signal (m)		151			79							
pX, platoon unblocked				0.95			0.95	0.95	0.95	0.95	0.95	
vC, conflicting volume	580			724			1013	1346	412	965	1312	325
vC1, stage 1 conf vol							766	766		546	546	
vC2, stage 2 conf vol							247	580		419	766	
vCu, unblocked vol	580			598			903	1254	269	852	1219	325
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			100	100	99	90	100	96
cM capacity (veh/h)	945			906			359	332	657	407	344	637

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	363	342	221	289	5	68
Volume Left	21	0	0	0	0	42
Volume Right	0	0	0	68	5	26
cSH	945	1700	906	1700	657	472
Volume to Capacity	0.02	0.20	0.00	0.17	0.01	0.14
Queue Length 95th (m)	0.5	0.0	0.0	0.0	0.2	4.0
Control Delay (s)	0.7	0.0	0.0	0.0	10.5	13.9
Lane LOS	A				B	B
Approach Delay (s)	0.4		0.0		10.5	13.9
Approach LOS					B	B

Intersection Summary					
Average Delay	1.0				
Intersection Capacity Utilization	49.5%	ICU Level of Service		A	
Analysis Period (min)	15				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	655	0	0	445	0	0	0	5	10	0	40
Future Volume (Veh/h)	15	655	0	0	445	0	0	0	5	10	0	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	15	675	0	0	459	0	0	0	5	10	0	41
Pedestrians					20			30			60	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					2			3			5	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (m)		108			121							
pX, platoon unblocked				0.95			0.95	0.95	0.95	0.95	0.95	
vC, conflicting volume	519			705			1006	1254	388	912	1254	290
vC1, stage 1 conf vol							735	735		519	519	
vC2, stage 2 conf vol							270	519		392	735	
vCu, unblocked vol	519			573			891	1154	237	792	1154	290
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	99	98	100	94
cM capacity (veh/h)	1005			931			376	360	698	433	364	677

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	15	450	225	0	306	153	5	51
Volume Left	15	0	0	0	0	0	0	10
Volume Right	0	0	0	0	0	0	5	41
cSH	1005	1700	1700	1700	1700	1700	698	610
Volume to Capacity	0.01	0.26	0.13	0.00	0.18	0.09	0.01	0.08
Queue Length 95th (m)	0.4	0.0	0.0	0.0	0.0	0.0	0.2	2.2
Control Delay (s)	8.6	0.0	0.0	0.0	0.0	0.0	10.2	11.4
Lane LOS	A						B	B
Approach Delay (s)	0.2			0.0			10.2	11.4
Approach LOS							B	B

Intersection Summary					
Average Delay	0.6				
Intersection Capacity Utilization	34.5%	ICU Level of Service		A	
Analysis Period (min)	15				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	695	0	5	485	0	0
Future Volume (Veh/h)	695	0	5	485	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	732	0	5	511	0	0
Pedestrians				30	40	
Lane Width (m)				3.6	3.6	
Walking Speed (m/s)				1.2	1.2	
Percent Blockage				3	3	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	173			56		
pX, platoon unblocked			0.95		0.95	0.95
vC, conflicting volume			772		1038	436
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			656		936	303
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	100
cM capacity (veh/h)			864		244	626

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	488	244	175	341	0
Volume Left	0	0	5	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	864	1700	1700
Volume to Capacity	0.29	0.14	0.01	0.20	0.00
Queue Length 95th (m)	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	0.0	0.0	0.3	0.0	0.0
Lane LOS			A		A
Approach Delay (s)	0.0		0.1		0.0
Approach LOS					A

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	35.5%	ICU Level of Service		A
Analysis Period (min)	15			

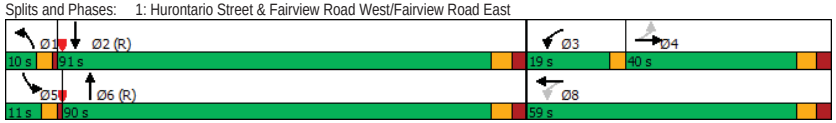
Future Background Traffic Conditions (2027)

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	100	215	75	60	870	50	1525
Future Volume (vph)	105	100	215	75	60	870	50	1525
Turn Type	Perm	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases		4	3	8	1	6	5	2
Permitted Phases	4		8					
Detector Phase	4	4	3	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	5.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	40.0	40.0	8.0	40.0	9.0	29.0	9.0	29.0
Total Split (s)	40.0	40.0	19.0	59.0	10.0	90.0	11.0	91.0
Total Split (%)	25.0%	25.0%	11.9%	36.9%	6.3%	56.3%	6.9%	56.9%
Yellow Time (s)	4.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	3.0	3.0	0.0	3.0	1.0	3.0	1.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.0	6.0	2.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	31.9	31.9	55.4	51.4	7.7	87.8	8.0	85.9
Actuated g/C Ratio	0.20	0.20	0.35	0.32	0.05	0.55	0.05	0.54
v/c Ratio	0.54	0.87	0.92	0.44	0.83	0.69	0.67	0.98
Control Delay	66.6	76.4	79.3	34.0	121.5	39.0	109.3	51.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.6	76.4	79.3	34.0	121.5	39.0	109.3	51.9
LOS	E	E	E	C	F	D	F	D
Approach Delay		73.6		57.0		43.3		53.7
Approach LOS		E		E		D		D

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 35 (22%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 52.8 — Intersection LOS: D
Intersection Capacity Utilization 100.8% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 1: Hurontario Street & Fairview Road West/Fairview Road East



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	121	305	247	241	69	1241	57	1810
v/c Ratio	0.54	0.87	0.92	0.44	0.83	0.69	0.67	0.98
Control Delay	66.6	76.4	79.3	34.0	121.5	39.0	109.3	51.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.6	76.4	79.3	34.0	121.5	39.0	109.3	51.9
Queue Length 50th (m)	36.2	84.7	62.3	46.9	22.7	217.3	19.1	306.5
Queue Length 95th (m)	57.2	#125.0	#99.9	70.5	#54.2	221.7	#40.3	#345.1
Internal Link Dist (m)		78.1		66.2		510.0		77.3
Turn Bay Length (m)	75.0		40.0		120.0		50.0	
Base Capacity (vph)	238	370	268	557	83	1797	85	1855
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	0.51	0.82	0.92	0.43	0.83	0.69	0.67	0.98

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	100	165	215	75	135	60	870	210	50	1525	50
Future Volume (vph)	105	100	165	215	75	135	60	870	210	50	1525	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		2.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.95		1.00	0.97		1.00	0.96		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.90		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1750	1567		1694	1559		1719	3253		1719	3455	
Flt Permitted	0.61	1.00		0.20	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1122	1567		356	1559		1719	3253		1719	3455	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	121	115	190	247	86	155	69	1000	241	57	1753	57
RTOR Reduction (vph)	0	38	0	0	41	0	0	13	0	0	1	0
Lane Group Flow (vph)	121	267	0	247	200	0	69	1228	0	57	1809	0
Confl. Peds. (#/hr)	20		50	50		20	60		50	50		60
Heavy Vehicles (%)	1%	3%	5%	6%	4%	9%	5%	3%	6%	5%	3%	10%
Turn Type	Perm	NA		pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases		4		3	8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)	30.9	30.9		50.4	50.4		6.7	86.0		5.6	84.9	
Effective Green, g (s)	31.9	31.9		51.4	51.4		7.7	87.0		6.6	85.9	
Actuated g/C Ratio	0.20	0.20		0.32	0.32		0.05	0.54		0.04	0.54	
Clearance Time (s)	7.0	7.0		3.0	7.0		4.0	7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	223	312		260	500		82	1768		70	1854	
v/s Ratio Prot		c0.17		c0.10	0.13		c0.04	0.38		0.03	c0.52	
v/s Ratio Perm	0.11			0.20								
v/c Ratio	0.54	0.86		0.95	0.40		0.84	0.69		0.81	0.98	
Uniform Delay, d1	57.5	61.8		46.3	42.3		75.5	26.8		76.1	36.0	
Progression Factor	1.00	1.00		1.00	1.00		0.83	1.37		1.00	1.00	
Incremental Delay, d2	2.7	20.0		41.7	0.5		49.2	2.2		49.3	15.9	
Delay (s)	60.2	81.9		88.0	42.8		112.0	39.0		125.4	51.9	
Level of Service	E	F		F	D		F	D		F	D	
Approach Delay (s)		75.7			65.7			42.8			54.1	
Approach LOS		E			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	54.1	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.0	
Intersection Capacity Utilization	100.8%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	100	10	10	30	215	840	80	1185	295
Future Volume (vph)	100	10	10	30	215	840	80	1185	295
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases		8		4	1	6	5	2	
Permitted Phases	8		4						2
Detector Phase	8	8	4	4	1	6	5	2	2
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	8.0
Minimum Split (s)	46.0	46.0	46.0	46.0	11.0	38.0	9.0	38.0	38.0
Total Split (s)	48.0	48.0	48.0	48.0	25.0	94.0	18.0	87.0	87.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	15.6%	58.8%	11.3%	54.4%	54.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	4.0	3.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	1.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	5.0	6.0	3.0	6.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	29.5	29.5	29.5	29.5	27.7	100.5	14.0	84.8	84.8
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.17	0.63	0.09	0.53	0.53
v/c Ratio	0.52	0.12	0.05	0.23	0.73	0.43	0.57	0.70	0.43
Control Delay	65.3	21.6	47.8	13.2	87.2	8.5	87.2	20.7	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	65.3	21.6	47.8	13.2	87.2	8.6	87.2	20.7	5.9
LOS	E	C	D	B	F	A	F	C	A
Approach Delay		53.7		15.5		24.4		21.3	
Approach LOS		D		B		C		C	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 107 (67%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 23.6		Intersection LOS: C	
Intersection Capacity Utilization 94.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 2: Hurontario Street & John Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	106	38	11	154	229	910	85	1261	314
v/c Ratio	0.52	0.12	0.05	0.23	0.73	0.43	0.57	0.70	0.43
Control Delay	65.3	21.6	47.8	13.2	87.2	8.5	87.2	20.7	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	65.3	21.6	47.8	13.2	87.2	8.6	87.2	20.7	5.9
Queue Length 50th (m)	30.0	2.8	2.8	4.3	73.7	30.0	29.7	182.5	19.6
Queue Length 95th (m)	50.2	13.2	8.7	14.4	#124.8	57.7	m26.6	m199.0	m29.8
Internal Link Dist (m)		69.2		56.1		37.7		43.8	
Turn Bay Length (m)					15.0		30.0		40.0
Base Capacity (vph)	285	443	316	874	312	2130	168	1870	744
Starvation Cap Reductn	0	0	0	0	0	305	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	0.37	0.09	0.03	0.18	0.73	0.50	0.51	0.67	0.42

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	10	25	10	30	115	215	840	15	80	1185	295
Future Volume (vph)	100	10	25	10	30	115	215	840	15	80	1185	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		5.0	6.0		3.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.96		1.00	1.00		1.00	1.00	0.87
Flpb, ped/bikes	0.97	1.00		0.98	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1620	1653		1602	3057		1805	3385		1703	3406	1250
Flt Permitted	0.65	1.00		0.73	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1116	1653		1235	3057		1805	3385		1703	3406	1250
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	106	11	27	11	32	122	229	894	16	85	1261	314
RTOR Reduction (vph)	0	22	0	0	100	0	0	1	0	0	0	61
Lane Group Flow (vph)	106	16	0	11	54	0	229	909	0	85	1261	253
Confl. Peds. (#/hr)	30		20	20		30	80		90	90		80
Heavy Vehicles (%)	8%	0%	0%	10%	0%	0%	0%	6%	0%	6%	6%	12%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4								2
Actuated Green, G (s)	28.5	28.5		28.5	28.5		26.7	99.5		13.0	83.8	83.8
Effective Green, g (s)	29.5	29.5		29.5	29.5		27.7	100.5		14.0	84.8	84.8
Actuated g/C Ratio	0.18	0.18		0.18	0.18		0.17	0.63		0.09	0.53	0.53
Clearance Time (s)	8.0	8.0		8.0	8.0		6.0	7.0		4.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	205	304		227	563		312	2126		149	1805	662
v/s Ratio Prot		0.01			0.02		c0.13	0.27		0.05	c0.37	
v/s Ratio Perm	c0.09			0.01								0.20
v/c Ratio	0.52	0.05		0.05	0.10		0.73	0.43		0.57	0.70	0.38
Uniform Delay, d1	58.8	53.7		53.7	54.2		62.7	15.1		70.1	28.1	22.2
Progression Factor	1.00	1.00		1.00	1.00		1.20	0.46		1.18	0.66	0.36
Incremental Delay, d2	2.2	0.1		0.1	0.1		7.9	0.6		1.6	0.7	0.5
Delay (s)	61.0	53.8		53.8	54.3		82.9	7.5		84.5	19.3	8.6
Level of Service	E	D		D	D		F	A		F	B	A
Approach Delay (s)		59.1			54.2			22.6			20.6	
Approach LOS		E			D			C			C	

Intersection Summary

HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

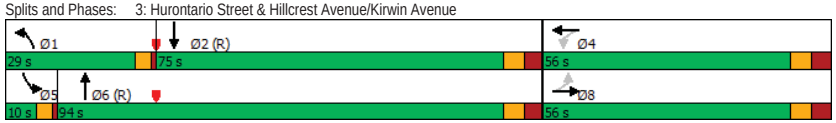
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	85	130	20	140	160	920	30	950
Future Volume (vph)	85	130	20	140	160	920	30	950
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4					
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	56.0	56.0	56.0	56.0	9.0	51.5	9.0	51.5
Total Split (s)	56.0	56.0	56.0	56.0	29.0	94.0	10.0	75.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	18.1%	58.8%	6.3%	46.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	1.0	3.5	1.0	3.5
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	3.0	6.5	3.0	6.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	49.0	49.0	49.0	49.0	23.6	89.3	7.1	70.9
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.15	0.56	0.04	0.44
v/c Ratio	0.28	0.27	0.07	0.20	0.83	0.51	0.40	0.86
Control Delay	52.6	27.4	40.5	32.6	108.8	12.1	97.6	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.6	27.4	40.5	32.6	108.8	12.1	97.6	20.3
LOS	D	C	D	C	F	B	F	C
Approach Delay		33.4		33.3		26.1		22.2
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 99 (62%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 25.9 — Intersection LOS: C
Intersection Capacity Utilization 111.9% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	88	283	21	206	165	974	31	1221
v/c Ratio	0.28	0.27	0.07	0.20	0.83	0.51	0.40	0.86
Control Delay	52.6	27.4	40.5	32.6	108.8	12.1	97.6	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.6	27.4	40.5	32.6	108.8	12.1	97.6	20.3
Queue Length 50th (m)	23.9	20.0	5.0	20.9	58.6	35.1	10.8	14.6
Queue Length 95th (m)	40.0	31.4	12.6	32.2	m64.6	m41.1	m16.4	69.8
Internal Link Dist (m)		32.2		62.6		277.3		54.3
Turn Bay Length (m)	50.0		50.0		75.0		65.0	
Base Capacity (vph)	317	1032	293	1017	220	1911	78	1424
Starvation Cap Reductn	0	0	0	0	0	0	0	1
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	0.28	0.27	0.07	0.20	0.75	0.51	0.40	0.86

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	130	145	20	140	60	160	920	25	30	950	235
Future Volume (vph)	85	130	145	20	140	60	160	920	25	30	950	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		3.0	6.5		3.0	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.94		1.00	0.99		1.00	1.00		1.00	0.97	
Flpb, ped/bikes	0.98	1.00		0.93	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.95		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1587	3035		1675	3224		1357	3415		1752	3183	
Flt Permitted	0.62	1.00		0.54	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1038	3035		957	3224		1357	3415		1752	3183	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	134	149	21	144	62	165	948	26	31	979	242
RTOR Reduction (vph)	0	103	0	0	31	0	0	1	0	0	13	0
Lane Group Flow (vph)	88	180	0	21	175	0	165	973	0	31	1208	0
Confl. Peds. (#/hr)	20		110	110		20	120		90	90		120
Heavy Vehicles (%)	12%	0%	5%	0%	5%	8%	33%	5%	4%	3%	6%	11%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4								
Actuated Green, G (s)	48.0	48.0		48.0	48.0		22.6	87.5		5.0	69.9	
Effective Green, g (s)	49.0	49.0		49.0	49.0		23.6	88.5		6.0	70.9	
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.15	0.55		0.04	0.44	
Clearance Time (s)	8.0	8.0		8.0	8.0		4.0	7.5		4.0	7.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	317	929		293	987		200	1888		65	1410	
v/s Ratio Prot		0.06			0.05		c0.12	0.28		0.02	c0.38	
v/s Ratio Perm	c0.08			0.02								
v/c Ratio	0.28	0.19		0.07	0.18		0.82	0.52		0.48	0.86	
Uniform Delay, d1	42.1	40.9		39.4	40.7		66.2	22.3		75.5	40.0	
Progression Factor	1.18	1.38		1.00	1.00		1.45	0.52		1.15	0.37	
Incremental Delay, d2	0.5	0.1		0.1	0.1		10.5	0.4		4.1	5.3	
Delay (s)	50.0	56.7		39.5	40.8		106.2	12.1		90.9	19.9	
Level of Service	D	E		D	D		F	B		F	B	
Approach Delay (s)		55.1			40.7			25.7			21.7	
Approach LOS		E			D			C			C	

Intersection Summary				
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	16.5	
Intersection Capacity Utilization	111.9%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	270	310	320	60	80
Future Volume (vph)	270	310	320	60	80
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	1	6	2	4	
Permitted Phases	6				4
Detector Phase	1	6	2	4	4
Switch Phase					
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	33.5	33.5	26.0	26.0
Total Split (s)	28.0	134.0	106.0	26.0	26.0
Total Split (%)	17.5%	83.8%	66.3%	16.3%	16.3%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	3.5	3.5	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	5.0	5.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	135.7	131.2	105.2	17.3	17.3
Actuated g/C Ratio	0.85	0.82	0.66	0.11	0.11
v/c Ratio	0.48	0.12	0.30	0.55	0.43
Control Delay	5.4	3.3	8.4	82.7	17.4
Queue Delay	0.8	0.0	0.0	0.0	0.0
Total Delay	6.1	3.3	8.4	82.7	17.4
LOS	A	A	A	F	B
Approach Delay		4.6	8.4	45.4	
Approach LOS		A	A	D	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 10.8		Intersection LOS: B	
Intersection Capacity Utilization 59.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Hillcrest Avenue & Go Access Road



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	310	356	609	69	92
v/c Ratio	0.48	0.12	0.30	0.55	0.43
Control Delay	5.4	3.3	8.4	82.7	17.4
Queue Delay	0.8	0.0	0.0	0.0	0.0
Total Delay	6.1	3.3	8.4	82.7	17.4
Queue Length 50th (m)	19.2	12.2	21.7	21.7	0.0
Queue Length 95th (m)	27.7	16.4	45.9	38.0	16.2
Internal Link Dist (m)		144.9	84.1	44.8	
Turn Bay Length (m)	70.0				
Base Capacity (vph)	667	2881	2075	154	240
Starvation Cap Reductn	140	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.59	0.12	0.29	0.45	0.38

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	270	310	320	210	60	80
Future Volume (vph)	270	310	320	210	60	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.5	6.5		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98		1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.94		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1472	3505	2985		1165	1207
Flt Permitted	0.39	1.00	1.00		0.95	1.00
Satd. Flow (perm)	608	3505	2985		1165	1207
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	310	356	368	241	69	92
RTOR Reduction (vph)	0	0	61	0	0	82
Lane Group Flow (vph)	310	356	548	0	69	10
Confl. Peds. (#/hr)	20			20	20	10
Heavy Vehicles (%)	22%	3%	12%	11%	55%	29%
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6					4
Actuated Green, G (s)	130.2	130.2	104.2		16.3	16.3
Effective Green, g (s)	131.2	131.2	105.2		17.3	17.3
Actuated g/C Ratio	0.82	0.82	0.66		0.11	0.11
Clearance Time (s)	3.0	7.5	7.5		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	628	2874	1962		125	130
v/s Ratio Prot	c0.07	0.10	c0.18		c0.06	
v/s Ratio Perm	0.33					0.01
v/c Ratio	0.49	0.12	0.28		0.55	0.08
Uniform Delay, d1	3.6	2.9	11.5		67.7	64.2
Progression Factor	1.00	1.00	0.86		1.00	1.00
Incremental Delay, d2	0.6	0.1	0.3		5.2	0.3
Delay (s)	4.2	3.0	10.1		72.9	64.4
Level of Service	A	A	B		E	E
Approach Delay (s)		3.6	10.1		68.0	
Approach LOS		A	B		E	

Intersection Summary				
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

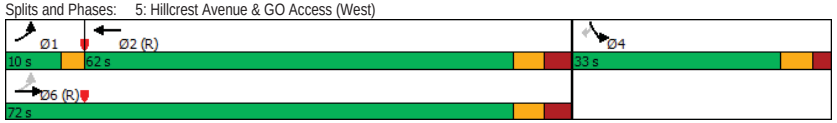
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	435	515	250	65	190
Future Volume (vph)	435	515	250	65	190
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	1	6	2	4	
Permitted Phases	6				4
Detector Phase	1	6	2	4	4
Switch Phase					
Minimum Initial (s)	5.0	8.0	8.0	4.0	4.0
Minimum Split (s)	8.0	38.5	38.5	31.5	31.5
Total Split (s)	10.0	72.0	62.0	33.0	33.0
Total Split (%)	9.5%	68.6%	59.0%	31.4%	31.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	3.5	3.5	2.5	2.5
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	5.5	5.5
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	75.3	70.8	49.1	22.2	22.2
Actuated g/C Ratio	0.72	0.67	0.47	0.21	0.21
v/c Ratio	0.60	0.24	0.31	0.19	0.44
Control Delay	10.2	7.7	12.8	32.9	7.7
Queue Delay	1.1	0.0	0.0	0.0	0.0
Total Delay	11.3	7.7	12.8	32.9	7.7
LOS	B	A	B	C	A
Approach Delay		9.4	12.8	14.1	
Approach LOS		A	B	B	

Intersection Summary

Cycle Length: 105
Actuated Cycle Length: 105
Offset: 90 (86%), Referenced to phase 2:WBT and 6:EBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 11.0 — Intersection LOS: B
Intersection Capacity Utilization 81.8% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 5: Hillcrest Avenue & GO Access (West)



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	473	560	435	71	207
v/c Ratio	0.60	0.24	0.31	0.19	0.44
Control Delay	10.2	7.7	12.8	32.9	7.7
Queue Delay	1.1	0.0	0.0	0.0	0.0
Total Delay	11.3	7.7	12.8	32.9	7.7
Queue Length 50th (m)	39.2	25.0	18.4	12.0	0.0
Queue Length 95th (m)	57.0	33.4	33.8	24.1	18.2
Internal Link Dist (m)		22.5	144.9	35.6	
Turn Bay Length (m)	30.0				
Base Capacity (vph)	782	2318	1644	468	531
Starvation Cap Reductn	129	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.72	0.24	0.26	0.15	0.39

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	435	515	250	150	65	190
Future Volume (vph)	435	515	250	150	65	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.5	6.5		5.5	5.5
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.96		1.00	0.91
Flpb, ped/bikes	0.98	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.94		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1768	3438	2825		1787	1447
Flt Permitted	0.46	1.00	1.00		0.95	1.00
Satd. Flow (perm)	863	3438	2825		1787	1447
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	473	560	272	163	71	207
RTOR Reduction (vph)	0	0	87	0	0	163
Lane Group Flow (vph)	473	560	348	0	71	44
Confl. Peds. (#/hr)	90			90	20	60
Heavy Vehicles (%)	0%	5%	13%	21%	1%	2%
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6					4
Actuated Green, G (s)	69.8	69.8	48.1		21.2	21.2
Effective Green, g (s)	70.8	70.8	49.1		22.2	22.2
Actuated g/C Ratio	0.67	0.67	0.47		0.21	0.21
Clearance Time (s)	3.0	7.5	7.5		6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	751	2318	1321		377	305
v/s Ratio Prot	c0.12	0.16	0.12		c0.04	
v/s Ratio Perm	0.31					0.03
v/c Ratio	0.63	0.24	0.26		0.19	0.14
Uniform Delay, d1	7.7	6.7	17.0		34.0	33.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.7	0.2	0.5		0.2	0.2
Delay (s)	9.4	6.9	17.5		34.2	33.9
Level of Service	A	A	B		C	C
Approach Delay (s)		8.0	17.5		34.0	
Approach LOS		A	B		C	

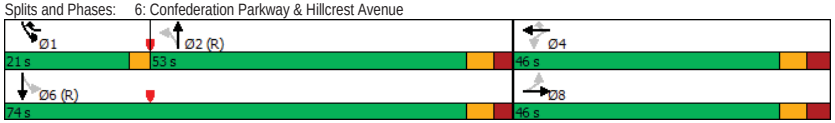
Intersection Summary				
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.35			
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	81.8%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	85	205	150	110	180	30	610	350	665
Future Volume (vph)	85	205	150	110	180	30	610	350	665
Turn Type	Perm	NA	Perm	NA	pm+ov	Perm	NA	pm+pt	NA
Protected Phases		8		4	1		2	1	6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	1	2	2	1	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	45.5	45.5	45.5	45.5	8.0	48.0	48.0	8.0	48.0
Total Split (s)	46.0	46.0	46.0	46.0	21.0	53.0	53.0	21.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	17.5%	44.2%	44.2%	17.5%	61.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	3.5	3.5	3.5	3.5	0.0	3.0	3.0	0.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	2.0	6.0	6.0	2.0	6.0
Lead/Lag					Lead	Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	34.2	34.2	34.2	34.2	64.0	46.0	46.0	77.3	73.3
Actuated g/C Ratio	0.28	0.28	0.28	0.28	0.53	0.38	0.38	0.64	0.61
v/c Ratio	0.28	0.57	0.95	0.24	0.24	0.16	0.86	0.89	0.39
Control Delay	33.6	38.6	98.1	32.5	9.2	26.5	37.6	56.4	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.6	38.6	98.1	32.5	9.2	26.5	37.6	56.4	13.2
LOS	C	D	F	C	A	C	D	E	B
Approach Delay		37.4		45.4			37.3		26.9
Approach LOS		D		D			D		C

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 81 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 115			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 34.6		Intersection LOS: C	
Intersection Capacity Utilization 109.5%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 6: Confederation Parkway & Hillcrest Avenue



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	94	289	167	122	200	33	1117	389	839
v/c Ratio	0.28	0.57	0.95	0.24	0.24	0.16	0.86	0.89	0.39
Control Delay	33.6	38.6	98.1	32.5	9.2	26.5	37.6	56.4	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.6	38.6	98.1	32.5	9.2	26.5	37.6	56.4	13.2
Queue Length 50th (m)	17.0	55.0	38.2	21.8	14.5	5.3	117.0	~90.3	57.2
Queue Length 95th (m)	31.3	82.4	#79.2	37.3	27.8	13.4	147.5	#156.3	72.7
Internal Link Dist (m)		72.4		67.3			99.6		86.6
Turn Bay Length (m)	25.0		35.0			35.0		30.0	
Base Capacity (vph)	394	588	203	589	851	213	1319	438	2135
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.49	0.82	0.21	0.24	0.15	0.85	0.89	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	205	55	150	110	180	30	610	395	350	665	90
Future Volume (vph)	85	205	55	150	110	180	30	610	395	350	665	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	2.0	6.0	6.0		2.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		0.97	1.00	1.00	0.99	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.94		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1678	1764		1416	1792	1532	1542	3143		1752	3482	
Flt Permitted	0.68	1.00		0.41	1.00	1.00	0.34	1.00		0.09	1.00	
Satd. Flow (perm)	1199	1764		617	1792	1532	546	3143		158	3482	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	228	61	167	122	200	33	678	439	389	739	100
RTOR Reduction (vph)	0	9	0	0	0	39	0	89	0	0	8	0
Lane Group Flow (vph)	94	280	0	167	122	161	33	1028	0	389	831	0
Confl. Peds. (#/hr)	30		50	50		30	20		50	50		20
Heavy Vehicles (%)	5%	3%	3%	24%	6%	3%	16%	3%	10%	3%	1%	3%
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		pm+pt	NA	
Protected Phases		8			4	1		2		1	6	
Permitted Phases	8			4		4	2			6		
Actuated Green, G (s)	33.2	33.2		33.2	33.2	57.5	45.0	45.0		72.3	72.3	
Effective Green, g (s)	34.2	34.2		34.2	34.2	59.5	46.0	46.0		73.3	73.3	
Actuated g/C Ratio	0.29	0.29		0.29	0.29	0.50	0.38	0.38		0.61	0.61	
Clearance Time (s)	7.5	7.5		7.5	7.5	3.0	7.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	341	502		175	510	759	209	1204		432	2126	
v/s Ratio Prot		0.16			0.07	0.04		c0.33		c0.19	0.24	
v/s Ratio Perm	0.08			c0.27		0.06	0.06			0.36		
v/c Ratio	0.28	0.56		0.95	0.24	0.21	0.16	0.85		0.90	0.39	
Uniform Delay, d1	33.3	36.5		42.1	32.9	17.0	24.3	33.9		35.2	11.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	1.4		54.3	0.2	0.1	1.6	7.8		21.4	0.5	
Delay (s)	33.7	37.8		96.4	33.2	17.2	25.9	41.7		56.6	12.5	
Level of Service	C	D		F	C	B	C	D		E	B	
Approach Delay (s)		36.8			48.2			41.2			26.5	
Approach LOS		D			D			D			C	

