TRANSPORTATION IMPACT STUDY

MILLCROFT GREENS

CITY OF BURLINGTON
REGIONAL MUNICIPALITY OF HALTON

PREPARED FOR:

MILLCROFT GREENS CORPORATION

PREPARED BY:

C.F. CROZIER & ASSOCIATES INC.
2800 HIGH POINT DRIVE, SUITE 100
MILTON, ON L9T 6P4

ORIGINAL: OCTOBER 2020
UPDATE: FEBRUARY 2022

CFCA FILE NO. 0912-5113

The material in this report reflects best judgment in light of the information available at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. C.F. Crozier & Associates Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

CROZIER
CONSULTING ENGINEERS

Revision Number	Date	Comments
Rev.0	October 2020	Issued for City and Region Review
Rev.1	February 2022	Issued for Submission

1.0 Executive Summary

C.F. Crozier & Associates Inc. (Crozier) was retained by Millcroft Greens Corporation to undertake a Transportation Impact Study in support of planning applications for the redevelopment of a portion of the golf course lands located at the north-east quadrant of the intersection of Country Club Drive and Upper Middle Road in the City of Burlington.

The project proposal is for 90 detached residential units and 130 condominium units split across four holes and the maintenance facility at the Millcroft Golf Club. Full movement accesses are being proposed at Millcroft Park Drive and Country Club Drive, and a right-in, right-out access is being proposed at Dundas Street.

Under 2020 existing conditions, the existing boundary road network is currently operating at Level of Service (LOS) "D" or better except for the intersection of Walkers Line at Upper Middle Road during the weekday peak periods, which experiences multiple movement (westbound left turning movement, westbound and northbound through movements) operating over capacity due to the high traffic volumes along Walkers Line and Upper Middle Road.

Additionally, the intersection Dundas Street and Appleby Line, during the p.m. peak period experiences high delays and operates with a Level of Service "E". The intersection of Country Club Drive at Millcroft Park Drive, internal to the subdivision, operates with less than 15 seconds of delay during peak periods.

Under 2025 future background conditions, the movements continue to operate over capacity at Walkers Line and Upper Middle Road during the weekday peak periods. The eastbound and southbound through movement at the intersection of Appleby Line at Upper Middle Road are expected to operate over capacity during weekday a.m. peak period.

The development is expected to generate 120 two-way (31 inbound and 89 outbound) trips during the weekday a.m. peak hour and 145 two-way (90 inbound and 55 outbound) trips during the weekday p.m. peak hour.

The proposed development is expected to have a negligible impact on the surrounding road network as future total traffic is expected to operate in a similar fashion to the future background scenario in horizon year 2025.

Recommended mitigation measures to decrease delays and improve volume to capacity ratios include optimizations of the total splits for the intersections of Walkers Line at Upper Middle Road and Appleby Line at Upper Middle Road for both peak periods.

Similar to existing conditions, with the addition of the proposed development, the intersection of Country Club Drive at Millcroft Park Drive, internal to the subdivision, along with all new site accesses operates with less than 15.2 seconds of delay during peak periods.

During off-peak hours, the intersections of Walkers Line at Upper Middle Road, Appleby Line at Upper Middle Road, Walkers Line & Dundas Street and Appleby Line & Dundas Street are projected to operate with acceptable delays and well under capacity under 2025 future total horizon.

No geometric improvements are recommended at the study intersections; however, it is recommended that the City monitor the intersection of Walkers Line at Upper Middle Road and Appleby Line at Upper Middle Road for possible signal optimizations during peak hours to improve intersection operations.

The proposed site accesses meet the Transportation Association of Canada's guidelines for sight distances, site access spacing and configuration. The proposed cross section for Area 'A' has been assessed for clear zone distance and have met the Transportation Association of Canada's guidelines. On-street parking has been examined for the development and found to be sufficient. The planning applications can be supported from a transportation perspective as the site generated traffic will have a negligible effect on the operations of the public roadway system.

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY III

2.0 INTRODUCTION 1

3.0 EXISTING CONDITIONS 1

- **3.1 Development Lands 1**
- **3.2 Boundary Road Network 4**
- **3.3 Public Transit 4**
- **3.4 Traffic Data 4**
- **3.5 Traffic Modeling 5**
- **3.6 Intersection Operations 5**

4.0 FUTURE BACKGROUND CONDITIONS 9

- **4.1 Study Horizons 9**
- **4.2 Background Developments 10**
- **4.3 Dundas Street EA Study 11**
- **4.4 Traffic Growth Rates 11**
- **4.5 Intersection Operations 11**

5.0 DEVELOPMENT PROPOSAL 21

- **5.1 Site Generated Traffic 22**
- **5.2 Trip Distribution and Assignment 23**

6.0 TOTAL TRAFFIC CONDITIONS 25

- **6.1 Intersection Operations 25**

7.0 OPERATIONAL COMPARISON AND IMPROVEMENT ANALYSIS 32

- **7.1 Additional Intersection Operations 34**

8.0 SITE OPERATIONS REVIEW 37

- **8.1 Sight Line Review 37**
- **8.2 Access Spacing 38**
- **8.3 Access Configuration 39**
- **8.4 Site Circulation 39**
- **8.5 Golf Cart Operations 39**
- **8.6 Area 'A' Cross-section 40**

9.0 CONCLUSION 46

LIST OF APPENDICES

Appendix A: Relevant Zoning Excerpts
Appendix B: Traffic Data
Appendix C: Level of Service Definition
Appendix D: Detailed Capacity Analysis
Appendix E: Background Development Generated Traffic
Appendix F: Dundas Street EA Study Excerpts
Appendix G: TTS Data
Appendix H: Detailed Site Generated Volumes
Appendix I: Terms of Reference & Relevant Communication
Appendix J: Area "A" Cross Sections
Appendix K: On-Street Parking Plan

LIST OF FIGURES

Figure 1: Concept Plan
Figure 2: 2020 Existing Traffic Volumes
Figure 3: 2020 Existing Delays
Figure 4: Background Development Traffic
Figure 4.1: Background Development Traffic (4053 Upper Middle Road)
Figure 4.2: Background Development Traffic (4853 Palladium Way)
Figure 4.3: Background Development Traffic (Evergreen)
Figure 4.4: Background Development Traffic (Turnberry)
Figure 5: 2025 Future Background Traffic Volumes
Figure 6: 2025 Future Background Delays
Figure 7: Site Generated Traffic Volumes
Figure 8: 2025 Future Total Traffic Volumes
Figure 9: 2025 Future Total Delays
Figure 10: 2025 Future Average Hour Volumes
Figure 11: Sight Distance Evaluation (Site Access A and B)
Figure 12: Sight Distance Evaluation (Site Access C)
Figure 13: Sight Distance Evaluation (Site Access D)
Figure 14: Sight Distance Evaluation (Site Access E)
Figure 15: Site Circulation Diagram

2.0 Introduction

C.F. Crozier & Associates Inc. (Crozier) was retained by Millcroft Greens Corporation to undertake a Traffic Impact Study in support of planning applications for the redevelopment of four golf course holes and the maintenance facility for Millcroft Golf Club.

The purpose of the study is to assess the impacts of the proposed development on the boundary road network and to recommend required mitigation measures if warranted. The following intersections were reviewed:

- Walkers Line at Upper Middle Road (Signalized)
- Itabashi Way/Country Club Drive at Upper Middle Road (Signalized)
- Appleby Line at Upper Middle Road (Signalized)
- Dundas Street at Tim Dobbie Drive (Signalized)
- Dundas Street at Millcroft Park Drive (Signalized)
- Dundas Street at Walkers Line (Signalized)
- Dundas Street at Appleby Line (Signalized)
- Country Club Drive at Millcroft Park Drive (Stop Controlled)

The following horizon timeframes were analyzed in this study, consistent with procedures set out in Halton Region's Transportation Impact Study Guidelines.

- Existing traffic conditions.
- Five-year horizon (2025) future conditions with and without the proposed development.
- Weekday morning and afternoon peak hours.

The study has been completed in accordance with the procedures set out in Halton Region's Transportation Impact Study Guidelines with the associated analysis and findings outlined herein. Comments have been provided on previous versions and have been addressed throughout this TIS. A specific comment response matrix has been included with Appendix I.

3.0 Existing Conditions

3.1 Development Lands

The subject lands cover a developable area of approximately 10.12 ha and span over holes 1, 6, 7, 16 and the maintenance facility of the Millcroft Golf Club. Location of the holes are shown on the Concept Plan in Figure 1 prepared by Gerrard Design.

The property, located in a mixed residential/commercial area, is bounded by Dundas Street (Highway #5) to the north, Appleby Line to the east, Walkers Line to the west and Upper Middle Road to the south.

To facilitate comprehension within the report Hole 6 as 'Site A', Hole 7 as 'Site B', Hole 1 is referred to as 'Site C', Hole 16 as 'Site D' and the maintenance facility with access on to Dundas street as 'Site E'.



- All Units In Metric Unless Otherwise Noted.
- Base Information Obtained From Various Sources And Is Approximate.
- Schedule / Plan Information Is Conceptual And Requires Verification by Appropriate Agency.
- Aerial Photo: Google Earth, Approx. Spring 2015

GERRARD DESIGN

Millcroft Greens Corporation | Burlington, Ontario

PRELIMINARY DEVELOPMENT CONCEPT

PROJECT 1516
DATE DEC 22, 2021
SCALE NTS

SK-73



- All Units In Metric Unless Otherwise Noted.
- Base Information Obtained From Various Sources And Is Approximate.
- Schedule / Plan Information Is Conceptual And Requires Verification by Appropriate Agency.
- Aerial Photo: Google Earth, Approx. Spring 2015

GERRARD DESIGN

Millcroft Greens Corporation | Burlington, Ontario

PRELIMINARY DEVELOPMENT CONCEPT

PROJECT 1516
DATE FEB 23, 2022
SCALE NTS

SK-74

3.2 Boundary Road Network

With skewed directions, the directional orientation of the roadway system is ambiguous. To provide clarity throughout this report and in the supporting analysis, Upper Middle Road has been assigned an east-west orientation. Walkers Line and Appleby Line have been assigned a north-south orientation.

Upper Middle Road is an east-west roadway with a five-lane (two way left turn lane through the median) urban cross-section. Upper Middle Road is under the jurisdiction of the Halton Region and is defined as a major road. The roadway has sidewalks available on both sides and has a posted speed limit of 60 km/h throughout the study area.

Dundas Street is an east-west roadway with a four-lane urban cross-section. Dundas Street is under the jurisdiction of the Halton Region and is defined as a major road. The roadway has sidewalks available on both sides and has a posted speed limit of 60 km/h throughout the study area.

Walkers Line is a north-south roadway with a four-lane urban cross-section. Walkers Line is under the jurisdiction of the City of Burlington and is defined as a major road. The roadway has sidewalks available on both sides and has a posted speed limit of 60 km/h throughout the study area.

Appleby Line is a north-south roadway with a four-lane urban cross-section. Appleby Line is under the jurisdiction of the Halton Region and is defined as a major road. The roadway has sidewalks available on both sides and has a posted speed limit of 60 km/h throughout the study area. There are exclusive bike lanes in both directions along Appleby Line.

Country Club Drive is a north-south roadway with a two-lane urban cross-section. Country Club Drive is under the jurisdiction of the City of Burlington and is defined as a minor road. The roadway has sidewalks available on both sides and has a posted speed limit of 40 km/h throughout the study area.

Millcroft Park Drive is an east-west roadway with a two-lane urban cross-section. The roadway is under the jurisdiction of the City of Burlington and is defined as a minor road with a posted speed limit of 40 km/h. The roadway curves into a north-south alignment and intersects with Dundas Street.

3.3 Public Transit

There are multiple transit stops located in the vicinity of the site. The study area is serviced by five buses. Burlington Transit Route 11 'Sutton - Alton', 12 'Upper Middle', Route 48 'Millcroft', Route 51 'Burlington Northeast' and Route 300 'Community Connection' operate on daily schedules and provide direct connections to the Haber Community Centre, Joseph Brant Memorial Hospital, Tansley Woods Community Centre, Burlington Mall, Burlington Supercentre, Downtown Burlington Transit Terminal, and many other employment and service nodes within Burlington.

3.4 Traffic Data

Turning movement counts at the intersections of Upper Middle Road at Appleby Line, Upper Middle Road at Country Club Drive, Millcroft Park Drive at Country Club Drive, and Upper Middle Road at Walkers Line were conducted by Spectrum Traffic Inc. on Thursday, December 13, 2018, and Dundas Street at Tim Dobbie Drive and Dundas Street at Millcroft Park Drive on Tuesday, September 10, 2019 between the weekday a.m. peak hours of 6:00 a.m. and 10:00 a.m. and weekday p.m. peak hours of 3:00 p.m. and 7:00 p.m. Traffic data surveyed prior to 2020 was grown to reflect 2020 volumes using an industry standard of two percent. The grown traffic volumes were submitted to the Region of Halton to confirm the use in this study.

Traffic data contained in Appendix B provides a summary of the turning movement counts. Refer to Figure 2 for the existing traffic volumes. Peak hour factors used for analysis were calculated based on existing traffic and are summarized in Table 1.

Table 1: Existing Peak Hour Factors

Intersection	Weekday A.M. Peak Hour Factor	Weekday P.M. Peak Hour Factor
Walkers Line at Upper Middle Road	0.96	0.92
Itabashi Way/Country Club Drive at Upper Middle Road	0.96	0.97
Appleby Line at Upper Middle Road	0.95	0.99
Country Club Drive at Millcroft Park Drive	0.85	0.98
Dundas Street at Tim Dobbie Drive	0.92	0.97
Dundas Street at Millcroft Park Drive	0.96	0.95

3.5 Traffic Modeling

The assessment of intersections is based on the method outlined in the "Highway Capacity Manual, 2010" using Synchro 10 modeling software. Intersections are assessed using a Level of Service metric, with ranges of delay assigned a letter from "A" to "F". For stop-controlled intersections, a Level of Service "A" or "B" would typically be measured during off-peak hours when lesser traffic volumes are on the roadways. Levels of Service "C" through "F" would typically be measured in the commuter peak hours when greater vehicle volumes cause longer travel times.

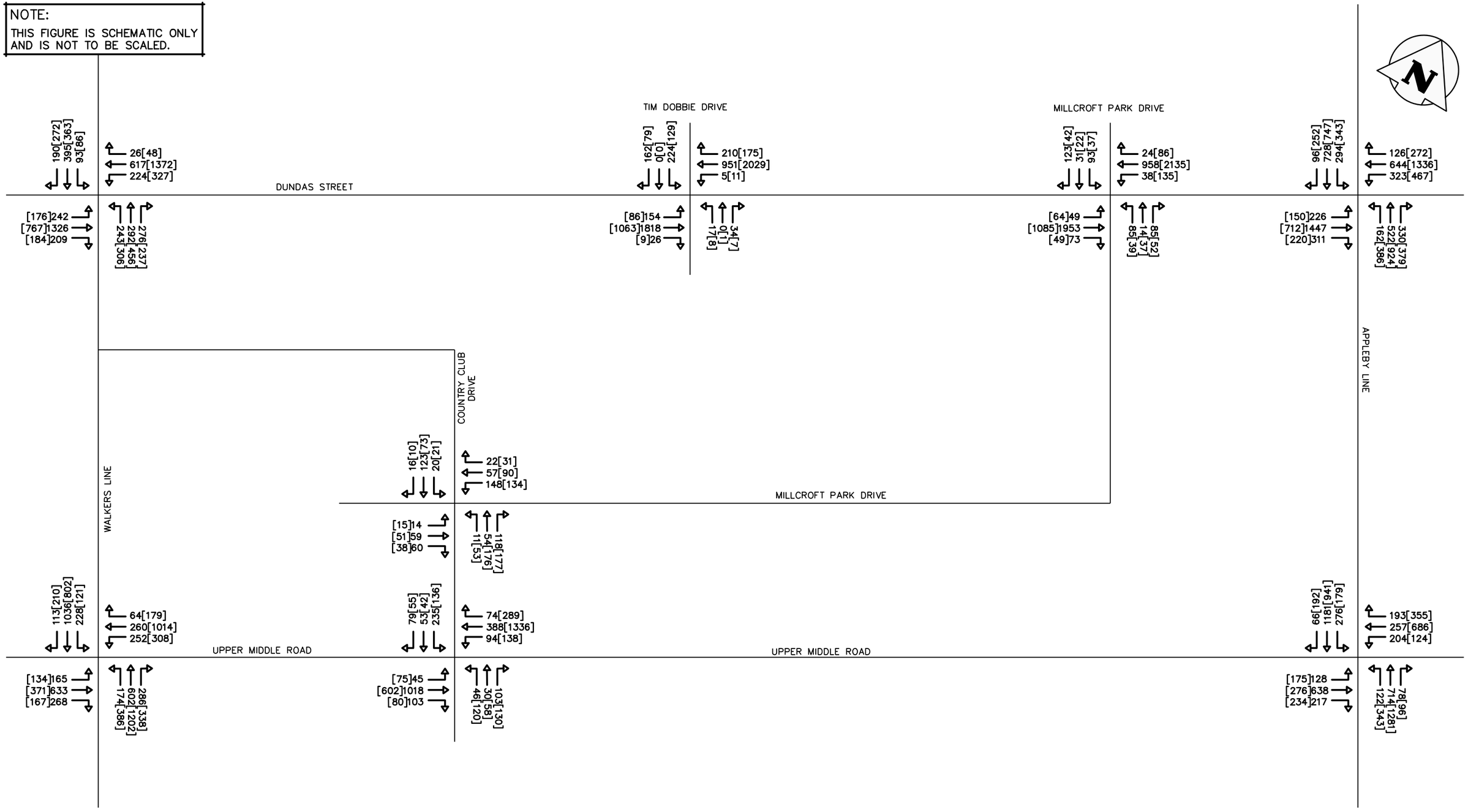
The Level of Service (LOS) definitions for signalized and stop control intersections is included in Appendix C. It is noted that the analysis conducted herein is considered to be conservative as the analysis does not account for any sneakers that may exit the intersection during the intergreen period.

The peak hour factors, heavy vehicle percentage and pedestrian movements for the study intersection were obtained from the existing traffic movement counts.

3.6 Intersection Operations

The traffic operations at the study intersection were analyzed on the basis of the traffic volumes recorded. Detailed capacity analyses are included in Appendix D. The intersection operation was analyzed based on the traffic volumes illustrated in Figure 2. Table 2 and Figure 3 outline the existing traffic operations.

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.



LEGEND:

XX[XX] WEEKDAY AM(PM) VOLUMES

MILLCROFT GOLF COURSE
MILLCROFT PARK DRIVE
CITY OF BURLINGTON

2020 EXISTING TRAFFIC VOLUMES

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	Design	Project No.	
S.K.	K.S.		912-5113
Check	Check	Scale	Dwg.
K.S.		N.T.S	FIG. 02

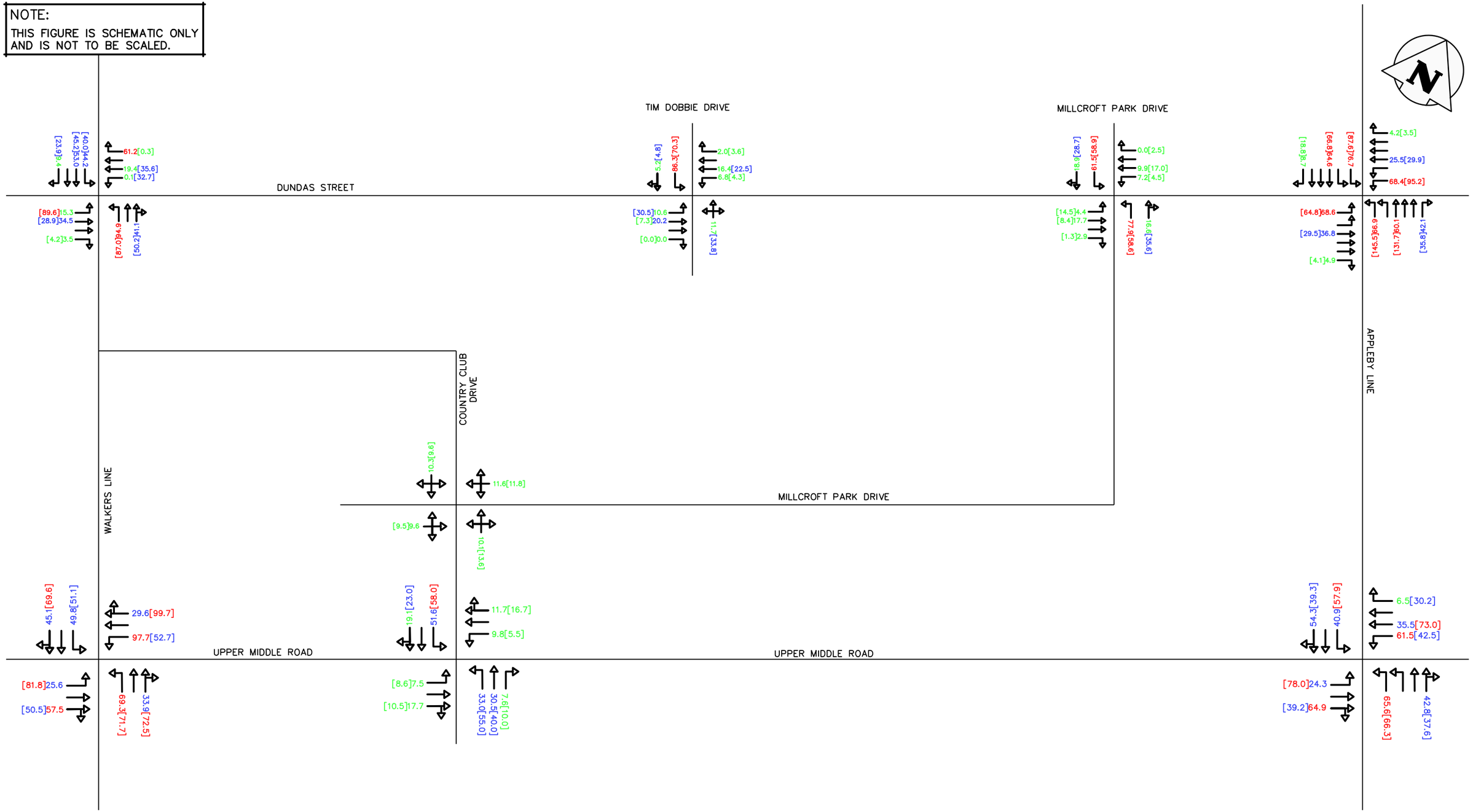
Table 2: 2020 Existing Levels of Service

Intersection	Control Type	Peak Hour	Level of Service	Average Delay per Vehicle(s)	Maximum V/C & V/C Ratio(s) > 0.85 (Approach)
Walkers Line at Upper Middle Road	Signalized	Weekday A.M.	D	50.1 s	0.95 (EBT) **1.08 (WBL)** 0.93 (NBL) 0.92 (SBL) 0.90 (SBT)
		Weekday P.M.	E	77.8 s	0.93 (EBL) 0.89 (WBL) **1.10 (WBT)** 0.96 (NBL) **1.05 (NBT)** **1.00 (SBT)**
Itabashi Way/Country Club Drive at Upper Middle Road	Signalized	Weekday A.M.	B	20.0 s	0.76 (SBL)
		Weekday P.M.	C	18.6 s	0.74 (WBT)
Appleby Line at Upper Middle Road	Signalized	Weekday A.M.	D	50.9 s	0.98 (EBT) 0.91 (WBL) 0.97 (SBT)
		Weekday P.M.	D	48.0 s	0.93 (EBL) 0.93 (WBT)
Country Club Drive at Millcroft Park Drive	Stop Control	Weekday A.M.	B	11.8 s	0.40 (WB)
		Weekday P.M.	B	14.0 s	0.56 (NB)
Millcroft Park Drive/Cornerstone Drive & Dundas Street	Signalized	Weekday A.M.	B	19.1 s	0.85 (EBT)
		Weekday P.M.	B	15.6 s	0.87 (WBT)
Weslock Common/Tim Dobbie Drive & Dundas Street	Signalized	Weekday A.M.	C	21.5 s	0.90 (SBL)
		Weekday P.M.	B	19.5 s	0.89 (WBT)
Walkers Line & Dundas Street	Signalized	Weekday A.M.	D	36.1 s	0.87 (WBL) **1.00 (NBL)**
		Weekday P.M.	D	40.5 s	**0.97 (EBL)** **0.99 (NBL)**
Appleby Line & Dundas Street	Signalized	Weekday A.M.	D	45.3 s	0.84 (SBT)
		Weekday P.M.	E	63.5 s	0.98 (WBL) **1.14 (NBL)** **1.15 (NBT)** 0.90 (SBL) 0.86 (SBT)

Note: The Level of Service of a Stop-Controlled intersection is based on the delay associated with the critical approach. The Level of Service of a signalized intersection is based on the average control delay per vehicle. Exiting Signal Timing provided by City of Burlington were used.

As indicated in Table 2, the intersection of Walkers Line at Upper Middle Road operates at a Level of Service "D" during the weekday a.m. peak period and at a Level of Service "E" during the p.m. peak period, with average delays per vehicle of 50.1 and 77.8 seconds, respectively. During the a.m. peak period, the westbound left turn movement operates over capacity with a volume to capacity ratio of 1.08. Volume-to-capacity ratios of 1.10 and 1.05 were observed for the westbound and northbound through movements, respectively, during the weekday p.m. peak period. This indicates an overestimation of the existing conditions as the existing v/c ratios can not exceed 1.0. However, calibration of the data was not possible because of the Covid-19 pandemic.

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.



LEGEND:

XX[XX]	WEEKDAY AM(PM) DELAYS IN SECONDS
GREEN	"A" TO "B" LOS
BLUE	"C" TO "D" LOS
RED	"E" TO "F" LOS

MILLCROFT GOLF COURSE
MILLCROFT PARK DRIVE
CITY OF BURLINGTON

2020 EXISTING DELAYS

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	S.K.	Design	K.S.	Project No.	912-5113
Check	K.S.	Check		Scale	N.T.S
				Dwg.	FIG. 03

The intersection of Itabashi Way/Country Club Drive at Upper Middle Road operates at a Level of Service "B" during the weekday a.m. peak period and at a Level of Service "C" during the p.m. peak period with average delays per vehicle of 20.0 seconds and 18.6 seconds, respectively. A maximum volume-to-capacity ratio of 0.76 was observed for the southbound left turn movement during the weekday a.m. peak period.

The intersection of Appleby Line at Upper Middle Road operates at a Level of Service "D" during the weekday a.m. and p.m. peak periods, with average delays per vehicle of 50.9 and 48.0 seconds, respectively. During the a.m. peak period, a maximum volume-to-capacity ratio of 0.98 was observed for the southbound through movement. A maximum volume-to-capacity ratio of 0.93 was observed for the eastbound left turn and westbound through movement during the weekday p.m. peak period.

The intersection of Millcroft Park Drive/Cornerstone Drive & Dundas Street operates at a Level of Service "B" during the weekday a.m. and p.m. peak periods, with average delays per vehicle of 19.1 and 15.6 seconds, respectively.

During the a.m. peak period, the maximum observed volume to capacity ratio of 0.85 was observed for the eastbound through movement. A maximum volume-to-capacity ratio of 0.87 was observed for the westbound through movement during the weekday p.m. peak period.

The intersection of Weslock Common/Tim Dobbie Drive & Dundas Street operates at a Level of Service "C" during the weekday a.m. peak period and at a Level of Service "B" during the p.m. peak period, with average delays per vehicle of 21.5 and 19.5 seconds, respectively. During the a.m. peak period, the maximum observed volume to capacity ratio of 0.90 was observed for the southbound left turn movement. A maximum volume-to-capacity ratio of 0.89 was observed for the westbound through movement during the weekday p.m. peak period.

The intersection of Walkers Line & Dundas Street operates at a Level of Service "D" during the weekday a.m. and p.m. peak periods, with average delays per vehicle of 36.1 and 40.5 seconds, respectively. During the a.m. peak period, the maximum observed volume to capacity ratio of 1.00 was observed for the northbound left turn movement. A maximum volume-to-capacity ratio of 0.99 was observed for the westbound left turn movement during the weekday p.m. peak period.

The intersection of Appleby Line & Dundas Street operates at a Level of Service "D" during the weekday a.m. peak period and at a Level of Service "B" during the p.m. peak period, with average delays per vehicle of 45.3 and 63.5 seconds, respectively. During the a.m. peak period, the maximum observed volume to capacity ratio of 0.84 was observed for the southbound through movement. A maximum volume-to-capacity ratio of 1.15 was observed for the northbound through movement during the weekday p.m. peak period.

The intersection of Country Club Drive at Millcroft Park Drive operates at a Level of Service "B" during the weekday a.m. and p.m. peak periods, with average delays per vehicle of 11.8 and 14.0 seconds, respectively. No individual movements are operating with a volume to capacity ratio above 0.85.

4.0 Future Background Conditions

4.1 Study Horizons

Per Halton Region's Transportation Impact Study Guidelines and confirmed with Halton Region staff per our Terms of Reference attached in Appendix I, a five-year horizon of 2025 year was considered for the analysis.

4.2 Background Developments

There are currently three active development applications in the vicinity of the proposed site. The first application is for a proposed development located at 4063 Upper Middle Road with access to Upper Middle Road. The application is for a five-storey, 32-unit condominium building. Paradigm Transportation Solutions Limited completed a Transportation Impact Study for this development in December 2016. Per the report, it is estimated that the development will generate 20 two-way net trips in the a.m. peak hour and 34 two-way net trips in the p.m. peak hour. All relative excerpts from the Transportation Impact Study for the development are provided in Appendix E.

There is a proposed development application for a 5.22-hectare site which proposes the creation of ten employment blocks with approximately 24,498 square metres (263,700 square feet) of GFA located at 4853 Palladium Way. The primary point of access is proposed by a new roadway connection to Palladium Way. Paradigm Transportation Solutions Limited completed a Transportation Impact Study for this development in June 2016. Per the report, it is estimated that the development will generate 203 two-way net trips in the a.m. peak hour and 236 two-way net trips in the p.m. peak hour. All relative excerpts from the Transportation Impact Study for the development are provided in Appendix E.

Additionally, there is a development application submitted by Evergreen Community (Burlington) Ltd. for a proposed mixed-use development at the northwest quadrant of Tremaine Road and Dundas Street. The proposed development encompasses four properties: 5421 and 5463 Dundas Street (Norton/Stevenson Lands) and 5453 Dundas Street and 3232 Tremaine Road. BA Consulting Group Ltd. completed a Transportation Impact Study for this development in July 2015. Per the report, it is estimated that the development will generate 1090 two-way net trips in the a.m. peak hour and 980 two-way net trips in the p.m. peak hour. All relative excerpts from the Transportation Impact Study for the development are provided in Appendix E.

Per discussion with Region Staff, the development located at 2273 Turnberry Road, Burlington was also included. The development is located on the southwest corner of Appleby Line and Taywood Drive in Burlington and is proposed to include 68 townhouse units. The trip generation of the proposed development was forecasted using the rates provided in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition. Land use Category 220 "Multifamily Housing (Low-Rise)" was used to forecast the trips generated by the development. The development is expected to generate 33 two-way (8 inbound and 25 outbound) trips during the weekday a.m. peak hour and 42 two-way (26 inbound and 16 outbound) trips during the weekday p.m. peak hour. Detailed trip generation and assignments are provided in Appendix E.

After the initial submission, Crozier became aware of a proposed residential development at 4375 Millcroft Park Drive. Crozier has reviewed the TIS that was submitted as part of the application for this development that consists of 30 single-detached homes. As shown in the TIS prepared by LEA Consulting Limited, dated October 19, 2021, the development is expected to generation 22 two-way (5 inbound and 17 outbound) and 32 two-way (20 inbound and 12 outbound) auto trips in the weekday a.m. and p.m. peak hours respectively. Due to this low trip generation, Crozier feels that the trips will not materially affect the results of the TIS and were not included in this resubmission. All relative excerpts from the Transportation Impact Study for the development are provided in Appendix E.

4.3 Dundas Street EA Study

Halton Region has initiated a Class Environmental Assessment to consider several improvements for Dundas Street between Brant Street and Bronte Road to accommodate anticipated future demand along the Dundas Street corridor. One of the options considered is the widening of Dundas Street from four to six lanes in order to ultimately accommodate a Bus Rapid Transit (BRT) lane in each direction. Initially, after the widening, the curb lanes will be designated as High Occupancy Vehicle (HOV) lanes. As transit utilization increases, these HOV lanes will be converted to dedicated BRT lanes, but these BRT lanes are part of Metrolinx's 2041 Regional Transportation Plan which is beyond the scope of this analysis. The environmental assessment compares the traffic and design impact between a center lane versus curb side HOV/BRT lane designation. Relevant excerpts are provided in Appendix F.

Based on the preliminary street level plans along Dundas Street in the study area, the curb side option for the HOV/BRT lanes was adopted as the preferred solution. These lane configurations have been assumed to be in place for this study. Per Halton Region's Transportation Impact Study Guidelines, a lane utilization factor of 0.80 was used to account for vehicles utilizing the HOV Lane.

4.4 Traffic Growth Rates

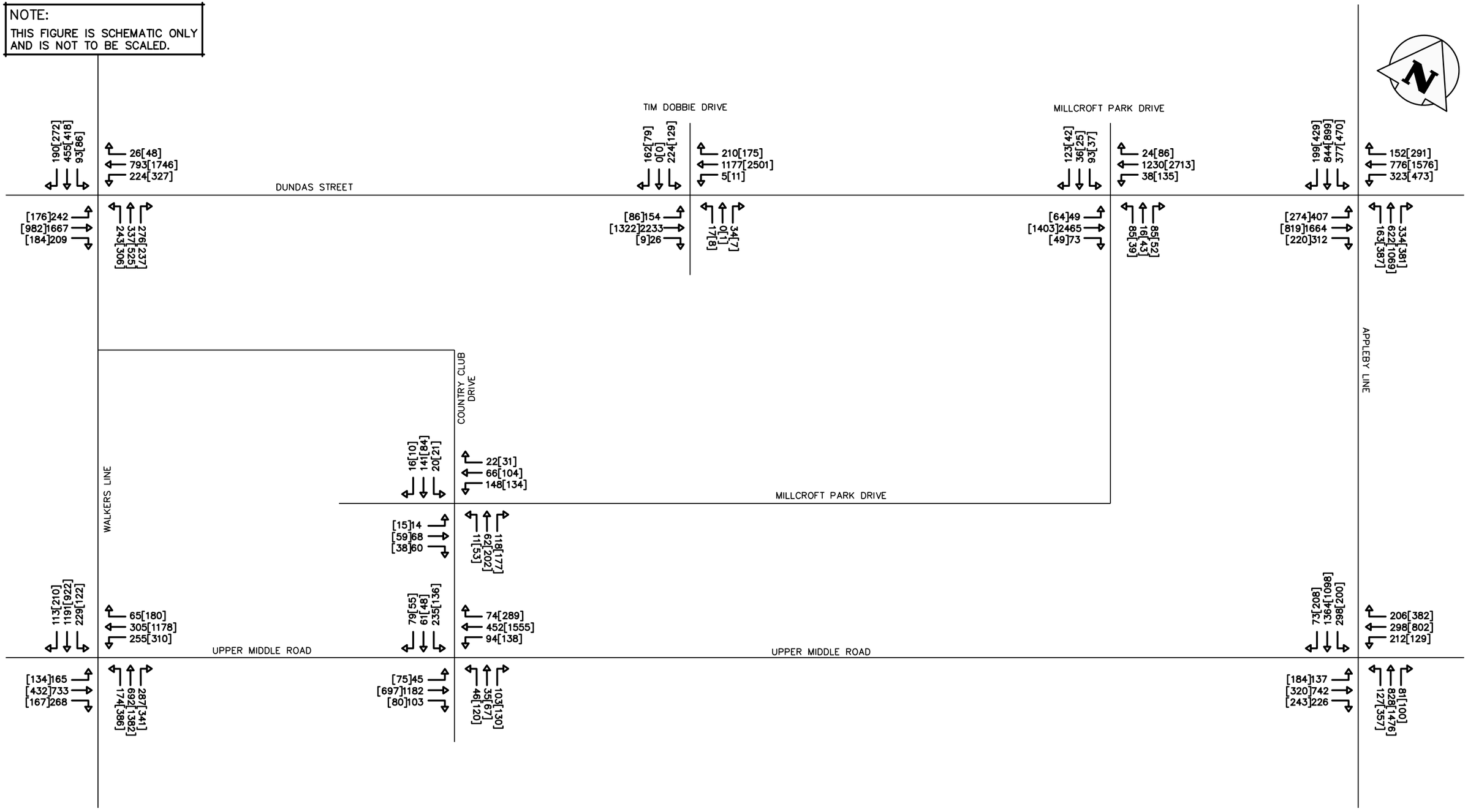
An industry standard of a 2.0% growth rate per annum was applied to all through traffic during the weekday peak periods along the road network in the study area. Figure 4 illustrates all the traffic from the background developments and is its subsection figures 4.1 – 4.4 show each individual background developments' traffic. Figure 5 illustrates the future background traffic volumes for the 2025 horizon year and reflects the traffic growth rate applied to the traffic volumes at the intersection in addition to the background development's traffic.

4.5 Intersection Operations

Traffic operations at the study intersections were analyzed with the growth rates and traffic from background developments. Table 3 outlines the 2025 future background Levels of Service. The observed delays under the future background conditions are shown in Figure 5.

Detailed capacity analysis worksheets are included in Appendix D.

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.



LEGEND:

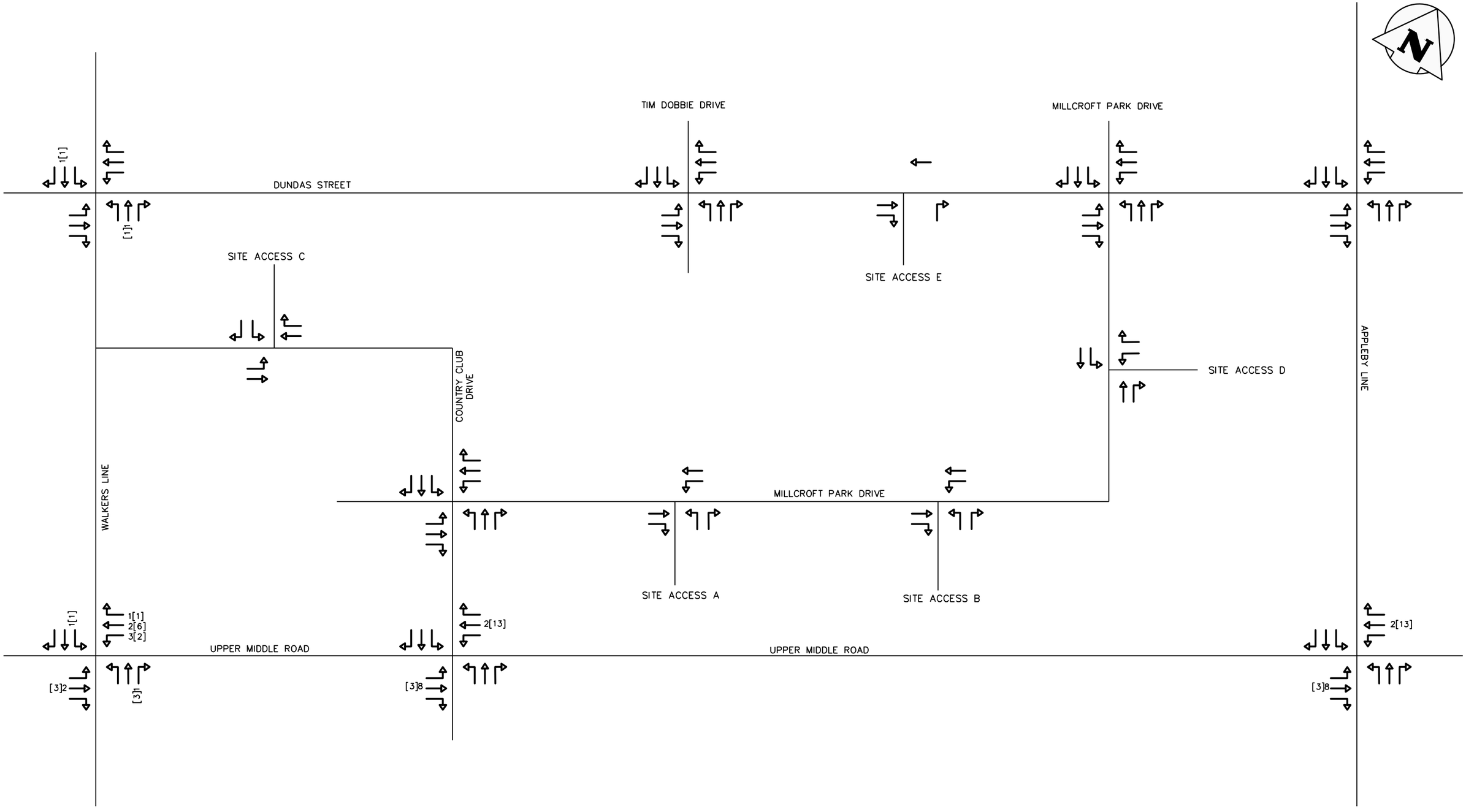
xx[xx] WEEKDAY AM(PM) VOLUMES

MILLCROFT GOLF COURSE
MILLCROFT PARK DRIVE
CITY OF BURLINGTON

2025 FUTURE BACKGROUND TRAFFIC VOLUMES

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

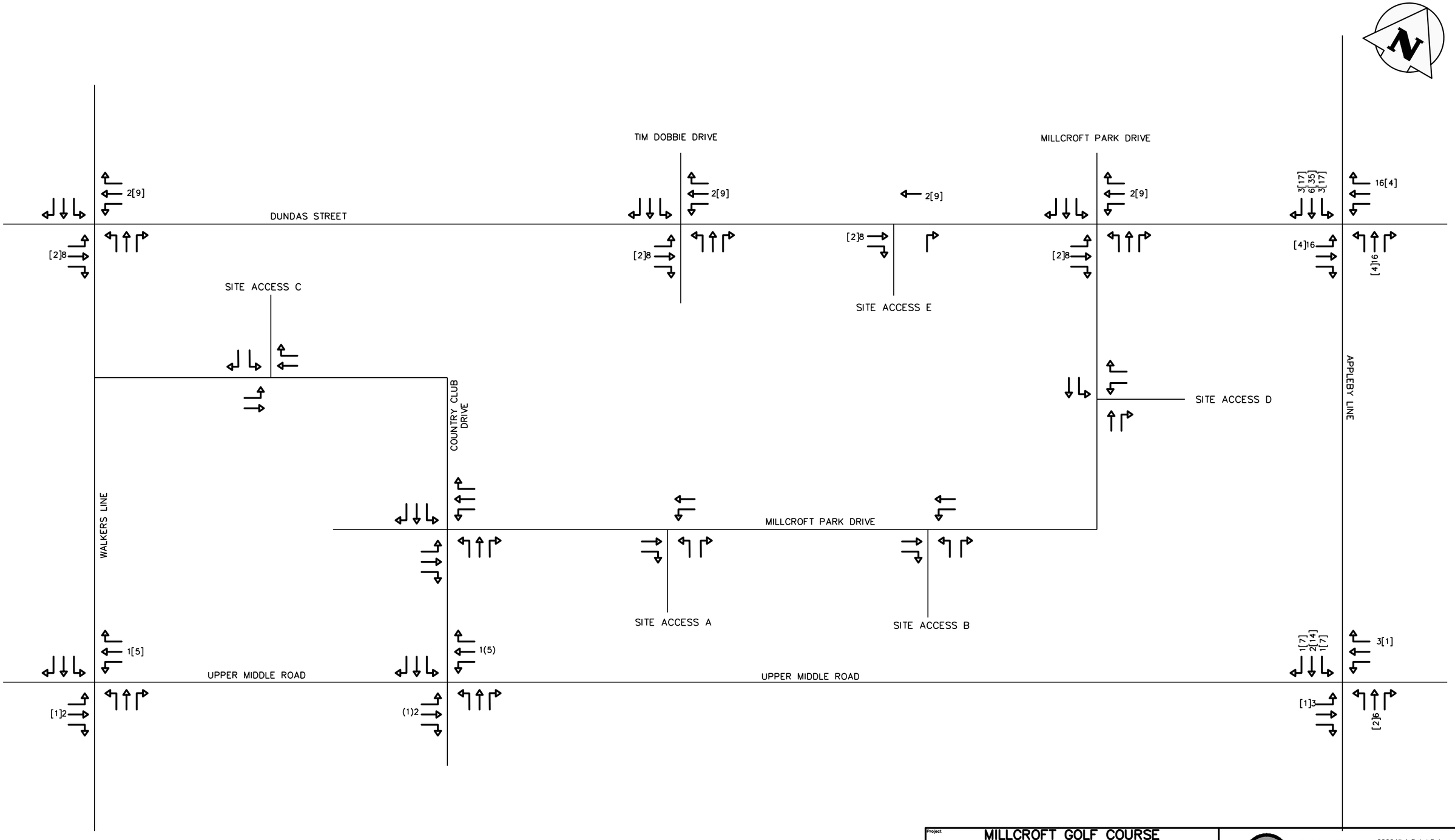
Drawn	Design	Project No.	
S.K.	K.S.		912-5113
Check	Check	Scale	Dwg.
K.S.		N.T.S	FIG. 04



Project	MILLCROFT GOLF COURSE MILLCROFT PARK DRIVE CITY OF BURLINGTON
Drawing	BACKGROUND DEVELOPMENT (4063 UPPER MIDDLE ROAD)

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

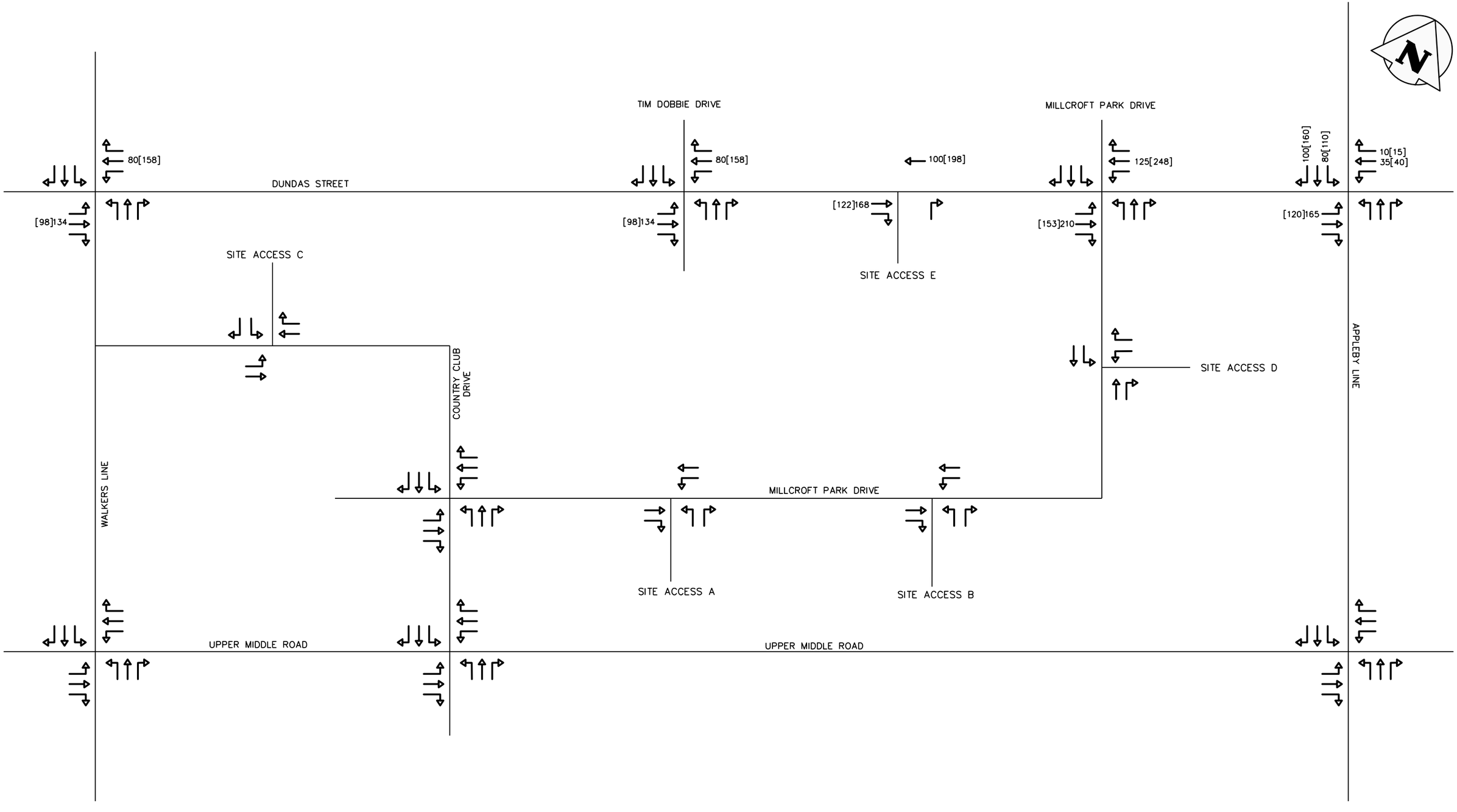
Drawn By	T.K.	Design By	K.S.	Project	912-5113
Scale	N.T.S.	Date	DEC/17/2021	Check By	I.L.	Drawing	FIG 4.1



Project	MILLCROFT GOLF COURSE MILLCROFT PARK DRIVE CITY OF BURLINGTON
Drawing	BACKGROUND DEVELOPMENT (4853 PALLADIUM WAY)

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn By	T.K.	Design By	K.S.	Project	912-5113
Scale	N.T.S.	Date	DEC/17/2021	Check By	I.L.
Drawing	FIG 4.2				

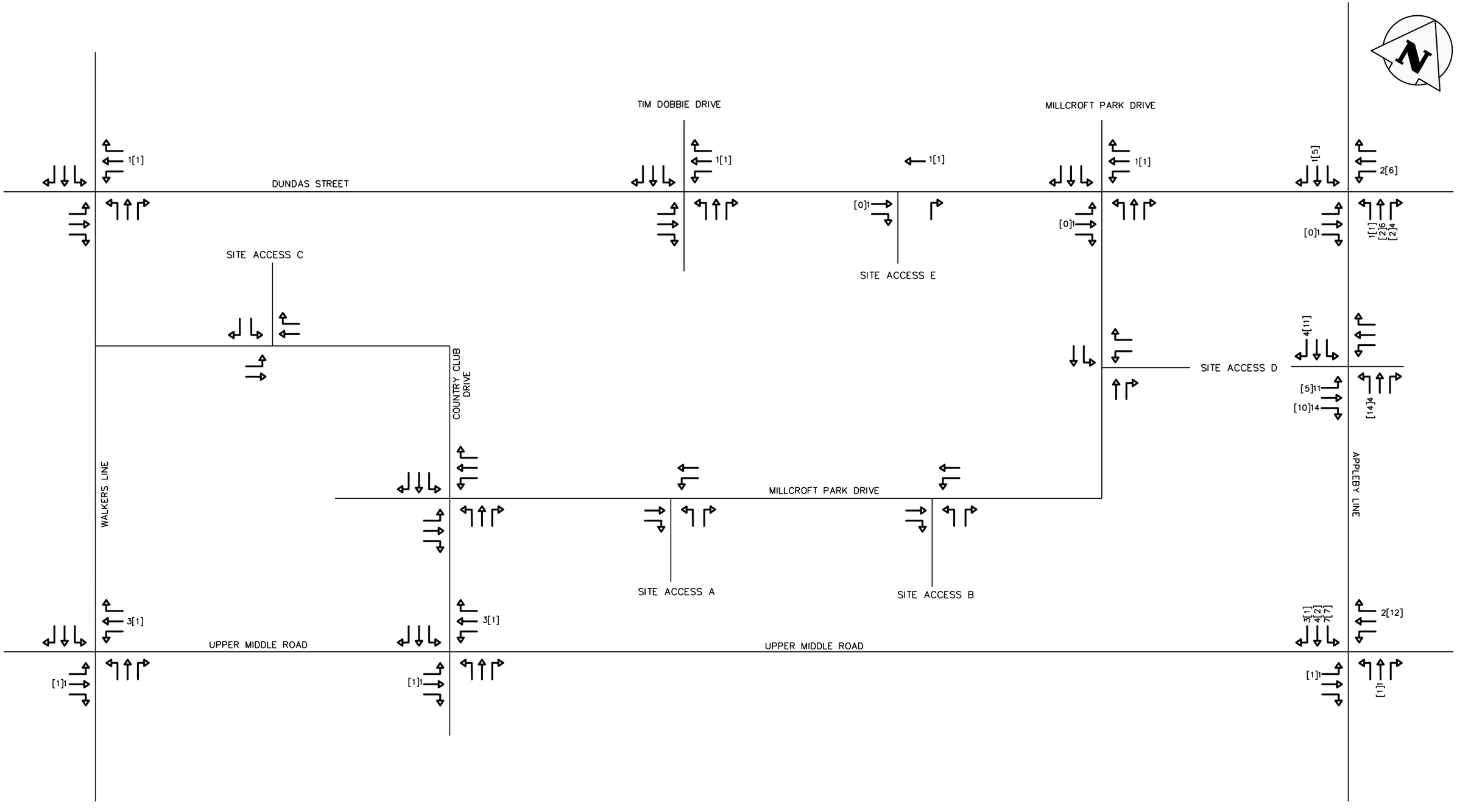


Project: MILLCROFT GOLF COURSE
MILLCROFT PARK DRIVE
CITY OF BURLINGTON

Drawing: BACKGROUND DEVELOPMENT
(EVERGREEN COMMUNITY)

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn By	Design By	Project
T.K.	K.S.	912-5113
Scale	Date	Check By	Drawing
N.T.S.	DEC/17/2021	I.L.	FIG 4.3

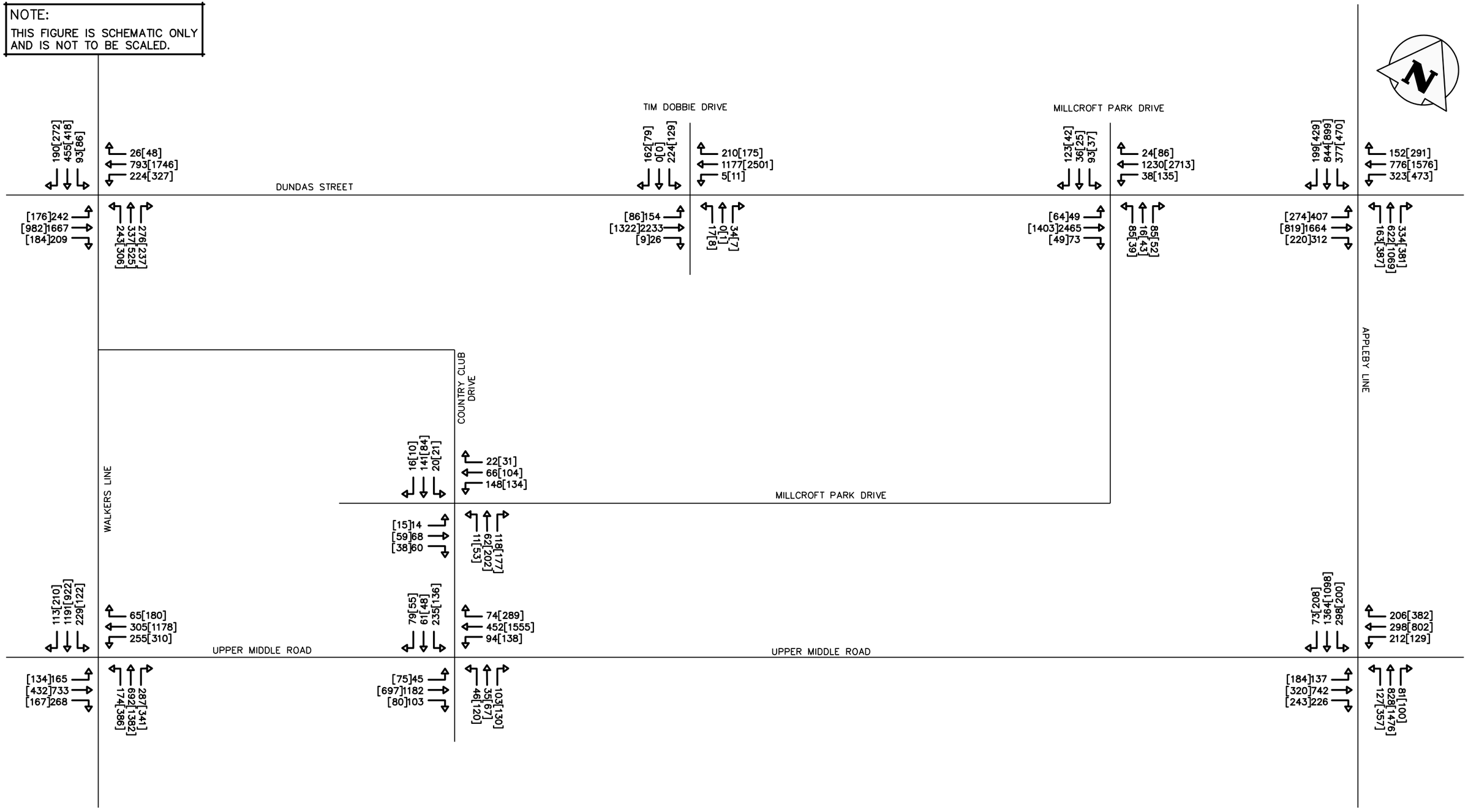


Project	MILLCROFT GOLF COURSE MILLCROFT PARK DRIVE CITY OF BURLINGTON
Drawing	BACKGROUND DEVELOPMENT (TURNBERRY)

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn By	T.K.	Design By	K.S.	Project	912-5113
Scale	N.T.S.	Date	DEC/17/2021	Check By	I.L.
				Drawing	FIG 4.4

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.



LEGEND:
XX[XX] WEEKDAY AM(PM) VOLUMES

DRAFT ISSUE

MILLCROFT GOLF COURSE
MILLCROFT PARK DRIVE
CITY OF BURLINGTON

2025 FUTURE BACKGROUND TRAFFIC VOLUMES

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	Design	Project No.	
S.K.	K.S.		912-5113
Check	Check	Scale	Dwg.
K.S.		N.T.S	FIG. 05

Table 3: 2025 Future Background Levels of Service

Intersection	Control Type	Peak Hour	Level of Service	Average Delay per Vehicle(s)	Maximum V/C & V/C Ratio(s) > 0.85 (Approach)
Walkers Line at Upper Middle Road	Signalized	Weekday A.M.	E	64.9 s	1.05 (EBT) **1.10 (WBL)** 0.94 (NBL) **1.04 (SBL)** **1.03 (SBT)**
		Weekday P.M.	F	113.3 s	0.93 (EBL) 0.95 (WBL) **1.25 (WBT)** 0.96 (NBL) **1.17 (NBT)** **1.11 (SBT)**
Itabashi Way/Country Club Drive at Upper Middle Road	Signalized	Weekday A.M.	C	21.1 s	0.76 (SBL)
		Weekday P.M.	C	21.0 s	0.84 (WBT)
Appleby Line at Upper Middle Road	Signalized	Weekday A.M.	E	75.2 s	**1.10 (EBT)** 0.91 (WBL) 0.92 (NBT) 0.93 (SBL) **1.12 (SBT)**
		Weekday P.M.	E	60.0 s	0.94 (EBL) **1.08 (WBT)** 0.97 (NBT) 0.88 (SBL) 0.91 (SBT)
Country Club Drive at Millcroft Park Drive	Stop Control	Weekday A.M.	B	11.3 s	0.42 (WB)
		Weekday P.M.	B	13.5 s	0.62 (NB)
Millcroft Park Drive/Cornerstone Drive & Dundas Street	Signalized	Weekday A.M.	B	18.5 s	0.85 (EBT)
		Weekday P.M.	B	15.7 s	0.88 (WBT)
Weslock Common/Tim Dobbie Drive & Dundas Street	Signalized	Weekday A.M.	C	20.7 s	0.90 (SBL)
		Weekday P.M.	B	17.8 s	0.87 (WBT)
Walkers Line & Dundas Street	Signalized	Weekday A.M.	C	28.0 s	0.81 (WBT)
		Weekday P.M.	C	29.8 s	0.80 (WBT)
Appleby Line & Dundas Street	Signalized	Weekday A.M.	E	59.3 s	**1.13 (EBL)** 0.94 (WBT) 0.86 (NBR) **1.03 (SBL)** 0.96 (SBT)
		Weekday P.M.	F	88.1 s	0.99 (WBL) **1.14 (NBL)** **1.33 (NBT)** 0.88 (NBR) **1.24 (SBL)** **1.04 (SBT)** 0.99 (SBR)

Note: The Level of Service of a Stop-Controlled intersection is based on the delay associated with the critical approach.
The Level of Service of a signalized intersection is based on the average control delay per vehicle.
Exiting Signal timing provided by City of Burlington were used.

As indicated in Table 3, the intersection of Walkers Line at Upper Middle Road is projected to operate at a Level of Service "E" during the weekday a.m. peak period and at a Level of Service "F" during the p.m. peak period, with average delays per vehicle of 64.9 and 113.3 seconds, respectively, with no optimizations in the signal timing plan.

When compared to the existing scenario, the average delay per vehicle increases by 14.8 and 35.5 seconds during the a.m. and p.m. peak periods, respectively. A maximum volume-to-capacity ratio of 1.25 was observed for the westbound through movement during the weekday p.m. peak period. It is important to note that at congested signalized intersections, even minimal increases in traffic volumes can exponentially increase the intersection control delay.

The intersection of Itabashi Way/Country Club Drive at Upper Middle Road is projected to operate at a Level of Service "C" during the weekday a.m. and p.m. peak period, with average delays per vehicle of 21.1 and 21.0 seconds, respectively, with no optimizations in the signal timing plan.

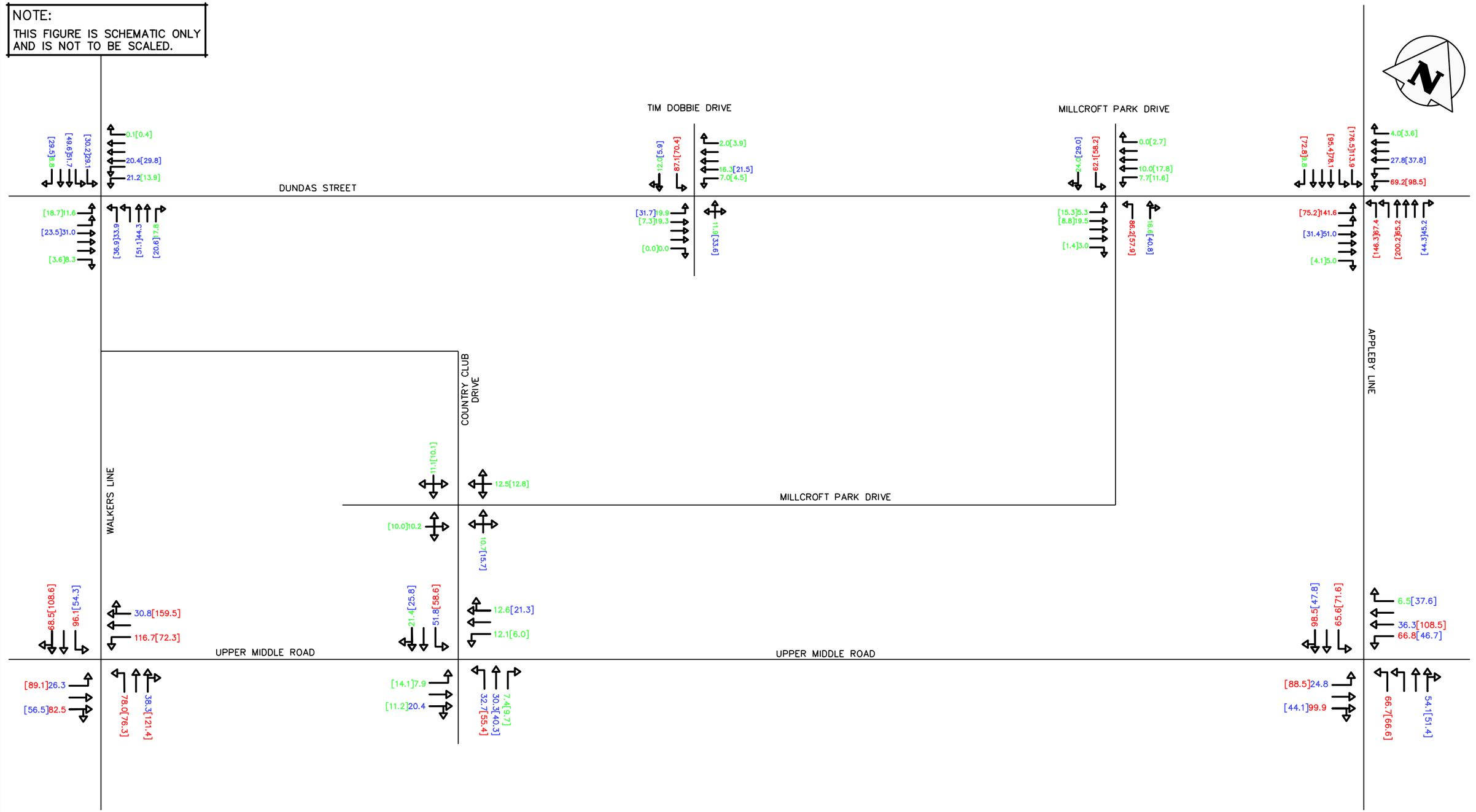
When compared to the existing scenario, the average delay per vehicle increases by 1.1 and 2.4 seconds during the a.m. and p.m. peak periods, respectively. A maximum volume-to-capacity ratio of 0.84 was observed for the westbound through movement during the weekday p.m. peak period.

The intersection of Appleby Line at Upper Middle Road is projected to operate at a Level of Service "E" during the weekday a.m. peak period and at a Level of Service D" during the p.m. peak period, with average delays per vehicle of 75.2 and 60.0 seconds, respectively, with no optimizations in the signal timing plan.

When compared to the existing scenario, the average delay per vehicle increases by 24.3 and 12.0 seconds during the a.m. and p.m. peak periods, respectively. During the a.m. peak period, the eastbound and southbound through movements operate over capacity with volume to capacity ratios of 1.10 and 1.12, respectively. Maximum volume-to-capacity ratio of 1.08 was observed for the westbound through movement during the weekday p.m. peak period.

As noted above, even minimal increases in traffic volumes at congested intersections can exponentially increase the intersection control delay.

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.



LEGEND:

XX[XX]	WEEKDAY AM(PM) DELAYS IN SECONDS
GREEN	"A" TO "B" LOS
BLUE	"C" TO "D" LOS
RED	"E" TO "F" LOS

MILLCROFT GOLF COURSE
MILLCROFT PARK DRIVE
CITY OF BURLINGTON

2025 FUTURE BACKGROUND DELAYS

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	S.K.	Design	K.S.	Project No.	912-5113		
Check	K.S.	Check		Scale	N.T.S	Dwg.	FIG. 06

The intersection of Millcroft Park Drive/Cornerstone Drive & Dundas Street is projected to operate at a Level of Service "B" during the weekday a.m. and p.m. peak periods, with average delays per vehicle of 18.5 and 15.7 seconds, respectively. Compared to the existing scenario, the average delay per vehicle is expected to slightly decrease due to the road widening along Dundas Street. During the a.m. peak period, the maximum observed volume to capacity ratio of 0.85 was observed for the eastbound through movement. A maximum volume-to-capacity ratio of 0.88 was observed for the westbound through movement during the weekday p.m. peak period.

The intersection of Weslock Common/Tim Dobbie Drive & Dundas Street operates at a Level of Service "C" during the weekday a.m. peak period and Level of Service "B" during the weekday p.m. peak periods, with average delays per vehicle of 20.7 and 17.8 seconds, respectively. Given the road improvements along Dundas Street, the average delay is expected to decrease by 0.8 seconds during the a.m. peak period and 1.7 seconds during the p.m. peak period. During the a.m. peak period, the maximum observed volume to capacity ratio of 0.90 was observed for the southbound left turn movement. A maximum volume-to-capacity ratio of 0.87 was observed for the westbound through movement during the weekday p.m. peak period.

The intersection of Walkers Line & Dundas Street is projected to operate at a Level of Service "C" during the weekday a.m. and p.m. peak periods, with average delays per vehicle of 28.0 and 29.8 seconds, respectively. Compared to the existing scenario, the average delay per vehicle is expected to slightly decrease due to the road widening along Dundas Street.

Given the road improvements along Dundas Street, the average delay is expected to decrease by 8.1 seconds during the a.m. peak period and 10.7 seconds during the p.m. peak period. A maximum volume-to-capacity ratio of 0.80 was observed for the westbound through movement during the weekday p.m. peak period.

The intersection of Appleby Line & Dundas Street operates at a Level of Service "E" during the weekday a.m. peak period and Level of Service "F" during the weekday p.m. peak periods, with average delays per vehicle of 59.3 and 88.1 seconds, respectively.

When compared to the existing scenario, the average delay per vehicle increases by 14.0 and 24.6 seconds during the a.m. and p.m. peak periods, respectively. During the a.m. peak period, the maximum observed volume to capacity ratio of 1.13 was observed for the eastbound left turn movement. A maximum volume-to-capacity ratio of 1.33 was observed for the northbound through movement during the weekday p.m. peak period.

The intersection of Country Club Drive at Millcroft Park Drive is projected to operate at a Level of Service "B" during the weekday a.m. and p.m. peak periods, with average delays per vehicle of 11.3 and 13.5 seconds, respectively. No individual movements are operating with a volume to capacity ratio above 0.85.

5.0 Development Proposal

The subject lands cover a developable area of approximately 10.12 ha and is split up between Sites A, B, C, D and E. Descriptions for each site is provided below.

Site A, located at 'Hole 6; of the Millcroft Golf Club is enclosed by Millcroft Park Drive to the north, Hadfield Court residences to the east, Country Club Drive residences to the west, and Upper Middle Road to the south, and 29 single detached units are proposed at this site.

Site B is located at 'Hole 7' of the Millcroft Golf Club is enclosed by Millcroft Park Drive, Hadfield Court residences, Parklane Crescent residences, and The Canadian National Railway, and 40 single detached units are proposed. No issues are projected based on the number of units proposed on this cul-de-sac as precedent has been set via Roseville Court in Burlington, which currently has 54 units being accessed through a single access. Site C is located on the existing 'Hole 1' of the Millcroft Golf Club and is bounded by Country Club Drive to the south, Weslock Common to the west and residential units to the north and east and 14 single detached units are proposed at this site. Site D is located on the existing 'Hole 16'of the Millcroft Golf Club and is bounded by Millcroft Park Drive to the west, residential units to the north and south, and part of the golf course to the east. A maximum of 7 single detached units are proposed for this site. Site E is enclosed by Dundas Street to the north, a hydro corridor to the south and east, and residential units to the west. A six-storey condominium building with 130 units and access onto Dundas Street is proposed at this site.

5.1 Site Generated Traffic

The proposed development will result in additional vehicles on the boundary road network that previously did not exist. The proposed development will also result in additional turning movements at the boundary road intersections.

The trip generation of the proposed development was forecasted using the rates provided in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition. 2016 Transportation Tomorrow Survey (TTS) data was used to determine the existing modal split. Per the available data, a 5% modal split was applied to all trips generated by the proposed site.

Land use Category 210 "Single-Family Detached Housing" and Land use Category 221 "Multifamily Housing (Mid-Rise)" was used to forecast the trips generated by the development. The forecasted primary trips are tabulated in Table 4.

Table 4: Trip Generation

ITE Category	Units	Roadway Peak Hour	Rate/Equation Used	Number of Trips		
				Inbound	Outbound	Total
Single-Family Detached Housing	Site A (29 Units)	Weekday A.M.	T = 0.71(X) + 4.80	6	18	24
		Weekday P.M.	Ln(T) = 0.96 Ln(X) + 0.20	18	11	29
	Site B (40 Units)	Weekday A.M.	T = 0.71(X) + 4.80	8	23	31
		Weekday P.M.	Ln(T) = 0.96 Ln(X) + 0.20	25	15	40
	SITE C (14 Units)	Weekday A.M.	T = 0.71(X) + 4.80	4	10	14
		Weekday P.M.	Ln(T) = 0.96 Ln(X) + 0.20	9	5	14
	Site D (7 Units)	Weekday A.M.	T = 0.71(X) + 4.80	2	7	9
		Weekday P.M.	Ln(T) = 0.96 Ln(X) + 0.20	5	3	8
Multifamily Housing (Mid-Rise) (LUC 221)	Site E (130 Units)	Weekday A.M.	0.36	11	31	42
		Weekday P.M.	0.44	33	21	54
New Trips		**Weekday A.M.**		**31**	**89**	**120**
		Weekday P.M.		**90**	**55**	**145**

Note: Number of trips reflect the 5% non-auto modal reduction.

Overall, the development is expected to generate 120 two-way (31 inbound and 89 outbound) trips during the weekday a.m. peak hour and 145 two-way (90 inbound and 55 outbound) trips during the weekday p.m. peak hour.

5.2 Trip Distribution and Assignment

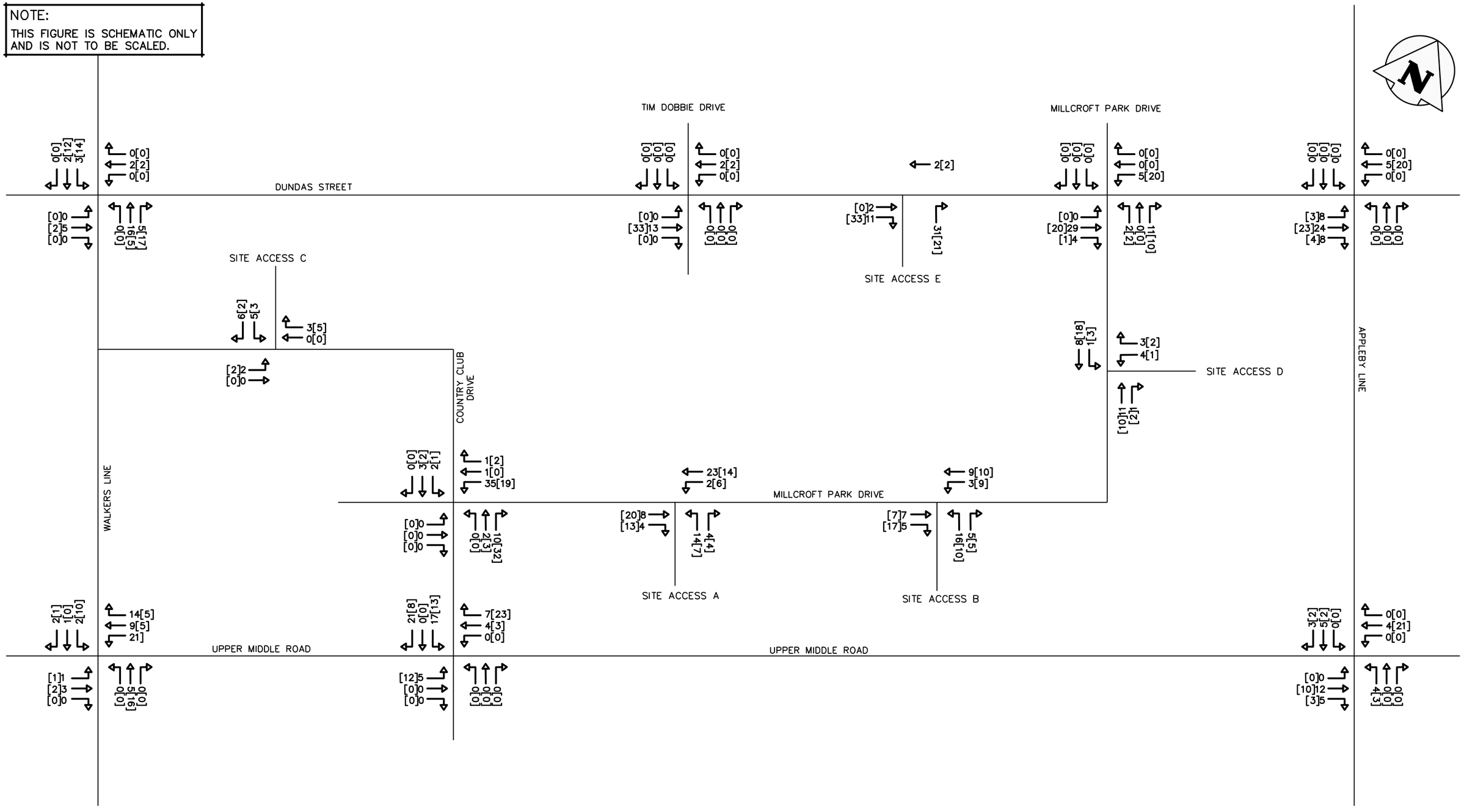
2016 Transportation Tomorrow Survey (TTS) data, provided in Appendix G, was used to determine the trip distribution for the proposed development. Table 5 below outlines the trip distribution for the proposed development, divided into time period and direction of travel.

