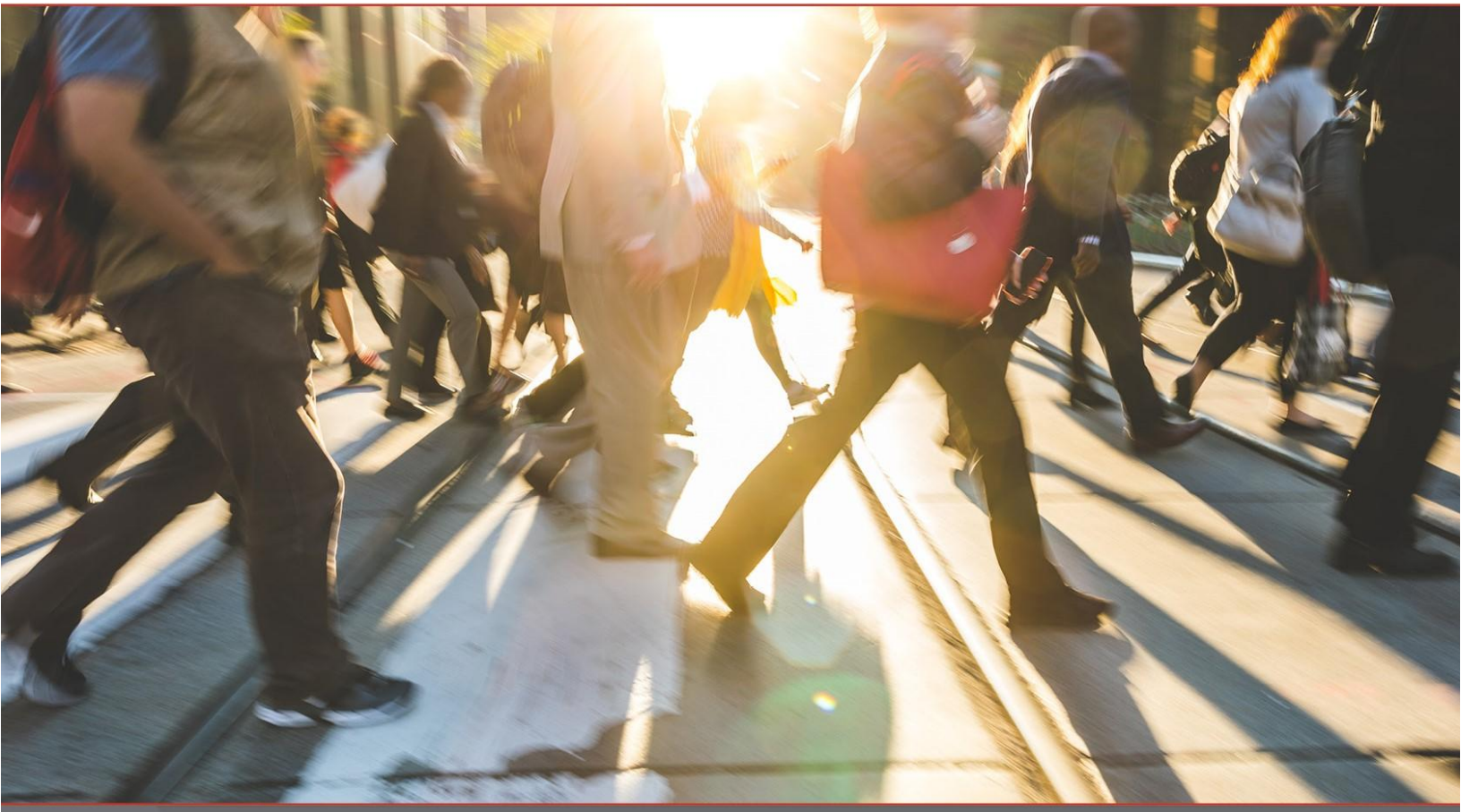
DERRY HEIGHTS PLAZA
TOWN OF MILTON

Proposed Retail Expansion
Transportation Impact Study



Prepared For: First Capital Asset Management LP

June 5, 2026

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1.0 INTRODUCTION

1.1 Overview

BA Group is retained by First Capital Asset Management LP to provide transportation consulting services in relation to the proposed retail expansion of the Derry Heights Plaza located at 6901-6951 Derry Road West in the Town of Milton. A Zoning By-law Amendment ("ZBA") application is being made to the Town for the proposed expansion.