Intersection Summary					
HCM 2000 Control Delay	36.2	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.89				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.5		
Intersection Capacity Utilization	109.5%	ICU Level of Service	H		
Analysis Period (min)	15				

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	50	0	1080	1010	75
Future Volume (Veh/h)	0	50	0	1080	1010	75
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	53	0	1137	1063	79
Pedestrians	60			10		
Lane Width (m)	3.6			3.6		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	5			1		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				123	301	
pX, platoon unblocked	0.83	0.70	0.70			
vC, conflicting volume	1731	641	1202			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	48	0	419			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	93	100			
cM capacity (veh/h)	755	712	762			

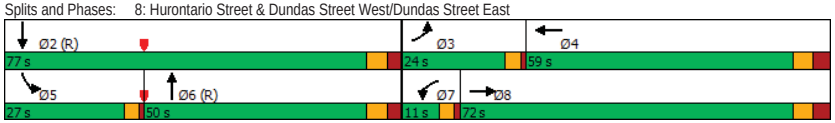
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	53	568	568	709	433
Volume Left	0	0	0	0	0
Volume Right	53	0	0	0	79
cSH	712	1700	1700	1700	1700
Volume to Capacity	0.07	0.33	0.33	0.42	0.25
Queue Length 95th (m)	1.9	0.0	0.0	0.0	0.0
Control Delay (s)	10.5	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.5	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization		44.0%	ICU Level of Service A
Analysis Period (min)		15	

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	185	1150	75	510	790	180	770
Future Volume (vph)	185	1150	75	510	790	180	770
Turn Type	Prot	NA	Prot	NA	NA	Prot	NA
Protected Phases	3	8	7	4	6	5	2
Permitted Phases							
Detector Phase	3	8	7	4	6	5	2
Switch Phase							
Minimum Initial (s)	5.0	8.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	9.0	45.5	9.0	45.5	41.0	9.0	41.0
Total Split (s)	24.0	72.0	11.0	59.0	50.0	27.0	77.0
Total Split (%)	15.0%	45.0%	6.9%	36.9%	31.3%	16.9%	48.1%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	3.5	1.0	3.5	3.0	1.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	6.5	3.0	6.5	6.0	3.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	20.5	65.5	8.0	53.0	46.0	22.0	71.0
Actuated g/C Ratio	0.13	0.41	0.05	0.33	0.29	0.14	0.44
v/c Ratio	0.90	1.00	0.91	0.75	0.96	0.81	0.65
Control Delay	106.3	70.8	146.1	50.6	76.8	74.8	57.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.3	70.8	146.1	50.6	76.8	74.8	57.8
LOS	F	E	F	D	E	E	E
Approach Delay		75.2		59.8	76.8		60.7
Approach LOS		E		E	E		E

Intersection Summary		
Cycle Length: 160		
Actuated Cycle Length: 160		
Offset: 72 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Green		
Natural Cycle: 115		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.00		
Intersection Signal Delay: 69.0	Intersection LOS: E	
Intersection Capacity Utilization 97.2%	ICU Level of Service F	
Analysis Period (min) 15		

Splits and Phases: 8: Hurontario Street & Dundas Street West/Dundas Street East



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	199	1388	81	758	930	194	946
v/c Ratio	0.90	1.00	0.91	0.75	0.96	0.81	0.65
Control Delay	106.3	70.8	146.1	50.6	76.8	74.8	57.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.3	70.8	146.1	50.6	76.8	74.8	57.8
Queue Length 50th (m)	66.4	~242.9	27.5	114.2	~166.2	68.0	170.8
Queue Length 95th (m)	#113.8	#298.0	#63.3	140.3	#214.7	m83.1	193.4
Internal Link Dist (m)		110.1		127.8	99.4		99.2
Turn Bay Length (m)	35.0		25.0			65.0	
Base Capacity (vph)	227	1386	89	1016	965	260	1458
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	1.00	0.91	0.75	0.96	0.75	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	1150	140	75	510	195	0	790	75	180	770	110
Future Volume (vph)	185	1150	140	75	510	195	0	790	75	180	770	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.5		3.0	6.5			6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.95			0.98		1.00	0.96	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96			0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)	1736	3371		1787	2997			3344		1736	3272	
Flt Permitted	0.95	1.00		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (perm)	1736	3371		1787	2997			3344		1736	3272	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	199	1237	151	81	548	210	0	849	81	194	828	118
RTOR Reduction (vph)	0	6	0	0	25	0	0	4	0	0	7	0
Lane Group Flow (vph)	199	1382	0	81	733	0	0	926	0	194	939	0
Confl. Peds. (#/hr)	150		140	140		150	280		190	190		280
Heavy Vehicles (%)	4%	3%	5%	1%	8%	12%	6%	4%	4%	4%	4%	3%
Turn Type	Prot	NA		Prot	NA			NA		Prot	NA	
Protected Phases	3	8		7	4			6		5	2	
Permitted Phases												
Actuated Green, G (s)	19.5	64.5		7.0	52.0			45.0		21.0	70.0	
Effective Green, g (s)	20.5	65.5		8.0	53.0			46.0		22.0	71.0	
Actuated g/C Ratio	0.13	0.41		0.05	0.33			0.29		0.14	0.44	
Clearance Time (s)	4.0	7.5		4.0	7.5			7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	222	1380		89	992			961		238	1451	
v/s Ratio Prot	c0.11	c0.41		0.05	0.24			c0.28		c0.11	0.29	
v/s Ratio Perm												
v/c Ratio	0.90	1.00		0.91	0.74			0.96		0.82	0.65	
Uniform Delay, d1	68.7	47.2		75.6	47.4			56.2		67.0	34.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00		0.84	1.63	
Incremental Delay, d2	33.6	24.6		66.4	2.9			21.4		13.6	1.5	
Delay (s)	102.3	71.8		142.0	50.3			77.6		70.2	58.0	
Level of Service	F	E		F	D			E		E	E	
Approach Delay (s)		75.7			59.2			77.6			60.1	
Approach LOS		E			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	69.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	80	75	180	345	5	5
Future Volume (Veh/h)	80	75	180	345	5	5
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	95	89	214	411	6	6
Pedestrians	50		40			
Lane Width (m)	3.6		3.6			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	4		3			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			158			
pX, platoon unblocked						
vC, conflicting volume	322	264			675	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	322	264			675	
tC, single (s)	6.5	7.1			4.1	
tC, 2 stage (s)						
tF (s)	3.6	4.1			2.2	
p0 queue free %	84	85			99	
cM capacity (veh/h)	596	578			887	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	184	214	411	12
Volume Left	95	0	0	6
Volume Right	89	0	411	0
cSH	587	1700	1700	887
Volume to Capacity	0.31	0.13	0.24	0.01
Queue Length 95th (m)	10.7	0.0	0.0	0.2
Control Delay (s)	13.9	0.0	0.0	4.6
Lane LOS	B			A
Approach Delay (s)	13.9	0.0		4.6
Approach LOS	B			

Intersection Summary				
Average Delay		3.2		
Intersection Capacity Utilization		35.3%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	0	525	5	5	80
Future Volume (Veh/h)	10	0	525	5	5	80
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	11	0	590	6	6	90
Pedestrians	40		60			
Lane Width (m)	3.6		3.6			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	3		5			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			142			
pX, platoon unblocked						
vC, conflicting volume	750	338			636	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	750	338			636	
tC, single (s)	7.0	6.9			4.8	
tC, 2 stage (s)						
tF (s)	3.6	3.3			2.5	
p0 queue free %	96	100			99	
cM capacity (veh/h)	298	642			736	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	11	393	203	36	60
Volume Left	11	0	0	6	0
Volume Right	0	0	6	0	0
cSH	298	1700	1700	736	1700
Volume to Capacity	0.04	0.23	0.12	0.01	0.04
Queue Length 95th (m)	0.9	0.0	0.0	0.2	0.0
Control Delay (s)	17.6	0.0	0.0	1.7	0.0
Lane LOS	C			A	
Approach Delay (s)	17.6	0.0		0.6	
Approach LOS	C				

Intersection Summary				
Average Delay		0.4		
Intersection Capacity Utilization		24.7%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	180	40	505	85	5
Future Volume (Veh/h)	25	180	40	505	85	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	29	212	47	594	100	6
Pedestrians	210				60	
Lane Width (m)	3.6				3.6	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	18				5	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				124		
pX, platoon unblocked						
vC, conflicting volume	764	263	316			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	764	263	316			
tC, single (s)	6.8	6.9	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	89	65	95			
cM capacity (veh/h)	257	607	983			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	241	245	396	67	39
Volume Left	29	47	0	0	0
Volume Right	212	0	0	0	6
cSH	521	983	1700	1700	1700
Volume to Capacity	0.46	0.05	0.23	0.04	0.02
Queue Length 95th (m)	19.3	1.2	0.0	0.0	0.0
Control Delay (s)	17.7	2.1	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	17.7	0.8		0.0	
Approach LOS	C				

Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	37.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	545	40	10	255
Future Volume (Veh/h)	0	0	545	40	10	255
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	0	612	45	11	287
Pedestrians	30		10			
Lane Width (m)	0.0		3.6			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	0		1			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			60			
pX, platoon unblocked						
vC, conflicting volume	840	358			687	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	840	358			687	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			99	
cM capacity (veh/h)	302	644			916	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	408	249	107	191
Volume Left	0	0	11	0
Volume Right	0	45	0	0
cSH	1700	1700	916	1700
Volume to Capacity	0.24	0.15	0.01	0.11
Queue Length 95th (m)	0.0	0.0	0.3	0.0
Control Delay (s)	0.0	0.0	1.0	0.0
Lane LOS			A	
Approach Delay (s)	0.0		0.4	
Approach LOS				

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	19.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	130	470	70	5	0
Future Volume (Veh/h)	25	130	470	70	5	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	26	137	495	74	5	0
Pedestrians					30	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			93			
pX, platoon unblocked						
vC, conflicting volume	599				682	314
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	599				682	314
tC, single (s)	4.1				7.5	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.8	3.3
p0 queue free %	97				98	100
cM capacity (veh/h)	963				305	670

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	72	91	330	239	5	0
Volume Left	26	0	0	0	5	0
Volume Right	0	0	0	74	0	0
cSH	963	1700	1700	1700	305	1700
Volume to Capacity	0.03	0.05	0.19	0.14	0.02	0.00
Queue Length 95th (m)	0.7	0.0	0.0	0.0	0.4	0.0
Control Delay (s)	3.4	0.0	0.0	0.0	17.0	0.0
Lane LOS	A				C	A
Approach Delay (s)	1.5		0.0		17.0	
Approach LOS					C	

Intersection Summary					
Average Delay	0.4				
Intersection Capacity Utilization	31.6%	ICU Level of Service		A	
Analysis Period (min)	15				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	150	20	100	280	90	0	0	5	0	0	0
Future Volume (Veh/h)	130	150	20	100	280	90	0	0	5	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	137	158	21	105	295	95	0	0	5	0	0	0
Pedestrians								20			30	
Lane Width (m)								3.6			0.0	
Walking Speed (m/s)								1.2			1.2	
Percent Blockage								2			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					149							
pX, platoon unblocked												
vC, conflicting volume	420			199			820	1092	110	940	1056	225
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	420			199			820	1092	110	940	1056	225
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	88			92			100	100	99	100	100	100
cM capacity (veh/h)	1150			1362			225	173	914	186	182	784

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	216	100	252	242	5
Volume Left	137	0	105	0	0
Volume Right	0	21	0	95	5
cSH	1150	1700	1362	1700	914
Volume to Capacity	0.12	0.06	0.08	0.14	0.01
Queue Length 95th (m)	3.2	0.0	2.0	0.0	0.1
Control Delay (s)	5.8	0.0	3.7	0.0	9.0
Lane LOS	A		A		A
Approach Delay (s)	4.0		1.9		9.0
Approach LOS					A

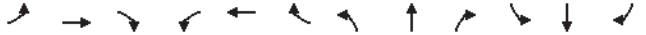
Intersection Summary					
Average Delay	2.7				
Intersection Capacity Utilization	38.3%	ICU Level of Service		A	
Analysis Period (min)	15				



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	215	280	0	85	155
Future Volume (Veh/h)	0	215	280	0	85	155
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	236	308	0	93	170
Pedestrians					20	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					2	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			205			
pX, platoon unblocked						
vC, conflicting volume	328				446	174
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	328				446	174
tC, single (s)	4.1				6.9	7.6
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.6
p0 queue free %	100				82	77
cM capacity (veh/h)	1222				527	738

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	118	118	154	154	263
Volume Left	0	0	0	0	93
Volume Right	0	0	0	0	170
cSH	1700	1700	1700	1700	646
Volume to Capacity	0.07	0.07	0.09	0.09	0.41
Queue Length 95th (m)	0.0	0.0	0.0	0.0	15.8
Control Delay (s)	0.0	0.0	0.0	0.0	14.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		14.3
Approach LOS					B

Intersection Summary				
Average Delay	4.7			
Intersection Capacity Utilization	31.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	160	105	10	225	90	120	120	120	110	0	10	5
Future Volume (vph)	160	105	10	225	90	120	120	120	110	0	10	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	168	111	11	237	95	126	126	126	116	0	11	5

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	279	11	332	126	252	116	16
Volume Left (vph)	168	0	237	0	126	0	0
Volume Right (vph)	0	11	0	126	0	116	5
Hadj (s)	0.30	-0.70	0.83	-0.70	0.90	-0.70	-0.19
Departure Headway (s)	6.8	5.8	7.1	5.6	7.6	6.0	7.3
Degree Utilization, x	0.53	0.02	0.66	0.20	0.53	0.19	0.03
Capacity (veh/h)	504	581	492	616	451	568	431
Control Delay (s)	16.1	7.7	21.6	8.7	17.6	9.2	10.5
Approach Delay (s)	15.8		18.1		14.9		10.5
Approach LOS	C		C		B		B

Intersection Summary				
Delay	16.4			
Level of Service	C			
Intersection Capacity Utilization	50.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	5	0	5	50	345	50	45	155	45
Future Volume (Veh/h)	0	0	5	5	0	5	50	345	50	45	155	45
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	5	5	0	5	54	375	54	49	168	49
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								108				
pX, platoon unblocked												
vC, conflicting volume	591	828	108	697	825	214	217			429		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	591	828	108	697	825	214	217			429		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	98	100	99	96			96		
cM capacity (veh/h)	368	284	931	309	285	797	1365			1141		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	5	10	242	242	133	133
Volume Left	0	5	54	0	49	0
Volume Right	5	5	0	54	0	49
cSH	931	446	1365	1700	1141	1700
Volume to Capacity	0.01	0.02	0.04	0.14	0.04	0.08
Queue Length 95th (m)	0.1	0.6	1.0	0.0	1.1	0.0
Control Delay (s)	8.9	13.3	2.0	0.0	3.3	0.0
Lane LOS	A	B	A		A	
Approach Delay (s)	8.9	13.3	1.0		1.6	
Approach LOS	A	B				

Intersection Summary					
Average Delay	1.4				
Intersection Capacity Utilization	34.7%	ICU Level of Service	A		
Analysis Period (min)	15				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	445	35	25	140
Future Volume (Veh/h)	0	0	445	35	25	140
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	484	38	27	152
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			69			
pX, platoon unblocked						
vC, conflicting volume	633	261			522	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	633	261			522	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			97	
cM capacity (veh/h)	406	744			1055	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	323	199	78	101
Volume Left	0	0	0	27	0
Volume Right	0	0	38	0	0
cSH	1700	1700	1700	1055	1700
Volume to Capacity	0.00	0.19	0.12	0.03	0.06
Queue Length 95th (m)	0.0	0.0	0.0	0.6	0.0
Control Delay (s)	0.0	0.0	0.0	3.1	0.0
Lane LOS	A			A	
Approach Delay (s)	0.0	0.0		1.3	
Approach LOS	A				

Intersection Summary					
Average Delay	0.3				
Intersection Capacity Utilization	24.7%	ICU Level of Service	A		
Analysis Period (min)	15				



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	265	145	70	10	10
Future Volume (Veh/h)	85	265	145	70	10	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	94	294	161	78	11	11
Pedestrians			10		10	
Lane Width (m)			3.6		3.6	
Walking Speed (m/s)			1.2		1.2	
Percent Blockage			1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	249				702	210
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	249				702	210
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				97	99
cM capacity (veh/h)	1317				372	828

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	388	239	22
Volume Left	94	0	11
Volume Right	0	78	11
cSH	1317	1700	513
Volume to Capacity	0.07	0.14	0.04
Queue Length 95th (m)	1.8	0.0	1.1
Control Delay (s)	2.4	0.0	12.3
Lane LOS	A		B
Approach Delay (s)	2.4	0.0	12.3
Approach LOS			B

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	44.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	225	0	0	0	0	15
Future Volume (Veh/h)	225	0	0	0	0	15
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	242	0	0	0	0	16
Pedestrians	10					20
Lane Width (m)	3.6					3.6
Walking Speed (m/s)	1.2					1.2
Percent Blockage	1					2
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	26	30			10	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	26	30			10	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	75	100			100	
cM capacity (veh/h)	986	1024			1609	

Direction, Lane #	WB 1	SB 1
Volume Total	242	16
Volume Left	242	0
Volume Right	0	0
cSH	986	1700
Volume to Capacity	0.25	0.01
Queue Length 95th (m)	7.7	0.0
Control Delay (s)	9.8	0.0
Lane LOS	A	
Approach Delay (s)	9.8	0.0
Approach LOS	A	

Intersection Summary				
Average Delay	9.2			
Intersection Capacity Utilization	22.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	0	15	240	0	0
Future Volume (Veh/h)	10	0	15	240	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	0	19	300	0	0
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			201			
pX, platoon unblocked						
vC, conflicting volume	179	179			329	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	179	179			329	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	808	862			1232	

Direction, Lane #	WB 1	NB 1
Volume Total	12	319
Volume Left	12	0
Volume Right	0	300
cSH	808	1700
Volume to Capacity	0.01	0.19
Queue Length 95th (m)	0.4	0.0
Control Delay (s)	9.5	0.0
Lane LOS	A	
Approach Delay (s)	9.5	0.0
Approach LOS	A	

Intersection Summary				
Average Delay		0.3		
Intersection Capacity Utilization		26.6%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	5	1050	5	0	1560
Future Volume (Veh/h)	0	5	1050	5	0	1560
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	5	1117	5	0	1660
Pedestrians	110					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	9					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			68			
pX, platoon unblocked	0.86	0.86			0.86	
vC, conflicting volume	2060	671			1232	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1912	306			955	
tC, single (s)	7.8	7.6			4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.6			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	27	476			572	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	5	745	377	830	830
Volume Left	0	0	0	0	0
Volume Right	5	0	5	0	0
cSH	476	1700	1700	1700	1700
Volume to Capacity	0.01	0.44	0.22	0.49	0.49
Queue Length 95th (m)	0.3	0.0	0.0	0.0	0.0
Control Delay (s)	12.6	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	12.6	0.0		0.0	
Approach LOS	B				

Intersection Summary				
Average Delay		0.0		
Intersection Capacity Utilization		46.5%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	0	0	1065	1215	5
Future Volume (Veh/h)	5	0	0	1065	1215	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	0	0	1121	1279	5
Pedestrians	50					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	4					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				78	62	
pX, platoon unblocked	0.81	0.72	0.72			
vC, conflicting volume	1892	692	1334			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	651	0	694			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	100			
cM capacity (veh/h)	315	755	631			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	5	560	560	853	431
Volume Left	5	0	0	0	0
Volume Right	0	0	0	0	5
cSH	315	1700	1700	1700	1700
Volume to Capacity	0.02	0.33	0.33	0.50	0.25
Queue Length 95th (m)	0.4	0.0	0.0	0.0	0.0
Control Delay (s)	16.6	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	16.6	0.0		0.0	
Approach LOS	C				

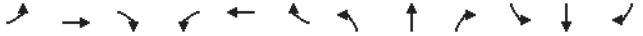
Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	Err%	ICU Level of Service		H
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	355	5	0	535	5	0	0	0	0	0	5
Future Volume (Veh/h)	5	355	5	0	535	5	0	0	0	0	0	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	6	403	6	0	608	6	0	0	0	0	0	6
Pedestrians					10			30			10	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					1			3			1	
Right turn flare (veh)												
Median type		TWLTL			None							
Median storage veh)		2										
Upstream signal (m)		151			79							
pX, platoon unblocked	0.98						0.98	0.98		0.98	0.98	0.98
vC, conflicting volume	624			439			758	1072	244	844	1072	317
vC1, stage 1 conf vol							448	448		621	621	
vC2, stage 2 conf vol							310	624		224	451	
vCu, unblocked vol	569			439			706	1027	244	795	1027	255
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	100	100	99
cM capacity (veh/h)	982			1103			490	409	737	434	412	727

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	208	208	304	310	0	6
Volume Left	6	0	0	0	0	0
Volume Right	0	6	0	6	0	6
cSH	982	1700	1103	1700	1700	727
Volume to Capacity	0.01	0.12	0.00	0.18	0.00	0.01
Queue Length 95th (m)	0.1	0.0	0.0	0.0	0.0	0.2
Control Delay (s)	0.3	0.0	0.0	0.0	0.0	10.0
Lane LOS	A				A	A
Approach Delay (s)	0.2		0.0		0.0	10.0
Approach LOS					A	A

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	27.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	350	20	25	515	0	10	0	15	0	0	5
Future Volume (Veh/h)	0	350	20	25	515	0	10	0	15	0	0	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	0	417	24	30	613	0	12	0	18	0	0	6
Pedestrians					10			50			30	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					1			4			3	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (m)		108			121							
pX, platoon unblocked				0.99			0.99	0.99	0.99	0.99	0.99	
vC, conflicting volume	643			491			852	1182	280	940	1194	336
vC1, stage 1 conf vol							479	479		703	703	
vC2, stage 2 conf vol							372	703		236	491	
vCu, unblocked vol	643			461			826	1160	248	915	1173	336
tC, single (s)	4.1			4.7			9.2	6.5	7.9	8.5	6.5	7.6
tC, 2 stage (s)							8.2	5.5		7.5	5.5	
tF (s)	2.2			2.5			4.4	4.0	3.8	4.0	4.0	3.6
p0 queue free %	100			97			96	100	97	100	100	99
cM capacity (veh/h)	928			878			295	359	587	266	351	562

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	0	278	163	30	409	204	30	6
Volume Left	0	0	0	30	0	0	12	0
Volume Right	0	0	24	0	0	0	18	6
cSH	1700	1700	1700	878	1700	1700	421	562
Volume to Capacity	0.00	0.16	0.10	0.03	0.24	0.12	0.07	0.01
Queue Length 95th (m)	0.0	0.0	0.0	0.8	0.0	0.0	1.8	0.3
Control Delay (s)	0.0	0.0	0.0	9.2	0.0	0.0	14.2	11.5
Lane LOS				A			B	B
Approach Delay (s)	0.0			0.4			14.2	11.5
Approach LOS							B	B

Intersection Summary					
Average Delay	0.7				
Intersection Capacity Utilization	37.5%	ICU Level of Service	A		
Analysis Period (min)	15				



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	355	0	0	535	5	5
Future Volume (Veh/h)	355	0	0	535	5	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	403	0	0	608	6	6
Pedestrians				10	30	
Lane Width (m)				3.6	3.6	
Walking Speed (m/s)				1.2	1.2	
Percent Blockage				1	3	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	173			56		
pX, platoon unblocked					0.97	
vC, conflicting volume			433		737	242
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			433		671	242
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	99
cM capacity (veh/h)			1109		373	740

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	269	134	203	405	12
Volume Left	0	0	0	0	6
Volume Right	0	0	0	0	6
cSH	1700	1700	1109	1700	496
Volume to Capacity	0.16	0.08	0.00	0.24	0.02
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.6
Control Delay (s)	0.0	0.0	0.0	0.0	12.4
Lane LOS					B
Approach Delay (s)	0.0		0.0		12.4
Approach LOS					B

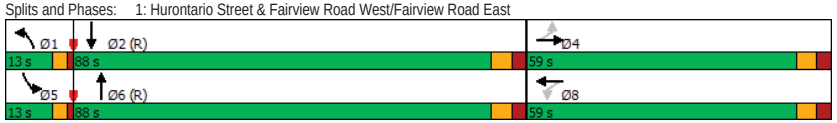
Intersection Summary					
Average Delay	0.1				
Intersection Capacity Utilization	27.6%	ICU Level of Service	A		
Analysis Period (min)	15				

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	45	70	120	90	105	1415	115	1450
Future Volume (vph)	45	70	120	90	105	1415	115	1450
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8					
Detector Phase	4	4	8	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	40.0	40.0	40.0	40.0	9.0	29.0	9.0	29.0
Total Split (s)	59.0	59.0	59.0	59.0	13.0	88.0	13.0	88.0
Total Split (%)	36.9%	36.9%	36.9%	36.9%	8.1%	55.0%	8.1%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	1.0	3.0	1.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	30.1	30.1	30.1	30.1	18.7	94.1	20.8	96.2
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.12	0.59	0.13	0.60
v/c Ratio	0.33	0.40	0.66	0.59	0.53	0.89	0.52	0.78
Control Delay	60.6	46.7	76.2	54.3	95.7	29.9	73.2	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.6	46.7	76.2	54.3	95.7	29.9	73.2	28.9
LOS	E	D	E	D	F	C	E	C
Approach Delay		50.2		62.8		33.8		32.0
Approach LOS		D		E		C		C

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 36.1 — Intersection LOS: D
Intersection Capacity Utilization 101.5% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 1: Hurontario Street & Fairview Road West/Fairview Road East



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	47	137	126	200	111	1742	121	1637
v/c Ratio	0.33	0.40	0.66	0.59	0.53	0.89	0.52	0.78
Control Delay	60.6	46.7	76.2	54.3	95.7	29.9	73.2	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.6	46.7	76.2	54.3	95.7	29.9	73.2	28.9
Queue Length 50th (m)	13.4	30.9	38.4	48.9	38.8	267.5	38.6	222.7
Queue Length 95th (m)	27.2	52.9	63.6	77.1	m58.3	#328.7	60.5	267.8
Internal Link Dist (m)		78.1		66.2		510.0		77.3
Turn Bay Length (m)	75.0		40.0		120.0		50.0	
Base Capacity (vph)	253	586	335	570	210	1968	234	2087
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.23	0.38	0.35	0.53	0.89	0.52	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	70	60	120	90	100	105	1415	240	115	1450	105
Future Volume (vph)	45	70	60	120	90	100	105	1415	240	115	1450	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.97		1.00	0.97		1.00	0.96		1.00	0.98	
Flpb, ped/bikes	0.97	1.00		0.96	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.92		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1755	1713		1707	1648		1805	3336		1805	3467	
Flt Permitted	0.42	1.00		0.56	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	770	1713		1015	1648		1805	3336		1805	3467	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	74	63	126	95	105	111	1489	253	121	1526	111
RTOR Reduction (vph)	0	24	0	0	30	0	0	7	0	0	3	0
Lane Group Flow (vph)	47	113	0	126	170	0	111	1735	0	121	1634	0
Confl. Peds. (#/hr)	30		40	40		30	80		70	70		80
Heavy Vehicles (%)	0%	0%	0%	1%	0%	6%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)	29.1	29.1		29.1	29.1		17.7	93.1		19.8	95.2	
Effective Green, g (s)	30.1	30.1		30.1	30.1		18.7	94.1		20.8	96.2	
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.12	0.59		0.13	0.60	
Clearance Time (s)	7.0	7.0		7.0	7.0		4.0	7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	144	322		190	310		210	1961		234	2084	
v/s Ratio Prot		0.07			0.10		0.06	c0.52		c0.07	0.47	
v/s Ratio Perm	0.06			c0.12								
v/c Ratio	0.33	0.35		0.66	0.55		0.53	0.88		0.52	0.78	
Uniform Delay, d1	56.2	56.5		60.2	58.8		66.5	28.3		64.9	24.1	
Progression Factor	1.00	1.00		1.00	1.00		1.32	0.82		1.00	1.00	
Incremental Delay, d2	1.3	0.7		8.4	2.0		2.1	5.5		1.9	3.0	
Delay (s)	57.5	57.1		68.7	60.8		89.9	28.6		66.8	27.1	
Level of Service	E	E		E	E		F	C		E	C	
Approach Delay (s)		57.2			63.8			32.3			29.8	
Approach LOS		E			E			C			C	