Figure 6 illustrates the assumed trip assignment for the proposed development. Trip Assignment for each site is presented in Appendix H.

Table 5: Site Distribution

	A.M. Peak Hour	**P.M. Peak Hour**
Direction	In (Out)	In (Out)
North	10% (25%)	20% (15%)
South	15% (15%)	5% (10%)
East	50% (45%)	70% (60%)
West	25% (15%)	5% (15%)

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.



LEGEND:
xx[xx] WEEKDAY AM(PM) VOLUMES

MILLCROFT GOLF COURSE
MILLCROFT PARK DRIVE
CITY OF BURLINGTON

SITE GENERATED TRAFFIC VOLUMES

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	Design	Project No.	
S.K.	K.S.		912-5113
Check	Check	Scale	Dwg.
K.S.		N.T.S	FIG. 07

6.0 Total Traffic Conditions

6.1 Intersection Operations

Traffic operations at the study intersections were analyzed with the addition of the site generated traffic. The total traffic volumes are illustrated in Figure 7. Table 6 outlines the 2025 total traffic Levels of Service. Detailed capacity analysis worksheets are included in Appendix D.

Table 6: 2025 Future Total Levels of Service

Intersection	Control Type	Peak Hour	Level of Service	Average Delay per Vehicle(s)	Maximum V/C & V/C Ratio(s) > 0.85 (Approach)
Walkers Line at Upper Middle Road	Signalized	Weekday A.M.	E	65.6 s	**1.05 (EBT)**
					1.11 (WBL)
					0.94 (NBL)
					1.05 (SBL)
					1.03 (SBT)
		Weekday P.M.	F	116.0 s	0.93 (EBL)
					0.96 (WBL)
					1.26 (WBT)
					0.96 (NBL)
					1.18 (NBT)
					1.11 (SBT)
Itabashi Way/Country Club Drive at Upper Middle Road	Signalized	Weekday A.M.	C	22.1 s	0.78 (SBL)
		Weekday P.M.	C	22.5 s	0.87 (WBT)
Appleby Line at Upper Middle Road	Signalized	Weekday A.M.	E	77.4 s	**1.12 (EBT)**
					0.91 (WBL)
					0.92 (NBT)
					0.92 (SBL)
					1.12 (SBT)
		Weekday P.M.	E	61.9 s	0.94 (EBL)
					1.11 (WBT)
					0.97 (NBT)
					0.88 (SBL)
					0.91 (SBT)
Country Club Drive at Millcroft Park Drive	Stop Control	Weekday A.M.	B	12.3 s	0.50 (WB)
		Weekday P.M.	C	15.2 s	0.68 (NB)
Millcroft Park Drive/Cornerstone Drive at Dundas Street	Signalized	Weekday A.M.	B	19.0 s	0.86 (EBT)
		Weekday P.M.	B	16.1 s	0.88 (WBT)
Weslock Common/Tim Dobbie Drive at Dundas Street	Signalized	Weekday A.M.	C	20.8 s	0.90 (SBL)
		Weekday P.M.	B	17.8 s	0.87 (WBT)

Table 6: 2025 Future Total Levels of Service

Intersection	Control Type	Peak Hour	Level of Service	Average Delay per Vehicle(s)	Maximum V/C & V/C Ratio(s) > 0.85 (Approach)
Site Access A at Dundas Street	Stop Control	Weekday A.M.	B	11.6 s	0.04 (NB)
		Weekday P.M.	B	11.9 s	0.02 (NB)
Site Access B at Country Club Drive	Stop Control	Weekday A.M.	B	11.3 s	0.04 (NB)
		Weekday P.M.	B	11.2 s	0.03 (NB)
Site Access C at Country Club Drive	Stop Control	Weekday A.M.	A	9.6 s	0.02 (SB)
		Weekday P.M.	B	11.0 s	0.01 (SB)
Site Access D at Millcroft Park Drive	Stop Control	Weekday A.M.	A	10.7 s	0.01 (WB)
		Weekday P.M.	B	10.1 s	0.00 (WB)
Site Access E at Millcroft Park Drive	Yield Control	Weekday A.M.	A	3.2 s	0.12 (NB)
		Weekday P.M.	A	9.1 s	0.03 (NB)
Walkers Line & Dundas Street	Signalized	Weekday A.M.	D	41.6 s	0.96 (EBT)
		Weekday P.M.	D	46.2 s	**1.12 (WBL)** 0.90 (WBT) **1.05 (NBL)**
Appleby Line & Dundas Street	Signalized	Weekday A.M.	E	60.3 s	**1.15 (EBL)** 0.96 (EBT) 0.86 (NBR) **1.03 (SBL)** 0.96 (SBT)
		Weekday P.M.	F	90.6 s	**1.14 (NBL)** **1.33 (NBT)** 0.89 (NBR) **1.24 (SBL)** **1.04 (SBT)** 0.89 (SBR)

Note: The Level of Service of a Stop-Controlled intersection is based on the delay associated with the critical approach. The Level of Service of a signalized intersection is based on the average control delay per vehicle. Exiting Signal Timing provided by City of Burlington were used.

As indicated in Table 6, the intersection of Walkers Line at Upper Middle Road is projected to operate at a Level of Service "E" during the weekday a.m. peak period and at a Level of Service "F" during the p.m. peak period, with average delays per vehicle of 64.9 and 116.0 seconds, respectively, with no optimizations in the signal timing plan. When compared to future background scenario, the average delay per vehicle increases by 0.7 and 2.7 seconds during the a.m. and p.m. peak periods, respectively. A maximum volume-to-capacity ratio of 1.26 was observed for the westbound through movement during the weekday p.m. peak period. It is important to note that at congested signalized intersections, even minimal increases in traffic volumes can exponentially increase the intersection control delay.

The intersection of Itabashi Way/Country Club Drive at Upper Middle Road is projected to operate at a Level of Service "C" during the weekday a.m. and p.m. peak period, with average delays per vehicle of 22.1 and 22.5 seconds, respectively, with no optimizations in the signal timing plan. When compared to future background scenario, the average delay per vehicle increases by 1.0 and 1.5 seconds during the a.m. and p.m. peak periods, respectively. A maximum volume-to-capacity ratio of 0.87 was observed for the westbound through movement during the weekday p.m. peak period.

The intersection of Appleby Line at Upper Middle Road is projected to operate at a Level of Service "E" during the weekday a.m. and p.m. peak period, with average delays per vehicle of 77.4 and 61.9 seconds, respectively, with no optimizations in the signal timing plan. When compared to the future background scenario, the average delay per vehicle increases by 2.2 and 1.2 seconds during the a.m. and p.m. peak periods, respectively. During the a.m. peak period, the eastbound and southbound through movements operate over capacity with volume to capacity ratios of 1.12. Maximum volume-to-capacity ratio of 1.11 was observed for the westbound through movement during the weekday p.m. peak period. As noted above, even minimal increases in traffic volumes at congested intersections can exponentially increase the intersection control delay.

The intersection of Millcroft Park Drive/Cornerstone Drive at Dundas Street is anticipated to operate at a Level of Service "B" during the weekday a.m. and p.m. peak period, with average delays per vehicle of 19.0 and 16.1 seconds, respectively, with no optimizations in the signal timing plan. When compared to the future background scenario, the average delay per vehicle increases by 0.5 and 0.4 seconds during the a.m. and p.m. peak periods, respectively. During the a.m. peak period, the eastbound though movement is expected to operate with a volume to capacity ratio of 0.86. a maximum volume-to-capacity ratio of 0.88 was observed for the westbound through movement during the weekday p.m. peak period.

The intersection of Weslock Common/Tim Dobbie Drive at Dundas Street is anticipated to operate at a Level of Service "C" during the weekday a.m. peak period and Level of Service "D" during the weekday p.m. peak period, with average delays per vehicle of 20.8 and 17.8 seconds, respectively, with no optimizations in the signal timing plan. When compared to the future background scenario, the average delay per vehicle increases by 0.1 seconds during the a.m. peak period. During the a.m. peak period, the southbound left turn movement is expected to operate with a volume to capacity ratio of 0.90. a maximum volume-to-capacity ratio of 0.87 was observed for the westbound through movement during the weekday p.m. peak period.

The intersection of Walkers Line & Dundas Street is projected to operate at a Level of Service "D" during the weekday a.m. and p.m. peak periods, with average delays per vehicle of 41.6 and 46.2 seconds, respectively. When compared to the future background scenario, the average delay per vehicle increases by 13.6 and 16.4 seconds during the a.m. and p.m. peak periods, respectively. A maximum volume-to-capacity ratio of 0.96 was observed for the eastbound through movement during the weekday a.m. peak period. During the weekday p.m. peak period, the westbound and northbound left turn movement operates over capacity with volume to capacity ratios of 1.12 and 1.05, respectively.

The intersection of Appleby Line & Dundas Street operates at a Level of Service "E" during the weekday a.m. peak period and Level of Service "F" during the weekday p.m. peak periods, with average delays per vehicle of 60.3 and 90.6 seconds, respectively When compared to the future background scenario, the average delay per vehicle increases by 1.0 and 2.5 seconds during the a.m. and p.m. peak periods, respectively. During the a.m. peak period, the maximum observed volume to capacity ratio of 1.15 was observed for the eastbound left turn movement. A maximum volume-to-capacity ratio of 1.33 was observed for the northbound through movement during the weekday p.m. peak period.

The intersection of Country Club Drive at Millcroft Park Drive is anticipated to operate at a Level of Service "B" and "C" during the weekday a.m. and p.m. peak periods, with average delays per vehicle of 12.3 and 15.2 seconds, respectively. No individual movements are expected to operate over capacity.

The site access intersections at Millcroft Park Drive are anticipated to operate with Level of Service "B" during the weekday a.m. and p.m. peak periods. No individual movements are operating with a volume to capacity ratio above 0.85.

The site access intersection at Country Club Drive is anticipated to operate with Level of Service "B" during the weekday a.m. and p.m. peak periods. No individual movements are operating with a volume to capacity ratio above 0.85.

The site access intersection at Dundas Street is anticipated to operate with Level of Service "B" during the weekday a.m. and p.m. peak periods. No individual movements are operating with a volume to capacity ratio above 0.85.

The observed delays under the future total conditions are shown in Figure 8.

Table 7: 95th Percentile Queue Lengths

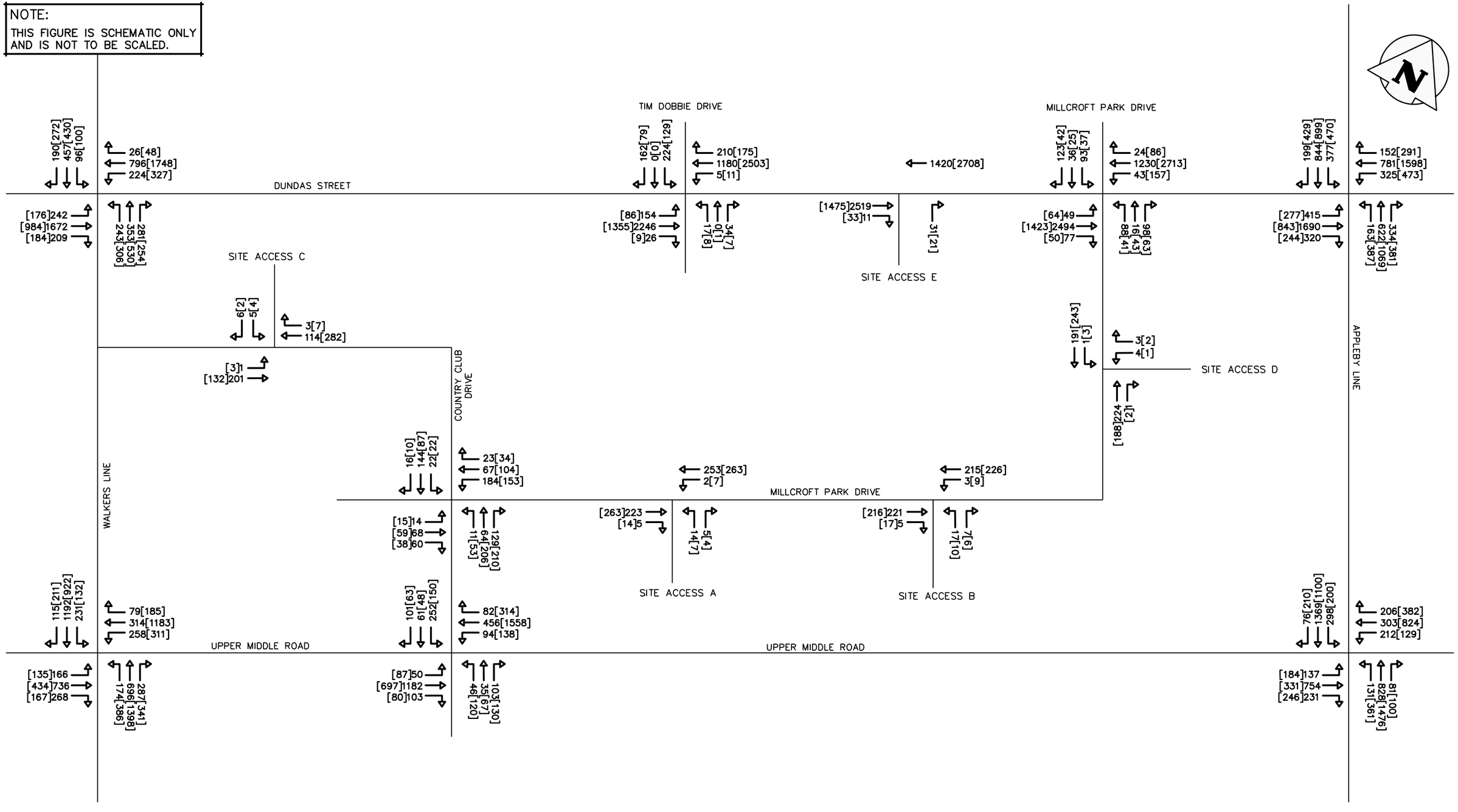
Intersection	Control Type	Peak Hour	95th Percentile Queue > Storage Length (Approach)		
			Existing	2025 Future Background	2025 Future Total
Walkers Line at Upper Middle Road	Signalized	Weekday A.M.	97.6 m > 95.0 m (WBL) 97.8 m > 60.0 m (SBL)	110.0 m > 85.0 m (EBL) 117.0 m > 95.0 m (WBL) 102.7 m > 60.0 m (SBL)	105.3 m > 85.0 m (EBL) 102.8 m > 60.0 m (SBL)
		Weekday P.M.	101.7 m > 95.0 m (WBL) 136.2 m > 95.0 m (NBL)	135.4 m > 95.0 m (WBL) 140.1 m > 95.0 m (NBL) 76.3 m > 60.0 m (SBL)	178.8 m > 95.0 m (WBL) 137.5 m > 95.0 m (NBL) 102.7 m > 60.0 m (SBL)
Itabashi Way/Country Club Drive at Upper Middle Road	Signalized	Weekday A.M.	32.2 m > 25.0 m (WBL) 60.0 m > 35.0 m (SBL)	29.1 m > 25.0 m (WBL) 71.1 m > 35.0 m (SBL)	28.3 m > 25.0 m (WBL) 58.5 m > 35.0 m (SBL)
		Weekday P.M.	38.5 m > 25.0 m (WBL) 37.9 m > 35.0 m (NBL)	33.5 m > 25.0 m (WBL) 44.3 m > 35.0 m (NBL) 37.5 m > 35.0 m (SBL)	45.3 m > 25.0 m (WBL) 37.5 m > 35.0 m (NBL) 47.4 m > 35.0 m (SBL)
Appleby Line at Upper Middle Road	Signalized	Weekday A.M.	64.6 m > 45.0 m (EBL) 91.0 m > 40.0 m (SBL)	87.2 m > 45.0 m (EBL) 94.5 m > 40.0 m (SBL)	88.4 m > 45.0 m (EBL) 92.9 m > 40.0 m (SBL)
		Weekday P.M.	47.5 m > 45.0 m (EBL) 79.9 m > 65.0 m (WBR) 100.3 m > 95.0 m (NBL) 133.3 m > 95.0 m (NBL) 73.0 m > 40.0 m (SBL)	61.5 m > 45.0 m (EBL) 113.3 m >65.0 m (WBR) 119.7 m > 95.0 m (NBL) 85.1 m > 40.0 m (SBL)	77.8 m > 45.0 m (EBL) 136.3 m > 100.0 m (WBL) 108.8 m > 65.0 m (WBR) 145.8 m > 95.0 m (NBL) 79.7 m > 40.0 m (SBL)
Country Club Drive at Millcroft Park Drive	Stop Controlled	Weekday A.M.			
		Weekday P.M.			

Table 7: 95th Percentile Queue Lengths

Intersection	Control Type	Peak Hour	95th Percentile Queue > Storage Length (Approach)		
			Existing	2025 Future Background	2025 Future Total
Millcroft Park Drive/Cornerstone Drive & Dundas Street	Signalized	Weekday A.M.	110.5 m > 100.0 m (EBL) 41.6 m > 35.0 m (SBL)	41.6 m > 35.0 m (SBL)	97.6 m > 70.0 m (EBR)
		Weekday P.M.			
Weslock Common/Tim Dobbie Drive & Dundas Street	Signalized	Weekday A.M.	79.5 m > 75.0 m (SBL)	93.8 m > 75.0 m (SBL)	87.3 m > 75.0 m (SBL)
		Weekday P.M.			
Walkers Line & Dundas Street	Signalized	Weekday A.M.	99.2 m > 90.0 m (NBL) 56.7 m >45.0 m (SBL)	43.7 m > 35.0 m (NBL)	39.1 m > 35.0 m (NBL) 42.8 m > 35.0 m (NBL) 41.2 m > 30.0 m (NBR)
		Weekday P.M.	98.0 m > 90.0 m (NBL)		44.0 m > 35.0 m (NBL) 53.7 m > 30.0 m (NBR)
Appleby Line & Dundas Street	Signalized	Weekday A.M.	127.6 m > 120.0 m (SBL)	160.9 m > 120.0 m (SBL)	143.7 m > 120.0 m (SBL)
		Weekday P.M.	135.4 m > 120.0 m (SBL)		105.0 m > 10.0 m (NBR) 130.9 m > 120.0 m (SBL) 185.2 m > 120.0 m (SBL)

Table 7 shows the 95th percentile queue lengths tor the different scenarios starting from existing conditions and covering both the future background and future total scenarios. As can be seen in Table 7, there are significant queues that form at the signalized intersections due to the delays discussed previously.

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.



LEGEND:
XX[XX] WEEKDAY AM(PM) VOLUMES

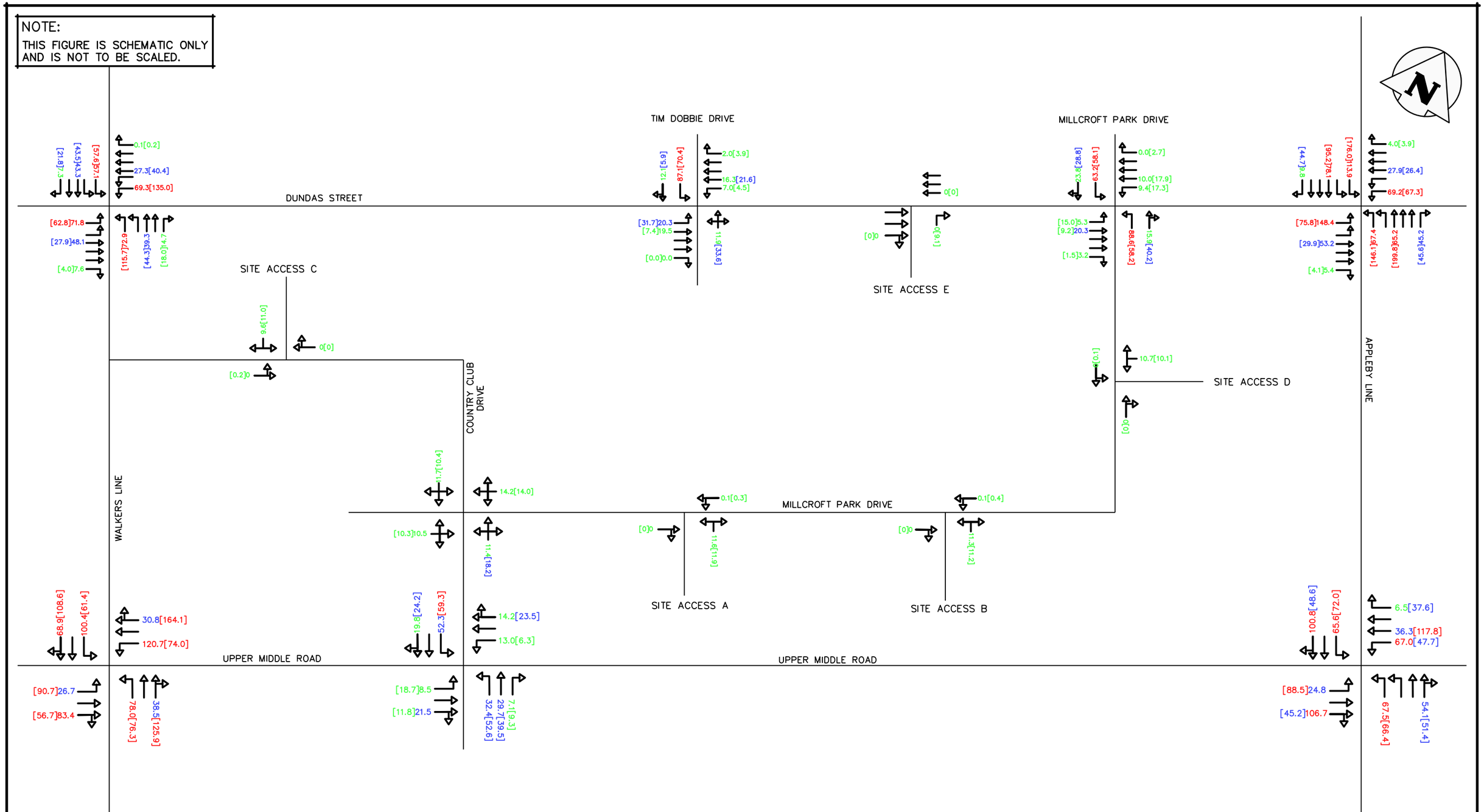
MILLCROFT GOLF COURSE
MILLCROFT PARK DRIVE
CITY OF BURLINGTON

2025 FUTURE TOTAL TRAFFIC VOLUMES

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	Design	Project No.	
S.K.	K.S.		912–5113
Check	Check	Scale	Dwg.
K.S.		N.T.S	FIG. 08

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.



LEGEND:

XX[XX]	WEEKDAY AM(PM) DELAYS IN SECONDS
GREEN	"A" TO "B" LOS
BLUE	"C" TO "D" LOS
RED	"E" TO "F" LOS

MILLCROFT GOLF COURSE
MILLCROFT PARK DRIVE
CITY OF BURLINGTON

2025 FUTURE TOTAL DELAYS

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	Design	Project No.
S.K.	K.S.	912-5113
Check	Check	Scale / Dwg.
K.S.		N.T.S / FIG. 09

7.0 Operational Comparison and Improvement Analysis

Table 8 compares the future background and future total traffic operations on the boundary road network. As shown in the Table 8, the average delay per vehicle and the volume to capacity ratios between the two scenarios are comparable and the site generated traffic does not significantly impact intersection operations.

Table 8: Comparison Table

Intersection	Peak Hour	Level of Service (Average Delay per Vehicle)		Max V/C and V/C Ratio > 0.85 (Approach)	
		2025 Future Background	2025 Future Total	2025 Future Background	2025 Future Total
Walkers Line at Upper Middle Road	Weekday A.M.	E (64.9 s)	E (65.6 s)	1.05 (EBT) **1.10 (WBL)** 0.94 (NBL) **1.04 (SBL)** **1.03 (SBT)**	**1.05 (EBT)** **1.11 (WBL)** 0.94 (NBL) **1.05 (SBL)** **1.03 (SBT)**
	Weekday P.M.	F (113.3 s)	F (116.0 s)	0.93 (EBL) 0.95 (WBL) **1.25 (WBT)** 0.96 (NBL) **1.17 (NBT)** **1.11 (SBT)**	0.93 (EBL) 0.96 (WBL) **1.26 (WBT)** 0.96 (NBL) **1.18 (NBT)** **1.11 (SBT)**
Itabashi Way/Country Club Drive at Upper Middle Road	Weekday A.M.	C (21.1 s)	C (22.1 s)	0.76 (SBL)	0.78 (SBL)
	Weekday P.M.	B (20.0 s)	C (22.5 s)	0.84 (WBT)	0.87 (WBT)
Appleby Line at Upper Middle Road	Weekday A.M.	E (75.2 s)	E (77.4 s)	**1.10 (EBT)** 0.91 (WBL) 0.92 (NBT) 0.93 (SBL) **1.12 (SBT)**	**1.12 (EBT)** 0.91 (WBL) 0.92 (NBT) 0.92 (SBL) **1.12 (SBT)**
	Weekday P.M.	D (60.0 s)	E (61.9 s)	0.94 (EBL) **1.08 (WBT)** 0.97 (NBT) 0.88 (SBL) 0.91 (SBT)	0.94 (EBL) **1.11 (WBT)** 0.97 (NBT) 0.88 (SBL) 0.91 (SBT)
Country Club Drive at Millcroft Park Drive	Weekday A.M.	B (11.3 s)	B (12.3 s)	0.42 (WB)	0.50 (WB)
	Weekday P.M.	B (13.5 s)	C (15.2 s)	0.62 (NB)	0.68 (NB)
Millcroft Park Drive/Cornerstone Drive at Dundas Street	Weekday A.M.	B (18.5 s)	B (19.0s)	0.85 (EBT)	0.86 (EBT)
	Weekday P.M.	B (15.7 s)	B (16.1s)	0.88 (WBT)	0.88 (WBT)
Weslock Common/Tim Dobbie Drive at Dundas Street	Weekday A.M.	B (20.7 s)	C (20.8 s)	*0.90 (SBL)*	0.90 (SBL)
	Weekday P.M.	B (17.8 s)	B (17.8 s)	*0.87 (WBT)*	0.87 (WBT)
Walkers Line & Dundas Street	Weekday A.M.	C (28.0 s)	D (41.6 s)	0.81 (WBT)	0.96 (EBT)
	Weekday P.M.	C (29.8 s)	D (46.2 s)	0.80 (WBT)	**1.12 (WBL)** 0.90 (WBT) **1.05 (NBL)**
Appleby Line & Dundas Street	Weekday A.M.	E (59.3 s)	E (60.3 s)	**1.13 (EBL)** 0.94 (WBT) 0.86 (NBR) **1.03 (SBL)** 0.96 (SBT)	**1.15 (EBL)** 0.96 (EBT) 0.86 (NBR) **1.03 (SBL)** 0.96 (SBT)
	Weekday P.M.	F (88.1 s)	F (90.6 s)	0.99 (WBL) **1.14 (NBL)** **1.33 (NBT)** 0.88 (NBR) **1.24 (SBL)** **1.04 (SBT)** 0.99 (SBR)	**1.14 (NBL)** **1.33 (NBT)** 0.89 (NBR) **1.24 (SBL)** **1.04 (SBT)** 0.89 (SBR)

Note: The Level of Service of a Stop-Controlled intersection is based on the delay associated with the critical approach. The Level of Service of a signalized intersection is based on the average control delay per vehicle. Exiting Signal Timing provided by City of Burlington were used.

As shown in Table 8, a maximum increase of 16.4 seconds of delay is observed with the addition of site traffic and it occurs during the weekday p.m. peak period at the intersection of Walkers Line & Dundas Street. The proposed development is expected to have a negligible impact on the surrounding road network.

7.1 Additional Intersection Operations

The signalized intersections of Walkers Line at Upper Middle Road, Appleby Line at Upper Middle Road, Walkers Line at Dundas Street and Appleby Line & Dundas Street were analyzed again with split optimizations (re-allocated the effective green time at the intersections based on the future traffic volumes) for both peak periods.

The updated signal timings are provided in Appendix D and the results from the optimized signal timings are summarized in Table 9.

The intersections of Walkers Line at Upper Middle Road, Appleby Line at Upper Middle Road, Walkers Line at Dundas Street and Appleby Line & Dundas Street were analyzed during the off-peak hours using average hour volumes under the ultimate 2025 horizon year.

According to the 'Ontario Traffic Manual-Book 12 for Traffic Signals' the average hourly volume for a typical day can be calculated using the sum of the weekday a.m. and p.m. peak hour volumes and dividing the sum by four. Average Hourly Traffic volumes for the two intersections were calculated using this methodology and are shown in Figure 9.

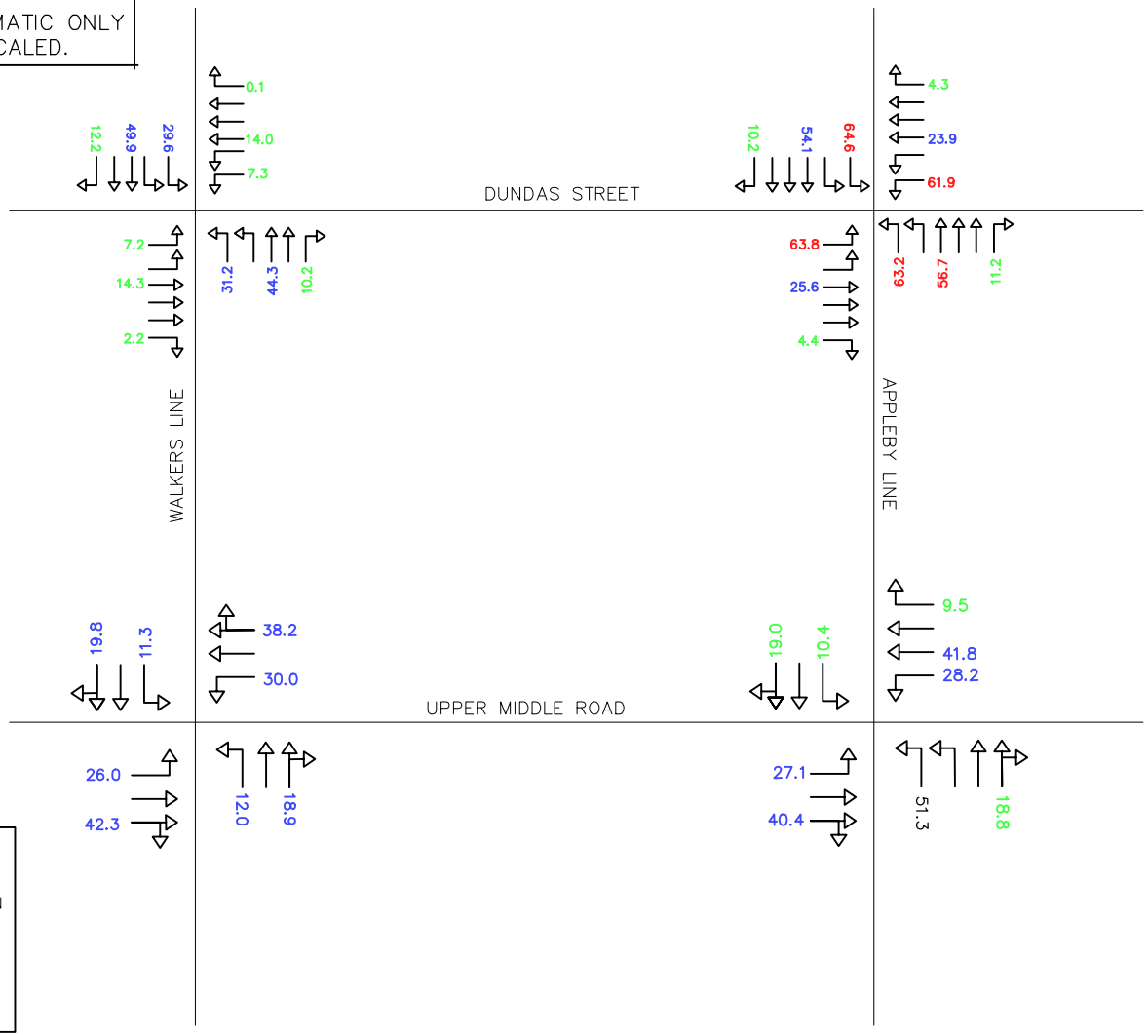
The results for the 2025 future total traffic conditions with average hourly volumes are summarized in Table 9. Detailed capacity analysis worksheets are included in Appendix D.

Table 9: Comparison Table

Intersection	Peak Hour Level of Service	Average Delay per Vehicle(s)			Maximum V/C & V/C Ratio(s) > 0.85 (Approach)		
		Current Signal Timings	Optimized Signal Timings	Average Hour	Current Signal Timings	Optimized Signal Timings	Average Hour
Walkers Line at Upper Middle Road	Weekday A.M.	65.6 s	65.4 s	26.2 s	**1.05 (EBT)** **1.11 (WBL)** 0.94 (NBL) **1.05 (SBL)** **1.03 (SBT)**	**1.05 (EBT)** **1.11 (WBL)** 0.93(NBL) 0.93 (SBL) **1.03 (SBT)**	0.70 (EBT)
	Weekday P.M.	116.0 s	105.0s		0.93 (EBL) 0.96 (WBL) **1.26 (WBT)** 0.96 (NBL) **1.18 (NBT)** **1.11 (SBT)**	0.97 (EBL) 0.90 (WBL) **1.21 (WBT)** 0.99 (NBL) **1.19 (NBT)** **1.13 (SBT)**	
Appleby Line at Upper Middle Road	Weekday A.M.	77.4 s	71.0 s	25.9 s	**1.12 (EBT)** 0.91 (WBL) 0.92 (NBT) 0.92 (SBL) **1.12 (SBT)**	**1.08 (EBT)** 0.96 (WBL) 0.91 (NBT) 0.95 (SBL) **1.08 (SBT)**	0.68 (EBT)
	Weekday P.M.	61.9 s	60.2 s		0.94 (EBL) **1.11 (WBT)** 0.97 (NBT) 0.88 (SBL) 0.91 (SBT)	0.98 (EBL) 0.96 (WBT) 0.91 (NBL) 0.99 (NBT) **1.00 (SBL)** 0.90 (SBT)	
Walkers Line & Dundas Street	Weekday A.M.	41.6 s	28.3 s	19.6 s	0.96 (EBT)	0.75 (EBT)	0.57 (SBT)
	Weekday P.M.	46.2 s	43.6 s		**1.12 (WBL)** 0.90 (WBT) **1.05 (NBL)**	0.84 (WBT)	
Appleby Line & Dundas Street	Weekday A.M.	60.3 s	52.1 s	37.9 s	**1.15 (EBL)** 0.96 (EBT) 0.86 (NBR) **1.03 (SBL)** 0.96 (SBT)	0.89 (EBT) 0.96 (WBL) 0.88 (NBT) 0.88 (NBR) 0.92 (SBL)	0.59 (SBL)
	Weekday P.M.	90.6 s	63.7 s		**1.14 (NBL)** **1.33 (NBT)** 0.89 (NBR) **1.24 (SBL)** **1.04 (SBT)** 0.89 (SBR)	**1.03 (WBL)** 0.95 (WBT) 0.97 (NBL) **1.02 (NBT)** **1.02 (SBL)**	

Note: The Level of Service of a signalized intersection is based on the average control delay per vehicle.

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.



LEGEND:

X(XX)	AVERAGE HOUR VOLUME (DELAYS IN SECONDS)
GREEN	"A" TO "B" LOS
BLUE	"C" TO "D" LOS
RED	"E" TO "F" LOS

MILLCROFT GOLF COURSE
MILLCROFT PARK DRIVE
CITY OF BURLINGTON

2025 FUTURE AVERAGE HOUR VOLUMES

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	S.K.	Design	K.S.	Project No.	912-5113
Check	K.S.	Check		Scale	N.T.S
				Dwg.	FIG. 10

As shown in Table 9, with the optimizations, several movements that were operating above capacity now operate under capacity. The northbound, westbound, and southbound through movements for the intersection of Walkers Line at Upper Middle Road continue to operate over capacity during the p.m. peak period. The proposed development is expected to have a negligible impact on the surrounding road network as future total traffic is expected to operate in a similar fashion to the future background scenario with the signal split optimizations.

During off-peak hours, all intersections are projected to operate with low delays in the 2025 horizon year. No individual movement is expected to operate with a volume to capacity ratio of greater than 0.85.

Since the subject intersections are projected to operate with acceptable delays during off-peak periods, no geometric improvements are recommended.

As noted by Halton Region Staff, additional analysis was conducted to analyze the intersection operations if access to Site E was un-restricted. The resulting Level of Service and delays for the boundary network remain largely unchanged, the detailed results are provided in Appendix D. Table 10 below, shows the level of service and volume to capacity ratios for access of Dundas Street if it was to operate as a full-moves. The stop-controlled intersection is expected to operate with acceptable levels of service and under capacity for both weekday peak periods.

Table 10: 2025 Future Total Levels of Service-Additional Analysis

Intersection	Control Type	Peak Hour	Level of Service	Average Delay per Vehicle(s)	Maximum V/C & V/C Ratio(s) > 0.85 (Approach)
Site Access E at Dundas Street	Stop Control	Weekday A.M.	C	23.8 s	0.15 (NB)
		Weekday P.M.	A	9.8 s	0.03 (NB)

8.0 Site Operations Review

8.1 Sight Line Review

The available sightlines at the future intersections of Millcroft Park Drive at the Western and Eastern Site Accesses were measured and compared to the standards set out in the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (GDGCR), June 2017.

Sight distance was measured from the proposed site accesses using the following assumptions:

- A standard driver eye height of 1.08 metres for a passenger car, and;
- A 5.4-metre setback from the approximate extension of the outer curb to represent a vehicle waiting to exit the site.

Intersection sight distance is calculated using equation 9.9.1 from the GDGCR as outlined below:

$$ISD = 0.278 * V_{major} * tg$$

Where;
ISD = Intersection Sight Distance
V major = design speed of roadway (km/h)
tg = assumed time gap for vehicles to turn from stop onto roadway (s)

A design speed of 50 km/h was assumed for the sight distance analysis. Table 11 below outlines the sight distance analysis for the intersections of Millcroft Park Drive at the Eastern and Western Site Accesses.

Table 11: Sight Distance Analysis

Feature	Millcroft Park Drive at Site Access A	Millcroft Park Drive at Site Access B	Country Club Drive Site Access C	Millcroft Park Drive at Site Access D	Dundas Street at Site Access E
Access Type	Full-Moves	Full-Moves	Full-Moves	Full-Moves	Right-In Right-Out
Posted Speed Limit of Roadway	40 km/h	40 km/h	40 km/h	40 km/h	60 km/h
Assumed Design Speed	50 km/h	50 km/h	50 km/h	50 km/h	80 km/h
Base Time Gap (for left turns)	7.5 s [1]	7.5 s [1]	7.5 s [1]	7.5 s [1]	7.5 s [1]
Base Time Gap (for right turns)	6.5 s [1]	6.5 s [1]	6.5 s [1]	6.5 s [1]	6.5 s [1]
Grade of Roadway	Less than 3%	Less than 3%	Less than 3%	Less than 3%	Less than 3%
Intersection Sight Distance Required (for left turns)	105 m [2]	105 m [2]	105 m [2]	105 m [2]	NA
Intersection Sight Distance Required (for right turns)	95 m [2]	95 m [2]	95 m [2]	95 m [2]	145 m [2]
Measured Sight Distance (for left turns)	>105 m	>105 m	>105 m	>105 m	NA
Measured Sight Distance (for right turns)	>95 m	>95 m	>95 m	>95 m	>145 m
Minimum Sight Distance Satisfied?	Yes	Yes	Yes	Yes	Yes

Note 1: Time gap for left-turning vehicles from a stop onto a two-lane highway with no median and with a grade less than 3%. Value from Table 9.9.3 in the GDGCR.
Note 2: Sight distance values calculated from Intersection Sight Distance equation 9.9.1 in the GDGCR.

The sight lines provided at the future site accesses are depicted in Figure 10 through Figure 13. These figures show that the available sight distance achieved meet the minimum requirement for turning vehicles for all accesses. As outlined in Table 9, minimum sight distance requirements are satisfied at the proposed site accesses on Millcroft Park Drive. Therefore, the proposed subdivision is supported from a sight distance perspective.

8.2 Access Spacing

Per TAC, the recommended minimum spacing downstream and upstream of an access from a stop-controlled intersection on local road is 15 metres (Figure 8.8.2).

Access to Site A is proposed to be situated approximately 75 metres east of Country Club Drive and approximately 45 metres west of Hadfield Court. Access to Site B is proposed to be situated approximately 90 metres east of Hadfield Court and approximately 80 metres west of Parklane Crescent. The intersection spacing for access to Site A and B, are expected to be sufficient.

Access to Site C is proposed to be situated approximately 90 metres east of Weslock Common and approximately 35 metres west of Arbourfield Drive. Access to Site D is proposed to be situated approximately 50 metres north of the access to Millcroft Gardens townhouses and approximately 75 metres south of Clubview Drive/Latimer Crescent. The intersection spacing for access to Site C and D, are expected to be sufficient.

Per the Geometric Design Guide for Canadian Roads, published by the Transportation Association of Canada (TAC), dated June 2017, the recommended minimum spacing downstream and upstream of an access from a signalized intersection on arterial roads is 70 metres and 15 metres from an unsignalized signalized (Figure 8.8.2)>

The Halton Region Access Management Guidelines (January 2015) state in Section 3.3 that the general spacing guidelines for a right in/right out access is 115 to 140 metres. This range of spacing is based off various factors including posted speed; traffic signal coordination; and storage requirements for left turning vehicles.

Access to Site E is proposed to be situated approximately 130 metres east of Tim Dobbie Drive and approximately 265 metres west of Millcroft Park Drive, thus satisfying the minimum spacing requirements per TAC and Halton Regions Access Management Guidelines.

8.3 Access Configuration

For residential development, Table 8.9.1 of the TAC-GDGCR identifies a width requirement of 2.0 m to 7.3 m for the two-way driveway and a right turn radius requirement of 3.0 m to 4.5 m. The proposed site accesses will satisfy the configuration requirements.

8.4 Site Circulation

The site was analyzed for the circulation of Halton Region garbage trucks using AutoTURN software and no issues were found. Figure 15 shows the truck movement while on site. Fire vehicles can reach the site from Dundas street and no circulation was shown within the site.

8.5 Golf Cart Operations

In previous comments, the City of Burlington raised concerns about the golf cart operating on the sidewalk/multi-use paths adjacent to the proposed single-family homes. This configuration in not uncommon in Ontario for example at Thundering Waters Golf Club in Niagara Falls passenger vehicles, golf carts and pedestrians travel together on John Daly Way with no separation between them.

John Daly Way provides access to residential properties, golf course holes, as well as the golf club's parking lot. This setup has been in use for over a decade with the golf carts, pedestrians and vehicles operating in conjunction with each other.

For this development it is proposed to separate the passenger vehicles from the golf carts and pedestrians. A multi-use path constructed adjacent to the residential properties will provide increased safety for the pedestrians and golf carts by separating them from the vehicles on the roads.

8.6 Area 'A' Cross-section

A cross-section for Area 'A' has been provided in Appendix J. Crozier reviewed the cross-section to confirm the clear zone per Section 7.3.2 of the TAC-GDGCR has been provided.

The clear zone is the distance recommended to allow for vehicles to recover and avoid objects on the side of the road and is measured from the edge of the closest through travel lane.

For a road with the characteristics of the Condo Road proposed for Area 'A', the TAC-GDGCR Table 7.3.1 recommends 3.0 metres for the clear zone width.

The Area 'A' condo road consists of sections with and without a parking lane alongside the through lane with a retaining wall acting as the roadside obstacle on the side of the road.

In the areas with a parking lane, this lane as well as a grass boulevard provide the required 3.0 metres of clear zone width between the through lane and the retaining wall. In the areas without the parking lane, a guide rail will be installed to provide protection for vehicles.

Appendix K contains figures showing the on-street parking available in Area's 'A' to 'D'.

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.





MILLCROFT PARK DRIVE,
CITY OF BURLINGTON

SIGHT DISTANCE EVALUATION
(SITE ACCESS)

CROZIER & ASSOCIATES
Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	Design	Project No.	
A.K.	K.S.	912–5113	
Check	Check	Scale	Dwg.
	K.S.	N.T.S	FIG. 11

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.

Feature	Country Club Drive Site Access C
Access Type	Full-Moves
Posted Speed Limit of Roadway	40 km/h
Assumed Design Speed	50 km/h
Base Time Gap (for left turns)	7.5 s [1]
Base Time Gap (for right turns)	6.5 s [1]
Grade of Roadway	Less than 3%
Intersection Sight Distance Required (for left turns)	105 m [2]
Intersection Sight Distance Required (for right turns)	95 m [2]
Measured Sight Distance (for left turns)	~109.1 m
Measured Sight Distance (for right turns)	~95.0 m
Minimum Sight Distance Satisfied?	Yes



MILLCROFT PARK DRIVE,
CITY OF BURLINGTON

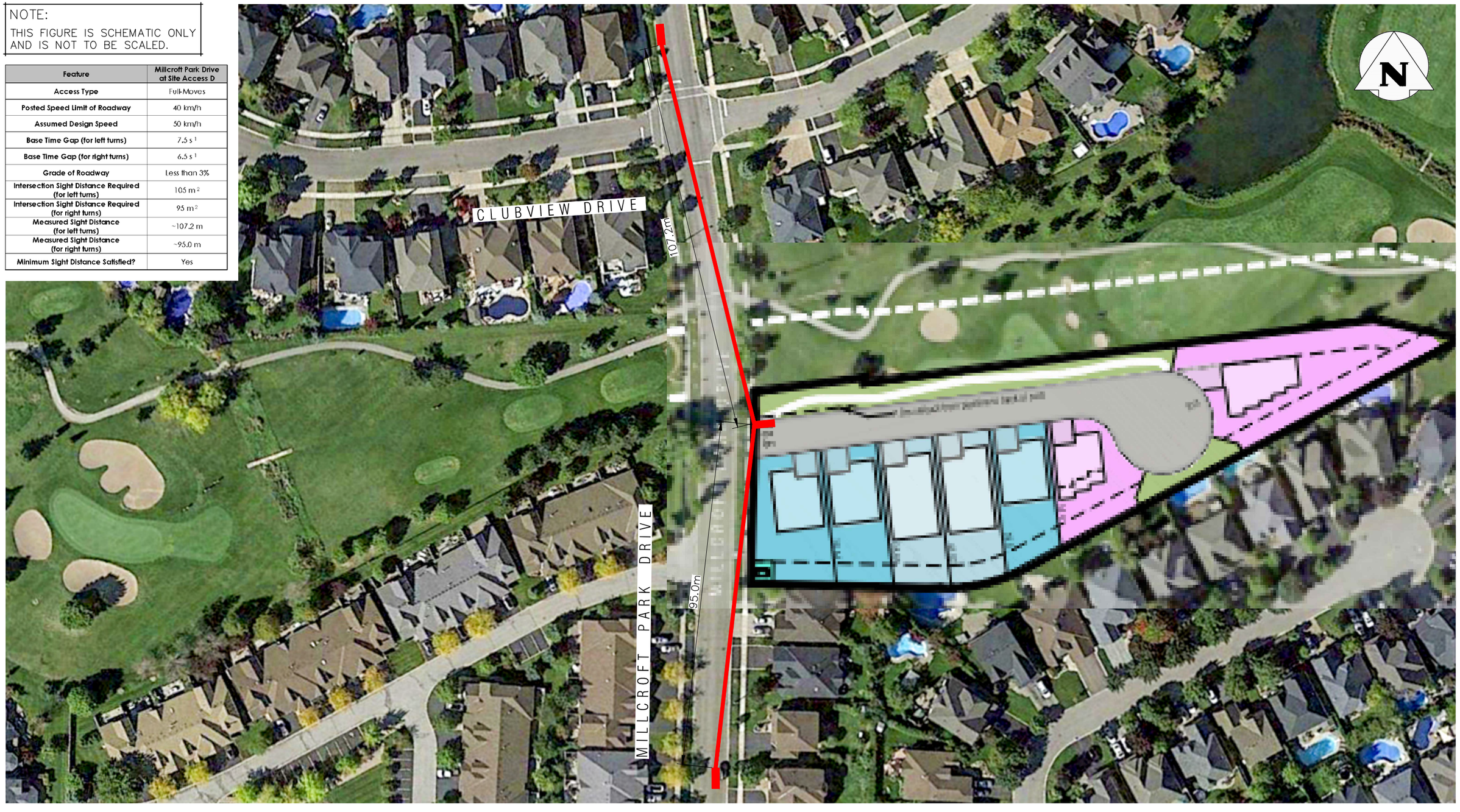
SIGHT DISTANCE EVALUATION
(SITE ACCESS)

CROZIER &ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	Design	Project No.	
A.K.	K.S.		912–5113
Check	Check	Scale	Dwg.
	K.S.	N.T.S	FIG. 12

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.

Feature	Millcroft Park Drive at Site Access D
Access Type	Full-Moves
Posted Speed Limit of Roadway	40 km/h
Assumed Design Speed	50 km/h
Base Time Gap (for left turns)	7.5 s [1]
Base Time Gap (for right turns)	6.5 s [1]
Grade of Roadway	Less than 3%
Intersection Sight Distance Required (for left turns)	105 m [2]
Intersection Sight Distance Required (for right turns)	95 m [2]
Measured Sight Distance (for left turns)	~107.2 m
Measured Sight Distance (for right turns)	~95.0 m
Minimum Sight Distance Satisfied?	Yes



MILLCROFT PARK DRIVE,
CITY OF BURLINGTON

SIGHT DISTANCE EVALUATION
(SITE ACCESS)

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	Design	Project No.	
A.K.	K.S.	912–5113	
Check	Check	Scale	Dwg.
	K.S.	N.T.S	FIG. 13

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.

Feature	Dundas Street at Site Access E
Access Type	Right-in Right-out
Posted Speed Limit of Roadway	60 km/h
Assumed Design Speed	70 km/h
Base Time Gap (for left turns)	7.5 s [1]
Base Time Gap (for right turns)	6.5 s [1]
Grade of Roadway	Less than 3%
Intersection Sight Distance Required (for left turns)	NA
Intersection Sight Distance Required (for right turns)	130 m [2]
Measured Sight Distance (for left turns)	NA
Measured Sight Distance (for right turns)	~130.1 m
Minimum Sight Distance Satisfied?	Yes

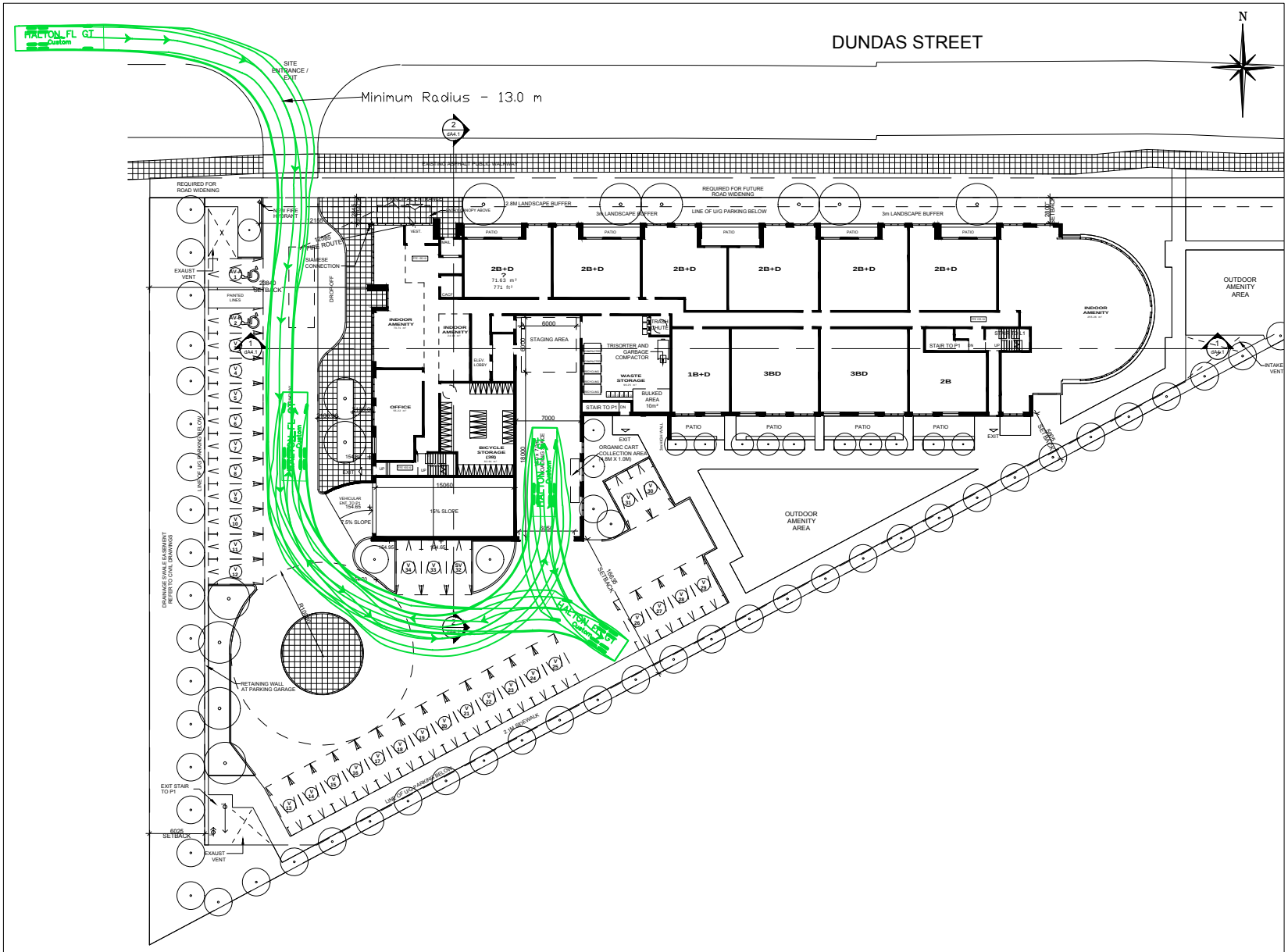


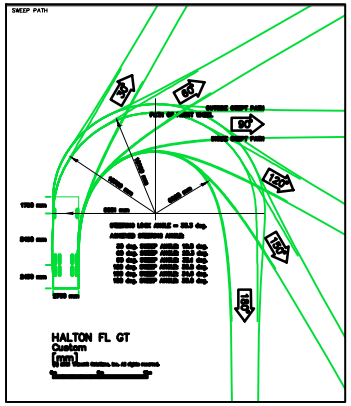
MILLCROFT PARK DRIVE,
CITY OF BURLINGTON

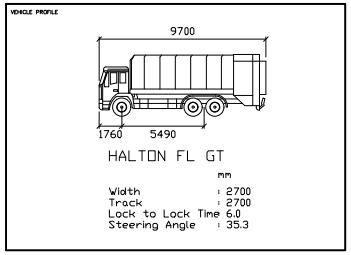
SIGHT DISTANCE EVALUATION
(SITE ACCESS)

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	Design	Project No.	
A.K.	K.S.		912–5113
Check	Check	Scale	Dwg.
	K.S.	N.T.S	FIG. 14







1. THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZIER & ASSOCIATES INC. AND THE REPRODUCTION OF ANY PART WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRICTLY PROHIBITED.

2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.

3. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT.

4. DO NOT SCALE THE DRAWINGS.

5. ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

6. MINIMUM TURNING RADIUS SET AT 13 METRES PER REGIONAL GUIDELINES

No.	ISSUE	DATE: MMM/DD/YYYY
0	ISSUED FOR 1st SUBMISSION	12/21/2021
1	ISSUED FOR 2nd SUBMISSION	01/12/2022

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project

MILLCROFT GOLF COURSE
CITY OF BURLINGTON

Drawing

SITE CIRCULATION DIAGRAM

CROZIER CONSULTING ENGINEERS
2800 High Point Drive
Suite 100
Milton, ON, L9T 6P4
905 875 0026 T
905 875 4915 F
www.cfcrozier.ca
info@cfcrozier.ca

Drawn By	Design By	Project	
I.L.	I.L.		912-5113
Check By	Check By	Scale	Drawing
R.A.W.	R.A.W.	N.T.S.	FIG15

9.0 Conclusion

The findings and conclusions of our analysis are represented as follows:

- During existing conditions, the intersection of Country Club Drive at Millcroft Park Drive, internal to the subdivision, operates with less than 15 seconds of delay during peak periods.

- The minor arterial intersections of Walkers Line at Upper Middle Road and Appleby Line & Dundas Street operate with relatively high delays during both the a.m. and p.m. peak hours under existing conditions.

- During both the a.m. and p.m. peak hours in the future background traffic conditions for horizon year 2025, movements continue to operate over capacity with no optimizations in the signal timing plan.

- The development is expected to generate 120 two-way (32 inbound and 89 outbound) trips during the weekday a.m. peak hour and 145 two-way (90 inbound and 55 outbound) trips during the weekday p.m. peak hour.

- The proposed development is expected to have a negligible impact on the surrounding road network as future total traffic is expected to operate in a similar fashion to the existing scenario with the signal split optimizations

- Compared to Future Background conditions, a maximum increase of 5.9 seconds of delay is observed with the addition of site traffic, and it occurs during the weekday p.m. peak period at the intersection of Walkers Line at Upper Middle Road.

- Recommended mitigation measures to decrease delays and improve volume to capacity ratios include optimizations total splits for the intersections of Walkers Line at Upper Middle Road and Appleby Line at Upper Middle Road for both peak periods.

- Like existing conditions, with the addition of the proposed development, the intersection of Country Club Drive at Millcroft Park Drive, internal to the subdivision, along with all new site accesses operate with less than 15.2 seconds of delay during peak periods.

- The proposed full-movement site accesses at Millcroft Park Drive and Country Club Drive and the right-in right-out access at Dundas Street are anticipated to function at good level of service and well below-capacity.

- The minor arterial intersections of Walkers Line at Upper Middle Road, Appleby Line & Dundas Street and Appleby Line at Upper Middle Road continue to operate with relatively high delays during both the a.m. and p.m. peak hours with the addition of the traffic generated from the background and proposed development.

- The analysis undertaken herein was prepared using the most recent Concept Plan. Any minor changes to the plan will not materially affect the conclusions contained in this report.

- The proposed site accesses meet the Transportation Association of Canada's guidelines for sight distances, site access spacing and configuration.
- The proposed cross section for Area 'A'.
- The proposed development can be supported from a traffic operation perspective as the site generated traffic will have a negligible effect on the operations of the public roadway system.

We trust that this review satisfies any transportation concerns associated with the proposed development. Please feel free to contact the undersigned for any further information required.

Respectfully submitted,

C.F. CROZIER & ASSOCIATES INC.



Michael A. Linton, MASc., P.Eng.
Associate, Transportation

C.F. CROZIER & ASSOCIATES INC.

R. Aaron Wignall
Associate, Transportation

AW/cj

I:\900\912-Argo Dev Corp\5113-Millcroft Golf Course\Reports\2022.02.07_(0912-5113)_Millcroft TIS.docx

APPENDIX A

Relevant Zoning Excerpts

4.0 O1 Zone (Open Space)

4.1 Permitted Uses

- Municipal parks, public and private open space
- Golf Course and associated uses such as Curling Club, Tennis Club, Arena, Gymnasium, Swimming Pool,
- Cultural Heritage Resources
- Storm water management and erosion control facilities
- Cemetery, Crematory

4.2 Buildings and Structures Permitted

- Buildings and structures for permitted uses.
- Accessory buildings and structures for permitted uses.

4.3 Public Assembly Buildings

Buildings and structures intended for public assembly shall be set back 30 m from a railway right-of-way.

4.4 Regulations

a) Yards:

- Abutting a residential zone: 15 m
- Abutting a street: 15 m
- Abutting any other lot line: 7.5 m

b) Landscape Area:

- Abutting a street: 6 m

- Abutting a creek block: 9 m

c] Landscape Buffer:

- Abutting a residential zone: 9 m

d] Regulations:

A crematory is not permitted within 70 m from the boundary of a Residential, Downtown, MXG or MXC zone.

4.5 Additional Provisions for Lands Located North of Highway 403, West of Kerns Road

a] Prohibited Uses:

Golf course and associated uses such as curling club, tennis club, arena, gymnasium, swimming pool, crematory

b] Maximum impervious surface cover per lot: 40%

This page last updated: December 18, 2015

Contacts:

Contact Department

Numbers

Links

Service Burlington
426 Brant Street, PO Box 5013
Burlington, ON L7R 3Z6

T. 905-335-7600
Toll Free: 1-877-213-3609

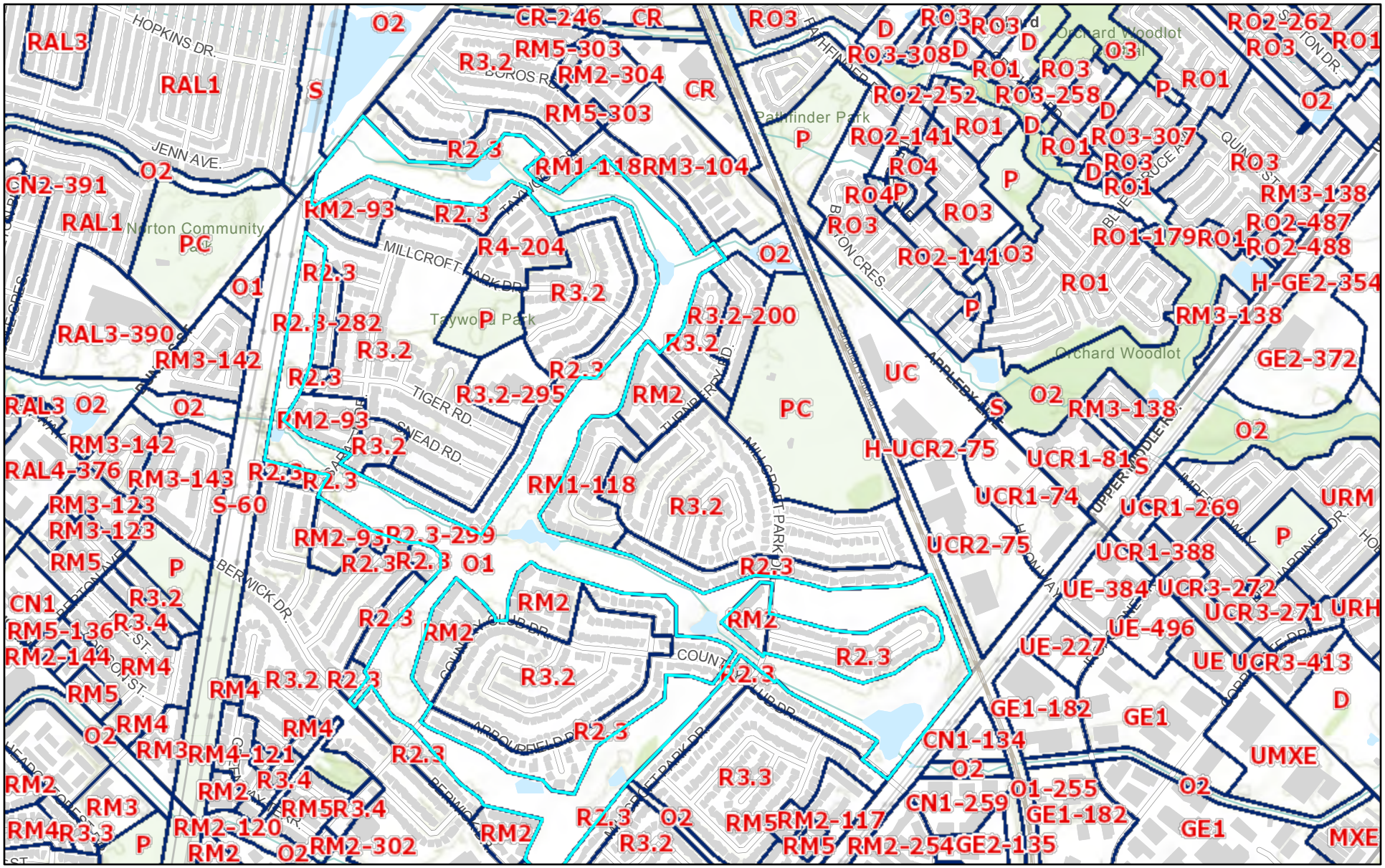
Map this location
Email Service Burlington

© City of Burlington
Privacy Policy and Terms of Use
Internet Performance Testing

General Information: 905-335-7600
Toll Free: 1-877-213-3609
Email: city@burlington.ca
Mailing: 426 Brant Street, PO Box 5013
Burlington, Ontario L7R 3Z6

Customer Service Button

City of Burlington Mapping



9/25/2019, 11:38:43 PM

1:18,056

0 0.1 0.2 0.4 mi

0 0.17 0.35 0.7 km

City Outline

Designated area for lot coverage

Zoning Bylaw

Shoreacres

Roseland

Indian Point

NEC Development Control

Sources: NRCan, Esri Canada, and Canadian Community Maps

City of Burlington

APPENDIX B

Traffic Data

Turning Movement Count (1 . UPPER MIDDLE RD & APPLEBY LINE)

Start Time	N Approach APPLEBY LINE						E Approach UPPER MIDDLE RD						S Approach APPLEBY LINE						W Approach UPPER MIDDLE RD						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		
06:00:00	3	118	14	0	1	135	16	4	10	0	1	30	6	70	3	1	0	80	24	8	4	0	0	36	281	
06:15:00	5	105	10	0	1	120	5	5	12	0	0	22	4	76	13	0	2	93	35	18	7	0	1	60	295	
06:30:00	6	171	27	0	0	204	5	8	19	0	0	32	13	81	13	0	0	107	34	29	13	0	0	76	419	
06:45:00	15	177	25	0	0	217	9	19	20	0	0	48	19	116	22	1	0	158	56	43	20	0	0	119	542	1537
07:00:00	10	179	37	0	0	226	12	13	21	0	0	46	7	111	15	0	0	133	42	43	23	0	3	108	513	1769
07:15:00	10	204	49	0	1	263	18	23	43	0	2	84	15	130	22	0	3	167	58	96	26	0	0	180	694	2168
07:30:00	12	282	55	0	0	349	22	22	50	0	0	94	21	172	23	0	0	216	76	117	34	0	1	227	886	2635
07:45:00	13	267	58	0	1	338	36	37	48	0	1	121	28	163	24	0	9	215	83	160	47	0	2	290	964	3057
08:00:00	13	285	88	0	1	386	43	63	58	0	1	164	32	174	25	0	1	231	29	204	19	0	0	252	1033	3577
08:15:00	16	272	65	0	0	353	65	84	55	0	0	204	18	162	30	0	0	210	73	165	37	0	0	275	1042	3925
08:30:00	20	319	52	0	0	391	46	42	35	0	0	123	10	172	27	0	1	209	55	107	34	0	1	196	919	3958
08:45:00	17	260	74	0	0	351	39	58	56	0	2	153	18	179	40	1	0	238	60	137	38	0	0	235	977	3971
09:00:00	20	224	54	0	1	298	52	42	40	0	2	134	11	173	38	0	0	222	56	83	53	0	1	192	846	3784
09:15:00	28	209	54	0	1	291	29	34	47	1	0	111	14	167	34	0	1	215	60	69	25	0	0	154	771	3513
09:30:00	21	191	46	0	1	258	35	28	35	1	1	99	13	147	33	0	0	193	43	42	34	0	0	119	669	3263
09:45:00	31	192	32	0	2	255	43	35	21	0	1	99	11	150	34	0	2	195	59	35	38	0	3	132	681	2967
BREAK																										
15:00:00	38	216	50	0	1	304	66	85	28	0	3	179	21	231	57	0	6	309	56	47	49	0	4	152	944	
15:15:00	55	228	53	0	1	336	63	100	28	0	5	191	20	231	57	0	2	308	53	53	48	0	3	154	989	
15:30:00	37	213	49	0	0	299	91	137	34	1	1	263	17	243	74	0	3	334	48	59	43	0	3	150	1046	
15:45:00	29	283	48	0	1	360	67	122	39	0	4	228	20	315	61	0	1	396	64	71	43	0	3	178	1162	4141
16:00:00	42	224	46	0	3	312	99	173	32	0	1	304	28	283	83	0	0	394	66	58	41	0	0	165	1175	4372
16:15:00	41	253	42	0	1	336	90	145	43	0	4	278	34	302	92	0	0	428	61	51	44	0	4	156	1198	4581
16:30:00	65	208	45	0	5	318	95	161	29	0	5	285	20	325	80	0	4	425	54	70	48	0	0	172	1200	4735
16:45:00	44	220	46	0	3	310	71	181	20	0	3	272	14	322	88	0	0	424	53	86	42	0	4	181	1187	4760
17:00:00	37	232	52	0	1	321	94	150	15	0	5	259	25	329	74	0	2	428	51	70	40	0	7	161	1169	4754
17:15:00	56	208	61	0	6	325	84	188	15	0	4	287	21	277	78	0	3	376	53	84	45	0	2	182	1170	4726
17:30:00	37	239	42	0	0	318	107	155	27	0	2	289	28	326	79	0	2	433	47	47	49	0	1	143	1183	4709
17:45:00	51	241	56	0	1	348	85	134	43	0	3	262	30	252	80	0	1	362	50	94	35	0	0	179	1151	4673
18:00:00	44	216	53	0	0	313	72	70	40	0	0	182	24	308	86	0	1	418	48	73	46	0	2	167	1080	4584
18:15:00	39	211	52	0	4	302	63	84	48	1	1	196	25	288	73	0	1	386	54	74	45	0	2	173	1057	4471

18:30:00	35	215	53	0	3	303	53	55	29	0	3	137	25	245	64	0	1	334	47	46	34	0	1	127	901	4189
18:45:00	42	254	41	0	1	337	63	65	29	0	3	157	23	232	44	0	2	299	48	58	34	0	3	140	933	3971
Grand Total	932	7116	1529	0	41	9577	1738	2522	1069	4	58	5333	615	6752	1566	3	48	8936	1696	2397	1138	0	51	5231	**29077**	-
Approach%	9.7%	74.3%	16%	0%		-	32.6%	47.3%	20%	0.1%		-	6.9%	75.6%	17.5%	0%		-	32.4%	45.8%	21.8%	0%		-	**-**	-
Totals %	3.2%	24.5%	5.3%	0%		32.9%	6%	8.7%	3.7%	0%		18.3%	2.1%	23.2%	5.4%	0%		30.7%	5.8%	8.2%	3.9%	0%		18%	**-**	-
Heavy	24	266	20	0		-	27	29	29	0		-	43	312	36	0		-	31	33	39	0		-	**-**	-
Heavy %	2.6%	3.7%	1.3%	0%		-	1.6%	1.1%	2.7%	0%		-	7%	4.6%	2.3%	0%		-	1.8%	1.4%	3.4%	0%		-	**-**	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-

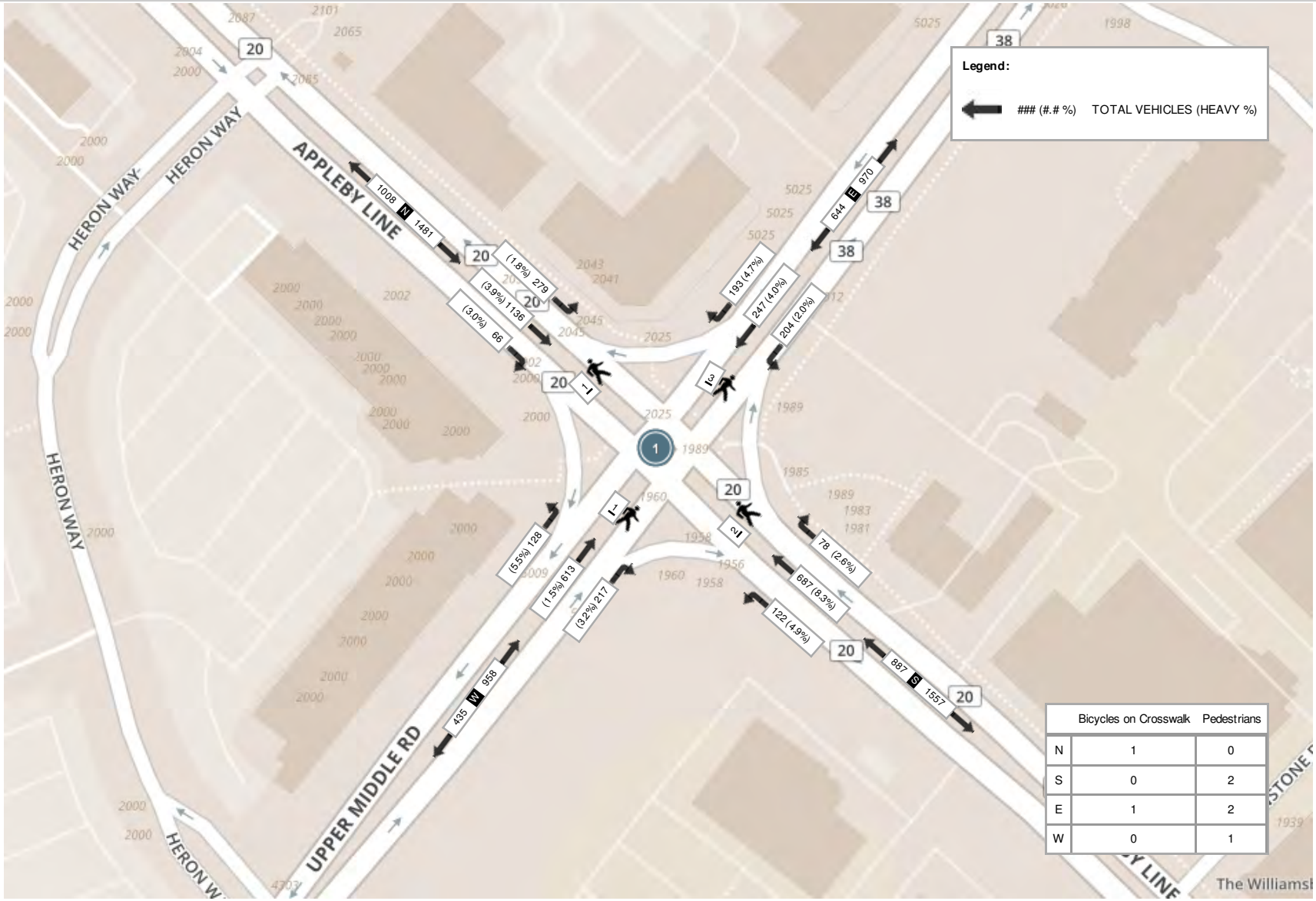
Peak Hour: 08:00 AM - 09:00 AM Weather: Unknown (1.4 °C)