The Terms of Reference for this study have been discussed with, and approved by, Town of Milton and Halton Region transportation staff. A copy of the approved Terms of Reference ("TOR") is attached in **Appendix A**.

1.2 Existing Conditions

1.2.1 Overview

The site is located on the northwest corner of the Derry Road West / Bronte Street South intersection, and is currently occupied by 4 commercial / retail buildings comprising a variety of commercial and retail uses. The current land use gross floor areas ("GFA") are summarized in **Table 1**. As shown, the site comprises a total floor area of 7,202 square metres GFA, of which 6,324 square metres is gross leasable area ("GLA"). For the purpose of this application, the existing buildings are labelled as Building B, Building C, Building D and Building E.

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

Table 1 Existing Land Use and Floor Areas (April 2025)

Land Use	Floor Area
Commercial School – Skill	115 m^2
Dry Cleaning Depot	56 m^2
Bank	1,060 m^2
Place of Assembly	433 m^2
Restaurant	1,307 m^2
Personal Service Shop	213 m^2
Drug Store	1,721 m^2
Medical Clinic	1,418 m^2
Circulation	878 m^2
Total GFA	**7,202 m^2**
Total GLA (excludes circulation)	**6,324 m^2**

Notes:
1. Current land use floor areas based on information provided by First Capital Asset Management LP in April 2025.

1.2.2 Existing Vehicle Access

Site access is available at 4 locations as follows:

- An all-moves unsignalized driveway to Bronte Street South at the north end of the site (the “north Bronte site driveway”). This driveway provides access to rear of Building B, and is signed as trucks only.
- A centrally located all-moves signalized driveway to Bronte Street South (the “central Bronte site driveway”).
- A right in / right out unsignalized driveway to Bronte Street South at the south end of the site (the “south Bronte site driveway). The right in / right out operations are enforced via a central median on Bronte Street South.
- A centrally located right in / left in / right out unsignalized driveway to Derry Road West (the “Derry site driveway”). The right in / left in / right out are enforced via a central median on Derry Road West and a triangular island on the site driveway.

1.2.3 Existing Car Parking

The site is serviced by an at grade parking lot comprising a total of 469 car spaces, including 13 accessible spaces. The existing car parking supply equates to a parking supply ratio of 6.51 spaces per 100 square metres GFA.

1.2.4 Existing Bicycle Parking

A mixture of existing bicycle racks and double sided bicycle hoops provide for an existing bicycle parking supply in the order of 28 spaces across the site, including:

- 1 double sided bicycle hoop comprising 2 spaces on the south side of Building D
- A bicycle rack comprising 9 bicycle spaces on the north side of Building E
- A bicycle rack comprising 9 bicycle spaces to the west of Building C
- A bicycle rack comprising 3 bicycle spaces on the north side of Building C
- A bicycle rack comprising 3 spaces on the south side of Building B
- A double sided bicycle hoop comprising 2 spaces on the south side of Building B

1.2.5 Existing Loading

There are currently 3 loading spaces servicing the site, including 2 loading spaces on the north side of Building B, and a loading space on the north side of Building E. It’s noted that the loading space at the northeast corner of Building B services a Shoppers Drug Mart and facilitates tractor trailer access, with these vehicles entering via the north Bronte site driveway and exiting via the central Bronte site driveway.