Intersection Summary				
HCM 2000 Control Delay	34.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	101.5%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	340	30	15	15	55	1030	100	1120	130
Future Volume (vph)	340	30	15	15	55	1030	100	1120	130
Turn Type	pm+pt	NA	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8		4	1	6	5	2	
Permitted Phases	8		4						2
Detector Phase	3	8	4	4	1	6	5	2	2
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	8.0
Minimum Split (s)	8.0	46.0	46.0	46.0	9.0	38.0	9.0	38.0	38.0
Total Split (s)	15.0	61.0	46.0	46.0	20.0	79.0	20.0	79.0	79.0
Total Split (%)	9.4%	38.1%	28.8%	28.8%	12.5%	49.4%	12.5%	49.4%	49.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	4.0	4.0	4.0	1.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	3.0	6.0	3.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	62.1	57.1	33.0	33.0	11.6	72.3	14.7	77.5	77.5
Actuated g/C Ratio	0.39	0.36	0.21	0.21	0.07	0.45	0.09	0.48	0.48
v/c Ratio	0.72	0.20	0.07	0.23	0.45	0.71	0.64	0.70	0.21
Control Delay	47.7	12.0	47.4	9.7	105.3	30.0	66.4	42.6	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	47.7	12.0	47.4	9.7	105.3	30.2	66.4	42.6	19.8
LOS	D	B	D	A	F	C	E	D	B
Approach Delay		39.0		13.1		33.9		42.2	
Approach LOS		D		B		C		D	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 107 (67%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 37.1		Intersection LOS: D	
Intersection Capacity Utilization 98.8%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 2: Hurontario Street & John Street

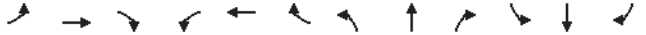




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	362	117	16	165	59	1123	106	1191	138
v/c Ratio	0.72	0.20	0.07	0.23	0.45	0.71	0.64	0.70	0.21
Control Delay	47.7	12.0	47.4	9.7	105.3	30.0	66.4	42.6	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	47.7	12.0	47.4	9.7	105.3	30.2	66.4	42.6	19.8
Queue Length 50th (m)	85.2	6.5	4.2	2.1	20.4	183.7	34.0	218.7	24.8
Queue Length 95th (m)	129.4	22.7	11.1	12.4	m35.0	195.2	m43.8	242.0	m37.1
Internal Link Dist (m)		69.2		56.1		37.7		43.8	
Turn Bay Length (m)					15.0		30.0		40.0
Base Capacity (vph)	504	601	287	822	191	1709	191	1781	680
Starvation Cap Reductn	0	0	0	0	0	106	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	8	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.19	0.06	0.20	0.31	0.70	0.55	0.67	0.20

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	30	80	15	15	140	55	1030	25	100	1120	130
Future Volume (vph)	340	30	80	15	15	140	55	1030	25	100	1120	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	7.0		7.0	7.0		3.0	6.0		3.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.96		1.00	0.93		1.00	1.00		1.00	1.00	0.87
Flpb, ped/bikes	0.97	1.00		0.96	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1686	1449		1645	2913		1805	3511		1805	3539	1272
Flt Permitted	0.61	1.00		0.68	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1083	1449		1181	2913		1805	3511		1805	3539	1272
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	362	32	85	16	16	149	59	1096	27	106	1191	138
RTOR Reduction (vph)	0	55	0	0	118	0	0	1	0	0	0	43
Lane Group Flow (vph)	362	62	0	16	47	0	59	1122	0	106	1191	95
Confl. Peds. (#/hr)	50		40	40		50	80		70	70		80
Heavy Vehicles (%)	4%	0%	16%	5%	0%	0%	0%	2%	0%	0%	2%	10%
Turn Type	pm+pt	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4								2
Actuated Green, G (s)	56.1	56.1		32.0	32.0		9.3	71.2		13.7	75.6	75.6
Effective Green, g (s)	57.1	57.1		33.0	33.0		10.3	72.2		14.7	76.6	76.6
Actuated g/C Ratio	0.36	0.36		0.21	0.21		0.06	0.45		0.09	0.48	0.48
Clearance Time (s)	3.0	8.0		8.0	8.0		4.0	7.0		4.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	469	517		243	600		116	1584		165	1694	608
v/s Ratio Prot	c0.11	0.04			0.02		0.03	0.32		c0.06	c0.34	
v/s Ratio Perm	0.17			0.01								0.07
v/c Ratio	0.77	0.12		0.07	0.08		0.51	0.71		0.64	0.70	0.16
Uniform Delay, d1	42.8	34.6		51.1	51.2		72.4	35.4		70.1	32.8	23.5
Progression Factor	1.00	1.00		1.00	1.00		1.35	0.74		0.77	1.17	1.65
Incremental Delay, d2	7.7	0.1		0.1	0.1		3.1	2.4		5.8	1.7	0.4
Delay (s)	50.6	34.7		51.2	51.3		101.2	28.6		59.8	40.1	39.2
Level of Service	D	C		D	D		F	C		E	D	D
Approach Delay (s)		46.7			51.3			32.2			41.5	
Approach LOS		D			D			C			D	

Intersection Summary					
HCM 2000 Control Delay	39.4	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.68				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.0		
Intersection Capacity Utilization	98.8%	ICU Level of Service	F		
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	205	150	30	260	135	810	65	1035
Future Volume (vph)	205	150	30	260	135	810	65	1035
Turn Type	pm+pt	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases	3	8		4	1	6	5	2
Permitted Phases	8		4					
Detector Phase	3	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	8.0	56.0	56.0	56.0	9.0	51.5	9.0	51.5
Total Split (s)	8.0	64.0	56.0	56.0	25.0	82.0	14.0	71.0
Total Split (%)	5.0%	40.0%	35.0%	35.0%	15.6%	51.3%	8.8%	44.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	4.0	4.0	4.0	1.0	3.5	1.0	3.5
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	3.0	6.5	3.0	6.5
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	60.0	55.0	42.5	42.5	18.0	78.2	10.3	70.5
Actuated g/C Ratio	0.38	0.34	0.27	0.27	0.11	0.49	0.06	0.44
v/c Ratio	0.58	0.40	0.13	0.38	0.69	0.51	0.58	0.76
Control Delay	47.3	24.0	41.8	43.6	99.3	20.6	109.8	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.2
Total Delay	47.3	24.0	41.8	43.6	99.3	21.1	109.8	17.1
LOS	D	C	D	D	F	C	F	B
Approach Delay		30.9		43.5		31.9		22.2
Approach LOS		C		D		C		C

Intersection Summary		
Cycle Length: 160		
Actuated Cycle Length: 160		
Offset: 99 (62%), Referenced to phase 2:SBT and 6:NBT, Start of Green		
Natural Cycle: 125		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.76		
Intersection Signal Delay: 29.4	Intersection LOS: C	
Intersection Capacity Utilization 108.0%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	207	495	30	354	136	853	66	1151
v/c Ratio	0.58	0.40	0.13	0.38	0.69	0.51	0.58	0.76
Control Delay	47.3	24.0	41.8	43.6	99.3	20.6	109.8	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.2
Total Delay	47.3	24.0	41.8	43.6	99.3	21.1	109.8	17.1
Queue Length 50th (m)	42.0	28.5	7.3	44.0	48.3	55.5	23.5	37.0
Queue Length 95th (m)	74.6	55.7	16.7	59.2	m55.2	m54.8	m35.5	70.2
Internal Link Dist (m)		32.2		62.6		277.3		54.3
Turn Bay Length (m)	50.0		50.0		75.0		65.0	
Base Capacity (vph)	356	1316	268	1061	243	1742	122	1534
Starvation Cap Reductn	0	0	0	0	0	0	0	58
Spillback Cap Reductn	0	0	0	1	0	451	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.38	0.11	0.33	0.56	0.66	0.54	0.78

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	150	340	30	260	90	135	810	35	65	1035	105
Future Volume (vph)	205	150	340	30	260	90	135	810	35	65	1035	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	7.0		7.0	7.0		3.0	6.5		3.0	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.96		1.00	0.98		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1733	3110		1769	3398		1770	3441		1787	3431	
Flt Permitted	0.44	1.00		0.47	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	795	3110		877	3398		1770	3441		1787	3431	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	207	152	343	30	263	91	136	818	35	66	1045	106
RTOR Reduction (vph)	0	161	0	0	23	0	0	2	0	0	4	0
Lane Group Flow (vph)	207	334	0	30	331	0	136	851	0	66	1147	0
Confl. Peds. (#/hr)	50		40	40		50	80		80	80		80
Confl. Bikes (#/hr)						1			1			2
Heavy Vehicles (%)	3%	1%	0%	0%	0%	2%	2%	4%	0%	1%	3%	1%
Turn Type	pm+pt	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4								
Actuated Green, G (s)	54.1	54.1		41.5	41.5		17.0	77.1		9.3	69.4	
Effective Green, g (s)	55.1	55.1		42.5	42.5		18.0	78.1		10.3	70.4	
Actuated g/C Ratio	0.34	0.34		0.27	0.27		0.11	0.49		0.06	0.44	
Clearance Time (s)	3.0	8.0		8.0	8.0		4.0	7.5		4.0	7.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	335	1071		232	902		199	1679		115	1509	
v/s Ratio Prot	c0.04	0.11			c0.10		c0.08	0.25		0.04	c0.33	
v/s Ratio Perm	0.17			0.03								
v/c Ratio	0.62	0.31		0.13	0.37		0.68	0.51		0.57	0.76	
Uniform Delay, d1	41.5	38.5		44.7	47.8		68.3	27.9		72.7	37.7	
Progression Factor	1.09	1.24		1.00	1.00		1.33	0.69		1.29	0.35	
Incremental Delay, d2	3.3	0.2		0.3	0.3		4.9	0.6		5.3	2.9	
Delay (s)	48.5	48.0		44.9	48.1		95.3	19.7		99.2	16.2	
Level of Service	D	D		D	D		F	B		F	B	
Approach Delay (s)		48.1			47.8			30.1			20.7	
Approach LOS		D			D			C			C	

Intersection Summary				
HCM 2000 Control Delay	32.5	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.5	
Intersection Capacity Utilization	108.0%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	80	410	425	260	195
Future Volume (vph)	80	410	425	260	195
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	1	6	2	4	
Permitted Phases	6				4
Detector Phase	1	6	2	4	4
Switch Phase					
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	33.5	33.5	26.0	26.0
Total Split (s)	28.0	134.0	106.0	26.0	26.0
Total Split (%)	17.5%	83.8%	66.3%	16.3%	16.3%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	3.5	3.5	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	5.0	5.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	95.4	90.9	78.7	57.6	57.6
Actuated g/C Ratio	0.60	0.57	0.49	0.36	0.36
v/c Ratio	0.21	0.21	0.30	0.58	0.33
Control Delay	13.1	16.4	32.4	51.2	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	16.4	32.4	51.2	6.6
LOS	B	B	C	D	A
Approach Delay		15.9	32.4	32.1	
Approach LOS		B	C	C	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 26.7		Intersection LOS: C	
Intersection Capacity Utilization 53.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Hillcrest Avenue & Go Access Road





Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	82	423	510	268	201
v/c Ratio	0.21	0.21	0.30	0.58	0.33
Control Delay	13.1	16.4	32.4	51.2	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	16.4	32.4	51.2	6.6
Queue Length 50th (m)	10.0	31.5	67.8	77.5	0.0
Queue Length 95th (m)	16.2	37.3	83.3	117.6	20.9
Internal Link Dist (m)		144.9	84.1	44.8	
Turn Bay Length (m)	70.0				
Base Capacity (vph)	477	2876	2161	464	609
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	0.17	0.15	0.24	0.58	0.33

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	80	410	425	70	260	195
Future Volume (vph)	80	410	425	70	260	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.5	6.5		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	0.99	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1384	3610	3462		1289	1335
Flt Permitted	0.41	1.00	1.00		0.95	1.00
Satd. Flow (perm)	594	3610	3462		1289	1335
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	82	423	438	72	268	201
RTOR Reduction (vph)	0	0	11	0	0	129
Lane Group Flow (vph)	82	423	499	0	268	72
Confl. Peds. (#/hr)	40			40	10	
Heavy Vehicles (%)	29%	0%	1%	0%	40%	21%
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6					4
Actuated Green, G (s)	89.9	89.9	77.7		56.6	56.6
Effective Green, g (s)	90.9	90.9	78.7		57.6	57.6
Actuated g/C Ratio	0.57	0.57	0.49		0.36	0.36
Clearance Time (s)	3.0	7.5	7.5		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	387	2050	1702		464	480
v/s Ratio Prot	c0.01	0.12	c0.14		c0.21	
v/s Ratio Perm	0.11					0.05
v/c Ratio	0.21	0.21	0.29		0.58	0.15
Uniform Delay, d1	16.2	16.9	24.1		41.4	34.6
Progression Factor	1.00	1.00	1.43		1.00	1.00
Incremental Delay, d2	0.3	0.2	0.4		1.7	0.1
Delay (s)	16.5	17.1	35.0		43.1	34.8
Level of Service	B	B	D		D	C
Approach Delay (s)		17.0	35.0		39.5	
Approach LOS		B	D		D	

Intersection Summary				
HCM 2000 Control Delay	30.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

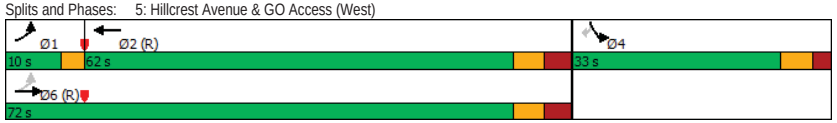
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	220	340	525	150	355
Future Volume (vph)	220	340	525	150	355
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	1	6	2	4	
Permitted Phases	6				4
Detector Phase	1	6	2	4	4
Switch Phase					
Minimum Initial (s)	5.0	8.0	8.0	4.0	4.0
Minimum Split (s)	8.0	38.5	38.5	31.5	31.5
Total Split (s)	10.0	72.0	62.0	33.0	33.0
Total Split (%)	9.5%	68.6%	59.0%	31.4%	31.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	3.5	3.5	2.5	2.5
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	5.5	5.5
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	71.3	66.8	53.2	26.2	26.2
Actuated g/C Ratio	0.68	0.64	0.51	0.25	0.25
v/c Ratio	0.43	0.16	0.38	0.36	0.66
Control Delay	8.8	8.0	16.2	35.2	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.8	8.0	16.2	35.2	15.2
LOS	A	A	B	D	B
Approach Delay		8.3	16.2	21.1	
Approach LOS		A	B	C	

Intersection Summary

Cycle Length: 105
Actuated Cycle Length: 105
Offset: 90 (86%), Referenced to phase 2:WBT and 6:EBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 15.1 — Intersection LOS: B
Intersection Capacity Utilization 71.3% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Hillcrest Avenue & GO Access (West)



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	237	366	667	161	382
v/c Ratio	0.43	0.16	0.38	0.36	0.66
Control Delay	8.8	8.0	16.2	35.2	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.8	8.0	16.2	35.2	15.2
Queue Length 50th (m)	16.7	15.3	41.8	28.7	15.8
Queue Length 95th (m)	27.1	22.1	60.6	47.6	49.3
Internal Link Dist (m)		22.5	144.9	35.6	
Turn Bay Length (m)	30.0				
Base Capacity (vph)	555	2230	1820	472	590
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	0.43	0.16	0.37	0.34	0.65

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	220	340	525	95	150	355
Future Volume (vph)	220	340	525	95	150	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.5	6.5		5.5	5.5
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00	0.89
Flpb, ped/bikes	0.99	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1792	3505	3410		1805	1436
Flt Permitted	0.34	1.00	1.00		0.95	1.00
Satd. Flow (perm)	641	3505	3410		1805	1436
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	237	366	565	102	161	382
RTOR Reduction (vph)	0	0	15	0	0	218
Lane Group Flow (vph)	237	366	652	0	161	164
Confl. Peds. (#/hr)	70			70	30	80
Heavy Vehicles (%)	0%	3%	2%	3%	0%	0%
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6					4
Actuated Green, G (s)	65.8	65.8	52.1		25.2	25.2
Effective Green, g (s)	66.8	66.8	53.1		26.2	26.2
Actuated g/C Ratio	0.64	0.64	0.51		0.25	0.25
Clearance Time (s)	3.0	7.5	7.5		6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	536	2229	1724		450	358
v/s Ratio Prot	c0.05	0.10	c0.19		0.09	
v/s Ratio Perm	0.23					c0.11
v/c Ratio	0.44	0.16	0.38		0.36	0.46
Uniform Delay, d1	8.5	7.8	15.9		32.5	33.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6	0.2	0.6		0.5	0.9
Delay (s)	9.0	7.9	16.5		33.0	34.3
Level of Service	A	A	B		C	C
Approach Delay (s)		8.4	16.5		33.9	
Approach LOS		A	B		C	

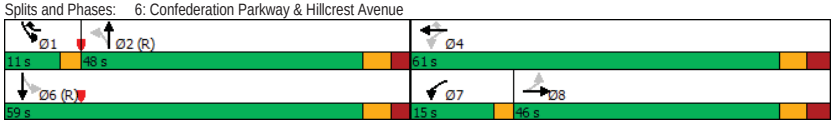
Intersection Summary				
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.41			
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	71.3%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	115	175	360	250	270	25	955	225	730
Future Volume (vph)	115	175	360	250	270	25	955	225	730
Turn Type	Perm	NA	pm+pt	NA	pm+ov	Perm	NA	pm+pt	NA
Protected Phases		8	7	4	1		2	1	6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	7	4	1	2	2	1	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	5.0	8.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	45.5	45.5	8.0	45.5	8.0	48.0	48.0	8.0	48.0
Total Split (s)	46.0	46.0	15.0	61.0	11.0	48.0	48.0	11.0	59.0
Total Split (%)	38.3%	38.3%	12.5%	50.8%	9.2%	40.0%	40.0%	9.2%	49.2%
Yellow Time (s)	4.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	3.5	3.5	0.0	3.5	0.0	3.0	3.0	0.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.5	6.5	2.0	6.5	2.0	6.0	6.0	2.0	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	29.7	29.7	49.5	45.0	65.1	44.9	44.9	66.5	62.5
Actuated g/C Ratio	0.25	0.25	0.41	0.38	0.54	0.37	0.37	0.55	0.52
v/c Ratio	0.45	0.49	0.87	0.38	0.34	0.12	0.91	0.79	0.51
Control Delay	41.0	38.7	48.1	27.5	13.3	28.3	46.7	48.2	21.3
Queue Delay	0.0	0.0	51.0	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay	41.0	38.7	99.1	27.5	13.8	28.3	46.7	48.2	21.3
LOS	D	D	F	C	B	C	D	D	C
Approach Delay		39.5		52.6			46.3		26.9
Approach LOS		D		D			D		C

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 41.1		Intersection LOS: D	
Intersection Capacity Utilization 108.0%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 6: Confederation Parkway & Hillcrest Avenue



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	122	223	383	266	287	27	1186	239	921
v/c Ratio	0.45	0.49	0.87	0.38	0.34	0.12	0.91	0.79	0.51
Control Delay	41.0	38.7	48.1	27.5	13.3	28.3	46.7	48.2	21.3
Queue Delay	0.0	0.0	51.0	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay	41.0	38.7	99.1	27.5	13.8	28.3	46.7	48.2	21.3
Queue Length 50th (m)	22.9	40.5	60.7	41.4	29.4	4.6	149.5	~52.9	86.3
Queue Length 95th (m)	40.8	63.2	#88.7	62.0	46.3	12.1	#198.3	#105.9	107.6
Internal Link Dist (m)		72.4		67.3			99.6		86.6
Turn Bay Length (m)	25.0		35.0			35.0		30.0	
Base Capacity (vph)	361	606	440	846	843	216	1307	302	1815
Starvation Cap Reductn	0	0	96	0	245	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.37	1.11	0.31	0.48	0.13	0.91	0.79	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	175	35	360	250	270	25	955	160	225	730	135
Future Volume (vph)	115	175	35	360	250	270	25	955	160	225	730	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		2.0	6.5	2.0	6.0	6.0		2.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00	1.00	0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1758	1825		1722	1863	1526	1783	3465		1805	3461	
Flt Permitted	0.60	1.00		0.46	1.00	1.00	0.31	1.00		0.09	1.00	
Satd. Flow (perm)	1101	1825		829	1863	1526	582	3465		162	3461	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	122	186	37	383	266	287	27	1016	170	239	777	144
RTOR Reduction (vph)	0	7	0	0	0	18	0	11	0	0	11	0
Lane Group Flow (vph)	122	216	0	383	266	269	27	1175	0	239	910	0
Confl. Peds. (#/hr)	40		30	30		40	30		60	60		30
Heavy Vehicles (%)	0%	1%	0%	4%	2%	2%	0%	0%	7%	0%	1%	0%
Turn Type	Perm	NA		pm+pt	NA	pm+ov	Perm	NA		pm+pt	NA	
Protected Phases		8		7	4	1		2		1	6	
Permitted Phases	8			4		4	2			6		
Actuated Green, G (s)	28.7	28.7		44.0	44.0	58.6	43.9	43.9		61.5	61.5	
Effective Green, g (s)	29.7	29.7		45.0	45.0	60.6	44.9	44.9		62.5	62.5	
Actuated g/C Ratio	0.25	0.25		0.38	0.38	0.51	0.37	0.37		0.52	0.52	
Clearance Time (s)	7.5	7.5		3.0	7.5	3.0	7.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	272	451		409	698	770	217	1296		297	1802	
v/s Ratio Prot		0.12		c0.10	0.14	0.05		c0.34		c0.10	0.26	
v/s Ratio Perm	0.11			0.25		0.13	0.05			0.31		
v/c Ratio	0.45	0.48		0.94	0.38	0.35	0.12	0.91		0.80	0.50	
Uniform Delay, d1	38.2	38.5		34.3	27.3	17.9	24.6	35.6		32.1	18.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	0.8		28.7	0.3	0.3	1.2	10.8		14.6	1.0	
Delay (s)	39.4	39.4		63.1	27.7	18.1	25.8	46.3		46.6	19.7	
Level of Service	D	D		E	C	B	C	D		D	B	
Approach Delay (s)		39.4			39.2			45.9			25.3	
Approach LOS		D			D			D			C	

Intersection Summary					
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service		D	
HCM 2000 Volume to Capacity ratio	0.77				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		16.5	
Intersection Capacity Utilization	108.0%	ICU Level of Service		G	
Analysis Period (min)	15				

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	65	0	910	1280	75
Future Volume (Veh/h)	0	65	0	910	1280	75
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	68	0	948	1333	78
Pedestrians	120			10	10	
Lane Width (m)	3.6			3.6	3.6	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	10			1	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				123	301	
pX, platoon unblocked	0.83	0.73	0.73			
vC, conflicting volume	1976	836	1531			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	673	26	981			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	90	100			
cM capacity (veh/h)	291	682	466			

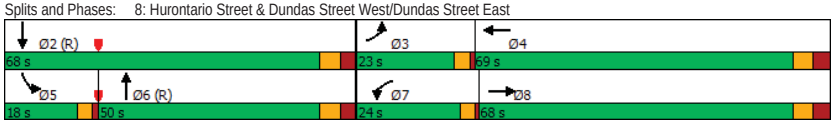
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	68	474	474	889	522
Volume Left	0	0	0	0	0
Volume Right	68	0	0	0	78
cSH	682	1700	1700	1700	1700
Volume to Capacity	0.10	0.28	0.28	0.52	0.31
Queue Length 95th (m)	2.6	0.0	0.0	0.0	0.0
Control Delay (s)	10.9	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.9	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay		0.3	
Intersection Capacity Utilization		52.2%	ICU Level of Service A
Analysis Period (min)		15	

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	215	810	130	975	630	160	935
Future Volume (vph)	215	810	130	975	630	160	935
Turn Type	Prot	NA	Prot	NA	NA	Prot	NA
Protected Phases	3	8	7	4	6	5	2
Permitted Phases							
Detector Phase	3	8	7	4	6	5	2
Switch Phase							
Minimum Initial (s)	5.0	8.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	9.0	45.5	9.0	45.5	41.0	9.0	41.0
Total Split (s)	23.0	68.0	24.0	69.0	50.0	18.0	68.0
Total Split (%)	14.4%	42.5%	15.0%	43.1%	31.3%	11.3%	42.5%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	3.5	1.0	3.5	3.0	1.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	6.5	3.0	6.5	6.0	3.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	20.0	64.4	17.0	61.4	44.8	15.3	63.1
Actuated g/C Ratio	0.12	0.40	0.11	0.38	0.28	0.10	0.39
v/c Ratio	0.92	0.73	0.66	0.94	0.86	0.90	0.94
Control Delay	108.5	43.9	84.1	61.4	63.9	102.5	74.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.5	43.9	84.1	61.4	63.9	102.5	74.1
LOS	F	D	F	E	E	F	E
Approach Delay		55.7		63.6	63.9		77.5
Approach LOS		E		E	E		E

Intersection Summary		
Cycle Length: 160		
Actuated Cycle Length: 160		
Offset: 72 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Green		
Natural Cycle: 115		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.94		
Intersection Signal Delay: 65.7	Intersection LOS: E	
Intersection Capacity Utilization 101.3%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 8: Hurontario Street & Dundas Street West/Dundas Street East



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	217	970	131	1197	782	162	1197
v/c Ratio	0.92	0.73	0.66	0.94	0.86	0.90	0.94
Control Delay	108.5	43.9	84.1	61.4	63.9	102.5	74.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.5	43.9	84.1	61.4	63.9	102.5	74.1
Queue Length 50th (m)	72.9	140.7	42.8	198.2	129.8	57.1	219.3
Queue Length 95th (m)	#125.0	174.4	65.4	#243.6	#158.1	m#94.6	#257.2
Internal Link Dist (m)		110.1		127.8	99.4		99.2
Turn Bay Length (m)	35.0		25.0			65.0	
Base Capacity (vph)	237	1332	246	1293	913	180	1272
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.73	0.53	0.93	0.86	0.90	0.94

Intersection Summary

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	810	150	130	975	210	0	630	145	160	935	250
Future Volume (vph)	215	810	150	130	975	210	0	630	145	160	935	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.5		3.0	6.5			6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.95		1.00	0.95			0.93		1.00	0.92	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97			0.97		1.00	0.97	
Flt Protected	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Satd. Flow (prot)	1900	3288		1881	3283			3220		1881	3186	
Flt Permitted	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Satd. Flow (perm)	1900	3288		1881	3283			3220		1881	3186	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	217	818	152	131	985	212	0	636	146	162	944	253
RTOR Reduction (vph)	0	9	0	0	12	0	0	12	0	0	15	0
Lane Group Flow (vph)	217	961	0	131	1185	0	0	770	0	162	1182	0
Confl. Peds. (#/hr)	220		290	290		220	500		410	410		500
Heavy Vehicles (%)	0%	2%	1%	1%	2%	0%	2%	2%	0%	1%	1%	0%
Turn Type	Prot	NA		Prot	NA			NA		Prot	NA	
Protected Phases	3	8		7	4			6		5	2	
Permitted Phases												
Actuated Green, G (s)	19.0	63.4		16.0	60.4			43.8		14.3	62.1	
Effective Green, g (s)	20.0	64.4		17.0	61.4			44.8		15.3	63.1	
Actuated g/C Ratio	0.12	0.40		0.11	0.38			0.28		0.10	0.39	
Clearance Time (s)	4.0	7.5		4.0	7.5			7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	237	1323		199	1259			901		179	1256	
v/s Ratio Prot	c0.11	c0.29		0.07	c0.36			0.24		0.09	c0.37	
v/s Ratio Perm												
v/c Ratio	0.92	0.73		0.66	0.94			0.85		0.91	0.94	
Uniform Delay, d1	69.2	40.4		68.7	47.6			54.5		71.6	46.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00		0.90	1.37	
Incremental Delay, d2	36.1	2.0		7.6	13.7			10.1		35.0	12.3	
Delay (s)	105.3	42.4		76.3	61.2			64.7		99.6	76.1	
Level of Service	F	D		E	E			E		F	E	
Approach Delay (s)		53.9			62.7			64.7			78.9	
Approach LOS		D			E			E			E	

Intersection Summary

HCM 2000 Control Delay	65.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	230	25	35	95	65	140
Future Volume (Veh/h)	230	25	35	95	65	140
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	315	34	48	130	89	192
Pedestrians	40		90			20
Lane Width (m)	3.6		3.6			3.6
Walking Speed (m/s)	1.2		1.2			1.2
Percent Blockage	3		8			2
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			158			
pX, platoon unblocked						
vC, conflicting volume	548	108			218	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	548	108			218	
tC, single (s)	6.4	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.1			2.2	
p0 queue free %	25	95			93	
cM capacity (veh/h)	418	725			1318	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	349	48	130	281
Volume Left	315	0	0	89
Volume Right	34	0	130	0
cSH	436	1700	1700	1318
Volume to Capacity	0.80	0.03	0.08	0.07
Queue Length 95th (m)	57.9	0.0	0.0	1.7
Control Delay (s)	39.1	0.0	0.0	2.9
Lane LOS	E			A
Approach Delay (s)	39.1	0.0		2.9
Approach LOS	E			

Intersection Summary				
Average Delay	17.9			
Intersection Capacity Utilization	38.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	5	125	15	5	365
Future Volume (Veh/h)	15	5	125	15	5	365
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	18	6	151	18	6	440
Pedestrians	30		100			
Lane Width (m)	3.6		3.6			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	3		8			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			142			
pX, platoon unblocked						
vC, conflicting volume	522	114			199	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	522	114			199	
tC, single (s)	6.9	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	99			100	
cM capacity (veh/h)	424	900			1351	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	24	101	68	153	293
Volume Left	18	0	0	6	0
Volume Right	6	0	18	0	0
cSH	489	1700	1700	1351	1700
Volume to Capacity	0.05	0.06	0.04	0.00	0.17
Queue Length 95th (m)	1.2	0.0	0.0	0.1	0.0
Control Delay (s)	12.7	0.0	0.0	0.3	0.0
Lane LOS	B			A	
Approach Delay (s)	12.7	0.0		0.1	
Approach LOS	B				