Start Time	N Approach APPLEBY LINE						E Approach UPPER MIDDLE RD						S Approach APPLEBY LINE						W Approach UPPER MIDDLE 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	
08:00:00	13	285	88	0	1	386	43	63	58	0	1	164	32	174	25	0	1	231	29	204	19	0	0	252	1033
08:15:00	16	272	65	0	0	353	65	84	55	0	0	204	18	162	30	0	0	210	73	165	37	0	0	275	1042
08:30:00	20	319	52	0	0	391	46	42	35	0	0	123	10	172	27	0	1	209	55	107	34	0	1	196	919
08:45:00	17	260	74	0	0	351	39	58	56	0	2	153	18	179	40	1	0	238	60	137	38	0	0	235	977
Grand Total	66	1136	279	0	1	1481	193	247	204	0	3	644	78	687	122	1	2	888	217	613	128	0	1	958	**3971**
Approach%	4.5%	76.7%	18.8%	0%		-	30%	38.4%	31.7%	0%		-	8.8%	77.4%	13.7%	0.1%		-	22.7%	64%	13.4%	0%		-	**-**
Totals %	1.7%	28.6%	7%	0%		37.3%	4.9%	6.2%	5.1%	0%		16.2%	2%	17.3%	3.1%	0%		22.4%	5.5%	15.4%	3.2%	0%		24.1%	**-**
PHF	0.83	0.89	0.79	0		0.95	0.74	0.74	0.88	0		0.79	0.61	0.96	0.76	0.25		0.93	0.74	0.75	0.84	0		0.87	**-**
Heavy	2	44	5	0		51	9	10	4	0		23	2	57	6	0		65	7	9	7	0		23	**-**
Heavy %	3%	3.9%	1.8%	0%		3.4%	4.7%	4%	2%	0%		3.6%	2.6%	8.3%	4.9%	0%		7.3%	3.2%	1.5%	5.5%	0%		2.4%	**-**
Lights	64	1092	274	0		1430	184	237	200	0		621	76	630	116	1		823	210	604	121	0		935	**-**
Lights %	97%	96.1%	98.2%	0%		96.6%	95.3%	96%	98%	0%		96.4%	97.4%	91.7%	95.1%	100%		92.7%	96.8%	98.5%	94.5%	0%		97.6%	**-**
Single-Unit Trucks	2	18	0	0		20	2	3	0	0		5	0	32	5	0		37	1	4	2	0		7	**-**
Single-Unit Trucks %	3%	1.6%	0%	0%		1.4%	1%	1.2%	0%	0%		0.8%	0%	4.7%	4.1%	0%		4.2%	0.5%	0.7%	1.6%	0%		0.7%	**-**
Buses	0	6	4	0		10	7	7	3	0		17	2	8	1	0		11	4	5	5	0		14	**-**
Buses %	0%	0.5%	1.4%	0%		0.7%	3.6%	2.8%	1.5%	0%		2.6%	2.6%	1.2%	0.8%	0%		1.2%	1.8%	0.8%	3.9%	0%		1.5%	**-**
Articulated Trucks	0	20	1	0		21	0	0	1	0		1	0	17	0	0		17	2	0	0	0		2	**-**
Articulated Trucks %	0%	1.8%	0.4%	0%		1.4%	0%	0%	0.5%	0%		0.2%	0%	2.5%	0%	0%		1.9%	0.9%	0%	0%	0%		0.2%	**-**
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	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	1	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	28.6%		-	-	-	-	28.6%		-	-	-	-	14.3%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	14.3%		-	-	-	-	14.3%		-	-	-	-	0%		-	-	-	-	0%		**-**

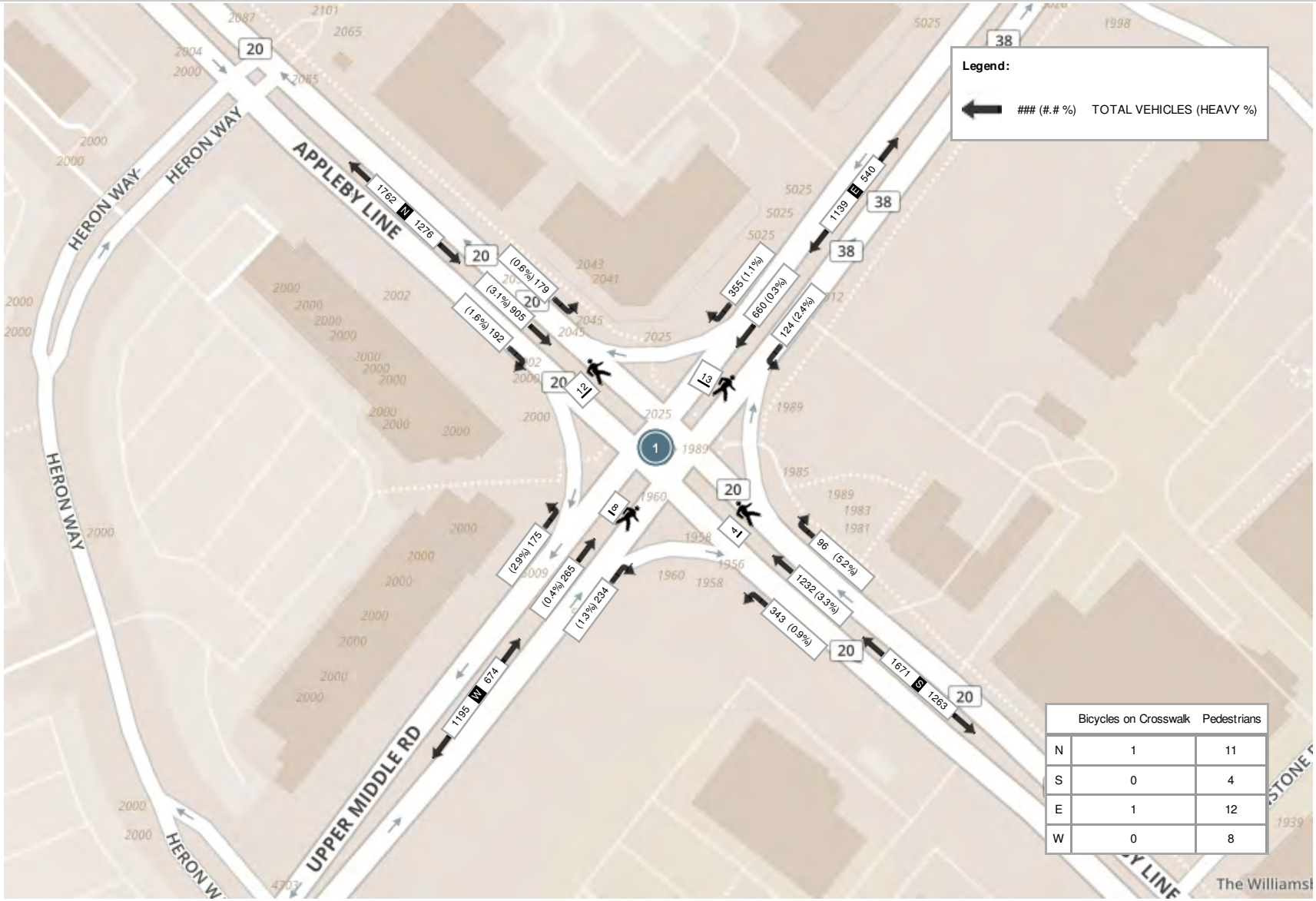
Peak Hour: 04:00 PM - 05:00 PM Weather: Unknown (3.4 °C)

Start Time	N Approach APPLEBY LINE						E Approach UPPER MIDDLE RD						S Approach APPLEBY LINE						W Approach UPPER MIDDLE 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	
16:00:00	42	224	46	0	3	312	99	173	32	0	1	304	28	283	83	0	0	394	66	58	41	0	0	165	1175
16:15:00	41	253	42	0	1	336	90	145	43	0	4	278	34	302	92	0	0	428	61	51	44	0	4	156	1198
16:30:00	65	208	45	0	5	318	95	161	29	0	5	285	20	325	80	0	4	425	54	70	48	0	0	172	1200
16:45:00	44	220	46	0	3	310	71	181	20	0	3	272	14	322	88	0	0	424	53	86	42	0	4	181	1187
Grand Total	192	905	179	0	12	1276	355	660	124	0	13	1139	96	1232	343	0	4	1671	234	265	175	0	8	674	**4760**
Approach%	15%	70.9%	14%	0%		-	31.2%	57.9%	10.9%	0%		-	5.7%	73.7%	20.5%	0%		-	34.7%	39.3%	26%	0%		-	**-**
Totals %	4%	19%	3.8%	0%		26.8%	7.5%	13.9%	2.6%	0%		23.9%	2%	25.9%	7.2%	0%		35.1%	4.9%	5.6%	3.7%	0%		14.2%	**-**
PHF	0.74	0.89	0.97	0		0.95	0.9	0.91	0.72	0		0.94	0.71	0.95	0.93	0		0.98	0.89	0.77	0.91	0		0.93	**-**
Heavy	3	28	1	0		32	4	2	3	0		9	5	41	3	0		49	3	1	5	0		9	**-**
Heavy %	1.6%	3.1%	0.6%	0%		2.5%	1.1%	0.3%	2.4%	0%		0.8%	5.2%	3.3%	0.9%	0%		2.9%	1.3%	0.4%	2.9%	0%		1.3%	**-**
Lights	189	877	178	0		1244	351	658	121	0		1130	91	1191	340	0		1622	231	264	170	0		665	**-**
Lights %	98.4%	96.9%	99.4%	0%		97.5%	98.9%	99.7%	97.6%	0%		99.2%	94.8%	96.7%	99.1%	0%		97.1%	98.7%	99.6%	97.1%	0%		98.7%	**-**
Single-Unit Trucks	2	13	0	0		15	0	1	0	0		1	2	19	2	0		23	2	0	2	0		4	**-**
Single-Unit Trucks %	1%	1.4%	0%	0%		1.2%	0%	0.2%	0%	0%		0.1%	2.1%	1.5%	0.6%	0%		1.4%	0.9%	0%	1.1%	0%		0.6%	**-**
Buses	1	10	1	0		12	3	1	3	0		7	3	6	1	0		10	1	1	3	0		5	**-**
Buses %	0.5%	1.1%	0.6%	0%		0.9%	0.8%	0.2%	2.4%	0%		0.6%	3.1%	0.5%	0.3%	0%		0.6%	0.4%	0.4%	1.7%	0%		0.7%	**-**
Articulated Trucks	0	5	0	0		5	1	0	0	0		1	0	16	0	0		16	0	0	0	0		0	**-**
Articulated Trucks %	0%	0.6%	0%	0%		0.4%	0.3%	0%	0%	0%		0.1%	0%	1.3%	0%	0%		1%	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	**-**
Bicycles on Road %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	11	-	-	-	-	-	12	-	-	-	-	-	4	-	-	-	-	-	8	-	**-**
Pedestrians%	-	-	-	-	29.7%		-	-	-	-	32.4%		-	-	-	-	10.8%		-	-	-	-	21.6%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	2.7%		-	-	-	-	2.7%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 08:00 AM - 09:00 AM Weather: Unknown (1.4 °C)



Peak Hour: 04:00 PM - 05:00 PM Weather: Unknown (3.4 °C)



	Bicycles on Crosswalk	Pedestrians
N	1	11
S	0	4
E	1	12
W	0	8

Turning Movement Count (2 . UPPER MIDDLE RD & COUNTRY CLUB DR)

Start Time	N Approach COUNTRY CLUB DR						E Approach UPPER MIDDLE RD						S Approach ITABASHI WAY						W Approach UPPER MIDDLE RD						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		
06:00:00	4	0	11	0	0	15	0	16	1	0	0	17	2	0	0	0	1	2	1	34	1	0	0	36	70	
06:15:00	3	1	25	0	0	29	2	21	3	0	0	26	2	0	1	0	0	3	1	50	1	0	0	52	110	
06:30:00	3	0	29	0	0	32	2	26	3	0	0	31	3	1	1	0	0	5	4	80	4	0	0	88	156	
06:45:00	6	4	35	0	1	45	9	37	10	0	0	56	1	0	0	0	1	1	4	134	2	0	0	140	242	578
07:00:00	9	1	28	0	0	38	10	49	7	0	0	66	8	1	2	0	0	11	9	103	3	0	0	115	230	738
07:15:00	7	1	45	0	0	53	13	44	12	0	0	69	13	0	4	0	0	17	4	167	1	0	0	172	311	939
07:30:00	20	3	40	0	1	63	7	40	17	0	2	64	21	1	5	0	2	27	17	242	13	0	0	272	426	1209
07:45:00	18	8	77	0	1	103	15	61	15	0	0	91	18	4	5	0	1	27	28	289	11	0	0	328	549	1516
08:00:00	23	7	85	0	2	115	21	92	12	0	0	125	14	4	4	0	0	22	23	281	3	0	0	307	569	1855
08:15:00	18	21	46	0	0	85	20	109	24	0	0	153	24	7	3	0	0	34	29	243	14	0	0	286	558	2102
08:30:00	22	9	24	0	0	55	13	81	25	1	0	120	25	5	19	0	0	49	21	240	9	0	1	270	494	2170
08:45:00	13	14	71	0	0	98	17	91	29	0	0	137	36	13	18	0	1	67	26	215	17	0	0	258	560	2181
09:00:00	17	8	56	0	0	81	21	85	23	0	0	129	29	4	12	0	0	45	16	183	12	0	0	211	466	2078
09:15:00	20	5	40	0	1	65	7	110	31	0	1	148	19	4	22	0	2	45	18	146	13	0	0	177	435	1955
09:30:00	15	6	31	0	0	52	11	80	23	0	0	114	27	3	15	0	0	45	13	112	10	0	0	135	346	1807
09:45:00	12	6	37	0	2	55	13	115	16	0	0	144	15	3	19	0	1	37	20	123	8	0	0	151	387	1634
BREAK																										
15:00:00	11	5	22	0	2	38	27	213	26	0	2	266	33	4	15	0	0	52	19	132	26	0	0	177	533	
15:15:00	12	10	29	0	3	51	42	231	29	0	2	302	22	8	16	0	1	46	22	159	15	0	0	196	595	
15:30:00	15	6	38	0	2	59	51	237	28	0	2	316	36	7	33	0	0	76	16	123	24	0	0	163	614	
15:45:00	20	8	39	0	1	67	52	255	24	0	1	331	23	4	16	0	1	43	16	181	14	0	0	211	652	2394
16:00:00	22	7	37	0	0	66	48	281	29	0	0	358	29	4	27	0	1	60	18	131	14	0	0	163	647	2508
16:15:00	11	9	32	0	2	52	67	301	40	0	0	408	33	9	15	0	0	57	25	130	10	0	0	165	682	2595
16:30:00	11	15	31	0	0	57	67	297	45	0	1	409	28	9	33	0	0	70	22	142	23	0	0	187	723	2704
16:45:00	17	10	36	0	1	63	69	339	34	0	4	442	24	9	17	0	3	50	23	159	18	0	0	200	755	2807
17:00:00	11	12	37	0	0	60	64	309	27	0	1	400	32	19	38	0	1	89	19	132	14	0	0	165	714	2874
17:15:00	14	3	27	0	1	44	78	340	27	0	0	445	41	19	27	0	2	87	13	146	17	0	0	176	752	2944
17:30:00	14	6	23	0	1	43	62	305	27	1	0	395	27	14	43	0	1	84	9	116	25	0	0	150	672	2893
17:45:00	21	2	42	0	1	65	79	251	18	1	1	349	16	7	21	0	2	44	9	178	20	0	0	207	665	2803
18:00:00	25	2	32	0	0	59	47	180	24	1	0	252	32	7	19	0	1	58	12	162	16	0	0	190	559	2648
18:15:00	17	4	31	0	0	52	56	174	21	0	0	251	23	3	16	0	2	42	33	140	15	0	1	188	533	2429

18:30:00	15	13	26	0	2	54	46	162	43	0	1	251	17	4	9	0	0	30	35	104	12	0	0	151	486	2243
18:45:00	21	8	29	0	2	58	38	164	28	0	0	230	14	4	6	0	0	24	24	123	20	0	0	167	479	2057
Grand Total	467	214	1191	0	26	1872	1074	5096	721	4	18	6895	687	181	481	0	24	1349	549	4900	405	0	2	5854	**15970**	-
Approach%	24.9%	11.4%	63.6%	0%		-	15.6%	73.9%	10.5%	0.1%		-	50.9%	13.4%	35.7%	0%		-	9.4%	83.7%	6.9%	0%		-	**-**	-
Totals %	2.9%	1.3%	7.5%	0%		11.7%	6.7%	31.9%	4.5%	0%		43.2%	4.3%	1.1%	3%	0%		8.4%	3.4%	30.7%	2.5%	0%		36.7%	**-**	-
Heavy	7	2	11	0		-	13	94	16	0		-	16	0	25	0		-	14	87	7	0		-	**-**	-
Heavy %	1.5%	0.9%	0.9%	0%		-	1.2%	1.8%	2.2%	0%		-	2.3%	0%	5.2%	0%		-	2.6%	1.8%	1.7%	0%		-	**-**	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-

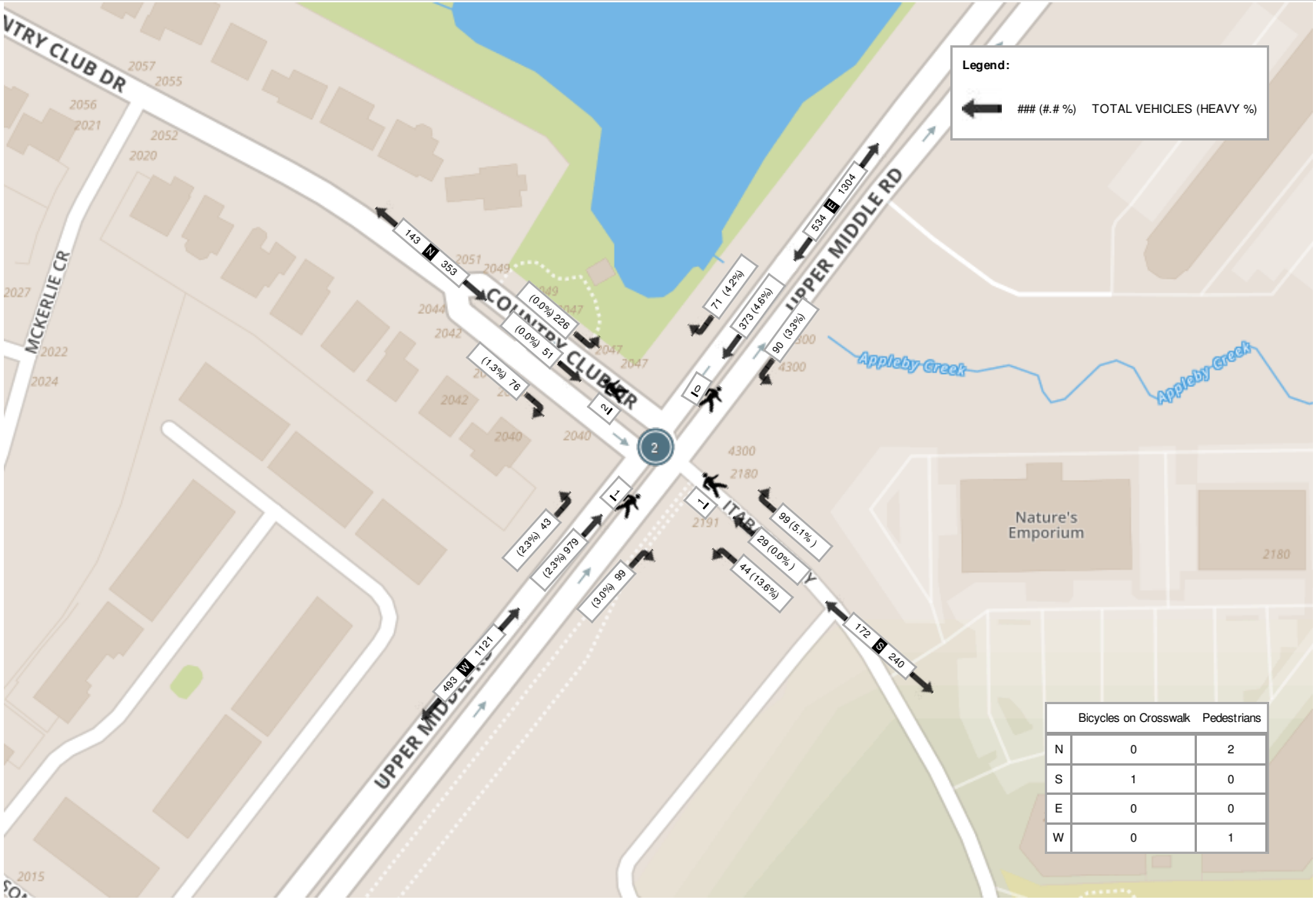
Peak Hour: 08:00 AM - 09:00 AM Weather: Unknown (1.4 °C)

Start Time	N Approach COUNTRY CLUB DR						E Approach UPPER MIDDLE RD						S Approach ITABASHI WAY						W Approach UPPER MIDDLE 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	
08:00:00	23	7	85	0	2	115	21	92	12	0	0	125	14	4	4	0	0	22	23	281	3	0	0	307	569
08:15:00	18	21	46	0	0	85	20	109	24	0	0	153	24	7	3	0	0	34	29	243	14	0	0	286	558
08:30:00	22	9	24	0	0	55	13	81	25	1	0	120	25	5	19	0	0	49	21	240	9	0	1	270	494
08:45:00	13	14	71	0	0	98	17	91	29	0	0	137	36	13	18	0	1	67	26	215	17	0	0	258	560
Grand Total	76	51	226	0	2	353	71	373	90	1	0	535	99	29	44	0	1	172	99	979	43	0	1	1121	**2181**
Approach%	21.5%	14.4%	64%	0%		-	13.3%	69.7%	16.8%	0.2%		-	57.6%	16.9%	25.6%	0%		-	8.8%	87.3%	3.8%	0%		-	**-**
Totals %	3.5%	2.3%	10.4%	0%		16.2%	3.3%	17.1%	4.1%	0%		24.5%	4.5%	1.3%	2%	0%		7.9%	4.5%	44.9%	2%	0%		51.4%	**-**
PHF	0.83	0.61	0.66	0		0.77	0.85	0.86	0.78	0.25		0.87	0.69	0.56	0.58	0		0.64	0.85	0.87	0.63	0		0.91	**-**
Heavy	1	0	0	0		1	3	17	3	0		23	5	0	6	0		11	3	23	1	0		27	**-**
Heavy %	1.3%	0%	0%	0%		0.3%	4.2%	4.6%	3.3%	0%		4.3%	5.1%	0%	13.6%	0%		6.4%	3%	2.3%	2.3%	0%		2.4%	**-**
Lights	75	51	226	0		352	68	356	87	1		512	94	29	38	0		161	96	956	42	0		1094	**-**
Lights %	98.7%	100%	100%	0%		99.7%	95.8%	95.4%	96.7%	100%		95.7%	94.9%	100%	86.4%	0%		93.6%	97%	97.7%	97.7%	0%		97.6%	**-**
Single-Unit Trucks	1	0	0	0		1	2	7	1	0		10	2	0	1	0		3	2	7	1	0		10	**-**
Single-Unit Trucks %	1.3%	0%	0%	0%		0.3%	2.8%	1.9%	1.1%	0%		1.9%	2%	0%	2.3%	0%		1.7%	2%	0.7%	2.3%	0%		0.9%	**-**
Buses	0	0	0	0		0	1	10	2	0		13	3	0	5	0		8	1	14	0	0		15	**-**
Buses %	0%	0%	0%	0%		0%	1.4%	2.7%	2.2%	0%		2.4%	3%	0%	11.4%	0%		4.7%	1%	1.4%	0%	0%		1.3%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	2	0	0		2	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	**-**
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	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	**-**
Pedestrians%	-	-	-	-	50%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	25%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	25%		-	-	-	-	0%		**-**

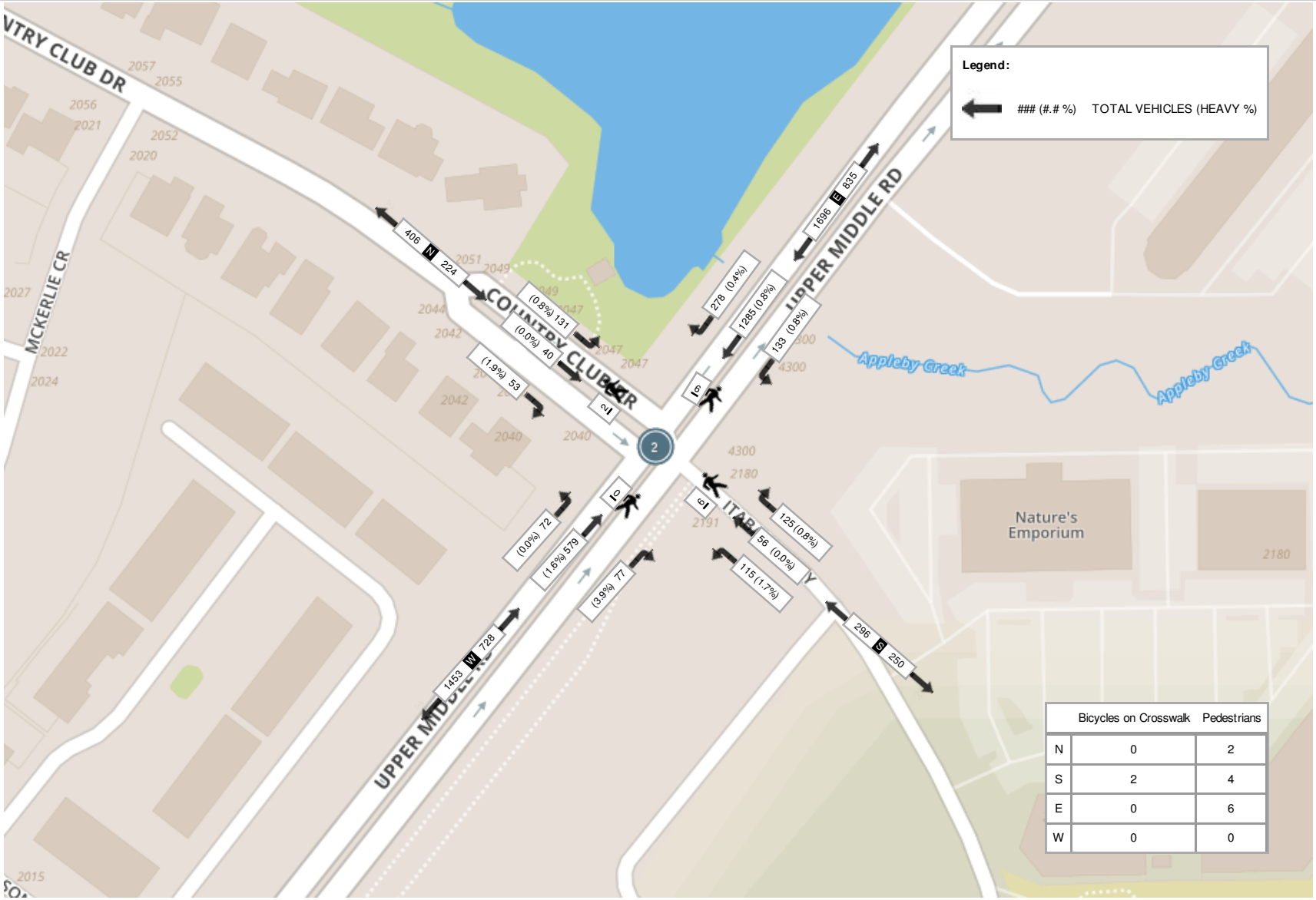
Peak Hour: 04:30 PM - 05:30 PM Weather: Unknown (3.4 °C)

Start Time	N Approach COUNTRY CLUB DR						E Approach UPPER MIDDLE RD						S Approach ITABASHI WAY						W Approach UPPER MIDDLE 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	
16:30:00	11	15	31	0	0	57	67	297	45	0	1	409	28	9	33	0	0	70	22	142	23	0	0	187	723
16:45:00	17	10	36	0	1	63	69	339	34	0	4	442	24	9	17	0	3	50	23	159	18	0	0	200	755
17:00:00	11	12	37	0	0	60	64	309	27	0	1	400	32	19	38	0	1	89	19	132	14	0	0	165	714
17:15:00	14	3	27	0	1	44	78	340	27	0	0	445	41	19	27	0	2	87	13	146	17	0	0	176	752
Grand Total	53	40	131	0	2	224	278	1285	133	0	6	1696	125	56	115	0	6	296	77	579	72	0	0	728	**2944**
Approach%	23.7%	17.9%	58.5%	0%		-	16.4%	75.8%	7.8%	0%		-	42.2%	18.9%	38.9%	0%		-	10.6%	79.5%	9.9%	0%		-	**-**
Totals %	1.8%	1.4%	4.4%	0%		7.6%	9.4%	43.6%	4.5%	0%		57.6%	4.2%	1.9%	3.9%	0%		10.1%	2.6%	19.7%	2.4%	0%		24.7%	**-**
PHF	0.78	0.67	0.89	0		0.89	0.89	0.94	0.74	0		0.95	0.76	0.74	0.76	0		0.83	0.84	0.91	0.78	0		0.91	**-**
Heavy	1	0	1	0		2	1	10	1	0		12	1	0	2	0		3	3	9	0	0		12	**-**
Heavy %	1.9%	0%	0.8%	0%		0.9%	0.4%	0.8%	0.8%	0%		0.7%	0.8%	0%	1.7%	0%		1%	3.9%	1.6%	0%	0%		1.6%	**-**
Lights	52	40	130	0		222	277	1275	132	0		1684	124	56	113	0		293	74	570	72	0		716	**-**
Lights %	98.1%	100%	99.2%	0%		99.1%	99.6%	99.2%	99.2%	0%		99.3%	99.2%	100%	98.3%	0%		99%	96.1%	98.4%	100%	0%		98.4%	**-**
Single-Unit Trucks	0	0	1	0		1	1	6	0	0		7	1	0	0	0		1	1	7	0	0		8	**-**
Single-Unit Trucks %	0%	0%	0.8%	0%		0.4%	0.4%	0.5%	0%	0%		0.4%	0.8%	0%	0%	0%		0.3%	1.3%	1.2%	0%	0%		1.1%	**-**
Buses	1	0	0	0		1	0	3	1	0		4	0	0	2	0		2	2	2	0	0		4	**-**
Buses %	1.9%	0%	0%	0%		0.4%	0%	0.2%	0.8%	0%		0.2%	0%	0%	1.7%	0%		0.7%	2.6%	0.3%	0%	0%		0.5%	**-**
Articulated Trucks	0	0	0	0		0	0	1	0	0		1	0	0	0	0		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%	**-**
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	-	-	-	-	2	-	-	-	-	-	6	-	-	-	-	-	4	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	14.3%		-	-	-	-	42.9%		-	-	-	-	28.6%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	14.3%		-	-	-	-	0%		**-**

Peak Hour: 08:00 AM - 09:00 AM **Weather: Unknown (1.4 °C)**



Peak Hour: 04:30 PM - 05:30 PM **Weather: Unknown (3.4 °C)**



	Bicycles on Crosswalk	Pedestrians
N	0	2
S	2	4
E	0	6
W	0	0

Turning Movement Count (3 . MILCROFT PARK DR & COUNTRY CLUB DR)

Start Time	N Approach COUNTRY CLUB DR						E Approach MILCROFT PARK DR						S Approach COUNTRY CLUB DR						W Approach MILCROFT PARK DR						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		
06:00:00	0	9	4	0	0	13	0	1	5	0	0	6	3	0	0	0	0	3	1	3	1	0	0	5	27	
06:15:00	0	13	3	0	1	16	2	1	9	0	0	12	3	1	0	0	0	4	3	1	0	0	0	4	36	
06:30:00	0	15	0	0	1	15	1	2	13	0	1	16	6	2	1	0	0	9	4	2	0	0	0	6	46	
06:45:00	0	17	2	0	0	19	1	3	16	0	0	20	8	3	0	0	0	11	7	4	1	0	0	12	62	171
07:00:00	1	18	2	0	0	21	2	5	14	0	0	21	5	7	3	0	1	15	7	10	0	0	0	17	74	218
07:15:00	3	25	2	0	4	30	3	5	23	0	0	31	6	8	3	0	1	17	3	13	0	0	2	16	94	276
07:30:00	0	26	5	1	0	32	6	5	24	0	0	35	12	8	2	0	0	22	11	4	5	0	0	20	109	339
07:45:00	3	48	1	0	0	52	4	12	38	0	0	54	22	7	3	0	0	32	8	14	0	0	1	22	160	437
08:00:00	2	32	8	1	0	43	4	14	54	0	0	72	16	15	0	0	2	31	15	11	0	0	0	26	172	535
08:15:00	2	29	2	0	0	33	3	8	37	0	0	48	26	12	2	0	0	40	10	12	2	0	1	24	145	586
08:30:00	6	18	2	0	1	26	4	13	34	0	0	51	22	7	4	0	0	33	13	19	4	0	0	36	146	623
08:45:00	2	33	6	0	0	41	8	19	37	0	0	64	35	17	4	0	0	56	24	9	5	0	1	38	199	662
09:00:00	5	38	9	0	1	52	6	15	34	0	0	55	30	16	1	0	1	47	11	17	2	0	1	30	184	674
09:15:00	0	24	4	0	1	28	7	17	35	0	1	59	15	4	3	0	1	22	6	7	2	0	2	15	124	653
09:30:00	5	17	3	0	0	25	1	17	25	0	1	43	14	8	1	0	3	23	6	8	1	0	1	15	106	613
09:45:00	1	14	0	0	0	15	3	11	35	0	1	49	16	9	0	0	5	25	2	12	0	0	0	14	103	517
BREAK																										
15:00:00	5	13	10	0	0	28	4	7	18	0	1	29	33	20	5	0	2	58	1	10	3	0	2	14	129	
15:15:00	4	18	4	0	2	26	6	18	18	0	0	42	33	22	5	0	0	60	12	12	5	0	1	29	157	
15:30:00	1	17	5	0	4	23	7	19	27	0	0	53	36	39	10	0	0	85	12	19	4	0	0	35	196	
15:45:00	4	27	6	0	0	37	9	25	32	0	1	66	26	27	9	0	0	62	10	20	4	0	1	34	199	681
16:00:00	2	22	3	0	4	27	7	34	38	0	3	79	35	22	8	0	2	65	6	7	4	1	2	18	189	741
16:15:00	2	24	12	0	2	38	11	22	22	0	1	55	33	35	9	0	1	77	8	14	2	0	0	24	194	778
16:30:00	4	15	6	0	1	25	7	21	34	0	1	62	42	45	8	0	0	95	8	8	2	0	0	18	200	782
16:45:00	0	18	6	0	2	24	7	29	34	0	2	70	37	39	12	0	1	88	11	12	5	0	1	28	210	793
17:00:00	2	16	6	0	2	24	7	19	30	0	0	56	53	40	10	0	0	103	10	14	5	0	0	29	212	816
17:15:00	4	21	2	0	0	27	9	18	31	0	1	58	38	45	21	0	2	104	8	15	2	0	2	25	214	836
17:30:00	1	17	8	0	0	26	4	21	22	0	0	47	48	44	14	0	0	106	3	12	2	0	1	17	196	832
17:45:00	2	24	9	0	0	35	12	13	24	0	0	49	37	53	9	0	0	99	14	10	2	0	0	26	209	831
18:00:00	0	19	2	0	0	21	4	12	32	0	0	48	31	38	6	0	0	75	7	15	3	0	0	25	169	788
18:15:00	1	19	2	0	0	22	10	14	21	0	0	45	36	36	7	0	0	79	9	10	2	0	0	21	167	741

18:30:00	2	19	6	0	0	27	4	13	31	0	0	48	19	36	2	0	1	57	2	10	1	0	0	13	145	690
18:45:00	0	16	4	0	0	20	4	12	32	0	0	48	32	20	6	0	4	58	4	7	1	0	0	12	138	619
Grand Total	64	681	144	2	26	891	167	445	879	0	14	1491	808	685	168	0	27	1661	256	341	70	1	19	668	**4711**	-
Approach%	7.2%	76.4%	16.2%	0.2%		-	11.2%	29.8%	59%	0%		-	48.6%	41.2%	10.1%	0%		-	38.3%	51%	10.5%	0.1%		-	**-**	-
Totals %	1.4%	14.5%	3.1%	0%		18.9%	3.5%	9.4%	18.7%	0%		31.6%	17.2%	14.5%	3.6%	0%		35.3%	5.4%	7.2%	1.5%	0%		14.2%	**-**	-
Heavy	3	8	6	0		-	5	11	12	0		-	14	4	1	0		-	2	10	8	0		-	**-**	-
Heavy %	4.7%	1.2%	4.2%	0%		-	3%	2.5%	1.4%	0%		-	1.7%	0.6%	0.6%	0%		-	0.8%	2.9%	11.4%	0%		-	**-**	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-

Peak Hour: 08:15 AM - 09:15 AM Weather: Unknown (1.4 °C)

Start Time	N Approach COUNTRY CLUB DR						E Approach MILCROFT PARK DR						S Approach COUNTRY CLUB DR						W Approach MILCROFT PARK DR						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	
08:15:00	2	29	2	0	0	33	3	8	37	0	0	48	26	12	2	0	0	40	10	12	2	0	1	24	145
08:30:00	6	18	2	0	1	26	4	13	34	0	0	51	22	7	4	0	0	33	13	19	4	0	0	36	146
08:45:00	2	33	6	0	0	41	8	19	37	0	0	64	35	17	4	0	0	56	24	9	5	0	1	38	199
09:00:00	5	38	9	0	1	52	6	15	34	0	0	55	30	16	1	0	1	47	11	17	2	0	1	30	184
Grand Total	15	118	19	0	2	152	21	55	142	0	0	218	113	52	11	0	1	176	58	57	13	0	3	128	**674**
Approach%	9.9%	77.6%	12.5%	0%		-	9.6%	25.2%	65.1%	0%		-	64.2%	29.5%	6.3%	0%		-	45.3%	44.5%	10.2%	0%		-	-
Totals %	2.2%	17.5%	2.8%	0%		22.6%	3.1%	8.2%	21.1%	0%		32.3%	16.8%	7.7%	1.6%	0%		26.1%	8.6%	8.5%	1.9%	0%		19%	-
PHF	0.63	0.78	0.53	0		0.73	0.66	0.72	0.96	0		0.85	0.81	0.76	0.69	0		0.79	0.6	0.75	0.65	0		0.84	-
Heavy	1	0	2	0		3	1	2	3	0		6	6	0	0	0		6	1	2	0	0		3	-
Heavy %	6.7%	0%	10.5%	0%		2%	4.8%	3.6%	2.1%	0%		2.8%	5.3%	0%	0%	0%		3.4%	1.7%	3.5%	0%	0%		2.3%	-
Lights	14	118	17	0		149	20	53	139	0		212	107	52	11	0		170	57	55	13	0		125	-
Lights %	93.3%	100%	89.5%	0%		98%	95.2%	96.4%	97.9%	0%		97.2%	94.7%	100%	100%	0%		96.6%	98.3%	96.5%	100%	0%		97.7%	-
Single-Unit Trucks	0	0	1	0		1	0	0	1	0		1	5	0	0	0		5	1	0	0	0		1	-
Single-Unit Trucks %	0%	0%	5.3%	0%		0.7%	0%	0%	0.7%	0%		0.5%	4.4%	0%	0%	0%		2.8%	1.7%	0%	0%	0%		0.8%	-
Buses	1	0	1	0		2	1	2	2	0		5	1	0	0	0		1	0	2	0	0		2	-
Buses %	6.7%	0%	5.3%	0%		1.3%	4.8%	3.6%	1.4%	0%		2.3%	0.9%	0%	0%	0%		0.6%	0%	3.5%	0%	0%		1.6%	-
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%	-
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	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	3	-	-
Pedestrians%	-	-	-	-	33.3%		-	-	-	-	0%		-	-	-	-	16.7%		-	-	-	-	50%		-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 04:30 PM - 05:30 PM Weather: Unknown (3.4 °C)

Start Time	N Approach COUNTRY CLUB DR						E Approach MILCROFT PARK DR						S Approach COUNTRY CLUB DR						W Approach MILCROFT PARK DR						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	
16:30:00	4	15	6	0	1	25	7	21	34	0	1	62	42	45	8	0	0	95	8	8	2	0	0	18	200
16:45:00	0	18	6	0	2	24	7	29	34	0	2	70	37	39	12	0	1	88	11	12	5	0	1	28	210
17:00:00	2	16	6	0	2	24	7	19	30	0	0	56	53	40	10	0	0	103	10	14	5	0	0	29	212
17:15:00	4	21	2	0	0	27	9	18	31	0	1	58	38	45	21	0	2	104	8	15	2	0	2	25	214
Grand Total	10	70	20	0	5	100	30	87	129	0	4	246	170	169	51	0	3	390	37	49	14	0	3	100	**836**
Approach%	10%	70%	20%	0%		-	12.2%	35.4%	52.4%	0%		-	43.6%	43.3%	13.1%	0%		-	37%	49%	14%	0%		-	-
Totals %	1.2%	8.4%	2.4%	0%		12%	3.6%	10.4%	15.4%	0%		29.4%	20.3%	20.2%	6.1%	0%		46.7%	4.4%	5.9%	1.7%	0%		12%	-
PHF	0.63	0.83	0.83	0		0.93	0.83	0.75	0.95	0		0.88	0.8	0.94	0.61	0		0.94	0.84	0.82	0.7	0		0.86	-
Heavy	0	1	0	0		1	1	1	1	0		3	0	1	0	0		1	0	0	0	0		0	-
Heavy %	0%	1.4%	0%	0%		1%	3.3%	1.1%	0.8%	0%		1.2%	0%	0.6%	0%	0%		0.3%	0%	0%	0%	0%		0%	-
Lights	10	69	20	0		99	29	86	128	0		243	170	168	51	0		389	37	49	14	0		100	-
Lights %	100%	98.6%	100%	0%		99%	96.7%	98.9%	99.2%	0%		98.8%	100%	99.4%	100%	0%		99.7%	100%	100%	100%	0%		100%	-
Single-Unit Trucks	0	1	0	0		1	0	1	0	0		1	0	1	0	0		1	0	0	0	0		0	-
Single-Unit Trucks %	0%	1.4%	0%	0%		1%	0%	1.1%	0%	0%		0.4%	0%	0.6%	0%	0%		0.3%	0%	0%	0%	0%		0%	-
Buses	0	0	0	0		0	1	0	1	0		2	0	0	0	0		0	0	0	0	0		0	-
Buses %	0%	0%	0%	0%		0%	3.3%	0%	0.8%	0%		0.8%	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	-
Articulated Trucks %	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	-
Bicycles on Road %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	5	-	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	3	-	-
Pedestrians%	-	-	-	-	33.3%		-	-	-	-	20%		-	-	-	-	20%		-	-	-	-	20%		-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	6.7%		-	-	-	-	0%		-	-	-	-	0%		-

Peak Hour: 08:15 AM - 09:15 AM Weather: Unknown (1.4 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	2
S	0	1
E	0	0
W	0	3

Peak Hour: 04:30 PM - 05:30 PM Weather: Unknown (3.4 °C)



Turning Movement Count (4 . UPPER MIDDLE RD & WALKERS LINE)

Start Time	N Approach WALKERS LINE						E Approach UPPER MIDDLE RD						S Approach WALKERS LINE						W Approach UPPER MIDDLE RD						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		
06:00:00	6	85	12	0	1	103	1	2	14	0	0	17	16	38	7	0	0	61	12	14	17	0	2	43	224	
06:15:00	6	88	11	0	0	105	3	11	15	0	0	29	23	50	6	0	1	79	24	41	9	0	0	74	287	
06:30:00	7	120	22	0	0	149	6	10	20	0	0	36	33	67	11	0	1	111	39	56	11	0	0	106	402	
06:45:00	3	139	27	0	0	169	4	16	26	0	0	46	43	85	7	0	0	135	37	81	19	0	1	137	487	1400
07:00:00	8	141	34	0	1	183	13	26	28	0	2	67	33	77	18	0	2	128	33	54	25	0	2	112	490	1666
07:15:00	6	189	37	0	0	232	5	20	34	0	0	59	43	111	18	0	0	172	45	100	38	0	0	183	646	2025
07:30:00	15	204	47	0	0	266	8	32	46	0	1	86	68	121	20	0	1	209	57	146	31	0	0	234	795	2418
07:45:00	17	265	56	0	0	338	11	35	43	0	3	89	82	142	35	0	1	259	65	188	41	0	1	294	980	2911
08:00:00	17	240	55	0	0	312	15	49	62	0	1	126	64	164	48	0	2	276	57	151	29	0	0	237	951	3372
08:15:00	23	252	61	0	1	336	19	56	59	0	2	134	64	130	46	0	0	240	78	164	39	0	0	281	991	3717
08:30:00	37	242	42	0	0	321	13	70	63	0	1	146	65	135	32	0	2	232	53	168	46	0	0	267	966	3888
08:45:00	32	262	61	0	3	355	15	75	58	0	2	148	82	150	41	0	1	273	70	126	45	0	0	241	1017	3925
09:00:00	31	216	35	0	1	282	19	56	62	0	0	137	65	125	39	1	1	230	50	124	33	0	1	207	856	3830
09:15:00	31	187	23	0	0	241	26	63	69	0	1	158	59	107	32	0	0	198	46	103	36	0	1	185	782	3621
09:30:00	40	175	34	0	1	249	18	68	61	0	0	147	53	127	34	0	1	214	38	79	36	0	1	153	763	3418
09:45:00	28	181	27	0	3	236	19	93	75	0	0	187	53	101	36	0	3	190	44	99	37	0	4	180	793	3194
BREAK																										
15:00:00	42	159	18	0	7	219	34	146	71	0	1	251	99	186	71	0	0	356	54	92	45	0	5	191	1017	
15:15:00	46	186	27	0	7	259	32	167	87	0	4	286	85	192	73	0	12	350	57	102	39	0	6	198	1093	
15:30:00	53	190	34	0	1	277	26	205	92	0	1	323	75	180	73	0	4	328	54	108	36	0	1	198	1126	
15:45:00	59	225	38	0	1	322	46	182	65	0	5	293	87	205	84	0	5	376	58	95	35	0	5	188	1179	4415
16:00:00	44	180	20	0	1	244	43	203	86	0	7	332	73	223	81	1	10	378	47	99	44	0	1	190	1144	4542
16:15:00	58	200	23	0	2	281	51	220	79	0	13	350	60	273	97	0	8	430	50	96	31	0	6	177	1238	4687
16:30:00	60	197	31	2	0	290	44	214	82	0	0	340	82	241	72	0	5	395	39	85	40	0	1	164	1189	4750
16:45:00	41	164	38	1	0	244	50	243	80	0	5	373	96	251	88	0	8	435	47	113	23	0	0	183	1235	4806
17:00:00	53	209	32	0	3	294	42	231	71	0	1	344	69	319	90	0	3	478	33	74	36	0	0	143	1259	4921
17:15:00	49	201	25	0	2	275	35	272	80	0	4	387	76	291	99	0	3	466	38	89	35	0	0	162	1290	4973
17:30:00	59	197	21	0	1	277	45	229	65	0	0	339	84	295	94	0	4	473	43	81	35	0	0	159	1248	5032
17:45:00	45	196	36	0	2	277	52	220	73	0	3	345	93	224	82	0	0	399	46	96	27	0	0	169	1190	4987
18:00:00	36	187	38	0	0	261	39	130	67	0	3	236	80	206	86	0	1	372	39	86	26	0	0	151	1020	4748
18:15:00	36	188	29	0	2	253	24	119	85	1	2	229	88	236	79	0	4	403	41	68	28	0	1	137	1022	4480

18:30:00	26	169	38	0	0	233	22	92	59	0	0	173	82	185	68	1	1	336	46	98	20	0	1	164	906	4138
18:45:00	28	150	29	0	3	207	25	98	67	0	2	190	69	183	59	0	4	311	44	67	29	0	0	140	848	3796
Grand Total	1042	5984	1061	3	43	8090	805	3653	1944	1	64	6403	2144	5420	1726	3	88	9293	1484	3143	1021	0	40	5648	**29434**	-
Approach%	12.9%	74%	13.1%	0%		-	12.6%	57.1%	30.4%	0%		-	23.1%	58.3%	18.6%	0%		-	26.3%	55.6%	18.1%	0%		-	**-**	-
Totals %	3.5%	20.3%	3.6%	0%		27.5%	2.7%	12.4%	6.6%	0%		21.8%	7.3%	18.4%	5.9%	0%		31.6%	5%	10.7%	3.5%	0%		19.2%	**-**	-
Heavy	24	154	18	0		-	19	78	30	0		-	28	155	23	0		-	32	63	30	0		-	**-**	-
Heavy %	2.3%	2.6%	1.7%	0%		-	2.4%	2.1%	1.5%	0%		-	1.3%	2.9%	1.3%	0%		-	2.2%	2%	2.9%	0%		-	**-**	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-

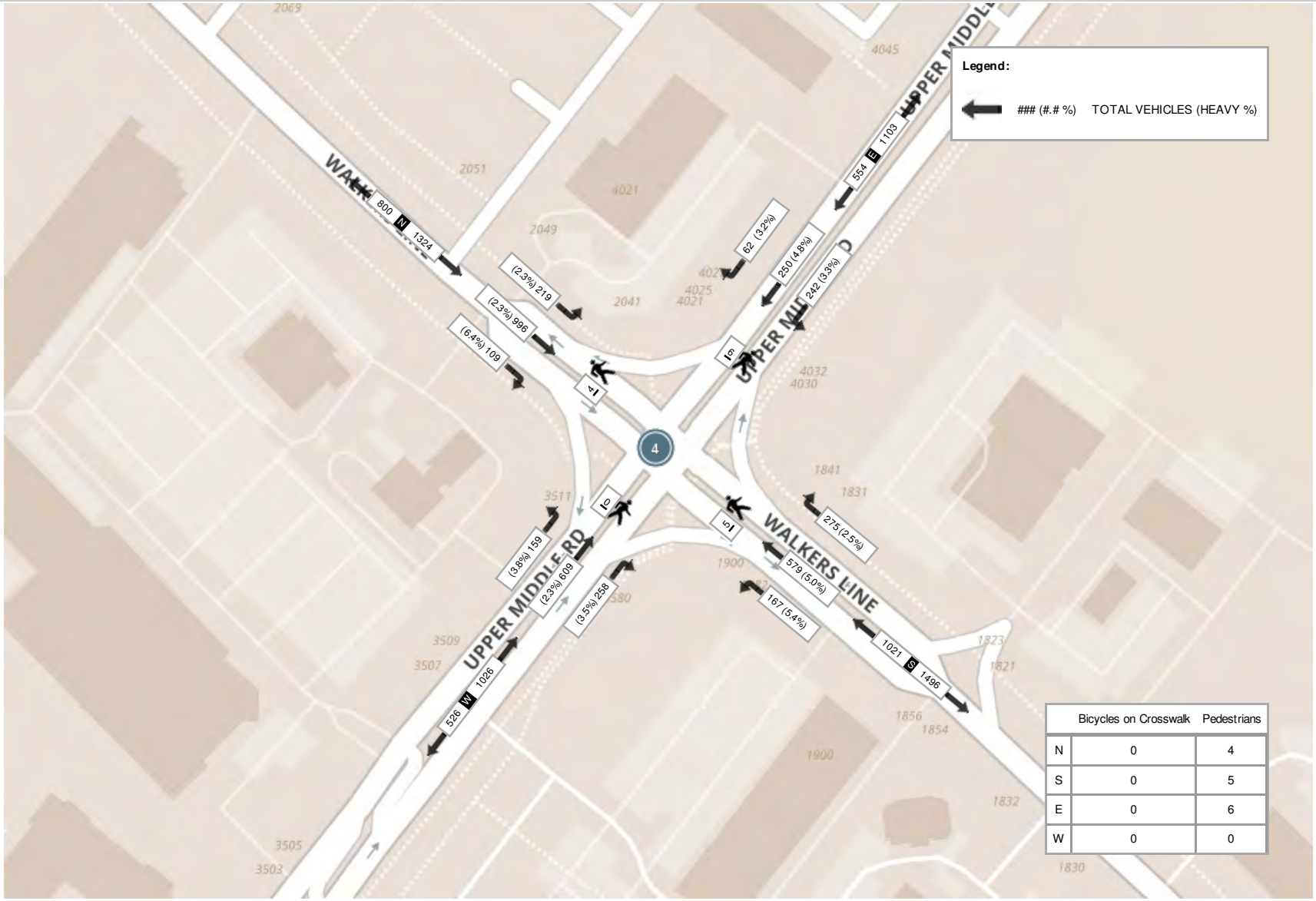
Peak Hour: 08:00 AM - 09:00 AM Weather: Unknown (1.4 °C)

Start Time	N Approach WALKERS LINE						E Approach UPPER MIDDLE RD						S Approach WALKERS LINE						W Approach UPPER MIDDLE 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	
08:00:00	17	240	55	0	0	312	15	49	62	0	1	126	64	164	48	0	2	276	57	151	29	0	0	237	951
08:15:00	23	252	61	0	1	336	19	56	59	0	2	134	64	130	46	0	0	240	78	164	39	0	0	281	991
08:30:00	37	242	42	0	0	321	13	70	63	0	1	146	65	135	32	0	2	232	53	168	46	0	0	267	966
08:45:00	32	262	61	0	3	355	15	75	58	0	2	148	82	150	41	0	1	273	70	126	45	0	0	241	1017
Grand Total	109	996	219	0	4	1324	62	250	242	0	6	554	275	579	167	0	5	1021	258	609	159	0	0	1026	**3925**
Approach%	8.2%	75.2%	16.5%	0%		-	11.2%	45.1%	43.7%	0%		-	26.9%	56.7%	16.4%	0%		-	25.1%	59.4%	15.5%	0%		-	**-**
Totals %	2.8%	25.4%	5.6%	0%		33.7%	1.6%	6.4%	6.2%	0%		14.1%	7%	14.8%	4.3%	0%		26%	6.6%	15.5%	4.1%	0%		26.1%	**-**
PHF	0.74	0.95	0.9	0		0.93	0.82	0.83	0.96	0		0.94	0.84	0.88	0.87	0		0.92	0.83	0.91	0.86	0		0.91	**-**
Heavy	7	23	5	0		35	2	12	8	0		22	7	29	9	0		45	9	14	6	0		29	**-**
Heavy %	6.4%	2.3%	2.3%	0%		2.6%	3.2%	4.8%	3.3%	0%		4%	2.5%	5%	5.4%	0%		4.4%	3.5%	2.3%	3.8%	0%		2.8%	**-**
Lights	102	973	214	0		1289	60	238	234	0		532	268	550	158	0		976	249	595	153	0		997	**-**
Lights %	93.6%	97.7%	97.7%	0%		97.4%	96.8%	95.2%	96.7%	0%		96%	97.5%	95%	94.6%	0%		95.6%	96.5%	97.7%	96.2%	0%		97.2%	**-**
Single-Unit Trucks	2	11	3	0		16	1	3	5	0		9	4	15	6	0		25	5	4	2	0		11	**-**
Single-Unit Trucks %	1.8%	1.1%	1.4%	0%		1.2%	1.6%	1.2%	2.1%	0%		1.6%	1.5%	2.6%	3.6%	0%		2.4%	1.9%	0.7%	1.3%	0%		1.1%	**-**
Buses	3	11	2	0		16	1	9	3	0		13	3	9	2	0		14	4	10	3	0		17	**-**
Buses %	2.8%	1.1%	0.9%	0%		1.2%	1.6%	3.6%	1.2%	0%		2.3%	1.1%	1.6%	1.2%	0%		1.4%	1.6%	1.6%	1.9%	0%		1.7%	**-**
Articulated Trucks	2	1	0	0		3	0	0	0	0		0	0	5	1	0		6	0	0	1	0		1	**-**
Articulated Trucks %	1.8%	0.1%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0.9%	0.6%	0%		0.6%	0%	0%	0.6%	0%		0.1%	**-**
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%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	4	-	-	-	-	-	6	-	-	-	-	-	5	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	26.7%		-	-	-	-	40%		-	-	-	-	33.3%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

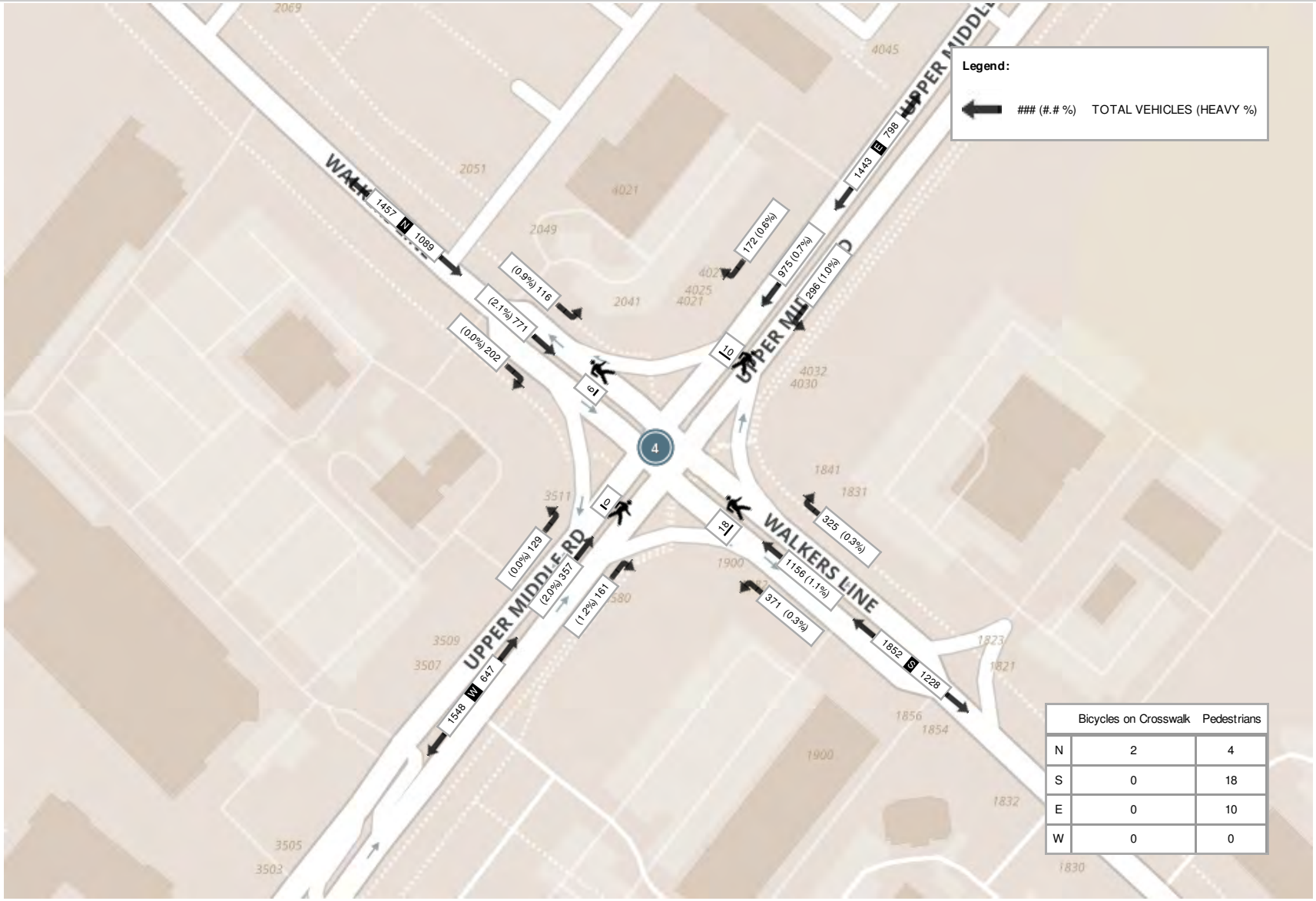
Peak Hour: 04:45 PM - 05:45 PM Weather: Unknown (3.4 °C)

Start Time	N Approach WALKERS LINE						E Approach UPPER MIDDLE RD						S Approach WALKERS LINE						W Approach UPPER MIDDLE 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	
16:45:00	41	164	38	1	0	244	50	243	80	0	5	373	96	251	88	0	8	435	47	113	23	0	0	183	1235
17:00:00	53	209	32	0	3	294	42	231	71	0	1	344	69	319	90	0	3	478	33	74	36	0	0	143	1259
17:15:00	49	201	25	0	2	275	35	272	80	0	4	387	76	291	99	0	3	466	38	89	35	0	0	162	1290
17:30:00	59	197	21	0	1	277	45	229	65	0	0	339	84	295	94	0	4	473	43	81	35	0	0	159	1248
Grand Total	202	771	116	1	6	1090	172	975	296	0	10	1443	325	1156	371	0	18	1852	161	357	129	0	0	647	**5032**
Approach%	18.5%	70.7%	10.6%	0.1%		-	11.9%	67.6%	20.5%	0%		-	17.5%	62.4%	20%	0%		-	24.9%	55.2%	19.9%	0%		-	**-**
Totals %	4%	15.3%	2.3%	0%		21.7%	3.4%	19.4%	5.9%	0%		28.7%	6.5%	23%	7.4%	0%		36.8%	3.2%	7.1%	2.6%	0%		12.9%	**-**
PHF	0.86	0.92	0.76	0.25		0.93	0.86	0.9	0.93	0		0.93	0.85	0.91	0.94	0		0.97	0.86	0.79	0.9	0		0.88	**-**
Heavy	0	16	1	0		17	1	7	3	0		11	1	13	1	0		15	2	7	0	0		9	**-**
Heavy %	0%	2.1%	0.9%	0%		1.6%	0.6%	0.7%	1%	0%		0.8%	0.3%	1.1%	0.3%	0%		0.8%	1.2%	2%	0%	0%		1.4%	**-**
Lights	202	755	115	1		1073	171	968	293	0		1432	324	1143	370	0		1837	159	349	129	0		637	**-**
Lights %	100%	97.9%	99.1%	100%		98.4%	99.4%	99.3%	99%	0%		99.2%	99.7%	98.9%	99.7%	0%		99.2%	98.8%	97.8%	100%	0%		98.5%	**-**
Single-Unit Trucks	0	7	0	0		7	1	1	0	0		2	1	5	1	0		7	2	4	0	0		6	**-**
Single-Unit Trucks %	0%	0.9%	0%	0%		0.6%	0.6%	0.1%	0%	0%		0.1%	0.3%	0.4%	0.3%	0%		0.4%	1.2%	1.1%	0%	0%		0.9%	**-**
Buses	0	7	1	0		8	0	5	3	0		8	0	6	0	0		6	0	3	0	0		3	**-**
Buses %	0%	0.9%	0.9%	0%		0.7%	0%	0.5%	1%	0%		0.6%	0%	0.5%	0%	0%		0.3%	0%	0.8%	0%	0%		0.5%	**-**
Articulated Trucks	0	2	0	0		2	0	1	0	0		1	0	2	0	0		2	0	0	0	0		0	**-**
Articulated Trucks %	0%	0.3%	0%	0%		0.2%	0%	0.1%	0%	0%		0.1%	0%	0.2%	0%	0%		0.1%	0%	0%	0%	0%		0%	**-**
Bicycles on Road	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	1	0	0		1	**-**
Bicycles on Road %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.2%	**-**
Pedestrians	-	-	-	-	4	-	-	-	-	-	10	-	-	-	-	-	18	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	11.8%		-	-	-	-	29.4%		-	-	-	-	52.9%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	5.9%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 08:00 AM - 09:00 AM Weather: Unknown (1.4 °C)



Peak Hour: 04:45 PM - 05:45 PM Weather: Unknown (3.4 °C)



	Bicycles on Crosswalk	Pedestrians
N	2	4
S	0	18
E	0	10
W	0	0

Turning Movement Count (2 . DUNDAS ST & MILLCROFT PARK DR / CORNERSTONE DR)

Start Time	N Approach CORNERSTONE DR						E Approach DUNDAS ST						S Approach MILLCROFT PARK DR						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		
06:00:00	2	0	11	0	0	13	1	35	0	0	1	36	7	0	0	0	0	7	1	183	1	0	0	185	241	
06:15:00	4	0	9	0	0	13	0	37	0	0	0	37	11	0	1	0	0	12	2	286	2	0	0	290	352	
06:30:00	9	2	22	0	1	33	5	72	6	0	0	83	22	0	2	0	0	24	1	361	1	0	0	363	503	
06:45:00	12	2	18	0	0	32	1	80	2	0	1	83	17	1	3	0	0	21	5	436	2	0	2	443	579	1675
07:00:00	9	1	19	0	1	29	5	87	5	0	0	97	21	0	9	0	3	30	3	492	2	0	0	497	653	2087
07:15:00	15	5	35	0	0	55	8	170	2	0	0	180	27	4	4	0	0	35	3	519	6	0	4	528	798	2533
07:30:00	21	12	30	0	2	63	4	133	5	0	0	142	27	2	6	0	1	35	3	594	7	0	0	604	844	2874
07:45:00	16	14	36	0	0	66	5	198	8	1	0	212	29	3	16	0	1	48	9	492	6	0	1	507	833	3128
08:00:00	19	5	12	0	4	36	2	212	9	0	1	223	26	0	22	0	0	48	13	493	13	0	3	519	826	3301
08:15:00	29	7	30	0	7	66	9	249	9	0	0	267	18	4	33	0	9	55	20	480	14	0	40	514	902	3405
08:30:00	45	10	29	0	6	84	6	240	9	0	5	255	20	6	14	0	2	40	24	474	10	0	14	508	887	3448
08:45:00	28	8	20	0	1	56	7	238	10	0	1	255	19	4	14	0	1	37	15	468	11	0	5	494	842	3457
09:00:00	15	2	11	0	3	28	15	205	9	0	0	229	36	5	10	0	3	51	11	340	7	0	2	358	666	3297
09:15:00	17	0	19	0	1	36	12	158	13	0	3	183	30	6	8	0	3	44	4	342	13	0	2	359	622	3017
09:30:00	11	0	19	0	2	30	6	185	6	0	0	197	19	3	5	0	0	27	5	270	5	0	1	280	534	2664
09:45:00	7	1	15	0	1	23	11	168	3	0	1	182	14	2	11	0	0	27	12	232	8	0	3	252	484	2306
BREAK																										
15:00:00	11	3	7	0	13	21	23	351	13	0	9	387	13	7	7	0	14	27	15	251	14	0	32	280	715	
15:15:00	9	5	8	0	5	22	15	395	22	0	0	432	10	5	11	0	1	26	13	216	9	0	1	238	718	
15:30:00	10	3	12	0	4	25	18	457	21	0	2	496	12	4	6	0	0	22	11	240	16	0	2	267	810	
15:45:00	10	3	11	0	3	24	21	477	20	0	1	518	14	4	8	0	2	26	10	219	15	0	2	244	812	3055
16:00:00	8	5	12	0	2	25	14	481	24	0	1	519	12	5	19	0	0	36	9	233	14	0	3	256	836	3176
16:15:00	13	3	8	0	3	24	19	554	34	0	0	607	14	7	10	0	1	31	9	288	16	0	0	313	975	3433
16:30:00	9	8	11	0	3	28	19	505	30	0	0	554	14	8	8	0	1	30	14	236	13	0	5	263	875	3498
16:45:00	9	7	10	0	10	26	24	537	36	0	3	597	14	10	10	0	2	34	14	283	10	0	7	307	964	3650
17:00:00	10	4	7	0	4	21	22	497	32	0	2	551	9	11	10	0	1	30	11	257	24	0	4	292	894	3708
17:15:00	14	4	10	0	1	28	19	462	23	0	0	504	10	9	18	0	4	37	18	225	14	0	4	257	826	3559
17:30:00	12	8	12	0	3	32	28	471	29	0	1	528	15	11	9	0	2	35	16	264	17	0	3	297	892	3576
17:45:00	13	7	18	0	8	38	30	449	21	0	2	500	17	12	6	0	4	35	7	230	16	0	2	253	826	3438
18:00:00	10	5	12	0	0	27	28	387	22	0	0	437	9	15	10	0	1	34	11	260	23	0	1	294	792	3336
18:15:00	15	6	15	0	7	36	24	333	16	0	0	373	18	7	12	0	2	37	6	238	11	0	0	255	701	3211

18:30:00	14	6	12	0	0	32	21	319	9	0	5	349	16	5	9	0	3	30	15	238	16	0	4	269	680	2999
18:45:00	16	1	11	0	1	28	23	301	11	0	1	335	17	4	10	0	4	31	8	238	24	0	1	270	664	2837
Grand Total	442	147	511	0	96	1100	445	9443	459	1	40	10348	557	164	321	0	65	1042	318	10378	360	0	148	11056	**23546**	-
Approach%	40.2%	13.4%	46.5%	0%		-	4.3%	91.3%	4.4%	0%		-	53.5%	15.7%	30.8%	0%		-	2.9%	93.9%	3.3%	0%		-	**-**	-
Totals %	1.9%	0.6%	2.2%	0%		4.7%	1.9%	40.1%	1.9%	0%		43.9%	2.4%	0.7%	1.4%	0%		4.4%	1.4%	44.1%	1.5%	0%		47%	**-**	-
Heavy	7	4	4	0		-	8	400	11	0		-	9	4	5	0		-	7	408	11	0		-	**-**	-
Heavy %	1.6%	2.7%	0.8%	0%		-	1.8%	4.2%	2.4%	0%		-	1.6%	2.4%	1.6%	0%		-	2.2%	3.9%	3.1%	0%		-	**-**	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-

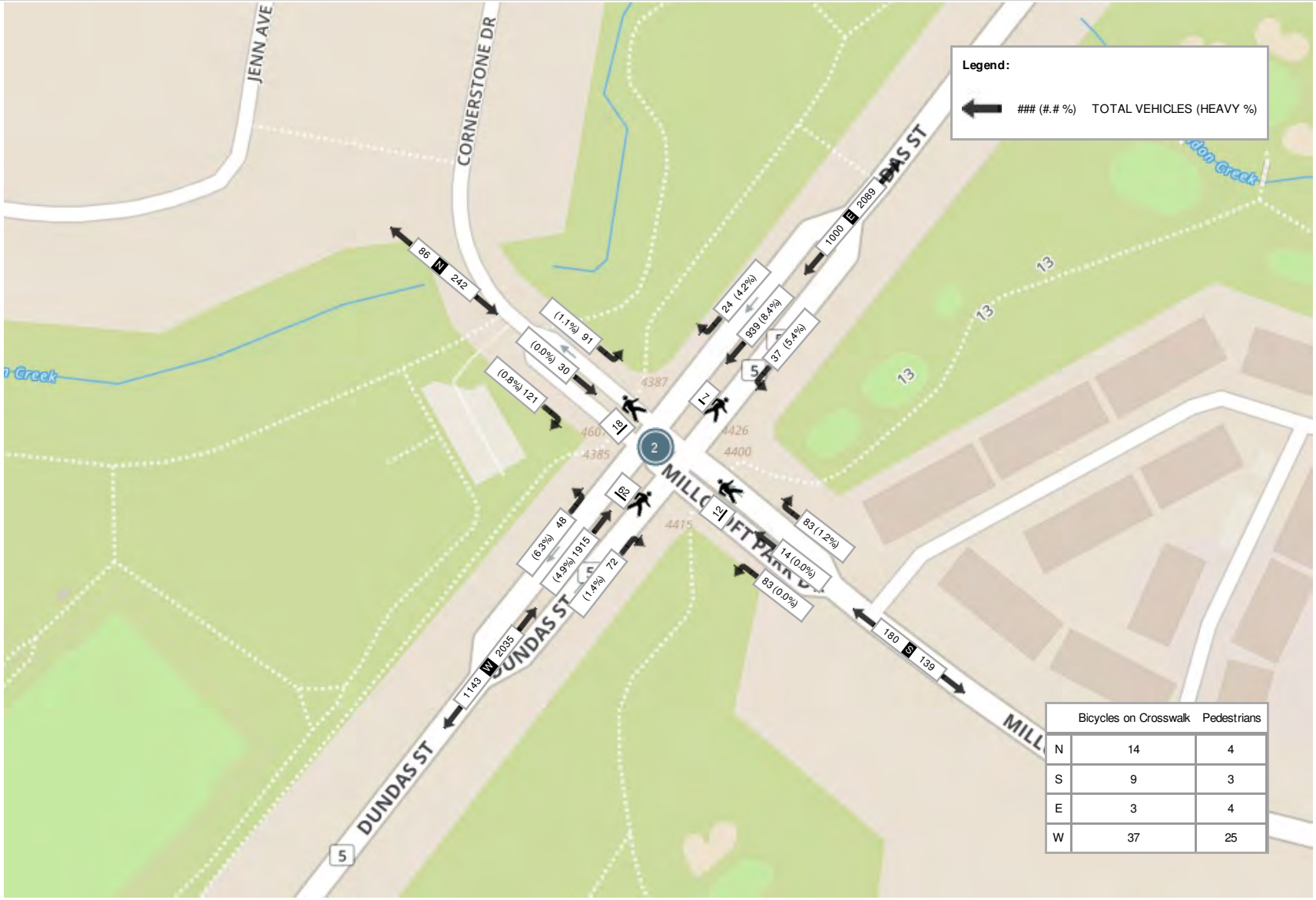
Peak Hour: 08:00 AM - 09:00 AM Weather: Scattered Clouds (11.07 °C)