1.2.6 Existing Drive Throughs

There are 3 existing drive throughs across the site, including 1 servicing a bank on the north side of Building C, 1 servicing a bank on the west side of Building E, and 1 servicing a Tim Hortons restaurant on the west side of Building B.

1.3 Proposed Expansion

1.3.1 Overview

The proposed expansion contemplates the development of the west side of the site to construct 2 new commercial / retail buildings. No changes are contemplated to the existing commercial / retail buildings on the east side of the site.

The proposed development includes 8,050 square metres of new commercial / retail GFA, including additional commercial / retail units (826 square metres) in Building A, and a grocery store (2,915 square metres), additional commercial / retail units (557 square metres), a gym on the second floor (3,611 square metres), and circulation / vestibule (141 square metres) in Building F. The resulting overall total floor area is 15,252 square metres GFA, as summarized in **Table 2**.

The site plan is shown in **Figure 2** and a copy of the site plan (not to scale) is attached in **Appendix B**. A pavement marking and signage plan is attached in **Appendix C**.

Table 2 Proposed Land Use and Floor Areas

Land Use	Existing	Proposed	Total
Commercial School – Skill	115 m^2	-	115 m^2
Dry Cleaning Depot	56 m^2	-	56 m^2
Bank	1,060 m^2	-	1,060 m^2
Place of Assembly	433 m^2	-	433 m^2
Restaurant	1,307 m^2	-	1,307 m^2
Personal Service Shop	213 m^2	-	213 m^2
Drug Store	1,721 m^2	-	1,721 m^2
Medical Clinic	1,418 m^2	-	1,418 m^2
Grocery	-	2,915 m^2	2,915 m^2
Gym	-	3,611 m^2	3,611 m^2
Commercial / Retail	-	1,383 m^2	1,383 m^2
Circulation / Vestibule	878 m^2	141 m^2	1,019 m^2
Total GFA	**7,202 m^2**	**8,050 m^2**	**15,252 m^2**
Total GLA (excludes circulation / vestibule)	**6,324 m^2**	**7,909 m^2**	**14,233 m^2**

1.3.2 Proposed Vehicle Access

No changes to the existing access arrangements are proposed.

1.3.3 Proposed Car Parking

It's proposed to reconfigure the car parking on the west side of the site to accommodate the proposed commercial / retail buildings, resulting in a car parking supply of 565 spaces across the site, including 18 accessible spaces. It's noted that the existing accessible spaces which are being retained on the east side of the site are proposed to be updated to current standards, resulting in a total of 12 Type A accessible spaces and 6 Type B accessible spaces.

The proposed car parking supply equates to a parking supply ratio of 3.7 spaces per 100 square metres GFA.

1.3.4 Proposed Bicycle Parking

A total of 8 bicycle spaces are proposed on the north side of Building F in the form of 4 double sided bicycle hoops.

In addition to the above, the existing 28 bicycle spaces are proposed to be retained, resulting in a total bicycle parking supply of 36 spaces across the site.

1.3.5 Proposed Loading

A total of 2 loading spaces and a garbage compactor are proposed to service Building F, with the loading spaces accessible by vehicles up to a tractor trailer in size. Consistent with existing tractor trailers accessing the site, these vehicles are proposed to enter via the north Bronte site driveway and exit via the central Bronte site driveway.

A total of 1 loading space is proposed to service Building A, accessible by vehicles up to a heavy single unit truck in size.

In addition to the above, the existing loading spaces are proposed to be retained, resulting in a total supply of 6 loading spaces across the site, plus a garbage compactor.