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	23.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	150	85	130	365	15
Future Volume (Veh/h)	10	150	85	130	365	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	12	176	100	153	429	18
Pedestrians	110				100	
Lane Width (m)	3.6				3.6	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	9				8	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				124		
pX, platoon unblocked						
vC, conflicting volume	924	334	557			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	924	334	557			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	71	89			
cM capacity (veh/h)	202	607	930			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	188	151	102	286	161
Volume Left	12	100	0	0	0
Volume Right	176	0	0	0	18
cSH	538	930	1700	1700	1700
Volume to Capacity	0.35	0.11	0.06	0.17	0.09
Queue Length 95th (m)	12.4	2.9	0.0	0.0	0.0
Control Delay (s)	15.2	6.5	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	15.2	3.9		0.0	
Approach LOS	C				

Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	39.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	215	100	10	505
Future Volume (Veh/h)	0	0	215	100	10	505
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	0	0	262	122	12	616
Pedestrians	20					
Lane Width (m)	0.0					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			60			
pX, platoon unblocked						
vC, conflicting volume	675	212			404	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	675	212			404	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			99	
cM capacity (veh/h)	388	800			1166	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	175	209	217	411
Volume Left	0	0	12	0
Volume Right	0	122	0	0
cSH	1700	1700	1166	1700
Volume to Capacity	0.10	0.12	0.01	0.24
Queue Length 95th (m)	0.0	0.0	0.2	0.0
Control Delay (s)	0.0	0.0	0.5	0.0
Lane LOS			A	
Approach Delay (s)	0.0		0.2	
Approach LOS				

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	24.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	410	190	10	40	25
Future Volume (Veh/h)	5	410	190	10	40	25
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	7	539	250	13	53	33
Pedestrians					60	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					5	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			93			
pX, platoon unblocked						
vC, conflicting volume	323				600	192
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	323				600	192
tC, single (s)	4.1				7.0	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	99				86	96
cM capacity (veh/h)	1186				387	783

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	187	359	167	96	53	33
Volume Left	7	0	0	0	53	0
Volume Right	0	0	0	13	0	33
cSH	1186	1700	1700	1700	387	783
Volume to Capacity	0.01	0.21	0.10	0.06	0.14	0.04
Queue Length 95th (m)	0.1	0.0	0.0	0.0	3.8	1.1
Control Delay (s)	0.4	0.0	0.0	0.0	15.8	9.8
Lane LOS	A				C	A
Approach Delay (s)	0.1		0.0		13.5	
Approach LOS					B	

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	24.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	350	5	15	125	75	5	0	65	0	0	0
Future Volume (Veh/h)	120	350	5	15	125	75	5	0	65	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	160	467	7	20	167	100	7	0	87	0	0	0
Pedestrians					20			60			50	
Lane Width (m)					3.6			3.6			0.0	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					2			5			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					149							
pX, platoon unblocked												
vC, conflicting volume	317			534			974	1208	317	968	1161	184
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	317			534			974	1208	317	968	1161	184
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	87			98			96	100	86	100	100	100
cM capacity (veh/h)	1255			992			170	150	640	154	160	834

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	394	240	104	184	94
Volume Left	160	0	20	0	7
Volume Right	0	7	0	100	87
cSH	1255	1700	992	1700	530
Volume to Capacity	0.13	0.14	0.02	0.11	0.18
Queue Length 95th (m)	3.5	0.0	0.5	0.0	5.1
Control Delay (s)	4.1	0.0	1.8	0.0	13.2
Lane LOS	A		A		B
Approach Delay (s)	2.5		0.7		13.2
Approach LOS					B

Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	45.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	285	130	0	190	25
Future Volume (Veh/h)	0	285	130	0	190	25
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	0	348	159	0	232	30
Pedestrians					30	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			205			
pX, platoon unblocked						
vC, conflicting volume	189				363	110
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	189				363	110
tC, single (s)	4.1				7.0	7.6
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.6
p0 queue free %	100				60	96
cM capacity (veh/h)	1362				574	809

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	174	174	80	80	262
Volume Left	0	0	0	0	232
Volume Right	0	0	0	0	30
cSH	1700	1700	1700	1700	594
Volume to Capacity	0.10	0.10	0.05	0.05	0.44
Queue Length 95th (m)	0.0	0.0	0.0	0.0	18.0
Control Delay (s)	0.0	0.0	0.0	0.0	15.8
Lane LOS					C
Approach Delay (s)	0.0		0.0		15.8
Approach LOS					C

Intersection Summary				
Average Delay	5.4			
Intersection Capacity Utilization	28.5%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	20	120	130	95	40	20	30	15	105	60	105	135
Future Volume (vph)	20	120	130	95	40	20	30	15	105	60	105	135
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	25	148	160	117	49	25	37	19	130	74	130	167

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	173	160	166	25	56	130	371
Volume Left (vph)	25	0	117	0	37	0	74
Volume Right (vph)	0	160	0	25	0	130	167
Hadj (s)	0.07	-0.70	0.77	-0.70	1.24	-0.70	-0.23
Departure Headway (s)	6.7	5.9	7.6	6.1	8.0	6.0	6.1
Degree Utilization, x	0.32	0.26	0.35	0.04	0.12	0.22	0.63
Capacity (veh/h)	504	567	440	538	417	542	565
Control Delay (s)	11.6	9.8	13.4	8.2	10.9	9.5	19.0
Approach Delay (s)	10.8		12.7		9.9		19.0
Approach LOS	B		B		A		C

Intersection Summary				
Delay	13.8			
Level of Service	B			
Intersection Capacity Utilization	52.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	50	50	0	5	5	140	5	5	320	5
Future Volume (Veh/h)	5	0	50	50	0	5	5	140	5	5	320	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	0	54	54	0	5	5	152	5	5	348	5
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								108				
pX, platoon unblocked												
vC, conflicting volume	452	528	176	402	528	78	353			157		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	452	528	176	402	528	78	353			157		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	94	89	100	99	100			100		
cM capacity (veh/h)	491	455	842	500	455	973	1217			1435		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	59	59	81	81	179	179
Volume Left	5	54	5	0	5	0
Volume Right	54	5	0	5	0	5
cSH	794	521	1217	1700	1435	1700
Volume to Capacity	0.07	0.11	0.00	0.05	0.00	0.11
Queue Length 95th (m)	1.9	3.0	0.1	0.0	0.1	0.0
Control Delay (s)	9.9	12.8	0.5	0.0	0.2	0.0
Lane LOS	A	B	A		A	
Approach Delay (s)	9.9	12.8	0.3		0.1	
Approach LOS	A	B				

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	29.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	40	5	145	5	5	415
Future Volume (Veh/h)	40	5	145	5	5	415
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	5	158	5	5	451
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			69			
pX, platoon unblocked						
vC, conflicting volume	396	82			163	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	396	82			163	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	99			100	
cM capacity (veh/h)	584	968			1428	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	48	105	58	155	301
Volume Left	43	0	0	5	0
Volume Right	5	0	5	0	0
cSH	610	1700	1700	1428	1700
Volume to Capacity	0.08	0.06	0.03	0.00	0.18
Queue Length 95th (m)	2.0	0.0	0.0	0.1	0.0
Control Delay (s)	11.4	0.0	0.0	0.3	0.0
Lane LOS	B			A	
Approach Delay (s)	11.4	0.0		0.1	
Approach LOS	B				

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	140	190	15	130	65
Future Volume (Veh/h)	20	140	190	15	130	65
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.63	0.63	0.63	0.63	0.63	0.63
Hourly flow rate (vph)	32	222	302	24	206	103
Pedestrians		10	10		30	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		1	1		3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	356				640	354
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	356				640	354
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				51	85
cM capacity (veh/h)	1184				417	671

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	254	326	309
Volume Left	32	0	206
Volume Right	0	24	103
cSH	1184	1700	477
Volume to Capacity	0.03	0.19	0.65
Queue Length 95th (m)	0.7	0.0	36.3
Control Delay (s)	1.2	0.0	25.4
Lane LOS	A		D
Approach Delay (s)	1.2	0.0	25.4
Approach LOS			D

Intersection Summary				
Average Delay	9.2			
Intersection Capacity Utilization	42.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	200	0	0	0	0	15
Future Volume (Veh/h)	200	0	0	0	0	15
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	278	0	0	0	0	21
Pedestrians	10					20
Lane Width (m)	3.6					3.6
Walking Speed (m/s)	1.2					1.2
Percent Blockage	1					2
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	31	30			10	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	31	30			10	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	72	100			100	
cM capacity (veh/h)	980	1024			1609	

Direction, Lane #	WB 1	SB 1
Volume Total	278	21
Volume Left	278	0
Volume Right	0	0
cSH	980	1700
Volume to Capacity	0.28	0.01
Queue Length 95th (m)	9.4	0.0
Control Delay (s)	10.1	0.0
Lane LOS	B	
Approach Delay (s)	10.1	0.0
Approach LOS	B	

Intersection Summary				
Average Delay	9.4			
Intersection Capacity Utilization	22.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	205	0	15	45	0	0
Future Volume (Veh/h)	205	0	15	45	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Hourly flow rate (vph)	311	0	23	68	0	0
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			201			
pX, platoon unblocked						
vC, conflicting volume	67	67			101	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	67	67			101	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	67	100			100	
cM capacity (veh/h)	935	994			1492	

Direction, Lane #	WB 1	NB 1
Volume Total	311	91
Volume Left	311	0
Volume Right	0	68
cSH	935	1700
Volume to Capacity	0.33	0.05
Queue Length 95th (m)	11.7	0.0
Control Delay (s)	10.8	0.0
Lane LOS	B	
Approach Delay (s)	10.8	0.0
Approach LOS	B	

Intersection Summary				
Average Delay		8.3		
Intersection Capacity Utilization		24.9%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1510	0	0	1350
Future Volume (Veh/h)	0	0	1510	0	0	1350
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	0	0	1541	0	0	1378
Pedestrians	70					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	6					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			68			
pX, platoon unblocked	0.74	0.74			0.74	
vC, conflicting volume	2300	840			1611	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2058	92			1130	
tC, single (s)	8.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	4.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	10	667			438	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	1027	514	689	689
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.60	0.30	0.41	0.41
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.0	0.0		0.0	
Approach LOS	A				

Intersection Summary				
Average Delay		0.0		
Intersection Capacity Utilization		45.1%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	10	0	1105	1195	20
Future Volume (Veh/h)	5	10	0	1105	1195	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	11	0	1163	1258	21
Pedestrians	70					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	6					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				78	62	
pX, platoon unblocked	0.82	0.73	0.73			
vC, conflicting volume	1920	710	1349			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	761	0	750			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	100			
cM capacity (veh/h)	266	754	600			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	16	582	582	839	440
Volume Left	5	0	0	0	0
Volume Right	11	0	0	0	21
cSH	479	1700	1700	1700	1700
Volume to Capacity	0.03	0.34	0.34	0.49	0.26
Queue Length 95th (m)	0.8	0.0	0.0	0.0	0.0
Control Delay (s)	12.8	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	12.8	0.0		0.0	
Approach LOS	B				

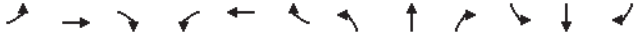
Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	Err%	ICU Level of Service		H
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	650	0	0	430	65	0	0	5	40	0	25
Future Volume (Veh/h)	20	650	0	0	430	65	0	0	5	40	0	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	21	684	0	0	453	68	0	0	5	42	0	26
Pedestrians					30			40			70	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					3			3			6	
Right turn flare (veh)												
Median type		TWLTL			None							
Median storage veh)		2										
Upstream signal (m)		151			79							
pX, platoon unblocked	0.93			0.95			0.96	0.96	0.95	0.96	0.96	0.93
vC, conflicting volume	591			724			1018	1357	412	976	1323	330
vC1, stage 1 conf vol							766	766		557	557	
vC2, stage 2 conf vol							252	591		419	766	
vCu, unblocked vol	412			598			683	1037	269	638	1001	132
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			100	100	99	91	100	97
cM capacity (veh/h)	1015			906			376	361	657	475	371	788

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	363	342	226	294	5	68
Volume Left	21	0	0	0	0	42
Volume Right	0	0	0	68	5	26
cSH	1015	1700	906	1700	657	560
Volume to Capacity	0.02	0.20	0.00	0.17	0.01	0.12
Queue Length 95th (m)	0.5	0.0	0.0	0.0	0.2	3.3
Control Delay (s)	0.7	0.0	0.0	0.0	10.5	12.3
Lane LOS	A				B	B
Approach Delay (s)	0.4		0.0		10.5	12.3
Approach LOS					B	B

Intersection Summary				
Average Delay	0.9			
Intersection Capacity Utilization	49.5%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	655	0	0	455	0	0	0	5	10	0	40
Future Volume (Veh/h)	15	655	0	0	455	0	0	0	5	10	0	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	15	675	0	0	469	0	0	0	5	10	0	41
Pedestrians					20			30			60	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					2			3			5	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (m)		108			121							
pX, platoon unblocked	0.96			0.95			0.96	0.96	0.95	0.96	0.96	0.96
vC, conflicting volume	529			705			1010	1264	388	922	1264	294
vC1, stage 1 conf vol							735	735		529	529	
vC2, stage 2 conf vol							276	529		392	735	
vCu, unblocked vol	430			573			758	1021	237	666	1021	186
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	99	98	100	95
cM capacity (veh/h)	1042			931			392	378	698	472	382	759

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	15	450	225	0	313	156	5	51
Volume Left	15	0	0	0	0	0	0	10
Volume Right	0	0	0	0	0	0	5	41
cSH	1042	1700	1700	1700	1700	1700	698	678
Volume to Capacity	0.01	0.26	0.13	0.00	0.18	0.09	0.01	0.08
Queue Length 95th (m)	0.4	0.0	0.0	0.0	0.0	0.0	0.2	1.9
Control Delay (s)	8.5	0.0	0.0	0.0	0.0	0.0	10.2	10.7
Lane LOS	A						B	B
Approach Delay (s)	0.2			0.0			10.2	10.7
Approach LOS							B	B

Intersection Summary					
Average Delay	0.6				
Intersection Capacity Utilization	34.5%	ICU Level of Service	A		
Analysis Period (min)	15				



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	695	0	5	495	0	0
Future Volume (Veh/h)	695	0	5	495	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	732	0	5	521	0	0
Pedestrians				30	40	
Lane Width (m)				3.6	3.6	
Walking Speed (m/s)				1.2	1.2	
Percent Blockage				3	3	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	173			56		
pX, platoon unblocked			0.95		0.95	0.95
vC, conflicting volume			772		1042	436
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			656		709	303
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	100
cM capacity (veh/h)			864		341	626

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	488	244	179	347	0
Volume Left	0	0	5	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	864	1700	1700
Volume to Capacity	0.29	0.14	0.01	0.20	0.00
Queue Length 95th (m)	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	0.0	0.0	0.3	0.0	0.0
Lane LOS			A		A
Approach Delay (s)	0.0		0.1		0.0
Approach LOS					A

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	35.5%	ICU Level of Service	A	
Analysis Period (min)	15			

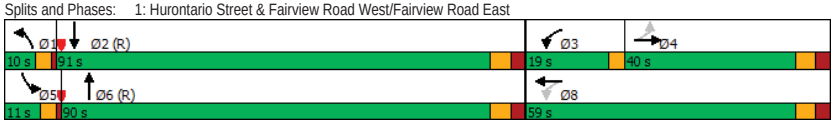
Future Total Traffic Conditions (2027)

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	100	215	75	60	1050	50	1520
Future Volume (vph)	105	100	215	75	60	1050	50	1520
Turn Type	Perm	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases		4	3	8	1	6	5	2
Permitted Phases	4		8					
Detector Phase	4	4	3	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	5.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	40.0	40.0	8.0	40.0	9.0	29.0	9.0	29.0
Total Split (s)	40.0	40.0	19.0	59.0	10.0	90.0	11.0	91.0
Total Split (%)	25.0%	25.0%	11.9%	36.9%	6.3%	56.3%	6.9%	56.9%
Yellow Time (s)	4.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	3.0	3.0	0.0	3.0	1.0	3.0	1.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.0	6.0	2.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	31.9	31.9	55.4	51.4	7.7	87.8	8.0	85.9
Actuated g/C Ratio	0.20	0.20	0.35	0.32	0.05	0.55	0.05	0.54
v/c Ratio	0.54	0.87	0.92	0.44	0.83	0.80	0.67	0.97
Control Delay	66.6	76.4	79.8	34.0	132.9	36.1	109.3	51.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.6	76.4	79.8	34.0	132.9	36.1	109.3	51.1
LOS	E	E	E	C	F	D	F	D
Approach Delay		73.6		57.2		40.5		52.9
Approach LOS		E		E		D		D

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 51.1 — Intersection LOS: D
Intersection Capacity Utilization 100.8% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 1: Hurontario Street & Fairview Road West/Fairview Road East



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	121	305	247	241	69	1448	57	1804
v/c Ratio	0.54	0.87	0.92	0.44	0.83	0.80	0.67	0.97
Control Delay	66.6	76.4	79.8	34.0	132.9	36.1	109.3	51.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.6	76.4	79.8	34.0	132.9	36.1	109.3	51.1
Queue Length 50th (m)	36.2	84.7	62.3	46.9	22.3	220.4	19.1	304.3
Queue Length 95th (m)	57.2	#125.0	#99.9	70.5	m#50.7	254.2	#40.3	#332.1
Internal Link Dist (m)		78.1		66.2		510.0		77.3
Turn Bay Length (m)	75.0		40.0		120.0		50.0	
Base Capacity (vph)	238	370	268	557	83	1815	85	1855
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	0.51	0.82	0.92	0.43	0.83	0.80	0.67	0.97

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	100	165	215	75	135	60	1050	210	50	1520	50
Future Volume (vph)	105	100	165	215	75	135	60	1050	210	50	1520	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		2.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.95		1.00	0.97		1.00	0.97		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.90		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1750	1567		1694	1559		1719	3289		1719	3455	
Flt Permitted	0.61	1.00		0.20	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1122	1567		356	1559		1719	3289		1719	3455	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	121	115	190	247	86	155	69	1207	241	57	1747	57
RTOR Reduction (vph)	0	38	0	0	41	0	0	10	0	0	1	0
Lane Group Flow (vph)	121	267	0	247	200	0	69	1438	0	57	1803	0
Confl. Peds. (#/hr)	20		50	50		20	60		50	50		60
Heavy Vehicles (%)	1%	3%	5%	6%	4%	9%	5%	3%	6%	5%	3%	10%
Turn Type	Perm	NA		pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases		4		3	8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)	30.9	30.9		50.4	50.4		6.7	86.0		5.6	84.9	
Effective Green, g (s)	31.9	31.9		51.4	51.4		7.7	87.0		6.6	85.9	
Actuated g/C Ratio	0.20	0.20		0.32	0.32		0.05	0.54		0.04	0.54	
Clearance Time (s)	7.0	7.0		3.0	7.0		4.0	7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	223	312		260	500		82	1788		70	1854	
v/s Ratio Prot		c0.17		c0.10	0.13		c0.04	0.44		0.03	c0.52	
v/s Ratio Perm	0.11			0.20								
v/c Ratio	0.54	0.86		0.95	0.40		0.84	0.80		0.81	0.97	
Uniform Delay, d1	57.5	61.8		46.3	42.3		75.5	29.6		76.1	35.9	
Progression Factor	1.00	1.00		1.00	1.00		1.05	1.09		1.00	1.00	
Incremental Delay, d2	2.7	20.0		41.7	0.5		47.4	3.6		49.3	15.3	
Delay (s)	60.2	81.9		88.0	42.8		126.4	35.8		125.4	51.2	
Level of Service	E	F		F	D		F	D		F	D	
Approach Delay (s)		75.7			65.7			39.9			53.5	
Approach LOS		E			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	52.3	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	17.0	
Intersection Capacity Utilization	100.8%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	230	10	10	20	160	890	80	1175	300
Future Volume (vph)	230	10	10	20	160	890	80	1175	300
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases		8		4	1	6	5	2	
Permitted Phases	8		4						2
Detector Phase	8	8	4	4	1	6	5	2	2
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	8.0
Minimum Split (s)	46.0	46.0	46.0	46.0	9.0	38.0	9.0	38.0	38.0
Total Split (s)	48.0	48.0	48.0	48.0	25.0	94.0	18.0	87.0	87.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	15.6%	58.8%	11.3%	54.4%	54.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	1.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	3.0	6.0	3.0	6.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	39.9	39.9	39.9	39.9	20.0	90.7	13.4	84.2	84.2
Actuated g/C Ratio	0.25	0.25	0.25	0.25	0.12	0.57	0.08	0.53	0.53
v/c Ratio	0.88	0.29	0.04	0.17	0.76	0.50	0.60	0.70	0.44
Control Delay	86.3	9.9	43.8	10.5	106.6	15.8	78.9	30.0	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.0
Total Delay	86.3	9.9	43.8	10.5	106.6	16.0	78.9	30.3	16.0
LOS	F	A	D	B	F	B	E	C	B
Approach Delay		58.0		12.9		29.6		30.0	
Approach LOS		E		B		C		C	

Intersection Summary		
Cycle Length: 160		
Actuated Cycle Length: 160		
Offset: 107 (67%), Referenced to phase 2:SBT and 6:NBT, Start of Green		
Natural Cycle: 95		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.88		
Intersection Signal Delay: 32.4	Intersection LOS: C	
Intersection Capacity Utilization 96.6%	ICU Level of Service F	
Analysis Period (min) 15		

Splits and Phases: 2: Hurontario Street & John Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	245	144	11	143	170	963	85	1250	319
v/c Ratio	0.88	0.29	0.04	0.17	0.76	0.50	0.60	0.70	0.44
Control Delay	86.3	9.9	43.8	10.5	106.6	15.8	78.9	30.0	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.0
Total Delay	86.3	9.9	43.8	10.5	106.6	16.0	78.9	30.3	16.0
Queue Length 50th (m)	77.5	2.7	2.8	2.7	60.0	37.1	26.3	201.1	48.5
Queue Length 95th (m)	#126.3	21.3	8.5	12.1	74.8	183.4	m27.5	m219.7	m77.2
Internal Link Dist (m)		69.2		56.1		116.0		43.8	
Turn Bay Length (m)					15.0		30.0		40.0
Base Capacity (vph)	300	519	274	895	252	1962	162	1833	734
Starvation Cap Reductn	0	0	0	0	0	274	0	0	0
Spillback Cap Reductn	0	5	0	0	0	0	0	164	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.28	0.04	0.16	0.67	0.57	0.52	0.75	0.43

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	10	125	10	20	115	160	890	15	80	1175	300
Future Volume (vph)	230	10	125	10	20	115	160	890	15	80	1175	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		3.0	6.0		3.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.96		1.00	1.00		1.00	1.00	0.87
Flpb, ped/bikes	0.97	1.00		0.98	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.86		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1619	1581		1609	3016		1805	3386		1703	3406	1250
Flt Permitted	0.66	1.00		0.61	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1127	1581		1029	3016		1805	3386		1703	3406	1250
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	245	11	133	11	21	122	170	947	16	85	1250	319
RTOR Reduction (vph)	0	100	0	0	92	0	0	1	0	0	0	63
Lane Group Flow (vph)	245	44	0	11	51	0	170	962	0	85	1250	256
Confl. Peds. (#/hr)	30		20	20		30	80		90	90		80
Heavy Vehicles (%)	8%	0%	0%	10%	0%	0%	0%	6%	0%	6%	6%	12%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4								2
Actuated Green, G (s)	38.9	38.9		38.9	38.9		19.0	89.7		12.4	83.1	83.1
Effective Green, g (s)	39.9	39.9		39.9	39.9		20.0	90.7		13.4	84.1	84.1
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.12	0.57		0.08	0.53	0.53
Clearance Time (s)	8.0	8.0		8.0	8.0		4.0	7.0		4.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	281	394		256	752		225	1919		142	1790	657
v/s Ratio Prot		0.03			0.02		c0.09	0.28		0.05	c0.37	
v/s Ratio Perm	c0.22			0.01								0.20
v/c Ratio	0.87	0.11		0.04	0.07		0.76	0.50		0.60	0.70	0.39
Uniform Delay, d1	57.6	46.4		45.6	45.9		67.6	21.0		70.7	28.4	22.6
Progression Factor	1.00	1.00		1.00	1.00		1.30	0.68		1.04	0.97	1.07
Incremental Delay, d2	24.3	0.1		0.1	0.0		12.3	0.9		2.2	0.7	0.6
Delay (s)	81.9	46.5		45.6	45.9		99.9	15.1		75.5	28.4	24.8
Level of Service	F	D		D	D		F	B		E	C	C
Approach Delay (s)		68.8			45.9			27.8			30.1	
Approach LOS		E			D			C			C	

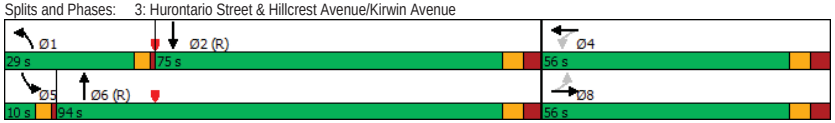
Intersection Summary				
HCM 2000 Control Delay	34.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	96.6%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	155	130	20	140	215	850	30	1030
Future Volume (vph)	155	130	20	140	215	850	30	1030
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4					
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	56.0	56.0	56.0	56.0	9.0	51.5	9.0	51.5
Total Split (s)	56.0	56.0	56.0	56.0	29.0	94.0	10.0	75.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	18.1%	58.8%	6.3%	46.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	1.0	3.5	1.0	3.5
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	3.0	6.5	3.0	6.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	49.0	49.0	49.0	49.0	27.4	89.5	6.9	67.1
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.17	0.56	0.04	0.42
v/c Ratio	0.50	0.38	0.09	0.20	0.96	0.47	0.41	0.98
Control Delay	64.5	26.7	41.1	32.6	71.3	29.9	101.4	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.5	26.7	41.1	32.6	71.3	29.9	101.4	40.8
LOS	E	C	D	C	E	C	F	D
Approach Delay		37.2		33.4		38.1		42.2
Approach LOS		D		C		D		D

Intersection Summary		
Cycle Length: 160		
Actuated Cycle Length: 160		
Offset: 99 (62%), Referenced to phase 2:SBT and 6:NBT, Start of Green		
Natural Cycle: 150		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.98		
Intersection Signal Delay: 39.3	Intersection LOS: D	
Intersection Capacity Utilization 116.1%	ICU Level of Service H	
Analysis Period (min) 15		

Splits and Phases: 3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	412	21	206	222	902	31	1320
v/c Ratio	0.50	0.38	0.09	0.20	0.96	0.47	0.41	0.98
Control Delay	64.5	26.7	41.1	32.6	71.3	29.9	101.4	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.5	26.7	41.1	32.6	71.3	29.9	101.4	40.8
Queue Length 50th (m)	46.1	25.8	5.1	20.9	~74.9	143.7	11.0	232.4
Queue Length 95th (m)	77.7	48.2	12.8	32.2	m#92.5	m150.8	m16.9	#265.6
Internal Link Dist (m)		32.2		62.6		277.3		116.0
Turn Bay Length (m)	50.0		50.0		75.0		65.0	
Base Capacity (vph)	317	1072	233	1017	232	1911	76	1377
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	113	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.38	0.09	0.20	0.96	0.50	0.41	0.96

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	130	270	20	140	60	215	850	25	30	1030	250
Future Volume (vph)	155	130	270	20	140	60	215	850	25	30	1030	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		3.0	6.5		3.0	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.92		1.00	0.99		1.00	1.00		1.00	0.97	
Flpb, ped/bikes	0.98	1.00		0.94	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.95		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1587	2885		1703	3224		1357	3413		1752	3186	
Flt Permitted	0.62	1.00		0.42	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1038	2885		762	3224		1357	3413		1752	3186	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	160	134	278	21	144	62	222	876	26	31	1062	258
RTOR Reduction (vph)	0	189	0	0	31	0	0	1	0	0	13	0
Lane Group Flow (vph)	160	223	0	21	175	0	222	901	0	31	1307	0
Confl. Peds. (#/hr)	20		110	110		20	120		90	90		120
Heavy Vehicles (%)	12%	0%	5%	0%	5%	8%	33%	5%	4%	3%	6%	11%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4								
Actuated Green, G (s)	48.0	48.0		48.0	48.0		26.4	87.7		4.8	66.1	
Effective Green, g (s)	49.0	49.0		49.0	49.0		27.4	88.7		5.8	67.1	
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.17	0.55		0.04	0.42	
Clearance Time (s)	8.0	8.0		8.0	8.0		4.0	7.5		4.0	7.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	317	883		233	987		232	1892		63	1336	
v/s Ratio Prot		0.08			0.05		c0.16	0.26		0.02	c0.41	
v/s Ratio Perm	c0.15			0.03								
v/c Ratio	0.50	0.25		0.09	0.18		0.96	0.48		0.49	0.98	
Uniform Delay, d1	45.5	41.7		39.6	40.7		65.7	21.6		75.7	45.7	
Progression Factor	1.27	1.82		1.00	1.00		0.65	1.37		1.18	0.52	
Incremental Delay, d2	1.2	0.1		0.2	0.1		25.4	0.3		4.6	17.0	
Delay (s)	59.0	76.0		39.8	40.8		68.4	29.9		94.2	40.5	
Level of Service	E	E		D	D		E	C		F	D	
Approach Delay (s)		71.2			40.7			37.5			41.8	
Approach LOS		E			D			D			D	