Start Time	N Approach CORNERSTONE DR						E Approach DUNDAS ST						S Approach MILLCROFT PARK DR						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	19	5	12	0	4	36	2	212	9	0	1	223	26	0	22	0	0	48	13	493	13	0	3	519	826
08:15:00	29	7	30	0	7	66	9	249	9	0	0	267	18	4	33	0	9	55	20	480	14	0	40	514	902
08:30:00	45	10	29	0	6	84	6	240	9	0	5	255	20	6	14	0	2	40	24	474	10	0	14	508	887
08:45:00	28	8	20	0	1	56	7	238	10	0	1	255	19	4	14	0	1	37	15	468	11	0	5	494	842
Grand Total	121	30	91	0	18	242	24	939	37	0	7	1000	83	14	83	0	12	180	72	1915	48	0	62	2035	**3457**
Approach%	50%	12.4%	37.6%	0%		-	2.4%	93.9%	3.7%	0%		-	46.1%	7.8%	46.1%	0%		-	3.5%	94.1%	2.4%	0%		-	**-**
Totals %	3.5%	0.9%	2.6%	0%		7%	0.7%	27.2%	1.1%	0%		28.9%	2.4%	0.4%	2.4%	0%		5.2%	2.1%	55.4%	1.4%	0%		58.9%	**-**
PHF	0.67	0.75	0.76	0		0.72	0.67	0.94	0.93	0		0.94	0.8	0.58	0.63	0		0.82	0.75	0.97	0.86	0		0.98	**-**
Heavy	1	0	1	0		2	1	79	2	0		82	1	0	0	0		1	1	93	3	0		97	**-**
Heavy %	0.8%	0%	1.1%	0%		0.8%	4.2%	8.4%	5.4%	0%		8.2%	1.2%	0%	0%	0%		0.6%	1.4%	4.9%	6.3%	0%		4.8%	**-**
Lights	120	30	90	0		240	23	860	34	0		917	82	14	83	0		179	71	1821	45	0		1937	**-**
Lights %	99.2%	100%	98.9%	0%		99.2%	95.8%	91.6%	91.9%	0%		91.7%	98.8%	100%	100%	0%		99.4%	98.6%	95.1%	93.8%	0%		95.2%	**-**
Single-Unit Trucks	0	0	0	0		0	0	37	2	0		39	0	0	0	0		0	0	45	0	0		45	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	3.9%	5.4%	0%		3.9%	0%	0%	0%	0%		0%	0%	2.3%	0%	0%		2.2%	**-**
Buses	1	0	1	0		2	1	21	0	0		22	1	0	0	0		1	1	12	3	0		16	**-**
Buses %	0.8%	0%	1.1%	0%		0.8%	4.2%	2.2%	0%	0%		2.2%	1.2%	0%	0%	0%		0.6%	1.4%	0.6%	6.3%	0%		0.8%	**-**
Articulated Trucks	0	0	0	0		0	0	21	0	0		21	0	0	0	0		0	0	36	0	0		36	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	2.2%	0%	0%		2.1%	0%	0%	0%	0%		0%	0%	1.9%	0%	0%		1.8%	**-**
Bicycles on Road	0	0	0	0		0	0	0	1	0		1	0	0	0	0		0	0	1	0	0		1	**-**
Bicycles on Road %	0%	0%	0%	0%		0%	0%	0%	2.7%	0%		0.1%	0%	0%	0%	0%		0%	0%	0.1%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	3	-	-	-	-	-	25	-	**-**
Pedestrians%	-	-	-	-	4%		-	-	-	-	4%		-	-	-	-	3%		-	-	-	-	25.3%		**-**
Bicycles on Crosswalk	-	-	-	-	14	-	-	-	-	-	3	-	-	-	-	-	9	-	-	-	-	-	37	-	**-**
Bicycles on Crosswalk%	-	-	-	-	14.1%		-	-	-	-	3%		-	-	-	-	9.1%		-	-	-	-	37.4%		**-**

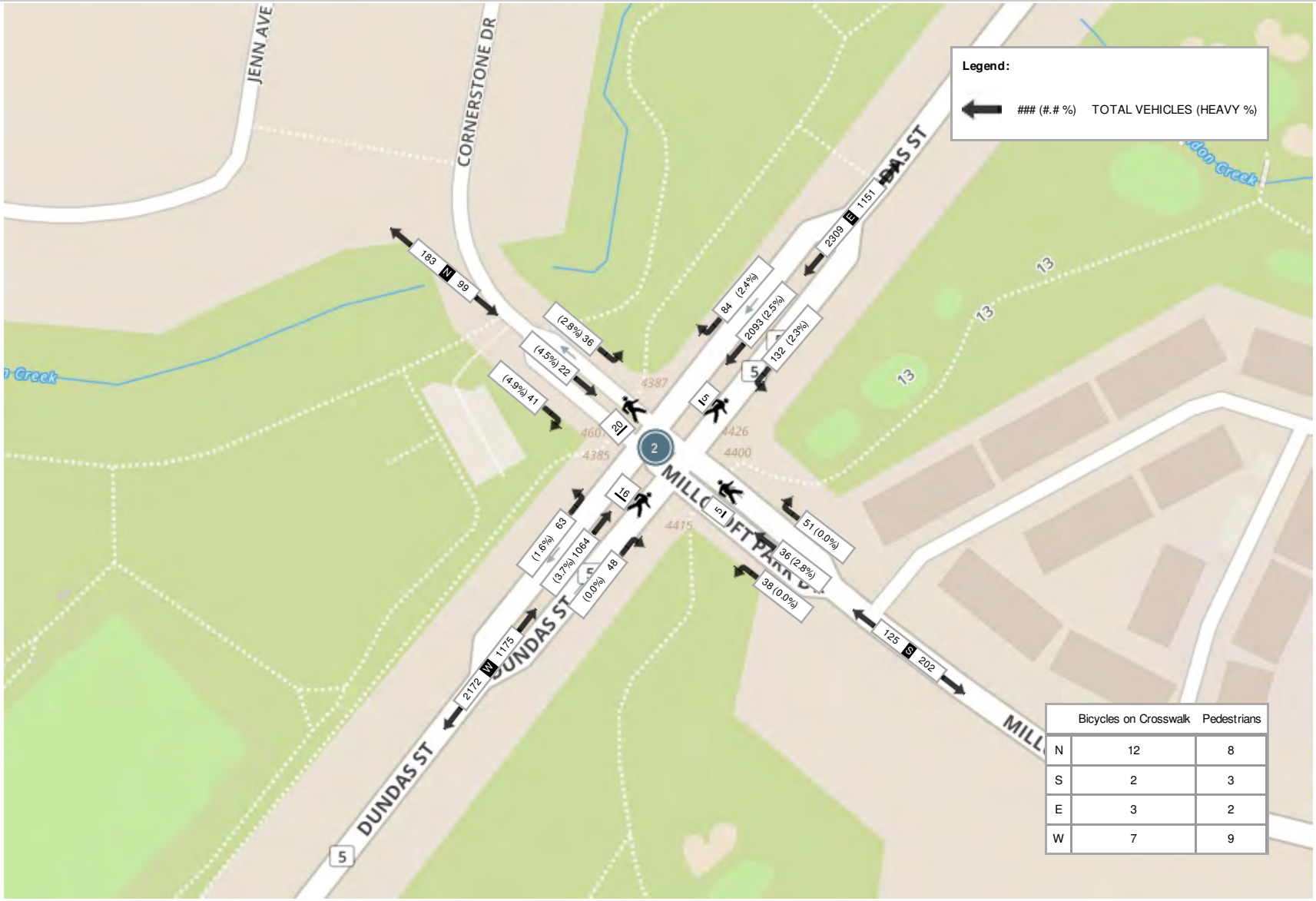
Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (22.61 °C)

Start Time	N Approach CORNERSTONE DR						E Approach DUNDAS ST						S Approach MILLCROFT PARK DR						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	
16:15:00	13	3	8	0	3	24	19	554	34	0	0	607	14	7	10	0	1	31	9	288	16	0	0	313	975
16:30:00	9	8	11	0	3	28	19	505	30	0	0	554	14	8	8	0	1	30	14	236	13	0	5	263	875
16:45:00	9	7	10	0	10	26	24	537	36	0	3	597	14	10	10	0	2	34	14	283	10	0	7	307	964
17:00:00	10	4	7	0	4	21	22	497	32	0	2	551	9	11	10	0	1	30	11	257	24	0	4	292	894
Grand Total	41	22	36	0	20	99	84	2093	132	0	5	2309	51	36	38	0	5	125	48	1064	63	0	16	1175	**3708**
Approach%	41.4%	22.2%	36.4%	0%		-	3.6%	90.6%	5.7%	0%		-	40.8%	28.8%	30.4%	0%		-	4.1%	90.6%	5.4%	0%		-	**-**
Totals %	1.1%	0.6%	1%	0%		2.7%	2.3%	56.4%	3.6%	0%		62.3%	1.4%	1%	1%	0%		3.4%	1.3%	28.7%	1.7%	0%		31.7%	**-**
PHF	0.79	0.69	0.82	0		0.88	0.88	0.94	0.92	0		0.95	0.91	0.82	0.95	0		0.92	0.86	0.92	0.66	0		0.94	**-**
Heavy	2	1	1	0		4	2	52	3	0		57	0	1	0	0		1	0	39	1	0		40	**-**
Heavy %	4.9%	4.5%	2.8%	0%		4%	2.4%	2.5%	2.3%	0%		2.5%	0%	2.8%	0%	0%		0.8%	0%	3.7%	1.6%	0%		3.4%	**-**
Lights	38	21	35	0		94	82	2041	129	0		2252	51	35	38	0		124	47	1025	62	0		1134	**-**
Lights %	92.7%	95.5%	97.2%	0%		94.9%	97.6%	97.5%	97.7%	0%		97.5%	100%	97.2%	100%	0%		99.2%	97.9%	96.3%	98.4%	0%		96.5%	**-**
Single-Unit Trucks	1	0	1	0		2	0	29	3	0		32	0	0	0	0		0	0	13	0	0		13	**-**
Single-Unit Trucks %	2.4%	0%	2.8%	0%		2%	0%	1.4%	2.3%	0%		1.4%	0%	0%	0%	0%		0%	0%	1.2%	0%	0%		1.1%	**-**
Buses	1	1	0	0		2	2	12	0	0		14	0	1	0	0		1	0	15	1	0		16	**-**
Buses %	2.4%	4.5%	0%	0%		2%	2.4%	0.6%	0%	0%		0.6%	0%	2.8%	0%	0%		0.8%	0%	1.4%	1.6%	0%		1.4%	**-**
Articulated Trucks	0	0	0	0		0	0	11	0	0		11	0	0	0	0		0	0	11	0	0		11	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.5%	0%	0%		0.5%	0%	0%	0%	0%		0%	0%	1%	0%	0%		0.9%	**-**
Bicycles on Road	1	0	0	0		1	0	0	0	0		0	0	0	0	0		0	1	0	0	0		1	**-**
Bicycles on Road %	2.4%	0%	0%	0%		1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	2.1%	0%	0%	0%		0.1%	**-**
Pedestrians	-	-	-	-	8	-	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	9	-	**-**
Pedestrians%	-	-	-	-	17.4%		-	-	-	-	4.3%		-	-	-	-	6.5%		-	-	-	-	19.6%		**-**
Bicycles on Crosswalk	-	-	-	-	12	-	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	7	-	**-**
Bicycles on Crosswalk%	-	-	-	-	26.1%		-	-	-	-	6.5%		-	-	-	-	4.3%		-	-	-	-	15.2%		**-**

Peak Hour: 08:00 AM - 09:00 AM Weather: Scattered Clouds (11.07 °C)



Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (22.61 °C)



	Bicycles on Crosswalk	Pedestrians
N	12	8
S	2	3
E	3	2
W	7	9

Turning Movement Count (1 . DUNDAS ST & TIM DOBBIE DR)

Start Time	N Approach TIM DOBBIE DR						E Approach DUNDAS ST						S Approach WESTLOCK COMMON						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		
06:00:00	4	0	11	0	0	15	3	31	0	0	0	34	0	0	0	0	2	0	0	190	3	0	0	193	242	
06:15:00	4	1	19	0	1	24	0	46	0	0	0	46	1	0	1	0	0	2	0	266	3	0	0	269	341	
06:30:00	9	0	15	0	1	24	2	77	0	0	1	79	2	0	0	0	1	2	0	358	2	0	0	360	465	
06:45:00	6	0	26	0	0	32	2	88	0	0	0	90	2	1	3	0	0	6	1	425	8	0	3	434	562	1610
07:00:00	3	0	29	0	1	32	5	104	0	0	1	109	4	0	2	0	3	6	1	445	2	0	0	448	595	1963
07:15:00	11	1	37	0	0	49	10	163	1	0	0	174	6	0	2	0	1	8	1	518	10	0	0	529	760	2382
07:30:00	10	0	47	0	0	57	11	163	0	0	0	174	9	0	2	0	1	11	0	509	14	1	2	524	766	2683
07:45:00	16	0	39	0	1	55	13	207	2	0	2	222	5	0	1	0	1	6	1	483	22	0	0	506	789	2910
08:00:00	24	0	39	0	0	63	47	212	0	0	1	259	3	0	3	0	0	6	0	469	39	0	1	508	836	3151
08:15:00	53	0	73	0	2	126	93	208	0	0	1	301	13	0	7	0	6	20	11	424	48	0	32	483	930	3321
08:30:00	66	0	69	0	0	135	53	241	3	0	2	297	12	0	6	0	7	18	13	452	42	0	29	507	957	3512
08:45:00	18	0	56	0	2	74	24	261	4	0	0	289	2	0	6	0	0	8	1	398	18	0	1	417	788	3511
09:00:00	6	0	22	0	4	28	24	200	2	0	0	226	4	0	3	0	1	7	2	353	11	0	0	366	627	3302
09:15:00	15	0	17	0	5	32	8	180	3	0	0	191	8	0	4	0	2	12	3	327	12	0	0	342	577	2949
09:30:00	8	0	13	0	0	21	13	176	1	0	0	190	1	0	1	0	0	2	1	263	7	0	0	271	484	2476
09:45:00	11	0	24	0	2	35	26	144	2	0	0	172	3	0	2	0	0	5	1	232	13	0	0	246	458	2146
BREAK																										
15:00:00	46	0	60	0	7	106	18	315	0	0	2	333	2	1	5	0	1	8	3	239	20	0	5	262	709	
15:15:00	37	0	21	0	3	58	25	403	5	0	2	433	1	0	4	0	2	5	4	208	12	0	1	224	720	
15:30:00	20	0	19	0	3	39	21	435	3	0	0	459	1	0	1	0	0	2	4	252	12	0	0	268	768	
15:45:00	17	0	24	0	0	41	31	469	0	0	0	500	2	0	2	0	1	4	5	208	10	0	0	223	768	2965
16:00:00	16	0	21	0	3	37	29	492	3	0	2	524	5	0	2	0	1	7	5	237	14	0	2	256	824	3080
16:15:00	21	0	28	0	1	49	43	517	1	0	1	561	1	0	4	0	2	5	2	268	17	0	2	287	902	3262
16:30:00	17	0	33	0	1	50	52	463	4	0	1	519	1	0	2	0	2	3	2	249	20	0	7	271	843	3337
16:45:00	15	0	44	0	6	59	43	494	3	0	1	540	2	1	1	0	2	4	1	246	26	0	4	273	876	3445
17:00:00	24	0	21	0	4	45	34	493	3	0	0	530	3	0	1	0	1	4	4	260	21	0	0	285	864	3485
17:15:00	21	2	23	0	6	46	32	444	7	0	0	483	2	0	4	0	4	6	4	251	22	0	1	277	812	3395
17:30:00	15	0	19	0	0	34	44	452	0	0	0	496	3	1	1	0	4	5	4	260	27	0	0	291	826	3378
17:45:00	17	0	27	0	8	44	46	405	7	0	2	458	3	0	1	0	1	4	4	241	35	0	0	280	786	3288
18:00:00	28	0	29	0	0	57	69	350	6	0	4	425	4	0	4	0	4	8	1	251	46	0	0	298	788	3212
18:15:00	25	0	27	0	3	52	49	312	4	0	0	365	2	0	7	0	1	9	11	235	46	0	2	292	718	3118

18:30:00	23	0	27	0	7	50	51	268	3	0	2	322	3	0	0	0	1	3	4	233	28	0	0	265	640	2932
18:45:00	15	0	23	0	3	38	45	280	3	0	0	328	5	0	0	0	2	5	4	229	28	0	0	261	632	2778
Grand Total	621	4	982	0	74	1607	966	9093	70	0	25	10129	115	4	82	0	54	201	98	9979	638	1	92	10716	**22653**	-
Approach%	38.6%	0.2%	61.1%	0%		-	9.5%	89.8%	0.7%	0%		-	57.2%	2%	40.8%	0%		-	0.9%	93.1%	6%	0%		-	**-**	-
Totals %	2.7%	0%	4.3%	0%		7.1%	4.3%	40.1%	0.3%	0%		44.7%	0.5%	0%	0.4%	0%		0.9%	0.4%	44.1%	2.8%	0%		47.3%	**-**	-
Heavy	50	0	23	0		-	17	393	0	0		-	1	0	0	0		-	0	397	59	0		-	**-**	-
Heavy %	8.1%	0%	2.3%	0%		-	1.8%	4.3%	0%	0%		-	0.9%	0%	0%	0%		-	0%	4%	9.2%	0%		-	**-**	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-

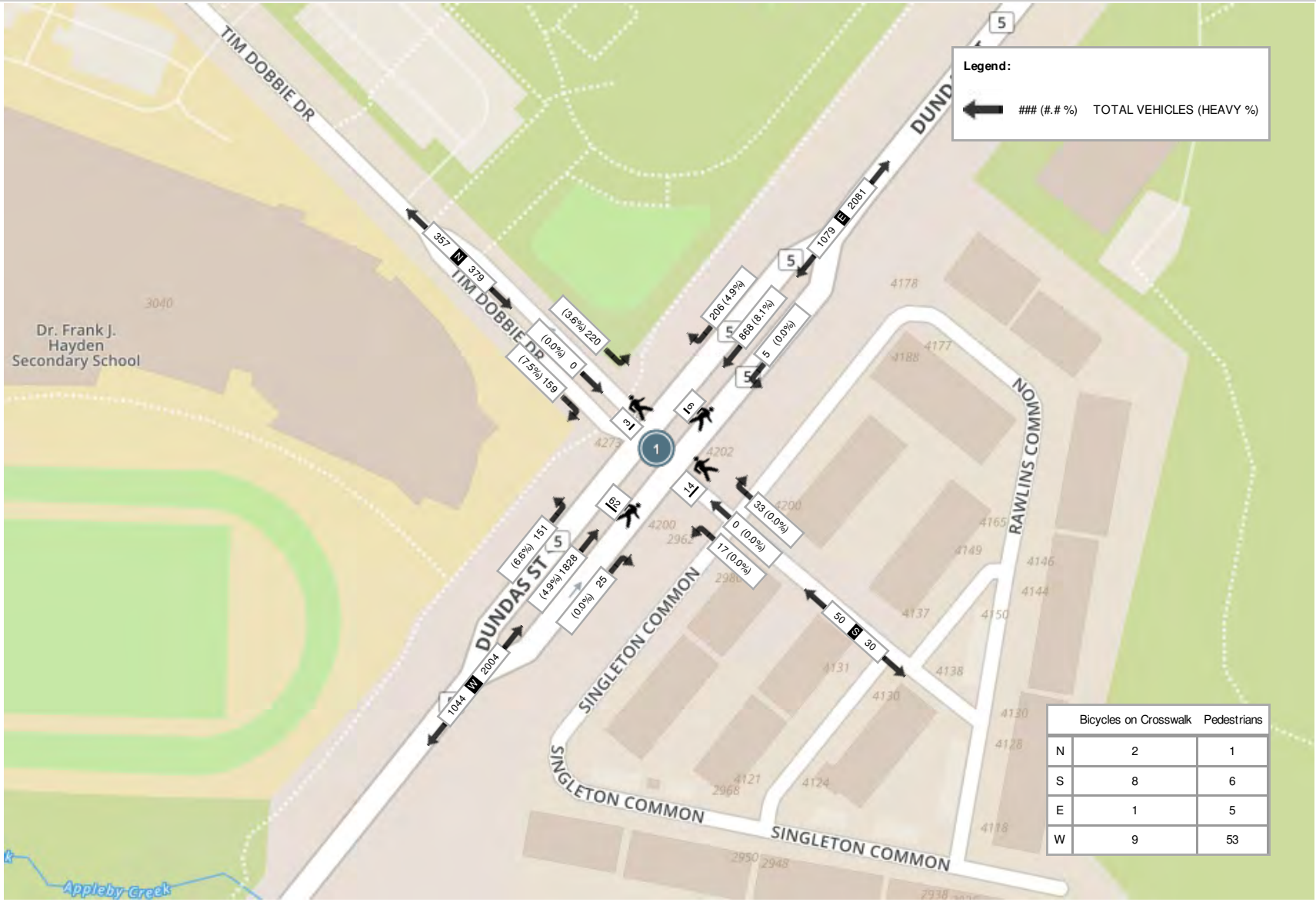
Peak Hour: 07:45 AM - 08:45 AM Weather: Scattered Clouds (11.07 °C)

Start Time	N Approach TIM DOBBIE DR						E Approach DUNDAS ST						S Approach WESTLOCK COMMON						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	
07:45:00	16	0	39	0	1	55	13	207	2	0	2	222	5	0	1	0	1	6	1	483	22	0	0	506	789
08:00:00	24	0	39	0	0	63	47	212	0	0	1	259	3	0	3	0	0	6	0	469	39	0	1	508	836
08:15:00	53	0	73	0	2	126	93	208	0	0	1	301	13	0	7	0	6	20	11	424	48	0	32	483	930
08:30:00	66	0	69	0	0	135	53	241	3	0	2	297	12	0	6	0	7	18	13	452	42	0	29	507	957
Grand Total	159	0	220	0	3	379	206	868	5	0	6	1079	33	0	17	0	14	50	25	1828	151	0	62	2004	**3512**
Approach%	42%	0%	58%	0%		-	19.1%	80.4%	0.5%	0%		-	66%	0%	34%	0%		-	1.2%	91.2%	7.5%	0%		-	**-**
Totals %	4.5%	0%	6.3%	0%		10.8%	5.9%	24.7%	0.1%	0%		30.7%	0.9%	0%	0.5%	0%		1.4%	0.7%	52.1%	4.3%	0%		57.1%	**-**
PHF	0.6	0	0.75	0		0.7	0.55	0.9	0.42	0		0.9	0.63	0	0.61	0		0.63	0.48	0.95	0.79	0		0.99	**-**
Heavy	12	0	8	0		20	10	70	0	0		80	0	0	0	0		0	0	90	10	0		100	**-**
Heavy %	7.5%	0%	3.6%	0%		5.3%	4.9%	8.1%	0%	0%		7.4%	0%	0%	0%	0%		0%	0%	4.9%	6.6%	0%		5%	**-**
Lights	147	0	212	0		359	196	798	5	0		999	33	0	17	0		50	25	1738	141	0		1904	**-**
Lights %	92.5%	0%	96.4%	0%		94.7%	95.1%	91.9%	100%	0%		92.6%	100%	0%	100%	0%		100%	100%	95.1%	93.4%	0%		95%	**-**
Single-Unit Trucks	0	0	1	0		1	0	36	0	0		36	0	0	0	0		0	0	45	0	0		45	**-**
Single-Unit Trucks %	0%	0%	0.5%	0%		0.3%	0%	4.1%	0%	0%		3.3%	0%	0%	0%	0%		0%	0%	2.5%	0%	0%		2.2%	**-**
Buses	12	0	7	0		19	10	11	0	0		21	0	0	0	0		0	0	11	10	0		21	**-**
Buses %	7.5%	0%	3.2%	0%		5%	4.9%	1.3%	0%	0%		1.9%	0%	0%	0%	0%		0%	0%	0.6%	6.6%	0%		1%	**-**
Articulated Trucks	0	0	0	0		0	0	23	0	0		23	0	0	0	0		0	0	34	0	0		34	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	2.6%	0%	0%		2.1%	0%	0%	0%	0%		0%	0%	1.9%	0%	0%		1.7%	**-**
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	-	-	-	-	1	-	-	-	-	-	5	-	-	-	-	-	6	-	-	-	-	-	53	-	**-**
Pedestrians%	-	-	-	-	1.2%		-	-	-	-	5.9%		-	-	-	-	7.1%		-	-	-	-	62.4%		**-**
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	8	-	-	-	-	-	9	-	**-**
Bicycles on Crosswalk%	-	-	-	-	2.4%		-	-	-	-	1.2%		-	-	-	-	9.4%		-	-	-	-	10.6%		**-**

Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (22.61 °C)

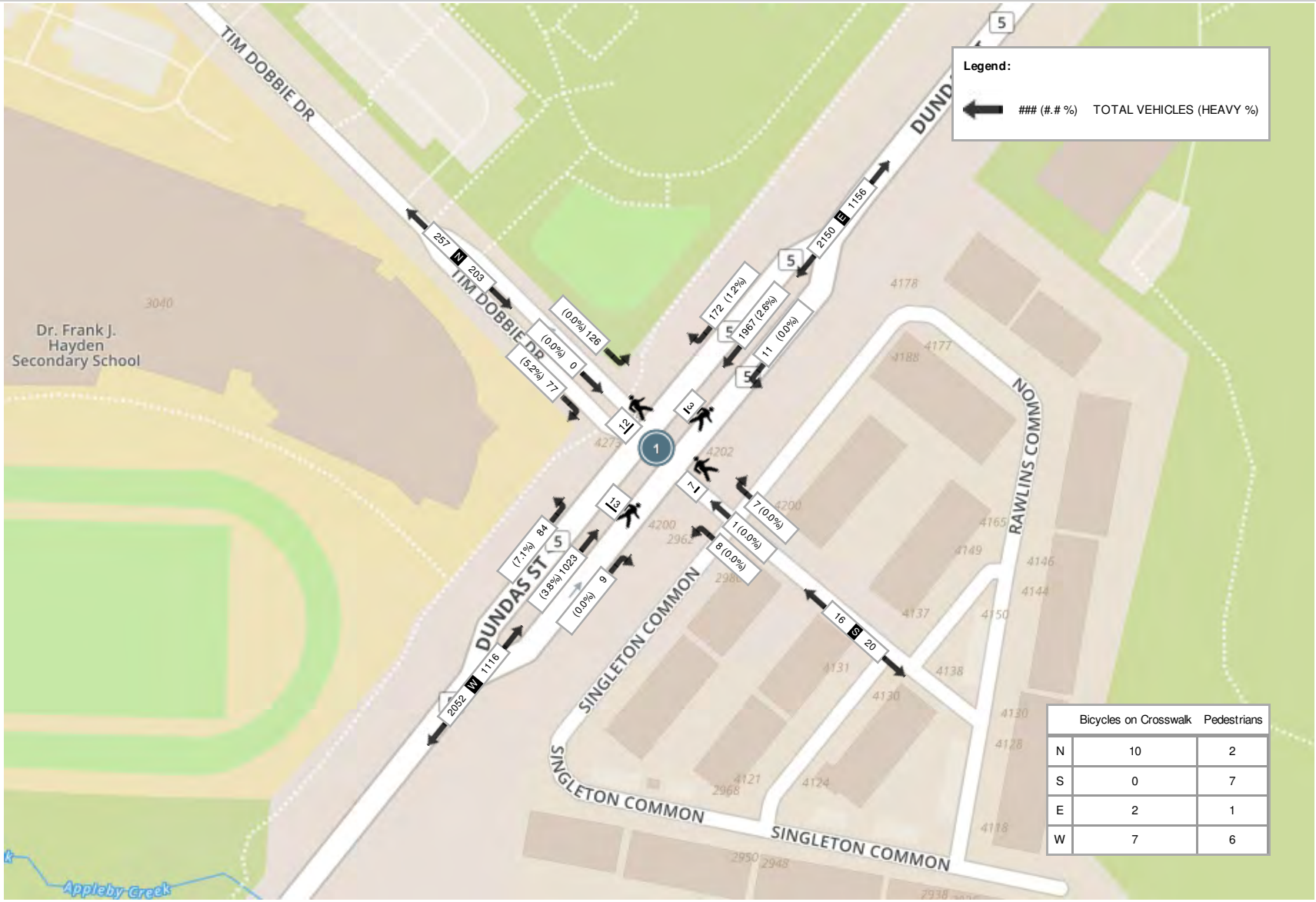
Start Time	N Approach TIM DOBBIE DR						E Approach DUNDAS ST						S Approach WESTLOCK COMMON						W Approach DUNDAS ST						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
16:15:00	21	0	28	0	1	49	43	517	1	0	1	561	1	0	4	0	2	5	2	268	17	0	2	287	902
16:30:00	17	0	33	0	1	50	52	463	4	0	1	519	1	0	2	0	2	3	2	249	20	0	7	271	843
16:45:00	15	0	44	0	6	59	43	494	3	0	1	540	2	1	1	0	2	4	1	246	26	0	4	273	876
17:00:00	24	0	21	0	4	45	34	493	3	0	0	530	3	0	1	0	1	4	4	260	21	0	0	285	864
Grand Total	77	0	126	0	12	203	172	1967	11	0	3	2150	7	1	8	0	7	16	9	1023	84	0	13	1116	**3485**
Approach%	37.9%	0%	62.1%	0%		-	8%	91.5%	0.5%	0%		-	43.8%	6.3%	50%	0%		-	0.8%	91.7%	7.5%	0%		-	**-**
Totals %	2.2%	0%	3.6%	0%		5.8%	4.9%	56.4%	0.3%	0%		61.7%	0.2%	0%	0.2%	0%		0.5%	0.3%	29.4%	2.4%	0%		32%	**-**
PHF	0.8	0	0.72	0		0.86	0.83	0.95	0.69	0		0.96	0.58	0.25	0.5	0		0.8	0.56	0.95	0.81	0		0.97	**-**
Heavy	4	0	0	0		4	2	52	0	0		54	0	0	0	0		0	0	39	6	0		45	**-**
Heavy %	5.2%	0%	0%	0%		2%	1.2%	2.6%	0%	0%		2.5%	0%	0%	0%	0%		0%	0%	3.8%	7.1%	0%		4%	**-**
Lights	73	0	126	0		199	170	1915	11	0		2096	7	1	8	0		16	9	984	78	0		1071	**-**
Lights %	94.8%	0%	100%	0%		98%	98.8%	97.4%	100%	0%		97.5%	100%	100%	100%	0%		100%	100%	96.2%	92.9%	0%		96%	**-**
Single-Unit Trucks	0	0	0	0		0	0	30	0	0		30	0	0	0	0		0	0	12	0	0		12	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	1.5%	0%	0%		1.4%	0%	0%	0%	0%		0%	0%	1.2%	0%	0%		1.1%	**-**
Buses	4	0	0	0		4	2	12	0	0		14	0	0	0	0		0	0	16	6	0		22	**-**
Buses %	5.2%	0%	0%	0%		2%	1.2%	0.6%	0%	0%		0.7%	0%	0%	0%	0%		0%	0%	1.6%	7.1%	0%		2%	**-**
Articulated Trucks	0	0	0	0		0	0	10	0	0		10	0	0	0	0		0	0	11	0	0		11	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.5%	0%	0%		0.5%	0%	0%	0%	0%		0%	0%	1.1%	0%	0%		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%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	7	-	-	-	-	-	6	-	**-**
Pedestrians%	-	-	-	-	5.7%		-	-	-	-	2.9%		-	-	-	-	20%		-	-	-	-	17.1%		**-**
Bicycles on Crosswalk	-	-	-	-	10	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	7	-	**-**
Bicycles on Crosswalk%	-	-	-	-	28.6%		-	-	-	-	5.7%		-	-	-	-	0%		-	-	-	-	20%		**-**

Peak Hour: 07:45 AM - 08:45 AM Weather: Scattered Clouds (11.07 °C)



	Bicycles on Crosswalk	Pedestrians
N	2	1
S	8	6
E	1	5
W	9	53

Peak Hour: 04:15 PM - 05:15 PM Weather: Broken Clouds (22.61 °C)



	Bicycles on Crosswalk	Pedestrians
N	10	2
S	0	7
E	2	1
W	7	6

Dundas St @ Walkers Line

Morning Peak Diagram

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

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

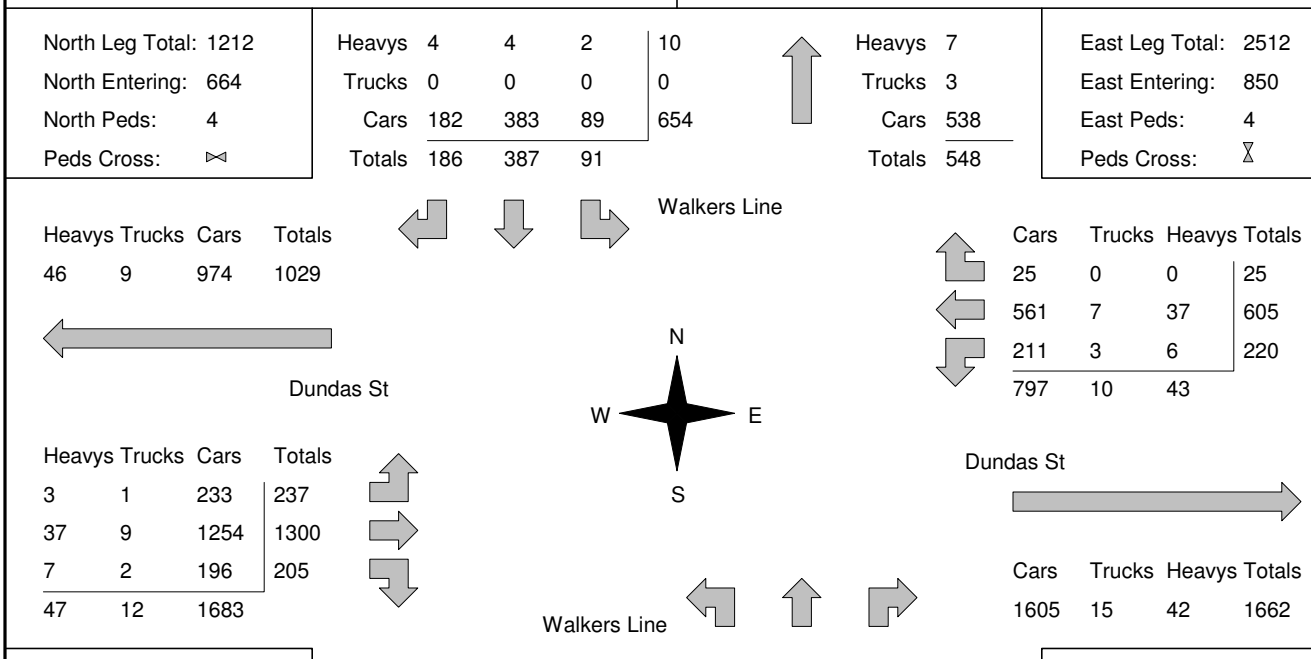
Municipality: Halton Region
Site #: 0000003215
Intersection: Dundas St & Walkers Line
TFR File #: 5
Count date: 22-Oct-2019

Weather conditions:
Overcast/Wet

Person(s) who counted:
Cam

**** Signalized Intersection ****

Major Road: Dundas St runs W/E



Comments

Dundas St @ Walkers Line

Mid-day Peak Diagram

Specified Period
From: 11:00:00
To: 14:00:00

One Hour Peak
From: 12:00:00
To: 13:00:00

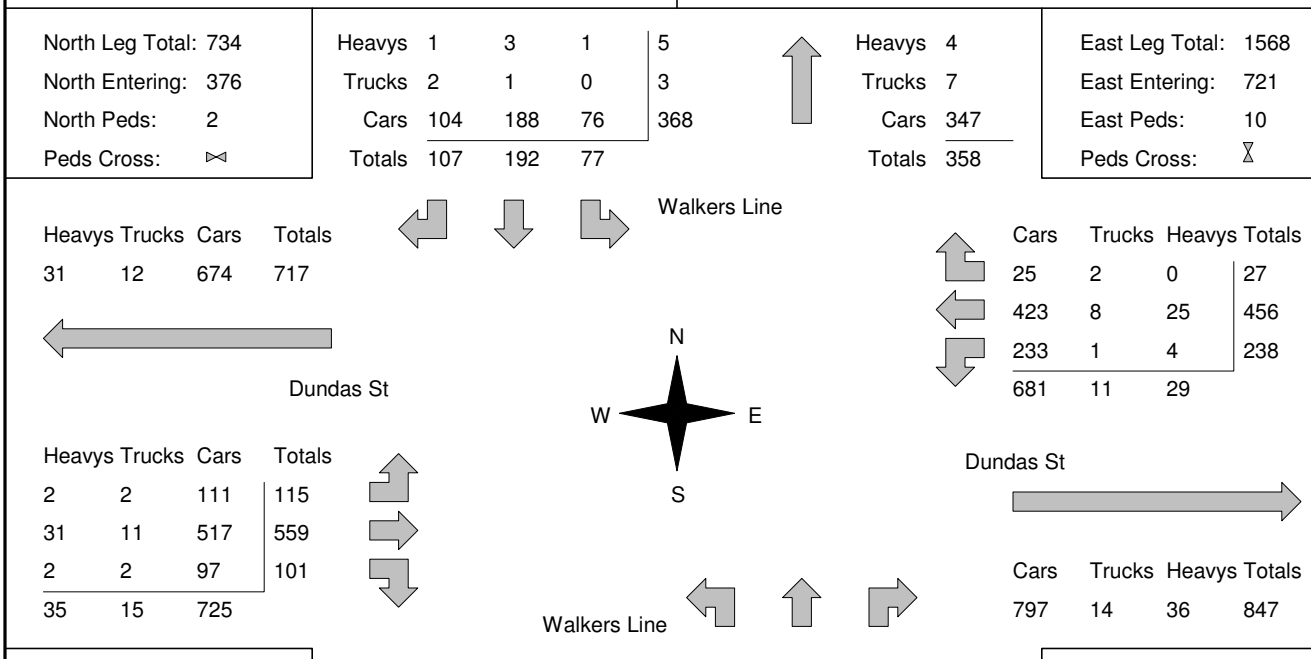
Municipality: Halton Region
Site #: 0000003215
Intersection: Dundas St & Walkers Line
TFR File #: 5
Count date: 22-Oct-2019

Weather conditions:
Overcast/Wet

Person(s) who counted:
Cam

**** Signalized Intersection ****

Major Road: Dundas St runs W/E



Comments

Dundas St @ Walkers Line

Afternoon Peak Diagram

Specified Period
From: 15:00:00
To: 18:00:00

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

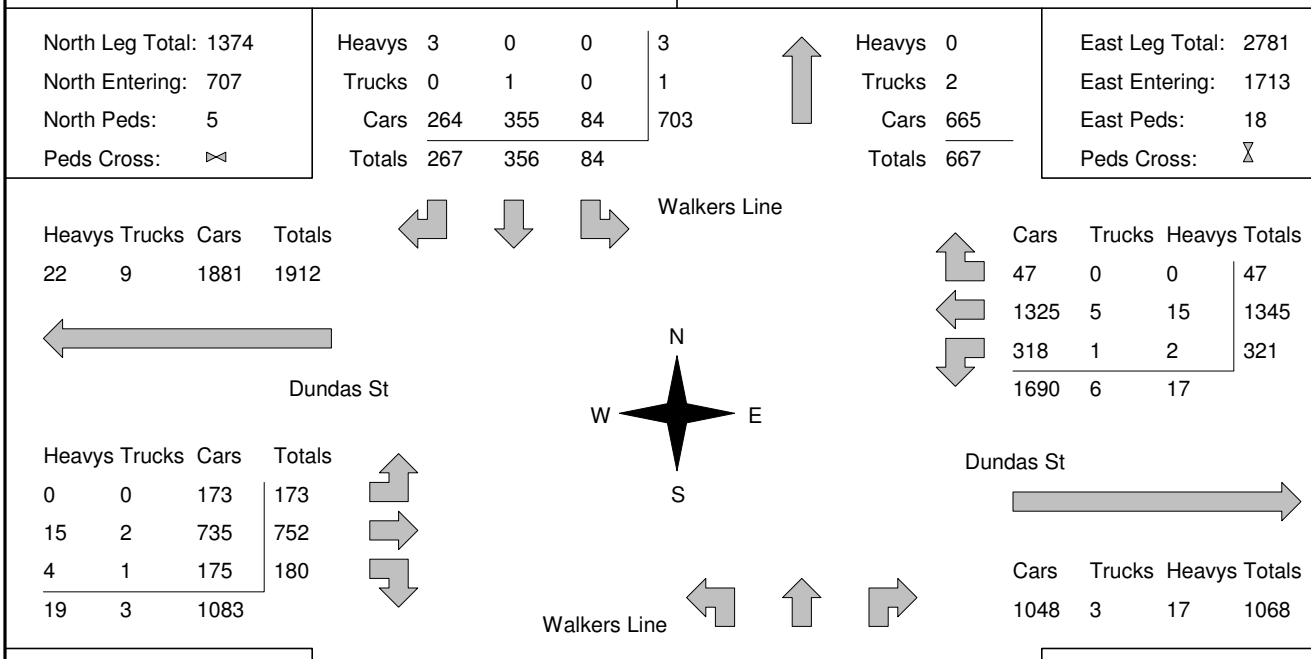
Municipality: Halton Region
Site #: 0000003215
Intersection: Dundas St & Walkers Line
TFR File #: 5
Count date: 22-Oct-2019

Weather conditions:
Overcast/Wet

Person(s) who counted:
Cam

**** Signalized Intersection ****

Major Road: Dundas St runs W/E



Comments

Dundas St @ Walkers Line

Total Count Diagram

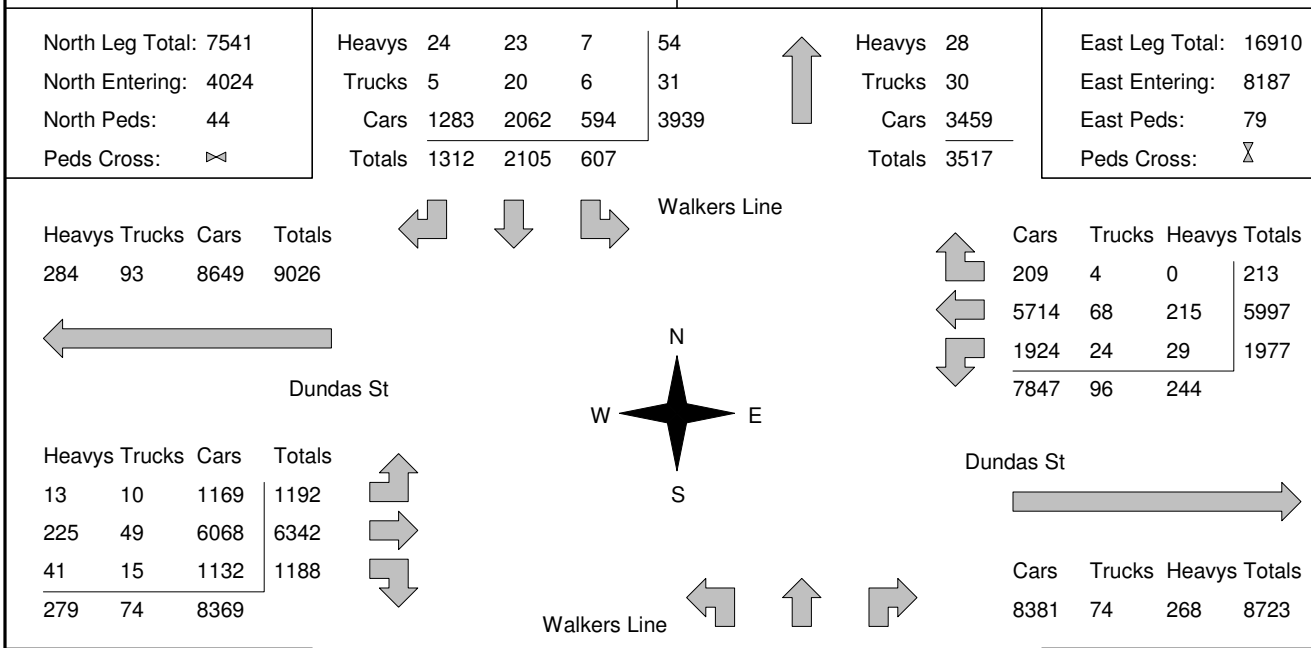
Municipality: Halton Region
Site #: 0000003215
Intersection: Dundas St & Walkers Line
TFR File #: 5
Count date: 22-Oct-2019

Weather conditions:
Overcast/Wet

Person(s) who counted:
Cam

**** Signalized Intersection ****

Major Road: Dundas St runs W/E



Comments

Dundas St @ Appleby Line

Morning Peak Diagram

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

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

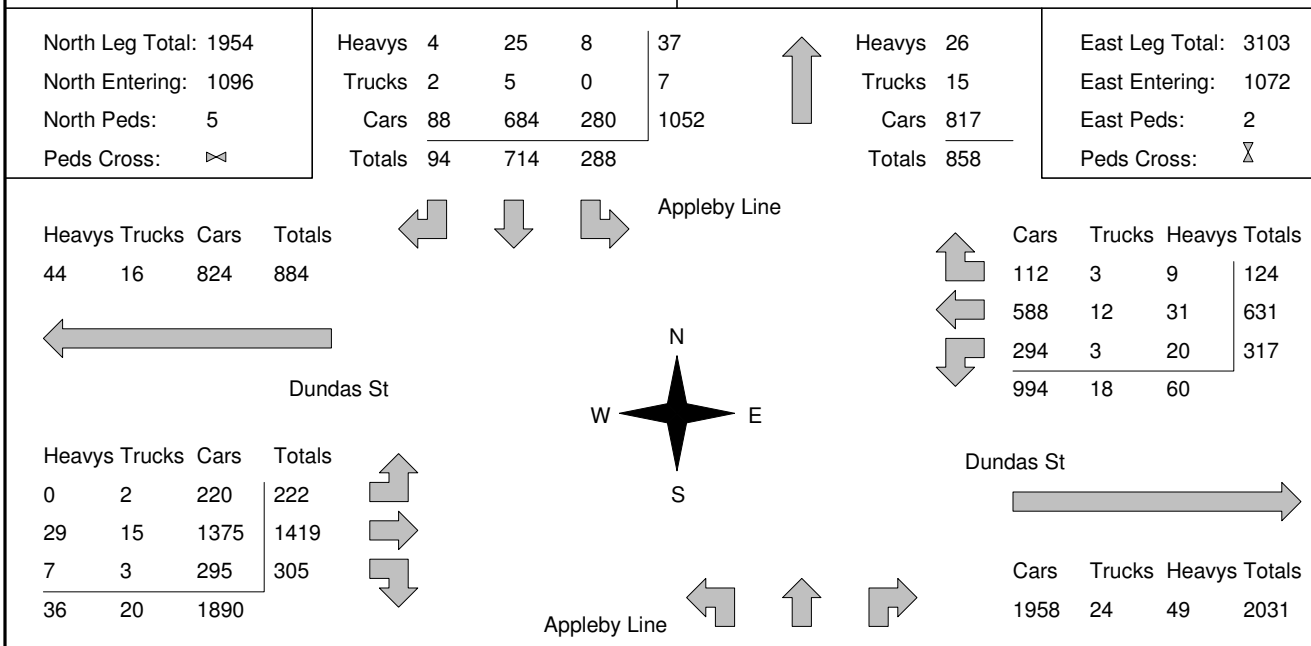
Municipality: Halton Region
Site #: 0000003218
Intersection: Dundas St & Appleby Line
TFR File #: 8
Count date: 22-Oct-2019

Weather conditions:
Overcast/Wet

Person(s) who counted:
Cam

**** Signalized Intersection ****

Major Road: Dundas St runs W/E



Comments

Dundas St @ Appleby Line

Mid-day Peak Diagram

Specified Period
From: 11:00:00
To: 14:00:00

One Hour Peak
From: 11:45:00
To: 12:45:00

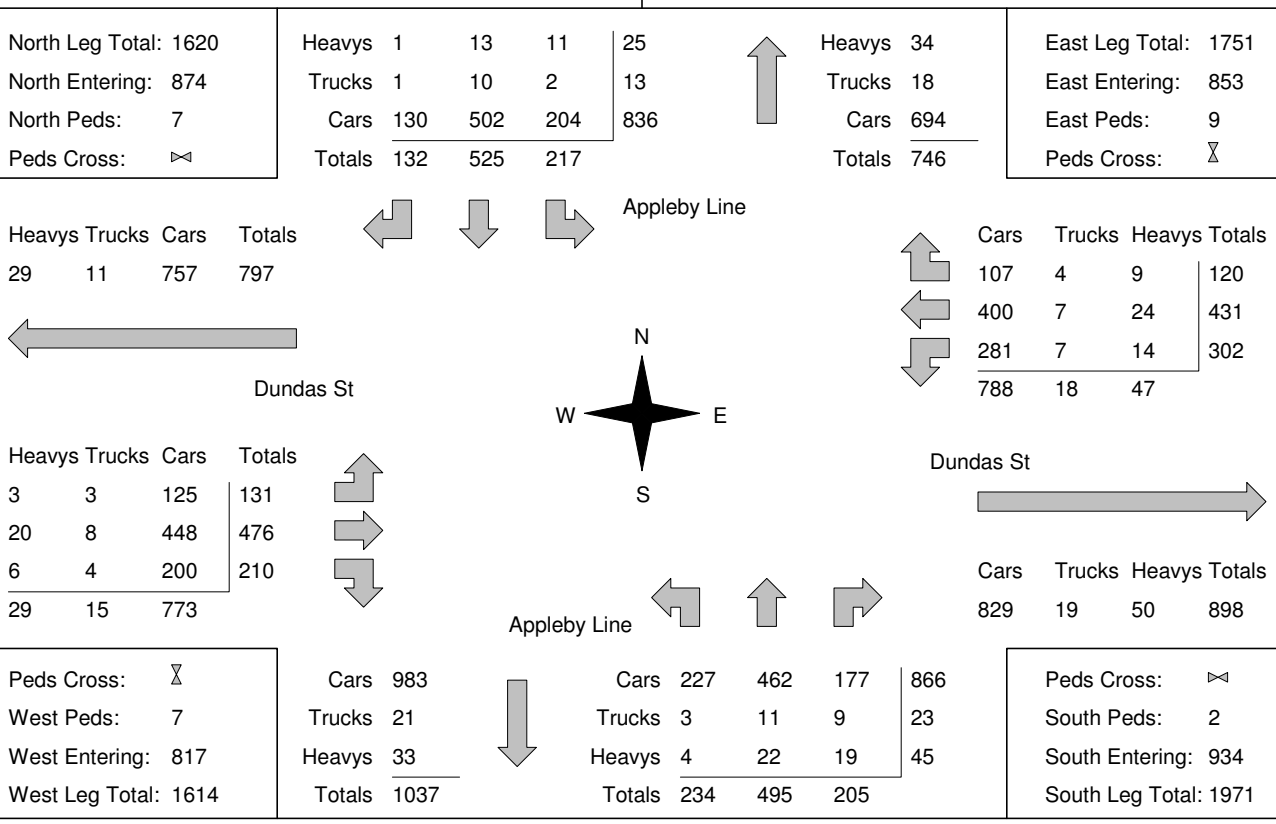
Municipality: Halton Region
Site #: 0000003218
Intersection: Dundas St & Appleby Line
TFR File #: 8
Count date: 22-Oct-2019

Weather conditions:
Overcast/Wet

Person(s) who counted:
Cam

**** Signalized Intersection ****

Major Road: Dundas St runs W/E



Comments

Dundas St @ Appleby Line

Afternoon Peak Diagram

Specified Period
From: 15:00:00
To: 18:00:00

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

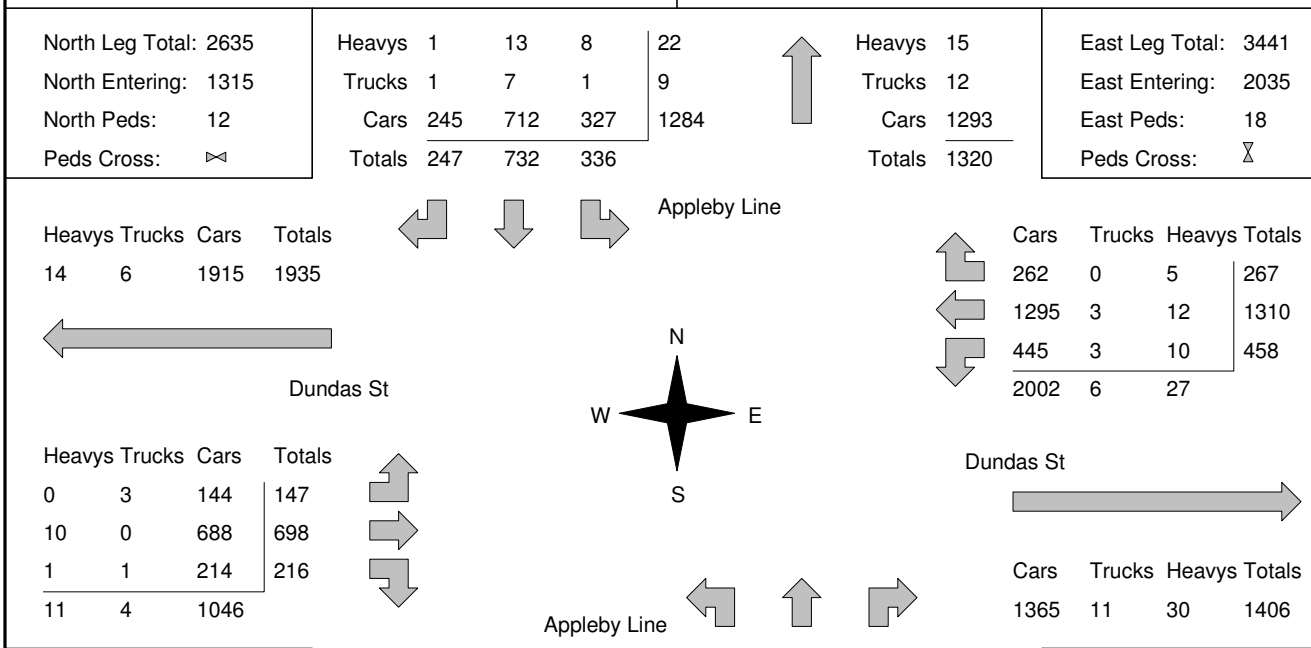
Municipality: Halton Region
Site #: 0000003218
Intersection: Dundas St & Appleby Line
TFR File #: 8
Count date: 22-Oct-2019

Weather conditions:
Overcast/Wet

Person(s) who counted:
Cam

**** Signalized Intersection ****

Major Road: Dundas St runs W/E



Comments

Dundas St @ Appleby Line

Total Count Diagram

Municipality: Halton Region
Site #: 0000003218
Intersection: Dundas St & Appleby Line
TFR File #: 8
Count date: 22-Oct-2019

Weather conditions:
Overcast/Wet

Person(s) who counted:
Cam

**** Signalized Intersection ****

Major Road: Dundas St runs W/E

North Leg Total:	14963
North Entering:	7952
North Peds:	54
Peds Cross:	⋈

Heavys	13	125	78	216
Trucks	12	65	6	83
Cars	1149	4560	1944	7653
Totals	1174	4750	2028	

Heavys	218
Trucks	103
Cars	6690
Totals	7011

East Leg Total:	20264
East Entering:	9713
East Peds:	61
Peds Cross:	⧖

Appleby Line

Heavys	Trucks	Cars	Totals
231	87	8665	8983

Dundas St

Cars	Trucks	Heavys	Totals
1137	21	75	1233
5601	60	179	5840
2492	35	113	2640
9230	116	367	

N
W E
S

Heavys	Trucks	Cars	Totals
12	15	1153	1180
181	52	5982	6215
37	20	1798	1855
230	87	8933	

Dundas St

Cars	Trucks	Heavys	Totals
10080	105	366	10551

Appleby Line

Peds Cross:	⧖
West Peds:	66
West Entering:	9250
West Leg Total:	18233

Cars	8850
Trucks	120
Heavys	275
Totals	9245

Cars	1915	4400	2154	8469
Trucks	15	67	47	129
Heavys	39	131	107	277
Totals	1969	4598	2308	

Peds Cross:	⋈
South Peds:	59
South Entering:	8875
South Leg Total:	18120

Comments

Intersection Name:	TS ID:	Line No:	Model:	IP address:	Controller Make:
Appleby Ln @ UMR	290	9	ACS/3	172.22.136.2	Econolite

Type of Operation: 8 Phase Semi-Actuated

*-Start from Main Menu

No	Date			Description	Prepared by
	Y	M	D		MA
1					
3	2017	2	3	Amber and All red Changed as per OTM12	

PHASE DESCRIPTION

Ph1	SBLT - Appleby Ln	Ph5	NBLT - Appleby Ln
Ph2	NB - Appleby Ln	Ph6	SB - Appleby Ln
Ph3	WBLT - UMR	Ph7	EBLT - UMR
Ph4	EB - UMR	Ph8	WB - UMR

CONFIGURATION (PHASE SEQ): PHASE IN USE/EXCLUSIVE PED (MM) *- 1 - 2

Phase:	1	2	3	4	5	6	7	8
Phase in Use	X	X	X	X	X	X	X	X
Exclusive PED								

CONTROLLER TIMING DATA - VEHICLE TIMING * - 2 - 1

Timing Plan: 1	Phase: 1	2	3	4	5	6	7	8
Minimum Green	7	8	7	8	7	8	7	8
Walk		7		7		7		7
Ped. Clearance		21		21		21		21
Pedestrian Carry Over								
Vehicle Extension	3	3	3	5	3	3	3	5
MAX 1	10	35	10	30	20	35	10	30
MAX 2	10	35	10	30	20	35	10	30
Yellow Change	3	3.7	3	3.7	3	3.7	3	3.7
Red Clearance	1	2.8	1	2.7	2	2.8	1	2.7
Phase Minimum:	5	35.5	5	35.4	6	35.5	5	35.4

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS * - 2 - 8

Phase:	1	2	3	4	5	6	7	8
Lock Detector								
Vehicle Recall								
Pedestrian Recall		X				X		
MAX Recall		X				X		
Min Recall								

COORDINATION: COORDINATOR PATTERN, SPLIT PATTERN *** - 3 - 2, - 3 - 3**

Coordinator	Cycle	Offset (sec)	Timing Plan	Split	Phases (sec)							
					1	2	3	4	5	6	7	8
1	120	0	1	1	23	43	16	38	13	53	16	38
2	110	0	1	2	12	51	12	35	19	44	12	35
3	140	0	1	3	18	72	14	36	30	60	15	35
10	0	0	1	10	0	0	0	0	0	0	0	0

TIME BASE: ACTION PLAN, DAY PLAN *** - 5 - 2, - 5 - 3, -5 - 4**

Day Plan	Sched. #	Action Plan	Time Period	Pattern	Timing Plan
1	1	1	06:00	1	1
1	1	2	09:00	2	1
1	1	3	15:00	3	1
1	1	2	19:00	2	1
1	1	10	22:00	254	1
2	2	2	06:00	2	1
2	2	10	21:30	254	1
3	3	2	06:00	2	1
3	3	10	21:30	254	1

Schedule 1 = Day Plan 1
Schedule 2 = Day Plan 2
Schedule 3 = Day Plan 3

Day Plan 1 (Weekday)
Day Plan 2 (Saturday)
Day Plan 3 (Sunday, Holidays)

Action Plan 10 = free (254)

Special Programming:

Intersection Name:	TS ID:	Line NO:	IP address:
UMR @ Country Club / Itabashi Way	275	8	172.22.222.2

Controller Make:	Model:	Firmware Rev. No:	
Econolite	ACS/3		

Type of Operation 8 Phase Semi-Actuated

Revision

NO	Date Y	Date M	Date D	Description	Prepared by:
1	2015	5	27	Implement timings in Centracs	MA

*- Start From Main Menu

PHASE DESCRIPTION

Ph1	WBL - UMR	Ph5	EBL - UMR
Ph2	EB - UMR	PH6	WB - UMR
Ph3		Ph7	
Ph4	NB - Itabashi Way	Ph8	SB - Country Club Dr

CONFIGURATION (PHASE SEQ): PHASE IN USE /EXCLUSIVE PED (MM) * - 1 - 2

Phase:	1	2	3	4	5	6	7	8
Phase in Use :	X	X		X	X	X		X
Exclusive PED :								

CONTROLLER: CONTROLLER TIMING DATA - VEHICLE TIMINGS (4 available) * - 2 - 1

Timing Plan 1 Phase:	1	2	3	4	5	6	7	8
Minimum Green :	7	8		8	7	8		8
Conditional Service Min. Green :								
Walk :		7		7		7		7
Ped. Clearance :		18		23		18		23
Pedestrians Carry Over :								
Vehicle Extension :	3	3		3	3	3		3
MAX 1 :	12	35		25	12	35		25
MAX 2 :	12	35		25	12	35		25
Yellow Change :	3	4		4	3	4		4
Red Clearance :	1	2		3	1	2		3

CONTROLLER: PHASE RECALL OPTIONS * - 2 - 8

Phase:	1	2	3	4	5	6	7	8
Lock Detector :								
Vehicle Recall :								
Pedestrian Recall :		X				X		
MAX Recall :		X				X		
Soft Recall :								

COORDINATION: COORDINATOR PATERN, SPLIT PATERN * - 3 - 2, - 3 - 3

Coordinator Pattern (CP)	Cycle Length	Offset (sec)	Timing Plan	Split Pattern	Phases (sec) 1	2	3	4	5	6	7	8
1	120	5	1	1	12	60		48	12	60		48
2	90	17	1	2	12	39		39	12	39		39
3	120	54	1	3	12	70		38	12	70		38
10	0	0	1	10	0	0		0	0	0		0

Intersection Name:	TS ID:	Line NO:	IP address:
UMR @ Country Club / Itabashi Way	275	8	172.22.222.2

Controller Make:	Model:	Firmware Rev. No:	
Econolite	ACS/3		

Intersection Name:	TS ID:	Line NO:	IP address:
UMR @ Country Club / Itabashi Way	275	8	172.22.222.2
Controller Make:	**Model:**	**Firmware Rev. No:**	
Econolite	ACS/3		

CP # 1, 2, 10	Phase:	1	2	3	4	5	6	7	8
Coord Phase	:		X				X		
Vehicle Recall	:								
Pedestrian Recall *(3-3, 5-2)	:		X				X		
Recall to MAX Time	:								
Phase Omit	:								
Special Function Outputs	:								

Coordinator Pattern #	Prefer.	Phase							
		1	2	3	4	5	6	7	8
	1								
	2								

X - select "." deselect

TIME BASE: ACTION PLAN, DAY PLAN *** - 5 - 2, - 5 - 3, - 5 - 4**

Day Plan	Sched. #	Action Plan	Time Period	Pattern	Timing Plan
1	1	1	07:00	1	1
1	1	2	09:00	2	1
1	1	3	15:15	3	1
1	1	2	19:00	2	1
1	1	10	21:30	254	1
2	2	2	09:00	2	1
2	2	10	21:00	254	1
3	3	2	09:00	2	1
3	3	10	21:00	254	1

Schedule 1 = Day Plan 1
Schedule 2 = Day Plan 2
Schedule 3 = Day Plan 3

Day Plan 1 (Weekday)
Day Plan 2 (Saturday)
Day Plan 3 (Sunday, Holidays)

Action Plan 10 = free (254)

Intersection Name:	TS ID:	Line No:	Model:	IP address:	Controller Make:
Walkers Line @ UMR	270	8	ACS/3	172.22.113.2	Econolite

Type of Operation: 4 Phase Semi-Actuated

*-Start from Main Menu

No	Date			Description	Prepared by
	Y	M	D		MA
1	2015	5	26	Implemented timings in Centracs	

PHASE DESCRIPTION

Ph1	SBL - Walkers Line	Ph5	NBL - Walkers Line
Ph2	NB - Walkers Line	Ph6	SB - Walkers Line
Ph3	WBL - UMR	Ph7	EBL - UMR
Ph4	EB - UMR	Ph8	WM - UMR

PHASE IN USE/EXCLUSIVE PED (MM) *- 1 - 2

Phase:	1	2	3	4	5	6	7	8
Phase in Use	X	X	X	X	X	X	X	X
Exclusive PED								

CONTROLLER TIMING DATA - VEHICLE TIMING * - 2 - 1

Timing Plan: 1

	Phase: 1	2	3	4	5	6	7	8
Minimum Green	7	8	7	8	7	8	7	8
Walk		7		7		7		7
Ped. Clearance		18		17		18		17
Pedestrian Carry Over								
Vehicle Extension	3	3	3	5	3	3	3	5
MAX 1	12	35	12	35	12	35	12	35
MAX 2	12	35	12	35	12	35	12	35
Yellow Change	3	4	3	4	3	4	3	4
Red Clearance	1	2	1	2	1	2	1	2
Phase Minimum:	**12**	**32**	**12**	**31**	**12**	**32**	**12**	**31**

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS * - 2 - 8

Phase:	1	2	3	4	5	6	7	8
Lock Detector								
Vehicle Recall								
Pedestrian Recall		X				X		
MAX Recall		X				X		
Min Recall								

COORDINATION: COORDINATOR PATTERN, SPLIT PATTERN *** - 3 - 2, - 3 - 3**

Coordinator Pattern (CP)	Cycle Length	Offset (sec)	Timing Plan	Split Pattern	Phases (sec)							
					1	2	3	4	5	6	7	8
1	120	103	1	1	14	50	16	40	13	51	12	44
2	110	68	1	2	14	42	13	41	14	42	13	41
3	140	0	1	3	13	66	24	37	32	47	11	50
4	90	56	1	4	11	35	11	33	11	35	11	33
5	95	59	1	5	12	37	11	35	12	37	11	35

TIME BASE: ACTION PLAN, DAY PLAN *** - 5 - 2, - 5 - 3, -5 - 4**

Day Plan	Sched. #	Action Plan	Time Period	Pattern	Timing Plan	
1	1	5	6:00	5	1	
1	1	1	7:00	1	1	Schedule 1 = Day Plan 1
1	1	2	9:00	2	1	Schedule 2 = Day Plan 2
1	1	3	15:15	3	1	Schedule 3 = Day Plan 3
1	1	4	19:00	4	1	
1	1	10	21:30	254	1	Day Plan 1 (Weekday)
2	2	5	7:30	5	1	Day Plan 2 (Saturday)
2	2	10	22:00	254	1	Day Plan 3 (Sunday, Holidays)
3	3	5	8:00	5	1	
3	3	10	22:00	254	1	Action Plan 10 = free (254)
					1	

Special Programming:

Intersection Name:	TS ID:	Line NO:	IP address:
Dundas St @ Tim Dobbie Dr / Weslock Comm	777	8	172.22.240.2
Controller Make: Econolite	**Model:** ACS/3	**Firmware Rev. No:**	

Type of Operation 8 Phase Semi-Actuated

Revision

NO	Date Y	Date M	Date D	Description	Prepared by
1	2015	5	27	Implement timings in Centracs	MA

*- Start From Main Menu

PHASE DESCRIPTION

Ph1	WBL - Dundas St.	Ph5	EBL - Dundas St.
Ph2	EB - Dundas St.	PH6	WB - Dundas St.
Ph3		Ph7	
Ph4	NB - Weslock Comm	Ph8	SB -Tim Dobbie Dr

CONFIGURATION (PHASE SEQ): PHASE IN USE /EXCLUSIVE PED (MM) * - 1 - 2

Phase:	1	2	3	4	5	6	7	8
Phase in Use :	X	X		X	X	X		X
Bicycle Min Green								
Exclusive PED :								

CONTROLLER TIMING DATA - VEHICLE TIMINGS (4 available) * - 2 - 1

Timing Plan: 1

Phase:	1	2	3	4	5	6	7	8
Minimum Green :	7	8		8	7	8		8
Conditional Service Min. Green :								
Walk :		7		7		7		7
Ped. Clearance :		18		22		18		22
Pedestrians Carry Over :								
Vehicle Extension :	3	3		3	3	3		3
MAX 1 :	15	55		35	15	55		35
MAX 2 :	15	55		35	15	55		35
Yellow Change :	3	4		4	3	4		4
Red Clearance :	1	2		3	1	2		3

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS * - 2 - 8

Phase:	1	2	3	4	5	6	7	8
Lock Detector :								
Vehicle Recall :								
Pedestrian Recall :		X				X		
MAX Recall :		X				X		
Soft Recall :								

COORDINATION: COORDINATOR PATTERN, SPLIT PATTERN * - 3 - 2, - 3 - 3

Coordinator Pattern (CP)	Cycle Length	Offset (sec)	Timing Plan	Split Pattern	Phases (sec) 1	2	3	4	5	6	7	8
1	140	52	1	1	13	89		38	13	89		38
2	110	3	1	2	12	61		37	12	61		37
3	140	50	1	3	13	89		38	13	89		38

Intersection Name:	TS ID:	Line NO:	IP address:
Dundas St @ Tim Dobbie Dr / Weslock Comm	777	8	172.22.240.2
Controller Make: Econolite	**Model:** ACS/3	**Firmware Rev. No:**	

10	0	0	1	10	0	0		0	0	0		0

CP # 1, 2, 10	Phase:	1	2	3	4	5	6	7	8
Coord Phase	:		X				X		
Vehicle Recall	:								
Pedestrian Recall *(3-3, 5-2)	:		X				X		
Recall to MAX Time	:								
Phase Omit	:								
Special Function Outputs	:								

Coordinator Pattern #	Prefer.	Phase							
		1	2	3	4	5	6	7	8
	1								
	2								

X - select "." deselect

TIME BASE: ACTION PLAN, DAY PLAN * - 5 - 2, - 5 - 3, - 5 - 4

Day Plan	Sched. #	Action Plan	Time Period	Pattern	Timing Plan
1	1	1	06:00	1	1
1	1	2	09:00	2	1
1	1	3	15:00	3	1
1	1	2	19:00	2	1
1	1	10	21:30	254	1
2	2	10	00:00	254	1
3	3	10	00:00	254	1

Schedule 1 = Day Plan 1
Schedule 2 = Day Plan 2
Schedule 3 = Day Plan 3

Day Plan 1 (Weekday)
Day Plan 2 (Saturday)
Day Plan 3 (Sunday, Holidays)

Action Plan 10 = free (254)

TIME BASE DATA - TIME OF YEAR EVENTS * - 5 - 5

Events	Exception Day		MON/ MON	DOW/ DOM	WOM/ Year	Day Plan
New Year's Day	1	Fixed	01	1	0	3
Family Day	2	Float	2	2	3	3
Good Friday	3	Float	04	6	1	3
Victoria Day	4	Float	05	2	3	3
Canada Day	5	Fixed	07	1	0	3
Civic Day	6	Float	08	2	1	3
Labour Day	7	Float	09	2	1	3
Thanksgiving	8	Float	10	2	2	3
Christmas Day	9	Fixed	12	25	0	3

Intersection Name:	TS ID:	Line NO:	IP address:
Dundas St @ Tim Dobbie Dr / Weslock Comm	777	8	172.22.240.2

Controller Make:	Model:	Firmware Rev. No:	
Econolite	ACS/3		

Intersection Name:	TS ID:	Line NO:	IP address:
Dundas St @ Millcroft Park Dr / Cornerstone Dr	791	9	172.22.241.2
Controller Make: Econolite	**Model:** ACS/3	**Firmware Rev. No:**	

Type of Operation 8 Phase Semi-Actuated

Revision

NO	Date Y	Date M	Date D	Description	Prepared by
1	2015	5	29	Implement timings in Centracs	MA

*- Start From Main Menu

PHASE DESCRIPTION

Ph1	WBL - Dundas St.	Ph5	EBL - Dundas St.
Ph2	EB - Dundas St.	PH6	WB - Dundas St.
Ph3		Ph7	
Ph4	NB - Millcroft Park Dr	Ph8	SB -Cornerstone Dr

CONFIGURATION (PHASE SEQ): PHASE IN USE /EXCLUSIVE PED (MM) * - 1 - 2

Phase:	1	2	3	4	5	6	7	8
Phase in Use :	X	X		X	X	X		X
Bicycle Min Green								
Exclusive PED :								

CONTROLLER TIMING DATA - VEHICLE TIMINGS (4 available) * - 2 - 1

Timing Plan: 1

Phase:	1	2	3	4	5	6	7	8
Minimum Green :	7	8		8	7	8		8
Conditional Service Min. Green :								
Walk :		7		7		7		7
Ped. Clearance :		21		24		21		24
Pedestrians Carry Over :								
Vehicle Extension :	3	3		3	3	3		3
MAX 1 :	15	55		35	15	55		35
MAX 2 :	15	55		35	15	55		35
Yellow Change :	3	4		4	3	4		4
Red Clearance :	1	2		3	1	2		3

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS * - 2 - 8

Phase:	1	2	3	4	5	6	7	8
Lock Detector :								
Vehicle Recall :								
Pedestrian Recall :		X				X		
MAX Recall :		X				X		
Soft Recall :								

COORDINATION: COORDINATOR PATTERN, SPLIT PATTERN * - 3 - 2, - 3 - 3

Coordinator Pattern (CP)	Cycle Length	Offset (sec)	Timing Plan	Split Pattern	Phases (sec) 1	2	3	4	5	6	7	8
1	140	71	1	1	13	86		41	13	86		41
2	110	102	1	2	12	58		40	12	58		40
3	140	48	1	3	13	86		41	13	86		41

Intersection Name:	TS ID:	Line NO:	IP address:
Dundas St @ Millcroft Park Dr / Cornerstone Dr	791	9	172.22.241.2
Controller Make: Econolite	**Model:** ACS/3	**Firmware Rev. No:**	

10	0	0	1	10	0	0		0	0	0		0

CP # 1, 2, 10	Phase:	1	2	3	4	5	6	7	8
Coord Phase	:		X				X		
Vehicle Recall	:								
Pedestrian Recall *(3-3, 5-2)	:		X				X		
Recall to MAX Time	:								
Phase Omit	:								
Special Function Outputs	:								

Coordinator Pattern #	Prefer.	Phase							
		1	2	3	4	5	6	7	8
	1								
	2								

X - select "." deselect

TIME BASE: ACTION PLAN, DAY PLAN * - 5 - 2, - 5 - 3, - 5 - 4

Day Plan	Sched. #	Action Plan	Time Period	Pattern	Timing Plan
1	1	1	06:00	1	1
1	1	2	09:00	2	1
1	1	3	15:00	3	1
1	1	2	19:00	2	1
1	1	10	21:30	254	1
2	2	10	00:00	254	1
3	3	10	00:00	254	1

Schedule 1 = Day Plan 1
Schedule 2 = Day Plan 2
Schedule 3 = Day Plan 3

Day Plan 1 (Weekday)
Day Plan 2 (Saturday)
Day Plan 3 (Sunday, Holidays)

Action Plan 10 = free (254)

TIME BASE DATA - TIME OF YEAR EVENTS * - 5 - 5

Events	Exception Day		MON/ MON	DOW/ DOM	WOM/ Year	Day Plan
New Year's Day	1	Fixed	01	1	0	3
Family Day	2	Float	2	2	3	3
Good Friday	3	Float	04	6	1	3
Victoria Day	4	Float	05	2	3	3
Canada Day	5	Fixed	07	1	0	3
Civic Day	6	Float	08	2	1	3
Labour Day	7	Float	09	2	1	3
Thanksgiving	8	Float	10	2	2	3
Christmas Day	9	Fixed	12	25	0	3

Intersection Name:	TS ID:	Line NO:	IP address:
Dundas St @ Millcroft Park Dr / Cornerstone Dr	791	9	172.22.241.2

Controller Make:	Model:	Firmware Rev. No:	
Econolite	ACS/3		

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Configuration Controller Sequence

Phase Ring Sequence and Assignment (MM) 1-1-1

Hardware Alternate Sequence Enable: No

Phase Ring Sequence.....(Note: Sequences identical to the prior one are not printed)

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
	B		B		B		B		B							
Sequence 1																
Ring 1	**1**	**2**	**3**	**4**	**9**	**10**	**13**	**14**	.	.	.	.	.	.	.	.
Ring 2	**5**	**6**	**7**	**8**	**11**	**12**	**15**	**16**	.	.	.	.	.	.	.	.
Sequence 2																
Ring 1	**2**	**1**	**3**	**4**	**10**	**9**	**13**	**14**	.	.	.	.	.	.	.	.
Ring 2	**5**	**6**	**7**	**8**	**11**	**12**	**15**	**16**	.	.	.	.	.	.	.	.
Sequence 3																
Ring 1	**1**	**2**	**4**	**3**	**9**	**10**	**14**	**13**	.	.	.	.	.	.	.	.
Ring 2	**5**	**6**	**7**	**8**	**11**	**12**	**15**	**16**	.	.	.	.	.	.	.	.
Sequence 4																
Ring 1	**2**	**1**	**4**	**3**	**10**	**9**	**14**	**13**	.	.	.	.	.	.	.	.
Ring 2	**5**	**6**	**7**	**8**	**11**	**12**	**15**	**16**	.	.	.	.	.	.	.	.
Sequence 5																
Ring 1	**1**	**2**	**3**	**4**	**9**	**10**	**13**	**14**	.	.	.	.	.	.	.	.
Ring 2	**6**	**5**	**7**	**8**	**12**	**11**	**15**	**16**	.	.	.	.	.	.	.	.
Sequence 6																
Ring 1	**2**	**1**	**3**	**4**	**10**	**9**	**13**	**14**	.	.	.	.	.	.	.	.
Ring 2	**6**	**5**	**7**	**8**	**12**	**11**	**15**	**16**	.	.	.	.	.	.	.	.
Sequence 7																
Ring 1	**1**	**2**	**4**	**3**	**9**	**10**	**14**	**13**	.	.	.	.	.	.	.	.
Ring 2	**6**	**5**	**7**	**8**	**12**	**11**	**15**	**16**	.	.	.	.	.	.	.	.
Sequence 8																
Ring 1	**2**	**1**	**4**	**3**	**10**	**9**	**14**	**13**	.	.	.	.	.	.	.	.
Ring 2	**6**	**5**	**7**	**8**	**12**	**11**	**15**	**16**	.	.	.	.	.	.	.	.
Sequence 9																
Ring 1	**1**	**2**	**3**	**4**	**9**	**10**	**13**	**14**	.	.	.	.	.	.	.	.
Ring 2	**5**	**6**	**8**	**7**	**11**	**12**	**16**	**15**	.	.	.	.	.	.	.	.
Sequence 10																
Ring 1	**2**	**1**	**3**	**4**	**10**	**9**	**13**	**14**	.	.	.	.	.	.	.	.
Ring 2	**5**	**6**	**8**	**7**	**11**	**12**	**16**	**15**	.	.	.	.	.	.	.	.