Intersection Summary				
HCM 2000 Control Delay	45.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	16.5	
Intersection Capacity Utilization	116.1%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	260	305	350	255	160
Future Volume (vph)	260	305	350	255	160
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	1	6	2	4	
Permitted Phases	6				4
Detector Phase	1	6	2	4	4
Switch Phase					
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	33.5	33.5	26.0	26.0
Total Split (s)	28.0	134.0	106.0	26.0	26.0
Total Split (%)	17.5%	83.8%	66.3%	16.3%	16.3%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	3.5	3.5	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	5.0	5.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	87.8	83.3	57.3	65.2	65.2
Actuated g/C Ratio	0.55	0.52	0.36	0.41	0.41
v/c Ratio	0.75	0.19	0.54	0.62	0.31
Control Delay	31.5	19.7	28.7	48.0	7.0
Queue Delay	1.6	0.0	0.0	0.0	0.0
Total Delay	33.1	19.7	28.7	48.0	7.0
LOS	C	B	C	D	A
Approach Delay		25.9	28.7	32.2	
Approach LOS		C	C	C	

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 28.6 — Intersection LOS: C
Intersection Capacity Utilization 63.8% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 4: Hillcrest Avenue & Go Access Road



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	299	351	620	293	184
v/c Ratio	0.75	0.19	0.54	0.62	0.31
Control Delay	31.5	19.7	28.7	48.0	7.0
Queue Delay	1.6	0.0	0.0	0.0	0.0
Total Delay	33.1	19.7	28.7	48.0	7.0
Queue Length 50th (m)	51.2	30.1	70.1	81.4	1.0
Queue Length 95th (m)	57.2	31.7	m64.4	#132.1	18.4
Internal Link Dist (m)		144.9	84.1	44.8	
Turn Bay Length (m)	70.0				
Base Capacity (vph)	413	2793	1917	474	597
Starvation Cap Reductn	33	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.79	0.13	0.32	0.62	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	260	305	350	190	255	160
Future Volume (vph)	260	305	350	190	255	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.5	6.5		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98		1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.95		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1476	3505	3011		1165	1207
Flt Permitted	0.29	1.00	1.00		0.95	1.00
Satd. Flow (perm)	448	3505	3011		1165	1207
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	299	351	402	218	293	184
RTOR Reduction (vph)	0	0	77	0	0	106
Lane Group Flow (vph)	299	351	543	0	293	78
Confl. Peds. (#/hr)	20			20	20	10
Heavy Vehicles (%)	22%	3%	12%	11%	55%	29%
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6					4
Actuated Green, G (s)	82.3	82.3	56.2		64.2	64.2
Effective Green, g (s)	83.3	83.3	57.2		65.2	65.2
Actuated g/C Ratio	0.52	0.52	0.36		0.41	0.41
Clearance Time (s)	3.0	7.5	7.5		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	388	1824	1076		474	491
v/s Ratio Prot	c0.12	0.10	c0.18		c0.25	
v/s Ratio Perm	0.29					0.06
v/c Ratio	0.77	0.19	0.50		0.62	0.16
Uniform Delay, d1	25.0	20.4	40.3		37.5	30.0
Progression Factor	1.00	1.00	0.87		1.00	1.00
Incremental Delay, d2	9.1	0.2	1.4		2.4	0.2
Delay (s)	34.1	20.7	36.5		39.9	30.2
Level of Service	C	C	D		D	C
Approach Delay (s)		26.9	36.5		36.2	
Approach LOS		C	D		D	

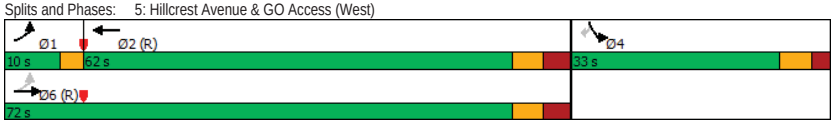
Intersection Summary				
HCM 2000 Control Delay	32.8	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.60			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	63.8%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	450	500	360	65	200
Future Volume (vph)	450	500	360	65	200
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	1	6	2	4	
Permitted Phases	6				4
Detector Phase	1	6	2	4	4
Switch Phase					
Minimum Initial (s)	5.0	8.0	8.0	4.0	4.0
Minimum Split (s)	8.0	38.5	38.5	31.5	31.5
Total Split (s)	10.0	72.0	62.0	33.0	33.0
Total Split (%)	9.5%	68.6%	59.0%	31.4%	31.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	3.5	3.5	2.5	2.5
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	5.5	5.5
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	75.3	70.8	46.4	22.2	22.2
Actuated g/C Ratio	0.72	0.67	0.44	0.21	0.21
v/c Ratio	0.66	0.23	0.42	0.19	0.46
Control Delay	11.5	7.7	19.4	32.9	7.7
Queue Delay	0.7	0.0	0.0	0.0	0.0
Total Delay	12.2	7.7	19.4	32.9	7.7
LOS	B	A	B	C	A
Approach Delay		9.8	19.4	13.9	
Approach LOS		A	B	B	

Intersection Summary			
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 90 (86%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 13.3		Intersection LOS: B	
Intersection Capacity Utilization 82.6%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: Hillcrest Avenue & GO Access (West)





Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	489	543	554	71	217
v/c Ratio	0.66	0.23	0.42	0.19	0.46
Control Delay	11.5	7.7	19.4	32.9	7.7
Queue Delay	0.7	0.0	0.0	0.0	0.0
Total Delay	12.2	7.7	19.4	32.9	7.7
Queue Length 50th (m)	41.0	24.1	35.6	12.0	0.0
Queue Length 95th (m)	59.5	32.3	57.3	24.1	18.6
Internal Link Dist (m)		22.5	144.9	35.6	
Turn Bay Length (m)	30.0				
Base Capacity (vph)	737	2318	1636	468	539
Starvation Cap Reductn	63	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.73	0.23	0.34	0.15	0.40

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	450	500	360	150	65	200
Future Volume (vph)	450	500	360	150	65	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.5	6.5		5.5	5.5
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97		1.00	0.91
Flpb, ped/bikes	0.99	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.96		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1781	3438	2902		1787	1447
Flt Permitted	0.38	1.00	1.00		0.95	1.00
Satd. Flow (perm)	716	3438	2902		1787	1447
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	489	543	391	163	71	217
RTOR Reduction (vph)	0	0	51	0	0	171
Lane Group Flow (vph)	489	543	503	0	71	46
Confl. Peds. (#/hr)	90			90	20	60
Heavy Vehicles (%)	0%	5%	13%	21%	1%	2%
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6					4
Actuated Green, G (s)	69.8	69.8	45.4		21.2	21.2
Effective Green, g (s)	70.8	70.8	46.4		22.2	22.2
Actuated g/C Ratio	0.67	0.67	0.44		0.21	0.21
Clearance Time (s)	3.0	7.5	7.5		6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	709	2318	1282		377	305
v/s Ratio Prot	c0.15	0.16	c0.17		c0.04	
v/s Ratio Perm	0.32					0.03
v/c Ratio	0.69	0.23	0.39		0.19	0.15
Uniform Delay, d1	8.2	6.6	19.8		34.0	33.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.8	0.2	0.9		0.2	0.2
Delay (s)	11.0	6.9	20.7		34.2	33.9
Level of Service	B	A	C		C	C
Approach Delay (s)		8.8	20.7		34.0	
Approach LOS		A	C		C	

Intersection Summary				
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		

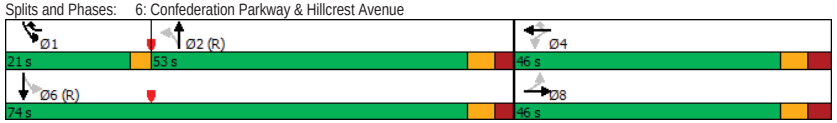
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	85	195	175	135	250	30	610	355	665
Future Volume (vph)	85	195	175	135	250	30	610	355	665
Turn Type	Perm	NA	Perm	NA	pm+ov	Perm	NA	pm+pt	NA
Protected Phases		8		4	1		2	1	6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	4	4	1	2	2	1	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	45.5	45.5	45.5	45.5	8.0	48.0	48.0	8.0	48.0
Total Split (s)	46.0	46.0	46.0	46.0	21.0	53.0	53.0	21.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	17.5%	44.2%	44.2%	17.5%	61.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	3.5	3.5	3.5	3.5	0.0	3.0	3.0	0.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	2.0	6.0	6.0	2.0	6.0
Lead/Lag					Lead	Lag	Lag	Lead	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	36.5	36.5	36.5	36.5	65.6	44.4	44.4	75.0	71.0
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.55	0.37	0.37	0.62	0.59
v/c Ratio	0.27	0.51	0.96	0.28	0.32	0.16	0.89	0.93	0.41
Control Delay	32.9	35.7	94.9	32.3	11.5	26.6	40.5	63.5	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	32.9	35.7	94.9	32.3	11.6	26.6	40.5	63.5	14.1
LOS	C	D	F	C	B	C	D	E	B
Approach Delay		35.0		42.5			40.1		29.8
Approach LOS		C		D			D		C

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 36.2 — Intersection LOS: D
Intersection Capacity Utilization 111.1% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 6: Confederation Parkway & Hillcrest Avenue



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	94	278	194	150	278	33	1122	394	839
v/c Ratio	0.27	0.51	0.96	0.28	0.32	0.16	0.89	0.93	0.41
Control Delay	32.9	35.7	94.9	32.3	11.5	26.6	40.5	63.5	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	32.9	35.7	94.9	32.3	11.6	26.6	40.5	63.5	14.1
Queue Length 50th (m)	17.0	51.8	45.3	27.1	25.3	5.3	117.2	~95.6	58.0
Queue Length 95th (m)	31.5	78.7	#91.4	44.5	43.2	13.4	148.2	#159.5	72.7
Internal Link Dist (m)		72.4		67.3			99.6		86.6
Turn Bay Length (m)	25.0		35.0			35.0		30.0	
Base Capacity (vph)	373	588	219	589	870	213	1321	425	2069
Starvation Cap Reductn	0	0	0	0	105	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	0.25	0.47	0.89	0.25	0.36	0.15	0.85	0.93	0.41

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	195	55	175	135	250	30	610	400	355	665	90
Future Volume (vph)	85	195	55	175	135	250	30	610	400	355	665	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	2.0	6.0	6.0		2.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		0.97	1.00	1.00	0.99	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.94		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1680	1761		1414	1792	1531	1542	3141		1752	3482	
Flt Permitted	0.64	1.00		0.45	1.00	1.00	0.34	1.00		0.09	1.00	
Satd. Flow (perm)	1135	1761		666	1792	1531	546	3141		159	3482	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	217	61	194	150	278	33	678	444	394	739	100
RTOR Reduction (vph)	0	9	0	0	0	38	0	94	0	0	8	0
Lane Group Flow (vph)	94	269	0	194	150	240	33	1028	0	394	831	0
Confl. Peds. (#/hr)	30		50	50		30	20		50	50		20
Heavy Vehicles (%)	5%	3%	3%	24%	6%	3%	16%	3%	10%	3%	1%	3%
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		pm+pt	NA	
Protected Phases		8			4	1		2		1	6	
Permitted Phases	8			4		4	2			6		
Actuated Green, G (s)	35.5	35.5		35.5	35.5	59.1	43.4	43.4		70.0	70.0	
Effective Green, g (s)	36.5	36.5		36.5	36.5	61.1	44.4	44.4		71.0	71.0	
Actuated g/C Ratio	0.30	0.30		0.30	0.30	0.51	0.37	0.37		0.59	0.59	
Clearance Time (s)	7.5	7.5		7.5	7.5	3.0	7.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	345	535		202	545	779	202	1162		420	2060	
v/s Ratio Prot		0.15			0.08	0.06		c0.33		c0.19	0.24	
v/s Ratio Perm	0.08			c0.29		0.09	0.06			0.36		
v/c Ratio	0.27	0.50		0.96	0.28	0.31	0.16	0.88		0.94	0.40	
Uniform Delay, d1	31.7	34.3		41.0	31.7	17.1	25.3	35.4		36.3	13.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.7		51.8	0.3	0.2	1.7	10.0		28.5	0.6	
Delay (s)	32.1	35.0		92.8	32.0	17.4	27.1	45.4		64.8	13.7	
Level of Service	C	D		F	C	B	C	D		E	B	
Approach Delay (s)		34.3			44.4			44.9			30.1	
Approach LOS		C			D			D			C	

Intersection Summary				
HCM 2000 Control Delay	38.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.92			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.5	
Intersection Capacity Utilization	111.1%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	50	0	1065	1215	75
Future Volume (Veh/h)	0	50	0	1065	1215	75
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	53	0	1121	1279	79
Pedestrians	60			10		
Lane Width (m)	3.6			3.6		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	5			1		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				123	301	
pX, platoon unblocked	0.76	0.63	0.63			
vC, conflicting volume	1939	749	1418			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	89	0	506			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	92	100			
cM capacity (veh/h)	658	648	644			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	53	560	560	853	505
Volume Left	0	0	0	0	0
Volume Right	53	0	0	0	79
cSH	648	1700	1700	1700	1700
Volume to Capacity	0.08	0.33	0.33	0.50	0.30
Queue Length 95th (m)	2.1	0.0	0.0	0.0	0.0
Control Delay (s)	11.1	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	11.1	0.0		0.0	
Approach LOS	B				

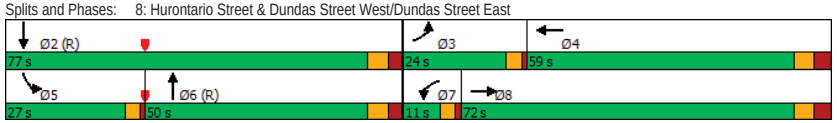
Intersection Summary					
Average Delay		0.2			
Intersection Capacity Utilization		49.6%	ICU Level of Service		A
Analysis Period (min)		15			

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	175	1150	75	510	780	240	880
Future Volume (vph)	175	1150	75	510	780	240	880
Turn Type	Prot	NA	Prot	NA	NA	Prot	NA
Protected Phases	3	8	7	4	6	5	2
Permitted Phases							
Detector Phase	3	8	7	4	6	5	2
Switch Phase							
Minimum Initial (s)	5.0	8.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	9.0	45.5	9.0	45.5	41.0	9.0	41.0
Total Split (s)	24.0	72.0	11.0	59.0	50.0	27.0	77.0
Total Split (%)	15.0%	45.0%	6.9%	36.9%	31.3%	16.9%	48.1%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	3.5	1.0	3.5	3.0	1.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	6.5	3.0	6.5	6.0	3.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	20.2	65.5	8.0	53.3	44.0	24.0	71.0
Actuated g/C Ratio	0.13	0.41	0.05	0.33	0.28	0.15	0.44
v/c Ratio	0.86	1.00	0.91	0.75	1.00	0.99	0.76
Control Delay	100.9	70.8	146.1	50.4	85.5	112.2	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.9	70.8	146.1	50.4	85.5	112.2	18.2
LOS	F	E	F	D	F	F	B
Approach Delay		74.3		59.6	85.5		36.1
Approach LOS		E		E	F		D

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 62.8 — Intersection LOS: E
Intersection Capacity Utilization 100.0% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 8: Hurontario Street & Dundas Street West/Dundas Street East



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	188	1388	81	763	920	258	1102
v/c Ratio	0.86	1.00	0.91	0.75	1.00	0.99	0.76
Control Delay	100.9	70.8	146.1	50.4	85.5	112.2	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.9	70.8	146.1	50.4	85.5	112.2	18.2
Queue Length 50th (m)	62.3	~242.9	27.5	115.1	162.2	81.8	91.5
Queue Length 95th (m)	#105.5	#298.0	#63.3	141.2	#211.1	m#108.9	m107.7
Internal Link Dist (m)		110.1		127.8	99.4		99.2
Turn Bay Length (m)	35.0		25.0			65.0	
Base Capacity (vph)	227	1386	89	1022	923	260	1448
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	1.00	0.91	0.75	1.00	0.99	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	1150	140	75	510	200	0	780	75	240	880	145
Future Volume (vph)	175	1150	140	75	510	200	0	780	75	240	880	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.5		3.0	6.5			6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.94			0.98		1.00	0.95	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96			0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)	1736	3371		1787	2992			3342		1736	3246	
Flt Permitted	0.95	1.00		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (perm)	1736	3371		1787	2992			3342		1736	3246	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	188	1237	151	81	548	215	0	839	81	258	946	156
RTOR Reduction (vph)	0	6	0	0	26	0	0	4	0	0	8	0
Lane Group Flow (vph)	188	1382	0	81	737	0	0	916	0	258	1094	0
Confl. Peds. (#/hr)	150		140	140		150	280		190	190		280
Heavy Vehicles (%)	4%	3%	5%	1%	8%	12%	6%	4%	4%	4%	4%	3%
Turn Type	Prot	NA		Prot	NA			NA		Prot	NA	
Protected Phases	3	8		7	4			6		5	2	
Permitted Phases												
Actuated Green, G (s)	19.2	64.5		7.0	52.3			43.0		23.0	70.0	
Effective Green, g (s)	20.2	65.5		8.0	53.3			44.0		24.0	71.0	
Actuated g/C Ratio	0.13	0.41		0.05	0.33			0.28		0.15	0.44	
Clearance Time (s)	4.0	7.5		4.0	7.5			7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	219	1380		89	996			919		260	1440	
v/s Ratio Prot	c0.11	c0.41		0.05	0.25			c0.27		c0.15	0.34	
v/s Ratio Perm												
v/c Ratio	0.86	1.00		0.91	0.74			1.00		0.99	0.76	
Uniform Delay, d1	68.5	47.2		75.6	47.2			57.9		67.9	37.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.07	0.43	
Incremental Delay, d2	26.7	24.6		66.4	2.9			28.8		41.2	2.3	
Delay (s)	95.2	71.8		142.0	50.1			86.7		114.1	18.3	
Level of Service	F	E		F	D			F		F	B	
Approach Delay (s)		74.6			59.0			86.7			36.5	
Approach LOS		E			E			F			D	

Intersection Summary				
HCM 2000 Control Delay	63.1	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.00			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.5	
Intersection Capacity Utilization	100.0%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	90	75	180	360	5	5
Future Volume (Veh/h)	90	75	180	360	5	5
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	107	89	214	429	6	6
Pedestrians	50		40			
Lane Width (m)	3.6		3.6			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	4		3			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			158			
pX, platoon unblocked						
vC, conflicting volume	322	264			693	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	322	264			693	
tC, single (s)	6.5	7.1			4.1	
tC, 2 stage (s)						
tF (s)	3.6	4.1			2.2	
p0 queue free %	82	85			99	
cM capacity (veh/h)	596	578			874	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	196	214	429	12
Volume Left	107	0	0	6
Volume Right	89	0	429	0
cSH	587	1700	1700	874
Volume to Capacity	0.33	0.13	0.25	0.01
Queue Length 95th (m)	11.7	0.0	0.0	0.2
Control Delay (s)	14.2	0.0	0.0	4.6
Lane LOS	B			A
Approach Delay (s)	14.2	0.0		4.6
Approach LOS	B			

Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	36.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	0	540	5	5	90
Future Volume (Veh/h)	10	0	540	5	5	90
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	11	0	607	6	6	101
Pedestrians	40		60			
Lane Width (m)	3.6		3.6			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	3		5			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			142			
pX, platoon unblocked						
vC, conflicting volume	772	346			653	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	772	346			653	
tC, single (s)	7.0	6.9			4.8	
tC, 2 stage (s)						
tF (s)	3.6	3.3			2.5	
p0 queue free %	96	100			99	
cM capacity (veh/h)	288	634			723	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	11	405	208	40	67
Volume Left	11	0	0	6	0
Volume Right	0	0	6	0	0
cSH	288	1700	1700	723	1700
Volume to Capacity	0.04	0.24	0.12	0.01	0.04
Queue Length 95th (m)	1.0	0.0	0.0	0.2	0.0
Control Delay (s)	18.0	0.0	0.0	1.6	0.0
Lane LOS	C			A	
Approach Delay (s)	18.0	0.0		0.6	
Approach LOS	C				

Intersection Summary				
Average Delay		0.4		
Intersection Capacity Utilization		25.1%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	180	40	520	95	5
Future Volume (Veh/h)	25	180	40	520	95	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	29	212	47	612	112	6
Pedestrians	210				60	
Lane Width (m)	3.6				3.6	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	18				5	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				124		
pX, platoon unblocked						
vC, conflicting volume	785	269	328			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	785	269	328			
tC, single (s)	6.8	6.9	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	88	65	95			
cM capacity (veh/h)	249	601	973			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	241	251	408	75	43
Volume Left	29	47	0	0	0
Volume Right	212	0	0	0	6
cSH	514	973	1700	1700	1700
Volume to Capacity	0.47	0.05	0.24	0.04	0.03
Queue Length 95th (m)	19.8	1.2	0.0	0.0	0.0
Control Delay (s)	18.0	2.1	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	18.0	0.8		0.0	
Approach LOS	C				

Intersection Summary				
Average Delay		4.8		
Intersection Capacity Utilization		38.0%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	560	40	10	265
Future Volume (Veh/h)	0	0	560	40	10	265
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	0	629	45	11	298
Pedestrians	30		10			
Lane Width (m)	0.0		3.6			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	0		1			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			60			
pX, platoon unblocked						
vC, conflicting volume	862	367			704	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	862	367			704	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			99	
cM capacity (veh/h)	292	636			903	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	419	255	110	199
Volume Left	0	0	11	0
Volume Right	0	45	0	0
cSH	1700	1700	903	1700
Volume to Capacity	0.25	0.15	0.01	0.12
Queue Length 95th (m)	0.0	0.0	0.3	0.0
Control Delay (s)	0.0	0.0	1.0	0.0
Lane LOS			A	
Approach Delay (s)	0.0		0.4	
Approach LOS				

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	20.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	200	20	90	320	70	40	0	160	5	0	0
Future Volume (Veh/h)	25	200	20	90	320	70	40	0	160	5	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	26	211	21	95	337	74	42	0	168	5	0	0
Pedestrians											30	
Lane Width (m)											3.6	
Walking Speed (m/s)											1.2	
Percent Blockage											3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					93							
pX, platoon unblocked												
vC, conflicting volume	441			232			632	904	116	920	878	236
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	441			232			632	904	116	920	878	236
tC, single (s)	4.1			4.1			7.5	6.5	6.9	8.2	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.8	4.0	3.3
p0 queue free %	98			93			88	100	82	96	100	100
cM capacity (veh/h)	1101			1348			336	247	921	133	256	753

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	132	126	264	242	210	5	0
Volume Left	26	0	95	0	42	5	0
Volume Right	0	21	0	74	168	0	0
cSH	1101	1700	1348	1700	683	133	1700
Volume to Capacity	0.02	0.07	0.07	0.14	0.31	0.04	0.00
Queue Length 95th (m)	0.6	0.0	1.8	0.0	10.4	0.9	0.0
Control Delay (s)	1.8	0.0	3.2	0.0	12.6	33.1	0.0
Lane LOS	A		A		B	D	A
Approach Delay (s)	0.9		1.7		12.6	33.1	
Approach LOS					B	D	

Intersection Summary				
Average Delay	4.0			
Intersection Capacity Utilization	49.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	130	245	270	90	0	0
Future Volume (Veh/h)	130	245	270	90	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	137	258	284	95	0	0
Pedestrians					30	
Lane Width (m)					0.0	
Walking Speed (m/s)					1.2	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			149			
pX, platoon unblocked						
vC, conflicting volume	409				764	220
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	409				764	220
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				100	100
cM capacity (veh/h)	1161				303	791

Direction, Lane #	EB 1	EB 2	WB 1	WB 2
Volume Total	223	172	189	190
Volume Left	137	0	0	0
Volume Right	0	0	0	95
cSH	1161	1700	1700	1700
Volume to Capacity	0.12	0.10	0.11	0.11
Queue Length 95th (m)	3.2	0.0	0.0	0.0
Control Delay (s)	5.6	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	3.2		0.0	
Approach LOS				

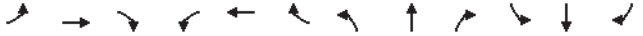
Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	29.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	290	270	0	85	155
Future Volume (Veh/h)	0	290	270	0	85	155
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	319	297	0	93	170
Pedestrians					20	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					2	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			205			
pX, platoon unblocked						
vC, conflicting volume	317				476	168
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	317				476	168
tC, single (s)	4.1				6.9	7.6
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.6
p0 queue free %	100				82	77
cM capacity (veh/h)	1234				504	744

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	160	160	148	148	263
Volume Left	0	0	0	0	93
Volume Right	0	0	0	0	170
cSH	1700	1700	1700	1700	637
Volume to Capacity	0.09	0.09	0.09	0.09	0.41
Queue Length 95th (m)	0.0	0.0	0.0	0.0	16.2
Control Delay (s)	0.0	0.0	0.0	0.0	14.6
Lane LOS					B
Approach Delay (s)	0.0		0.0		14.6
Approach LOS					B

Intersection Summary				
Average Delay	4.4			
Intersection Capacity Utilization	31.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	160	115	15	215	90	120	130	120	175	0	10	5
Future Volume (vph)	160	115	15	215	90	120	130	120	175	0	10	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	168	121	16	226	95	126	137	126	184	0	11	5

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	289	16	321	126	263	184	16
Volume Left (vph)	168	0	226	0	137	0	0
Volume Right (vph)	0	16	0	126	0	184	5
Hadj (s)	0.29	-0.70	0.82	-0.70	0.93	-0.70	-0.19
Departure Headway (s)	7.1	6.1	7.4	5.8	7.7	6.0	7.5
Degree Utilization, x	0.57	0.03	0.66	0.20	0.56	0.31	0.03
Capacity (veh/h)	491	561	476	590	448	568	421
Control Delay (s)	17.7	8.0	22.3	9.1	18.9	10.5	10.8
Approach Delay (s)	17.2		18.6		15.4		10.8
Approach LOS	C		C		C		B

Intersection Summary					
Delay	17.0				
Level of Service	C				
Intersection Capacity Utilization	50.6%	ICU Level of Service	A		
Analysis Period (min)	15				



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	5	50	425	195	45
Future Volume (Veh/h)	0	5	50	425	195	45
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	5	54	462	212	49
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				108		
pX, platoon unblocked						
vC, conflicting volume	576	130	261			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	576	130	261			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	96			
cM capacity (veh/h)	434	901	1315			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	5	208	308	141	120
Volume Left	0	54	0	0	0
Volume Right	5	0	0	0	49
cSH	901	1315	1700	1700	1700
Volume to Capacity	0.01	0.04	0.18	0.08	0.07
Queue Length 95th (m)	0.1	1.0	0.0	0.0	0.0
Control Delay (s)	9.0	2.3	0.0	0.0	0.0
Lane LOS	A	A			
Approach Delay (s)	9.0	0.9		0.0	
Approach LOS	A				

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	33.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	240	90	385	65	25	175
Future Volume (Veh/h)	240	90	385	65	25	175
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	261	98	418	71	27	190
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			69			
pX, platoon unblocked						
vC, conflicting volume	602	244			489	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	602	244			489	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	39	87			98	
cM capacity (veh/h)	425	762			1085	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	359	279	210	90	127
Volume Left	261	0	0	27	0
Volume Right	98	0	71	0	0
cSH	483	1700	1700	1085	1700
Volume to Capacity	0.74	0.16	0.12	0.02	0.07
Queue Length 95th (m)	49.6	0.0	0.0	0.6	0.0
Control Delay (s)	31.0	0.0	0.0	2.7	0.0
Lane LOS	D			A	
Approach Delay (s)	31.0	0.0		1.1	
Approach LOS	D				

Intersection Summary				
Average Delay	10.7			
Intersection Capacity Utilization	47.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	280	155	70	10	10
Future Volume (Veh/h)	85	280	155	70	10	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	94	311	172	78	11	11
Pedestrians			10		10	
Lane Width (m)			3.6		3.6	
Walking Speed (m/s)			1.2		1.2	
Percent Blockage			1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	260				730	221
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	260				730	221
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				97	99
cM capacity (veh/h)	1305				358	817

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	405	250	22
Volume Left	94	0	11
Volume Right	0	78	11
cSH	1305	1700	498
Volume to Capacity	0.07	0.15	0.04
Queue Length 95th (m)	1.9	0.0	1.1
Control Delay (s)	2.4	0.0	12.6
Lane LOS	A		B
Approach Delay (s)	2.4	0.0	12.6
Approach LOS			B

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	45.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	225	0	0	0	0	15
Future Volume (Veh/h)	225	0	0	0	0	15
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	242	0	0	0	0	16
Pedestrians	10					20
Lane Width (m)	3.6					3.6
Walking Speed (m/s)	1.2					1.2
Percent Blockage	1					2
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	26	30			10	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	26	30			10	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	75	100			100	
cM capacity (veh/h)	986	1024			1609	