Sequence 11

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

Sequence 12

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

Sequence 13

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

Sequence 14

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

Sequence 15

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

Sequence 16

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

Phases In Use/Exclusive Ped (MM) 1-2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phases In Use	X	X	X	X	X	X	X	X								
Exclusive Ped																

Phase Compatibility (MM) 1-1-2

Phase	
n/a	Barrier Mode

Phase and Overlap Descriptions

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Description																

Administration (MM) 1-7-1

Enable Controller/Cabinet Interlock CRC	No
CRC (16 bit)	E386
Enable Automatic Backup to Datakey	No

Backup Prevent (MM) 1-1-3

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

Simultaneous Gap (MM) 1-1-4

Phases		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	1		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	2	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.
	3	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.
	4	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.
	5	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.
Phase	**6**	.	.	.	.	.		.	.	.	.	.	.	.	.	.	.
Must	**7**	.	.	.	.	.	.		.	.	.	.	.	.	.	.	.
Gap	**8**	.	.	.	.	.	.	.		.	.	.	.	.	.	.	.
With	**9**	.	.	.	.	.	.	.	.		.	.	.	.	.	.	.
Phase	**10**	.	.	.	.	.	.	.	.	.		.	.	.	.	.	.
	11	.	.	.	.	.	.	.	.	.	.		.	.	.	.	.
	12	.	.	.	.	.	.	.	.	.	.	.		.	.	.	.
	13	.	.	.	.	.	.	.	.	.	.	.	.		.	.	.
	14	.	.	.	.	.	.	.	.	.	.	.	.	.		.	.
	15	.	.	.	.	.	.	.	.	.	.	.	.	.	.		.
	16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
	Disable	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Load Switch Assignments (MM) 1-3

	Phase / Overlap	Type	Dimming Red	Yellow	Green	Dark	Power Up	Auto Red	Yellow	Flash Together
1	1	V				-	Auto	X		

2	2	V	-	Auto	X	X
3	3	V	-	Auto	X	
4	4	V	-	Auto	X	X
5	5	V	+	Auto	X	
6	6	V	+	Auto	X	X
7	7	V	+	Auto	X	
8	8	V	+	Auto	X	X
9	2	P	-	Auto		
10	4	P	-	Auto		
11	6	P	+	Auto		
12	8	P	+	Auto		
13	1	O	-	Auto	X	
14	2	O	+	Auto	X	X
15	3	O	-	Auto	X	
16	4	O	+	Auto	X	X

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Configuration Port 1 (SDLC)

Port 1 SDLC (MM) 1-4-1

BIU	1	2	3	4	5	6	7	8
Term & Facility	X	X						
Detector Rack	X							

Enable TS2/MMU Type Cabinet: No
Enable MMU Extended Status: Yes
Enable SDLC Stop Time: Yes
Enable 3 Critical RFE's Lockup: Yes

MMU Program (MM) 1-4-2

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

10 12

Color Check Enable (MM) 1-4-3
Enable Color Check: No

MMU/LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green																
Yellow																
Red																

Secondary Stations/Tests (MM) 1-4-4

ID	1	2	3	4	5	6	7	8	MMU
Term & Facility									

ID	1	2	3	4	5	6	7	8	Diag
Detector Rack									

Enable SDLC Diagnostic Test: No

City of Burlington



Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Configuration Communications 1 (SDLC)

Ethernet Port Configuration (MM) 1-5-1

Controller IP:	172.22.238.2
Subnet Mask:	255.255.0.0
Default Gateway IP:	172.22.0.255
Server IP:	192.168.210.120

NTCIP (MM) 1-5-5

NTCIP Backup Time (Sec):	0
NTCIP UDP Port:	501
Ethernet Priority:	1
Port 2 Priority (Port C50S for 2070):	4
Port 3A Priority (Port C21S for 2070):	2
Port 3B Priority (Port C22S for 2070):	3

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

Port	2 (C50S)	3A (C21S)	3B (C22S)
Protocol	NTCIP	NTCIP	NTCIP
Enable	No	No	No
Data Rate (BPS)	19.2K	19.2K	19.2K
Data, Parity, Stop	8 N 1	8 N 1	8 N 1
Address	0	0	0
Telemetry Response Delay	0.0	0.0	0.0
Duplex - Half or Full	Full	Full	Full
Flow Control	Yes	Yes	Yes
Group Address	0	0	0
Single Flag Enable	Yes	Yes	Yes
RTS to CTS Delay	n/a	n/a	0.0
RTS Turn Off Delay	n/a	n/a	0.0
Dropout Time	10	10	10
Early RTS	n/a	n/a	No
Telemetry Mode	n/a	n/a	FSK
ATCS Railroad	0	n/a	n/a
ATCS Railroad Line	0	n/a	n/a
ATCS Group	0	n/a	n/a
Wayside Device	0	n/a	n/a
ATC Device	0	n/a	n/a
Wayside Subnode	0	n/a	n/a
ATC Subnode	0	n/a	n/a

ECPIP (MM) 1-5-6

Controller Address:	0
Expanded System Detector Address:	0

System Detector Assignment

System Detector	Local Detector

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Configuration Logging / Display

Event Logging (MM) 1-6-1

Critical RFE's (MMU/TF)	Yes	3 Critical Errors Within 24 Hours	Yes
MMU Flash Faults	Yes	Local Flash Fault	Yes
Non-Critical RFE's (Det/Test)	Yes	Detector Errors	Yes
Coordination Errors	Yes	Controller Download	Yes
Preemption Events	Yes	TSP Events	Yes
Power On/Off	Yes	Low Battery	Yes
Access	Yes	Data Change	Yes
Online / Offline	Yes		

Alarm Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable Logging	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Display Options (MM) 1-7-2

Key Click Enable:	No
Backlight Enable:	Yes
LED Mode:	Auto
Display Mode:	Basic
Screen Format:	Basic
Trans Mode Pop-Up Disable:	No

Sign On (MM) 8-5

Sign On Message Line 1: Solutions that Move the World

Sign On Message Line 2:

Software Modules (MM) 8-7

Application Version: 02.58.00

OS (Boot) Version: 01.14.03

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Logic Processor Page 1

Logic Statement Control (MM) 1-8-1

Logic #	Statement Control

City of Burlington



Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Logic Processor Page 2

Logic Statements (MM) 1-8-2

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Controller Timing Plan (MM) 2-1

Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	**WBLT**	**EB**	**SBLT**	**NB**	**EBLT**	**WB**	**NBLT**	**SB**								
Min Green	7	8	7	8	7	8	7	8	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	28	0	30	0	28	0	30	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	15	55	15	35	15	55	15	35	35	35	35	35	35	35	35	35
Max2	15	55	15	35	15	55	15	35	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.7	3.0	3.7	3.0	3.7	3.0	3.7	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	2.7	1.0	3.2	1.0	2.7	1.0	3.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	**WBLT**	**EB**	**SBLT**	**NB**	**EBLT**	**WB**	**NBLT**	**SB**								
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	**WBLT**	**EB**	**SBLT**	**NB**	**EBLT**	**WB**	**NBLT**	**SB**								
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	**WBLT**	**EB**	**SBLT**	**NB**	**EBLT**	**WB**	**NBLT**	**SB**								
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Controller Overlaps

Vehicle Overlaps (MM) 2-2

Overlap	Type	Lag Green	Yellow	Red	Adv. Green

Phases

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

PPLT FYA

Overlap	Protected Phase (Left Turn)	Permissive Phase (Opposing Thru)	Flashing Arrow Output	Flashing Arrow Output CH	Delay Start of FYA	Delay Start of Clearance	Action Plan SF Bit Disable	Ped Protected Enable

Guaranteed Minimum Time Data (MM) 2-4

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

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Controller Pedestrian Overlaps

Vehicle / Pedestrian Overlaps (MM) 2-3

Included	Pedestrian Overlaps

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Controller Start / Flash Data (MM) 2-5

Start Up

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

Overlap
A
B
C
D

Flash Thru Mon:	No
Flash Time:	0
All Red:	6
Power Start Seq:	1
MUTCD Enabled:	No
Y->G:	n/a

Automatic Flash

Entry
2
6

Exit
2
6

Overlap Exit
A
B
C
D

Flash Thru Mon:	No
Exit Flash:	W
Minimum Flash:	8
Mimimum Recall:	No
Cycle Through Phase:	No

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Controller Options

Controller Options (MM) 2-6-1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flashing Grn Ph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guar Passage																
Non-Act I	X				X											
Non-Act II			X				X									
Dual Entry	X		X		X		X									
Cond Service																
Cond Reservice																
Ped Re-Service																
Rest In Walk	X				X											
Flashing Walk																
Ped Clr-Yel																
Ped Clr-Red																
IGRN + Veh Ext																

Ped Clear Protect: Off Unit Red Revert: 2.0 MUTCD 3 Seconds Don't Walk: No

Pre-Timed Mode (MM) 2-7

Enable Pre-Timed Mode: No Free Input Disables Pre-Timed: No

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

Phase Recall Options (MM) 2-8

Plan # 1

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

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Coordination Options
Options (MM) 3-1

Manual Pattern	Auto	ECPI Coord	Yes
System Source	SYS	System Format	PTN
Splits In	Seconds	Offsets In	Seconds
Transition	Smooth	Max Select	MAXINH
Dwell / Add Time	0		
Delay Coord Wk-LZ	No	Force Off	Float
Offset Reference	Lead	Use Ped Time	No
Ped Recall	No	Ped Reservice	No
Local Zero Override	No	FO Added Ini Green	No
Re-sync Count	0	Multisync	No

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

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Split Demand (MM) 3-5

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

Demand	1	2
Detector	0	0
Call Time (Sec)	0	0
Cycle Count	0	0

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Coordination Pattern Data
Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Seconds
Cycle	140	Std (COS)	9	Offsets In	Seconds
Offset Value	76s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Splits (Split Pat 1)	18	63	11	48	13	68	13	46	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	140s	140s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall		X				X										
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 2

Split Pattern	2	TS2 (Pat-Off)	0-2	Splits In	Seconds
Cycle	115	Std (COS)	17	Offsets In	Seconds
Offset Value	17s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Splits (Split Pat 2)	13	45	11	46	12	46	11	46	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	115s	115s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall		X				X										
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 3

Split Pattern	3	TS2 (Pat-Off)	0-3	Splits In	Seconds
Cycle	140	Std (COS)	25	Offsets In	Seconds
Offset Value	56s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	0		

Phase Reservice	No	Action Plan	0
Max Select	None	Force Off	None

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Splits (Split Pat 3)	25	52	12	51	13	64	18	45	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	140s	140s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall		X				X										
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 5

Split Pattern	5	TS2 (Pat-Off)	1-2	Splits In	Seconds
Cycle	100	Std (COS)	41	Offsets In	Seconds
Offset Value	0s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Splits (Split Pat 5)	12	51	12	25	12	51	12	25	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100s	100s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall		X				X										
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Coordination Split Pattern
Split Pattern Data (MM) 3-3

Split Pattern # 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Split (seconds)	18	63	11	48	13	68	13	46	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall		X				X										
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	140s	140s	0s	0s

Split Pattern # 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Split (seconds)	13	45	11	46	12	46	11	46	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall		X				X										
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	115s	115s	0s	0s

Split Pattern # 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Split (seconds)	25	52	12	51	13	64	18	45	0	0	0	0	0	0	0	0
Coord Phase		X				X										

Vehicle Recall																
Pedestrian Recall		X				X										
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	140s	140s	0s	0s

Split Pattern # 5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Split (seconds)	12	51	12	25	12	51	12	25	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall		X				X										
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100s	100s	0s	0s

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Preempt Plan

Preempt Plan (MM) 4-1

Preempt Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing																
Dwell Veh	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases		X				X										
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	8	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Red	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	8	5	3.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	3.0	1.0

	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	25	3.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing																
Dwell Veh	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases																
Exit Calls		X				X										
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	8	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4

Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	8	5	3.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	3.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	30	3.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing																
Dwell Veh	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases				X				X								
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	8	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No

Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	8	5	3.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	3.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	20	3.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing																
Dwell Veh	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases				X				X								
Exit Calls																

Special Function															

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	8	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	8	5	3.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	3.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	25	3.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Preempt Preempt Filtering

Enable Preempt Filtering & TSP/SCP (MM) 4-2

Input	Solid	Pulsing
1	PREEMPTION 1	...BYPASSED...
2	PREEMPTION 2	...BYPASSED...
3	PREEMPTION 3	PREEMPTION 7
4	PREEMPTION 4	PREEMPTION 8
5	PREEMPTION 5	PREEMPTION 9
6	PREEMPTION 6	PREEMPTION 10
7	...BYPASSED...	...BYPASSED...
8	...BYPASSED...	...BYPASSED...
9	...BYPASSED...	...BYPASSED...
10	...BYPASSED...	...BYPASSED...

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Preempt TSP/SCP Plan and Split

TSP / SCP Plan (MM) 4-3

TSP/SCP Plan	Enable Option	Signal Type	Det Lock	Delay Time	Max Presence	PMT Enables Reservice	No Delay in TSP	Action SF Inhibit	Reservice Cycles	Bus Heading
1	No	Solid	No	0	0	No	False	0	0	NB
2	No	Solid	No	0	0	No	False	0	0	SB
3	No	Solid	No	0	0	No	False	0	0	EB
4	No	Solid	No	0	0	No	False	0	0	WB
5	No	Solid	No	0	0	No	False	0	0	.
6	No	Solid	No	0	0	No	False	0	0	.

Mode: TSP
Free Default Pattern: 120
Headway Allowance: 0

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

TSP / SCP Split Pattern (MM) 4-4

TSP/SCP Split Pattern	Max Type	Phase 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
4	Max Reduction	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Time Base Clock/Calendar

Clock/Calendar Data (MM) 5-1

Manual Action Plan:	0
SYNC Reference Time:	00:00
SYNC Reference:	Reference Time
Day Light Savings:	No
Time Reset Input Set Time:	0:00:00
Standard Time From GMT:	0

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

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

Action Plan - 1

Pattern	1	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																

Aux Func (1-3)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 2

Pattern	2	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 3

Pattern	3	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No

Pmt Cond Delay		No													
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 5

Pattern	5	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 7

Pattern	7	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No

Pmt Cond Delay		No														
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 8

Pattern	8	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 9

Pattern	9	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No

Pmt Cond Delay		No														
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 10

Pattern	Free	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

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

Day Plan #1

Event	Action Plan	Start Time
1	1	06:00
2	2	09:00
3	3	15:00
4	2	19:00
5	5	21:30

Day Plan #2

Event	Action Plan	Start Time
1	2	09:00
2	5	21:00

Day Plan #3

Event	Action Plan	Start Time
1	2	09:00
2	5	20:00

Schedule (MM) 5-4

Schedule Number - 1

Day Plan No.: 1

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		X	X	X	X	X	

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

Schedule Number - 2

Day Plan No.: 2

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
							X

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

Schedule Number - 3

Day Plan No.: 3

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X						

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

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Time Base Exceptions

Exception Day Program (MM) 5-5

Excep Day	Float/Fixed	Mon/Mon	DOW/DOM	WOM/Year	Day Plan
1	FIXED	1	1	0	3
2	FLOAT	2	2	3	3
3	FIXED	4	19	0	3
4	FLOAT	5	2	3	3
5	FIXED	7	1	0	3
6	FLOAT	8	2	1	3
7	FLOAT	9	2	1	3
8	FLOAT	10	2	2	3
9	FIXED	12	25	0	3

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Detectors
Detectors - Pg 1

Veh Det Phase Assignment (MM) 6-1

Vehicle Detector Plan Number - 1

Veh Detector	Assigned Phase	Called Phase	Type
1	1		S
2	7	4	S
3	3	8	S
4	4	8	S
5	5		S
6	6		S
8	8	4	S
9	9		S
10	10		S
11	11		S
12	12		S
13	13		S
14	14		S
15	15		S
16	16		S

Vehicle Detector Plan Number - 2

Veh Detector	Assigned Phase	Called Phase	Type
1	1		S
2	2		S
3	3		S
4	4		S
5	5		S
6	6		S
7	7		S
8	8		S
9	9		S
10	10		S
11	11		S
12	12		S
13	13		S
14	14		S

15	15		S
16	16		S

Vehicle Detector Plan Number - 3

Veh Detector	Assigned Phase	Called Phase	Type
1	1		S
2	2		S
3	3		S
4	4		S
5	5		S
6	6		S
7	7		S
8	8		S
9	9		S
10	10		S
11	11		S
12	12		S
13	13		S
14	14		S
15	15		S
16	16		S

Vehicle Detector Plan Number - 4

Veh Detector	Assigned Phase	Called Phase	Type
1	1		S
2	2		S
3	3		S
4	4		S
5	5		S
6	6		S
7	7		S
8	8		S
9	9		S
10	10		S
11	11		S
12	12		S
13	13		S
14	14		S
15	15		S
16	16		S

Vehicle Detector Setup (MM) 6-2

Veh Detector	Type	TS2 Detector	Description
1	S-STANDARD	No	
2	S-STANDARD	No	

3	S-STANDARD No
4	S-STANDARD No
5	S-STANDARD No
6	S-STANDARD No
7	S-STANDARD No
8	S-STANDARD No
9	S-STANDARD No
10	S-STANDARD No
11	S-STANDARD No
12	S-STANDARD No
13	S-STANDARD No
14	S-STANDARD No
15	S-STANDARD No
16	S-STANDARD No
17	S-STANDARD Yes
18	S-STANDARD Yes
19	S-STANDARD Yes
20	S-STANDARD Yes
21	S-STANDARD Yes
22	S-STANDARD Yes
23	S-STANDARD Yes
24	S-STANDARD Yes
25	S-STANDARD Yes
26	S-STANDARD Yes
27	S-STANDARD Yes
28	S-STANDARD Yes
29	S-STANDARD Yes
30	S-STANDARD Yes
31	S-STANDARD Yes
32	S-STANDARD Yes
33	S-STANDARD Yes
34	S-STANDARD Yes
35	S-STANDARD Yes
36	S-STANDARD Yes
37	S-STANDARD Yes
38	S-STANDARD Yes
39	S-STANDARD Yes
40	S-STANDARD Yes
41	S-STANDARD Yes
42	S-STANDARD Yes
43	S-STANDARD Yes
44	S-STANDARD Yes
45	S-STANDARD Yes
46	S-STANDARD Yes

47	S-STANDARD Yes
48	S-STANDARD Yes
49	S-STANDARD Yes
50	S-STANDARD Yes
51	S-STANDARD Yes
52	S-STANDARD Yes
53	S-STANDARD Yes
54	S-STANDARD Yes
55	S-STANDARD Yes
56	S-STANDARD Yes
57	S-STANDARD Yes
58	S-STANDARD Yes
59	S-STANDARD Yes
60	S-STANDARD Yes
61	S-STANDARD Yes
62	S-STANDARD Yes
63	S-STANDARD Yes
64	S-STANDARD Yes

Vehicle Detector Plan Number - 1

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	9	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	10	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	11	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	12	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	13	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	14	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	15	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	16	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

21	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
22	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
23	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
24	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
25	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
26	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
27	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
28	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
29	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
30	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
31	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
32	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
33	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
34	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
35	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
36	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
37	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
38	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
39	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
40	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
41	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
42	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
43	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
44	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
45	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
46	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
47	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
48	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
49	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
50	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
51	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
52	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
53	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
54	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
55	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
56	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
57	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
58	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
59	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
60	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
61	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
62	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
63	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
64	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No

Vehicle Detector Plan Number - 2

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	9	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	10	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	11	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	12	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	13	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	14	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	15	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	16	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 3

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	9	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	10	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	11	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	12	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	13	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	14	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

15	15	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
16	16	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
17	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
18	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
19	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
20	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
21	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
22	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
23	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
24	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
25	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
26	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
27	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
28	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
29	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
30	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
31	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
32	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
33	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
34	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
35	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
36	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
37	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
38	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
39	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
40	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
41	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
42	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
43	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
44	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
45	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
46	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
47	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
48	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
49	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
50	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
51	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
52	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
53	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
54	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
55	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
56	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
57	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
58	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No

59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 4

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	9	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	10	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	11	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	12	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	13	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	14	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	15	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	16	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

34	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
35	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
36	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
37	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
38	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
39	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
40	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
41	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
42	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
43	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
44	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
45	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
46	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
47	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
48	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
49	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
50	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
51	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
52	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
53	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
54	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
55	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
56	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
57	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
58	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
59	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
60	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
61	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
62	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
63	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No
64	0	No	Yes	0.0	Passage 0.0	0	No	0	None No	No	No

Ped Detector Phase Assignment (MM)
6-3

Mode: NTCIP

Called Phase	Detector
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

Called Phase	Detector
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16

City of Burlington

Dundas St @ Walker's Ln - TS 774 - Econolite Type - ASC/3

Detectors

Detectors - Pg 2

Log - Speed Detector Setup (MM) 6-4

NTCIP Log Period: 60 | ECPI Log Period: 0 | Length Unit: Inches

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

Vehicle Detector Diagnostics (MM) 6-5

Veh Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Pedestrian Detector Diagnostics (MM) 6-6

Ped Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Configuration Controller Sequence

Phase Ring Sequence and Assignment (MM) 1-1-1

Hardware Alternate Sequence Enable: No

Phase Ring Sequence.....(Note: Sequences identical to the prior one are not printed)

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
	B		B		B		B		B							
Sequence 1																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 2																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 3																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 4																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 5																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 6																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 7																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 8																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 9																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 10																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 11																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 12																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 13																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 14																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 15																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 16																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.

Phases In Use/Exclusive Ped (MM) 1-2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phases In Use	X	X	X	X	X	X	X	X								
Exclusive Ped																

Phase Compatibility (MM) 1-1-2

Phase	
n/a	Barrier Mode

Phase and Overlap Descriptions

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Overlap	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
Description																

Administration (MM) 1-7-1

Enable Controller/Cabinet Interlock CRC	No
CRC (16 bit)	F89C
Enable Automatic Backup to Datakey	No

Backup Prevent (MM) 1-1-3

	Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Timing	**1**		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phases	**2**	B		.	C	.	.	.	.	.	.	.	.	.	.	.	.
	3	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.
	4	.	.	X		.	.	.	.	.	.	.	.	.	.	.	.
	5	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.
	6	.	.	.	.	B		.	C	.	.	.	.	.	.	.	.
	7	.	.	.	.	.	.		.	.	.	.	.	.	.	.	.
	8	.	.	.	.	.	.	X		.	.	.	.	.	.	.	.
	9	.	.	.	.	.	.	.	.		.	.	.	.	.	.	.
	10	.	.	.	.	.	.	.	.	.		.	.	.	.	.	.
	11	.	.	.	.	.	.	.	.	.	.		.	.	.	.	.
	12	.	.	.	.	.	.	.	.	.	.	.		.	.	.	.
	13	.	.	.	.	.	.	.	.	.	.	.	.		.	.	.
	14	.	.	.	.	.	.	.	.	.	.	.	.	.		.	.
	15	.	.	.	.	.	.	.	.	.	.	.	.	.	.		.
	16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	

Simultaneous Gap (MM) 1-1-4

	Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	1		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	2	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.
	3	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.
	4	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.
	5	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.
Phase	**6**	.	.	.	.	.		.	.	.	.	.	.	.	.	.	.
Must	**7**	.	.	.	.	.	.		.	.	.	.	.	.	.	.	.
Gap	**8**	.	.	.	.	.	.	.		.	.	.	.	.	.	.	.
With	**9**	.	.	.	.	.	.	.	.		.	.	.	.	.	.	.
Phase	**10**	.	.	.	.	.	.	.	.	.		.	.	.	.	.	.
	11	.	.	.	.	.	.	.	.	.	.		.	.	.	.	.
	12	.	.	.	.	.	.	.	.	.	.	.		.	.	.	.
	13	.	.	.	.	.	.	.	.	.	.	.	.		.	.	.
	14	.	.	.	.	.	.	.	.	.	.	.	.	.		.	.
	15	.	.	.	.	.	.	.	.	.	.	.	.	.	.		.
	16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
	Disable	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Load Switch Assignments (MM) 1-3

	Phase / Overlap	Type	Dimming				Power Up	Auto		Flash Together
			Red	Yellow	Green	Dark		Red	Yellow	
1	1	V				-	Auto	X		
2	2	V				-	Auto	X		X
3	3	V				-	Auto	X		
4	4	V				-	Auto	X		X
5	5	V				+	Auto	X		
6	6	V				+	Auto	X		X
7	7	V				+	Auto	X		
8	8	V				+	Auto	X		X
9	2	P				-	Auto			
10	4	P				-	Auto			
11	6	P				+	Auto			
12	8	P				+	Auto			
13	1	O				-	Auto	X		
14	2	O				+	Auto	X		X
15	3	O				-	Auto	X		
16	4	O				+	Auto	X		X

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Configuration Port 1 (SDLC)

Port 1 SDLC (MM) 1-4-1

BIU	1	2	3	4	5	6	7	8
Term & Facility	X	X						
Detector Rack	X		X					

Enable TS2/MMU Type Cabinet: No
Enable MMU Extended Status: Yes
Enable SDLC Stop Time: Yes
Enable 3 Critical RFE's Lockup: Yes

MMU Program (MM) 1-4-2

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

Color Check Enable (MM) 1-4-3

Enable Color Check: No

MMU/LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green													X	X	X	X
Yellow									X	X	X	X	X	X	X	X
Red	X		X		X		X						X	X	X	X

Secondary Stations/Tests (MM) 1-4-4

ID	1	2	3	4	5	6	7	8	MMU
Term & Facility									

ID	1	2	3	4	5	6	7	8	Diag
Detector Rack									

Enable SDLC Diagnostic Test: No

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Configuration Communications 1 (SDLC)

Ethernet Port Configuration (MM) 1-5-1

Controller IP:	172.24.242.2
Subnet Mask:	255.255.0.0
Default Gateway IP:	172.24.254.254
Server IP:	192.168.210.120

NTCIP (MM) 1-5-5

NTCIP Backup Time (Sec):	0
NTCIP UDP Port:	501
Ethernet Priority:	1
Port 2 Priority (Port C50S for 2070):	4
Port 3A Priority (Port C21S for 2070):	2
Port 3B Priority (Port C22S for 2070):	3

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

Port	2 (C50S)	3A (C21S)	3B (C22S)
Protocol	TERMINAL	NTCIP	ECPIP
Enable	No	No	Yes
Data Rate (BPS)	9600	19.2K	1200
Data, Parity, Stop	8 N 1	8 N 1	8 O 1
Address	0	0	1
Telemetry Response Delay	0.0	0.0	0.9
Duplex - Half or Full	Half	Full	Full
Flow Control	Yes	Yes	Yes
Group Address	0	0	0
Single Flag Enable	Yes	Yes	Yes
RTS to CTS Delay	n/a	n/a	3.0
RTS Turn Off Delay	n/a	n/a	2.0
Dropout Time	10	10	300
Early RTS	n/a	n/a	No
Telemetry Mode	n/a	n/a	FSK
ATCS Railroad	0	n/a	n/a
ATCS Railroad Line	0	n/a	n/a
ATCS Group	0	n/a	n/a
Wayside Device	0	n/a	n/a
ATC Device	0	n/a	n/a
Wayside Subnode	0	n/a	n/a
ATC Subnode	0	n/a	n/a

ECPIP (MM) 1-5-6

Controller Address:	1
Expanded System Detector Address:	0

System Detector Assignment

System Detector	Local Detector

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Configuration Logging / Display

Event Logging (MM) 1-6-1

Critical RFE's (MMU/TF)	Yes	3 Critical Errors Within 24 Hours	Yes
MMU Flash Faults	Yes	Local Flash Fault	Yes
Non-Critical RFE's (Det/Test)	Yes	Detector Errors	Yes
Coordination Errors	Yes	Controller Download	Yes
Preemption Events	Yes	TSP Events	Yes
Power On/Off	Yes	Low Battery	Yes
Access	Yes	Data Change	Yes
Online / Offline	Yes		

Alarm Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable Logging	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Display Options (MM) 1-7-2

Key Click Enable:	No
Backlight Enable:	Yes
LED Mode:	Auto
Display Mode:	Basic
Screen Format:	Advanced
Trans Mode Pop-Up Disable:	No

Sign On (MM) 8-5

Sign On Message Line 1: Solutions that Move the World
Sign On Message Line 2:

Software Modules (MM) 8-7

Application Version: 02.58.00
OS (Boot) Version: 01.14.03

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Logic Processor Page 1

Logic Statement Control (MM) 1-8-1

Logic #	Statement Control
1	E
2	E

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Logic Processor Page 2

Logic Statements (MM) 1-8-2

Logic #: 1

If:

	Assignment	#		State
IF	VEH GREEN ON PH	3	IS	On

Then:

Assignment	#	State
CTR CALL PHASE	4	On

Logic #: 2

If:

	Assignment	#		State
IF	VEH GREEN ON PH	7	IS	On

Then:

Assignment	#	State
CTR CALL PHASE	8	On

Logic #: 3

If:

	Assignment	#	State
IF	LP CIB CODE ON		169

Then:

Assignment	#	State
CTR SET TMGPLN A-C	2	On

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Controller Timing Plan (MM) 2-1

Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Min Green	8	15	8	15	8	15	8	15	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	32	0	34	0	32	0	34	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	3.0	5.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	15	55	15	30	15	55	15	30	35	35	35	35	35	35	35	35
Max2	15	55	15	30	15	55	15	30	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.7	3.0	3.7	3.0	3.7	3.0	3.7	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	2.0	3.6	2.0	3.7	2.0	3.6	2.0	3.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Min Green	8	15	8	15	8	15	8	15	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	32	0	34	0	32	0	34	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	3.0	5.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	15	55	15	30	15	55	15	30	35	35	35	35	35	35	35	35
Max2	15	55	15	30	15	55	15	30	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Controller Overlaps

Vehicle Overlaps (MM) 2-2

Overlap	Type	Lag Green	Yellow	Red	Adv. Green

Phases

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

PPLT FYA

Overlap	Protected Phase (Left Turn)	Permissive Phase (Opposing Thru)	Flashing Arrow Output	Flashing Arrow Output CH	Delay Start of FYA	Delay Start of Clearance	Action Plan SF Bit Disable	Ped Protected Enable

Guaranteed Minimum Time Data (MM) 2-4

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

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Controller Pedestrian Overlaps
Vehicle / Pedestrian Overlaps (MM) 2-3

Included	Pedestrian Overlaps

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Controller Start / Flash Data (MM) 2-5

Start Up

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

Overlap
A
B
C
D

Flash Thru Mon: Yes
Flash Time: 0
All Red: 0
Power Start Seq: 1
MUTCD Enabled: No
Y->G: n/a

Automatic Flash

Entry
2
6

Exit
2
6

Overlap Exit
A
B
C
D

Flash Thru Mon: Yes
Exit Flash: W
Minimum Flash: 8
Mimimum Recall: No
Cycle Through Phase: No

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Controller Options

Controller Options (MM) 2-6-1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flashing Grn Ph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guar Passage																
Non-Act I		X				X										
Non-Act II																
Dual Entry		X		X		X		X								
Cond Service																
Cond Reservice																
Ped Re-Service																
Rest In Walk		X				X										
Flashing Walk																
Ped Clr-Yel																
Ped Clr-Red																
IGRN + Veh Ext																

Ped Clear Protect: Off Unit Red Revert: 2.0 MUTCD 3 Seconds Don't Walk: No

Pre-Timed Mode (MM) 2-7

Enable Pre-Timed Mode: No Free Input Disables Pre-Timed: No

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

Phase Recall Options (MM) 2-8

Plan # 1

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

Plan # 2

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

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Coordination Options

Options (MM) 3-1

Manual Pattern	Auto	ECPI Coord	Yes
System Source	SYS	System Format	PTN
Splits In	Seconds	Offsets In	Seconds
Transition	Smooth	Max Select	MAXINH
Dwell / Add Time	0		
Delay Coord Wk-LZ	No	Force Off	Float
Offset Reference	Lead	Use Ped Time	No
Ped Recall	No	Ped Reservice	No
Local Zero Override	Yes	FO Added Ini Green	No
Re-sync Count	0	Multisync	No

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

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Split Demand (MM) 3-5

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

Demand	1	2
Detector	0	0
Call Time (Sec)	0	0
Cycle Count	0	0

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Coordination Pattern Data
Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Seconds
Cycle	140	Std (COS)	9	Offsets In	Seconds
Offset Value	0s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Splits (Split Pat 1)	25	64	21	30	20	69	19	32	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	140s	140s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall		X				X										
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 2

Split Pattern	2	TS2 (Pat-Off)	0-2	Splits In	Seconds
Cycle	130	Std (COS)	17	Offsets In	Seconds
Offset Value	48s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Splits (Split Pat 2)	18	48	16	48	18	48	16	48	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	130s	130s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall		X				X										
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 3

Split Pattern	3	TS2 (Pat-Off)	0-3	Splits In	Seconds
Cycle	140	Std (COS)	25	Offsets In	Seconds
Offset Value	128s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Splits (Split Pat 3)	35	50	21	34	17	68	21	34	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	140s	140s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall		X				X										
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Coordination Split Pattern
Split Pattern Data (MM) 3-3

Split Pattern # 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Split (seconds)	25	64	21	30	20	69	19	32	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall		X				X										
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	140s	140s	0s	0s

Split Pattern # 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Split (seconds)	18	48	16	48	18	48	16	48	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall		X				X										
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	130s	130s	0s	0s

Split Pattern # 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB								
Split (seconds)	35	50	21	34	17	68	21	34	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall		X				X										
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	140s	140s	0s	0s

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Preempt Plan

Preempt Plan (MM) 4-1

Preempt Plan 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dwell Veh	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases				X				X								
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	No	Duration	5	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	10	8	3.0	2.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	3.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	8	0.0	50	3.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dwell Veh	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																

Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases				X				X								
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	No	Duration	5	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	10	8	3.0	2.0
	Min Grn	**Ext Grn**	**Max Grn**	**Yellow**	**Red**
Track Clear	0	0	0	3.0	1.0
	Min Dwell	**Pmt Ext**	**Max Time**	**Yellow**	**Red**
Dwell / Cycle-Exit	8	0.0	35	3.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dwell Veh	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases		X				X										
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	No	Duration	5	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	8	5	3.0	1.0
	Min Grn	**Ext Grn**	**Max Grn**	**Yellow**	**Red**
Track Clear	0	0	0	3.0	1.0
	Min Dwell	**Pmt Ext**	**Max Time**	**Yellow**	**Red**
Dwell / Cycle-Exit	8	0.0	20	3.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 6

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dwell Veh	.	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases		X				X										
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	No	Duration	5	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	8	5	3.0	1.0
	Min Grn	**Ext Grn**	**Max Grn**	**Yellow**	**Red**
Track Clear	0	0	0	3.0	1.0
	Min Dwell	**Pmt Ext**	**Max Time**	**Yellow**	**Red**
Dwell / Cycle-Exit	8	0.0	50	3.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Preempt Preempt Filtering
Enable Preempt Filtering & TSP/SCP (MM) 4-2

Input	Solid	Pulsing
1	...BYPASSED...	...BYPASSED...
2	...BYPASSED...	...BYPASSED...
3	PREEMPTION 3	PREEMPTION 7
4	PREEMPTION 4	PREEMPTION 8
5	PREEMPTION 5	PREEMPTION 9
6	PREEMPTION 6	PREEMPTION 10
7	...BYPASSED...	...BYPASSED...
8	...BYPASSED...	...BYPASSED...
9	...BYPASSED...	...BYPASSED...
10	...BYPASSED...	...BYPASSED...

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Preempt TSP/SCP Plan and Split

TSP / SCP Plan (MM) 4-3

TSP/SCP Plan	Enable Option	Signal Type	Det Lock	Delay Time	Max Presence	PMT Enables Reservice	No Delay in TSP	Action SF Inhibit	Reservice Cycles	Bus Heading
1	No	Solid	No	0	0	No	False	0	0	NB
2	No	Solid	No	0	0	No	False	0	0	SB
3	No	Solid	No	0	0	No	False	0	0	EB
4	No	Solid	No	0	0	No	False	0	0	WB
5	No	Solid	No	0	0	No	False	0	0	.
6	No	Solid	No	0	0	No	False	0	0	.

Mode: TSP
Free Default Pattern: 120
Headway Allowance: 0

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

TSP / SCP Split Pattern (MM) 4-4

TSP/SCP Split Pattern	Max Type	Phase															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
4	Max Reduction	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Time Base Clock/Calendar
Clock/Calendar Data (MM) 5-1

Manual Action Plan:	0
SYNC Reference Time:	00:00
SYNC Reference:	Reference Time
Day Light Savings:	No
Time Reset Input Set Time:	0:00:00
Standard Time From GMT:	0

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

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

Action Plan - 1

Pattern	1	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 2

Pattern	2	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)								
Aux Func (1-3)								

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 3

Pattern	3	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)								
Aux Func (1-3)								

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 7

Pattern	7	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)								
Aux Func (1-3)								

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 8

Pattern	8	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)								
Aux Func (1-3)								

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 9

Pattern	9	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)								
Aux Func (1-3)								

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 10

Pattern	Free	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X										
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)								
Aux Func (1-3)								

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 11

Pattern	Auto	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X				X	X									
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)								
Aux Func (1-3)								

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 12

Pattern	Auto	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X														
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)								
Aux Func (1-3)								

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 13

Pattern	Auto	Override Sys	No
Timing Plan	1	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall		X														
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)								
Aux Func (1-3)								

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

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

Day Plan #1

Event	Action Plan	Start Time
1	1	06:00
2	2	09:00
3	3	15:00
4	2	19:00
5	10	21:30

Day Plan #2

Event	Action Plan	Start Time
1	2	09:00
2	10	21:00

Day Plan #3

Event	Action Plan	Start Time
1	2	09:00
2	10	20:00

Schedule (MM) 5-4

Schedule Number - 1

Day Plan No.: 1

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		X	X	X	X	X	

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

Schedule Number - 2

Day Plan No.: 2

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
							X

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

Schedule Number - 3

Day Plan No.: 3

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X						

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

Schedule Number - 5

Day Plan No.: 5

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	12	13	14	15	16	17	18	19	20	21	22
	23	24	25	26	27	28	29	30	31		

Schedule Number - 11

Day Plan No.: 11

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	12	13	14	15	16	17	18	19	20	21	22
	23	24	25	26	27	28	29	30	31		

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

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

Excep Day	Float/Fixed	Mon/Mon	DOW/DOM	WOM/Year	Day Plan
1	FIXED	1	1	0	3
2	FLOAT	2	2	3	3
3	FIXED	4	19	0	3
4	FLOAT	5	2	3	3
5	FIXED	7	1	0	3
6	FLOAT	8	2	1	3
7	FLOAT	9	2	1	3
8	FLOAT	10	2	2	3
9	FIXED	12	25	0	3

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Detectors

Detectors - Pg 1

Veh Det Phase Assignment (MM) 6-1

Vehicle Detector Plan Number - 1

Veh Detector	Assigned Phase	Called Phase	Type
1	1		N
2	2		N
3	3		N
4	4		N
5	5		N
6	6		N
7	7		N
8	8		N
9	9		N
10	10		N
11	11		N
12	12		N
13	13		N
14	14		N
15	15		N
16	16		N
33	1		N
35	3		N
36	4		N
37	5		N
39	7		N
40	8		N

Vehicle Detector Plan Number - 2

Veh Detector	Assigned Phase	Called Phase	Type
1	1		N
2	2		N
3	3		N
4	4		N
5	5		N
6	6		N
7	7		N
8	8		N
9	9		N
10	10		N
11	11		N
12	12		N
13	13		N
14	14		N
15	15		N
16	16		N

Vehicle Detector Plan Number - 3

Veh Detector	Assigned Phase	Called Phase	Type
1	1		N
2	2		N
3	3		N
4	4		N
5	5		N
6	6		N

7	7		N
8	8		N
9	9		N
10	10		N
11	11		N
12	12		N
13	13		N
14	14		N
15	15		N
16	16		N

Vehicle Detector Plan Number - 4

Veh Detector	Assigned Phase	Called Phase	Type
1	1		N
2	2		N
3	3		N
4	4		N
5	5		N
6	6		N
7	7		N
8	8		N
9	9		N
10	10		N
11	11		N
12	12		N
13	13		N
14	14		N
15	15		N
16	16		N

Vehicle Detector Setup (MM) 6-2

Veh Detector	Type	TS2 Detector	Description
1	N-NTCIP	No	
2	N-NTCIP	No	
3	N-NTCIP	No	
4	N-NTCIP	No	
5	N-NTCIP	No	
6	N-NTCIP	No	
7	N-NTCIP	No	
8	N-NTCIP	No	
9	N-NTCIP	No	
10	N-NTCIP	No	
11	N-NTCIP	No	
12	N-NTCIP	No	
13	N-NTCIP	No	
14	N-NTCIP	No	
15	N-NTCIP	No	
16	N-NTCIP	No	
17	N-NTCIP	No	
18	N-NTCIP	No	
19	N-NTCIP	Yes	
20	N-NTCIP	No	
21	N-NTCIP	No	
22	N-NTCIP	No	
23	N-NTCIP	No	
24	N-NTCIP	No	
25	N-NTCIP	No	
26	N-NTCIP	No	
27	N-NTCIP	No	
28	N-NTCIP	No	
29	N-NTCIP	No	
30	N-NTCIP	No	
31	N-NTCIP	No	
32	N-NTCIP	No	
33	N-NTCIP	Yes	

34	N-NTCIP	Yes	
35	N-NTCIP	Yes	
36	N-NTCIP	Yes	
37	N-NTCIP	Yes	
38	N-NTCIP	Yes	
39	N-NTCIP	Yes	
40	N-NTCIP	Yes	
41	N-NTCIP	Yes	
42	N-NTCIP	Yes	
43	N-NTCIP	Yes	
44	N-NTCIP	Yes	
45	N-NTCIP	Yes	
46	N-NTCIP	Yes	
47	N-NTCIP	Yes	
48	N-NTCIP	Yes	
49	N-NTCIP	Yes	
50	N-NTCIP	Yes	
51	N-NTCIP	Yes	
52	N-NTCIP	Yes	
53	N-NTCIP	Yes	
54	N-NTCIP	Yes	
55	N-NTCIP	Yes	
56	N-NTCIP	Yes	
57	N-NTCIP	Yes	
58	N-NTCIP	Yes	
59	N-NTCIP	Yes	
60	N-NTCIP	Yes	
61	N-NTCIP	Yes	
62	N-NTCIP	Yes	
63	N-NTCIP	Yes	
64	N-NTCIP	Yes	

Vehicle Detector Plan Number - 1

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	Red	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	Red	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	9	No	Yes	0.0	Passage	0.0	0	No	0	None	Yes	Yes	No
10	10	No	Yes	0.0	Passage	0.0	0	No	0	None	Yes	Yes	No
11	11	No	Yes	0.0	Passage	0.0	0	No	0	None	Yes	Yes	No
12	12	No	Yes	0.0	Passage	0.0	0	No	0	None	Yes	Yes	No
13	13	No	Yes	0.0	Passage	0.0	0	No	0	None	Yes	Yes	No
14	14	No	Yes	0.0	Passage	0.0	0	No	0	None	Yes	Yes	No
15	15	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	16	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	0	No	Yes	0.0	Passage	0.0	0	No	0	Red	No	No	No
20	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	0	No	Yes	0.0	Passage	0.0	0	No	0	Red	No	No	No
24	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	Red	No	No	No
33	1	No	No	0.0	None	0.0	0	No	0	None	No	No	No
35	3	No	Yes	0.0	Passage	0.0	0	No	0	Red	No	No	No
36	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	5	No	Yes	0.0	Passage	0.0	0	No	0	Red	No	No	No
39	7	No	Yes	0.0	Passage	0.0	0	No	0	Red	No	No	No
40	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 2

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	9	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	10	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	11	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	12	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	13	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	14	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	15	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	16	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 3

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	9	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	10	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	11	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	12	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	13	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	14	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	15	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	16	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 4

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	9	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	10	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	11	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	12	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	13	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	14	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	15	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	16	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Ped Detector Phase Assignment (MM) 6-3

Mode: NTCIP

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

City of Burlington

ECONOLITE

MOVING TRAFFIC FORWARD

Dundas St @ Appleby Ln - TS 790 - Econolite Type - ASC/3

Detectors

Detectors - Pg 2

Log - Speed Detector Setup (MM) 6-4

NTCIP Log Period: 60 ECPI Log Period: 0 Length Unit: Inches

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

Vehicle Detector Diagnostics (MM) 6-5

Veh Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Pedestrian Detector Diagnostics (MM) 6-6

Ped Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier

APPENDIX C

Level of Service Definition

Level of Service Definitions

Signalized Intersections

Level of Service	Control Delay per Vehicle (seconds)	Interpretation
A	≤ 10	EXCELLENT. Extremely favourable progression with most vehicles arriving during the green phase. Most vehicles do not stop and short cycle lengths may contribute to low delay.
B	> 10 and ≤ 20	VERY GOOD. Very good progression and/or short cycle lengths with slightly more vehicles stopping than LOS "A" causing slightly higher levels of average delay.
C	> 20 and ≤ 35	GOOD. Fair progression and longer cycle lengths lead to a greater number of vehicles stopping than LOS "B".
D	> 35 and ≤ 55	FAIR. Congestion becomes noticeable with higher average delays resulting from a combination of long cycle lengths, high volume-to-capacity ratios and unfavourable progression.
E	> 55 and ≤ 80	POOR. Lengthy delays values are indicative of poor progression, long cycle lengths and high volume-to-capacity ratios. Individual cycle failures are common with individual movement failures also common.
F	> 80	UNSATISFACTORY. Indicative of oversaturated conditions with vehicular demand greater than the capacity of the intersection.

Adapted from Highway Capacity Manual 2000, Transportation Research Board

Level of Service Definitions

Two-Way Stop Controlled Intersections

Level of Service	Control Delay per Vehicle (seconds)	Interpretation
A	≤ 10	EXCELLENT. Large and frequent gaps in traffic on the main roadway. Queuing on the minor street is rare.
B	> 10 and ≤ 15	VERY GOOD. Many gaps exist in traffic on the main roadway. Queuing on the minor street is minimal.
C	> 15 and ≤ 25	GOOD. Fewer gaps exist in traffic on the main roadway. Delay on minor approach becomes more noticeable.
D	> 25 and ≤ 35	FAIR. Infrequent and shorter gaps in traffic on the main roadway. Queue lengths develop on the minor street.
E	> 35 and ≤ 50	POOR. Very infrequent gaps in traffic on the main roadway. Queue lengths become noticeable.
F	> 50	UNSATISFACTORY. Very few gaps in traffic on the main roadway. Excessive delay with significant queue lengths on the minor street.

Adapted from Highway Capacity Manual 2000, Transportation Research Board

APPENDIX D

Detailed Capacity Analysis

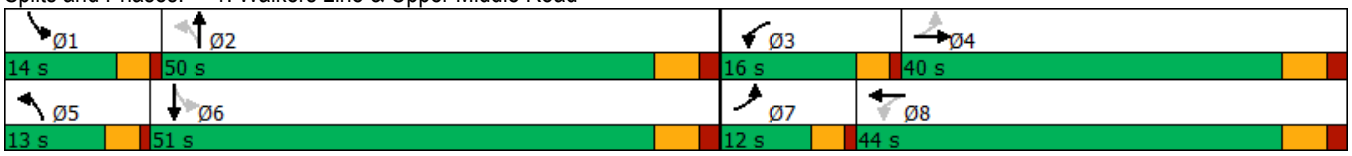
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	633	268	252	260	64	174	602	286	228	1036	113
Future Volume (vph)	165	633	268	252	260	64	174	602	286	228	1036	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	95.0		0.0	95.0		0.0	60.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	2.5			50.0			15.0			35.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99			1.00			0.99		1.00		
Frt		0.955			0.970			0.952			0.985	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3378	0	1772	3373	0	1738	3318	0	1789	3511	0
Flt Permitted	0.548			0.106			0.091			0.150		
Satd. Flow (perm)	1008	3378	0	198	3373	0	166	3318	0	282	3511	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		54			26			75			11	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		184.1			1228.8			157.6			1836.7	
Travel Time (s)		11.0			73.7			9.5			110.2	
Confl. Peds. (#/hr)	4		5	5		4			6	6		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	2%	4%	3%	5%	3%	5%	5%	2%	2%	2%	6%
Adj. Flow (vph)	172	659	279	263	271	67	181	627	298	238	1079	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	172	938	0	263	338	0	181	925	0	238	1197	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.5	8.0		6.5	8.0		6.5	8.0		6.5	8.0	
Minimum Split (s)	11.0	30.0		11.0	30.0		11.0	31.0		11.0	31.0	
Total Split (s)	12.0	40.0		16.0	44.0		13.0	50.0		14.0	51.0	
Total Split (%)	10.0%	33.3%		13.3%	36.7%		10.8%	41.7%		11.7%	42.5%	
Maximum Green (s)	8.0	34.0		12.0	38.0		9.0	44.0		10.0	45.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		17.0			17.0			18.0			18.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	43.7	33.7		51.7	37.7		55.0	44.0		57.0	45.0	
Actuated g/C Ratio	0.37	0.28		0.43	0.31		0.46	0.37		0.48	0.38	
v/c Ratio	0.41	0.95		1.08	0.31		0.93	0.73		0.92	0.90	
Control Delay	26.0	58.5		111.2	29.6		77.2	34.0		59.5	45.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.0	58.5		111.2	29.6		77.2	34.0		59.5	45.7	
LOS	C	E		F	C		E	C		E	D	
Approach Delay		53.4			65.3			41.1			48.0	
Approach LOS		D			E			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 119.7
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 50.1 Intersection LOS: D
Intersection Capacity Utilization 98.7% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 1: Walkers Line & Upper Middle Road

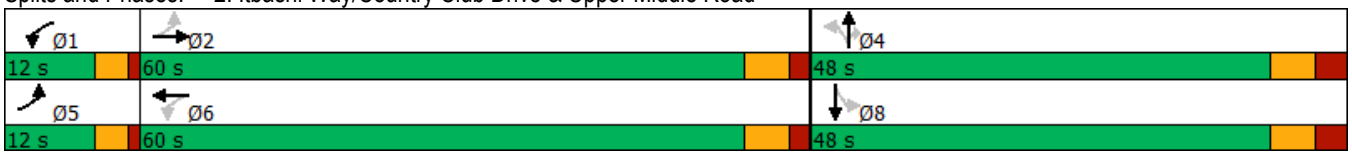


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	1018	103	94	388	74	46	30	103	235	53	79
Future Volume (vph)	45	1018	103	94	388	74	46	30	103	235	53	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	25.0		0.0	35.0		35.0	35.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	25.0			25.0			85.0			40.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00				1.00		1.00				0.99	
Frt		0.986			0.976				0.850		0.910	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3525	0	1772	3385	0	1601	1921	1555	1825	1724	0
Flt Permitted	0.477			0.161			0.669			0.737		
Satd. Flow (perm)	896	3525	0	300	3385	0	1126	1921	1555	1416	1724	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			24				107		68	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1228.8			782.1			150.1			414.9	
Travel Time (s)		73.7			46.9			9.0			24.9	
Confl. Peds. (#/hr)	2					2	1					1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	3%	3%	5%	4%	14%	0%	5%	0%	0%	1%
Adj. Flow (vph)	47	1060	107	98	404	77	48	31	107	245	55	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	1167	0	98	481	0	48	31	107	245	137	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4		4	8		
Detector Phase	5	2		1	6		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	6.5	8.0		6.5	8.0		8.0	8.0	8.0	8.0	8.0	
Minimum Split (s)	11.0	31.0		11.0	31.0		37.0	37.0	37.0	37.0	37.0	
Total Split (s)	12.0	60.0		12.0	60.0		48.0	48.0	48.0	48.0	48.0	
Total Split (%)	10.0%	50.0%		10.0%	50.0%		40.0%	40.0%	40.0%	40.0%	40.0%	
Maximum Green (s)	8.0	54.0		8.0	54.0		41.0	41.0	41.0	41.0	41.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	Max		None	Max		None	None	None	None	None	
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		18.0			18.0		23.0	23.0	23.0	23.0	23.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effct Green (s)	62.0	54.7		63.7	57.3		22.6	22.6	22.6	22.6	22.6	
Actuated g/C Ratio	0.62	0.55		0.64	0.58		0.23	0.23	0.23	0.23	0.23	
v/c Ratio	0.08	0.60		0.33	0.25		0.19	0.07	0.25	0.76	0.31	
Control Delay	7.8	18.3		10.4	12.1		32.7	30.2	7.4	51.8	18.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	7.8	18.3		10.4	12.1		32.7	30.2	7.4	51.8	18.5	
LOS	A	B		B	B		C	C	A	D	B	
Approach Delay		17.9			11.8			17.7			39.9	
Approach LOS		B			B			B			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 99.3			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 20.0		Intersection LOS: B	
Intersection Capacity Utilization 76.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Itbashi Way/Country Club Drive & Upper Middle Road



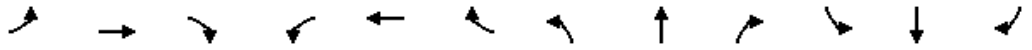
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	133	638	226	212	257	201	127	714	81	290	1181	69
Future Volume (vph)	133	638	226	212	257	201	127	714	81	290	1181	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	100.0		65.0	95.0		0.0	40.0		0.0
Storage Lanes	1		0	1		1	2		0	1		0
Taper Length (m)	25.0			40.0			30.0			35.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00		1.00				1.00		1.00		
Frt		0.961				0.850		0.985			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1722	3417	0	1789	3510	1555	3372	3340	0	1789	3484	0
Flt Permitted	0.585			0.122			0.950			0.145		
Satd. Flow (perm)	1060	3417	0	230	3510	1555	3372	3340	0	273	3484	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40				212		10			6	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		782.1			454.4			154.1			1784.0	
Travel Time (s)		46.9			27.3			9.2			107.0	
Confl. Peds. (#/hr)			2	2					2	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	6%	2%	3%	2%	4%	5%	5%	8%	3%	2%	4%	3%
Adj. Flow (vph)	140	672	238	223	271	212	134	752	85	305	1243	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	140	910	0	223	271	212	134	837	0	305	1316	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8				6		
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	1.0	8.0		1.0	8.0	8.0	1.0	8.0		1.0	8.0	
Minimum Split (s)	5.5	35.4		5.5	35.4	35.4	6.0	35.5		5.5	35.5	
Total Split (s)	16.0	38.0		16.0	38.0	38.0	13.0	43.0		23.0	53.0	
Total Split (%)	13.3%	31.7%		13.3%	31.7%	31.7%	10.8%	35.8%		19.2%	44.2%	
Maximum Green (s)	12.0	31.6		12.0	31.6	31.6	8.0	36.5		19.0	46.5	
Yellow Time (s)	3.0	3.7		3.0	3.7	3.7	3.0	3.7		3.0	3.7	
All-Red Time (s)	1.0	2.7		1.0	2.7	2.7	2.0	2.8		1.0	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.4		4.0	6.4	6.4	5.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		21.0			21.0	21.0		21.0			21.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	44.7	31.6		47.3	32.9	32.9	7.9	38.1		61.9	46.5	
Actuated g/C Ratio	0.37	0.26		0.39	0.27	0.27	0.07	0.32		0.52	0.39	
v/c Ratio	0.31	0.98		0.91	0.28	0.36	0.61	0.78		0.85	0.97	
Control Delay	24.4	66.9		66.8	35.5	6.5	66.7	43.3		44.8	54.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	24.4	66.9		66.8	35.5	6.5	66.7	43.3		44.8	54.8	
LOS	C	E		E	D	A	E	D		D	D	
Approach Delay		61.2			36.7			46.5			52.9	
Approach LOS		E			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 119.9			
Natural Cycle: 105			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 50.9		Intersection LOS: D	
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 3: Appleby Line & Upper Middle Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	14	59	60	148	57	22	11	54	118	20	123	16
Future Volume (vph)	14	59	60	148	57	22	11	54	118	20	123	16
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	16	69	71	174	67	26	13	64	139	24	145	19

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	156	267	216	188
Volume Left (vph)	16	174	13	24
Volume Right (vph)	71	26	139	19
Hadj (s)	-0.21	0.12	-0.32	0.00
Departure Headway (s)	5.2	5.4	5.1	5.4
Degree Utilization, x	0.23	0.40	0.30	0.28
Capacity (veh/h)	621	627	645	609
Control Delay (s)	9.7	11.8	10.2	10.5
Approach Delay (s)	9.7	11.8	10.2	10.5
Approach LOS	A	B	B	B

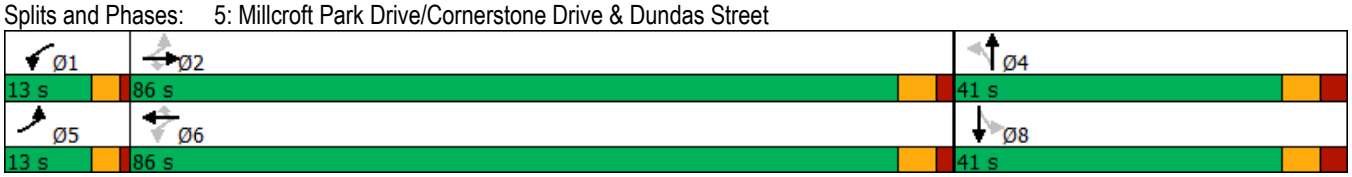
Intersection Summary				
Delay	10.7			
Level of Service	B			
Intersection Capacity Utilization	40.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	1953	73	38	958	24	85	14	85	93	31	123
Future Volume (vph)	49	1953	73	38	958	24	85	14	85	93	31	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		80.0	150.0		95.0	40.0		0.0	35.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	100.0			100.0			35.0			45.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.95			0.94	0.94	0.98		0.99	0.92	
Frt			0.850			0.850		0.872			0.880	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1722	3476	1617	1738	3380	1570	1825	1631	0	1807	1551	0
Flt Permitted	0.253			0.050			0.523			0.690		
Satd. Flow (perm)	455	3476	1537	91	3380	1469	940	1631	0	1302	1551	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			62		89			128	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		360.5			298.9			256.9			129.9	
Travel Time (s)		21.6			17.9			23.1			11.7	
Confl. Peds. (#/hr)	18		12	12		18	62		7	7		62
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	6%	5%	1%	5%	8%	4%	0%	0%	1%	1%	0%	1%
Adj. Flow (vph)	51	2034	76	40	998	25	89	15	89	97	32	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	2034	76	40	998	25	89	104	0	97	160	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2		2	6		6	4			8		
Detector Phase	5	2	2	1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	11.0	34.0	34.0	11.0	34.0	34.0	38.0	38.0		38.0	38.0	
Total Split (s)	13.0	86.0	86.0	13.0	86.0	86.0	41.0	41.0		41.0	41.0	
Total Split (%)	9.3%	61.4%	61.4%	9.3%	61.4%	61.4%	29.3%	29.3%		29.3%	29.3%	
Maximum Green (s)	9.0	80.0	80.0	9.0	80.0	80.0	34.0	34.0		34.0	34.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	None	None	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		21.0	21.0		21.0	21.0	24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	88.0	80.5	80.5	87.9	80.4	80.4	15.0	15.0		15.0	15.0	
Actuated g/C Ratio	0.75	0.69	0.69	0.75	0.69	0.69	0.13	0.13		0.13	0.13	
v/c Ratio	0.12	0.85	0.07	0.24	0.43	0.02	0.74	0.36		0.58	0.52	
Control Delay	4.5	20.3	3.0	7.6	10.0	0.0	83.8	16.3		62.8	18.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	4.5	20.3	3.0	7.6	10.0	0.0	83.8	16.3		62.8	18.9	
LOS	A	C	A	A	A	A	F	B		E	B	
Approach Delay		19.3			9.6			47.5			35.5	
Approach LOS		B			A			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 117.1			
Natural Cycle: 125			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 19.1		Intersection LOS: B	
Intersection Capacity Utilization 101.5%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 5: Millcroft Park Drive/Cornerstone Drive & Dundas Street



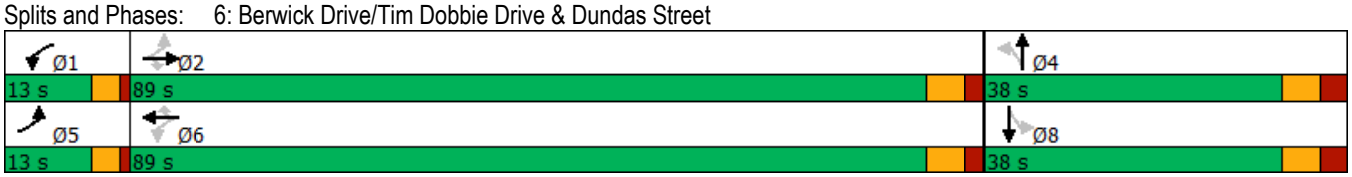
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	1818	26	5	951	210	17	0	34	224	0	162
Future Volume (vph)	154	1818	26	5	951	210	17	0	34	224	0	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		110.0	145.0		80.0	0.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (m)	60.0			80.0			45.0			25.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.94			0.97		0.97		0.99	0.90	
Frt			0.850			0.850		0.909			0.850	
Flt Protected	0.950			0.950				0.984		0.950		
Satd. Flow (prot)	1706	3476	1633	1825	3380	1555	0	1695	0	1755	1361	0
Flt Permitted	0.212			0.046				0.868		0.721		
Satd. Flow (perm)	380	3476	1538	88	3380	1511	0	1463	0	1321	1361	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			228		55			203	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		241.8			360.5			69.2			154.4	
Travel Time (s)		14.5			21.6			6.2			13.9	
Confl. Peds. (#/hr)	3		14	14		3	62		6	6		62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	5%	0%	0%	8%	5%	0%	0%	0%	4%	0%	8%
Adj. Flow (vph)	167	1976	28	5	1034	228	18	0	37	243	0	176
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	1976	28	5	1034	228	0	55	0	243	176	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

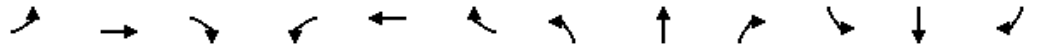
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2		2	6		6	4			8		
Detector Phase	5	2	2	1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	11.5	31.0	31.0	11.5	31.0	31.0	36.0	36.0		36.0	36.0	
Total Split (s)	13.0	89.0	89.0	13.0	89.0	89.0	38.0	38.0		38.0	38.0	
Total Split (%)	9.3%	63.6%	63.6%	9.3%	63.6%	63.6%	27.1%	27.1%		27.1%	27.1%	
Maximum Green (s)	9.0	83.0	83.0	9.0	83.0	83.0	31.0	31.0		31.0	31.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0		7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		18.0	18.0		18.0	18.0	22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	97.4	93.7	93.7	92.1	83.1	83.1		28.1		28.1	28.1	
Actuated g/C Ratio	0.71	0.68	0.68	0.67	0.61	0.61		0.21		0.21	0.21	
v/c Ratio	0.47	0.83	0.03	0.03	0.50	0.23		0.16		0.90	0.40	
Control Delay	11.1	21.1	0.0	7.0	16.7	2.0		11.9		87.1	6.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	11.1	21.1	0.0	7.0	16.7	2.0		11.9		87.1	6.1	
LOS	B	C	A	A	B	A		B		F	A	
Approach Delay		20.1			14.1			11.9			53.1	
Approach LOS		C			B			B			D	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 136.9
Natural Cycle: 120
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 21.5 Intersection LOS: C
Intersection Capacity Utilization 93.8% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 6: Berwick Drive/Tim Dobbie Drive & Dundas Street





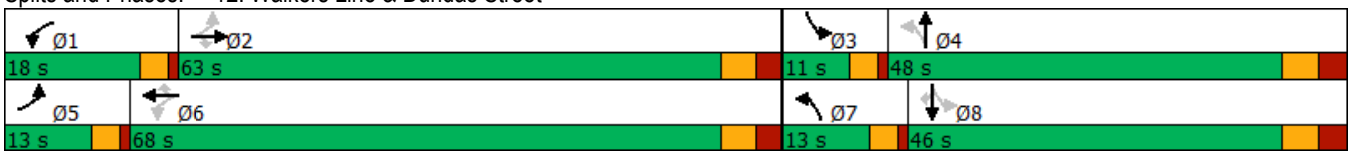
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	1326	209	224	617	26	243	292	276	93	395	190
Future Volume (vph)	242	1326	209	224	617	26	243	292	276	93	395	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		185.0	200.0		225.0	90.0		0.0	45.0		50.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	100.0			100.0			25.0			15.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98			0.98	1.00	0.99		1.00		0.98
Frt			0.850			0.850		0.927				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3510	1570	1755	3411	1633	1772	3273	0	1789	3614	1601
Flt Permitted	0.394			0.066			0.312			0.197		
Satd. Flow (perm)	741	3510	1544	122	3411	1606	581	3273	0	370	3614	1575
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			215			93		173				196
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		399.3			463.3			1836.7			109.1	
Travel Time (s)		24.0			27.8			110.2			6.5	
Confl. Peds. (#/hr)	4		4	4		4	4		5	5		4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	4%	4%	4%	7%	0%	3%	2%	3%	2%	1%	2%
Adj. Flow (vph)	249	1367	215	231	636	27	251	301	285	96	407	196
Shared Lane Traffic (%)												
Lane Group Flow (vph)	249	1367	215	231	636	27	251	586	0	96	407	196
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

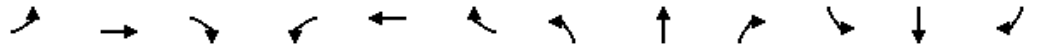
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0		7.0	8.0	8.0
Minimum Split (s)	11.5	41.4	41.4	11.5	41.4	41.4	11.5	43.9		11.0	43.9	43.9
Total Split (s)	13.0	63.0	63.0	18.0	68.0	68.0	13.0	48.0		11.0	46.0	46.0
Total Split (%)	9.3%	45.0%	45.0%	12.9%	48.6%	48.6%	9.3%	34.3%		7.9%	32.9%	32.9%
Maximum Green (s)	9.0	56.6	56.6	14.0	61.6	61.6	9.0	41.1		7.0	39.1	39.1
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2		1.0	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		28.0	28.0		28.0	28.0		30.0			30.0	30.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	68.1	56.7	56.7	77.1	61.7	61.7	34.3	22.3		30.3	20.3	20.3
Actuated g/C Ratio	0.56	0.47	0.47	0.64	0.51	0.51	0.28	0.18		0.25	0.17	0.17
v/c Ratio	0.51	0.83	0.26	0.87	0.37	0.03	1.00	0.79		0.55	0.67	0.46
Control Delay	15.3	34.5	3.5	61.2	19.4	0.1	94.9	41.1		44.2	53.0	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	15.3	34.5	3.5	61.2	19.4	0.1	94.9	41.1		44.2	53.0	9.4
LOS	B	C	A	E	B	A	F	D		D	D	A
Approach Delay		28.3			29.6			57.2			39.6	
Approach LOS		C			C			E			D	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 121.4
Natural Cycle: 130
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 36.1 Intersection LOS: D
Intersection Capacity Utilization 93.7% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 12: Walkers Line & Dundas Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	1447	311	323	644	126	162	522	330	294	728	96
Future Volume (vph)	226	1447	311	323	644	126	162	522	330	294	728	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		155.0	160.0		195.0	125.0		100.0	120.0		150.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	35.0			85.0			30.0			35.0		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor	1.00		0.99	1.00		0.98	0.99		0.98	1.00		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3506	5092	1585	3309	4902	1484	3309	4995	1541	3340	5043	1585
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3498	5092	1565	3308	4902	1459	3292	4995	1516	3332	5043	1558
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			310			131			200			111
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		416.3			249.5			1784.0			156.1	
Travel Time (s)		25.0			15.0			107.0			9.4	
Confl. Peds. (#/hr)	5		1	1		5	3		2	2		3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	3%	3%	7%	7%	10%	7%	5%	6%	6%	4%	3%
Adj. Flow (vph)	235	1507	324	336	671	131	169	544	344	306	758	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	235	1507	324	336	671	131	169	544	344	306	758	100
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	8.0	15.0	15.0	8.0	15.0	15.0	8.0	15.0	15.0	8.0	15.0	15.0
Minimum Split (s)	13.0	48.3	48.3	13.0	48.3	48.3	13.0	22.4	22.4	13.0	22.4	22.4
Total Split (s)	20.0	64.0	64.0	25.0	69.0	69.0	19.0	30.0	30.0	21.0	32.0	32.0
Total Split (%)	14.3%	45.7%	45.7%	17.9%	49.3%	49.3%	13.6%	21.4%	21.4%	15.0%	22.9%	22.9%
Maximum Green (s)	15.0	56.7	56.7	20.0	61.7	61.7	14.0	22.6	22.6	16.0	24.6	24.6
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	2.0	3.6	3.6	2.0	3.6	3.6	2.0	3.7	3.7	2.0	3.7	3.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.3	7.3	5.0	7.3	7.3	5.0	7.4	7.4	5.0	7.4	7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0						
Flash Dont Walk (s)		34.0	34.0		34.0	34.0						
Pedestrian Calls (#/hr)		0	0		0	0						
Act Effct Green (s)	14.5	57.2	57.2	19.0	61.7	61.7	13.1	22.2	22.2	15.9	24.9	24.9
Actuated g/C Ratio	0.10	0.41	0.41	0.14	0.44	0.44	0.09	0.16	0.16	0.11	0.18	0.18
v/c Ratio	0.64	0.72	0.39	0.74	0.31	0.18	0.54	0.68	0.84	0.80	0.84	0.27
Control Delay	68.6	36.8	4.9	68.4	25.5	4.2	66.9	60.1	42.1	76.7	64.6	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.6	36.8	4.9	68.4	25.5	4.2	66.9	60.1	42.1	76.7	64.6	8.7
LOS	E	D	A	E	C	A	E	E	D	E	E	A
Approach Delay		35.4			35.7			55.3			63.0	
Approach LOS		D			D			E			E	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 138.9
Natural Cycle: 100
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 45.3 Intersection LOS: D
Intersection Capacity Utilization 84.9% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 13: Appleby Line & Dundas Street

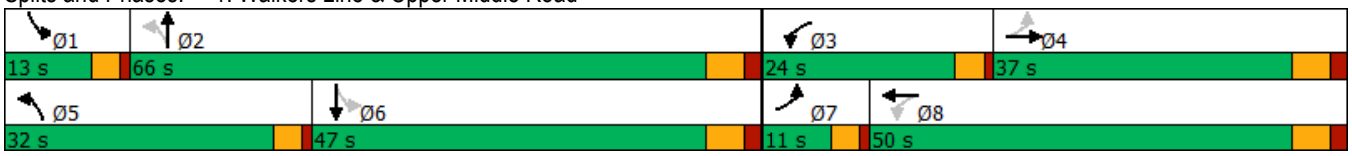


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	371	167	308	1014	179	386	1202	338	121	802	210
Future Volume (vph)	134	371	167	308	1014	179	386	1202	338	121	802	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	95.0		0.0	95.0		0.0	60.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	2.5			50.0			15.0			35.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99		0.99	1.00			0.99				
Frt		0.953			0.977			0.967			0.969	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3375	0	1807	3521	0	1825	3480	0	1807	3482	0
Flt Permitted	0.127			0.207			0.088			0.097		
Satd. Flow (perm)	244	3375	0	390	3521	0	169	3480	0	185	3482	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		47			15			32			24	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		184.1			1228.8			157.6			1831.3	
Travel Time (s)		11.0			73.7			9.5			109.9	
Confl. Peds. (#/hr)	4		18	18		4			10	10		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	1%	1%	1%	1%	0%	1%	0%	1%	2%	0%
Adj. Flow (vph)	138	382	172	318	1045	185	398	1239	348	125	827	216
Shared Lane Traffic (%)												
Lane Group Flow (vph)	138	554	0	318	1230	0	398	1587	0	125	1043	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.5	8.0		6.5	8.0		6.5	8.0		6.5	8.0	
Minimum Split (s)	10.5	30.0		10.5	30.0		10.5	31.0		10.5	31.0	
Total Split (s)	11.0	37.0		24.0	50.0		32.0	66.0		13.0	47.0	
Total Split (%)	7.9%	26.4%		17.1%	35.7%		22.9%	47.1%		9.3%	33.6%	
Maximum Green (s)	7.0	31.0		20.0	44.0		28.0	60.0		9.0	41.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		17.0			17.0			18.0			18.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	40.4	31.4		57.0	44.0		74.8	60.0		52.2	41.4	
Actuated g/C Ratio	0.29	0.22		0.41	0.31		0.54	0.43		0.37	0.30	
v/c Ratio	0.93	0.70		0.89	1.10		0.96	1.05		0.74	1.00	
Control Delay	89.4	51.0		57.7	102.6		76.3	75.5		53.6	74.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	89.4	51.0		57.7	102.6		76.3	75.5		53.6	74.3	
LOS	F	D		E	F		E	E		D	E	
Approach Delay		58.7			93.4			75.7			72.1	
Approach LOS		E			F			E			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 139.8			
Natural Cycle: 135			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay: 77.8		Intersection LOS: E	
Intersection Capacity Utilization 108.8%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 1: Walkers Line & Upper Middle Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	602	80	138	1336	289	120	58	130	136	42	55
Future Volume (vph)	75	602	80	138	1336	289	120	58	130	136	42	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	25.0		0.0	35.0		35.0	35.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	25.0			25.0			85.0			40.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00	1.00				0.98	0.99		
Frt		0.983			0.973				0.850		0.914	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3498	0	1807	3507	0	1789	1921	1617	1807	1736	0
Flt Permitted	0.080			0.347			0.692			0.718		
Satd. Flow (perm)	154	3498	0	658	3507	0	1303	1921	1586	1357	1736	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			33				134		54	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1228.8			782.1			150.1			414.9	
Travel Time (s)		73.7			46.9			9.0			24.9	
Confl. Peds. (#/hr)	2		4	4		2			6	6		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	4%	1%	1%	0%	2%	0%	1%	1%	0%	2%
Adj. Flow (vph)	77	621	82	142	1377	298	124	60	134	140	43	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	703	0	142	1675	0	124	60	134	140	100	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4		4	8		
Detector Phase	5	2		1	6		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0		7.0	8.0		8.0	8.0	8.0	8.0	8.0	
Minimum Split (s)	11.0	32.0		11.0	32.0		38.0	38.0	38.0	38.0	38.0	
Total Split (s)	12.0	70.0		12.0	70.0		38.0	38.0	38.0	38.0	38.0	
Total Split (%)	10.0%	58.3%		10.0%	58.3%		31.7%	31.7%	31.7%	31.7%	31.7%	
Maximum Green (s)	8.0	64.0		8.0	64.0		31.0	31.0	31.0	31.0	31.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	Max		None	Max		None	None	None	None	None	
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		18.0			18.0		23.0	23.0	23.0	23.0	23.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effct Green (s)	73.4	64.1		74.9	66.8		16.0	16.0	16.0	16.0	16.0	
Actuated g/C Ratio	0.70	0.61		0.72	0.64		0.15	0.15	0.15	0.15	0.15	
v/c Ratio	0.35	0.33		0.26	0.74		0.63	0.20	0.38	0.68	0.32	
Control Delay	9.1	10.7		5.7	17.2		55.6	39.8	9.8	58.4	22.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	9.1	10.7		5.7	17.2		55.6	39.8	9.8	58.4	22.5	
LOS	A	B		A	B		E	D	A	E	C	
Approach Delay		10.5			16.3			33.3			43.5	
Approach LOS		B			B			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 104.7			
Natural Cycle: 95			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 18.6		Intersection LOS: B	
Intersection Capacity Utilization 81.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Itbashi Way/Country Club Drive & Upper Middle Road



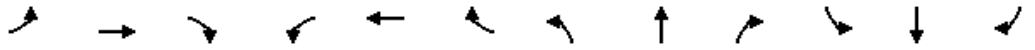
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	182	276	243	129	686	369	357	1281	100	186	941	200
Future Volume (vph)	182	276	243	129	686	369	357	1281	100	186	941	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	100.0		65.0	95.0		0.0	40.0		0.0
Storage Lanes	1		0	1		1	2		0	1		0
Taper Length (m)	25.0			40.0			30.0			35.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00		0.97	1.00	1.00			1.00	
Frt		0.930				0.850		0.989			0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1772	3351	0	1789	3650	1617	3506	3492	0	1807	3443	0
Flt Permitted	0.134			0.265			0.950			0.072		
Satd. Flow (perm)	249	3351	0	498	3650	1571	3491	3492	0	137	3443	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		145				212		8			21	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		782.1			454.4			154.1			1783.9	
Travel Time (s)		46.9			27.3			9.2			107.0	
Confl. Peds. (#/hr)	11		4	4		11	8		13	13		8
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	3%	0%	1%	2%	0%	1%	1%	3%	5%	1%	3%	2%
Adj. Flow (vph)	184	279	245	130	693	373	361	1294	101	188	951	202
Shared Lane Traffic (%)												
Lane Group Flow (vph)	184	524	0	130	693	373	361	1395	0	188	1153	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8				6		
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	1.0	8.0		1.0	8.0	8.0	1.0	8.0		1.0	8.0	
Minimum Split (s)	8.0	34.4		8.0	34.4	34.4	11.5	34.5		8.0	34.5	
Total Split (s)	15.0	36.0		14.0	35.0	35.0	30.0	72.0		18.0	60.0	
Total Split (%)	10.7%	25.7%		10.0%	25.0%	25.0%	21.4%	51.4%		12.9%	42.9%	
Maximum Green (s)	11.0	29.6		10.0	28.6	28.6	25.0	65.5		14.0	53.5	
Yellow Time (s)	3.0	3.7		3.0	3.7	3.7	3.0	3.7		3.0	3.7	
All-Red Time (s)	1.0	2.7		1.0	2.7	2.7	2.0	2.8		1.0	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.4		4.0	6.4	6.4	5.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		21.0			21.0	21.0		21.0			21.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	43.2	29.8		40.5	28.4	28.4	19.5	65.5		73.0	57.8	
Actuated g/C Ratio	0.31	0.22		0.29	0.20	0.20	0.14	0.47		0.53	0.42	
v/c Ratio	0.93	0.63		0.55	0.93	0.76	0.73	0.84		0.84	0.80	
Control Delay	85.4	39.3		43.9	73.4	33.1	66.2	38.0		63.2	40.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	85.4	39.3		43.9	73.4	33.1	66.2	38.0		63.2	40.2	
LOS	F	D		D	E	C	E	D		E	D	
Approach Delay		51.3			57.6			43.8			43.4	
Approach LOS		D			E			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 138.6			
Natural Cycle: 100			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 48.0		Intersection LOS: D	
Intersection Capacity Utilization 96.8%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 3: Appleby Line & Upper Middle Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	15	51	38	134	90	31	53	176	177	21	73	10
Future Volume (vph)	15	51	38	134	90	31	53	176	177	21	73	10
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	15	52	39	137	92	32	54	180	181	21	74	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	106	261	415	105
Volume Left (vph)	15	137	54	21
Volume Right (vph)	39	32	181	10
Hadj (s)	-0.19	0.04	-0.23	-0.01
Departure Headway (s)	5.5	5.5	4.9	5.6
Degree Utilization, x	0.16	0.40	0.56	0.16
Capacity (veh/h)	570	608	699	578
Control Delay (s)	9.6	12.1	14.0	9.6
Approach Delay (s)	9.6	12.1	14.0	9.6
Approach LOS	A	B	B	A

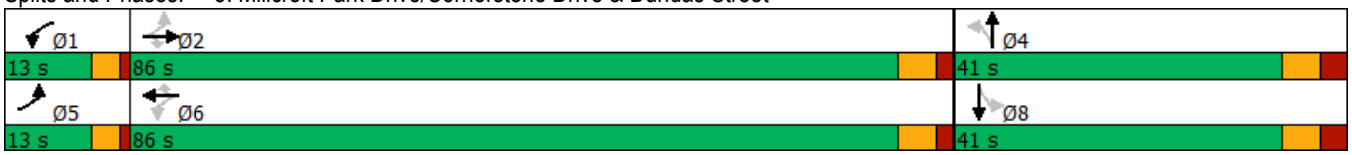
Intersection Summary				
Delay		12.4		
Level of Service		B		
Intersection Capacity Utilization		55.1%	ICU Level of Service	B
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	1085	49	135	2135	86	39	37	52	37	22	42
Future Volume (vph)	64	1085	49	135	2135	86	39	37	52	37	22	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		80.0	150.0		95.0	40.0		0.0	35.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	100.0			100.0			35.0			45.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.97	1.00		0.93	0.98	0.99		0.99	0.98	
Frt			0.850			0.850		0.912			0.901	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3510	1633	1789	3579	1601	1825	1712	0	1772	1618	0
Flt Permitted	0.049			0.211			0.713			0.696		
Satd. Flow (perm)	92	3510	1580	397	3579	1490	1343	1712	0	1290	1618	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			62		48			44	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		360.5			715.2			791.4			129.9	
Travel Time (s)		21.6			42.9			71.2			11.7	
Confl. Peds. (#/hr)	20		5	5		20	16		5	5		16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	4%	0%	2%	2%	2%	0%	3%	0%	3%	4%	5%
Adj. Flow (vph)	67	1142	52	142	2247	91	41	39	55	39	23	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	1142	52	142	2247	91	41	94	0	39	67	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2		2	6		6	4			8		
Detector Phase	5	2	2	1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	11.0	34.0	34.0	11.0	34.0	34.0	38.0	38.0		38.0	38.0	
Total Split (s)	13.0	86.0	86.0	13.0	86.0	86.0	41.0	41.0		41.0	41.0	
Total Split (%)	9.3%	61.4%	61.4%	9.3%	61.4%	61.4%	29.3%	29.3%		29.3%	29.3%	
Maximum Green (s)	9.0	80.0	80.0	9.0	80.0	80.0	34.0	34.0		34.0	34.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	None	None	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		21.0	21.0		21.0	21.0	24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	89.8	80.4	80.4	90.9	82.8	82.8	9.6	9.6		9.6	9.6	
Actuated g/C Ratio	0.78	0.70	0.70	0.79	0.72	0.72	0.08	0.08		0.08	0.08	
v/c Ratio	0.37	0.46	0.05	0.35	0.87	0.08	0.37	0.50		0.36	0.38	
Control Delay	15.1	8.5	1.3	4.7	18.0	2.6	58.8	36.2		59.0	28.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	15.1	8.5	1.3	4.7	18.0	2.6	58.8	36.2		59.0	28.5	
LOS	B	A	A	A	B	A	E	D		E	C	
Approach Delay		8.6			16.7			43.0			39.7	
Approach LOS		A			B			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 114.6			
Natural Cycle: 145			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 15.6		Intersection LOS: B	
Intersection Capacity Utilization 94.8%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 5: Millcroft Park Drive/Cornerstone Drive & Dundas Street

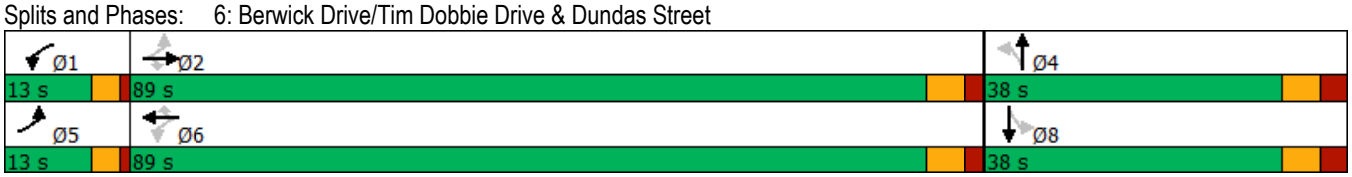


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	1063	9	11	2029	175	8	1	7	129	0	79
Future Volume (vph)	86	1063	9	11	2029	175	8	1	7	129	0	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		110.0	145.0		80.0	0.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (m)	60.0			80.0			45.0			25.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.96	1.00		0.95		0.98		1.00	0.97	
Frt			0.850			0.850		0.941			0.850	
Flt Protected	0.950			0.950				0.976		0.950		
Satd. Flow (prot)	1706	3510	1633	1825	3544	1617	0	1752	0	1825	1508	0
Flt Permitted	0.044			0.249				0.852		0.747		
Satd. Flow (perm)	79	3510	1569	477	3544	1531	0	1516	0	1429	1508	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			119		7			114	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		706.4			360.5			69.2			154.4	
Travel Time (s)		42.4			21.6			6.2			13.9	
Confl. Peds. (#/hr)	12		7	7		12	13		3	3		13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	7%	4%	0%	0%	3%	1%	0%	0%	0%	0%	0%	5%
Adj. Flow (vph)	89	1096	9	11	2092	180	8	1	7	133	0	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	1096	9	11	2092	180	0	16	0	133	81	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2		2	6		6	4			8		
Detector Phase	5	2	2	1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	11.5	31.0	31.0	11.5	31.0	31.0	36.0	36.0		36.0	36.0	
Total Split (s)	13.0	89.0	89.0	13.0	89.0	89.0	38.0	38.0		38.0	38.0	
Total Split (%)	9.3%	63.6%	63.6%	9.3%	63.6%	63.6%	27.1%	27.1%		27.1%	27.1%	
Maximum Green (s)	9.0	83.0	83.0	9.0	83.0	83.0	31.0	31.0		31.0	31.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0		7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		18.0	18.0		18.0	18.0	22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	96.9	93.2	93.2	92.3	83.3	83.3		16.8		16.8	16.8	
Actuated g/C Ratio	0.77	0.75	0.75	0.74	0.67	0.67		0.13		0.13	0.13	
v/c Ratio	0.54	0.42	0.01	0.03	0.89	0.17		0.08		0.69	0.27	
Control Delay	31.7	7.5	0.0	4.4	24.0	3.7		33.6		70.4	5.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	31.7	7.5	0.0	4.4	24.0	3.7		33.6		70.4	5.3	
LOS	C	A	A	A	C	A		C		E	A	
Approach Delay		9.3			22.3			33.6			45.7	
Approach LOS		A			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 125.1			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 19.5		Intersection LOS: B	
Intersection Capacity Utilization 92.8%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 6: Berwick Drive/Tim Dobbie Drive & Dundas Street

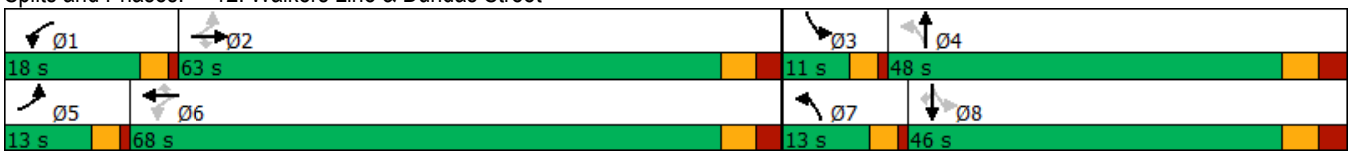


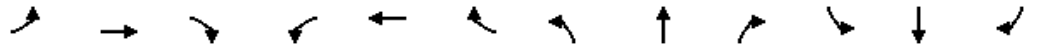
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	767	184	327	1372	48	306	456	237	86	363	272
Future Volume (vph)	176	767	184	327	1372	48	306	456	237	86	363	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		185.0	200.0		225.0	90.0		0.0	45.0		50.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	100.0			100.0			25.0			15.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.949				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3579	1585	1807	3614	1633	1772	3452	0	1825	3650	1617
Flt Permitted	0.071			0.238			0.402			0.156		
Satd. Flow (perm)	136	3579	1585	453	3614	1633	750	3452	0	300	3650	1617
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			190			93		67				156
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		363.5			706.4			1831.3			405.7	
Travel Time (s)		21.8			42.4			109.9			24.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	3%	1%	1%	0%	3%	0%	1%	0%	0%	1%
Adj. Flow (vph)	181	791	190	337	1414	49	315	470	244	89	374	280
Shared Lane Traffic (%)												
Lane Group Flow (vph)	181	791	190	337	1414	49	315	714	0	89	374	280
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0		7.0	8.0	8.0
Minimum Split (s)	11.5	41.4	41.4	11.5	41.4	41.4	11.5	43.9		11.0	43.9	43.9
Total Split (s)	13.0	63.0	63.0	18.0	68.0	68.0	13.0	48.0		11.0	46.0	46.0
Total Split (%)	9.3%	45.0%	45.0%	12.9%	48.6%	48.6%	9.3%	34.3%		7.9%	32.9%	32.9%
Maximum Green (s)	9.0	56.6	56.6	14.0	61.6	61.6	9.0	41.1		7.0	39.1	39.1
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2		1.0	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max	Max	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		28.0	28.0		28.0	28.0		30.0			30.0	30.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	68.1	56.7	56.7	77.2	61.7	61.7	43.1	31.2		39.1	29.2	29.2
Actuated g/C Ratio	0.52	0.44	0.44	0.59	0.47	0.47	0.33	0.24		0.30	0.22	0.22
v/c Ratio	0.97	0.51	0.24	0.81	0.83	0.06	0.99	0.81		0.52	0.46	0.58
Control Delay	89.6	28.9	4.2	32.7	35.6	0.3	87.0	50.2		40.0	45.2	23.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	89.6	28.9	4.2	32.7	35.6	0.3	87.0	50.2		40.0	45.2	23.9
LOS	F	C	A	C	D	A	F	D		D	D	C
Approach Delay		34.3			34.1			61.5			36.6	
Approach LOS		C			C			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 130.3			
Natural Cycle: 120			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 40.5		Intersection LOS: D	
Intersection Capacity Utilization 92.4%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 12: Walkers Line & Dundas Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	712	220	467	1336	272	386	924	379	343	747	252
Future Volume (vph)	150	712	220	467	1336	272	386	924	379	343	747	252
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		155.0	160.0		195.0	125.0		100.0	120.0		150.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	35.0			85.0			30.0			35.0		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	5193	1617	3437	5193	1601	3506	5142	1541	3437	5092	1617
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	5193	1617	3437	5193	1601	3506	5142	1541	3437	5092	1617
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			227			280			259			202
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		715.2			201.7			1783.9			156.2	
Travel Time (s)		42.9			12.1			107.0			9.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	1%	1%	3%	1%	2%	1%	2%	6%	3%	3%	1%
Adj. Flow (vph)	155	734	227	481	1377	280	398	953	391	354	770	260
Shared Lane Traffic (%)												
Lane Group Flow (vph)	155	734	227	481	1377	280	398	953	391	354	770	260
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	8.0	15.0	15.0	8.0	15.0	15.0	8.0	15.0	15.0	8.0	15.0	15.0
Minimum Split (s)	13.0	48.3	48.3	13.0	48.3	48.3	13.0	22.4	22.4	13.0	22.4	22.4
Total Split (s)	20.0	64.0	64.0	25.0	69.0	69.0	19.0	30.0	30.0	21.0	32.0	32.0
Total Split (%)	14.3%	45.7%	45.7%	17.9%	49.3%	49.3%	13.6%	21.4%	21.4%	15.0%	22.9%	22.9%
Maximum Green (s)	15.0	56.7	56.7	20.0	61.7	61.7	14.0	22.6	22.6	16.0	24.6	24.6
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	2.0	3.6	3.6	2.0	3.6	3.6	2.0	3.7	3.7	2.0	3.7	3.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.3	7.3	5.0	7.3	7.3	5.0	7.4	7.4	5.0	7.4	7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0						
Flash Dont Walk (s)		34.0	34.0		34.0	34.0						
Pedestrian Calls (#/hr)		0	0		0	0						
Act Effct Green (s)	13.2	56.7	56.7	20.0	63.5	63.5	14.0	22.6	22.6	16.0	24.6	24.6
Actuated g/C Ratio	0.09	0.40	0.40	0.14	0.45	0.45	0.10	0.16	0.16	0.11	0.18	0.18
v/c Ratio	0.48	0.35	0.29	0.98	0.58	0.32	1.14	1.15	0.84	0.90	0.86	0.58
Control Delay	64.8	29.5	4.1	95.2	29.9	3.5	145.5	131.7	35.8	87.6	66.8	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.8	29.5	4.1	95.2	29.9	3.5	145.5	131.7	35.8	87.6	66.8	18.8
LOS	E	C	A	F	C	A	F	F	D	F	E	B
Approach Delay		29.2			41.1			113.3			63.1	
Approach LOS		C			D			F			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Natural Cycle: 110			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.15			
Intersection Signal Delay: 63.5		Intersection LOS: E	
Intersection Capacity Utilization 80.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 13: Appleby Line & Dundas Street

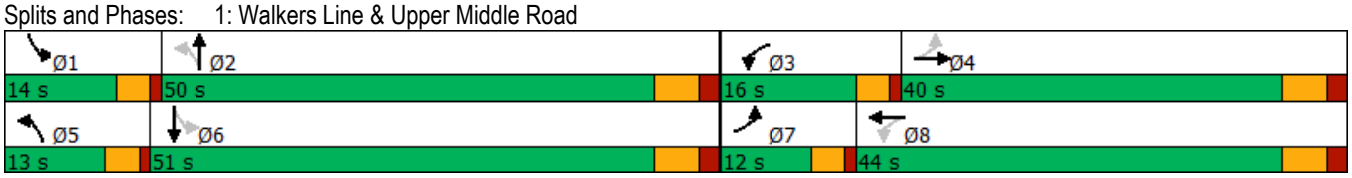


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	733	268	255	305	65	174	692	287	229	1191	113
Future Volume (vph)	165	733	268	255	305	65	174	692	287	229	1191	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	95.0		0.0	95.0		0.0	60.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	2.5			50.0			15.0			35.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99			1.00			0.99				
Frt		0.960			0.974			0.956			0.987	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3400	0	1772	3387	0	1738	3331	0	1789	3520	0
Flt Permitted	0.517			0.105			0.091			0.111		
Satd. Flow (perm)	952	3400	0	196	3387	0	166	3331	0	209	3520	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			22			60			9	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		184.1			1228.8			157.6			1836.7	
Travel Time (s)		11.0			73.7			9.5			110.2	
Confl. Peds. (#/hr)	4		5	5		4			6	6		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	2%	4%	3%	5%	3%	5%	5%	2%	2%	2%	6%
Adj. Flow (vph)	172	764	279	266	318	68	181	721	299	239	1241	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	172	1043	0	266	386	0	181	1020	0	239	1359	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.5	8.0		6.5	8.0		6.5	8.0		6.5	8.0	
Minimum Split (s)	11.0	30.0		11.0	30.0		11.0	31.0		11.0	31.0	
Total Split (s)	12.0	40.0		16.0	44.0		13.0	50.0		14.0	51.0	
Total Split (%)	10.0%	33.3%		13.3%	36.7%		10.8%	41.7%		11.7%	42.5%	
Maximum Green (s)	8.0	34.0		12.0	38.0		9.0	44.0		10.0	45.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		17.0			17.0			18.0			18.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	44.0	34.0		52.0	38.0		55.0	44.0		57.0	45.0	
Actuated g/C Ratio	0.37	0.28		0.43	0.32		0.46	0.37		0.48	0.38	
v/c Ratio	0.43	1.05		1.10	0.36		0.94	0.81		1.04	1.03	
Control Delay	26.3	82.5		116.7	30.8		78.0	38.3		96.1	68.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.3	82.5		116.7	30.8		78.0	38.3		96.1	68.5	
LOS	C	F		F	C		E	D		F	E	
Approach Delay		74.6			65.8			44.2			72.6	
Approach LOS		E			E			D			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Natural Cycle: 115			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay: 64.9		Intersection LOS: E	
Intersection Capacity Utilization 105.9%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 1: Walkers Line & Upper Middle Road

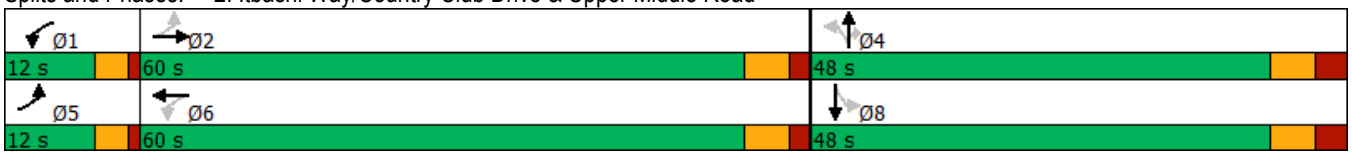


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	1182	103	94	452	74	46	35	103	235	61	79
Future Volume (vph)	45	1182	103	94	452	74	46	35	103	235	61	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	25.0		0.0	35.0		35.0	35.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	25.0			25.0			85.0			40.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00				1.00		1.00				0.99	
Frt		0.988			0.979				0.850		0.916	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3533	0	1772	3396	0	1601	1921	1555	1825	1737	0
Flt Permitted	0.443			0.115			0.664			0.734		
Satd. Flow (perm)	833	3533	0	214	3396	0	1118	1921	1555	1410	1737	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			20				107		58	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1228.8			782.1			150.1			414.9	
Travel Time (s)		73.7			46.9			9.0			24.9	
Confl. Peds. (#/hr)	2					2	1					1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	3%	3%	5%	4%	14%	0%	5%	0%	0%	1%
Adj. Flow (vph)	47	1231	107	98	471	77	48	36	107	245	64	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	1338	0	98	548	0	48	36	107	245	146	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4		4	8		
Detector Phase	5	2		1	6		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	6.5	8.0		6.5	8.0		8.0	8.0	8.0	8.0	8.0	
Minimum Split (s)	11.0	31.0		11.0	31.0		37.0	37.0	37.0	37.0	37.0	
Total Split (s)	12.0	60.0		12.0	60.0		48.0	48.0	48.0	48.0	48.0	
Total Split (%)	10.0%	50.0%		10.0%	50.0%		40.0%	40.0%	40.0%	40.0%	40.0%	
Maximum Green (s)	8.0	54.0		8.0	54.0		41.0	41.0	41.0	41.0	41.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	Max		None	Max		None	None	None	None	None	
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		18.0			18.0		23.0	23.0	23.0	23.0	23.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effct Green (s)	62.0	54.7		63.7	57.3		22.7	22.7	22.7	22.7	22.7	
Actuated g/C Ratio	0.62	0.55		0.64	0.58		0.23	0.23	0.23	0.23	0.23	
v/c Ratio	0.08	0.69		0.39	0.28		0.19	0.08	0.24	0.76	0.33	
Control Delay	7.9	20.4		12.1	12.6		32.7	30.3	7.4	51.8	21.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	7.9	20.4		12.1	12.6		32.7	30.3	7.4	51.8	21.4	
LOS	A	C		B	B		C	C	A	D	C	
Approach Delay		20.0			12.6			18.1			40.4	
Approach LOS		C			B			B			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 99.4			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 21.1		Intersection LOS: C	
Intersection Capacity Utilization 81.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Itbashi Way/Country Club Drive & Upper Middle Road





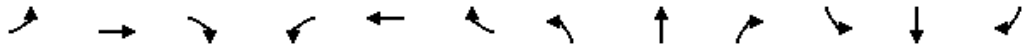
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	742	226	212	298	206	127	828	81	298	1364	73
Future Volume (vph)	137	742	226	212	298	206	127	828	81	298	1364	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	100.0		65.0	95.0		0.0	40.0		0.0
Storage Lanes	1		0	1		1	2		0	1		0
Taper Length (m)	25.0			40.0			30.0			35.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00						1.00				
Frt		0.965				0.850		0.987			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1722	3434	0	1789	3510	1555	3372	3345	0	1789	3483	0
Flt Permitted	0.540			0.122			0.950			0.097		
Satd. Flow (perm)	979	3434	0	230	3510	1555	3372	3345	0	183	3483	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33				217		9			5	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		782.1			454.4			154.1			1784.0	
Travel Time (s)		46.9			27.3			9.2			107.0	
Confl. Peds. (#/hr)			2	2					2	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	6%	2%	3%	2%	4%	5%	5%	8%	3%	2%	4%	3%
Adj. Flow (vph)	144	781	238	223	314	217	134	872	85	314	1436	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	1019	0	223	314	217	134	957	0	314	1513	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8				6		
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	1.0	8.0		1.0	8.0	8.0	1.0	8.0		1.0	8.0	
Minimum Split (s)	5.5	35.4		5.5	35.4	35.4	6.0	35.5		5.5	35.5	
Total Split (s)	16.0	38.0		16.0	38.0	38.0	13.0	43.0		23.0	53.0	
Total Split (%)	13.3%	31.7%		13.3%	31.7%	31.7%	10.8%	35.8%		19.2%	44.2%	
Maximum Green (s)	12.0	31.6		12.0	31.6	31.6	8.0	36.5		19.0	46.5	
Yellow Time (s)	3.0	3.7		3.0	3.7	3.7	3.0	3.7		3.0	3.7	
All-Red Time (s)	1.0	2.7		1.0	2.7	2.7	2.0	2.8		1.0	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.4		4.0	6.4	6.4	5.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		21.0			21.0	21.0		21.0			21.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	44.8	31.6		47.2	32.8	32.8	7.9	37.2		61.9	46.5	
Actuated g/C Ratio	0.37	0.26		0.39	0.27	0.27	0.07	0.31		0.52	0.39	
v/c Ratio	0.33	1.10		0.91	0.33	0.37	0.61	0.92		0.93	1.12	
Control Delay	24.8	99.9		66.8	36.3	6.5	66.7	54.1		65.6	98.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	24.8	99.9		66.8	36.3	6.5	66.7	54.1		65.6	98.5	
LOS	C	F		E	D	A	E	D		E	F	
Approach Delay		90.6			36.7			55.7			92.8	
Approach LOS		F			D			E			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 119.9			
Natural Cycle: 125			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.12			
Intersection Signal Delay: 75.2		Intersection LOS: E	
Intersection Capacity Utilization 101.4%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 3: Appleby Line & Upper Middle Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	14	68	60	148	66	22	11	62	118	20	141	16
Future Volume (vph)	14	68	60	148	66	22	11	62	118	20	141	16
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	16	80	71	174	78	26	13	73	139	24	166	19

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	167	278	225	209
Volume Left (vph)	16	174	13	24
Volume Right (vph)	71	26	139	19
Hadj (s)	-0.19	0.12	-0.31	0.00
Departure Headway (s)	5.4	5.5	5.2	5.5
Degree Utilization, x	0.25	0.42	0.33	0.32
Capacity (veh/h)	597	610	625	595
Control Delay (s)	10.2	12.5	10.7	11.1
Approach Delay (s)	10.2	12.5	10.7	11.1
Approach LOS	B	B	B	B

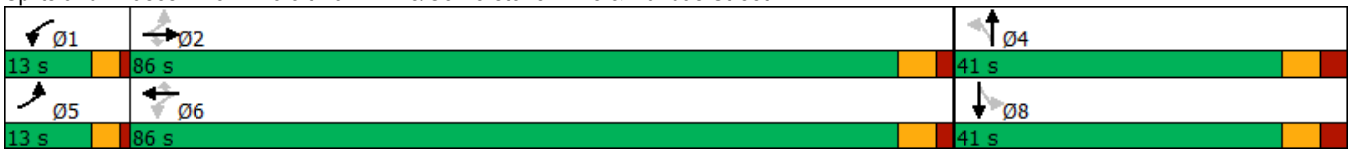
Intersection Summary				
Delay	11.3			
Level of Service	B			
Intersection Capacity Utilization	46.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	2465	73	38	1230	24	85	16	85	93	36	123
Future Volume (vph)	49	2465	73	38	1230	24	85	16	85	93	36	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		70.0	85.0		70.0	40.0		0.0	35.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	65.0			80.0			35.0			45.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.95			0.94	0.94	0.98		0.99	0.93	
Frt			0.850			0.850		0.874			0.884	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1722	4391	1617	1738	4269	1570	1825	1635	0	1807	1563	0
Flt Permitted	0.149			0.050			0.505			0.689		
Satd. Flow (perm)	269	4391	1537	91	4269	1469	909	1635	0	1300	1563	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			62		89			114	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		360.5			298.9			256.9			129.9	
Travel Time (s)		21.6			17.9			23.1			11.7	
Confl. Peds. (#/hr)	18		12	12		18	62		7	7		62
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	6%	5%	1%	5%	8%	4%	0%	0%	1%	1%	0%	1%
Adj. Flow (vph)	51	2568	76	40	1281	25	89	17	89	97	38	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	2568	76	40	1281	25	89	106	0	97	166	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2		2	6		6	4			8		
Detector Phase	5	2	2	1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	11.0	34.0	34.0	11.0	34.0	34.0	38.0	38.0		38.0	38.0	
Total Split (s)	13.0	86.0	86.0	13.0	86.0	86.0	41.0	41.0		41.0	41.0	
Total Split (%)	9.3%	61.4%	61.4%	9.3%	61.4%	61.4%	29.3%	29.3%		29.3%	29.3%	
Maximum Green (s)	9.0	80.0	80.0	9.0	80.0	80.0	34.0	34.0		34.0	34.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	None	None	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		21.0	21.0		21.0	21.0	24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	88.1	80.5	80.5	87.9	80.4	80.4	15.3	15.3		15.3	15.3	
Actuated g/C Ratio	0.75	0.69	0.69	0.75	0.68	0.68	0.13	0.13		0.13	0.13	
v/c Ratio	0.18	0.85	0.07	0.24	0.44	0.02	0.75	0.37		0.57	0.55	
Control Delay	5.3	19.5	3.0	7.7	10.0	0.0	86.2	16.6		62.1	24.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	5.3	19.5	3.0	7.7	10.0	0.0	86.2	16.6		62.1	24.0	
LOS	A	B	A	A	A	A	F	B		E	C	
Approach Delay		18.8			9.7			48.3			38.0	
Approach LOS		B			A			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 117.4			
Natural Cycle: 125			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 18.5		Intersection LOS: B	
Intersection Capacity Utilization 95.2%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 5: Millcroft Park Drive/Cornerstone Drive & Dundas Street

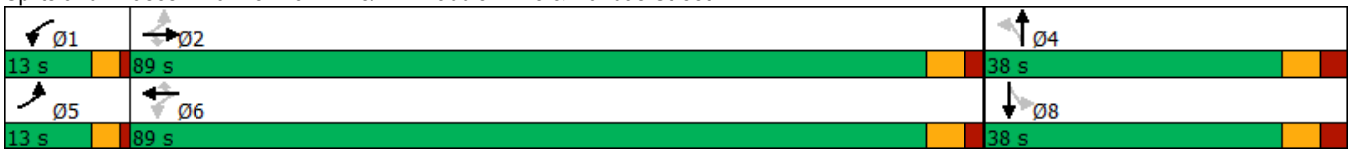


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	2233	26	5	1177	210	17	0	34	224	0	162
Future Volume (vph)	154	2233	26	5	1177	210	17	0	34	224	0	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		70.0	125.0		75.0	0.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (m)	65.0			65.0			45.0			25.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.94			0.97		0.97		0.99	0.90	
Frt			0.850			0.850		0.909			0.850	
Flt Protected	0.950			0.950				0.984		0.950		
Satd. Flow (prot)	1706	4391	1633	1825	4269	1555	0	1695	0	1755	1361	0
Flt Permitted	0.131			0.046				0.868		0.721		
Satd. Flow (perm)	235	4391	1538	88	4269	1511	0	1463	0	1321	1361	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			228		55			161	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		241.8			360.5			69.2			154.4	
Travel Time (s)		14.5			21.6			6.2			13.9	
Confl. Peds. (#/hr)	3		14	14		3	62		6	6		62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	5%	0%	0%	8%	5%	0%	0%	0%	4%	0%	8%
Adj. Flow (vph)	167	2427	28	5	1279	228	18	0	37	243	0	176
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	2427	28	5	1279	228	0	55	0	243	176	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2		2	6		6	4			8		
Detector Phase	5	2	2	1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	11.5	31.0	31.0	11.5	31.0	31.0	36.0	36.0		36.0	36.0	
Total Split (s)	13.0	89.0	89.0	13.0	89.0	89.0	38.0	38.0		38.0	38.0	
Total Split (%)	9.3%	63.6%	63.6%	9.3%	63.6%	63.6%	27.1%	27.1%		27.1%	27.1%	
Maximum Green (s)	9.0	83.0	83.0	9.0	83.0	83.0	31.0	31.0		31.0	31.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0		7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		18.0	18.0		18.0	18.0	22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	97.4	93.7	93.7	92.1	83.1	83.1		28.1		28.1	28.1	
Actuated g/C Ratio	0.71	0.68	0.68	0.67	0.61	0.61		0.21		0.21	0.21	
v/c Ratio	0.64	0.81	0.03	0.03	0.49	0.23		0.16		0.90	0.43	
Control Delay	19.9	19.3	0.0	7.0	16.3	2.0		11.9		87.1	12.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	19.9	19.3	0.0	7.0	16.3	2.0		11.9		87.1	12.0	
LOS	B	B	A	A	B	A		B		F	B	
Approach Delay		19.1			14.1			11.9			55.6	
Approach LOS		B			B			B			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 136.9			
Natural Cycle: 110			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 20.7		Intersection LOS: C	
Intersection Capacity Utilization 86.7%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 6: Berwick Drive/Tim Dobbie Drive & Dundas Street

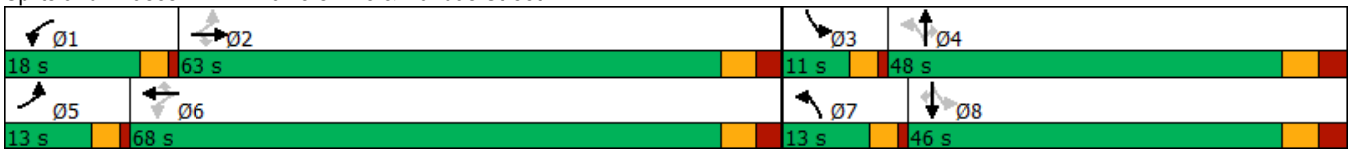


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	1667	209	224	793	26	243	337	276	93	455	190
Future Volume (vph)	242	1667	209	224	793	26	243	337	276	93	455	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	160.0		75.0	200.0		225.0	35.0		30.0	50.0		45.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	52.0			100.0			50.0			30.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor	1.00		0.98			0.98	1.00		0.98	1.00		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4433	1570	3404	4309	1633	3437	3579	1585	3471	3614	1601
Flt Permitted	0.260			0.069			0.270			0.499		
Satd. Flow (perm)	948	4433	1544	247	4309	1606	975	3579	1558	1817	3614	1575
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			141			93			208			196
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		399.3			463.3			1836.7			109.1	
Travel Time (s)		24.0			27.8			110.2			6.5	
Confl. Peds. (#/hr)	4		4	4		4	4		5	5		4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	4%	4%	4%	7%	0%	3%	2%	3%	2%	1%	2%
Adj. Flow (vph)	249	1719	215	231	818	27	251	347	285	96	469	196
Shared Lane Traffic (%)												
Lane Group Flow (vph)	249	1719	215	231	818	27	251	347	285	96	469	196
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0
Minimum Split (s)	11.5	41.4	41.4	11.5	41.4	41.4	11.5	43.9	43.9	11.0	43.9	43.9
Total Split (s)	13.0	63.0	63.0	18.0	68.0	68.0	13.0	48.0	48.0	11.0	46.0	46.0
Total Split (%)	9.3%	45.0%	45.0%	12.9%	48.6%	48.6%	9.3%	34.3%	34.3%	7.9%	32.9%	32.9%
Maximum Green (s)	9.0	56.6	56.6	14.0	61.6	61.6	9.0	41.1	41.1	7.0	39.1	39.1
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.9	6.9	4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	None	None	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		28.0	28.0		28.0	28.0		30.0	30.0		30.0	30.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	67.7	56.8	56.8	69.8	57.9	57.9	35.7	23.7	23.7	31.7	21.7	21.7
Actuated g/C Ratio	0.57	0.48	0.48	0.59	0.49	0.49	0.30	0.20	0.20	0.27	0.18	0.18
v/c Ratio	0.34	0.81	0.26	0.58	0.39	0.03	0.52	0.48	0.60	0.16	0.71	0.44
Control Delay	11.6	31.0	8.3	21.2	20.4	0.1	33.9	44.3	17.8	29.1	51.7	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.6	31.0	8.3	21.2	20.4	0.1	33.9	44.3	17.8	29.1	51.7	8.8
LOS	B	C	A	C	C	A	C	D	B	C	D	A
Approach Delay		26.6			20.1			32.8			37.8	
Approach LOS		C			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 118.5			
Natural Cycle: 120			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 28.0		Intersection LOS: C	
Intersection Capacity Utilization 78.1%		ICU Level of Service D	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 12: Walkers Line & Dundas Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	407	1664	312	325	776	152	163	622	334	377	844	199
Future Volume (vph)	407	1664	312	325	776	152	163	622	334	377	844	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		155.0	160.0		195.0	125.0		100.0	120.0		150.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	35.0			85.0			30.0			35.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3506	4476	1585	3309	4309	1484	3309	4995	1541	3340	5043	1585
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3500	4476	1565	3308	4309	1459	3300	4995	1516	3333	5043	1558
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			309			158			194			207
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		416.3			249.5			1784.0			156.1	
Travel Time (s)		25.0			15.0			107.0			9.4	
Confl. Peds. (#/hr)	5		1	1		5	3		2	2		3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	3%	3%	7%	7%	10%	7%	5%	6%	6%	4%	3%
Adj. Flow (vph)	424	1733	325	339	808	158	170	648	348	393	879	207
Shared Lane Traffic (%)												
Lane Group Flow (vph)	424	1733	325	339	808	158	170	648	348	393	879	207
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	8.0	15.0	15.0	8.0	15.0	15.0	8.0	15.0	15.0	8.0	15.0	15.0
Minimum Split (s)	13.0	48.3	48.3	13.0	48.3	48.3	13.0	22.4	22.4	13.0	22.4	22.4
Total Split (s)	20.0	64.0	64.0	25.0	69.0	69.0	19.0	30.0	30.0	21.0	32.0	32.0
Total Split (%)	14.3%	45.7%	45.7%	17.9%	49.3%	49.3%	13.6%	21.4%	21.4%	15.0%	22.9%	22.9%
Maximum Green (s)	15.0	56.7	56.7	20.0	61.7	61.7	14.0	22.6	22.6	16.0	24.6	24.6
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	2.0	3.6	3.6	2.0	3.6	3.6	2.0	3.7	3.7	2.0	3.7	3.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.3	7.3	5.0	7.3	7.3	5.0	7.4	7.4	5.0	7.4	7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0						
Flash Dont Walk (s)		34.0	34.0		34.0	34.0						
Pedestrian Calls (#/hr)		0	0		0	0						
Act Effct Green (s)	15.0	57.6	57.6	19.1	61.7	61.7	13.2	22.6	22.6	16.0	25.4	25.4
Actuated g/C Ratio	0.11	0.41	0.41	0.14	0.44	0.44	0.09	0.16	0.16	0.11	0.18	0.18
v/c Ratio	1.13	0.94	0.39	0.75	0.43	0.22	0.55	0.80	0.86	1.03	0.96	0.46
Control Delay	141.6	51.0	5.0	69.2	27.8	4.0	67.4	65.2	45.2	113.9	78.1	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	141.6	51.0	5.0	69.2	27.8	4.0	67.4	65.2	45.2	113.9	78.1	9.8
LOS	F	D	A	E	C	A	E	E	D	F	E	A
Approach Delay		60.5			35.7			59.5			78.0	
Approach LOS		E			D			E			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Natural Cycle: 100			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay: 59.3		Intersection LOS: E	
Intersection Capacity Utilization 89.6%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 13: Appleby Line & Dundas Street

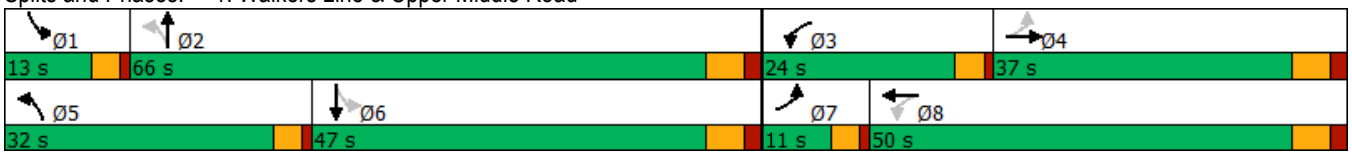


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	432	167	310	1178	180	386	1382	341	122	922	210
Future Volume (vph)	134	432	167	310	1178	180	386	1382	341	122	922	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	95.0		0.0	95.0		0.0	60.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	2.5			50.0			15.0			35.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99		0.99	1.00			0.99				
Frt		0.958			0.980			0.970			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3397	0	1807	3533	0	1825	3493	0	1807	3491	0
Flt Permitted	0.129			0.156			0.088			0.097		
Satd. Flow (perm)	248	3397	0	295	3533	0	169	3493	0	185	3491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			13			27			20	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		184.1			1228.8			157.6			1747.3	
Travel Time (s)		11.0			73.7			9.5			104.8	
Confl. Peds. (#/hr)	4		18	18		4			10	10		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	1%	1%	1%	1%	0%	1%	0%	1%	2%	0%
Adj. Flow (vph)	138	445	172	320	1214	186	398	1425	352	126	951	216
Shared Lane Traffic (%)												
Lane Group Flow (vph)	138	617	0	320	1400	0	398	1777	0	126	1167	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.5	8.0		6.5	8.0		6.5	8.0		6.5	8.0	
Minimum Split (s)	10.5	30.0		10.5	30.0		10.5	31.0		10.5	31.0	
Total Split (s)	11.0	37.0		24.0	50.0		32.0	66.0		13.0	47.0	
Total Split (%)	7.9%	26.4%		17.1%	35.7%		22.9%	47.1%		9.3%	33.6%	
Maximum Green (s)	7.0	31.0		20.0	44.0		28.0	60.0		9.0	41.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		17.0			17.0			18.0			18.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	40.0	31.0		57.0	44.0		74.8	60.0		52.2	41.4	
Actuated g/C Ratio	0.29	0.22		0.41	0.31		0.54	0.43		0.37	0.30	
v/c Ratio	0.93	0.79		0.95	1.25		0.96	1.17		0.74	1.11	
Control Delay	89.1	56.5		72.3	159.5		76.3	121.4		54.3	108.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	89.1	56.5		72.3	159.5		76.3	121.4		54.3	108.6	
LOS	F	E		E	F		E	F		D	F	
Approach Delay		62.5			143.3			113.1			103.3	
Approach LOS		E			F			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 139.8			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.25			
Intersection Signal Delay: 113.3		Intersection LOS: F	
Intersection Capacity Utilization 118.5%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: Walkers Line & Upper Middle Road



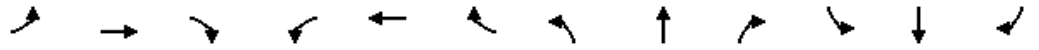
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	697	80	138	1555	289	120	67	130	136	48	55
Future Volume (vph)	75	697	80	138	1555	289	120	67	130	136	48	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	25.0		0.0	35.0		35.0	35.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	25.0			25.0			85.0			40.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00	1.00				0.98	0.99		
Frt		0.985			0.976				0.850		0.919	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3507	0	1807	3519	0	1789	1921	1617	1807	1747	0
Flt Permitted	0.062			0.305			0.689			0.712		
Satd. Flow (perm)	119	3507	0	579	3519	0	1298	1921	1586	1345	1747	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			27				134		47	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1228.8			782.1			150.1			414.9	
Travel Time (s)		73.7			46.9			9.0			24.9	
Confl. Peds. (#/hr)	2		4	4		2			6	6		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	4%	1%	1%	0%	2%	0%	1%	1%	0%	2%
Adj. Flow (vph)	77	719	82	142	1603	298	124	69	134	140	49	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	801	0	142	1901	0	124	69	134	140	106	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4		4	8		
Detector Phase	5	2		1	6		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0		7.0	8.0		8.0	8.0	8.0	8.0	8.0	
Minimum Split (s)	11.0	32.0		11.0	32.0		38.0	38.0	38.0	38.0	38.0	
Total Split (s)	12.0	70.0		12.0	70.0		38.0	38.0	38.0	38.0	38.0	
Total Split (%)	10.0%	58.3%		10.0%	58.3%		31.7%	31.7%	31.7%	31.7%	31.7%	
Maximum Green (s)	8.0	64.0		8.0	64.0		31.0	31.0	31.0	31.0	31.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	Max		None	Max		None	None	None	None	None	
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		18.0			18.0		23.0	23.0	23.0	23.0	23.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effct Green (s)	73.4	64.2		74.9	66.9		16.1	16.1	16.1	16.1	16.1	
Actuated g/C Ratio	0.70	0.61		0.71	0.64		0.15	0.15	0.15	0.15	0.15	
v/c Ratio	0.38	0.37		0.28	0.84		0.62	0.23	0.38	0.68	0.34	
Control Delay	14.1	11.2		6.0	21.3		55.4	40.3	9.7	58.6	25.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	14.1	11.2		6.0	21.3		55.4	40.3	9.7	58.6	25.8	
LOS	B	B		A	C		E	D	A	E	C	
Approach Delay		11.5			20.2			33.5			44.5	
Approach LOS		B			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 104.9			
Natural Cycle: 115			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 21.0		Intersection LOS: C	
Intersection Capacity Utilization 87.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: Itbashi Way/Country Club Drive & Upper Middle Road





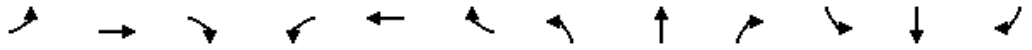
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	320	243	129	802	382	357	1476	100	200	1098	208
Future Volume (vph)	184	320	243	129	802	382	357	1476	100	200	1098	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	100.0		65.0	95.0		0.0	40.0		0.0
Storage Lanes	1		0	1		1	2		0	1		0
Taper Length (m)	25.0			40.0			30.0			35.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99		1.00		0.97	1.00	1.00			1.00	
Frt		0.935				0.850		0.990			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1772	3372	0	1789	3650	1617	3506	3497	0	1807	3451	0
Flt Permitted	0.134			0.223			0.950			0.069		
Satd. Flow (perm)	250	3372	0	419	3650	1571	3494	3497	0	131	3451	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		125				204		7			18	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		782.1			454.4			154.1			1940.1	
Travel Time (s)		46.9			27.3			9.2			116.4	
Confl. Peds. (#/hr)	11		4	4		11	8		13	13		8
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	3%	0%	1%	2%	0%	1%	1%	3%	5%	1%	3%	2%
Adj. Flow (vph)	186	323	245	130	810	386	361	1491	101	202	1109	210
Shared Lane Traffic (%)												
Lane Group Flow (vph)	186	568	0	130	810	386	361	1592	0	202	1319	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8				6		
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	1.0	8.0		1.0	8.0	8.0	1.0	8.0		1.0	8.0	
Minimum Split (s)	8.0	34.4		8.0	34.4	34.4	11.5	34.5		8.0	34.5	
Total Split (s)	15.0	36.0		14.0	35.0	35.0	30.0	72.0		18.0	60.0	
Total Split (%)	10.7%	25.7%		10.0%	25.0%	25.0%	21.4%	51.4%		12.9%	42.9%	
Maximum Green (s)	11.0	29.6		10.0	28.6	28.6	25.0	65.5		14.0	53.5	
Yellow Time (s)	3.0	3.7		3.0	3.7	3.7	3.0	3.7		3.0	3.7	
All-Red Time (s)	1.0	2.7		1.0	2.7	2.7	2.0	2.8		1.0	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.4		4.0	6.4	6.4	5.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		21.0			21.0	21.0		21.0			21.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	43.3	29.9		40.7	28.6	28.6	19.5	65.5		74.1	58.3	
Actuated g/C Ratio	0.31	0.21		0.29	0.21	0.21	0.14	0.47		0.53	0.42	
v/c Ratio	0.94	0.69		0.60	1.08	0.80	0.74	0.97		0.88	0.91	
Control Delay	88.5	44.1		46.7	108.5	37.6	66.6	51.4		71.6	47.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	88.5	44.1		46.7	108.5	37.6	66.6	51.4		71.6	47.8	
LOS	F	D		D	F	D	E	D		E	D	
Approach Delay		55.1			81.8			54.2			51.0	
Approach LOS		E			F			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 139.3			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay: 60.0		Intersection LOS: E	
Intersection Capacity Utilization 105.3%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 3: Appleby Line & Upper Middle Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	15	59	38	134	104	31	53	202	177	21	84	10
Future Volume (vph)	15	59	38	134	104	31	53	202	177	21	84	10
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	15	60	39	137	106	32	54	206	181	21	86	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	114	275	441	117
Volume Left (vph)	15	137	54	21
Volume Right (vph)	39	32	181	10
Hadj (s)	-0.18	0.04	-0.21	0.00
Departure Headway (s)	5.7	5.6	5.0	5.7
Degree Utilization, x	0.18	0.43	0.62	0.19
Capacity (veh/h)	546	590	681	557
Control Delay (s)	10.0	12.8	15.7	10.1
Approach Delay (s)	10.0	12.8	15.7	10.1
Approach LOS	B	B	C	B

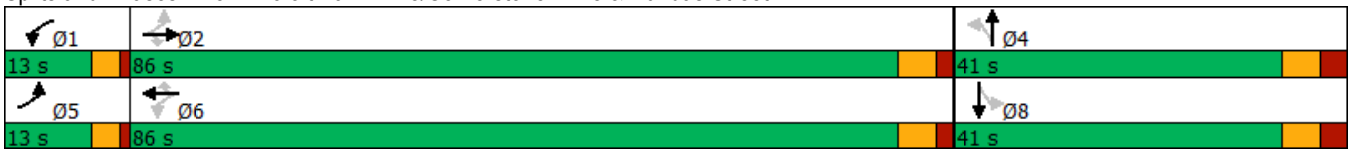
Intersection Summary				
Delay		13.5		
Level of Service		B		
Intersection Capacity Utilization		57.8%	ICU Level of Service	B
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	1403	49	135	2713	86	39	43	52	37	25	42
Future Volume (vph)	64	1403	49	135	2713	86	39	43	52	37	25	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		70.0	85.0		70.0	40.0		0.0	35.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	100.0			100.0			35.0			45.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.97	1.00		0.93	0.98	0.99		0.99	0.98	
Frt			0.850			0.850		0.917			0.906	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4433	1633	1789	4520	1601	1825	1720	0	1772	1629	0
Flt Permitted	0.049			0.112			0.711			0.692		
Satd. Flow (perm)	92	4433	1580	211	4520	1490	1339	1720	0	1283	1629	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			62		42			44	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		360.5			298.9			791.4			129.9	
Travel Time (s)		21.6			17.9			71.2			11.7	
Confl. Peds. (#/hr)	20		5	5		20	16		5	5		16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	4%	0%	2%	2%	2%	0%	3%	0%	3%	4%	5%
Adj. Flow (vph)	67	1477	52	142	2856	91	41	45	55	39	26	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	1477	52	142	2856	91	41	100	0	39	70	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2		2	6		6	4			8		
Detector Phase	5	2	2	1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	11.0	34.0	34.0	11.0	34.0	34.0	38.0	38.0		38.0	38.0	
Total Split (s)	13.0	86.0	86.0	13.0	86.0	86.0	41.0	41.0		41.0	41.0	
Total Split (%)	9.3%	61.4%	61.4%	9.3%	61.4%	61.4%	29.3%	29.3%		29.3%	29.3%	
Maximum Green (s)	9.0	80.0	80.0	9.0	80.0	80.0	34.0	34.0		34.0	34.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	None	None	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		21.0	21.0		21.0	21.0	24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	89.6	80.2	80.2	91.1	82.8	82.8	10.1	10.1		10.1	10.1	
Actuated g/C Ratio	0.78	0.70	0.70	0.79	0.72	0.72	0.09	0.09		0.09	0.09	
v/c Ratio	0.37	0.48	0.05	0.52	0.88	0.08	0.35	0.53		0.35	0.38	
Control Delay	15.3	8.8	1.4	11.6	17.8	2.7	57.9	40.8		58.2	29.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	15.3	8.8	1.4	11.6	17.8	2.7	57.9	40.8		58.2	29.0	
LOS	B	A	A	B	B	A	E	D		E	C	
Approach Delay		8.8			17.0			45.8			39.5	
Approach LOS		A			B			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 115			
Natural Cycle: 145			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 15.7		Intersection LOS: B	
Intersection Capacity Utilization 88.2%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 5: Millcroft Park Drive/Cornerstone Drive & Dundas Street

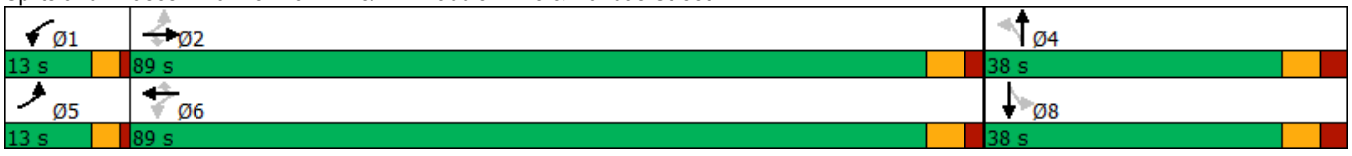


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	1322	9	11	2501	175	8	1	7	129	0	79
Future Volume (vph)	86	1322	9	11	2501	175	8	1	7	129	0	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		70.0	125.0		75.0	0.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (m)	60.0			80.0			45.0			25.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.96	1.00		0.95		0.98		1.00	0.97	
Frt			0.850			0.850		0.941			0.850	
Flt Protected	0.950			0.950				0.976		0.950		
Satd. Flow (prot)	1706	4433	1633	1825	4476	1617	0	1752	0	1825	1508	0
Flt Permitted	0.044			0.147				0.852		0.747		
Satd. Flow (perm)	79	4433	1569	282	4476	1531	0	1516	0	1429	1508	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			115		7			109	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		241.8			360.5			69.2			154.4	
Travel Time (s)		14.5			21.6			6.2			13.9	
Confl. Peds. (#/hr)	12		7	7		12	13		3	3		13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	7%	4%	0%	0%	3%	1%	0%	0%	0%	0%	0%	5%
Adj. Flow (vph)	89	1363	9	11	2578	180	8	1	7	133	0	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	1363	9	11	2578	180	0	16	0	133	81	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2		2	6		6	4			8		
Detector Phase	5	2	2	1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	11.5	31.0	31.0	11.5	31.0	31.0	36.0	36.0		36.0	36.0	
Total Split (s)	13.0	89.0	89.0	13.0	89.0	89.0	38.0	38.0		38.0	38.0	
Total Split (%)	9.3%	63.6%	63.6%	9.3%	63.6%	63.6%	27.1%	27.1%		27.1%	27.1%	
Maximum Green (s)	9.0	83.0	83.0	9.0	83.0	83.0	31.0	31.0		31.0	31.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0		7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		18.0	18.0		18.0	18.0	22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	96.9	93.2	93.2	92.3	83.3	83.3		16.8		16.8	16.8	
Actuated g/C Ratio	0.77	0.75	0.75	0.74	0.67	0.67		0.13		0.13	0.13	
v/c Ratio	0.54	0.41	0.01	0.04	0.87	0.17		0.08		0.69	0.27	
Control Delay	31.7	7.3	0.0	4.5	21.5	3.9		33.6		70.4	5.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	31.7	7.3	0.0	4.5	21.5	3.9		33.6		70.4	5.9	
LOS	C	A	A	A	C	A		C		E	A	
Approach Delay		8.7			20.3			33.6			46.0	
Approach LOS		A			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 125.1			
Natural Cycle: 120			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 17.8		Intersection LOS: B	
Intersection Capacity Utilization 85.0%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 6: Berwick Drive/Tim Dobbie Drive & Dundas Street

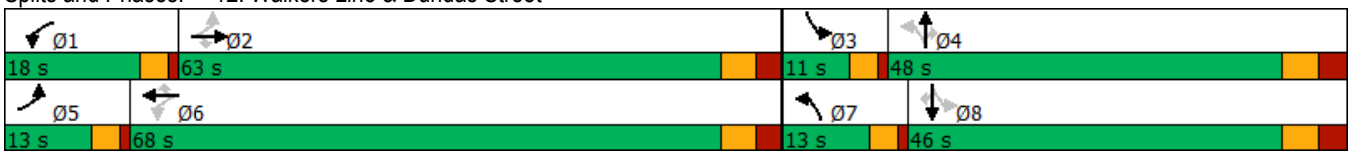


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	982	184	327	1746	48	306	525	237	86	418	272
Future Volume (vph)	176	982	184	327	1746	48	306	525	237	86	418	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	160.0		75.0	200.0		225.0	35.0		30.0	50.0		45.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	55.0			100.0			50.0			30.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3541	4520	1585	3506	4565	1633	3437	3650	1617	3541	3650	1617
Flt Permitted	0.069			0.173			0.315			0.269		
Satd. Flow (perm)	257	4520	1585	638	4565	1633	1140	3650	1617	1003	3650	1617
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			190			93			154			145
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		363.5			706.4			1831.3			405.7	
Travel Time (s)		21.8			42.4			109.9			24.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	3%	1%	1%	0%	3%	0%	1%	0%	0%	1%
Adj. Flow (vph)	181	1012	190	337	1800	49	315	541	244	89	431	280
Shared Lane Traffic (%)												
Lane Group Flow (vph)	181	1012	190	337	1800	49	315	541	244	89	431	280
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0
Minimum Split (s)	11.5	41.4	41.4	11.5	41.4	41.4	11.5	43.9	43.9	11.0	43.9	43.9
Total Split (s)	13.0	63.0	63.0	18.0	68.0	68.0	13.0	48.0	48.0	11.0	46.0	46.0
Total Split (%)	9.3%	45.0%	45.0%	12.9%	48.6%	48.6%	9.3%	34.3%	34.3%	7.9%	32.9%	32.9%
Maximum Green (s)	9.0	56.6	56.6	14.0	61.6	61.6	9.0	41.1	41.1	7.0	39.1	39.1
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.9	6.9	4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	None	None	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		28.0	28.0		28.0	28.0		30.0	30.0		30.0	30.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	68.4	57.8	57.8	73.2	60.3	60.3	37.0	25.1	25.1	33.0	23.1	23.1
Actuated g/C Ratio	0.56	0.47	0.47	0.60	0.49	0.49	0.30	0.21	0.21	0.27	0.19	0.19
v/c Ratio	0.50	0.47	0.22	0.53	0.80	0.06	0.61	0.72	0.54	0.21	0.62	0.66
Control Delay	18.7	23.5	3.6	13.9	29.8	0.4	36.9	51.1	20.6	30.2	49.6	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	23.5	3.6	13.9	29.8	0.4	36.9	51.1	20.6	30.2	49.6	29.5
LOS	B	C	A	B	C	A	D	D	C	C	D	C
Approach Delay		20.1			26.7			40.3			40.4	
Approach LOS		C			C			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 121.9			
Natural Cycle: 120			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 29.8		Intersection LOS: C	
Intersection Capacity Utilization 77.7%		ICU Level of Service D	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 12: Walkers Line & Dundas Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	274	819	220	473	1576	291	387	1069	381	470	899	429
Future Volume (vph)	274	819	220	473	1576	291	387	1069	381	470	899	429
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		155.0	160.0		195.0	125.0		100.0	120.0		150.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	35.0			85.0			30.0			35.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4565	1617	3437	4565	1601	3506	5142	1541	3437	5092	1617
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	4565	1617	3437	4565	1601	3506	5142	1541	3437	5092	1617
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			227			300			236			196
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		715.2			201.7			1783.9			156.2	
Travel Time (s)		42.9			12.1			107.0			9.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	1%	1%	3%	1%	2%	1%	2%	6%	3%	3%	1%
Adj. Flow (vph)	282	844	227	488	1625	300	399	1102	393	485	927	442
Shared Lane Traffic (%)												
Lane Group Flow (vph)	282	844	227	488	1625	300	399	1102	393	485	927	442
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	8.0	15.0	15.0	8.0	15.0	15.0	8.0	15.0	15.0	8.0	15.0	15.0
Minimum Split (s)	13.0	48.3	48.3	13.0	48.3	48.3	13.0	22.4	22.4	13.0	22.4	22.4
Total Split (s)	20.0	64.0	64.0	25.0	69.0	69.0	19.0	30.0	30.0	21.0	32.0	32.0
Total Split (%)	14.3%	45.7%	45.7%	17.9%	49.3%	49.3%	13.6%	21.4%	21.4%	15.0%	22.9%	22.9%
Maximum Green (s)	15.0	56.7	56.7	20.0	61.7	61.7	14.0	22.6	22.6	16.0	24.6	24.6
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	2.0	3.6	3.6	2.0	3.6	3.6	2.0	3.7	3.7	2.0	3.7	3.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.3	7.3	5.0	7.3	7.3	5.0	7.4	7.4	5.0	7.4	7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0						
Flash Dont Walk (s)		34.0	34.0		34.0	34.0						
Pedestrian Calls (#/hr)		0	0		0	0						
Act Effct Green (s)	14.9	56.7	56.7	20.0	61.8	61.8	14.0	22.6	22.6	16.0	24.6	24.6
Actuated g/C Ratio	0.11	0.40	0.40	0.14	0.44	0.44	0.10	0.16	0.16	0.11	0.18	0.18
v/c Ratio	0.77	0.46	0.29	0.99	0.81	0.34	1.14	1.33	0.88	1.24	1.04	0.99
Control Delay	75.2	31.4	4.1	98.5	37.8	3.6	146.3	200.2	44.3	176.5	95.4	72.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.2	31.4	4.1	98.5	37.8	3.6	146.3	200.2	44.3	176.5	95.4	72.8
LOS	E	C	A	F	D	A	F	F	D	F	F	E
Approach Delay		35.9			45.8			156.5			111.2	
Approach LOS		D			D			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.33			
Intersection Signal Delay: 88.1		Intersection LOS: F	
Intersection Capacity Utilization 92.9%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 13: Appleby Line & Dundas Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	736	268	258	314	79	174	696	287	231	1192	115
Future Volume (vph)	166	736	268	258	314	79	174	696	287	231	1192	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	95.0		0.0	95.0		0.0	60.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	2.5			50.0			15.0			35.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99			1.00			0.99				
Frt		0.960			0.970			0.956			0.987	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3400	0	1772	3373	0	1738	3331	0	1789	3520	0
Flt Permitted	0.495			0.105			0.091			0.109		
Satd. Flow (perm)	911	3400	0	196	3373	0	166	3331	0	205	3520	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			27			59			10	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		184.1			1005.4			157.6			1844.3	
Travel Time (s)		11.0			60.3			9.5			110.7	
Confl. Peds. (#/hr)	4		5	5		4			6	6		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	2%	4%	3%	5%	3%	5%	5%	2%	2%	2%	6%
Adj. Flow (vph)	173	767	279	269	327	82	181	725	299	241	1242	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	173	1046	0	269	409	0	181	1024	0	241	1362	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.5	8.0		6.5	8.0		6.5	8.0		6.5	8.0	
Minimum Split (s)	11.0	30.0		11.0	30.0		11.0	31.0		11.0	31.0	
Total Split (s)	12.0	40.0		16.0	44.0		13.0	50.0		14.0	51.0	
Total Split (%)	10.0%	33.3%		13.3%	36.7%		10.8%	41.7%		11.7%	42.5%	
Maximum Green (s)	8.0	34.0		12.0	38.0		9.0	44.0		10.0	45.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		17.0			17.0			18.0			18.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	44.0	34.0		52.0	38.0		55.0	44.0		57.0	45.0	
Actuated g/C Ratio	0.37	0.28		0.43	0.32		0.46	0.37		0.48	0.38	
v/c Ratio	0.44	1.05		1.11	0.38		0.94	0.81		1.05	1.03	
Control Delay	26.7	83.4		120.7	30.8		78.0	38.5		100.4	68.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.7	83.4		120.7	30.8		78.0	38.5		100.4	68.9	
LOS	C	F		F	C		E	D		F	E	
Approach Delay		75.4			66.5			44.4			73.6	
Approach LOS		E			E			D			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Natural Cycle: 115			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 65.6		Intersection LOS: E	
Intersection Capacity Utilization 106.3%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 1: Walkers Line & Upper Middle Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	1182	103	94	456	82	46	35	103	252	61	101
Future Volume (vph)	50	1182	103	94	456	82	46	35	103	252	61	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	25.0		0.0	35.0		35.0	35.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	25.0			25.0			85.0			40.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00				1.00		1.00				0.99	
Frt		0.988			0.977				0.850		0.907	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	3533	0	1772	3389	0	1601	1921	1555	1825	1718	0
Flt Permitted	0.420			0.113			0.623			0.734		
Satd. Flow (perm)	789	3533	0	211	3389	0	1049	1921	1555	1410	1718	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			22				107		75	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		614.4			782.1			150.1			414.9	
Travel Time (s)		36.9			46.9			9.0			24.9	
Confl. Peds. (#/hr)	2					2	1					1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	3%	3%	5%	4%	14%	0%	5%	0%	0%	1%
Adj. Flow (vph)	52	1231	107	98	475	85	48	36	107	263	64	105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	1338	0	98	560	0	48	36	107	263	169	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4		4	8		
Detector Phase	5	2		1	6		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	6.5	8.0		6.5	8.0		8.0	8.0	8.0	8.0	8.0	
Minimum Split (s)	11.0	31.0		11.0	31.0		37.0	37.0	37.0	37.0	37.0	
Total Split (s)	12.0	60.0		12.0	60.0		48.0	48.0	48.0	48.0	48.0	
Total Split (%)	10.0%	50.0%		10.0%	50.0%		40.0%	40.0%	40.0%	40.0%	40.0%	
Maximum Green (s)	8.0	54.0		8.0	54.0		41.0	41.0	41.0	41.0	41.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	Max		None	Max		None	None	None	None	None	
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		18.0			18.0		23.0	23.0	23.0	23.0	23.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effct Green (s)	62.1	54.7		62.9	55.1		24.3	24.3	24.3	24.3	24.3	
Actuated g/C Ratio	0.61	0.54		0.62	0.55		0.24	0.24	0.24	0.24	0.24	
v/c Ratio	0.09	0.70		0.40	0.30		0.19	0.08	0.24	0.78	0.36	
Control Delay	8.5	21.5		13.0	14.2		32.4	29.7	7.1	52.3	19.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	8.5	21.5		13.0	14.2		32.4	29.7	7.1	52.3	19.8	
LOS	A	C		B	B		C	C	A	D	B	
Approach Delay		21.0			14.0			17.7			39.6	
Approach LOS		C			B			B			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 101			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 22.1		Intersection LOS: C	
Intersection Capacity Utilization 82.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Itbashi Way/Country Club Drive & Upper Middle Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	754	231	212	303	206	131	828	81	298	1369	76
Future Volume (vph)	137	754	231	212	303	206	131	828	81	298	1369	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	100.0		65.0	95.0		0.0	40.0		0.0
Storage Lanes	1		0	1		1	2		0	1		0
Taper Length (m)	25.0			40.0			30.0			35.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00						1.00				
Frt		0.965				0.850		0.987			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1722	3434	0	1789	3510	1555	3372	3345	0	1789	3483	0
Flt Permitted	0.534			0.122			0.950			0.097		
Satd. Flow (perm)	968	3434	0	230	3510	1555	3372	3345	0	183	3483	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33				217		9			5	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		391.1			454.4			154.1			893.4	
Travel Time (s)		23.5			27.3			9.2			53.6	
Confl. Peds. (#/hr)			2	2					2	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	6%	2%	3%	2%	4%	5%	5%	8%	3%	2%	4%	3%
Adj. Flow (vph)	144	794	243	223	319	217	138	872	85	314	1441	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	1037	0	223	319	217	138	957	0	314	1521	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8				6		
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	1.0	8.0		1.0	8.0	8.0	1.0	8.0		1.0	8.0	
Minimum Split (s)	5.5	35.4		5.5	35.4	35.4	6.0	35.5		5.5	35.5	
Total Split (s)	16.0	38.0		16.0	38.0	38.0	13.0	43.0		23.0	53.0	
Total Split (%)	13.3%	31.7%		13.3%	31.7%	31.7%	10.8%	35.8%		19.2%	44.2%	
Maximum Green (s)	12.0	31.6		12.0	31.6	31.6	8.0	36.5		19.0	46.5	
Yellow Time (s)	3.0	3.7		3.0	3.7	3.7	3.0	3.7		3.0	3.7	
All-Red Time (s)	1.0	2.7		1.0	2.7	2.7	2.0	2.8		1.0	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.4		4.0	6.4	6.4	5.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		21.0			21.0	21.0		21.0			21.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	44.8	31.6		47.2	32.8	32.8	7.9	37.2		61.9	46.5	
Actuated g/C Ratio	0.37	0.26		0.39	0.27	0.27	0.07	0.31		0.52	0.39	
v/c Ratio	0.34	1.12		0.91	0.33	0.37	0.62	0.92		0.93	1.12	
Control Delay	24.8	106.7		67.0	36.3	6.5	67.5	54.1		65.6	100.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	24.8	106.7		67.0	36.3	6.5	67.5	54.1		65.6	100.8	
LOS	C	F		E	D	A	E	D		E	F	
Approach Delay		96.7			36.8			55.8			94.8	
Approach LOS		F			D			E			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 119.9			
Natural Cycle: 105			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.12			
Intersection Signal Delay: 77.4		Intersection LOS: E	
Intersection Capacity Utilization 102.3%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 3: Appleby Line & Upper Middle Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	14	68	60	184	67	23	11	64	129	22	144	16
Future Volume (vph)	14	68	60	184	67	23	11	64	129	22	144	16
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	16	80	71	216	79	27	13	75	152	26	169	19

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	167	322	240	214
Volume Left (vph)	16	216	13	26
Volume Right (vph)	71	27	152	19
Hadj (s)	-0.19	0.13	-0.32	0.00
Departure Headway (s)	5.6	5.6	5.4	5.7
Degree Utilization, x	0.26	0.50	0.36	0.34
Capacity (veh/h)	570	600	600	567
Control Delay (s)	10.5	14.2	11.4	11.7
Approach Delay (s)	10.5	14.2	11.4	11.7
Approach LOS	B	B	B	B

Intersection Summary				
Delay	12.3			
Level of Service	B			
Intersection Capacity Utilization	49.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	2494	77	43	1230	24	88	16	98	93	36	123
Future Volume (vph)	49	2494	77	43	1230	24	88	16	98	93	36	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		70.0	85.0		70.0	40.0		0.0	35.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	65.0			80.0			35.0			45.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.95			0.94	0.94	0.98		0.99	0.93	
Frt			0.850			0.850		0.871			0.884	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1722	4391	1617	1738	4269	1570	1825	1629	0	1807	1563	0
Flt Permitted	0.149			0.050			0.505			0.668		
Satd. Flow (perm)	268	4391	1537	91	4269	1469	908	1629	0	1260	1563	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			62		102			114	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		220.7			715.2			791.4			129.9	
Travel Time (s)		13.2			42.9			71.2			11.7	
Confl. Peds. (#/hr)	18		12	12		18	62		7	7		62
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	6%	5%	1%	5%	8%	4%	0%	0%	1%	1%	0%	1%
Adj. Flow (vph)	51	2598	80	45	1281	25	92	17	102	97	38	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	2598	80	45	1281	25	92	119	0	97	166	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2		2	6		6	4			8		
Detector Phase	5	2	2	1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	11.0	34.0	34.0	11.0	34.0	34.0	38.0	38.0		38.0	38.0	
Total Split (s)	13.0	86.0	86.0	13.0	86.0	86.0	41.0	41.0		41.0	41.0	
Total Split (%)	9.3%	61.4%	61.4%	9.3%	61.4%	61.4%	29.3%	29.3%		29.3%	29.3%	
Maximum Green (s)	9.0	80.0	80.0	9.0	80.0	80.0	34.0	34.0		34.0	34.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	None	None	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		21.0	21.0		21.0	21.0	24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	88.1	80.5	80.5	88.1	80.5	80.5	15.4	15.4		15.4	15.4	
Actuated g/C Ratio	0.75	0.68	0.68	0.75	0.68	0.68	0.13	0.13		0.13	0.13	
v/c Ratio	0.18	0.86	0.07	0.27	0.44	0.02	0.77	0.39		0.59	0.55	
Control Delay	5.3	20.3	3.2	9.4	10.0	0.0	88.6	15.9		63.2	23.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	5.3	20.3	3.2	9.4	10.0	0.0	88.6	15.9		63.2	23.8	
LOS	A	C	A	A	B	A	F	B		E	C	
Approach Delay		19.5			9.8			47.6			38.4	
Approach LOS		B			A			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 117.7			
Natural Cycle: 125			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 19.0		Intersection LOS: B	
Intersection Capacity Utilization 95.7%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 5: Millcroft Park Drive/Cornerstone Drive & Dundas Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	2246	26	5	1180	210	17	0	34	224	0	162
Future Volume (vph)	154	2246	26	5	1180	210	17	0	34	224	0	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		70.0	125.0		75.0	0.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (m)	65.0			65.0			45.0			25.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.94			0.97		0.97		0.99	0.90	
Frt			0.850			0.850		0.909			0.850	
Flt Protected	0.950			0.950				0.984		0.950		
Satd. Flow (prot)	1706	4391	1633	1825	4269	1555	0	1695	0	1755	1361	0
Flt Permitted	0.130			0.046				0.868		0.721		
Satd. Flow (perm)	233	4391	1538	88	4269	1511	0	1463	0	1321	1361	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			228		55			160	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		705.6			139.8			69.2			154.4	
Travel Time (s)		42.3			8.4			6.2			13.9	
Confl. Peds. (#/hr)	3		14	14		3	62		6	6		62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	5%	0%	0%	8%	5%	0%	0%	0%	4%	0%	8%
Adj. Flow (vph)	167	2441	28	5	1283	228	18	0	37	243	0	176
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	2441	28	5	1283	228	0	55	0	243	176	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2		2	6		6	4			8		
Detector Phase	5	2	2	1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	11.5	31.0	31.0	11.5	31.0	31.0	36.0	36.0		36.0	36.0	
Total Split (s)	13.0	89.0	89.0	13.0	89.0	89.0	38.0	38.0		38.0	38.0	
Total Split (%)	9.3%	63.6%	63.6%	9.3%	63.6%	63.6%	27.1%	27.1%		27.1%	27.1%	
Maximum Green (s)	9.0	83.0	83.0	9.0	83.0	83.0	31.0	31.0		31.0	31.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0		7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		18.0	18.0		18.0	18.0	22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	97.4	93.7	93.7	92.1	83.1	83.1		28.1		28.1	28.1	
Actuated g/C Ratio	0.71	0.68	0.68	0.67	0.61	0.61		0.21		0.21	0.21	
v/c Ratio	0.64	0.81	0.03	0.03	0.50	0.23		0.16		0.90	0.43	
Control Delay	20.3	19.5	0.0	7.0	16.3	2.0		11.9		87.1	12.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	20.3	19.5	0.0	7.0	16.3	2.0		11.9		87.1	12.1	
LOS	C	B	A	A	B	A		B		F	B	
Approach Delay		19.3			14.1			11.9			55.6	
Approach LOS		B			B			B			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 136.9			
Natural Cycle: 120			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 20.8		Intersection LOS: C	
Intersection Capacity Utilization 86.9%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 6: Berwick Drive/Tim Dobbie Drive & Dundas Street