Direction, Lane #	WB 1	SB 1
Volume Total	242	16
Volume Left	242	0
Volume Right	0	0
cSH	986	1700
Volume to Capacity	0.25	0.01
Queue Length 95th (m)	7.7	0.0
Control Delay (s)	9.8	0.0
Lane LOS	A	
Approach Delay (s)	9.8	0.0
Approach LOS	A	

Intersection Summary				
Average Delay	9.2			
Intersection Capacity Utilization	22.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	0	15	240	0	0
Future Volume (Veh/h)	10	0	15	240	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	0	19	300	0	0
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			201			
pX, platoon unblocked						
vC, conflicting volume	179	179			329	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	179	179			329	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	808	862			1232	

Direction, Lane #	WB 1	NB 1
Volume Total	12	319
Volume Left	12	0
Volume Right	0	300
cSH	808	1700
Volume to Capacity	0.01	0.19
Queue Length 95th (m)	0.4	0.0
Control Delay (s)	9.5	0.0
Lane LOS	A	
Approach Delay (s)	9.5	0.0
Approach LOS	A	

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	26.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	5	1230	5	0	1555
Future Volume (Veh/h)	0	5	1230	5	0	1555
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	5	1309	5	0	1654
Pedestrians	110					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	9					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			68			
pX, platoon unblocked	0.83	0.83			0.83	
vC, conflicting volume	2248	767			1424	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2094	307			1099	
tC, single (s)	7.8	7.6			4.1	
tC, 2 stage (s)						
tF (s)	4.0	3.6			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	19	456			484	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	5	873	441	827	827
Volume Left	0	0	0	0	0
Volume Right	5	0	5	0	0
cSH	456	1700	1700	1700	1700
Volume to Capacity	0.01	0.51	0.26	0.49	0.49
Queue Length 95th (m)	0.3	0.0	0.0	0.0	0.0
Control Delay (s)	13.0	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	13.0	0.0		0.0	
Approach LOS	B				

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	46.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	550	5	0	505	105	0	0	0	0	0	50
Future Volume (Veh/h)	0	550	5	0	505	105	0	0	0	0	0	50
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	625	6	0	574	119	0	0	0	0	0	57
Pedestrians					10			30			10	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					1			3			1	
Right turn flare (veh)												
Median type		TWLTL			None							
Median storage veh)		2										
Upstream signal (m)		151			79							
pX, platoon unblocked	0.98			0.96			0.97	0.97	0.96	0.97	0.97	0.98
vC, conflicting volume	703			661			1002	1361	356	966	1304	356
vC1, stage 1 conf vol							658	658		644	644	
vC2, stage 2 conf vol							344	703		322	661	
vCu, unblocked vol	650			556			832	1203	237	795	1145	296
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	92
cM capacity (veh/h)	917			956			407	361	713	423	375	685

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	417	214	383	310	0	57
Volume Left	0	0	0	0	0	0
Volume Right	0	6	0	119	0	57
cSH	1700	1700	1700	1700	1700	685
Volume to Capacity	0.25	0.13	0.23	0.18	0.00	0.08
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	2.2
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.7
Lane LOS					A	B
Approach Delay (s)	0.0		0.0		0.0	10.7
Approach LOS					A	B

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	30.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	540	20	25	530	10	15
Future Volume (Veh/h)	540	20	25	530	10	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	643	24	30	631	12	18
Pedestrians				10	50	
Lane Width (m)				3.6	3.6	
Walking Speed (m/s)				1.2	1.2	
Percent Blockage				1	4	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (m)	108			121		
pX, platoon unblocked			0.95		0.95	0.95
vC, conflicting volume			717		1080	394
vC1, stage 1 conf vol					705	
vC2, stage 2 conf vol					376	
vCu, unblocked vol			598		980	257
tC, single (s)			4.7		8.5	7.9
tC, 2 stage (s)					7.5	
tF (s)			2.5		4.4	3.8
p0 queue free %			96		96	97
cM capacity (veh/h)			739		269	556

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	429	238	30	316	316	30
Volume Left	0	0	30	0	0	12
Volume Right	0	24	0	0	0	18
cSH	1700	1700	739	1700	1700	390
Volume to Capacity	0.25	0.14	0.04	0.19	0.19	0.08
Queue Length 95th (m)	0.0	0.0	1.0	0.0	0.0	2.0
Control Delay (s)	0.0	0.0	10.1	0.0	0.0	15.0
Lane LOS			B			C
Approach Delay (s)	0.0		0.5			15.0
Approach LOS						C

Intersection Summary				
Average Delay		0.6		
Intersection Capacity Utilization		33.6%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	550	0	0	605	5	5
Future Volume (Veh/h)	550	0	0	605	5	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	625	0	0	688	6	6
Pedestrians				10	30	
Lane Width (m)				3.6	3.6	
Walking Speed (m/s)				1.2	1.2	
Percent Blockage				1	3	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	173			56		
pX, platoon unblocked			0.96		0.97	0.96
vC, conflicting volume			655		999	352
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			557		815	242
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	99
cM capacity (veh/h)			958		303	710

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	417	208	229	459	12
Volume Left	0	0	0	0	6
Volume Right	0	0	0	0	6
cSH	1700	1700	958	1700	425
Volume to Capacity	0.25	0.12	0.00	0.27	0.03
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.7
Control Delay (s)	0.0	0.0	0.0	0.0	13.7
Lane LOS					B
Approach Delay (s)	0.0		0.0		13.7
Approach LOS					B

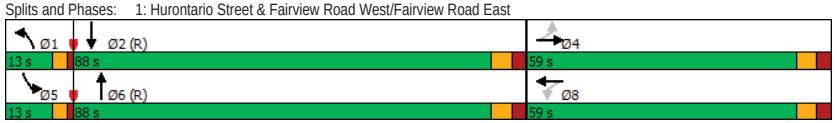
Intersection Summary				
Average Delay		0.1		
Intersection Capacity Utilization		29.6%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	45	70	120	90	105	1440	115	1540
Future Volume (vph)	45	70	120	90	105	1440	115	1540
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8					
Detector Phase	4	4	8	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	40.0	40.0	40.0	40.0	9.0	29.0	9.0	29.0
Total Split (s)	59.0	59.0	59.0	59.0	13.0	88.0	13.0	88.0
Total Split (%)	36.9%	36.9%	36.9%	36.9%	8.1%	55.0%	8.1%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	1.0	3.0	1.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	30.1	30.1	30.1	30.1	18.7	94.1	20.8	96.2
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.12	0.59	0.13	0.60
v/c Ratio	0.33	0.40	0.66	0.59	0.53	0.90	0.52	0.83
Control Delay	60.4	46.7	76.2	54.3	70.6	38.3	73.2	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.4	46.7	76.2	54.3	70.6	38.3	73.2	31.2
LOS	E	D	E	D	E	D	E	C
Approach Delay		50.2		62.8		40.2		34.0
Approach LOS		D		E		D		C

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 35 (22%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 39.7 — Intersection LOS: D
Intersection Capacity Utilization 102.1% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 1: Hurontario Street & Fairview Road West/Fairview Road East



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	47	137	126	200	111	1769	121	1732
v/c Ratio	0.33	0.40	0.66	0.59	0.53	0.90	0.52	0.83
Control Delay	60.4	46.7	76.2	54.3	70.6	38.3	73.2	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.4	46.7	76.2	54.3	70.6	38.3	73.2	31.2
Queue Length 50th (m)	13.4	30.9	38.4	48.9	31.4	314.3	38.6	248.5
Queue Length 95th (m)	27.2	52.9	63.6	77.1	m48.5	#352.2	60.5	298.1
Internal Link Dist (m)		78.1		66.2		510.0		77.3
Turn Bay Length (m)	75.0		40.0		120.0		50.0	
Base Capacity (vph)	254	586	335	570	210	1971	234	2089
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.23	0.38	0.35	0.53	0.90	0.52	0.83

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	70	60	120	90	100	105	1440	240	115	1540	105
Future Volume (vph)	45	70	60	120	90	100	105	1440	240	115	1540	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.97		1.00	0.97		1.00	0.96		1.00	0.98	
Flpb, ped/bikes	0.97	1.00		0.96	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.92		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1755	1713		1707	1648		1805	3339		1805	3473	
Flt Permitted	0.42	1.00		0.56	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	770	1713		1015	1648		1805	3339		1805	3473	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	74	63	126	95	105	111	1516	253	121	1621	111
RTOR Reduction (vph)	0	24	0	0	30	0	0	7	0	0	2	0
Lane Group Flow (vph)	47	113	0	126	170	0	111	1762	0	121	1730	0
Confl. Peds. (#/hr)	30		40	40		30	80		70	70		80
Heavy Vehicles (%)	0%	0%	0%	1%	0%	6%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)	29.1	29.1		29.1	29.1		17.7	93.1		19.8	95.2	
Effective Green, g (s)	30.1	30.1		30.1	30.1		18.7	94.1		20.8	96.2	
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.12	0.59		0.13	0.60	
Clearance Time (s)	7.0	7.0		7.0	7.0		4.0	7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	144	322		190	310		210	1963		234	2088	
v/s Ratio Prot		0.07			0.10		0.06	c0.53		c0.07	0.50	
v/s Ratio Perm	0.06			c0.12								
v/c Ratio	0.33	0.35		0.66	0.55		0.53	0.90		0.52	0.83	
Uniform Delay, d1	56.2	56.5		60.2	58.8		66.5	28.7		64.9	25.3	
Progression Factor	1.00	1.00		1.00	1.00		0.95	1.08		1.00	1.00	
Incremental Delay, d2	1.3	0.7		8.4	2.0		2.0	6.0		1.9	4.0	
Delay (s)	57.5	57.1		68.7	60.8		64.9	37.1		66.8	29.3	
Level of Service	E	E		E	E		E	D		E	C	
Approach Delay (s)		57.2			63.8			38.7			31.8	
Approach LOS		E			E			D			C	

Intersection Summary				
HCM 2000 Control Delay	38.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	102.1%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	400	20	15	10	70	995	100	1135	205
Future Volume (vph)	400	20	15	10	70	995	100	1135	205
Turn Type	pm+pt	NA	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8		4	1	6	5	2	
Permitted Phases	8		4						2
Detector Phase	3	8	4	4	1	6	5	2	2
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0	8.0
Minimum Split (s)	8.0	46.0	46.0	46.0	9.0	38.0	9.0	38.0	38.0
Total Split (s)	15.0	61.0	46.0	46.0	20.0	79.0	20.0	79.0	79.0
Total Split (%)	9.4%	38.1%	28.8%	28.8%	12.5%	49.4%	12.5%	49.4%	49.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	4.0	4.0	4.0	1.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	3.0	6.0	3.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	63.3	58.3	33.0	33.0	12.8	71.1	14.7	72.9	72.9
Actuated g/C Ratio	0.40	0.36	0.21	0.21	0.08	0.44	0.09	0.46	0.46
v/c Ratio	0.82	0.26	0.07	0.22	0.51	0.70	0.64	0.75	0.35
Control Delay	54.7	9.0	47.5	9.0	104.3	32.0	89.2	27.2	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0
Total Delay	54.7	9.0	47.5	9.0	104.3	32.3	89.2	27.3	8.1
LOS	D	A	D	A	F	C	F	C	A
Approach Delay		42.9		12.5		36.9		28.8	
Approach LOS		D		B		D		C	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 107 (67%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 33.1		Intersection LOS: C	
Intersection Capacity Utilization 102.5%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 2: Hurontario Street & John Street





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	426	149	16	160	74	1086	106	1207	218
v/c Ratio	0.82	0.26	0.07	0.22	0.51	0.70	0.64	0.75	0.35
Control Delay	54.7	9.0	47.5	9.0	104.3	32.0	89.2	27.2	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0
Total Delay	54.7	9.0	47.5	9.0	104.3	32.3	89.2	27.3	8.1
Queue Length 50th (m)	106.9	4.3	4.2	1.4	25.5	167.7	31.9	201.1	26.3
Queue Length 95th (m)	#199.1	22.3	11.2	11.6	m40.6	185.1	m41.7	218.0	m32.4
Internal Link Dist (m)		69.2		56.1		116.0		43.8	
Turn Bay Length (m)					15.0		30.0		40.0
Base Capacity (vph)	518	596	280	817	191	1668	191	1689	651
Starvation Cap Reductn	0	0	0	0	0	132	0	0	0
Spillback Cap Reductn	0	1	0	0	0	0	0	29	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.25	0.06	0.20	0.39	0.71	0.55	0.73	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	400	20	120	15	10	140	70	995	25	100	1135	205
Future Volume (vph)	400	20	120	15	10	140	70	995	25	100	1135	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	7.0		7.0	7.0		3.0	6.0		3.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.95		1.00	0.93		1.00	1.00		1.00	1.00	0.87
Flpb, ped/bikes	0.97	1.00		0.96	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1685	1378		1648	2892		1805	3510		1805	3539	1272
Flt Permitted	0.61	1.00		0.66	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1088	1378		1149	2892		1805	3510		1805	3539	1272
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	426	21	128	16	11	149	74	1059	27	106	1207	218
RTOR Reduction (vph)	0	81	0	0	118	0	0	1	0	0	0	46
Lane Group Flow (vph)	426	68	0	16	42	0	74	1085	0	106	1207	172
Confl. Peds. (#/hr)	50		40	40		50	80		70	70		80
Heavy Vehicles (%)	4%	0%	16%	5%	0%	0%	0%	2%	0%	0%	2%	10%
Turn Type	pm+pt	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4								2
Actuated Green, G (s)	57.3	57.3		32.0	32.0		11.8	70.0		13.7	71.9	71.9
Effective Green, g (s)	58.3	58.3		33.0	33.0		12.8	71.0		14.7	72.9	72.9
Actuated g/C Ratio	0.36	0.36		0.21	0.21		0.08	0.44		0.09	0.46	0.46
Clearance Time (s)	3.0	8.0		8.0	8.0		4.0	7.0		4.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	483	502		236	596		144	1557		165	1612	579
v/s Ratio Prot	c0.13	0.05			0.01		0.04	0.31		c0.06	c0.34	
v/s Ratio Perm	0.19			0.01								0.13
v/c Ratio	0.88	0.13		0.07	0.07		0.51	0.70		0.64	0.75	0.30
Uniform Delay, d1	44.8	34.0		51.1	51.1		70.6	35.8		70.1	36.0	27.4
Progression Factor	1.00	1.00		1.00	1.00		1.33	0.81		1.11	0.67	0.40
Incremental Delay, d2	17.0	0.1		0.1	0.1		2.8	2.3		5.4	2.1	0.8
Delay (s)	61.8	34.1		51.2	51.2		96.8	31.2		83.1	26.3	11.9
Level of Service	E	C		D	D		F	C		F	C	B
Approach Delay (s)		54.6			51.2			35.4			28.2	
Approach LOS		D			D			D			C	

Intersection Summary				
HCM 2000 Control Delay	36.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	102.5%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	205	130	30	250	235	795	65	1055
Future Volume (vph)	205	130	30	250	235	795	65	1055
Turn Type	pm+pt	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases	3	8		4	1	6	5	2
Permitted Phases	8		4					
Detector Phase	3	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	8.0	8.0	8.0	5.0	8.0	5.0	8.0
Minimum Split (s)	8.0	56.0	56.0	56.0	9.0	51.5	9.0	51.5
Total Split (s)	8.0	64.0	56.0	56.0	25.0	82.0	14.0	71.0
Total Split (%)	5.0%	40.0%	35.0%	35.0%	15.6%	51.3%	8.8%	44.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	4.0	4.0	4.0	1.0	3.5	1.0	3.5
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	7.0	7.0	7.0	3.0	6.5	3.0	6.5
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	57.8	52.8	42.4	42.4	22.7	80.4	10.3	68.0
Actuated g/C Ratio	0.36	0.33	0.26	0.26	0.14	0.50	0.06	0.42
v/c Ratio	0.61	0.43	0.13	0.37	0.95	0.48	0.58	0.84
Control Delay	52.2	27.9	42.0	43.0	111.5	19.2	105.5	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.3
Total Delay	52.2	27.9	42.0	43.0	111.5	19.7	105.5	20.6
LOS	D	C	D	D	F	B	F	C
Approach Delay		35.0		42.9		39.9		25.0
Approach LOS		D		D		D		C

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 99 (62%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 33.7 — Intersection LOS: C
Intersection Capacity Utilization 113.5% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 3: Hurontario Street & Hillcrest Avenue/Kirwin Avenue



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	207	505	30	344	237	838	66	1218
v/c Ratio	0.61	0.43	0.13	0.37	0.95	0.48	0.58	0.84
Control Delay	52.2	27.9	42.0	43.0	111.5	19.2	105.5	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.3
Total Delay	52.2	27.9	42.0	43.0	111.5	19.7	105.5	20.6
Queue Length 50th (m)	47.2	35.8	7.3	42.2	84.3	52.2	23.2	31.0
Queue Length 95th (m)	77.0	61.4	16.7	57.2	m#97.0	m56.5	m33.6	83.3
Internal Link Dist (m)		32.2		62.6		277.3		116.0
Turn Bay Length (m)	50.0		50.0		75.0		65.0	
Base Capacity (vph)	338	1266	259	1061	250	1743	122	1467
Starvation Cap Reductn	0	0	0	0	0	0	0	36
Spillback Cap Reductn	0	0	0	1	0	438	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.40	0.12	0.32	0.95	0.64	0.54	0.85

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	130	370	30	250	90	235	795	35	65	1055	150
Future Volume (vph)	205	130	370	30	250	90	235	795	35	65	1055	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	7.0		7.0	7.0		3.0	6.5		3.0	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.96		1.00	0.98		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.89		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1732	3079		1770	3392		1770	3441		1787	3405	
Flt Permitted	0.45	1.00		0.45	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	811	3079		847	3392		1770	3441		1787	3405	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	207	131	374	30	253	91	237	803	35	66	1066	152
RTOR Reduction (vph)	0	163	0	0	24	0	0	2	0	0	7	0
Lane Group Flow (vph)	207	342	0	30	320	0	237	836	0	66	1211	0
Confl. Peds. (#/hr)	50		40	40		50	80		80	80		80
Confl. Bikes (#/hr)						1			1			2
Heavy Vehicles (%)	3%	1%	0%	0%	0%	2%	2%	4%	0%	1%	3%	1%
Turn Type	pm+pt	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4								
Actuated Green, G (s)	51.9	51.9		41.4	41.4		21.7	79.3		9.3	66.9	
Effective Green, g (s)	52.9	52.9		42.4	42.4		22.7	80.3		10.3	67.9	
Actuated g/C Ratio	0.33	0.33		0.26	0.26		0.14	0.50		0.06	0.42	
Clearance Time (s)	3.0	8.0		8.0	8.0		4.0	7.5		4.0	7.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	317	1017		224	898		251	1726		115	1444	
v/s Ratio Prot	c0.03	0.11			c0.09		c0.13	0.24		0.04	c0.36	
v/s Ratio Perm	0.18			0.04								
v/c Ratio	0.65	0.34		0.13	0.36		0.94	0.48		0.57	0.84	
Uniform Delay, d1	44.6	40.3		44.8	47.7		68.0	26.2		72.7	41.2	
Progression Factor	1.15	1.35		1.00	1.00		1.31	0.68		1.24	0.37	
Incremental Delay, d2	4.6	0.2		0.3	0.2		23.8	0.4		5.1	4.5	
Delay (s)	55.7	54.8		45.1	48.0		112.8	18.3		95.4	19.6	
Level of Service	E	D		D	D		F	B		F	B	
Approach Delay (s)		55.0			47.7			39.1			23.5	
Approach LOS		E			D			D			C	

Intersection Summary				
HCM 2000 Control Delay	37.5	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.5	
Intersection Capacity Utilization	113.5%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	135	375	390	320	225
Future Volume (vph)	135	375	390	320	225
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	1	6	2	4	
Permitted Phases	6				4
Detector Phase	1	6	2	4	4
Switch Phase					
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	33.5	33.5	26.0	26.0
Total Split (s)	28.0	134.0	106.0	26.0	26.0
Total Split (%)	17.5%	83.8%	66.3%	16.3%	16.3%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	3.5	3.5	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	5.0	5.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	87.3	82.8	66.8	65.7	65.7
Actuated g/C Ratio	0.55	0.52	0.42	0.41	0.41
v/c Ratio	0.38	0.21	0.37	0.62	0.35
Control Delay	19.7	20.2	40.5	47.1	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	20.2	40.5	47.1	9.2
LOS	B	C	D	D	A
Approach Delay		20.0	40.5	31.5	
Approach LOS		C	D	C	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 30.7		Intersection LOS: C	
Intersection Capacity Utilization 59.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Hillcrest Avenue & Go Access Road





Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	139	387	536	330	232
v/c Ratio	0.38	0.21	0.37	0.62	0.35
Control Delay	19.7	20.2	40.5	47.1	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	20.2	40.5	47.1	9.2
Queue Length 50th (m)	21.3	33.7	71.2	91.6	6.8
Queue Length 95th (m)	27.5	36.3	m84.2	#156.2	31.8
Internal Link Dist (m)		144.9	84.1	44.8	
Turn Bay Length (m)	70.0				
Base Capacity (vph)	428	2876	2118	529	665
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	0.32	0.13	0.25	0.62	0.35

Intersection Summary

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

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	135	375	390	130	320	225
Future Volume (vph)	135	375	390	130	320	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.5	6.5		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00
Flpb, ped/bikes	0.99	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.96		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1387	3610	3376		1289	1335
Flt Permitted	0.37	1.00	1.00		0.95	1.00
Satd. Flow (perm)	537	3610	3376		1289	1335
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	139	387	402	134	330	232
RTOR Reduction (vph)	0	0	31	0	0	118
Lane Group Flow (vph)	139	387	505	0	330	114
Confl. Peds. (#/hr)	40			40	10	
Heavy Vehicles (%)	29%	0%	1%	0%	40%	21%
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6					4
Actuated Green, G (s)	81.8	81.8	65.8		64.7	64.7
Effective Green, g (s)	82.8	82.8	66.8		65.7	65.7
Actuated g/C Ratio	0.52	0.52	0.42		0.41	0.41
Clearance Time (s)	3.0	7.5	7.5		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	352	1868	1409		529	548
v/s Ratio Prot	c0.03	0.11	c0.15		c0.26	
v/s Ratio Perm	0.17					0.09
v/c Ratio	0.39	0.21	0.36		0.62	0.21
Uniform Delay, d1	21.3	20.9	31.9		37.4	30.4
Progression Factor	1.00	1.00	1.44		1.00	1.00
Incremental Delay, d2	0.7	0.3	0.6		2.3	0.2
Delay (s)	22.1	21.1	46.7		39.7	30.6
Level of Service	C	C	D		D	C
Approach Delay (s)		21.4	46.7		35.9	
Approach LOS		C	D		D	

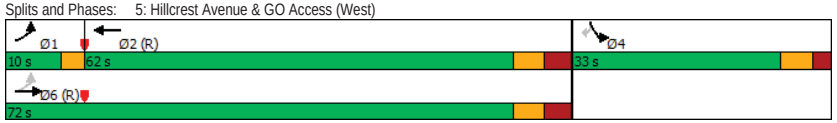
Intersection Summary				
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	260	360	520	150	355
Future Volume (vph)	260	360	520	150	355
Turn Type	pm+pt	NA	NA	Prot	Perm
Protected Phases	1	6	2	4	
Permitted Phases	6				4
Detector Phase	1	6	2	4	4
Switch Phase					
Minimum Initial (s)	5.0	8.0	8.0	4.0	4.0
Minimum Split (s)	8.0	38.5	38.5	31.5	31.5
Total Split (s)	10.0	72.0	62.0	33.0	33.0
Total Split (%)	9.5%	68.6%	59.0%	31.4%	31.4%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	3.5	3.5	2.5	2.5
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.0	6.5	6.5	5.5	5.5
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	71.2	66.7	51.9	26.3	26.3
Actuated g/C Ratio	0.68	0.64	0.49	0.25	0.25
v/c Ratio	0.49	0.17	0.39	0.36	0.66
Control Delay	9.7	8.1	17.1	35.0	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.7	8.1	17.1	35.0	14.8
LOS	A	A	B	C	B
Approach Delay		8.8	17.1	20.8	
Approach LOS		A	B	C	

Intersection Summary		
Cycle Length: 105		
Actuated Cycle Length: 105		
Offset: 90 (86%), Referenced to phase 2:WBT and 6:EBTL, Start of Green		
Natural Cycle: 80		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.66		
Intersection Signal Delay: 15.2	Intersection LOS: B	
Intersection Capacity Utilization 73.5%	ICU Level of Service D	
Analysis Period (min) 15		

Splits and Phases: 5: Hillcrest Avenue & GO Access (West)



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	280	387	661	161	382
v/c Ratio	0.49	0.17	0.39	0.36	0.66
Control Delay	9.7	8.1	17.1	35.0	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.7	8.1	17.1	35.0	14.8
Queue Length 50th (m)	20.3	16.3	42.4	28.7	15.2
Queue Length 95th (m)	32.8	23.8	62.8	47.2	48.0
Internal Link Dist (m)		22.5	144.9	35.6	
Turn Bay Length (m)	30.0				
Base Capacity (vph)	569	2226	1816	472	593
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	0.49	0.17	0.36	0.34	0.64

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	260	360	520	95	150	355
Future Volume (vph)	260	360	520	95	150	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.5	6.5		5.5	5.5
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00	0.89
Flpb, ped/bikes	0.99	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1791	3505	3409		1805	1436
Flt Permitted	0.34	1.00	1.00		0.95	1.00
Satd. Flow (perm)	640	3505	3409		1805	1436
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	280	387	559	102	161	382
RTOR Reduction (vph)	0	0	15	0	0	220
Lane Group Flow (vph)	280	387	646	0	161	162
Confl. Peds. (#/hr)	70			70	30	80
Heavy Vehicles (%)	0%	3%	2%	3%	0%	0%
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6					4
Actuated Green, G (s)	65.7	65.7	50.9		25.3	25.3
Effective Green, g (s)	66.7	66.7	51.9		26.3	26.3
Actuated g/C Ratio	0.64	0.64	0.49		0.25	0.25
Clearance Time (s)	3.0	7.5	7.5		6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	546	2226	1685		452	359
v/s Ratio Prot	c0.06	0.11	c0.19		0.09	
v/s Ratio Perm	0.26					c0.11
v/c Ratio	0.51	0.17	0.38		0.36	0.45
Uniform Delay, d1	8.8	7.9	16.6		32.4	33.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.8	0.2	0.7		0.5	0.9
Delay (s)	9.6	8.0	17.2		32.9	34.1
Level of Service	A	A	B		C	C
Approach Delay (s)		8.7	17.2		33.8	
Approach LOS		A	B		C	

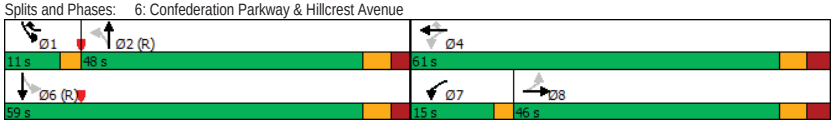
Intersection Summary				
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.42			
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	73.5%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	115	180	350	245	280	25	955	265	730
Future Volume (vph)	115	180	350	245	280	25	955	265	730
Turn Type	Perm	NA	pm+pt	NA	pm+ov	Perm	NA	pm+pt	NA
Protected Phases		8	7	4	1		2	1	6
Permitted Phases	8		4		4	2		6	
Detector Phase	8	8	7	4	1	2	2	1	6
Switch Phase									
Minimum Initial (s)	8.0	8.0	5.0	8.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	45.5	45.5	8.0	45.5	8.0	48.0	48.0	8.0	48.0
Total Split (s)	46.0	46.0	15.0	61.0	11.0	48.0	48.0	11.0	59.0
Total Split (%)	38.3%	38.3%	12.5%	50.8%	9.2%	40.0%	40.0%	9.2%	49.2%
Yellow Time (s)	4.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	3.5	3.5	0.0	3.5	0.0	3.0	3.0	0.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	6.5	6.5	2.0	6.5	2.0	6.0	6.0	2.0	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	29.8	29.8	49.3	44.8	67.9	42.1	42.1	66.7	62.7
Actuated g/C Ratio	0.25	0.25	0.41	0.37	0.57	0.35	0.35	0.56	0.52
v/c Ratio	0.45	0.50	0.86	0.38	0.34	0.13	0.98	0.81	0.51
Control Delay	40.8	39.0	47.1	27.5	12.5	28.8	60.0	49.1	21.3
Queue Delay	0.0	0.0	51.6	0.0	0.4	0.0	0.0	0.0	0.0
Total Delay	40.8	39.0	98.7	27.5	13.0	28.8	60.0	49.1	21.3
LOS	D	D	F	C	B	C	E	D	C
Approach Delay		39.6		51.3			59.3		27.8
Approach LOS		D		D			E		C

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 45.2		Intersection LOS: D	
Intersection Capacity Utilization 109.8%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 6: Confederation Parkway & Hillcrest Avenue