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	201	114	3	5	6
Future Volume (Veh/h)	1	201	114	3	5	6
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	218	124	3	5	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	127				346	126
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	127				346	126
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	99
cM capacity (veh/h)	1459				651	925

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	219	127	12
Volume Left	1	0	5
Volume Right	0	3	7
cSH	1459	1700	787
Volume to Capacity	0.00	0.07	0.02
Queue Length 95th (m)	0.0	0.0	0.4
Control Delay (s)	0.0	0.0	9.6
Lane LOS	A		A
Approach Delay (s)	0.0	0.0	9.6
Approach LOS			A

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	21.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	223	5	2	253	14	5
Future Volume (Veh/h)	223	5	2	253	14	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	242	5	2	275	15	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			247		524	244
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			247		524	244
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		97	99
cM capacity (veh/h)			1319		513	794

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	247	277	20
Volume Left	0	2	15
Volume Right	5	0	5
cSH	1700	1319	563
Volume to Capacity	0.15	0.00	0.04
Queue Length 95th (m)	0.0	0.0	0.8
Control Delay (s)	0.0	0.1	11.6
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	11.6
Approach LOS			B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	24.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	221	5	3	215	17	7
Future Volume (Veh/h)	221	5	3	215	17	7
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	240	5	3	234	18	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			245		482	242
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			245		482	242
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		97	99
cM capacity (veh/h)			1321		542	796

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	245	237	26
Volume Left	0	3	18
Volume Right	5	0	8
cSH	1700	1321	601
Volume to Capacity	0.14	0.00	0.04
Queue Length 95th (m)	0.0	0.1	1.0
Control Delay (s)	0.0	0.1	11.3
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	11.3
Approach LOS			B

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization		23.7%	ICU Level of Service
Analysis Period (min)		15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	3	224	1	1	191
Future Volume (Veh/h)	4	3	224	1	1	191
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	3	243	1	1	208
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	454	244			244	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	454	244			244	
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)	564	795			1322	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	7	244	209
Volume Left	4	0	1
Volume Right	3	1	0
cSH	644	1700	1322
Volume to Capacity	0.01	0.14	0.00
Queue Length 95th (m)	0.3	0.0	0.0
Control Delay (s)	10.7	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	10.7	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization		21.9%	ICU Level of Service A
Analysis Period (min)		15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2519	11	0	1420	0	0
Future Volume (Veh/h)	2519	11	0	1420	0	0
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2738	12	0	1543	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	140			221		
pX, platoon unblocked			0.58		0.64	0.58
vC, conflicting volume			2750		3258	919
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1498		1351	0
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		100	100
cM capacity (veh/h)			259		91	632

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	1095	1095	560	514	514	514	0
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	12	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.64	0.64	0.33	0.30	0.30	0.30	0.00
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

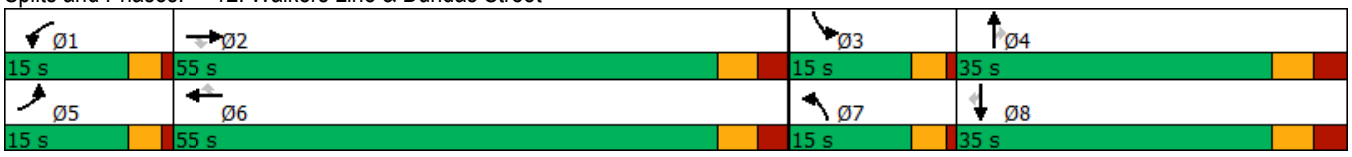
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	1672	209	224	796	26	243	353	281	96	457	190
Future Volume (vph)	242	1672	209	224	796	26	243	353	281	96	457	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	160.0		75.0	200.0		225.0	35.0		30.0	50.0		45.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	52.0			100.0			50.0			30.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4433	1570	3404	4309	1633	3437	3579	1585	3471	3614	1601
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	4433	1570	3404	4309	1633	3437	3579	1585	3471	3614	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			108			214			196
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		281.6			890.7			1844.3			305.6	
Travel Time (s)		16.9			53.4			110.7			18.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	4%	4%	4%	7%	0%	3%	2%	3%	2%	1%	2%
Adj. Flow (vph)	249	1724	215	231	821	27	251	364	290	99	471	196
Shared Lane Traffic (%)												
Lane Group Flow (vph)	249	1724	215	231	821	27	251	364	290	99	471	196
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	15.0	55.0	55.0	15.0	55.0	55.0	15.0	35.0	35.0	15.0	35.0	35.0
Total Split (s)	15.0	55.0	55.0	15.0	55.0	55.0	15.0	35.0	35.0	15.0	35.0	35.0
Total Split (%)	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	12.5%	29.2%	29.2%	12.5%	29.2%	29.2%
Maximum Green (s)	11.0	48.6	48.6	11.0	48.6	48.6	11.0	28.1	28.1	11.0	28.1	28.1
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.9	6.9	4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	10.9	48.7	48.7	10.8	48.6	48.6	10.9	30.3	30.3	8.8	28.1	28.1
Actuated g/C Ratio	0.09	0.41	0.41	0.09	0.41	0.41	0.09	0.25	0.25	0.07	0.23	0.23
v/c Ratio	0.79	0.96	0.29	0.75	0.47	0.04	0.80	0.40	0.52	0.39	0.56	0.37
Control Delay	71.8	48.1	7.6	69.3	27.3	0.1	72.9	39.3	14.7	57.1	43.3	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.8	48.1	7.6	69.3	27.3	0.1	72.9	39.3	14.7	57.1	43.3	7.3
LOS	E	D	A	E	C	A	E	D	B	E	D	A
Approach Delay		46.8			35.6			40.7			35.9	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 119.8			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 41.6		Intersection LOS: D	
Intersection Capacity Utilization 76.0%		ICU Level of Service D	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 12: Walkers Line & Dundas Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	415	1690	320	325	781	152	163	622	334	377	844	199
Future Volume (vph)	415	1690	320	325	781	152	163	622	334	377	844	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		155.0	160.0		195.0	125.0		100.0	120.0		150.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	35.0			85.0			30.0			35.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3506	4476	1585	3309	4309	1484	3309	4995	1541	3340	5043	1585
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3500	4476	1565	3308	4309	1459	3300	4995	1516	3333	5043	1558
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			309			158			194			207
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		416.3			249.5			1784.0			156.1	
Travel Time (s)		25.0			15.0			107.0			9.4	
Confl. Peds. (#/hr)	5		1	1		5	3		2	2		3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	3%	3%	7%	7%	10%	7%	5%	6%	6%	4%	3%
Adj. Flow (vph)	432	1760	333	339	814	158	170	648	348	393	879	207
Shared Lane Traffic (%)												
Lane Group Flow (vph)	432	1760	333	339	814	158	170	648	348	393	879	207
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	8.0	15.0	15.0	8.0	15.0	15.0	8.0	15.0	15.0	8.0	15.0	15.0
Minimum Split (s)	13.0	48.3	48.3	13.0	48.3	48.3	13.0	22.4	22.4	13.0	22.4	22.4
Total Split (s)	20.0	64.0	64.0	25.0	69.0	69.0	19.0	30.0	30.0	21.0	32.0	32.0
Total Split (%)	14.3%	45.7%	45.7%	17.9%	49.3%	49.3%	13.6%	21.4%	21.4%	15.0%	22.9%	22.9%
Maximum Green (s)	15.0	56.7	56.7	20.0	61.7	61.7	14.0	22.6	22.6	16.0	24.6	24.6
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	2.0	3.6	3.6	2.0	3.6	3.6	2.0	3.7	3.7	2.0	3.7	3.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.3	7.3	5.0	7.3	7.3	5.0	7.4	7.4	5.0	7.4	7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0						
Flash Dont Walk (s)		34.0	34.0		34.0	34.0						
Pedestrian Calls (#/hr)		0	0		0	0						
Act Effct Green (s)	15.0	57.6	57.6	19.1	61.7	61.7	13.2	22.6	22.6	16.0	25.4	25.4
Actuated g/C Ratio	0.11	0.41	0.41	0.14	0.44	0.44	0.09	0.16	0.16	0.11	0.18	0.18
v/c Ratio	1.15	0.96	0.40	0.75	0.43	0.22	0.55	0.80	0.86	1.03	0.96	0.46
Control Delay	148.4	53.2	5.4	69.2	27.9	4.0	67.4	65.2	45.2	113.9	78.1	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	148.4	53.2	5.4	69.2	27.9	4.0	67.4	65.2	45.2	113.9	78.1	9.8
LOS	F	D	A	E	C	A	E	E	D	F	E	A
Approach Delay		63.1			35.7			59.5			78.0	
Approach LOS		E			D			E			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Natural Cycle: 100			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.15			
Intersection Signal Delay: 60.3		Intersection LOS: E	
Intersection Capacity Utilization 89.8%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 13: Appleby Line & Dundas Street



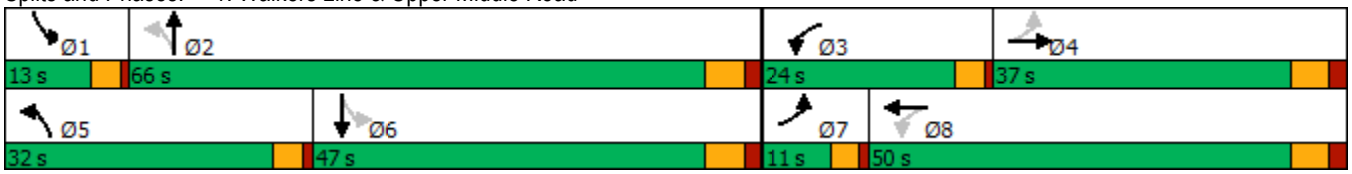
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	434	167	311	1183	185	386	1398	341	132	922	211
Future Volume (vph)	135	434	167	311	1183	185	386	1398	341	132	922	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	95.0		0.0	95.0		0.0	60.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	2.5			50.0			15.0			35.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99		0.99	1.00			0.99				
Frt		0.958			0.980			0.971			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3397	0	1807	3533	0	1825	3496	0	1807	3491	0
Flt Permitted	0.129			0.154			0.088			0.096		
Satd. Flow (perm)	248	3397	0	291	3533	0	169	3496	0	183	3491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			13			27			20	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		184.1			1005.4			157.6			1747.3	
Travel Time (s)		11.0			60.3			9.5			104.8	
Confl. Peds. (#/hr)	4		18	18		4			10	10		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	1%	1%	1%	1%	0%	1%	0%	1%	2%	0%
Adj. Flow (vph)	139	447	172	321	1220	191	398	1441	352	136	951	218
Shared Lane Traffic (%)												
Lane Group Flow (vph)	139	619	0	321	1411	0	398	1793	0	136	1169	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

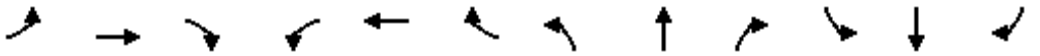
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.5	8.0		6.5	8.0		6.5	8.0		6.5	8.0	
Minimum Split (s)	10.5	30.0		10.5	30.0		10.5	31.0		10.5	31.0	
Total Split (s)	11.0	37.0		24.0	50.0		32.0	66.0		13.0	47.0	
Total Split (%)	7.9%	26.4%		17.1%	35.7%		22.9%	47.1%		9.3%	33.6%	
Maximum Green (s)	7.0	31.0		20.0	44.0		28.0	60.0		9.0	41.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		17.0			17.0			18.0			18.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	40.0	31.0		57.0	44.0		74.9	60.0		52.5	41.5	
Actuated g/C Ratio	0.29	0.22		0.41	0.31		0.54	0.43		0.38	0.30	
v/c Ratio	0.93	0.79		0.96	1.26		0.96	1.18		0.79	1.11	
Control Delay	90.7	56.7		74.0	164.1		76.3	125.9		61.4	108.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	90.7	56.7		74.0	164.1		76.3	125.9		61.4	108.6	
LOS	F	E		E	F		E	F		E	F	
Approach Delay		63.0			147.4			116.9			103.7	
Approach LOS		E			F			F			F	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 139.9
Natural Cycle: 145
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.26
Intersection Signal Delay: 116.0 Intersection LOS: F
Intersection Capacity Utilization 119.8% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 1: Walkers Line & Upper Middle Road



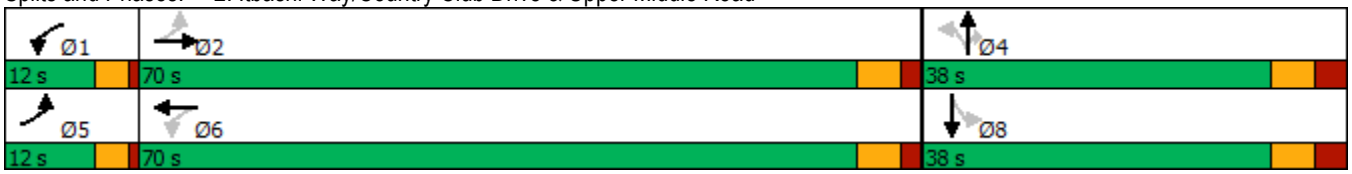


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	697	80	138	1558	314	120	67	130	150	48	63
Future Volume (vph)	87	697	80	138	1558	314	120	67	130	150	48	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	25.0		0.0	35.0		35.0	35.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	25.0			25.0			85.0			40.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00	1.00				0.98	0.99		
Frt		0.985			0.975				0.850		0.914	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3507	0	1807	3515	0	1789	1921	1617	1807	1736	0
Flt Permitted	0.061			0.304			0.684			0.712		
Satd. Flow (perm)	117	3507	0	577	3515	0	1288	1921	1586	1345	1736	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			30				134		54	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		614.4			782.1			150.1			414.9	
Travel Time (s)		36.9			46.9			9.0			24.9	
Confl. Peds. (#/hr)	2		4	4		2			6	6		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	4%	1%	1%	0%	2%	0%	1%	1%	0%	2%
Adj. Flow (vph)	90	719	82	142	1606	324	124	69	134	155	49	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	90	801	0	142	1930	0	124	69	134	155	114	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5	6.1	6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8	6.1	6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4		4	8		
Detector Phase	5	2		1	6		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0		7.0	8.0		8.0	8.0	8.0	8.0	8.0	
Minimum Split (s)	11.0	32.0		11.0	32.0		38.0	38.0	38.0	38.0	38.0	
Total Split (s)	12.0	70.0		12.0	70.0		38.0	38.0	38.0	38.0	38.0	
Total Split (%)	10.0%	58.3%		10.0%	58.3%		31.7%	31.7%	31.7%	31.7%	31.7%	
Maximum Green (s)	8.0	64.0		8.0	64.0		31.0	31.0	31.0	31.0	31.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	Max		None	Max		None	None	None	None	None	
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		18.0			18.0		23.0	23.0	23.0	23.0	23.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effct Green (s)	73.6	64.2		74.8	66.7		17.4	17.4	17.4	17.4	17.4	
Actuated g/C Ratio	0.69	0.60		0.70	0.63		0.16	0.16	0.16	0.16	0.16	
v/c Ratio	0.45	0.38		0.29	0.87		0.59	0.22	0.36	0.70	0.35	
Control Delay	18.7	11.8		6.5	23.5		52.6	39.5	9.3	59.3	24.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	18.7	11.8		6.5	23.5		52.6	39.5	9.3	59.3	24.2	
LOS	B	B		A	C		D	D	A	E	C	
Approach Delay		12.5			22.4			32.1			44.5	
Approach LOS		B			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 106.2			
Natural Cycle: 115			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 22.5		Intersection LOS: C	
Intersection Capacity Utilization 88.6%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: Itbashi Way/Country Club Drive & Upper Middle Road



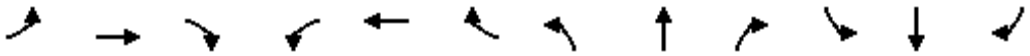
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	331	246	129	824	382	361	1476	100	200	1100	210
Future Volume (vph)	184	331	246	129	824	382	361	1476	100	200	1100	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	100.0		65.0	95.0		0.0	40.0		0.0
Storage Lanes	1		0	1		1	2		0	1		0
Taper Length (m)	25.0			40.0			30.0			35.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99		1.00		0.97	1.00	1.00			1.00	
Frt		0.936				0.850		0.990			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1772	3376	0	1789	3650	1617	3506	3497	0	1807	3451	0
Flt Permitted	0.134			0.210			0.950			0.069		
Satd. Flow (perm)	250	3376	0	395	3650	1571	3494	3497	0	131	3451	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		123				204		7			18	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		391.1			454.4			154.1			1787.5	
Travel Time (s)		23.5			27.3			9.2			107.3	
Confl. Peds. (#/hr)	11		4	4		11	8		13	13		8
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	3%	0%	1%	2%	0%	1%	1%	3%	5%	1%	3%	2%
Adj. Flow (vph)	186	334	248	130	832	386	365	1491	101	202	1111	212
Shared Lane Traffic (%)												
Lane Group Flow (vph)	186	582	0	130	832	386	365	1592	0	202	1323	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8				6		
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	1.0	8.0		1.0	8.0	8.0	1.0	8.0		1.0	8.0	
Minimum Split (s)	8.0	34.4		8.0	34.4	34.4	11.5	34.5		8.0	34.5	
Total Split (s)	15.0	36.0		14.0	35.0	35.0	30.0	72.0		18.0	60.0	
Total Split (%)	10.7%	25.7%		10.0%	25.0%	25.0%	21.4%	51.4%		12.9%	42.9%	
Maximum Green (s)	11.0	29.6		10.0	28.6	28.6	25.0	65.5		14.0	53.5	
Yellow Time (s)	3.0	3.7		3.0	3.7	3.7	3.0	3.7		3.0	3.7	
All-Red Time (s)	1.0	2.7		1.0	2.7	2.7	2.0	2.8		1.0	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.4		4.0	6.4	6.4	5.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		21.0			21.0	21.0		21.0			21.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	43.3	29.9		40.7	28.6	28.6	19.7	65.5		73.9	58.1	
Actuated g/C Ratio	0.31	0.21		0.29	0.21	0.21	0.14	0.47		0.53	0.42	
v/c Ratio	0.94	0.71		0.61	1.11	0.80	0.74	0.97		0.88	0.91	
Control Delay	88.5	45.2		47.7	117.8	37.6	66.4	51.4		72.0	48.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	88.5	45.2		47.7	117.8	37.6	66.4	51.4		72.0	48.6	
LOS	F	D		D	F	D	E	D		E	D	
Approach Delay		55.7			88.1			54.2			51.7	
Approach LOS		E			F			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 139.3			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 61.9		Intersection LOS: E	
Intersection Capacity Utilization 105.7%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 3: Appleby Line & Upper Middle Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	15	59	38	153	104	34	53	206	210	22	87	10
Future Volume (vph)	15	59	38	153	104	34	53	206	210	22	87	10
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	15	60	39	156	106	35	54	210	214	22	89	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	114	297	478	121
Volume Left (vph)	15	156	54	22
Volume Right (vph)	39	35	214	10
Hadj (s)	-0.18	0.05	-0.24	0.00
Departure Headway (s)	6.0	5.8	5.1	5.9
Degree Utilization, x	0.19	0.48	0.68	0.20
Capacity (veh/h)	518	576	674	525
Control Delay (s)	10.3	14.0	18.2	10.4
Approach Delay (s)	10.3	14.0	18.2	10.4
Approach LOS	B	B	C	B

Intersection Summary				
Delay		15.2		
Level of Service		C		
Intersection Capacity Utilization		61.1%	ICU Level of Service	B
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	1423	50	157	2713	86	41	43	63	37	25	42
Future Volume (vph)	64	1423	50	157	2713	86	41	43	63	37	25	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		70.0	85.0		70.0	40.0		0.0	35.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	100.0			100.0			35.0			45.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.97	1.00		0.93	0.98	0.99		0.99	0.98	
Frt			0.850			0.850		0.911			0.906	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4433	1633	1789	4520	1601	1825	1710	0	1772	1629	0
Flt Permitted	0.050			0.106			0.711			0.685		
Satd. Flow (perm)	94	4433	1580	199	4520	1490	1339	1710	0	1270	1629	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			62		50			44	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		220.7			298.9			791.4			129.9	
Travel Time (s)		13.2			17.9			71.2			11.7	
Confl. Peds. (#/hr)	20		5	5		20	16		5	5		16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	4%	0%	2%	2%	2%	0%	3%	0%	3%	4%	5%
Adj. Flow (vph)	67	1498	53	165	2856	91	43	45	66	39	26	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	1498	53	165	2856	91	43	111	0	39	70	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2		2	6		6	4			8		
Detector Phase	5	2	2	1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	11.0	34.0	34.0	11.0	34.0	34.0	38.0	38.0		38.0	38.0	
Total Split (s)	13.0	86.0	86.0	13.0	86.0	86.0	41.0	41.0		41.0	41.0	
Total Split (%)	9.3%	61.4%	61.4%	9.3%	61.4%	61.4%	29.3%	29.3%		29.3%	29.3%	
Maximum Green (s)	9.0	80.0	80.0	9.0	80.0	80.0	34.0	34.0		34.0	34.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	None	None	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		21.0	21.0		21.0	21.0	24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	89.5	80.1	80.1	92.1	83.3	83.3	10.3	10.3		10.3	10.3	
Actuated g/C Ratio	0.77	0.69	0.69	0.80	0.72	0.72	0.09	0.09		0.09	0.09	
v/c Ratio	0.37	0.49	0.05	0.61	0.88	0.08	0.36	0.56		0.35	0.38	
Control Delay	15.0	9.2	1.5	17.3	17.9	2.7	58.2	40.2		58.1	28.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	15.0	9.2	1.5	17.3	17.9	2.7	58.2	40.2		58.1	28.8	
LOS	B	A	A	B	B	A	E	D		E	C	
Approach Delay		9.2			17.4			45.2			39.3	
Approach LOS		A			B			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 115.7			
Natural Cycle: 145			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 16.1		Intersection LOS: B	
Intersection Capacity Utilization 88.2%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 5: Millcroft Park Drive/Cornerstone Drive & Dundas Street

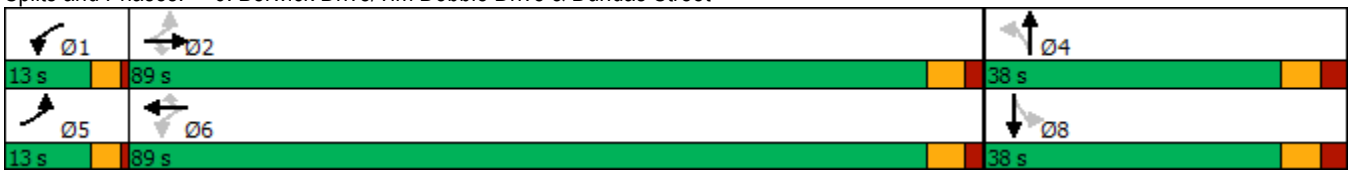


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	1355	9	11	2503	175	8	1	7	129	0	79
Future Volume (vph)	86	1355	9	11	2503	175	8	1	7	129	0	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		70.0	125.0		75.0	0.0		0.0	75.0		0.0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (m)	60.0			80.0			45.0			25.0		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.96	1.00		0.95		0.98		1.00	0.97	
Frt			0.850			0.850		0.941			0.850	
Flt Protected	0.950			0.950				0.976		0.950		
Satd. Flow (prot)	1706	4433	1633	1825	4476	1617	0	1752	0	1825	1508	0
Flt Permitted	0.044			0.140				0.852		0.747		
Satd. Flow (perm)	79	4433	1569	269	4476	1531	0	1516	0	1429	1508	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			62			115		7			109	
Link Speed (k/h)		60			60			40			40	
Link Distance (m)		241.8			139.8			69.2			154.4	
Travel Time (s)		14.5			8.4			6.2			13.9	
Confl. Peds. (#/hr)	12		7	7		12	13		3	3		13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	7%	4%	0%	0%	3%	1%	0%	0%	0%	0%	0%	5%
Adj. Flow (vph)	89	1397	9	11	2580	180	8	1	7	133	0	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	1397	9	11	2580	180	0	16	0	133	81	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2		2	6		6	4			8		
Detector Phase	5	2	2	1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	11.5	31.0	31.0	11.5	31.0	31.0	36.0	36.0		36.0	36.0	
Total Split (s)	13.0	89.0	89.0	13.0	89.0	89.0	38.0	38.0		38.0	38.0	
Total Split (%)	9.3%	63.6%	63.6%	9.3%	63.6%	63.6%	27.1%	27.1%		27.1%	27.1%	
Maximum Green (s)	9.0	83.0	83.0	9.0	83.0	83.0	31.0	31.0		31.0	31.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0		7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		18.0	18.0		18.0	18.0	22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	96.9	93.2	93.2	92.3	83.3	83.3		16.8		16.8	16.8	
Actuated g/C Ratio	0.77	0.75	0.75	0.74	0.67	0.67		0.13		0.13	0.13	
v/c Ratio	0.54	0.42	0.01	0.04	0.87	0.17		0.08		0.69	0.27	
Control Delay	31.7	7.4	0.0	4.5	21.6	3.9		33.6		70.4	5.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	31.7	7.4	0.0	4.5	21.6	3.9		33.6		70.4	5.9	
LOS	C	A	A	A	C	A		C		E	A	
Approach Delay		8.8			20.4			33.6			46.0	
Approach LOS		A			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 125.1			
Natural Cycle: 120			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 17.8		Intersection LOS: B	
Intersection Capacity Utilization 85.0%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 6: Berwick Drive/Tim Dobbie Drive & Dundas Street





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	3	132	282	7	4	2
Future Volume (Veh/h)	3	132	282	7	4	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	143	307	8	4	2
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	315				460	311
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	315				460	311
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1245				558	729

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	146	315	6
Volume Left	3	0	4
Volume Right	0	8	2
cSH	1245	1700	605
Volume to Capacity	0.00	0.19	0.01
Queue Length 95th (m)	0.1	0.0	0.2
Control Delay (s)	0.2	0.0	11.0
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	11.0
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	25.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	263	14	7	263	7	4
Future Volume (Veh/h)	263	14	7	263	7	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	286	15	8	286	8	4
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			301		596	294
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			301		596	294
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	99
cM capacity (veh/h)			1260		464	746

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	301	294	12
Volume Left	0	8	8
Volume Right	15	0	4
cSH	1700	1260	531
Volume to Capacity	0.18	0.01	0.02
Queue Length 95th (m)	0.0	0.1	0.5
Control Delay (s)	0.0	0.3	11.9
Lane LOS		A	B
Approach Delay (s)	0.0	0.3	11.9
Approach LOS			B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	29.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	216	17	9	226	10	6
Future Volume (Veh/h)	216	17	9	226	10	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	235	18	10	246	11	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			253		510	244
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			253		510	244
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	99
cM capacity (veh/h)			1312		519	795

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	253	256	18
Volume Left	0	10	11
Volume Right	18	0	7
cSH	1700	1312	600
Volume to Capacity	0.15	0.01	0.03
Queue Length 95th (m)	0.0	0.2	0.7
Control Delay (s)	0.0	0.4	11.2
Lane LOS		A	B
Approach Delay (s)	0.0	0.4	11.2
Approach LOS			B

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization		29.2%	ICU Level of Service A
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	2	188	2	3	243
Future Volume (Veh/h)	1	2	188	2	3	243
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)	1	2	204	2	3	264
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	475	205			206	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	475	205			206	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	547	836			1365	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	3	206	267
Volume Left	1	0	3
Volume Right	2	2	0
cSH	711	1700	1365
Volume to Capacity	0.00	0.12	0.00
Queue Length 95th (m)	0.1	0.0	0.1
Control Delay (s)	10.1	0.0	0.1
Lane LOS	B		A
Approach Delay (s)	10.1	0.0	0.1
Approach LOS	B		

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		25.2%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1475	33	0	2708	0	21
Future Volume (Veh/h)	1475	33	0	2708	0	21
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1603	36	0	2943	0	23
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	140			221		
pX, platoon unblocked			0.88		0.52	0.88
vC, conflicting volume			1639		2602	552
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1265		0	36
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		100	97
cM capacity (veh/h)			482		535	910

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	641	641	357	981	981	981	23
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	36	0	0	0	23
cSH	1700	1700	1700	1700	1700	1700	910
Volume to Capacity	0.38	0.38	0.21	0.58	0.58	0.58	0.03
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	9.1
Lane LOS							A
Approach Delay (s)	0.0			0.0			9.1
Approach LOS							A

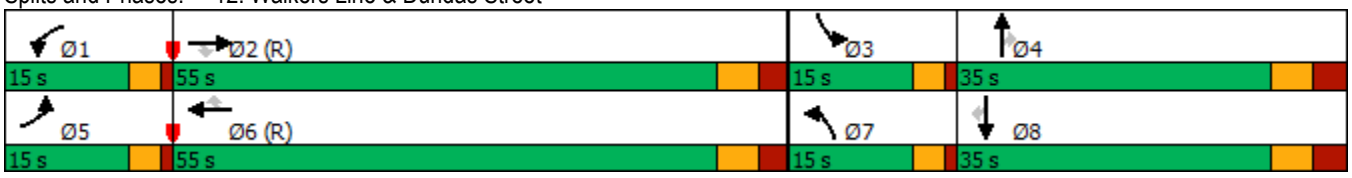
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

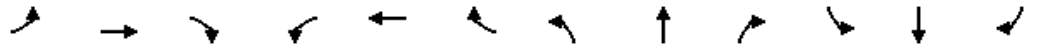
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	984	184	327	1748	48	306	530	254	100	430	272
Future Volume (vph)	176	984	184	327	1748	48	306	530	254	100	430	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	160.0		75.0	200.0		225.0	35.0		30.0	50.0		45.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	52.0			100.0			50.0			30.0		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	5142	1601	3471	5142	1601	3471	3579	1601	3471	3579	1601
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	5142	1601	3471	5142	1601	3471	3579	1601	3471	3579	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200			108			177			172
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		412.8			463.6			84.1			411.6	
Travel Time (s)		24.8			27.8			5.0			24.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	191	1070	200	355	1900	52	333	576	276	109	467	296
Shared Lane Traffic (%)												
Lane Group Flow (vph)	191	1070	200	355	1900	52	333	576	276	109	467	296
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	5.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	5.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	15.0	55.0	55.0	15.0	55.0	55.0	15.0	35.0	35.0	15.0	35.0	35.0
Total Split (s)	15.0	55.0	55.0	15.0	55.0	55.0	15.0	35.0	35.0	15.0	35.0	35.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	12.5%	29.2%	29.2%	12.5%	29.2%	29.2%
Maximum Green (s)	11.0	48.6	48.6	11.0	48.6	48.6	11.0	28.1	28.1	11.0	28.1	28.1
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.9	6.9	4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	10.4	48.6	48.6	11.0	49.2	49.2	11.0	30.1	30.1	9.0	28.1	28.1
Actuated g/C Ratio	0.09	0.40	0.40	0.09	0.41	0.41	0.09	0.25	0.25	0.08	0.23	0.23
v/c Ratio	0.63	0.51	0.26	1.12	0.90	0.07	1.05	0.64	0.52	0.42	0.56	0.58
Control Delay	62.8	27.9	4.0	135.0	40.4	0.2	115.7	44.3	18.0	57.6	43.5	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.8	27.9	4.0	135.0	40.4	0.2	115.7	44.3	18.0	57.6	43.5	21.8
LOS	E	C	A	F	D	A	F	D	B	E	D	C
Approach Delay		29.2			54.0			58.3			37.9	
Approach LOS		C			D			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 17 (14%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.12			
Intersection Signal Delay: 46.2		Intersection LOS: D	
Intersection Capacity Utilization 77.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 12: Walkers Line & Dundas Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	277	843	224	325	781	152	387	1069	381	470	899	429
Future Volume (vph)	277	843	224	325	781	152	387	1069	381	470	899	429
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		155.0	160.0		195.0	125.0		100.0	120.0		150.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	35.0			85.0			30.0			35.0		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	5193	1617	3437	5193	1601	3506	5142	1541	3437	5092	1617
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	5193	1617	3437	5193	1601	3506	5142	1541	3437	5092	1617
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			231			157			232			256
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		715.2			201.7			1783.9			156.2	
Travel Time (s)		42.9			12.1			107.0			9.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	1%	1%	3%	1%	2%	1%	2%	6%	3%	3%	1%
Adj. Flow (vph)	286	869	231	335	805	157	399	1102	393	485	927	442
Shared Lane Traffic (%)												
Lane Group Flow (vph)	286	869	231	335	805	157	399	1102	393	485	927	442
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			2			6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	8.0	15.0	15.0	8.0	15.0	15.0	8.0	15.0	15.0	8.0	15.0	15.0
Minimum Split (s)	13.0	48.3	48.3	13.0	48.3	48.3	13.0	22.4	22.4	13.0	22.4	22.4
Total Split (s)	20.0	64.0	64.0	25.0	69.0	69.0	19.0	30.0	30.0	21.0	32.0	32.0
Total Split (%)	14.3%	45.7%	45.7%	17.9%	49.3%	49.3%	13.6%	21.4%	21.4%	15.0%	22.9%	22.9%
Maximum Green (s)	15.0	56.7	56.7	20.0	61.7	61.7	14.0	22.6	22.6	16.0	24.6	24.6
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	2.0	3.6	3.6	2.0	3.6	3.6	2.0	3.7	3.7	2.0	3.7	3.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.3	7.3	5.0	7.3	7.3	5.0	7.4	7.4	5.0	7.4	7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0						
Flash Dont Walk (s)		34.0	34.0		34.0	34.0						
Pedestrian Calls (#/hr)		0	0		0	0						
Act Effct Green (s)	14.9	57.7	57.7	18.9	61.7	61.7	14.0	22.6	22.6	16.0	24.6	24.6
Actuated g/C Ratio	0.11	0.41	0.41	0.14	0.44	0.44	0.10	0.16	0.16	0.11	0.18	0.18
v/c Ratio	0.78	0.41	0.29	0.72	0.35	0.20	1.14	1.33	0.89	1.24	1.04	0.89
Control Delay	75.8	29.9	4.1	67.3	26.4	3.9	146.1	199.8	45.6	176.0	95.2	44.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.8	29.9	4.1	67.3	26.4	3.9	146.1	199.8	45.6	176.0	95.2	44.7
LOS	E	C	A	E	C	A	F	F	D	F	F	D
Approach Delay		35.1			34.3			156.5			104.3	
Approach LOS		D			C			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 139.9			
Natural Cycle: 120			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.33			
Intersection Signal Delay: 90.6		Intersection LOS: F	
Intersection Capacity Utilization 80.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 13: Appleby Line & Dundas Street



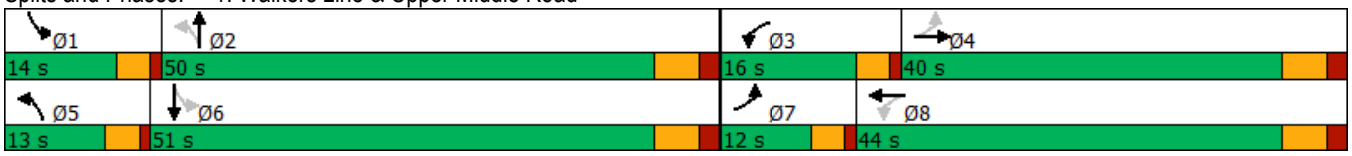
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	293	109	142	374	66	140	524	157	91	529	82
Future Volume (vph)	75	293	109	142	374	66	140	524	157	91	529	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	95.0		0.0	95.0		0.0	60.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	2.5			50.0			15.0			35.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		0.99	1.00			0.99		1.00		
Frt		0.959			0.978			0.965			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	3405	0	1807	3525	0	1825	3474	0	1807	3516	0
Flt Permitted	0.432			0.278			0.339			0.333		
Satd. Flow (perm)	827	3405	0	522	3525	0	651	3474	0	631	3516	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			17			37			17	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		184.1			1005.4			157.6			1831.4	
Travel Time (s)		11.0			60.3			9.5			109.9	
Confl. Peds. (#/hr)	4		18	18		4			10	10		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	1%	1%	1%	1%	0%	1%	0%	1%	2%	0%
Adj. Flow (vph)	77	302	112	146	386	68	144	540	162	94	545	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	414	0	146	454	0	144	702	0	94	630	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.5	8.0		6.5	8.0		6.5	8.0		6.5	8.0	
Minimum Split (s)	11.0	30.0		11.0	30.0		11.0	31.0		11.0	31.0	
Total Split (s)	12.0	40.0		16.0	44.0		13.0	50.0		14.0	51.0	
Total Split (%)	10.0%	33.3%		13.3%	36.7%		10.8%	41.7%		11.7%	42.5%	
Maximum Green (s)	8.0	34.0		12.0	38.0		9.0	44.0		10.0	45.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		17.0			17.0			18.0			18.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	26.0	16.4		32.5	21.7		56.8	48.0		55.1	45.2	
Actuated g/C Ratio	0.26	0.16		0.32	0.22		0.56	0.48		0.55	0.45	
v/c Ratio	0.27	0.70		0.48	0.59		0.31	0.42		0.21	0.40	
Control Delay	26.0	42.3		30.0	38.2		12.0	18.9		11.3	19.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.0	42.3		30.0	38.2		12.0	18.9		11.3	19.8	
LOS	C	D		C	D		B	B		B	B	
Approach Delay		39.7			36.2			17.7			18.7	
Approach LOS		D			D			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 100.6
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 26.2 Intersection LOS: C
Intersection Capacity Utilization 66.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Walkers Line & Upper Middle Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	271	119	85	282	147	123	576	45	125	617	72
Future Volume (vph)	80	271	119	85	282	147	123	576	45	125	617	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	45.0		0.0	100.0		65.0	95.0		0.0	40.0		0.0
Storage Lanes	1		0	1		1	2		0	1		0
Taper Length (m)	25.0			40.0			30.0			35.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99	0.99		1.00		0.97	0.99	1.00		1.00	1.00	
Frt		0.954				0.850		0.989			0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1772	3454	0	1789	3650	1617	3506	3493	0	1807	3483	0
Flt Permitted	0.534			0.362			0.950			0.370		
Satd. Flow (perm)	987	3454	0	680	3650	1575	3483	3493	0	700	3483	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		56				150		7			12	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		391.1			454.4			154.1			1787.5	
Travel Time (s)		23.5			27.3			9.2			107.3	
Confl. Peds. (#/hr)	11		4	4		11	8		13	13		8
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	3%	0%	1%	2%	0%	1%	1%	3%	5%	1%	3%	2%
Adj. Flow (vph)	81	274	120	86	285	148	124	582	45	126	623	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	81	394	0	86	285	148	124	627	0	126	696	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5	6.1	6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	6.1	1.8		6.1	1.8	6.1	6.1	1.8		6.1	1.8	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8				6		
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	1.0	8.0		1.0	8.0	8.0	1.0	8.0		1.0	8.0	
Minimum Split (s)	5.5	35.4		5.5	35.4	35.4	6.0	35.5		5.5	35.5	
Total Split (s)	16.0	38.0		16.0	38.0	38.0	13.0	43.0		23.0	53.0	
Total Split (%)	13.3%	31.7%		13.3%	31.7%	31.7%	10.8%	35.8%		19.2%	44.2%	
Maximum Green (s)	12.0	31.6		12.0	31.6	31.6	8.0	36.5		19.0	46.5	
Yellow Time (s)	3.0	3.7		3.0	3.7	3.7	3.0	3.7		3.0	3.7	
All-Red Time (s)	1.0	2.7		1.0	2.7	2.7	2.0	2.8		1.0	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.4		4.0	6.4	6.4	5.0	6.5		4.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		21.0			21.0	21.0		21.0			21.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	24.9	15.2		25.2	15.3	15.3	7.7	47.3		58.0	47.0	
Actuated g/C Ratio	0.25	0.15		0.26	0.16	0.16	0.08	0.48		0.59	0.48	
v/c Ratio	0.25	0.68		0.31	0.50	0.40	0.45	0.37		0.25	0.42	
Control Delay	27.1	40.4		28.2	41.8	9.5	51.3	18.8		10.4	19.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	27.1	40.4		28.2	41.8	9.5	51.3	18.8		10.4	19.0	
LOS	C	D		C	D	A	D	B		B	B	
Approach Delay		38.1			30.3			24.2			17.7	
Approach LOS		D			C			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 98.5			
Natural Cycle: 85			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 25.9		Intersection LOS: C	
Intersection Capacity Utilization 65.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Appleby Line & Upper Middle Road



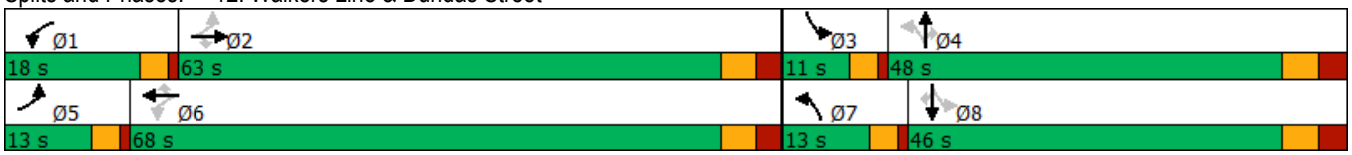


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	664	98	138	636	19	137	221	134	49	222	116
Future Volume (vph)	105	664	98	138	636	19	137	221	134	49	222	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	160.0		75.0	200.0		225.0	35.0		30.0	50.0		45.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	52.0			100.0			50.0			30.0		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	5142	1601	3471	5142	1601	3471	3579	1601	3471	3579	1601
Flt Permitted	0.366			0.349			0.485			0.603		
Satd. Flow (perm)	1337	5142	1601	1275	5142	1601	1772	3579	1601	2203	3579	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			124			93			146			126
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		412.8			1781.1			1831.4			411.6	
Travel Time (s)		24.8			106.9			109.9			24.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	114	722	107	150	691	21	149	240	146	53	241	126
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	722	107	150	691	21	149	240	146	53	241	126
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	5.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	5.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0
Minimum Split (s)	11.5	41.4	41.4	11.5	41.4	41.4	11.5	43.9	43.9	11.0	43.9	43.9
Total Split (s)	13.0	63.0	63.0	18.0	68.0	68.0	13.0	48.0	48.0	11.0	46.0	46.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	9.3%	45.0%	45.0%	12.9%	48.6%	48.6%	9.3%	34.3%	34.3%	7.9%	32.9%	32.9%
Maximum Green (s)	9.0	56.6	56.6	14.0	61.6	61.6	9.0	41.1	41.1	7.0	39.1	39.1
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.9	6.9	4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	None	None	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		28.0	28.0		28.0	28.0		30.0	30.0		30.0	30.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	66.3	56.7	56.7	66.7	56.9	56.9	26.4	16.5	16.5	22.6	12.7	12.7
Actuated g/C Ratio	0.62	0.53	0.53	0.63	0.53	0.53	0.25	0.15	0.15	0.21	0.12	0.12
v/c Ratio	0.12	0.26	0.12	0.16	0.25	0.02	0.26	0.43	0.39	0.10	0.57	0.42
Control Delay	7.2	14.3	2.2	7.3	14.0	0.1	31.2	44.3	10.2	29.6	49.9	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.2	14.3	2.2	7.3	14.0	0.1	31.2	44.3	10.2	29.6	49.9	12.2
LOS	A	B	A	A	B	A	C	D	B	C	D	B
Approach Delay		12.1			12.5			31.4			36.0	
Approach LOS		B			B			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 106.6			
Natural Cycle: 110			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 19.6		Intersection LOS: B	
Intersection Capacity Utilization 48.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 12: Walkers Line & Dundas Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	173	633	136	200	595	111	138	423	179	212	436	157
Future Volume (vph)	173	633	136	200	595	111	138	423	179	212	436	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		155.0	160.0		195.0	125.0		100.0	120.0		150.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	35.0			85.0			30.0			35.0		
Lane Util. Factor	0.97	*0.80	1.00	0.97	*0.80	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4565	1617	3437	4565	1601	3506	5142	1541	3437	5092	1617
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3471	4565	1617	3437	4565	1601	3506	5142	1541	3437	5092	1617
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			114			185			162
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		1781.1			536.9			1787.5			337.6	
Travel Time (s)		106.9			32.2			107.3			20.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	1%	1%	3%	1%	2%	1%	2%	6%	3%	3%	1%
Adj. Flow (vph)	178	653	140	206	613	114	142	436	185	219	449	162
Shared Lane Traffic (%)												
Lane Group Flow (vph)	178	653	140	206	613	114	142	436	185	219	449	162
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	5.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	5.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	8.0	15.0	15.0	8.0	15.0	15.0	8.0	15.0	15.0	8.0	15.0	15.0
Minimum Split (s)	13.0	48.3	48.3	13.0	48.3	48.3	13.0	22.4	22.4	13.0	22.4	22.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	20.0	64.0	64.0	25.0	69.0	69.0	19.0	30.0	30.0	21.0	32.0	32.0
Total Split (%)	14.3%	45.7%	45.7%	17.9%	49.3%	49.3%	13.6%	21.4%	21.4%	15.0%	22.9%	22.9%
Maximum Green (s)	15.0	56.7	56.7	20.0	61.7	61.7	14.0	22.6	22.6	16.0	24.6	24.6
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	2.0	3.6	3.6	2.0	3.6	3.6	2.0	3.7	3.7	2.0	3.7	3.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.3	7.3	5.0	7.3	7.3	5.0	7.4	7.4	5.0	7.4	7.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	3.0	3.0	5.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0						
Flash Dont Walk (s)		34.0	34.0		34.0	34.0						
Pedestrian Calls (#/hr)		0	0		0	0						
Act Effct Green (s)	13.5	60.0	60.0	15.3	61.8	61.8	12.3	20.1	20.1	14.7	22.4	22.4
Actuated g/C Ratio	0.10	0.45	0.45	0.11	0.46	0.46	0.09	0.15	0.15	0.11	0.17	0.17
v/c Ratio	0.51	0.32	0.18	0.53	0.29	0.14	0.44	0.57	0.48	0.59	0.53	0.40
Control Delay	63.8	25.6	4.4	61.9	23.9	4.3	63.2	56.7	11.2	64.6	54.1	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.8	25.6	4.4	61.9	23.9	4.3	63.2	56.7	11.2	64.6	54.1	10.2
LOS	E	C	A	E	C	A	E	E	B	E	D	B
Approach Delay		29.6			29.9			46.9			48.3	
Approach LOS		C			C			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 134.8			
Natural Cycle: 100			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 37.9		Intersection LOS: D	
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 13: Appleby Line & Dundas Street



APPENDIX E

Background Development Generated Traffic



4063 Upper Middle Road Transportation Impact Study

Paradigm Transportation Solutions Limited

December 2016

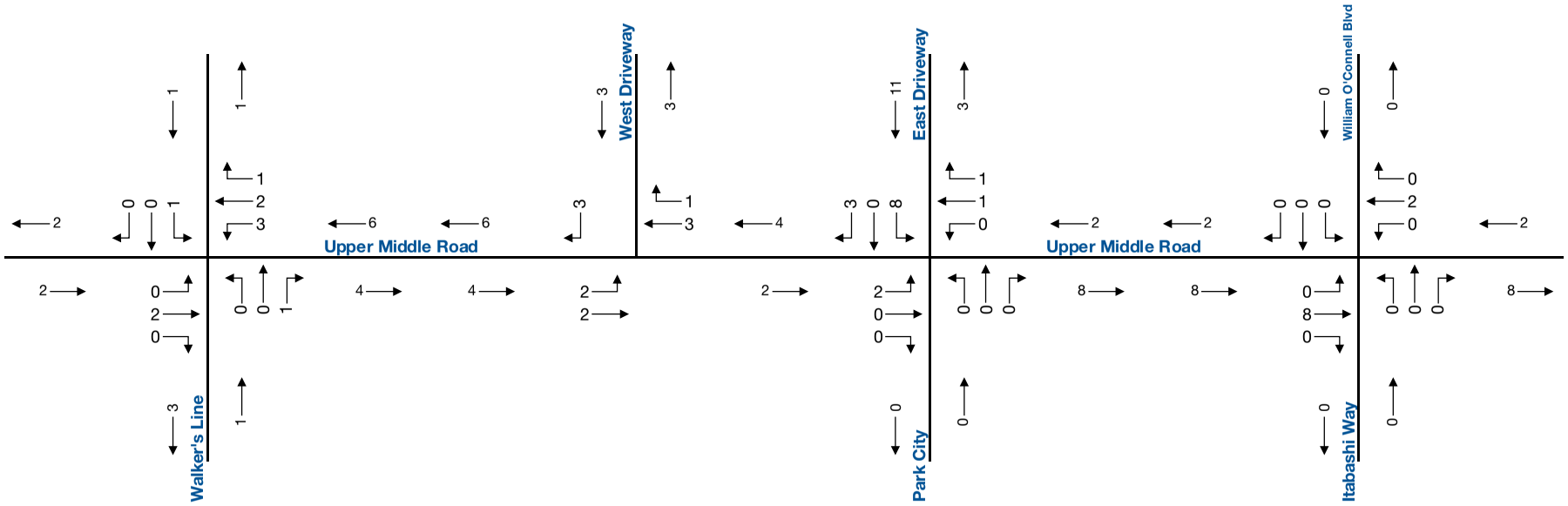
3.3 Development Trip Distribution and Assignment

The estimated direction of approach has been based on a review of existing travel patterns and distribution of trips entering and exiting the study area. Given the commuter nature of area traffic, the prevailing orientation is to/from the east via Upper Middle Road and south via Walker's Line (presumably to access the QEW and Highway 407 at Appleby Line). The resulting trip distribution is summarized in **Table 3.2**.

TABLE 3.2: TRIP DISTRIBUTION

Origin/Destination	AM Peak Hour		PM Peak Hour	
	Inbound	Outbound	Inbound	Outbound
To/From North via Walker's Line	12%	4%	7%	9%
To/From North via William O'Connell Boulevard	3%	3%	2%	3%
To/From South via Walker's Line	15%	20%	14%	15%
To/From South via Itabashi Way	5%	2%	6%	7%
To/From East via Upper Middle Road	35%	54%	57%	25%
To/From West via Upper Middle Road	30%	17%	14%	41%
Total	**100%**	**100%**	**100%**	**100%**

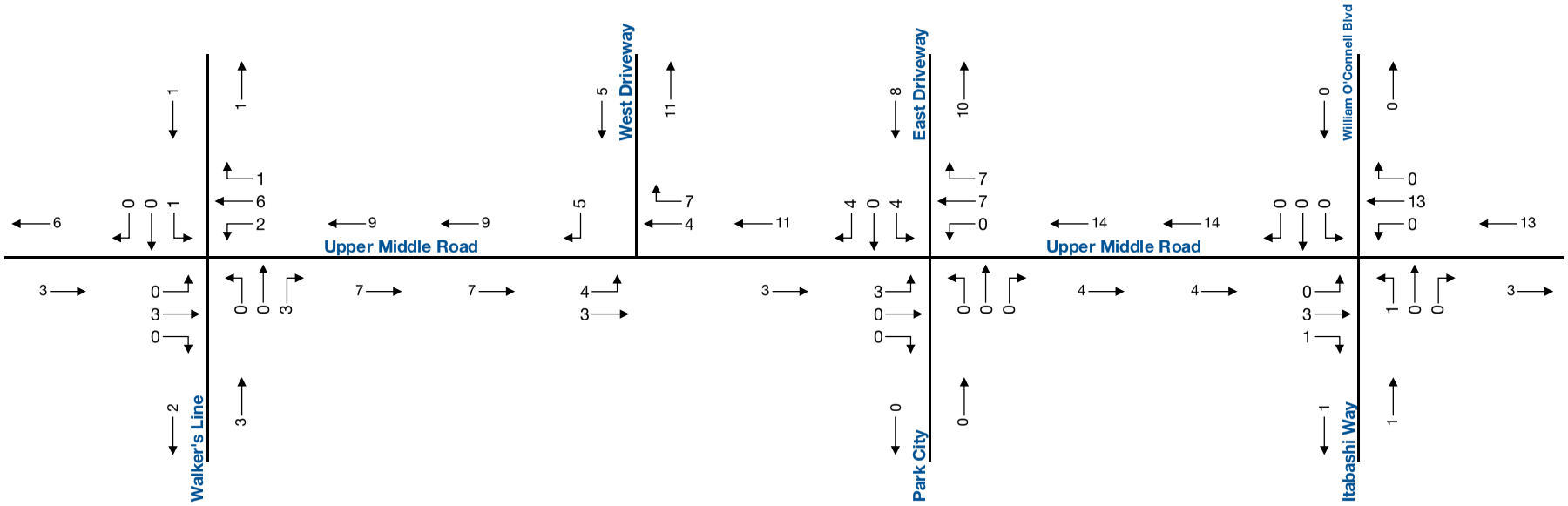
Site-generated trips were assigned to the adjacent road network based on logical routings which have considered the location of the site driveway, overall connectivity, prevailing traffic conditions and local knowledge of the surrounding area. **Figures 3.2a** and **Figure 3.2b** display the resulting AM and PM site traffic assignments.



Site Generated AM Peak Hour Traffic Volumes

4063 Upper Middle Road, Burlington, TIS
162390

Figure 3.2a



Site Generated PM Peak Hour Traffic Volumes

4063 Upper Middle Road, Burlington, TIS
162390

Figure 3.2b



Block 23 20M-1034
4853 Palladium Way
Transportation Impact Study

Paradigm Transportation Solutions Limited

June 2016

3.2 Site Traffic Estimates

The site trip generation for the AM and PM peak hours were estimated based on the Institute of Transportation Engineers (ITE) Trip Generation[2]. Land Use Code 130 (Industrial Park) was used to estimate the traffic generated by the development of the subject site. The land use is described as "*contain a number of industrial or related facilities. They are characterized by a mix of manufacturing, service and warehouse facilities with a wide variation in the proportion of each type of use from one location to another. Many industrial parks contain highly diversified facilities – some with a large number of small businesses and others with one or two dominant industries.*"

Table 3.1 indicates that the subject site is estimated to have a total trip generation of approximately 203 vehicle trips during the AM peak hour and approximately 236 vehicle trips during the PM peak hour. A modal split of 15 percent has been applied to the trip generation estimates to account for transit/non-automotive oriented trips. The modal split reduction is consistent with the Halton Region's Transportation Master Plan. The site's net generation is anticipated to be reduced to approximately 172 AM peak hour trips and approximately 200 PM peak hour trips.

TABLE 3.1: ESTIMATED TRIP GENERATION

Land Use	Number of Units	AM Peak Hour				PM Peak Hour			
		Rate	In	Out	Total	Rate	In	Out	Total
130 - Industrial Park (GFA)*	263,700		166	37	203		50	186	236
Total Generation			**166**	**37**	**203**		**50**	**186**	**236**
Modal Split		15%	25	6	31	15%	8	28	36
Net Generation			**141**	**31**	**172**		**42**	**158**	**200**

*ITE Regression Equation

The estimated trip generation was assigned to the road network based on the observed local trip patterns documented in the existing conditions (**Figure 2.3A** and **Figure 2.3B**). The estimated trip distribution is summarized in **Table 3.2**.

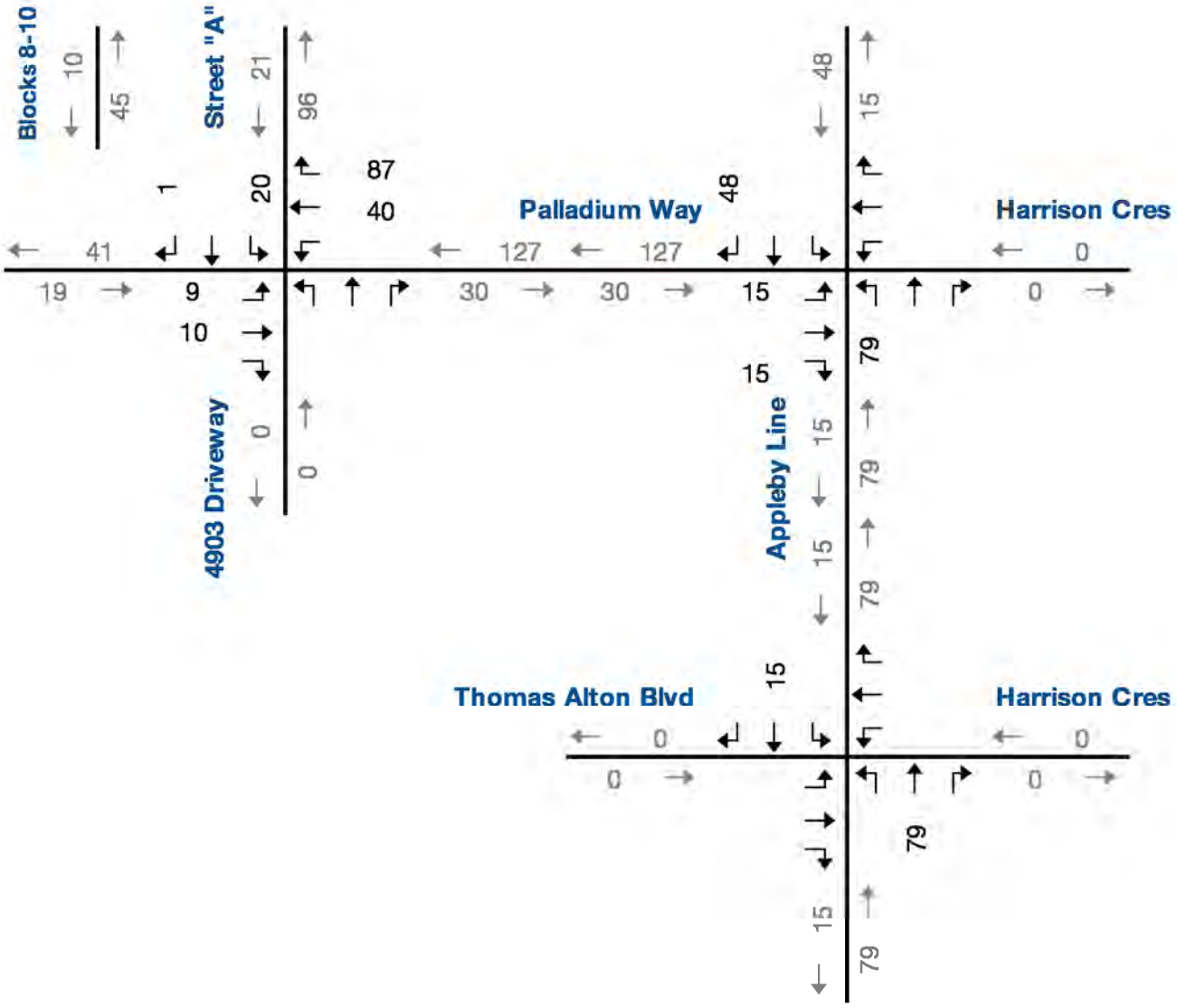
TABLE 3.2: ESTIMATED TRIP DISTRIBUTION

Origin/Destination	AM Peak Hour		PM Peak Hour	
	In	Out	In	Out
North via Appleby Line	34%	46%	41%	34%
South via Appleby Line	56%	46%	53%	55%
West via Palladium Way	10%	8%	6%	11%
Total	**100%**	**100%**	**100%**	**100%**

Using the trip generation data provided in **Table 3.1** and the trip distribution provided in **Table 3.2** the site generated traffic was assigned to the adjacent

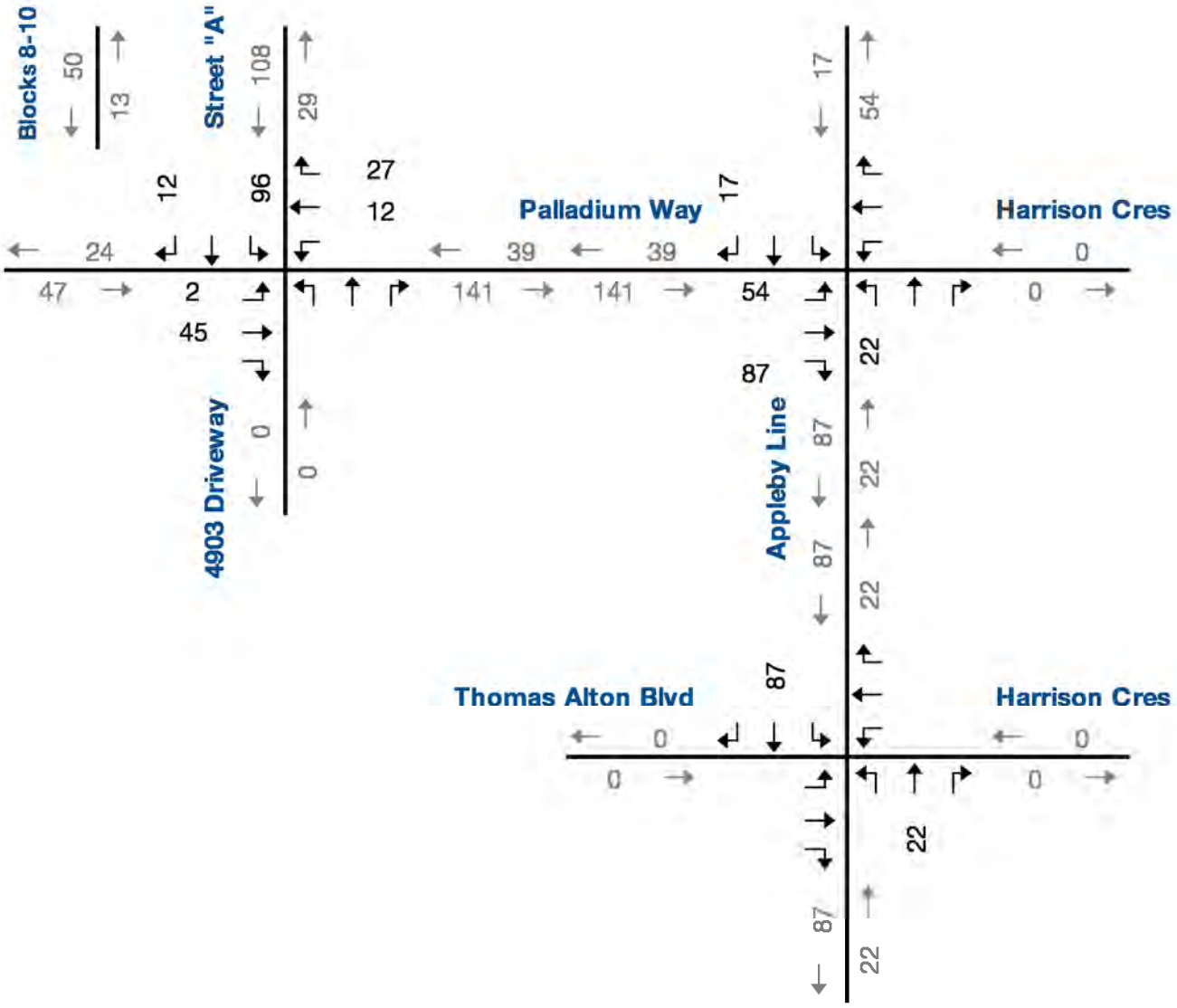
[2] Trip Generation Manual 9th Edition Institute of Transportation Engineers Washington DC 2012

road network. The site-generated traffic is illustrated in **Figure 3.2A** and **Figure 3.2B**.



NTS

Estimated Site Generated Traffic – AM Peak Hour



NTS

Estimated Site Generated Traffic – PM Peak Hour

EVERGREEN COMMUNITY
PROPOSED MIXED USE DEVELOPMENT

TRANSPORTATION CONSIDERATIONS

Prepared For: Evergreen Community (Burlington) Ltd.

July 10, 2015



4.3 EVERGREEN COMMUNITY SITE TRAFFIC

4.3.1 Trip Generation

Vehicular trip generation during the morning and afternoon peak hours has been estimated for the proposed Evergreen mixed use development based on the ITE Trip Generation Manual Edition 9. Trip rates for the proposed business corridor are based on the general office land use (ITE710) category. Mixed use retail trip rates are based on the specialty retail land use. Residential trip rates were based on the corresponding single, townhome, apartment unit type in reference to the ITE land use codes.

Since only nominal non-auto mode shares are included in the ITE trip rates, they were adjusted to reflect increased transit mode share given the completion of the Dundas BRT and other transit initiatives in the site vicinity. Like the August 2013 *Transportation Impact Study, Lazy Pat Farm Property* report by MMM Group, BA Group has adopted a 10 percent and 20 percent reduction to vehicular trips under the 2021 and 2031 horizon years respectively to account for the other travel modes. The retail pass-by percentage during the afternoon peak hour was developed based on the best fit equation for shopping centre uses found in Volume 1 of the ITE Trip Generation Manual 9th Edition.

Table 4 provides a summary of the site total trip generation rates, before transit and pass-by reductions, derived from ITE during the morning and afternoon peak hours.

TABLE 4 PROPOSED DEVELOPMENT TRIP GENERATION RATE SUMMARY

Land Use	ITE Code	Morning Peak Hour			Afternoon Peak Hour		
Residential							
Single	ITE 210	0.18	0.54	0.73	0.58	0.34	0.92
Townhome	ITE 230	0.08	0.38	0.46	0.36	0.18	0.54
Apartment	ITE 232	0.10	0.40	0.50	0.39	0.21	0.60
General Office	ITE 710	1.49	0.20	1.69	0.26	1.29	1.55
Specialty Retail	ITE 826	0.32	0.34	0.66	1.12	1.42	2.54

Vehicular trips before and after transit and pass-by reductions based on the above trip generation rates are summarized in Table 5.

TABLE 5 PROPOSED DEVELOPMENT SITE TRIP GENERATION SUMMARY

Land Use	Stats	Morning Peak Hour			Afternoon Peak Hour		
		In	Out	2-way	In	Out	2-way
RESIDENTIAL							
Single	374 units	65	205	270	215	130	345
Townhome	173 units	15	65	80	65	30	95
Apartment	360 units	25	105	135	85	50	135
Transit Reduction (2021)	10%	-10	-40	-50	-35	-25	-60
Transit Reduction (2031)	20%	-20	-75	-95	-75	-40	-115
Residential 2021		95	340	435	330	185	515
Residential 2031		85	305	390	290	170	460
OFFICE	362,022 sq.ft.	535	80	615	100	460	560
Transit Reduction (2021)	10%	-55	-10	-65	-10	-45	-55
Transit Reduction (2031)	20%	-105	-15	-120	-20	-95	-115
Office 2021		480	70	550	90	415	505
Office 2031		430	65	495	80	365	445
RETAIL	178,433 sq.ft.	55	60	115	200	250	450
Passby	10% AM 30% PM	-5	-5	-10	-70	-70	-140
Transit Reduction (2021)	10%	-5	-5	-10	-20	-25	-45
Transit Reduction (2031)	20%	-10	-10	-20	-40	-50	-90
Retail 2021		45	50	95	110	155	265
Retail 2031		40	45	85	90	130	220
Total 2021[2]		625	465	1090	600	825	1425
Total 2031[2]		560	420	980	530	735	1265

Notes:
1. Vehicle trips are rounded to the nearest 5 vehicles.
2. Includes retail pass-by trips

4.3.2 Trip Distribution

New site traffic has been assigned to the area road network based upon a review of travel distribution patterns provided by the Transportation Tomorrow Survey (TTS) for the site area and the different land uses. Given the greenfield nature of the site, adjacent and nearby traffic zones were used to query travel distribution information from the TTS.

The existing site vicinity from east of Appleby Line to west of Bronte Road between Dundas Street and Upper Middle Road, 2006 GTA Zones 4045 and 4079, are zoned for residential uses. These zones were used to query for residential travel distribution inbound and outbound from the zones. Similarly for the employment distribution, the employment district around Highway 403 and Burloak Drive directly south of the site (2006 GTA Zones 4078, 4077, and 4002) was used in the query. The employment distribution was used for office trips. Retail trips are anticipated to be local in nature given the scope of the retail development. The retail distribution is based on a truncated employment distribution consisting mainly of zones within Burlington and Oakville.

Tables summarizing inbound and outbound trips to / from the zones and corresponding major travel routes and distributions to / from the development site for residential and employment land uses are provided in Appendix C. Table 6 summarizes the resultant directional distribution to / from the site.

TABLE 6 PROPOSED SITE DEVELOPMENT ARRIVAL / DEPARTURE PATTERNS

Routes	Direction (to / from)	Residential		Employment		Retail	
		Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
Dundas	West	50%	49%	71%	72%	70%	68%
Dundas	East	14%	18%	6%	11%	22%	27%
Burnhamthorpe East / Avenue One	East	36%	5%	22%	3%	3%	0%
Tremaine	North	0%	28%	1%	14%	5%	5%

4.3.3 Trip Assignment

New site traffic volumes and pass-by traffic were distributed on the adjacent road system based upon the arrival / departure patterns in Table 6. Given the development timing of the east-west roadway links within the 407 West Employment Lands and the Lazy Pat Farm property, separate trip assignments were adopted for the 2021 and 2031 horizon years reflecting the availability of Avenue One which will connect to the site directly from the east in 2031. New site traffic volumes in 2021 and 2031 are illustrated in Figure 17 and Figure 18.

4.4 FUTURE TOTAL TRAFFIC

Future 2021 and 2031 total traffic volumes that include future background traffic (Figure 15 and Figure 16 respectively) and new site traffic (Figure 17 and Figure 18 respectively) are illustrated for the morning and afternoon peak hours periods in Figure 19 and Figure 20.



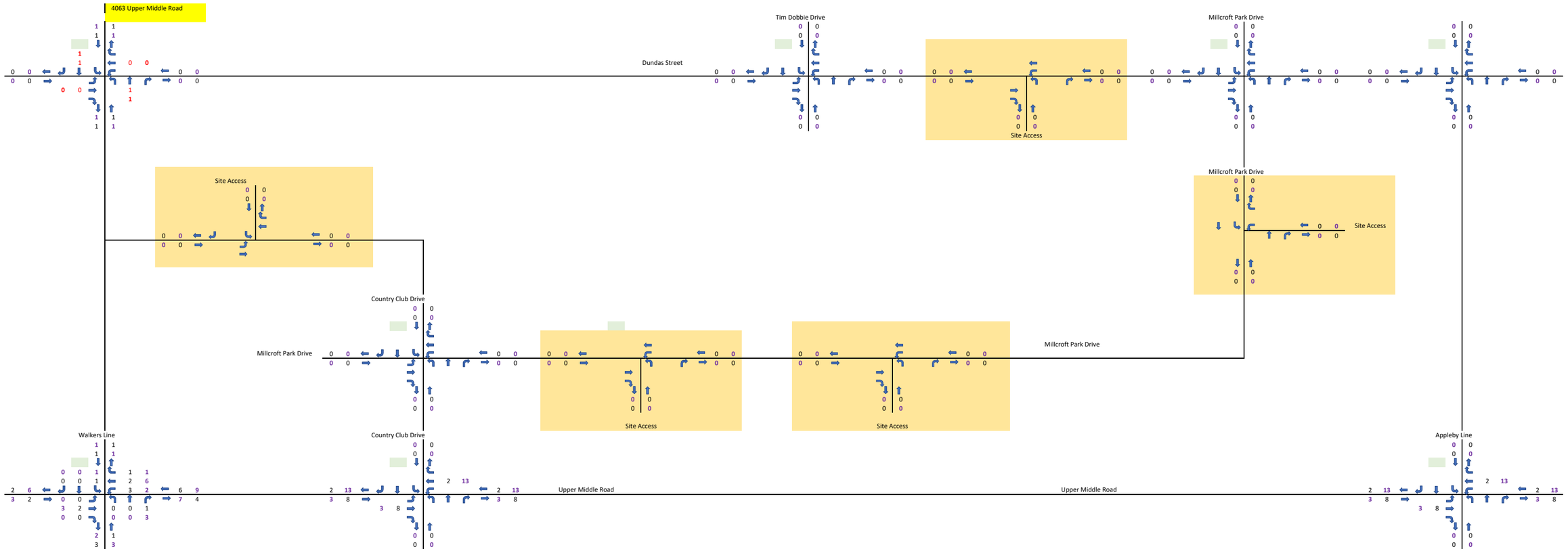
Date Plotted: July 8, 2015 Filename: \\barp02\Data\WP\75\97\02\Graphics\Fig11-02-ExT.dwg

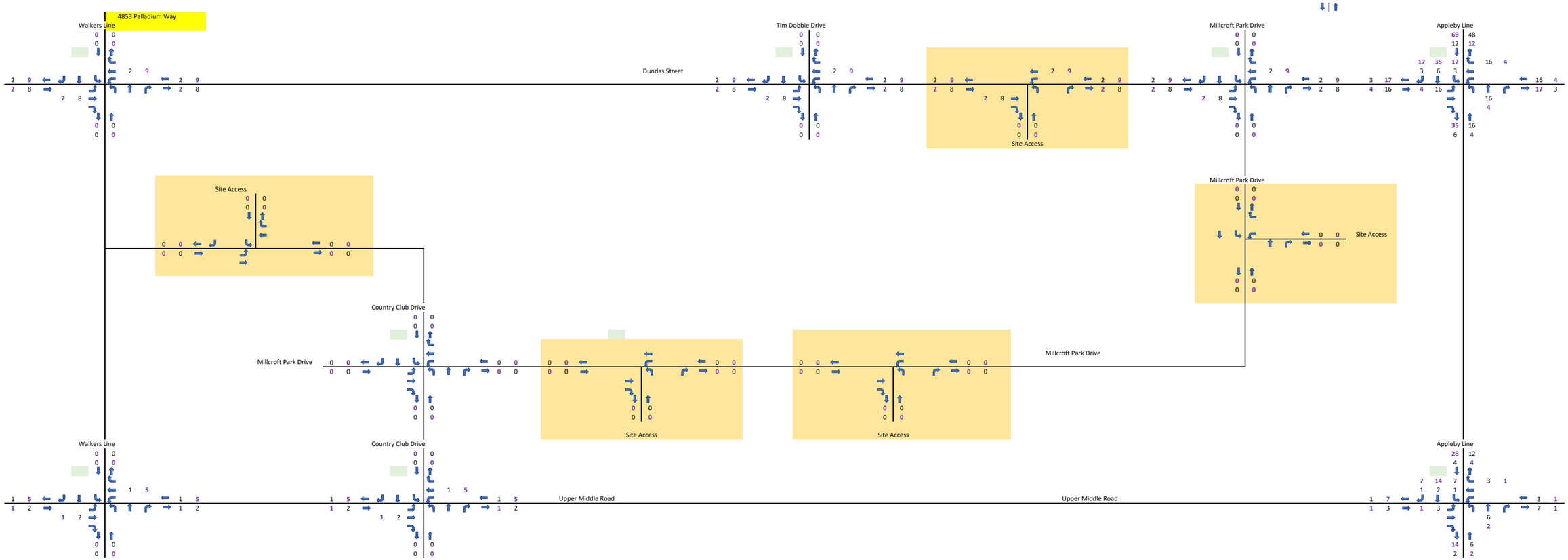
EXISTING TRAFFIC VOLUMES

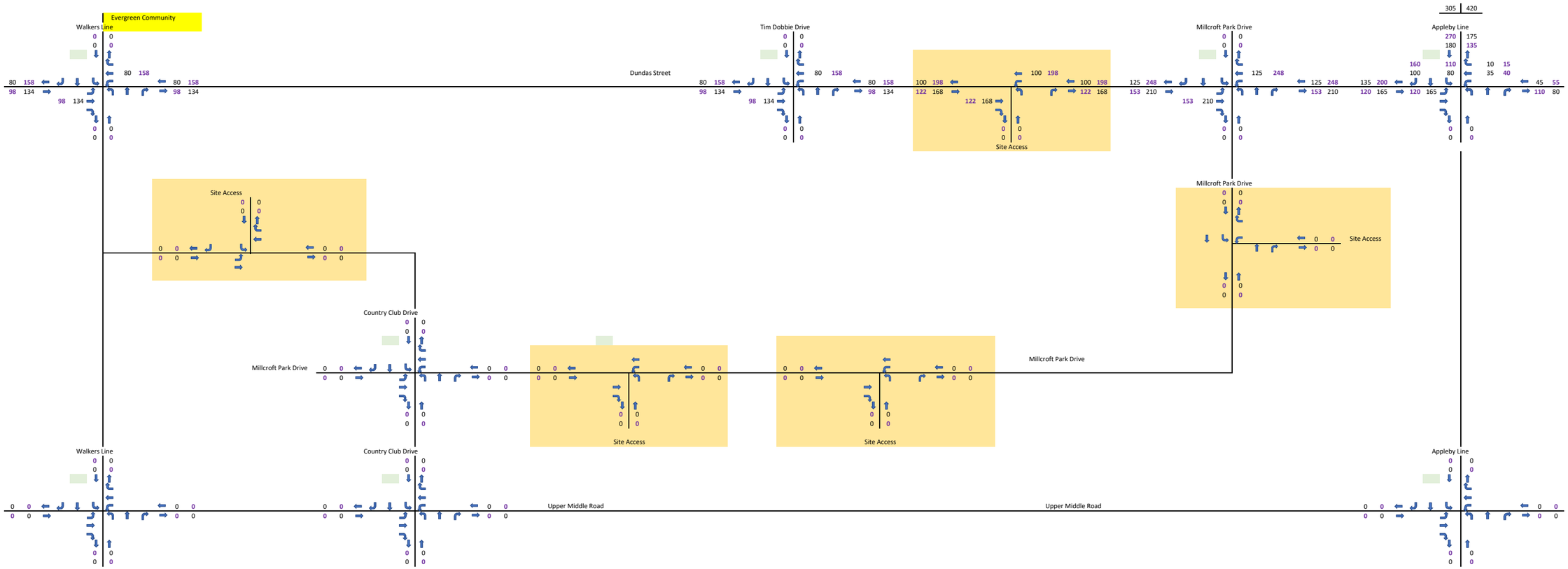
BA Group

Evergreen Community
7597-02 July 2015

Figure 11


4063 Upper Middle Road
Dundas Street
Tim Dobbie Drive
Site Access
Millcroft Park Drive
Millcroft Park Drive
Site Access
Site Access
Country Club Drive
Millcroft Park Drive
Site Access
Site Access
Millcroft Park Drive
Walkers Line
Country Club Drive
Upper Middle Road
Upper Middle Road
Appleby Line


4853 Palladium Way
Walkers Line
Dundas Street
Tim Dobbie Drive
Site Access
Millcroft Park Drive
Appleby Line
Site Access
Millcroft Park Drive
Site Access
Country Club Drive
Millcroft Park Drive
Site Access
Site Access
Millcroft Park Drive
Walkers Line
Country Club Drive
Upper Middle Road
Upper Middle Road
Appleby Line


Evergreen Community
Walkers Line
Tim Dobbie Drive
Dundas Street
Millcroft Park Drive
Appleby Line
305
420
Site Access
Site Access
Millcroft Park Drive
Site Access
Country Club Drive
Millcroft Park Drive
Site Access
Site Access
Millcroft Park Drive
Walkers Line
Country Club Drive
Appleby Line
Upper Middle Road
Upper Middle Road

Trip Generation

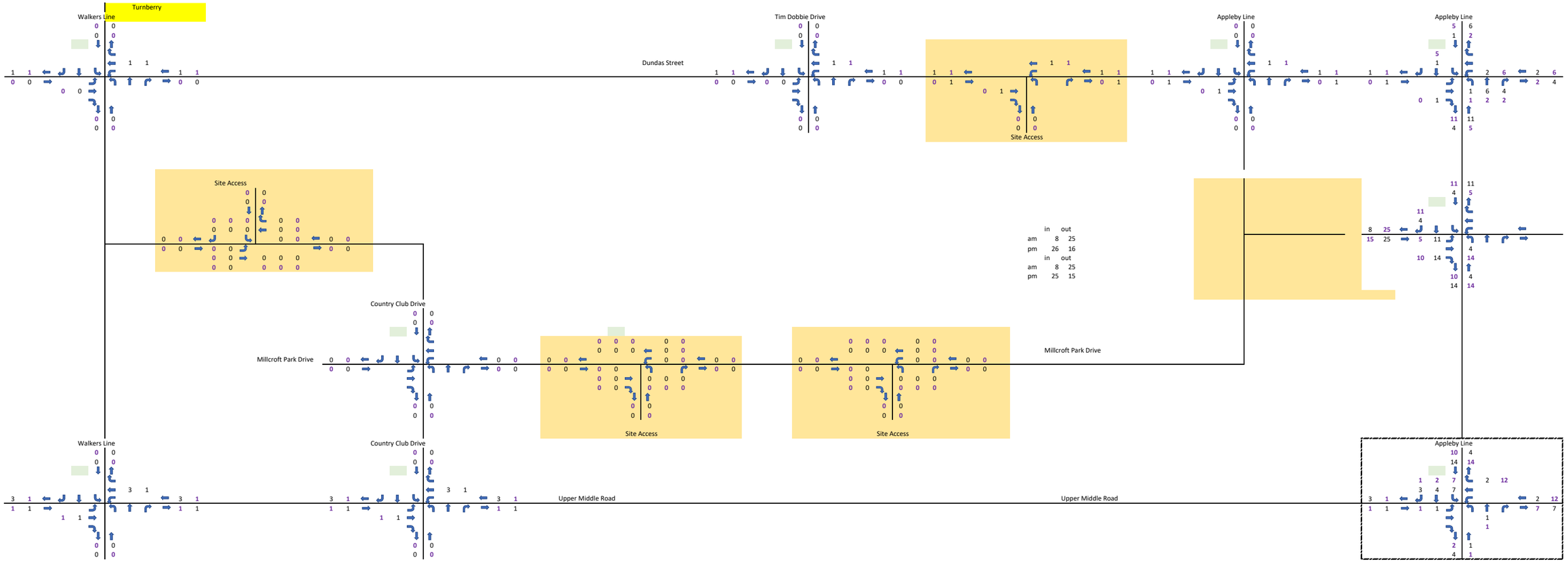
2273 Turnberry Road

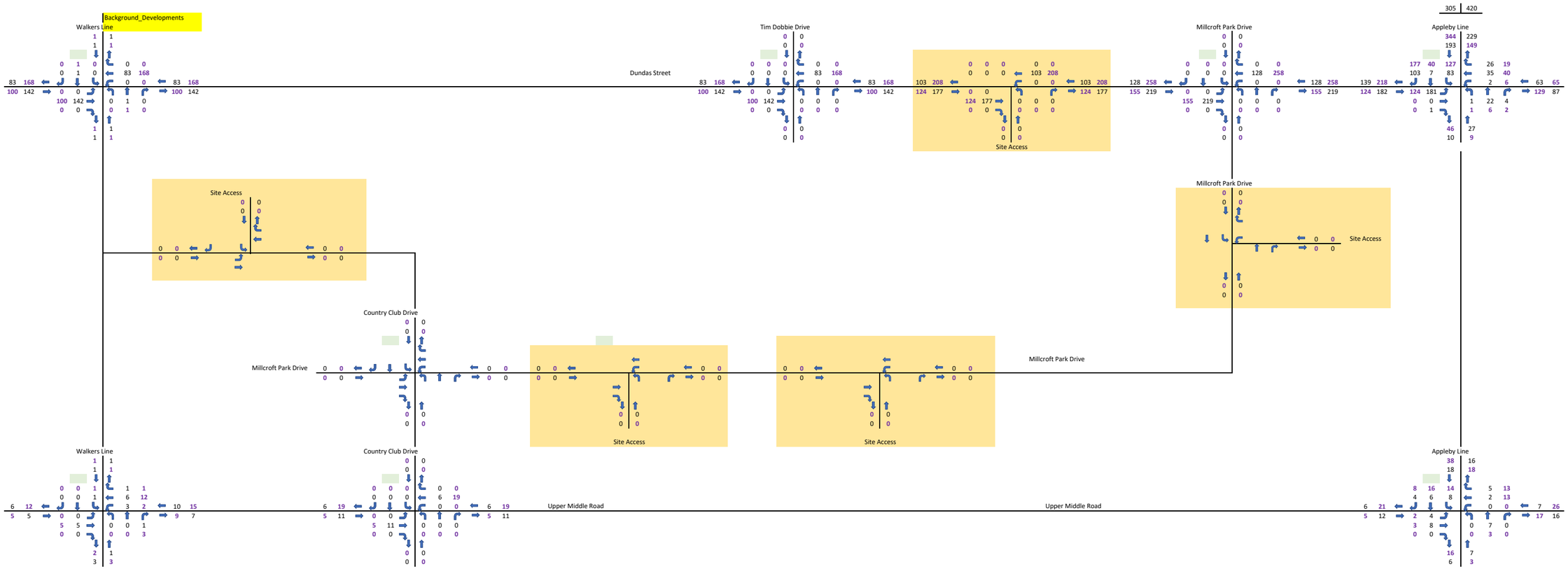
AM

LAND USE CATEGORY	Residential			68	
LAND USE	LUC 220 "Multifamily Housing "I				
INDEPENDENT VARIABLE	Dwelling Units				
TIME PERIOD	Peak Hour of Adjacent Street Traffic One Hour Between 7 and 9				
AVERAGE RATE	0.46				
EQUATION	Ln(T) = 0.95 Ln(X) - 0.51				
DIRECTIONAL DISTRIBUTION	IN 23%				
	OUT 77%			IN	OUT
CALCULATED TRIP ENDS	AVERAGE RATE 31			0	31
	FITTED CURVE 33			8	25
MODAL SPLIT	0%	TRIPS 0			
PASS BY	0%	TRIPS 0			
INTERNAL CAPTURE	0%	TRIPS 0		IN	OUT
		NET NEW TRIPS	33	8	25
		Net Trip Rate	0.49		

PM

LAND USE CATEGORY	Residential			68	
LAND USE	LUC 220 "Multifamily Housing "Low-F				
INDEPENDENT VARIABLE	Dwelling Units				
TIME PERIOD	Peak Hour of Adjacent Street Traffic One Hour Between 4 and 6 p.m.				
AVERAGE RATE	0.56				
EQUATION	Ln(T) = 0.89 Ln(X) - 0.02				
DIRECTIONAL DISTRIBUTION	IN 63%				
	OUT 37%			IN	OUT
CALCULATED TRIP ENDS	AVERAGE RATE 38			24	14
	FITTED CURVE 42			26	16
MODAL SPLIT	0%	TRIPS 0			
PASS BY	0%	TRIPS 0			
INTERNAL CAPTURE	0%	TRIPS 0		IN	OUT
		NET NEW TRIPS	42	26	16
		Net Trip Rate	0.62		


Turnberry
Walkers Line
Dundas Street
Tim Dobbie Drive
Site Access
Appleby Line
Site Access
Country Club Drive
Millcroft Park Drive
Site Access
Site Access
in out
am 8 25
pm 26 16
in out
am 8 25
pm 25 15
Millcroft Park Drive
Appleby Line
Walkers Line
Country Club Drive
Upper Middle Road
Upper Middle Road
Appleby Line


Background_Developments
Walkers Line
Tim Dobbie Drive
Dundas Street
Millcroft Park Drive
Appleby Line
305
420
Site Access
Site Access
Site Access
Site Access
Millcroft Park Drive
Millcroft Park Drive
Millcroft Park Drive
Country Club Drive
Country Club Drive
Walkers Line
Appleby Line
Upper Middle Road
Upper Middle Road
Upper Middle Road

APPENDIX F

Dundas Street EA Study Excerpts

PROPOSED TEMPORARY GRADING EASEMENT

13+800

3.0m MULTI-USE PATHWAY

13+900

PROPOSED PROPERTY LINE

DUNDAS STREET

14+000

WB WALKERS STATION

EXISTING SIGNALIZED INTERSECTION

WALKERS LINE

14+100

#3051 WALKERS LINE

EXISTING SIGNALIZED INTERSECTION

PASSENGER PLATFORM

BUS BAY

R=1500m

R=1500m

PLATE 10

PLATE 11

3.0m MULTI-USE PATHWAY

℄ CONSTRUCTION

PASSENGER PLATFORM

RETAINING WALL

EB WALKERS STATION

ENTRANCE FEATURE TO BE RELOCATED DURING DETAILED DESIGN

ESSO GAS STATION

PLATE 11

PLATE 12

HEADON FOREST PLAZA

DATE OF PHOTOGRAPHY - 2013

Scale 1:1000

5m 0 25m

MMM GROUP

DUNDAS STREET - PREFERRED ALTERNATIVE FROM STA. 13+780 TO STA. 14+160

HALTON REGION
DUNDAS STREET (REGIONAL ROAD 5)
BRANT STREET TO BRONTE ROAD
CLASS ENVIRONMENTAL ASSESSMENT STUDY

Legend :

- EXISTING PROPERTY LINE
- PROPOSED TEMPORARY GRADING EASEMENT
- PROPOSED PROPERTY LINE
- PROPOSED MULTI-USE PATH/SIDEWALK
- PROPOSED HARD SURFACE
- PROPOSED PAVEMENT
- PROPOSED VEGETATION
- PROPOSED BUFFERED BIKE LANE
- RELOCATION OF NOISE WALL BY HALTON REGION
- EXISTING NOISE WALL
- RETAINING WALL
- EXISTING SIGNALIZED INTERSECTION
- PROPOSED SIGNALIZED INTERSECTION

PLATE

11



Scale 1:1000
5m 0 25m

MMM GROUP

DUNDAS STREET - PREFERRED ALTERNATIVE FROM STA. 14+160 TO STA. 14+540

HALTON REGION
DUNDAS STREET (REGIONAL ROAD 5)
BRANT STREET TO BRONTE ROAD
CLASS ENVIRONMENTAL ASSESSMENT STUDY

Legend :

- EXISTING PROPERTY LINE
- PROPOSED TEMPORARY GRADING EASEMENT
- PROPOSED PROPERTY LINE
- PROPOSED MULTI-USE PATH/SIDEWALK
- PROPOSED HARD SURFACE
- PROPOSED PAVEMENT
- PROPOSED VEGETATION
- PROPOSED BUFFERED BIKE LANE
- RELOCATION OF NOISE WALL BY HALTON REGION
- EXISTING NOISE WALL
- RETAINING WALL
- EXISTING SIGNALIZED INTERSECTION
- PROPOSED SIGNALIZED INTERSECTION

PLATE
12

ALTON COMMUNITY

APPLEBY CREEK

DR. FRANK J. HAYDEN SECONDARY SCHOOL

TIM DOBBIE DRIVE

14+600

3.0m MULTI-USE PATHWAY

14+700

14+800

DUNDAS STREET

WB ALTON STATION

14+900

PASSENGER PLATFORM

BUS BAY

R=5000m

BUS BAY

PASSENGER PLATFORM

℄ CONSTRUCTION

GUIRE COMMON

3.0m MULTI-USE PATHWAY

EXISTING PROPERTY LINE

SINGLETON COMMON

EB BERWICK STATION

PLATE 12

PLATE 13

PROPOSED PROPERTY LINE

UPPER MILLCROFT TOWNHOUSES

PROPOSED TEMPORARY GRADING EASEMENT

RETAINING WALL AND LANDSCAPING

EB ALTON STATION

SIGNAGE TO BE PROVIDED FOR INTERNAL TRAFFIC OPERATION; SUBJECT TO REVIEW DURING DETAILED DESIGN

WESTLOCK COMMON

PLATE 13

PLATE 14

JUDSON COMMON

UPPER MILLCROFT TOWNHOUSES

DATE OF PHOTOGRAPHY - 2013

Scale 1:1000

5m 0 25m

MMM GROUP

DUNDAS STREET - PREFERRED ALTERNATIVE FROM STA. 14+540 TO STA. 14+920

HALTON REGION
DUNDAS STREET (REGIONAL ROAD 5)
BRANT STREET TO BRONTE ROAD
CLASS ENVIRONMENTAL ASSESSMENT STUDY

Legend :

- EXISTING PROPERTY LINE
- PROPOSED TEMPORARY GRADING EASEMENT
- PROPOSED PROPERTY LINE
- PROPOSED MULTI-USE PATH/SIDEWALK
- PROPOSED HARD SURFACE
- PROPOSED PAVEMENT
- PROPOSED VEGETATION
- PROPOSED BUFFERED BIKE LANE
- RELOCATION OF NOISE WALL BY HALTON REGION
- EXISTING NOISE WALL
- RETAINING WALL
- EXISTING SIGNALIZED INTERSECTION
- PROPOSED SIGNALIZED INTERSECTION

PLATE 13

CORNERSTONE DRIVE

HYDRO ONE CORRIDOR

EXISTING SIGNALIZED INTERSECTION

PROPOSED PROPERTY LINE

3.0m MULTI-USE PATHWAY

15+300

15+400

15+500

15+600

DUNDAS STREET

BUS BAY

PASSENGER PLATFORM

℄ CONSTRUCTION

EB MILLCROFT STATION

3.0m MULTI-USE PATHWAY

RELOCATION OF EXISTING NOISE BARRIER

ENTRANCE FEATURE TO BE RELOCATED DURING DETAILED DESIGN

PLATE 14

PLATE 15

MILLCROFT PARK DRIVE

MILLCROFT GOLF CLUB

#2562

#2563

#2560

#2561

#4426

TANSLEY YMCA CHILD CARE CENTRE (FORMERLY TANSLEY SCHOOLHOUSE (1915)–HERITAGE INVENTORY–BHR)

HOGAN COURT

PLATE 15

PLATE 16

DATE OF PHOTOGRAPHY - 2013

Scale 1:1000

5m 0 25m

MMM GROUP

DUNDAS STREET - PREFERRED ALTERNATIVE FROM STA. 15+300 TO STA. 15+680

HALTON REGION
DUNDAS STREET (REGIONAL ROAD 5)
BRANT STREET TO BRONTE ROAD
CLASS ENVIRONMENTAL ASSESSMENT STUDY

Legend :

- EXISTING PROPERTY LINE
- PROPOSED TEMPORARY GRADING EASEMENT
- PROPOSED PROPERTY LINE
- PROPOSED MULTI-USE PATH/SIDEWALK
- PROPOSED HARD SURFACE
- PROPOSED PAVEMENT
- PROPOSED VEGETATION
- PROPOSED BUFFERED BIKE LANE
- RELOCATION OF NOISE WALL BY HALTON REGION
- EXISTING NOISE WALL
- RETAINING WALL
- EXISTING SIGNALIZED INTERSECTION
- PROPOSED SIGNALIZED INTERSECTION

PLATE

15

EXISTING SIGNALIZED INTERSECTION

EXTEND EXISTING RETAINING WALL

MATCH EXISTING LANES

3.0m MULTI-USE PATHWAY

16+100

16+200

16+300

16+400

WB APPLEBY STATION

DUNDAS STREET

PETRO CANADA GAS STATION

PASSENGER PLATFORM

BUS BAY

R=2500m

BUS BAY

PASSENGER PLATFORM

EB APPLEBY STATION

℄ CONSTRUCTION

3.0m MULTI-USE PATHWAY

PLATE 16

PLATE 17

SUNOCO GAS STATION

COMMERCIAL PLAZA

APPLEBY LINE - REGIONAL ROAD NO. 20

PLATE 17

PLATE 18

DATE OF PHOTOGRAPHY - 2013

Scale 1:1000

5m 0 25m

MMM GROUP

DUNDAS STREET - PREFERRED ALTERNATIVE FROM STA. 16+060 TO STA. 16+440

HALTON REGION
DUNDAS STREET (REGIONAL ROAD 5)
BRANT STREET TO BRONTE ROAD
CLASS ENVIRONMENTAL ASSESSMENT STUDY

Legend :

- EXISTING PROPERTY LINE
- PROPOSED TEMPORARY GRADING EASEMENT
- PROPOSED PROPERTY LINE
- PROPOSED MULTI-USE PATH/SIDEWALK
- PROPOSED HARD SURFACE
- PROPOSED PAVEMENT
- PROPOSED VEGETATION
- PROPOSED BUFFERED BIKE LANE
- RELOCATION OF NOISE WALL BY HALTON REGION
- EXISTING NOISE WALL
- RETAINING WALL
- EXISTING SIGNALIZED INTERSECTION
- PROPOSED SIGNALIZED INTERSECTION

PLATE

17

APPENDIX G

TTS Data

Wed Dec 12 2018 11:39:17 GMT-0500 (Eastern Standard Time) - Run Time: 2498ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: 2006 GTA zone of household - gta06_hhld
Column: Primary travel mode of trip - mode_prime

Filters:
2006 GTA zone of household - gta06_hhld In 4080,4084,4079,4083
and
Age of person - age In 18-99
and
Start time of trip - start_time In 700-1900

Trip 2016
Table:

	Transit excluding GO rail	Cycle	Auto driver	GO rail only	Joint GO rail and local transit	Auto passenger	Taxi passenger	Paid rideshare	Walk	Total
4079	329	0	16009	550	269	1203	0	75	351	18786
4080	149	102	12589	338	32	1439	0	0	153	14802
4083	119	51	10378	167	221	1215	73	0	253	12477
4084	552	105	17687	289	115	706	29	56	348	19887
Total	1149	258	56663	1344	637	4563	102	131	1105	65952
	2%	0%	86%	2%	1%	7%	0%	0%	2%	
Modal Split: 7%										

,Transit excluding GO rail,Cycle,Auto driver,GO rail only,Joint GO rail and local transit,Auto passenger,Taxi passenger,Paid rideshare,Walk
4079,329,0,16009,550,269,1203,0,75,351
4080,149,102,12589,338,32,1439,0,0,153
4083,119,51,10378,167,221,1215,73,0,253
4084,552,105,17687,289,115,706,29,56,348

APPENDIX H

Detailed Site Generated Volumes

Total Trip Gen

Site A

LAND USE CATEGORY	Residential			130		
LAND USE	Multifamily Housing (Mid-Rise) (LUC 221)					
INDEPENDENT VARIABLE	Dwelling Units					
TIME PERIOD	Peak Hour of Adjacent Street Traffic One Hour Between 7 and 9					
AVERAGE RATE	0.36					
EQUATION	Ln(T) = 0.98 Ln(X) - 0.98					
DIRECTIONAL DISTRIBUTION	IN 26%					
	OUT 74%					
CALCULATED TRIP ENDS	AVERAGE RATE 47					
	FITTED CURVE 44					
MODAL SPLIT	5%	TRIPS 2				
PASS BY	0%	TRIPS 0				
INTERNAL CAPTURE	0%	TRIPS 0		IN	OUT	
	NET NEW TRIPS 45			12	33	
	Net Trip Rate 0.35					

LAND USE CATEGORY	Residential			130		
LAND USE	Multifamily Housing (Mid-Rise) (LUC 221)					
INDEPENDENT VARIABLE	Dwelling Units					
TIME PERIOD	Peak Hour of Adjacent Street Traffic One Hour Between 4 and 6					
AVERAGE RATE	0.44					
EQUATION	Ln(T) = 0.96 Ln(X) - 0.63					
DIRECTIONAL DISTRIBUTION	IN 61%					
	OUT 39%					
CALCULATED TRIP ENDS	AVERAGE RATE 57					
	FITTED CURVE 57					
MODAL SPLIT	5%	TRIPS 3				
PASS BY	0%	TRIPS 0				
INTERNAL CAPTURE	0%	TRIPS 0		IN	OUT	
	NET NEW TRIPS 54			33	21	
	Net Trip Rate 0.42					

SITE E

LAND USE CATEGORY	Residential			18		
LAND USE	Single-Family Detached Housing					
INDEPENDENT VARIABLE	Dwelling Units					
TIME PERIOD	Peak Hour of Adjacent Street Traffic One Hour Between 7 and 9					
AVERAGE RATE	0.74					
EQUATION	T = 0.71(X) + 4.80					
DIRECTIONAL DISTRIBUTION	IN 25%					
	OUT 75%					
CALCULATED TRIP ENDS	AVERAGE RATE 13					
	FITTED CUTE 18					
MODAL SPLIT	5%	TRIPS 1				
PASS BY	0%	TRIPS 0				
INTERNAL CAPTURE	0%	TRIPS 0		IN	OUT	
	NET NEW TRIPS 17			4	13	
	Net Trip Rate 0.94					

LAND USE CATEGORY	Residential			18		
LAND USE	Single-Family Detached Housing					
INDEPENDENT VARIABLE	Dwelling Units					
TIME PERIOD	Peak Hour of Adjacent Street Traffic One Hour Between 4 and 6					
AVERAGE RATE	0.99					
EQUATION	Ln(T) = 0.96 Ln(X) + 0.20					
DIRECTIONAL DISTRIBUTION	IN 63%					
	OUT 37%					
CALCULATED TRIP ENDS	AVERAGE RATE 18					
	FITTED CUTE 20					
MODAL SPLIT	5%	TRIPS 1				
PASS BY	0%	TRIPS 0				
INTERNAL CAPTURE	0%	TRIPS 0		IN	OUT	
	NET NEW TRIPS 19			12	7	
	Net Trip Rate 1.06					

Site J

LAND USE CATEGORY	Residential			8		
LAND USE	Single-Family Detached Housing					
INDEPENDENT VARIABLE	Dwelling Units					
TIME PERIOD	Peak Hour of Adjacent Street Traffic One Hour Between 7 and 9					
AVERAGE RATE	0.74					
EQUATION	T = 0.71(X) + 4.80					
DIRECTIONAL DISTRIBUTION	IN 25%					
	OUT 75%					
CALCULATED TRIP ENDS	AVERAGE RATE 6					
	FITTED CUTE 10					
MODAL SPLIT	5%	TRIPS 1				
PASS BY	0%	TRIPS 0				
INTERNAL CAPTURE	0%	TRIPS 0		IN	OUT	
	NET NEW TRIPS 9			2	7	
	Net Trip Rate 1.13					

LAND USE CATEGORY	Residential			8		
LAND USE	Single-Family Detached Housing					
INDEPENDENT VARIABLE	Dwelling Units					
TIME PERIOD	Peak Hour of Adjacent Street Traffic One Hour Between 4 and 6					
AVERAGE RATE	0.99					
EQUATION	Ln(T) = 0.96 Ln(X) + 0.20					
DIRECTIONAL DISTRIBUTION	IN 63%					
	OUT 37%					
CALCULATED TRIP ENDS	AVERAGE RATE 8					
	FITTED CUTE 9					
MODAL SPLIT	5%	TRIPS 0				
PASS BY	0%	TRIPS 0				
INTERNAL CAPTURE	0%	TRIPS 0		IN	OUT	
	NET NEW TRIPS 9			6	3	
	Net Trip Rate 1.13					

Site H

LAND USE CATEGORY	Residential			30		
LAND USE	Single-Family Detached Housing					
INDEPENDENT VARIABLE	Dwelling Units					
TIME PERIOD	Peak Hour of Adjacent Street Traffic One Hour Between 7 and 9					
AVERAGE RATE	0.74					
EQUATION	T = 0.71(X) + 4.80					
DIRECTIONAL DISTRIBUTION	IN 25%					
	OUT 75%					
CALCULATED TRIP ENDS	AVERAGE RATE 22					
	FITTED CUTE 26					
MODAL SPLIT	5%	TRIPS 1				
PASS BY	0%	TRIPS 0				
INTERNAL CAPTURE	0%	TRIPS 0		IN	OUT	
	NET NEW TRIPS 25			6	19	
	Net Trip Rate 0.83					

LAND USE CATEGORY	Residential			30		
LAND USE	Single-Family Detached Housing					
INDEPENDENT VARIABLE	Dwelling Units					
TIME PERIOD	Peak Hour of Adjacent Street Traffic One Hour Between 4 and 6					
AVERAGE RATE	0.99					
EQUATION	Ln(T) = 0.96 Ln(X) + 0.20					
DIRECTIONAL DISTRIBUTION	IN 63%					
	OUT 37%					
CALCULATED TRIP ENDS	AVERAGE RATE 30					
	FITTED CUTE 32					
MODAL SPLIT	5%	TRIPS 2				
PASS BY	0%	TRIPS 0				
INTERNAL CAPTURE	0%	TRIPS 0		IN	OUT	
	NET NEW TRIPS 30			19	11	
	Net Trip Rate 1.00					

Site I

LAND USE CATEGORY	Residential			41		
LAND USE	Single-Family Detached Housing					
INDEPENDENT VARIABLE	Dwelling Units					
TIME PERIOD	Peak Hour of Adjacent Street Traffic One Hour Between 7 and 9					
AVERAGE RATE	0.74					
EQUATION	T = 0.71(X) + 4.80					
DIRECTIONAL DISTRIBUTION	IN 25%					
	OUT 75%					
CALCULATED TRIP ENDS	AVERAGE RATE 30					
	FITTED CUTE 34					
MODAL SPLIT	5%	TRIPS 2				
PASS BY	0%	TRIPS 0				
INTERNAL CAPTURE	0%	TRIPS 0		IN	OUT	
	NET NEW TRIPS 32			8	24	
	Net Trip Rate 0.78					

LAND USE CATEGORY	Residential			41		
LAND USE	Single-Family Detached Housing					
INDEPENDENT VARIABLE	Dwelling Units					
TIME PERIOD	Peak Hour of Adjacent Street Traffic One Hour Between 4 and 6					
AVERAGE RATE	0.99					
EQUATION	Ln(T) = 0.96 Ln(X) + 0.20					
DIRECTIONAL DISTRIBUTION	IN 63%					
	OUT 37%					
CALCULATED TRIP ENDS	AVERAGE RATE 41					
	FITTED CUTE 43					
MODAL SPLIT	5%	TRIPS 2				
PASS BY	0%	TRIPS 0				
INTERNAL CAPTURE	0%	TRIPS 0		IN	OUT	
	NET NEW TRIPS 41			26	15	
	Net Trip Rate 1.00					

APPENDIX I

Terms of Reference

Kavleen Sachdeva

From: Pasquini, Alexsandria <Alex.Pasquini@halton.ca>
Sent: Thursday, April 30, 2020 10:44 AM
To: Kavleen Sachdeva
Cc: Glenn Wellings; Huycke, Adam; Aaron Wignall; Walter Scattolon
Subject: RE: Millcroft Greens - TIS Terms of Reference

Good Morning,

Halton Region has reviewed the updated materials provided on April 29 2020, and can confirm it is acceptable.

Have a great day.
Alex

From: Kavleen Sachdeva [mailto:ksachdeva@cfcrozier.ca]
Sent: Wednesday, April 29, 2020 5:24 PM
To: Pasquini, Alexsandria <Alex.Pasquini@halton.ca>
Cc: Glenn Wellings <glenn@wellingsplanning.ca>; Huycke, Adam <Adam.Huycke@halton.ca>; Aaron Wignall <awignall@cfcrozier.ca>; Scattolon, Walter <Walter.Scattolon@halton.ca>
Subject: RE: Millcroft Greens - TIS Terms of Reference

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe. If you are unsure or need assistance please contact the IT Service Desk.

Hi Alexsandria,

A 2% growth rate, per annum, has been applied to all movements to grow the traffic volume to the current 2020 year. Attached, you will find the original traffic volumes dated 2019, traffic volumes grown to 2020, as well as traffic volumes grown to 2025. As noted in the Terms of Reference, the growth rate has only been applied to through volumes for the 2025 horizon year. Traffic volumes generated from the background developments will be added to these volumes.

Kindly let us know if the grown volumes will be acceptable.

Regards,
Kavleen

Kavleen Sachdeva | Engineering Intern
C.F. Crozier & Associates Consulting Engineers
2800 High Point Drive, Suite 100 | Milton, ON L9T 6P4
cfcrozier.ca | ksachdeva@cfcrozier.ca
tel: 905.875.0026 ext: 359

COVID-19: All Crozier offices have moved to remote operations until further notice to respect the protocols and safety measures as outlined by the Public Health Agency of Canada. Refer to cfcrozier.ca/COVID-19 for updates.

This communication is intended solely for the attention and use of the named recipients and contains information that is privileged and confidential. If you are not the intended recipient, or the person responsible for delivering this information to the intended recipient, please notify us immediately by telephone. If you have received this information in error, please be notified that you are not authorized to read, copy, distribute, use or retain this message or any part of it.

From: Pasquini, Alexsandria <Alex.Pasquini@halton.ca>
Sent: Tuesday, April 28, 2020 5:14 PM
To: Kavleen Sachdeva <ksachdeva@cfcrozier.ca>
Cc: Glenn Wellings <glenn@wellingsplanning.ca>; Huycke, Adam <Adam.Huycke@halton.ca>; Aaron Wignall <awignall@cfcrozier.ca>; Walter Scattolon <walter.scattolon@halton.ca>
Subject: RE: Millcroft Greens - TIS Terms of Reference

Hello Kavleen,

Regional Staff have had an opportunity to review the provided information and would prefer if a 2% growth rate was applied to all moves not just the through volumes.

If you have any questions please do not hesitate to reach out.

Have a great day.
Alex

From: Kavleen Sachdeva [mailto:ksachdeva@cfcrozier.ca]
Sent: Wednesday, April 22, 2020 6:05 PM
To: Pasquini, Alexsandria <Alex.Pasquini@halton.ca>
Cc: Glenn Wellings <glenn@wellingsplanning.ca>; Huycke, Adam <Adam.Huycke@halton.ca>; Aaron Wignall <awignall@cfcrozier.ca>
Subject: RE: Millcroft Greens - TIS Terms of Reference

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe. If you are unsure or need assistance please contact the IT Service Desk.

Hi Alexsandria,

We have received Traffic Data and have grown the volumes by using a 2% growth rate. Attached you will find the original traffic volumes dated 2019, traffic volumes grown to 2020 as well as the raw data that we were provided.

Please note that only through volumes were grown. Kindly let us know if the grown volumes will be acceptable.

Regards,
Kavleen

Kavleen Sachdeva | Engineering Intern
C.F. Crozier & Associates Consulting Engineers
2800 High Point Drive, Suite 100 | Milton, ON L9T 6P4
cfcrozier.ca | ksachdeva@cfcrozier.ca
tel: 905.875.0026 ext: 359



COVID-19: All Crozier offices have moved to remote operations until further notice to respect the protocols and safety measures as outlined by the Public Health Agency of Canada. Refer to cfcrozier.ca/COVID-19 for updates.

This communication is intended solely for the attention and use of the named recipients and contains information that is privileged and confidential. If you are not the intended recipient, or the person responsible for delivering this information to the intended recipient, please notify us immediately by telephone. If you have received this information in error, please be notified that you are not authorized to read, copy, distribute, use or retain this message or any part of it.

From: Pasquini, Alexsandria <Alex.Pasquini@halton.ca>
Sent: Monday, April 13, 2020 3:57 PM
To: Kavleen Sachdeva <ksachdeva@cfcrozier.ca>
Cc: Glenn Wellings <glenn@wellingsplanning.ca>; Huycke, Adam <Adam.Huycke@halton.ca>; Aaron Wignall <awignall@cfcrozier.ca>
Subject: RE: Millcroft Greens - TIS Terms of Reference

Good Afternoon Kavleen,

I hope you and your family had a great Easter weekend!

Regional staff have had an opportunity to review your request below and can offer the following:

The following six (6) intersections were proposed for the TIS analysis in the recent Terms of Reference from Crozier Consulting, dated 11 Feb 2020, and remain Acceptable to the Region:

- Walkers Line at Upper Middle Road (Signalized)
- Itabashi Way/Country Club Drive at Upper Middle Road (Signalized)
- Appleby Line at Upper Middle Road (Signalized)
- Dundas Street at Tim Dobbie Drive (Signalized)
- Dundas Street at Millcroft Park Drive (Signalized)
- Country Club Drive at Millcroft Park Drive (Stop Controlled)

Regional Transportation Planning supports the City's further request for the addition of the following two (2) intersections:

- Walkers Line at Dundas Street; and
- Appleby Line and Dundas Street.

Further, the Region would like to take this opportunity to clarify and point out the following:

Traffic Counts:

Please ensure any existing or future traffic counts also do not include any Holiday periods/days.

Access at Area E (Dundas Street):

As well as conforming to the Access Management Guidelines, any accesses required or requested must also conform to the Halton Region Access By-law (NO.32-17).

As such, please consider these as additional requirements for the Region's response to the Terms of Reference for the TIS analysis and report.

Should you have any questions, please do not hesitate to contact me.

Thank you.

Alex

From: Kavleen Sachdeva [mailto:ksachdeva@cfcrozier.ca]
Sent: Thursday, April 9, 2020 12:41 PM
To: Pasquini, Alexsandria <Alex.Pasquini@halton.ca>
Cc: Glenn Wellings <glenn@wellingsplanning.ca>; Huycke, Adam <Adam.Huycke@halton.ca>; Aaron Wignall <awignall@cfcrozier.ca>
Subject: RE: Millcroft Greens - TIS Terms of Reference

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe. If you are unsure or need assistance please contact the IT Service Desk.

Hi Alexsandria,

Hope you are healthy and well.

I just wanted to check-in and ask if you have had a chance to review the email below?

Regards,
Kavleen

Kavleen Sachdeva | Engineering Intern
C.F. Crozier & Associates Consulting Engineers
2800 High Point Drive, Suite 100 | Milton, ON L9T 6P4
cfcrozier.ca | ksachdeva@cfcrozier.ca
tel: 905.875.0026 ext: 359



COVID-19: All Crozier offices have moved to remote operations until further notice to respect the protocols and safety measures as outlined by the Public Health Agency of Canada. Refer to cfcrozier.ca/COVID-19 for updates.

This communication is intended solely for the attention and use of the named recipients and contains information that is privileged and confidential. If you are not the intended recipient, or the person responsible for delivering this information to the intended recipient, please notify us immediately by telephone. If you have received this information in error, please be notified that you are not authorized to read, copy, distribute, use or retain this message or any part of it.

From: Kavleen Sachdeva
Sent: Monday, March 23, 2020 5:27 PM
To: Alex.Pasquini@halton.ca
Cc: Glenn Wellings <glenn@wellingsplanning.ca>; Adam.Huycke@halton.ca; Aaron Wignall <awignall@cfcrozier.ca>
Subject: RE: Millcroft Greens - TIS Terms of Reference

Hi Alexsandria,

Thank you for your comments below.

The City of Burlington has asked for the inclusion of the intersections of Walkers Line & Dundas; Appleby Line and Dundas as part of the TIS. Site E, is proposed to have a right in right out access on Dundas Street. The Concept Plan for Site E as well as the entire development can be accessed here: https://cfcrozier.sharefile.com/d-sf830774f21b47e6a

Site E is expected to generate 44 two-way (11 inbound and 33 outbound) trips during the weekday a.m. peak hour and 57 two-way (35 inbound and 22 outbound) trips during the weekday p.m. peak hour using the rates provided in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition. The proposed development as a whole is expected to generate 133 two-way (34 inbound and 99 outbound) trips during the weekday a.m. peak hour and 161 two-way (101 inbound and 60 outbound) trips during the weekday p.m. peak hour.

Additionally, given that the requested intersections are further than 1 kilometer from the closest site access as well as under Regional control, we do not recommend analyzing those intersections. Can you confirm?

Please let us know if the region will require the analysis of the additional intersections.

Regards,
Kavleen

From: Pasquini, Alexsandria <Alex.Pasquini@halton.ca>
Sent: Monday, March 23, 2020 12:36 PM
To: Glenn Wellings <glenn@wellingsplanning.ca>
Cc: Huycke, Adam <Adam.Huycke@halton.ca>
Subject: RE: Millcroft Greens - TIS Terms of Reference

Hello Glen,

Halton Staff have had an opportunity to review the submitted Terms of Reference and Study Methodology for the Transportation Impact Study (TIS) for the proposed development at Millcroft Green Golf course, submitted by Crozier Consulting, dated 11 Feb 2020, and offer the following comments and requests:

Summary:
Please note, Regional Staff require acknowledge the below noted comments and additional requirements *prior to commencement* of the TIS work. If any clarifications are required, please inquire further before proceeding.

The balance of the proposed TIS scope is acceptable.

Traffic Counts:

The Terms of Reference state that the already collected traffic counts were conducted between December 2018 and September 2019.

Regional staff require confirmation that traffic surveys already conducted **did not occur between July 1st and the 2nd week in September**. Counts within the Summer period are not representative of typical traffic patterns.

Future Background Traffic Growth Rate:

As proposed, please use a **2% annual growth** rate for traffic volumes for the Regional corridors of Appleby Line, Dundas Street and Upper Middle Road.

Additional Background Developments:

The following additional development must be considered:

2273 Turnberry Road, Burlington:
-The subject site is located on the southwest corner of Appleby Line and Taywood Drive in Burlington.
-The development concept includes 68 townhouse units.

-A TIS Report has been recently generated for this site (Under review: Please inquire further with the Town on status and to obtain a copy of the Finalized version of the report when it is available.)

Access at Area E (Dundas Street):

For **Area E**, the proposed relocation of the existing access onto Dundas Street (Regional Road 5) will be subject to the Region's prevailing Access Management Guidelines and minimum spacing requirements and criteria therein. The Access Management Guidelines are available on-line at: https://www.halton.ca/The-Region/Regional-Planning/Regional-Official-Plan-%28ROP%29/About-Regional-Official-Plan-%28ROP%29/Regional-Official-Plan-Guidelines

Restricted Movements at Area E (Dundas Street):

A solid median is proposed opposite **Area E** frontage according to the preferred design of the MCEA Study (completed in 2015) for Dundas Street widening from 4 to 6 lanes.

- As such, the access to **Area E** will become physically restricted to Right-in/Right-out only turning movements, and will be required to have a minimum spacing of 115m from stop-line of nearest signalized intersection to nearest curb-radius of access driveway.
- Only a single (1) access to Regional Road 5 will be considered for **Area E**, and approval will be subject to the results of a Traffic Impact Study approved by the Region.

Scenarios for Turning Movement at **Access to Area E** (Dundas Street):

The TIS analysis must incorporate two (2) scenarios:

- An Interim scenario where Access to Area E is un-restricted and
- an Ultimate scenario where the Access is physically restricted to Right-In/Right-out by a centre median.

Future Roadway Improvements:

Road network improvement dates should be assumed as follows (within and beyond the proposed Horizon):

- Dundas Street: 6 lanes, North Hampton to Appleby Line (Start of Construction 2022)
- Appleby Line: 6 lanes, Taywood Drive to Fairview Street, (Start of Construction 2029)

Regarding Dundas Street Widening from 4 to 6 Lanes (Capital Project):

The Regional Transportation Master Plan (TMP 2011) identified the need to widen Dundas Street (Regional Road 5) from 4 to 6 lanes from Brant Street to Bronte Road. Please note:

- Halton Region has plans to widen Dundas Street (Regional Road 5) from Brant Street to Bronte Road.
- A Municipal Class Environmental Assessment (MCEA) Study has been completed (2015) and the project is currently in the detail design phase.
- For more information on the MCEA Study please visit the Halton Region Website https://www.halton.ca/For-Residents/Roads-Construction/Municipal-Class-Environmental-Assessment-Studies/Dundas-Corridor-Study-Brant-St-to-Bronte-Rd-(1)
- The Design/Construction Project Manager for Halton Region is David Olsen (Senior Project Advisor, 905-825-6000 ext. 7433, David.Olsen@halton.ca).
- Start of Construction is currently scheduled for 2022, subject to change.

Regarding Appleby Line Widening from 4 to 6 Lanes (Capital Project):

The Regional Transportation Master Plan (TMP 2011) identified the need to widen Appleby Line (Regional Road 20) from 4 to 6 lanes from Fairview Street to Palladium Way. Please note:

- Halton Region already completed improvements to Appleby Line (Regional Road 20) between Taywood Drive and Palladium Way, widening from 4 to 6 lanes with related improvements on Dundas Street, to the west and east of the intersection with Appleby Line.
- Halton Region has plans to widen Appleby Line (Regional Road 20) from 4 to 6 lanes from Fairview Street to Taywood Drive. However, a Municipal Class Environmental Assessment (MCEA) Study has yet to be completed. The Capital Implementation plan indicates a start of construction of 2029, subject to change.

Future Total Analysis:

Please ensure a Recommendation Section is completed clearly outlining proposed/recommended road improvements directly related to the development impacts and indirectly related to the development impacts, based on the analysis and findings in the transportation impact study.

TIS Guidelines:

Please note, for the most up to date TIS Guidelines for Halton Region, these can now be found at the following updated web link:
https://www.halton.ca/The-Region/Regional-Planning/Regional-Official-Plan-(ROP)/About-Regional-Official-Plan-(ROP)/Regional-Official-Plan-Guidelines

Please do note hesitate to contact me with any questions.
Alex

Alexsandria Pasquini
Intermediate Planner
Planning Services
Legislative & Planning Services
Halton Region
905-825-6000, ext. 7185 | 1-866-442-5866



This message, including any attachments, is intended only for the person(s) named above and may contain confidential and/or privileged information. Any use, distribution, copying or disclosure by anyone other than the intended recipient is strictly prohibited. If you are not the intended recipient, please notify us immediately by telephone or e-mail and permanently delete the original transmission from us, including any attachments, without making a copy.

From: Glenn Wellings [mailto:glenn@wellingsplanning.ca]
Sent: Wednesday, March 4, 2020 4:07 PM
To: Pasquini, Alexsandria <Alex.Pasquini@halton.ca>
Subject: RE: Millcroft Greens - TIS Terms of Reference

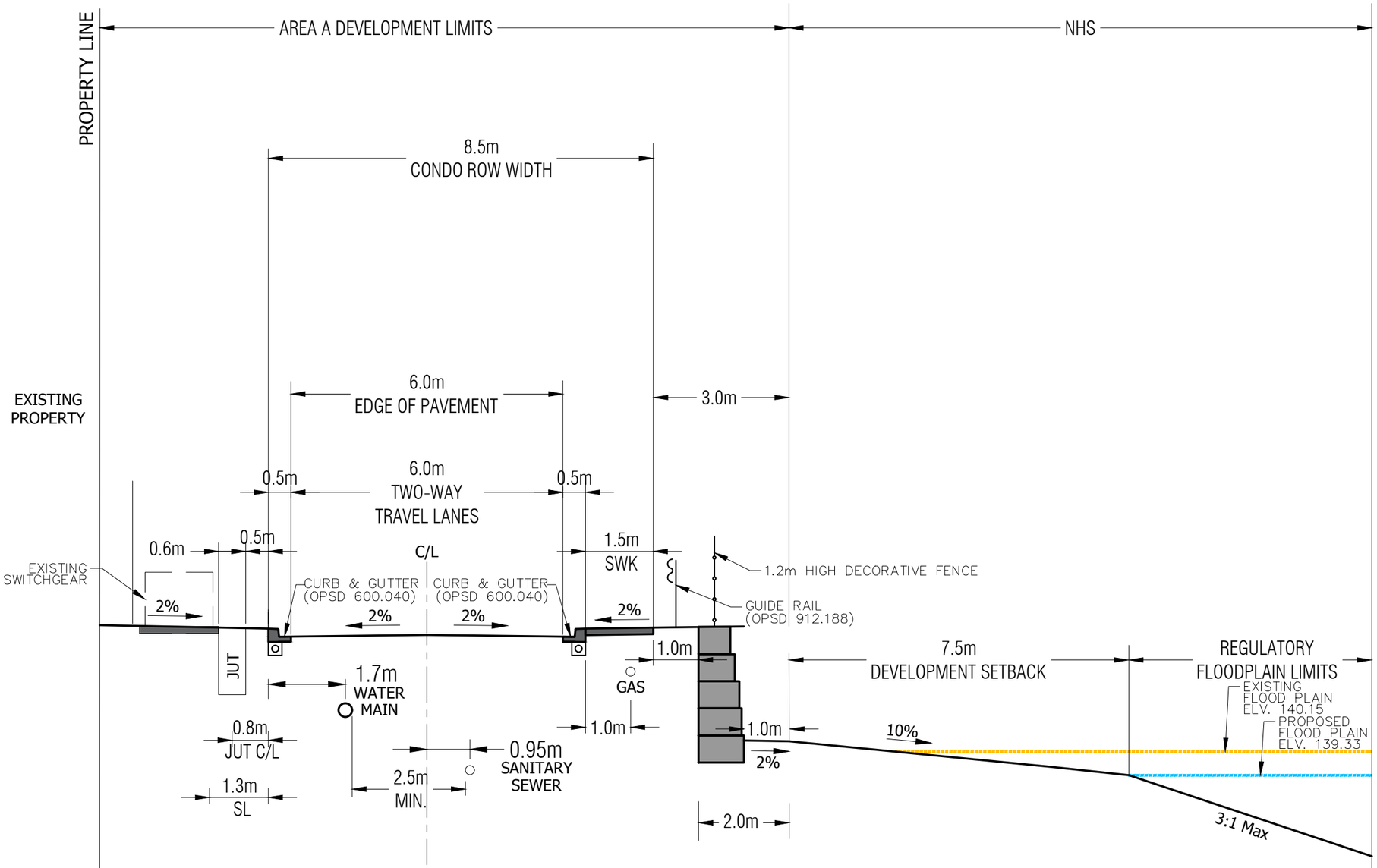
CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe. If you are unsure or need assistance please contact the IT Service Desk.

Alexsandria, file was too large so resending in a reduced format.

Glenn

APPENDIX J

Area "A" Cross-sections



CONDO ROAD
CROSS SECTION 1

REFER TO GR-A1 & GR-A2 FOR
CROSS SETION LOCATIONS

NOTES:
1) MIN. COVER OVER SANITARY SEWER = 2.5m
2) MIN. COVER OVER STORM SEWER: UP TO 450mm DIA. PIPE = 1.25m
ABOVE 450mm DIA. PIPE = 1.00m
3) ALL UTILITY CORRIDOR INFORMATION PROVIDED BY RTG SYSTEMS INC. (OCTOBER, 2020)

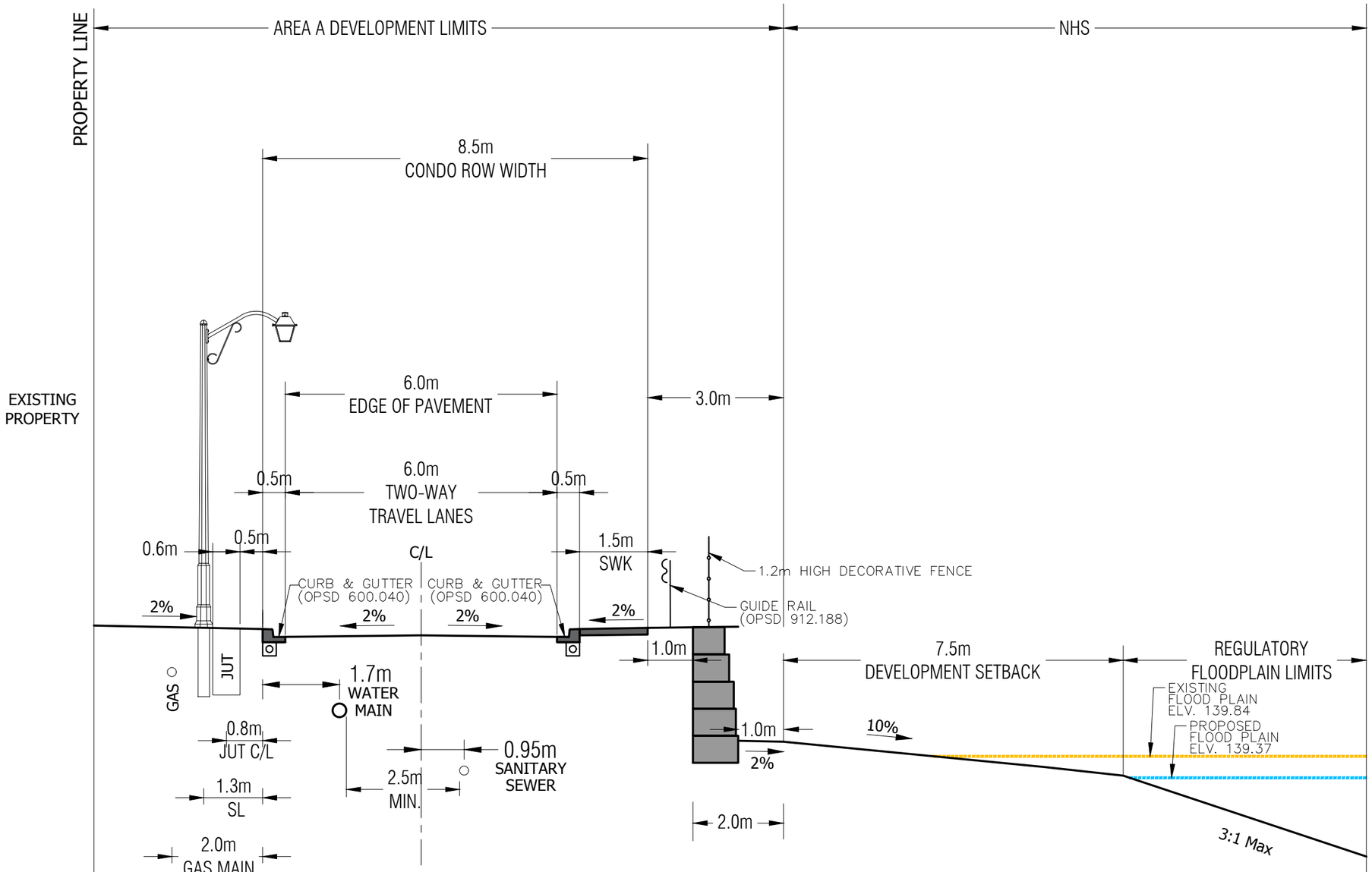
URBANTECH®
Urbantech® Consulting
A Division of Leighton-Zec Ltd.
3760 14th Avenue, Suite 301,
Markham, ON. L3R 3T7
TEL 905.946.9461 • urbantech.com

MILLCROFT GREEN
CITY OF BURLINGTON

AREA A
CONDO ROAD
CROSS SECTION

PROJECT No.	DATE	SCALE	DWG No.
17-526	OCT. 2021	NTS	SEC-A1

File: F:\Projects\17-526 (Millcroft)\03_Drawings\Figures\Misc\CONDO ROW Concp ROW (channel section).dwg - Revised by: <BLANUSA> : Mon, Oct 18 2021 - 4:26pm



CONDO ROAD
CROSS SECTION 2

REFER TO GR-A1 & GR-A2 FOR
CROSS SETION LOCATIONS

NOTES:
1) MIN. COVER OVER SANITARY SEWER = 2.5m
2) MIN. COVER OVER STORM SEWER: UP TO 450mm DIA. PIPE = 1.25m
ABOVE 450mm DIA. PIPE = 1.00m
3) ALL UTILITY CORRIDOR INFORMATION PROVIDED BY RTG SYSTEMS INC. (OCTOBER, 2020)

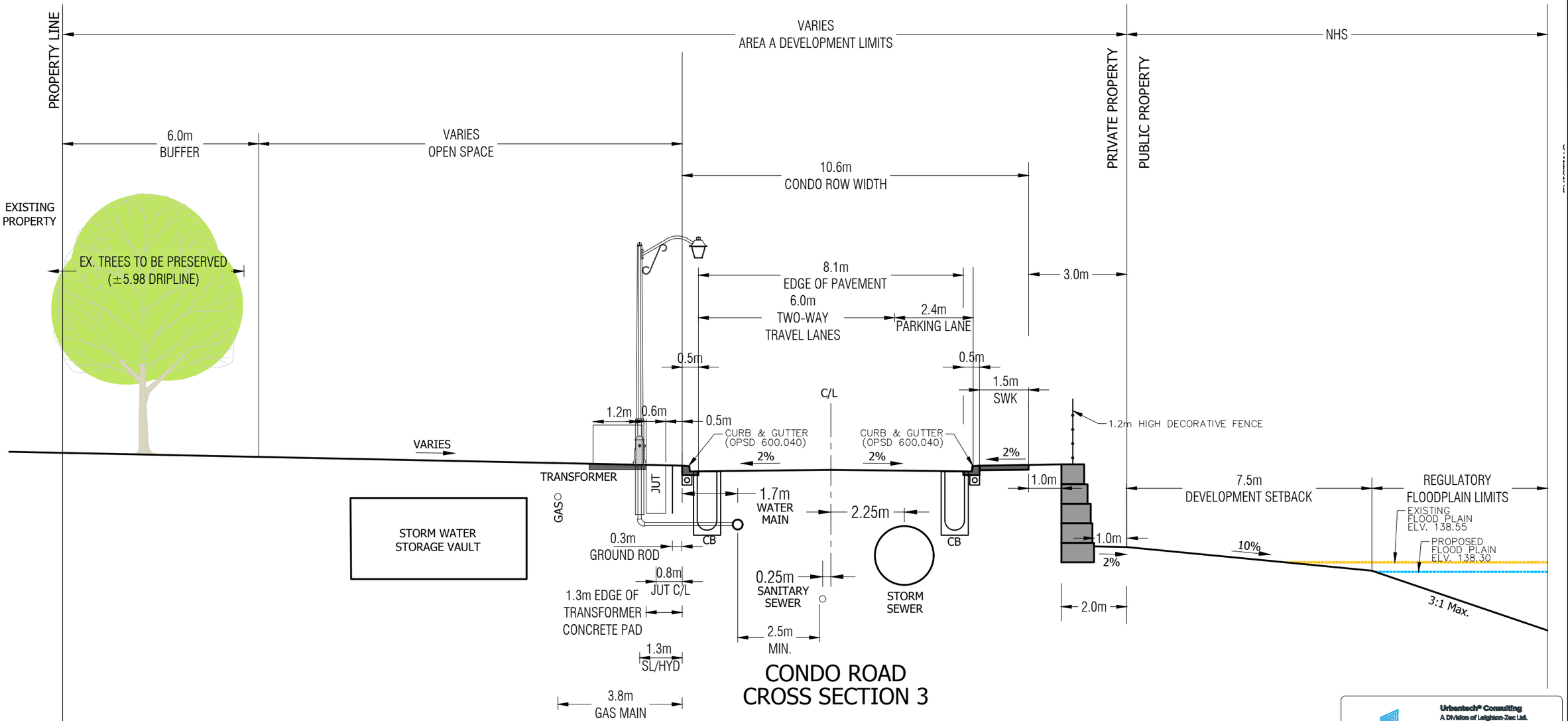
URBANTECH®
Urbantech® Consulting
A Division of Leighton-Zac Ltd.
3760 14th Avenue, Suite 301,
Markham, ON. L3R 3T7
TEL 905.946.9461 • urbantech.com

MILLCROFT GREEN
CITY OF BURLINGTON

AREA A
CONDO ROAD
CROSS SECTION

PROJECT No.	DATE	SCALE	DWG No.
17-526	OCT. 2021	NTS	SEC-A2

File: F:\Projects\17-526 (Millcroft)\03_Drawings\Figures\Misc\CONDO ROW\Condo ROW (channel section).dwg - Revised by: <BLANKISA> : Mon, Oct 18 2021 - 4:26pm



CONDO ROAD CROSS SECTION 3

REFER TO GR-A1 & GR-A2 FOR CROSS SETION LOCATIONS

NOTES:
1) MIN. COVER OVER SANITARY SEWER = 2.5m
2) MIN. COVER OVER STORM SEWER: UP TO 450mm DIA. PIPE = 1.25m
ABOVE 450mm DIA. PIPE = 1.00m
3) ALL UTILITY CORRIDOR INFORMATION PROVIDED BY RTG SYSTEMS INC. (OCTOBER, 2020)

URBANTECH®
Urbantech® Consulting
A Division of Leighton-Zec Ltd.
3760 14th Avenue, Suite 301,
Markham, ON. L3R 3T7
TEL 905.946.9461 • urbantech.com

MILLCROFT GREEN
CITY OF BURLINGTON

AREA A
CONDO ROAD
CROSS SECTION
(w/TRANSFORMER)

PROJECT No.	DATE	SCALE	DWG No.
17-526	OCT. 2021	NTS	SEC-A3

File: P:\Projects\17-526 (Millcroft)\03_Drawings\Figures\Misc\CONDO ROW\Condo ROW (channel section).dwg - Mon, Oct 18 2021 - 4:20pm

APPENDIX K

On-Street Parking Plan



"AREA"	A
NUMBER OF HOUSES IN "AREA"	39
REQUIRED NUMBER OF ON-STREET PARKING SPACES	20
PROVIDED ON-STREET PARKING SPACES IN "AREA"	47

1. THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZIER & ASSOCIATES INC. AND THE REPRODUCTION OF ANY PART WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRICTLY PROHIBITED.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.
3. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT.
4. DO NOT SCALE THE DRAWINGS.
5. ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

No.	ISSUE	DATE: MMM/DD/YYYY
0	ISSUED FOR REVIEW	01/20/2022

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project

MILLCROFT GOLF COURSE
CITY OF BURLINGTON

Drawing

ON-STREET PARKING PLAN – AREA "A"
SHEET 1

CROZIER
CONSULTING ENGINEERS

2800 High Point Drive
Suite 100
Milton, ON, L9T 6P4
905-875-0026 T
905-875-4915 F
www.cfcrozier.ca
info@cfcrozier.ca

Drawn By: I.L.	Design By: I.L.	Project: 0912-5113	
Check By: R.A.W.	Check By: R.A.W.	Scale: N.T.S.	Drawing: PK101



"AREA"	A
NUMBER OF HOUSES IN "AREA"	39
REQUIRED NUMBER OF ON-STREET PARKING SPACES	20
PROVIDED ON-STREET PARKING SPACES IN "AREA"	47

1. THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZIER & ASSOCIATES INC. AND THE REPRODUCTION OF ANY PART WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRICTLY PROHIBITED.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.
3. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT.
4. DO NOT SCALE THE DRAWINGS.
5. ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

No.	ISSUE	DATE: MMM/DD/YYYY
0	ISSUED FOR REVIEW	01/20/2022

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project

MILLCROFT GOLF COURSE
CITY OF BURLINGTON

Drawing

ON-STREET PARKING PLAN – AREA "A"
SHEET 2

CROZIER
CONSULTING ENGINEERS

2800 High Point Drive
Suite 100
Milton, ON. L9T 6P4
905-875-0026 T
905-875-4915 F
www.cfcrozier.ca
info@cfcrozier.ca

Drawn By	Design By	Project	
I.L.	I.L.		0912-5113
Check By	Check By	Scale	Drawing
R.A.W.	R.A.W.	N.T.S.	PK102



"AREA"	B
NUMBER OF HOUSES IN "AREA"	40
REQUIRED NUMBER OF ON-STREET PARKING SPACES	20
PROVIDED ON-STREET PARKING SPACES IN "AREA"	20

1. THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZIER & ASSOCIATES INC. AND THE REPRODUCTION OF ANY PART WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRICTLY PROHIBITED.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.
3. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT.
4. DO NOT SCALE THE DRAWINGS.
5. ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

No.	ISSUE	DATE: MMM/DD/YYYY
0	ISSUED FOR REVIEW	01/20/2022

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project

MILLCROFT GOLF COURSE
CITY OF BURLINGTON

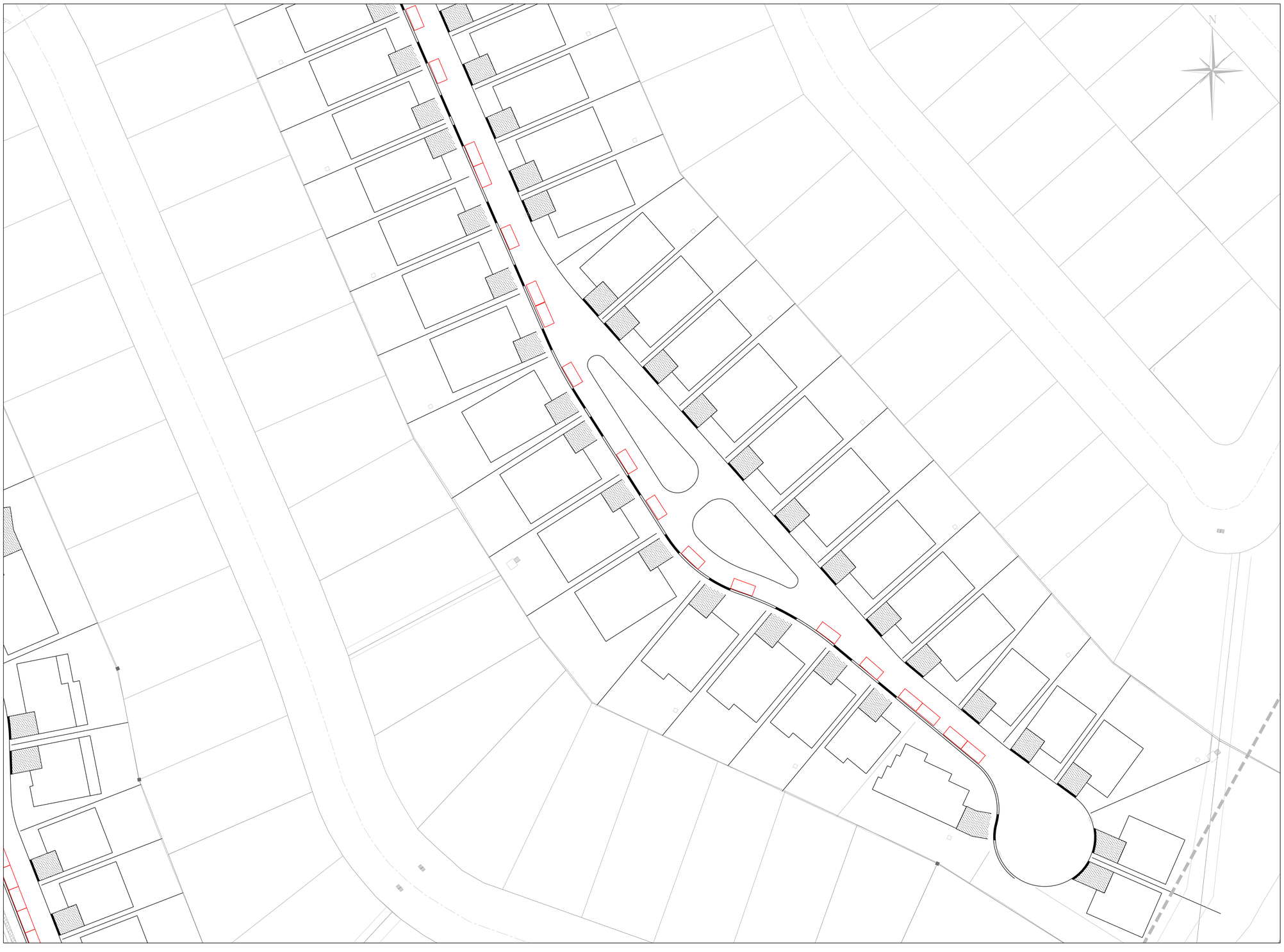
Drawing

ON-STREET PARKING PLAN – AREA "B"
SHEET 1

CROZIER
CONSULTING ENGINEERS

2800 HIGH POINT DRIVE
SUITE 100
MILTON, ON, L9T 6P4
905-875-0026 T
905-875-4915 F
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

Drawn By	Design By	Project	
I.L.	I.L.		0912-5113
Check By	Check By	Scale	Drawing
R.A.W.	R.A.W.	N.T.S.	PK103



"AREA"	B
NUMBER OF HOUSES IN "AREA"	40
REQUIRED NUMBER OF ON-STREET PARKING SPACES	20
PROVIDED ON-STREET PARKING SPACES IN "AREA"	20

1. THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZIER & ASSOCIATES INC. AND THE REPRODUCTION OF ANY PART WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRICTLY PROHIBITED.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.
3. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT.
4. DO NOT SCALE THE DRAWINGS.
5. ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

No.	ISSUE	DATE: MMM/DD/YYYY
0	ISSUED FOR REVIEW	01/20/2022

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project

MILLCROFT GOLF COURSE
CITY OF BURLINGTON

Drawing

ON-STREET PARKING PLAN – AREA "B"
SHEET 2

CROZIER
CONSULTING ENGINEERS
2800 HIGH POINT DRIVE
SUITE 100
MILTON, ON, L9T 6P4
905-875-0026 T
905-875-4915 F
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

Drawn By I.L.	Design By I.L.	Project	0912-5113
Check By R.A.W.	Check By R.A.W.	Scale N.T.S.	Drawing PK104



"AREA"	C
NUMBER OF HOUSES IN "AREA"	14
REQUIRED NUMBER OF ON-STREET PARKING SPACES	7
PROVIDED ON-STREET PARKING SPACES IN "AREA"	10

1. THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZIER & ASSOCIATES INC. AND THE REPRODUCTION OF ANY PART WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRICTLY PROHIBITED.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.
3. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT.
4. DO NOT SCALE THE DRAWINGS.
5. ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

No.	ISSUE	DATE: MMM/DD/YYYY
0	ISSUED FOR REVIEW	01/20/2022

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project

MILLCROFT GOLF COURSE
CITY OF BURLINGTON

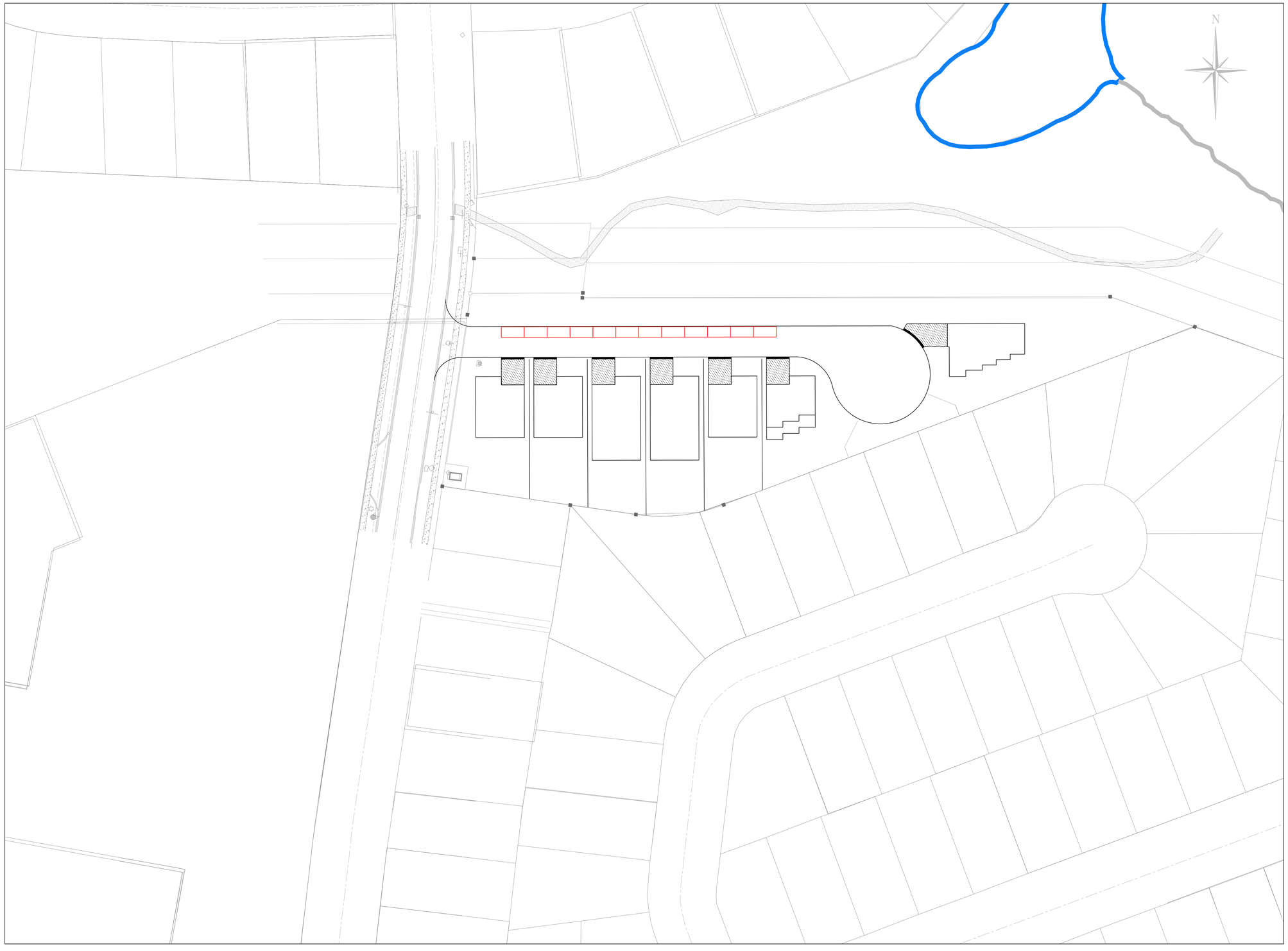
Drawing

ON-STREET PARKING PLAN – AREA "C"
SHEET 1

CROZIER
CONSULTING ENGINEERS

2800 High Point Drive
Suite 100
Milton, ON, L9T 6P4
905-875-0026 T
905-875-4915 F
www.cfcrozier.ca
info@cfcrozier.ca

Drawn By I.L.	Design By I.L.	Project	0912-5113
Check By R.A.W.	Check By R.A.W.	Scale N.T.S.	Drawing PK105



"AREA"	D
NUMBER OF HOUSES IN "AREA"	7
REQUIRED NUMBER OF ON-STREET PARKING SPACES	4
PROVIDED ON-STREET PARKING SPACES IN "AREA"	12

1. THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZIER & ASSOCIATES INC. AND THE REPRODUCTION OF ANY PART WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRICTLY PROHIBITED.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.
3. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT.
4. DO NOT SCALE THE DRAWINGS.
5. ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

No.	ISSUE	DATE: MMM/DD/YYYY
0	ISSUED FOR REVIEW	01/20/2022

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project

MILLCROFT GOLF COURSE
CITY OF BURLINGTON

Drawing

ON-STREET PARKING PLAN – AREA "D"
SHEET 1

CROZIER
CONSULTING ENGINEERS

2800 High Point Drive
Suite 100
Milton, ON. L9T 6P4
905-875-0026 T
905-875-4915 F
www.cfcrozier.ca
info@cfcrozier.ca

Drawn By: I.L.	Design By: I.L.	Project: 0912-5113	
Check By: R.A.W.	Check By: R.A.W.	Scale: N.T.S.	Drawing: PK106