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	122	228	372	261	298	27	1202	282	921
v/c Ratio	0.45	0.50	0.86	0.38	0.34	0.13	0.98	0.81	0.51
Control Delay	40.8	39.0	47.1	27.5	12.5	28.8	60.0	49.1	21.3
Queue Delay	0.0	0.0	51.6	0.0	0.4	0.0	0.0	0.0	0.0
Total Delay	40.8	39.0	98.7	27.5	13.0	28.8	60.0	49.1	21.3
Queue Length 50th (m)	22.9	41.6	58.4	40.5	31.0	4.5	152.5	~73.1	86.3
Queue Length 95th (m)	40.7	64.7	84.5	60.8	48.5	12.1	#203.1	#129.8	107.6
Internal Link Dist (m)		72.4		67.3			99.6		86.6
Turn Bay Length (m)	25.0		35.0			35.0		30.0	
Base Capacity (vph)	364	607	432	846	879	204	1224	348	1821
Starvation Cap Reductn	0	0	96	0	243	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.38	1.11	0.31	0.47	0.13	0.98	0.81	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	180	35	350	245	280	25	955	175	265	730	135
Future Volume (vph)	115	180	35	350	245	280	25	955	175	265	730	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		2.0	6.5	2.0	6.0	6.0		2.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00	1.00	0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1757	1826		1722	1863	1528	1783	3454		1805	3461	
Flt Permitted	0.60	1.00		0.45	1.00	1.00	0.31	1.00		0.09	1.00	
Satd. Flow (perm)	1106	1826		816	1863	1528	582	3454		172	3461	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	122	191	37	372	261	298	27	1016	186	282	777	144
RTOR Reduction (vph)	0	7	0	0	0	17	0	12	0	0	11	0
Lane Group Flow (vph)	122	221	0	372	261	281	27	1190	0	282	910	0
Confl. Peds. (#/hr)	40		30	30		40	30		60	60		30
Heavy Vehicles (%)	0%	1%	0%	4%	2%	2%	0%	0%	7%	0%	1%	0%
Turn Type	Perm	NA		pm+pt	NA	pm+ov	Perm	NA		pm+pt	NA	
Protected Phases		8		7	4	1		2		1	6	
Permitted Phases	8			4		4	2			6		
Actuated Green, G (s)	28.8	28.8		43.8	43.8	61.4	41.1	41.1		61.7	61.7	
Effective Green, g (s)	29.8	29.8		44.8	44.8	63.4	42.1	42.1		62.7	62.7	
Actuated g/C Ratio	0.25	0.25		0.37	0.37	0.53	0.35	0.35		0.52	0.52	
Clearance Time (s)	7.5	7.5		3.0	7.5	3.0	7.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	274	453		402	695	807	204	1211		342	1808	
v/s Ratio Prot		c0.12		c0.10	0.14	0.05		c0.34		c0.13	0.26	
v/s Ratio Perm	0.11			0.24		0.13	0.05			0.30		
v/c Ratio	0.45	0.49		0.93	0.38	0.35	0.13	0.98		0.82	0.50	
Uniform Delay, d1	38.1	38.6		34.3	27.4	16.4	26.5	38.6		33.6	18.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	0.8		26.9	0.3	0.3	1.3	22.0		14.8	1.0	
Delay (s)	39.3	39.4		61.1	27.7	16.6	27.9	60.6		48.4	19.6	
Level of Service	D	D		E	C	B	C	E		D	B	
Approach Delay (s)		39.4			37.5			59.8			26.3	
Approach LOS		D			D			E			C	

Intersection Summary					
HCM 2000 Control Delay	41.5	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.80				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.5		
Intersection Capacity Utilization	109.8%	ICU Level of Service	H		
Analysis Period (min)	15				

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	65	0	995	1330	75
Future Volume (Veh/h)	0	65	0	995	1330	75
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	68	0	1036	1385	78
Pedestrians	120			10	10	
Lane Width (m)	3.6			3.6	3.6	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	10			1	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				123	301	
pX, platoon unblocked	0.80	0.70	0.70			
vC, conflicting volume	2072	862	1583			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	659	0	962			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	90	100			
cM capacity (veh/h)	286	677	453			

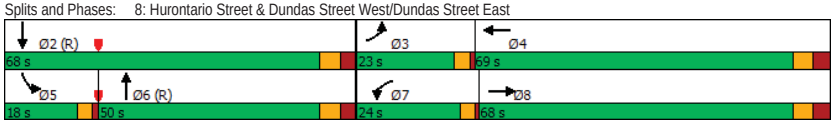
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	68	518	518	923	540
Volume Left	0	0	0	0	0
Volume Right	68	0	0	0	78
cSH	677	1700	1700	1700	1700
Volume to Capacity	0.10	0.30	0.30	0.54	0.32
Queue Length 95th (m)	2.7	0.0	0.0	0.0	0.0
Control Delay (s)	10.9	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.9	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay		0.3	
Intersection Capacity Utilization		53.6%	ICU Level of Service A
Analysis Period (min)		15	

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	235	810	130	975	645	165	955
Future Volume (vph)	235	810	130	975	645	165	955
Turn Type	Prot	NA	Prot	NA	NA	Prot	NA
Protected Phases	3	8	7	4	6	5	2
Permitted Phases							
Detector Phase	3	8	7	4	6	5	2
Switch Phase							
Minimum Initial (s)	5.0	8.0	5.0	8.0	8.0	5.0	8.0
Minimum Split (s)	9.0	45.5	9.0	45.5	41.0	9.0	41.0
Total Split (s)	23.0	68.0	24.0	69.0	50.0	18.0	68.0
Total Split (%)	14.4%	42.5%	15.0%	43.1%	31.3%	11.3%	42.5%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	3.5	1.0	3.5	3.0	1.0	3.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	6.5	3.0	6.5	6.0	3.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	20.0	65.5	17.0	62.5	44.0	15.0	62.0
Actuated g/C Ratio	0.12	0.41	0.11	0.39	0.28	0.09	0.39
v/c Ratio	1.00	0.72	0.66	0.98	0.89	0.95	1.00
Control Delay	126.6	43.0	84.1	66.8	67.0	107.7	83.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	126.6	43.0	84.1	66.8	67.0	107.7	83.9
LOS	F	D	F	E	E	F	F
Approach Delay		59.4		68.5	67.0		86.7
Approach LOS		E		E	E		F

Intersection Summary		
Cycle Length: 160		
Actuated Cycle Length: 160		
Offset: 72 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Green		
Natural Cycle: 125		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.00		
Intersection Signal Delay: 71.3	Intersection LOS: E	
Intersection Capacity Utilization 104.5%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 8: Hurontario Street & Dundas Street West/Dundas Street East



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	237	970	131	1248	798	167	1243
v/c Ratio	1.00	0.72	0.66	0.98	0.89	0.95	1.00
Control Delay	126.6	43.0	84.1	66.8	67.0	107.7	83.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	126.6	43.0	84.1	66.8	67.0	107.7	83.9
Queue Length 50th (m)	80.7	140.7	42.8	212.9	133.3	59.0	~228.4
Queue Length 95th (m)	#140.3	174.4	65.4	#265.0	#167.8	m#88.4	#275.1
Internal Link Dist (m)		110.1		127.8	99.4		99.2
Turn Bay Length (m)	35.0		25.0			65.0	
Base Capacity (vph)	237	1355	246	1278	900	176	1241
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.72	0.53	0.98	0.89	0.95	1.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	810	150	130	975	260	0	645	145	165	955	275
Future Volume (vph)	235	810	150	130	975	260	0	645	145	165	955	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.5		3.0	6.5			6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.95		1.00	0.94			0.93		1.00	0.91	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97			0.97		1.00	0.97	
Flt Protected	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Satd. Flow (prot)	1900	3288		1881	3235			3227		1881	3163	
Flt Permitted	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Satd. Flow (perm)	1900	3288		1881	3235			3227		1881	3163	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	237	818	152	131	985	263	0	652	146	167	965	278
RTOR Reduction (vph)	0	9	0	0	15	0	0	12	0	0	17	0
Lane Group Flow (vph)	237	961	0	131	1233	0	0	786	0	167	1226	0
Confl. Peds. (#/hr)	220		290	290		220	500		410	410		500
Heavy Vehicles (%)	0%	2%	1%	1%	2%	0%	2%	2%	0%	1%	1%	0%
Turn Type	Prot	NA		Prot	NA			NA		Prot	NA	
Protected Phases	3	8		7	4			6		5	2	
Permitted Phases												
Actuated Green, G (s)	19.0	64.5		16.0	61.5			43.0		14.0	61.0	
Effective Green, g (s)	20.0	65.5		17.0	62.5			44.0		15.0	62.0	
Actuated g/C Ratio	0.12	0.41		0.11	0.39			0.28		0.09	0.39	
Clearance Time (s)	4.0	7.5		4.0	7.5			7.0		4.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	237	1346		199	1263			887		176	1225	
v/s Ratio Prot	c0.12	c0.29		0.07	c0.38			0.24		0.09	c0.39	
v/s Ratio Perm												
v/c Ratio	1.00	0.71		0.66	0.98			0.89		0.95	1.00	
Uniform Delay, d1	70.0	39.4		68.7	48.0			55.6		72.1	49.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00		0.86	1.33	
Incremental Delay, d2	58.5	1.8		7.6	19.6			12.6		43.5	22.3	
Delay (s)	128.5	41.3		76.3	67.6			68.2		105.6	87.2	
Level of Service	F	D		E	E			E		F	F	
Approach Delay (s)		58.4			68.5			68.2			89.4	
Approach LOS		E			E			E			F	

Intersection Summary				
HCM 2000 Control Delay	72.0	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.00			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.5	
Intersection Capacity Utilization	104.5%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	230	25	35	135	65	140
Future Volume (Veh/h)	230	25	35	135	65	140
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	315	34	48	185	89	192
Pedestrians	40		90			20
Lane Width (m)	3.6		3.6			3.6
Walking Speed (m/s)	1.2		1.2			1.2
Percent Blockage	3		8			2
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			158			
pX, platoon unblocked						
vC, conflicting volume	548	108			273	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	548	108			273	
tC, single (s)	6.4	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.1			2.2	
p0 queue free %	24	95			93	
cM capacity (veh/h)	416	725			1258	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	349	48	185	281
Volume Left	315	0	0	89
Volume Right	34	0	185	0
cSH	434	1700	1700	1258
Volume to Capacity	0.80	0.03	0.11	0.07
Queue Length 95th (m)	58.3	0.0	0.0	1.8
Control Delay (s)	39.5	0.0	0.0	3.0
Lane LOS	E			A
Approach Delay (s)	39.5	0.0		3.0
Approach LOS	E			

Intersection Summary				
Average Delay		16.9		
Intersection Capacity Utilization		38.8%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	5	165	15	5	365
Future Volume (Veh/h)	15	5	165	15	5	365
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	18	6	199	18	6	440
Pedestrians	30		100			
Lane Width (m)	3.6		3.6			
Walking Speed (m/s)	1.2		1.2			
Percent Blockage	3		8			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			142			
pX, platoon unblocked						
vC, conflicting volume	570	138			247	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	570	138			247	
tC, single (s)	6.9	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	99			100	
cM capacity (veh/h)	396	869			1297	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	24	133	84	153	293
Volume Left	18	0	0	6	0
Volume Right	6	0	18	0	0
cSH	458	1700	1700	1297	1700
Volume to Capacity	0.05	0.08	0.05	0.00	0.17
Queue Length 95th (m)	1.3	0.0	0.0	0.1	0.0
Control Delay (s)	13.3	0.0	0.0	0.3	0.0
Lane LOS	B			A	
Approach Delay (s)	13.3	0.0		0.1	
Approach LOS	B				

Intersection Summary				
Average Delay		0.5		
Intersection Capacity Utilization		23.6%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	150	85	170	365	15
Future Volume (Veh/h)	10	150	85	170	365	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	12	176	100	200	429	18
Pedestrians	110				100	
Lane Width (m)	3.6				3.6	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	9				8	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				124		
pX, platoon unblocked						
vC, conflicting volume	948	334	557			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	948	334	557			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	71	89			
cM capacity (veh/h)	195	607	930			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	188	167	133	286	161
Volume Left	12	100	0	0	0
Volume Right	176	0	0	0	18
cSH	535	930	1700	1700	1700
Volume to Capacity	0.35	0.11	0.08	0.17	0.09
Queue Length 95th (m)	12.6	2.9	0.0	0.0	0.0
Control Delay (s)	15.3	6.0	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	15.3	3.3		0.0	
Approach LOS	C				

Intersection Summary				
Average Delay	4.2			
Intersection Capacity Utilization	40.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	255	100	10	505
Future Volume (Veh/h)	0	0	255	100	10	505
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	0	0	311	122	12	616
Pedestrians	20					
Lane Width (m)	0.0					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			60			
pX, platoon unblocked						
vC, conflicting volume	724	236			453	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	724	236			453	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			99	
cM capacity (veh/h)	361	771			1118	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	207	226	217	411
Volume Left	0	0	12	0
Volume Right	0	122	0	0
cSH	1700	1700	1118	1700
Volume to Capacity	0.12	0.13	0.01	0.24
Queue Length 95th (m)	0.0	0.0	0.3	0.0
Control Delay (s)	0.0	0.0	0.6	0.0
Lane LOS			A	
Approach Delay (s)	0.0		0.2	
Approach LOS				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	24.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	375	30	65	210	10	25	0	125	40	0	25
Future Volume (Veh/h)	5	375	30	65	210	10	25	0	125	40	0	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	7	493	39	86	276	13	33	0	164	53	0	33
Pedestrians											60	
Lane Width (m)											3.6	
Walking Speed (m/s)											1.2	
Percent Blockage											5	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					93							
pX, platoon unblocked												
vC, conflicting volume	349			532			870	1048	266	939	1060	204
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	349			532			870	1048	266	939	1060	204
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.7	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.6	4.0	3.3
p0 queue free %	99			92			85	100	78	61	100	96
cM capacity (veh/h)	1160			1046			214	199	738	135	196	768

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	254	286	224	151	197	53	33
Volume Left	7	0	86	0	33	53	0
Volume Right	0	39	0	13	164	0	33
cSH	1160	1700	1046	1700	523	135	768
Volume to Capacity	0.01	0.17	0.08	0.09	0.38	0.39	0.04
Queue Length 95th (m)	0.1	0.0	2.1	0.0	13.9	13.3	1.1
Control Delay (s)	0.3	0.0	3.8	0.0	16.0	47.7	9.9
Lane LOS	A		A		C	E	A
Approach Delay (s)	0.1		2.3		16.0	33.2	
Approach LOS					C	D	

Intersection Summary					
Average Delay	5.8				
Intersection Capacity Utilization	49.9%	ICU Level of Service		A	
Analysis Period (min)	15				



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	120	410	185	75	0	0
Future Volume (Veh/h)	120	410	185	75	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	160	547	247	100	0	0
Pedestrians			20		50	
Lane Width (m)			3.6		0.0	
Walking Speed (m/s)			1.2		1.2	
Percent Blockage			2		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			149			
pX, platoon unblocked						
vC, conflicting volume	397				960	224
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	397				960	224
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	86				100	100
cM capacity (veh/h)	1173				219	786

Direction, Lane #	EB 1	EB 2	WB 1	WB 2
Volume Total	342	365	165	182
Volume Left	160	0	0	0
Volume Right	0	0	0	100
cSH	1173	1700	1700	1700
Volume to Capacity	0.14	0.21	0.10	0.11
Queue Length 95th (m)	3.8	0.0	0.0	0.0
Control Delay (s)	4.7	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	2.3		0.0	
Approach LOS				

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	33.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	340	185	0	190	25
Future Volume (Veh/h)	0	340	185	0	190	25
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	0	415	226	0	232	30
Pedestrians					30	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			205			
pX, platoon unblocked						
vC, conflicting volume	256				464	143
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	256				464	143
tC, single (s)	4.1				7.0	7.6
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.6
p0 queue free %	100				53	96
cM capacity (veh/h)	1288				495	766

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	208	208	113	113	262
Volume Left	0	0	0	0	232
Volume Right	0	0	0	0	30
cSH	1700	1700	1700	1700	516
Volume to Capacity	0.12	0.12	0.07	0.07	0.51
Queue Length 95th (m)	0.0	0.0	0.0	0.0	22.7
Control Delay (s)	0.0	0.0	0.0	0.0	19.0
Lane LOS					C
Approach Delay (s)	0.0		0.0		19.0
Approach LOS					C

Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	29.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	20	145	145	150	40	20	30	15	135	60	105	135
Future Volume (vph)	20	145	145	150	40	20	30	15	135	60	105	135
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	25	179	179	185	49	25	37	19	167	74	130	167

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	204	179	234	25	56	167	371
Volume Left (vph)	25	0	185	0	37	0	74
Volume Right (vph)	0	179	0	25	0	167	167
Hadj (s)	0.06	-0.70	0.85	-0.70	1.24	-0.70	-0.23
Departure Headway (s)	7.2	6.4	8.1	6.5	8.7	6.7	6.7
Degree Utilization, x	0.41	0.32	0.53	0.05	0.13	0.31	0.69
Capacity (veh/h)	471	524	410	511	375	490	518
Control Delay (s)	13.9	11.2	18.6	8.6	11.8	11.5	23.3
Approach Delay (s)	12.6		17.6		11.6		23.3
Approach LOS	B		C		B		C

Intersection Summary				
Delay	16.7			
Level of Service	C			
Intersection Capacity Utilization	58.7%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	50	5	175	395	5
Future Volume (Veh/h)	5	50	5	175	395	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	54	5	190	429	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				108		
pX, platoon unblocked						
vC, conflicting volume	536	217	434			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	536	217	434			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	93	100			
cM capacity (veh/h)	477	794	1136			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	59	68	127	286	148
Volume Left	5	5	0	0	0
Volume Right	54	0	0	0	5
cSH	751	1136	1700	1700	1700
Volume to Capacity	0.08	0.00	0.07	0.17	0.09
Queue Length 95th (m)	2.0	0.1	0.0	0.0	0.0
Control Delay (s)	10.2	0.6	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	10.2	0.2		0.0	
Approach LOS	B				

Intersection Summary				
Average Delay		0.9		
Intersection Capacity Utilization		21.1%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	160	40	140	125	60	385
Future Volume (Veh/h)	160	40	140	125	60	385
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	174	43	152	136	65	418
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			69			
pX, platoon unblocked						
vC, conflicting volume	559	144			288	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	559	144			288	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	60	95			95	
cM capacity (veh/h)	440	884			1286	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	217	101	187	204	279
Volume Left	174	0	0	65	0
Volume Right	43	0	136	0	0
cSH	489	1700	1700	1286	1700
Volume to Capacity	0.44	0.06	0.11	0.05	0.16
Queue Length 95th (m)	18.0	0.0	0.0	1.3	0.0
Control Delay (s)	18.1	0.0	0.0	2.8	0.0
Lane LOS	C			A	
Approach Delay (s)	18.1	0.0		1.2	
Approach LOS	C				

Intersection Summary				
Average Delay		4.6		
Intersection Capacity Utilization		41.6%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	180	190	15	130	65
Future Volume (Veh/h)	20	180	190	15	130	65
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.63	0.63	0.63	0.63	0.63	0.63
Hourly flow rate (vph)	32	286	302	24	206	103
Pedestrians		10	10		30	
Lane Width (m)		3.6	3.6		3.6	
Walking Speed (m/s)		1.2	1.2		1.2	
Percent Blockage		1	1		3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	356				704	354
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	356				704	354
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				46	85
cM capacity (veh/h)	1184				382	671

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	318	326	309
Volume Left	32	0	206
Volume Right	0	24	103
cSH	1184	1700	446
Volume to Capacity	0.03	0.19	0.69
Queue Length 95th (m)	0.7	0.0	41.5
Control Delay (s)	1.1	0.0	29.3
Lane LOS	A		D
Approach Delay (s)	1.1	0.0	29.3
Approach LOS			D

Intersection Summary				
Average Delay	9.9			
Intersection Capacity Utilization	44.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	200	0	0	0	0	15
Future Volume (Veh/h)	200	0	0	0	0	15
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	278	0	0	0	0	21
Pedestrians	10					20
Lane Width (m)	3.6					3.6
Walking Speed (m/s)	1.2					1.2
Percent Blockage	1					2
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	31	30			10	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	31	30			10	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	72	100			100	
cM capacity (veh/h)	980	1024			1609	

Direction, Lane #	WB 1	SB 1
Volume Total	278	21
Volume Left	278	0
Volume Right	0	0
cSH	980	1700
Volume to Capacity	0.28	0.01
Queue Length 95th (m)	9.4	0.0
Control Delay (s)	10.1	0.0
Lane LOS	B	
Approach Delay (s)	10.1	0.0
Approach LOS	B	

Intersection Summary				
Average Delay	9.4			
Intersection Capacity Utilization	22.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	205	0	15	45	0	0
Future Volume (Veh/h)	205	0	15	45	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66
Hourly flow rate (vph)	311	0	23	68	0	0
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			201			
pX, platoon unblocked						
vC, conflicting volume	67	67			101	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	67	67			101	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	67	100			100	
cM capacity (veh/h)	935	994			1492	

Direction, Lane #	WB 1	NB 1
Volume Total	311	91
Volume Left	311	0
Volume Right	0	68
cSH	935	1700
Volume to Capacity	0.33	0.05
Queue Length 95th (m)	11.7	0.0
Control Delay (s)	10.8	0.0
Lane LOS	B	
Approach Delay (s)	10.8	0.0
Approach LOS	B	

Intersection Summary				
Average Delay		8.3		
Intersection Capacity Utilization		24.9%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1535	0	0	1440
Future Volume (Veh/h)	0	0	1535	0	0	1440
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	0	0	1566	0	0	1469
Pedestrians	70					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	6					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			68			
pX, platoon unblocked	0.75	0.75			0.75	
vC, conflicting volume	2370	853			1636	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2163	145			1186	
tC, single (s)	8.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	4.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	8	625			422	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	1044	522	734	734
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.61	0.31	0.43	0.43
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.0	0.0		0.0	
Approach LOS	A				

Intersection Summary				
Average Delay		0.0		
Intersection Capacity Utilization		45.8%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	700	0	0	475	155	0	0	5	0	0	45
Future Volume (Veh/h)	0	700	0	0	475	155	0	0	5	0	0	45
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	737	0	0	500	163	0	0	5	0	0	47
Pedestrians					30			40			70	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					3			3			6	
Right turn flare (veh)												
Median type		TWLTL			None							
Median storage veh)		2										
Upstream signal (m)		151			79							
pX, platoon unblocked	0.93			0.95			0.96	0.96	0.95	0.96	0.96	0.93
vC, conflicting volume	733			777			1074	1510	438	1055	1428	402
vC1, stage 1 conf vol							777	777		652	652	
vC2, stage 2 conf vol							297	733		404	777	
vCu, unblocked vol	572			650			742	1196	292	723	1111	217
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	100	100	93
cM capacity (veh/h)	889			865			375	338	633	430	355	698

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	491	246	333	330	5	47
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	163	5	47
cSH	1700	1700	1700	1700	633	698
Volume to Capacity	0.29	0.14	0.20	0.19	0.01	0.07
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.2	1.7
Control Delay (s)	0.0	0.0	0.0	0.0	10.7	10.5
Lane LOS					B	B
Approach Delay (s)	0.0		0.0		10.7	10.5
Approach LOS					B	B

Intersection Summary					
Average Delay	0.4				
Intersection Capacity Utilization	42.3%	ICU Level of Service	A		
Analysis Period (min)	15				



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	695	0	0	520	0	5
Future Volume (Veh/h)	695	0	0	520	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	716	0	0	536	0	5
Pedestrians				20	30	
Lane Width (m)				3.6	3.6	
Walking Speed (m/s)				1.2	1.2	
Percent Blockage				2	3	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (m)	108			121		
pX, platoon unblocked			0.94		0.94	0.94
vC, conflicting volume			746		1014	408
vC1, stage 1 conf vol					746	
vC2, stage 2 conf vol					268	
vCu, unblocked vol			613		897	255
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			899		435	679

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	477	239	0	268	268	5
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	5
cSH	1700	1700	1700	1700	1700	679
Volume to Capacity	0.28	0.14	0.00	0.16	0.16	0.01
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.2
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.3
Lane LOS						B
Approach Delay (s)	0.0		0.0			10.3
Approach LOS						B

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	34.1%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	705	0	5	630	0	0
Future Volume (Veh/h)	705	0	5	630	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	742	0	5	663	0	0
Pedestrians				30	40	
Lane Width (m)				3.6	3.6	
Walking Speed (m/s)				1.2	1.2	
Percent Blockage				3	3	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	173			56		
pX, platoon unblocked			0.95		0.96	0.95
vC, conflicting volume			782		1124	441
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			658		788	298
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	100
cM capacity (veh/h)			860		305	629

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	495	247	226	442	0
Volume Left	0	0	5	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	860	1700	1700
Volume to Capacity	0.29	0.15	0.01	0.26	0.00
Queue Length 95th (m)	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	0.0	0.0	0.3	0.0	0.0
Lane LOS			A		A
Approach Delay (s)	0.0		0.1		0.0
Approach LOS					A

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	37.2%	ICU Level of Service		A
Analysis Period (min)	15			

APPENDIX M: TTS TRANSIT TRIP DISTRIBUTION QUERIES

Mon May 09 2022 11:26:16 GMT-0400 (Eastern Daylight Time) - Run Time: 2769ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of destination - pd_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
(Start time of trip - start_time In 600-859
and
2006 GTA 3724 3862 3867 3871 3872
and
Trip purpo
and
Primary tra G J)

Trip 2016
Table:

	3723	3724	3862	3867	3872	**TOTAL**
PD 1 of To	53	69	37	179	67	**405**
PD 4 of To	0	0	11	18	0	**29**
PD 5 of To	12	0	0	26	0	**38**
PD 7 of To	0	0	27	0	0	**27**
Mississaug	81	176	69	400	7	**733**
Oakville	0	0	0	0	7	**7**
Hamilton	0	12	32	0	0	**44**

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: 2006 GTA zone of destination - gta06_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
(Start time of trip - start_time In 600-859
and
2006 GTA 3724 3862 3867 3871 3872
and
Trip purpo
and
Primary tra G J
and
Planning d)

Trip 2016
Table:

	3723	3724	3862	3867	3872	**TOTAL**
3612	0	12	0	0	0	**12**
3613	18	0	0	0	0	**18**
3631	17	0	0	0	0	**17**
3655	18	0	0	0	0	**18**
3661	0	0	0	59	0	**59**
3671	0	27	0	26	0	**53**
3673	0	45	0	0	0	**45**
3674	0	0	0	33	0	**33**
3675	0	12	0	0	0	**12**
3695	0	0	0	0	7	**7**
3699	0	0	0	6	0	**6**
3702	0	0	0	53	0	**53**
3703	0	0	0	59	0	**59**
3713	0	72	0	0	0	**72**
3820	28	0	0	0	0	**28**
3826	0	0	0	42	0	**42**
3834	0	0	0	49	0	**49**
3860	0	8	0	0	0	**8**
3863	0	0	48	0	0	**48**
3865	0	0	21	49	0	**70**
3868	0	0	0	12	0	**12**
3871	0	0	0	13	0	**13**

AM	RESIDENTIAL TRANSIT TRIP DISTRIBUTION
OUTBOUND	Traffic Volume Allocation
2022-05-18	

			NB	NB	NB	NB	SB	SB	SB	SB	EB	EB	EB	EB	WB	WB	WB	WB	
			MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	GO Bus	GO Train	MiWay Bus	MiWay Bus	GO Bus	GO Train	
Zone	**Trips**	**%**	28 Confederation	38 Creditview	53 Kennedy	Hurontario	28 Confederation	38 Creditview	53 Kennedy	Hurontario	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	TOTAL
PD 1 of Toronto	405	32%								40%				60%					100.00%
PD 4 of Toronto	29	2%								40%				60%					100.00%
PD 5 of Toronto	38	3%								40%				60%					100.00%
PD 7 of Toronto	27	2%								90%				10%					100.00%
Oakville	7	1%	30%			70%													100.00%
Hamilton	44	3%	30%			70%													100.00%
3612	12	1%		15%	15%	40%									15%		15%		100.00%
3613	18	1%		20%	20%	30%									30%				100.00%
3631	17	1%													100%				100.00%
3655	18	1%		30%											70%				100.00%
3661	59	5%									100%								100.00%
3671	53	4%	50%	50%															100.00%
3673	45	4%			50%	50%													100.00%
3674	33	3%			50%	50%													100.00%
3675	12	1%			50%	50%													100.00%
3695	7	1%	30%			70%													100.00%
3699	6	0%			25%	45%					30%								100.00%
3702	53	4%	25%		20%	55%													100.00%
3703	59	5%			20%	50%					30%								100.00%
3713	72	6%				70%					30%								100.00%
3820	28	2%		10%	10%	80%													100.00%
3826	42	3%				100%													100.00%
3834	49	4%				100%													100.00%
3860	8	1%									100%								100.00%
3863	48	4%			50%	50%													100.00%
3865	70	5%				100%													100.00%
3868	12	1%				50%									50%				100.00%
3871	13	1%					50%			50%									100.00%
	1284	100%																	

NB	NB	NB	NB	SB	SB	SB	SB	EB	EB	EB	EB	WB	WB	WB	WB	
MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	GO Bus	GO Train	MiWay Bus	MiWay Bus	GO Bus	GO Train	
28 Confederation	38 Creditview	53 Kennedy	Hurontario	28 Confederation	38 Creditview	53 Kennedy	Hurontario	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	TOTAL
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.62%	0.00%	0.00%	0.00%	18.93%	0.00%	0.00%	0.00%	0.00%	31.5%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.90%	0.00%	0.00%	0.00%	1.36%	0.00%	0.00%	0.00%	0.00%	2.3%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.18%	0.00%	0.00%	0.00%	1.78%	0.00%	0.00%	0.00%	0.00%	3.0%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.89%	0.00%	0.00%	0.00%	0.21%	0.00%	0.00%	0.00%	0.00%	2.1%
0.16%	0.00%	0.00%	0.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5%
1.03%	0.00%	0.00%	2.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.4%
0.00%	0.14%	0.14%	0.37%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.14%	0.00%	0.9%
0.00%	0.28%	0.28%	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.42%	0.00%	0.00%	0.00%	1.4%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.32%	0.00%	0.00%	0.00%	1.3%
0.00%	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.00%	0.00%	0.00%	1.4%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.6%
2.06%	2.06%	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%	4.1%
0.00%	0.00%	1.75%	1.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.5%
0.00%	0.00%	1.29%	1.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.6%
0.00%	0.00%	0.47%	0.47%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.9%
0.16%	0.00%	0.00%	0.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5%
0.00%	0.00%	0.12%	0.21%	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5%
1.03%	0.00%	0.83%	2.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.1%
0.00%	0.00%	0.92%	2.30%	0.00%	0.00%	0.00%	0.00%	1.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.6%
0.00%	0.00%	0.00%	3.93%	0.00%	0.00%	0.00%	0.00%	1.68%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.6%
0.00%	0.22%	0.22%	1.74%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.2%
0.00%	0.00%	0.00%	3.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.3%
0.00%	0.00%	0.00%	3.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.8%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
0.00%	0.00%	1.87%	1.87%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.7%
0.00%	0.00%	0.00%	5.45%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.5%
0.00%	0.00%	0.00%	0.47%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.47%	0.00%	0.00%	0.00%	0.9%
0.00%	0.00%	0.00%	0.00%	0.51%	0.00%	0.00%	0.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.0%
4.45%	**3.12%**	**7.87%**	**32.78%**	**0.51%**	**0.00%**	**0.00%**	**17.10%**	**8.42%**	**0.00%**	**0.00%**	**22.27%**	**3.33%**	**0.00%**	**0.14%**	**0.00%**	**100.0%**

4.00%	**3.00%**	**8.00%**	**33.00%**	**1.00%**	**0.00%**	**0.00%**	**17.00%**	**8.00%**	**0.00%**	**0.00%**	**22.00%**	**3.00%**	**0.00%**	**1.00%**	**0.00%**	100%

NB	48.00%
SB	18.00%
EB	30.00%
WB	4.00%
	100.00%

Mon May 09 2022 14:26:42 GMT-0400 (Eastern Daylight Time) - Run Time: 2975ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of origin - pd_orig
Column: 2006 GTA zone of destination - gta06_dest

Filters:
(Start time of trip - start_time In 1500-1759
and
2006 GTA 3724 3862 3867 3871 3872
and
Trip purpo
and
Primary tra G J)

Trip 2016
Table:

	3723	3724	3862	3867	3872	**TOTAL**
PD 1 of To	53	68	19	63	60	**263**
PD 4 of To	0	0	11	33	0	**44**
PD 5 of To	12	0	0	26	0	**38**
Mississau	46	319	48	220	34	**667**
Oakville	0	0	0	8	7	**15**
Hamilton	0	0	32	0	0	**32**

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: 2006 GTA zone of origin - gta06_orig
Column: 2006 GTA zone of destination - gta06_dest

Filters:
(Start time of trip - start_time In 1500-1759
and
2006 GTA 3724 3862 3867 3871 3872
and
Trip purpo
and
Primary tra G J
and
Planning d)

Trip 2016
Table:

	3723	3724	3862	3867	3872	**TOTAL**
3612	0	12	0	0	0	**12**
3613	0	0	0	16	0	**16**
3621	0	12	0	0	0	**12**
3631	0	21	0	0	0	**21**
3649	0	27	0	0	0	**27**
3656	0	0	0	19	0	**19**
3661	0	0	0	59	0	**59**
3671	0	27	0	0	0	**27**
3675	0	12	0	0	0	**12**
3680	0	0	48	0	0	**48**
3693	0	0	0	38	0	**38**
3695	0	0	0	0	7	**7**
3699	0	0	0	6	0	**6**
3702	0	12	0	34	0	**46**
3705	24	0	0	0	0	**24**
3713	0	72	0	0	0	**72**
3831	22	0	0	0	0	**22**
3834	0	0	0	49	0	**49**
3851	0	91	0	0	27	**118**
3871	0	25	0	0	0	**25**
3872	0	9	0	0	0	**9**

PM	**RESIDENTIAL TRANSIT TRIP DISTRIBUTION**
INBOUND	**Traffic Volume Allocation**
2022-05-18	

			NB	NB	NB	NB	SB	SB	SB	SB	EB	EB	EB	EB	WB	WB	WB	WB	
			MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	GO Bus	GO Train	MiWay Bus	MiWay Bus	GO Bus	GO Train	
Zone	**Trips**	**%**	28 Confederation	38 Creditview	53 Kennedy	Hurontario	28 Confederation	38 Creditview	53 Kennedy	Hurontario	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	TOTAL
PD 1 of Toronto	263	25%				40%												60%	100.00%
PD 4 of Toronto	44	4%				40%												60%	100.00%
PD 5 of Toronto	38	4%				40%												60%	100.00%
Oakville	15	1%					30%			70%									100.00%
Hamilton	32	3%					30%			70%									100.00%
3612	12	1%						15%	15%	40%	15%		15%						100.00%
3613	16	2%						20%	20%	30%	30%								100.00%
3621	12	1%							30%	70%									100.00%
3631	21	2%									100%								100.00%
3649	27	3%								50%								50%	100.00%
3656	19	2%		50%								50%							100.00%
3661	59	6%													100%				100.00%
3671	27	3%					50%	50%											100.00%
3675	12	1%							50%	50%									100.00%
3680	48	5%							20%	80%									100.00%
3693	38	4%							20%	80%									100.00%
3695	7	1%					30%			70%									100.00%
3699	6	1%							25%	45%					30%				100.00%
3702	46	4%					25%		20%	55%									100.00%
3705	24	2%							20%	80%									100.00%
3713	72	7%								70%					30%				100.00%
3831	22	2%							20%	80%									100.00%
3834	49	5%								100%									100.00%
3851	118	11%					50%			50%									100.00%
3871	25	2%	50%			50%													100.00%
3872	9	1%				100%													100.00%
	1061	100%																	

NB	NB	NB	NB	SB	SB	SB	SB	EB	EB	EB	EB	WB	WB	WB	WB	
MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	GO Bus	GO Train	MiWay Bus	MiWay Bus	GO Bus	GO Train	
28 Confederation	38 Creditview	53 Kennedy	Hurontario	28 Confederation	38 Creditview	53 Kennedy	Hurontario	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	TOTAL
0.00%	0.00%	0.00%	9.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.87%	24.8%
0.00%	0.00%	0.00%	1.66%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.49%	4.1%
0.00%	0.00%	0.00%	1.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.15%	3.6%
0.00%	0.00%	0.00%	0.00%	0.42%	0.00%	0.00%	0.99%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.4%
0.00%	0.00%	0.00%	0.00%	0.90%	0.00%	0.00%	2.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.0%
0.00%	0.00%	0.00%	0.00%	0.00%	0.17%	0.17%	0.45%	0.17%	0.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.30%	0.45%	0.45%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.5%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.34%	0.79%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.98%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.0%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.27%	2.5%
0.00%	0.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.8%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.56%	0.00%	0.00%	0.00%	5.6%
0.00%	0.00%	0.00%	0.00%	1.27%	1.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.5%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.57%	0.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.90%	3.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.5%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.72%	2.87%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.6%
0.00%	0.00%	0.00%	0.00%	0.20%	0.00%	0.00%	0.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.14%	0.25%	0.00%	0.00%	0.00%	0.00%	0.17%	0.00%	0.00%	0.00%	0.6%
0.00%	0.00%	0.00%	0.00%	1.08%	0.00%	0.87%	2.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.3%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.45%	1.81%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.3%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.75%	0.00%	0.00%	0.00%	0.00%	2.04%	0.00%	0.00%	0.00%	6.8%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.41%	1.66%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.1%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.6%
0.00%	0.00%	0.00%	0.00%	5.56%	0.00%	0.00%	5.56%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.1%
1.18%	0.00%	0.00%	1.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.4%
0.00%	0.00%	0.00%	0.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.8%
1.18%	**0.90%**	**0.00%**	**15.03%**	**9.44%**	**1.74%**	**4.87%**	**34.62%**	**2.60%**	**0.90%**	**0.17%**	**0.00%**	**7.77%**	**0.00%**	**0.00%**	**20.78%**	**100.0%**

1.00%	**1.00%**		**15.00%**	**9.00%**	**2.00%**	**5.00%**	**34.00%**	**3.00%**	**1.00%**			**8.00%**	**0.00%**	**0.00%**	**21.00%**	100%

NB	17.00%
SB	50.00%
EB	4.00%
WB	29.00%
	100.00%

Mon May 09 2022 17:13:20 GMT-0400 (Eastern Daylight Time) - Run Time: 2539ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of origin - pd_orig
Column: 2006 GTA zone of destination - gta06_dest

Filters:
(Start time of trip - start_time In 600-859
and
2006 GTA 3723 3724 3862 3867 3871 3872
and
Trip purpose of destination - purp_dest In W
and
Primary tra G J)

Trip 2016
Table:

	3671	3867	3871	3872	**TOTAL**
PD 8 of To	0	0	8	0	**8**
PD 16 of T	0	28	0	0	**28**
Mississau	165	51	30	33	**279**

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: 2006 GTA zone of origin - gta06_orig
Column: 2006 GTA zone of destination - gta06_dest

Filters:
(Start time of trip - start_time In 600-859
and
2006 GTA 3723 3724 3862 3867 3871 3872
and
Trip purpose of destination - purp_dest In W
and
Primary tra G J
and
Planning d)

Trip 2016
Table:

	3671	3867	3871	3872	**TOTAL**
3653	0	0	13	0	**13**
3668	23	0	0	0	**23**
3670	0	0	17	0	**17**
3678	0	0	0	33	**33**
3691	67	0	0	0	**67**
3809	51	0	0	0	**51**
3852	0	51	0	0	**51**
3863	25	0	0	0	**25**

AM	**OFFICE TRANSIT TRIP DISTRIBUTION**
INBOUND	**Traffic Volume Allocation**
2022-05-18	

			NB	NB	NB	NB	SB	SB	SB	SB	EB	EB	EB	EB	WB	WB	WB	WB	
			MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	GO Bus	GO Train	MiWay Bus	MiWay Bus	GO Bus	GO Train	
Zone	**Trips**	**%**	28 Confederation	38 Creditview	53 Kennedy	Hurontario	28 Confederation	38 Creditview	53 Kennedy	Hurontario	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	TOTAL
PD 8 of Toronto	8	3%				40%												60%	100.00%
PD 16 of Toronto	28	9%								60%			10%					30%	100.00%
3653	13	4%				100%													100.00%
3668	23	7%							50%	50%									100.00%
3670	17	5%								30%					70%				100.00%
3678	33	10%					45%			45%			10%						100.00%
3691	67	21%						20%	20%	60%									100.00%
3809	51	16%					30%			40%				30%					100.00%
3852	51	16%					50%			50%									100.00%
3863	25	8%							50%	50%									100.00%
	316	100%																	

NB	NB	NB	NB	SB	SB	SB	SB	EB	EB	EB	EB	WB	WB	WB	WB	
MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	GO Bus	GO Train	MiWay Bus	MiWay Bus	GO Bus	GO Train	
28 Confederation	38 Creditview	53 Kennedy	Hurontario	28 Confederation	38 Creditview	53 Kennedy	Hurontario	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	TOTAL
0.00%	0.00%	0.00%	1.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.52%	2.5%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.32%	0.00%	0.00%	0.89%	0.00%	0.00%	0.00%	0.00%	2.66%	8.9%
0.00%	0.00%	0.00%	4.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.1%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.64%	3.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.3%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.61%	0.00%	0.00%	0.00%	0.00%	3.77%	0.00%	0.00%	0.00%	5.4%
0.00%	0.00%	0.00%	0.00%	4.70%	0.00%	0.00%	4.70%	0.00%	0.00%	1.04%	0.00%	0.00%	0.00%	0.00%	0.00%	10.4%
0.00%	0.00%	0.00%	0.00%	0.00%	4.24%	4.24%	12.72%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.2%
0.00%	0.00%	0.00%	0.00%	4.84%	0.00%	0.00%	6.46%	0.00%	0.00%	0.00%	4.84%	0.00%	0.00%	0.00%	0.00%	16.1%
0.00%	0.00%	0.00%	0.00%	8.07%	0.00%	0.00%	8.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.1%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.96%	3.96%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.9%
0.00%	**0.00%**	**0.00%**	**5.13%**	**17.61%**	**4.24%**	**11.84%**	**46.47%**	**0.00%**	**0.00%**	**1.93%**	**4.84%**	**3.77%**	**0.00%**	**0.00%**	**4.18%**	**100.0%**

			5.00%	**18.00%**	**4.00%**	**12.00%**	**46.00%**			**2.00%**	**5.00%**	**4.00%**			**4.00%**	100%

NB	5.00%
SB	80.00%
EB	7.00%
WB	8.00%
	100.00%

Mon May 09 2022 17:18:17 GMT-0400 (Eastern Daylight Time) - Run Time: 2635ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of destination - pd_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
(Start time of trip - start_time In 1500-1759
and
2006 GTA z 3723 3724 3862 3867 3871 3872
and
Trip purpose of origin - purp_orig In W
and
Primary trav G J)

Trip 2016
Table:

	3671	3871	3872	**TOTAL**
PD 9 of Torc	29	0	0	**29**
Mississauga	188	22	9	**219**

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: 2006 GTA zone of destination - gta06_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
(Start time of trip - start_time In 1500-1759
and
2006 GTA 3723 3724 3862 3867 3871 3872
and
Trip purpose of origin - purp_orig In W
and
Primary tr G J
and
Planning c)

Trip 2016
Table:

	3671	3871	3872	**TOTAL**
3619	23	0	0	**23**
3620	0	22	0	**22**
3668	23	0	0	**23**
3691	67	0	0	**67**
3724	0	0	9	**9**
3809	51	0	0	**51**
3863	25	0	0	**25**

PM	**OFFICE TRANSIT TRIP DISTRIBUTION**
OUTBOUND	**Traffic Volume Allocation**
2022-05-18	

			NB	NB	NB	NB	SB	SB	SB	SB	EB	EB	EB	EB	WB	WB	WB	WB	
			MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	GO Bus	GO Train	MiWay Bus	MiWay Bus	GO Bus	GO Train	
Zone	**Trips**	**%**	28 Confederation	38 Creditview	53 Kennedy	Hurontario	28 Confederation	38 Creditview	53 Kennedy	Hurontario	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	TOTAL
PD 9 of Toronto	29	12%									50%			50%					100.00%
3619	23	9%	20%		20%	60%													100.00%
3620	22	9%	20%		20%	60%													100.00%
3668	23	9%			50%	50%													100.00%
3691	67	27%		20%	20%	60%													100.00%
3724	9	4%			50%	50%													100.00%
3809	51	20%	30%			40%												30%	100.00%
3863	25	10%			50%	50%													100.00%
	249	100%																	

NB	NB	NB	NB	SB	SB	SB	SB	EB	EB	EB	EB	WB	WB	WB	WB	
MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	GO Bus	GO Train	MiWay Bus	MiWay Bus	GO Bus	GO Train		
28 Confederation	38 Creditview	53 Kennedy	Hurontario	28 Confederation	38 Creditview	53 Kennedy	Hurontario	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	TOTAL
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.82%	0.00%	0.00%	5.82%	0.00%	0.00%	0.00%	0.00%	11.6%
1.85%	0.00%	1.85%	5.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.2%
1.77%	0.00%	1.77%	5.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.8%
0.00%	0.00%	4.62%	4.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.2%
0.00%	5.38%	5.38%	16.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	26.9%
0.00%	0.00%	1.81%	1.81%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.6%
6.14%	0.00%	0.00%	8.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.14%	20.5%
0.00%	0.00%	5.02%	5.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.0%
9.76%	**5.38%**	**20.44%**	**46.63%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**5.82%**	**0.00%**	**0.00%**	**5.82%**	**0.00%**	**0.00%**	**0.00%**	**6.14%**	**100.0%**

10.00%	**5.00%**	**20.00%**	**47.00%**					**6.00%**			**6.00%**					**6.00%**	100%

NB	82.00%
SB	0.00%
EB	12.00%
WB	6.00%
	100.00%

Tue May 10 2022 09:24:36 GMT-0400 (Eastern Daylight Time) - Run Time: 2755ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of origin - pd_orig
Column: 2006 GTA zone of destination - gta06_dest

Filters:
(Start time of trip - start_time In 600-1759
and
2006 GTA 3724 3862 3867 3871 3872
and
Trip purpc
and
Primary tr G J)

Trip 2016
Table:

	3862	3867	3871	3872	**TOTAL**
PD 8 of T	0	0	12	0	**12**
Mississau	27	47	183	15	**272**

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: 2006 GTA zone of origin - gta06_orig
Column: 2006 GTA zone of destination - gta06_dest

Filters:
(Start time of trip - start_time In 600-1759
and
2006 GTA 3724 3862 3867 3871 3872
and
Trip purpc
and
Primary tr G J
and
Planning c)

Trip 2016
Table:

	3862	3867	3871	3872	**TOTAL**
3664	0	47	0	0	**47**
3665	0	0	11	0	**11**
3668	0	0	0	15	**15**
3670	15	0	0	0	**15**
3707	0	0	32	0	**32**
3724	0	0	70	0	**70**
3859	0	0	63	0	**63**
3864	0	0	6	0	**6**
3866	12	0	0	0	**12**

DAILY
INBOUND
2022-05-18

RETAIL TRANSIT TRIP DISTRIBUTION

Traffic Volume Allocation

			NB	NB	NB	NB	SB	SB	SB	SB	EB	EB	EB	EB	WB	WB	WB	WB	
			MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	GO Bus	GO Train	MiWay Bus	MiWay Bus	GO Bus	GO Train	
Zone	**Trips**	**%**	28 Confederation	38 Creditview	53 Kennedy	Hurontario	28 Confederation	38 Creditview	53 Kennedy	Hurontario	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	TOTAL
PD 8 of Toronto	12	4%				40%												60%	100.00%
3664	47	17%									100%								100.00%
3665	11	4%						30%			40%	30%							100.00%
3668	15	5%							50%	50%									100.00%
3670	15	5%								30%					70%				100.00%
3707	32	11%							20%	80%									100.00%
3724	70	25%							50%	50%									100.00%
3859	63	22%							50%	50%									100.00%
3864	6	2%							50%	50%									100.00%
3866	12	4%							50%	50%									100.00%
	283	100%																	

NB	NB	NB	NB	SB	SB	SB	SB	EB	EB	EB	EB	WB	WB	WB	WB	
MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	GO Bus	GO Train	MiWay Bus	MiWay Bus	GO Bus	GO Train	
28 Confederation	38 Creditview	53 Kennedy	Hurontario	28 Confederation	38 Creditview	53 Kennedy	Hurontario	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	TOTAL
0.00%	0.00%	0.00%	1.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.54%	4.2%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.6%
0.00%	0.00%	0.00%	0.00%	0.00%	1.17%	0.00%	0.00%	1.55%	1.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.9%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.65%	2.65%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.3%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.59%	0.00%	0.00%	0.00%	0.00%	3.71%	0.00%	0.00%	0.00%	5.3%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.26%	9.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.3%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.37%	12.37%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	24.7%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.13%	11.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	22.3%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.06%	1.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.1%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.12%	2.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.2%
0.00%	**0.00%**	**0.00%**	**1.70%**	**0.00%**	**1.17%**	**31.59%**	**39.96%**	**18.16%**	**1.17%**	**0.00%**	**0.00%**	**3.71%**	**0.00%**	**0.00%**	**2.54%**	**100.0%**

			2.00%		**1.00%**	**32.00%**	**40.00%**	**18.00%**	**1.00%**			**4.00%**			**2.00%**	100%

NB	2.00%
SB	73.00%
EB	19.00%
WB	6.00%
	100.00%

Tue May 10 2022 09:12:16 GMT-0400 (Eastern Daylight Time) - Run Time: 2755ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of destination - pd_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
(Start time of trip - start_time In 600-1759
and
2006 GTA 3724 3862 3867 3871 3872 3872
and
Trip purpo
and
Primary tra G J)

Trip 2016
Table:

	3862	3867	3871	3872	**TOTAL**
PD 8 of To	0	0	12	0	**12**
Mississaug	12	47	87	15	**161**

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: 2006 GTA zone of destination - gta06_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
(Start time of trip - start_time In 600-1759
and
2006 GTA 3724 3862 3867 3871 3872 3872
and
Trip purpo
and
Primary tra G J
and
Planning d)

Trip 2016
Table:

	3862	3867	3871	3872	**TOTAL**
3601	12	0	0	0	**12**
3664	0	47	0	0	**47**
3666	0	0	11	0	**11**
3668	0	0	0	15	**15**
3724	0	0	70	0	**70**
3851	0	0	6	0	**6**

DAILY
OUTBOUND
2022-05-18

RETAIL TRANSIT TRIP DISTRIBUTION

Traffic Volume Allocation

			NB	NB	NB	NB	SB	SB	SB	SB	EB	EB	EB	EB	WB	WB	WB	WB	
			MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	GO Bus	GO Train	MiWay Bus	MiWay Bus	GO Bus	GO Train	
Zone	**Trips**	**%**	28 Confederation	38 Creditview	53 Kennedy	Hurontario	28 Confederation	38 Creditview	53 Kennedy	Hurontario	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	TOTAL
PD 8 of Toronto	12	7%								40%				60%					100.00%
3601	12	7%	30%			40%												30%	100.00%
3664	47	27%													100%				100.00%
3666	11	6%														100%			100.00%
3668	15	9%			50%	50%													100.00%
3724	70	40%			50%	50%													100.00%
3851	6	3%	50%			50%													100.00%
	173	100%																	

NB	NB	NB	NB	SB	SB	SB	SB	EB	EB	EB	EB	WB	WB	WB	WB	
MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	MiWay Bus	LRT	MiWay Bus	MiWay Bus	GO Bus	GO Train	MiWay Bus	MiWay Bus	GO Bus	GO Train	
28 Confederation	38 Creditview	53 Kennedy	Hurontario	28 Confederation	38 Creditview	53 Kennedy	Hurontario	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	1 Dundas / 101 Dundas Express	4 Sherway Gardens	21 Milton	*MI* Milton	TOTAL
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.77%	0.00%	0.00%	0.00%	4.16%	0.00%	0.00%	0.00%	0.00%	6.9%
2.08%	0.00%	0.00%	2.77%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.08%	6.9%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	27.17%	0.00%	0.00%	0.00%	27.2%
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%	6.36%	0.00%	0.00%	6.4%
0.00%	0.00%	4.34%	4.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.7%
0.00%	0.00%	20.23%	20.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	40.5%
1.73%	0.00%	0.00%	1.73%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.5%
3.82%	**0.00%**	**24.57%**	**29.08%**	**0.00%**	**0.00%**	**0.00%**	**2.77%**	**0.00%**	**0.00%**	**0.00%**	**4.16%**	**27.17%**	**6.36%**	**0.00%**	**2.08%**	**100.0%**

4.00%		**25.00%**	**29.00%**				**3.00%**				**4.00%**	**27.00%**	**6.00%**		**2.00%**	100%

NB	58.00%
SB	3.00%
EB	4.00%
WB	35.00%
	100.00%

APPENDIX N: SENSITIVITY MULTIMODAL SITE TRIP GENERATION (20% AUTO MODE SHIFT

33 Hillcrest	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**480**	**1270**	**1750**	**900**	**735**	**1635**
Auto Driver	240	515	755	365	340	705
Auto Passenger	55	155	210	115	85	200
Transit	145	440	585	315	230	545
Cycle	0	10	10	10	5	15
Walk	40	150	190	95	75	170
Check	480	1270	1750	900	735	1635
	YES	YES	YES	YES	YES	YES

Building A	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**60**	**265**	**325**	**180**	**125**	**305**
Auto Driver	30	100	130	60	55	115
Auto Passenger	5	30	35	30	15	45
Transit	20	95	115	70	35	105
Cycle	0	5	5	0	5	5
Walk	5	35	40	20	15	35
Check	60	265	325	180	125	305
	YES	YES	YES	YES	YES	YES

Building B	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**95**	**285**	**380**	**215**	**150**	**365**
Auto Driver	40	120	160	95	65	160
Auto Passenger	20	30	50	20	20	40
Transit	25	100	125	70	50	120
Cycle	0	0	0	5	0	5
Walk	10	35	45	25	15	40
Check	95	285	380	215	150	365
	YES	YES	YES	YES	YES	YES

Building C	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**180**	**260**	**440**	**170**	**215**	**385**
Auto Driver	110	105	215	65	120	185
Auto Passenger	10	35	45	25	15	40
Transit	50	90	140	60	60	120
Cycle	0	0	0	5	0	5
Walk	10	30	40	15	20	35
Check	180	260	440	170	215	385
	YES	YES	YES	YES	YES	YES

Building D	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**55**	**250**	**305**	**170**	**115**	**285**
Auto Driver	20	100	120	70	45	115
Auto Passenger	5	35	40	20	15	35
Transit	25	80	105	60	45	105
Cycle	0	5	5	0	0	0
Walk	5	30	35	20	10	30
Check	55	250	305	170	115	285
	YES	YES	YES	YES	YES	YES

Building E	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**90**	**210**	**300**	**165**	**130**	**295**
Auto Driver	40	90	130	75	55	130
Auto Passenger	15	25	40	20	20	40
Transit	25	75	100	55	40	95
Cycle	0	0	0	0	0	0
Walk	10	20	30	15	15	30
Check	90	210	300	165	130	295
	YES	YES	YES	YES	YES	YES

CHECK	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Person Site Trips	**480**	**1270**	**1750**	**900**	**735**	**1635**
Auto Driver	240	515	755	365	340	705
Auto Passenger	55	155	210	115	85	200
Transit	145	440	585	315	230	545
Cycle	0	10	10	10	5	15
Walk	40	150	190	95	75	170
Check	480	1270	1750	900	735	1635
	YES	YES	YES	YES	YES	YES
Auto Driver	YES	YES	YES	YES	YES	YES
Auto Passenger	YES	YES	YES	YES	YES	YES
Transit	YES	YES	YES	YES	YES	YES
Cycle	YES	YES	YES	YES	YES	YES
Walk	YES	YES	YES	YES	YES	YES

VEHICLE TRIPS

Use	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
COMPOSITE						
Residential	40	410	450	245	145	390
Retail	85	80	165	95	100	195
Office	85	10	95	0	70	70
Community	30	15	45	25	25	50
Total	240	515	755	365	340	705
Building A						
Residential	10	90	100	50	30	80
Retail	20	10	30	10	25	35
Office	0	0	0	0	0	0
Community	0	0	0	0	0	0
Total	30	100	130	60	55	115
Building B						
Residential	10	90	100	55	30	85
Retail	30	30	60	40	35	75
Office	0	0	0	0	0	0
Community	0	0	0	0	0	0
Total	40	120	160	95	65	160
Building C						
Residential	10	80	90	50	30	80
Retail	15	15	30	15	20	35
Office	85	10	95	0	70	70
Community	0	0	0	0	0	0
Total	110	105	215	65	120	185
Building D						
Residential	5	80	85	45	30	75
Retail	15	20	35	25	15	40
Office	0	0	0	0	0	0
Community	0	0	0	0	0	0
Total	20	100	120	70	45	115
Building E						
Residential	5	70	75	45	25	70
Retail	5	5	10	5	5	10
Office	0	0	0	0	0	0
Community	30	15	45	25	25	50
Total	40	90	130	75	55	130
COMPOSITE (Check)						
Residential	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Retail	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Office	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Community	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Total	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*

VEHICLE TRIPS

Use	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
COMPOSITE						
Residential	40	410	450	245	145	390
Retail	85	80	165	95	100	195
Office	85	10	95	0	70	70
Community	30	15	45	25	25	50
Total	240	515	755	365	340	705

Passby %	43%	*assume same between AM / PM

*copy to traffic assignment sheet!

Retail	85	80	165	95	100	195
Passby	35	35	70	45	45	90
Primary	50	45	95	50	55	105

*copy to traffic assignment sheet!

Building A + E						
Residential	15	160	175	95	55	150
Retail	25	15	40	15	30	45
Office	0	0	0	0	0	0
Community	30	15	45	25	25	50
Total	70	190	260	135	110	245
Building B + C + D						
Residential	25	250	275	150	90	240
Retail	60	65	125	80	70	150
Office	85	10	95	0	70	70
Community	0	0	0	0	0	0
Total	170	325	495	230	230	460