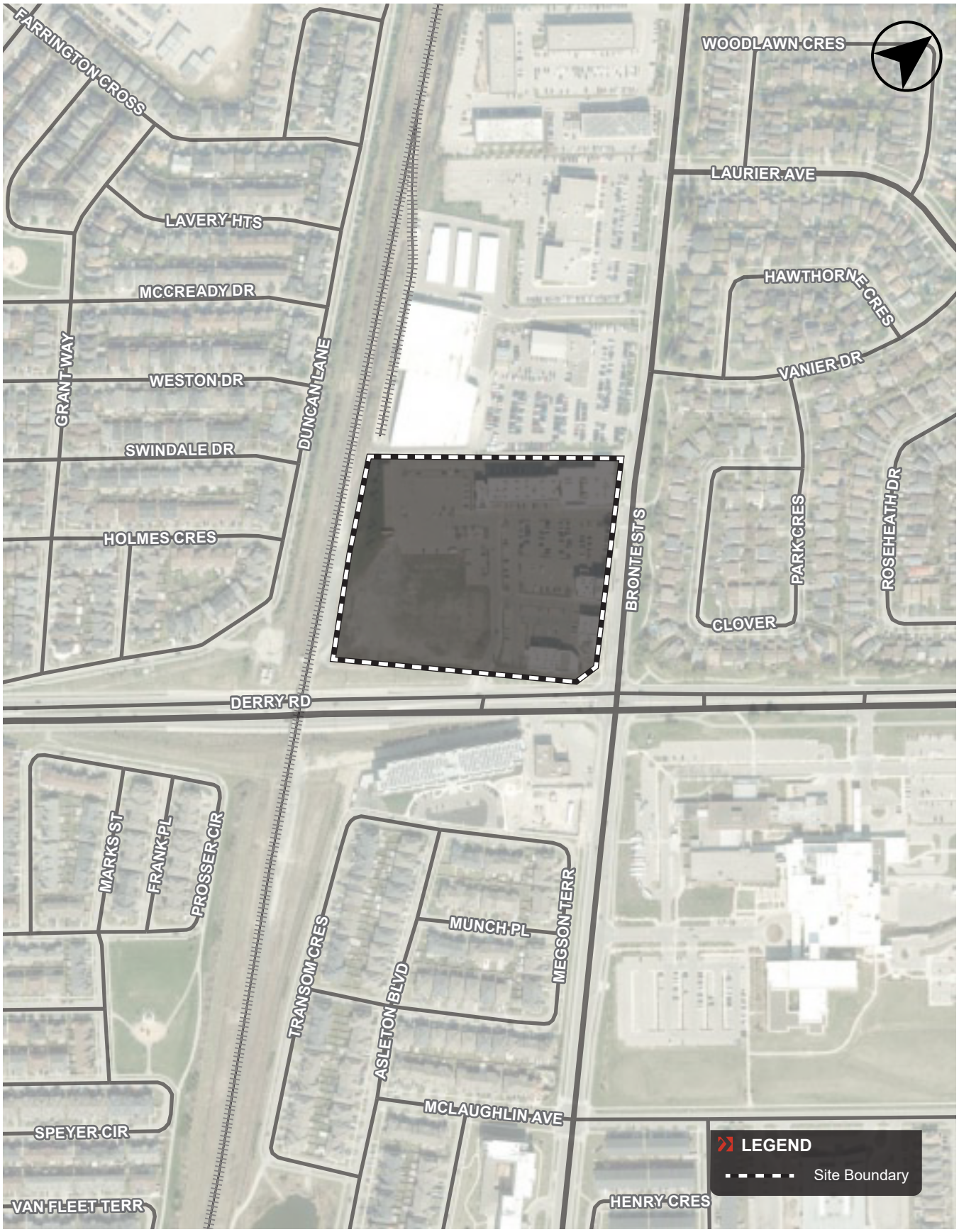
1.3.6 Proposed Drive Through Modifications

The proposed Building A is located adjacent to the existing drive through servicing the Tim Hortons restaurant on the west side of Building B. Some minor changes to the curbs are proposed in this location to accommodate the proposed Building A. Vehicle manoeuvring diagrams demonstrating access through this drive through are attached in **Appendix D**.

No changes are proposed to the other existing drive throughs.

1.3.7 Proposed Fire Route

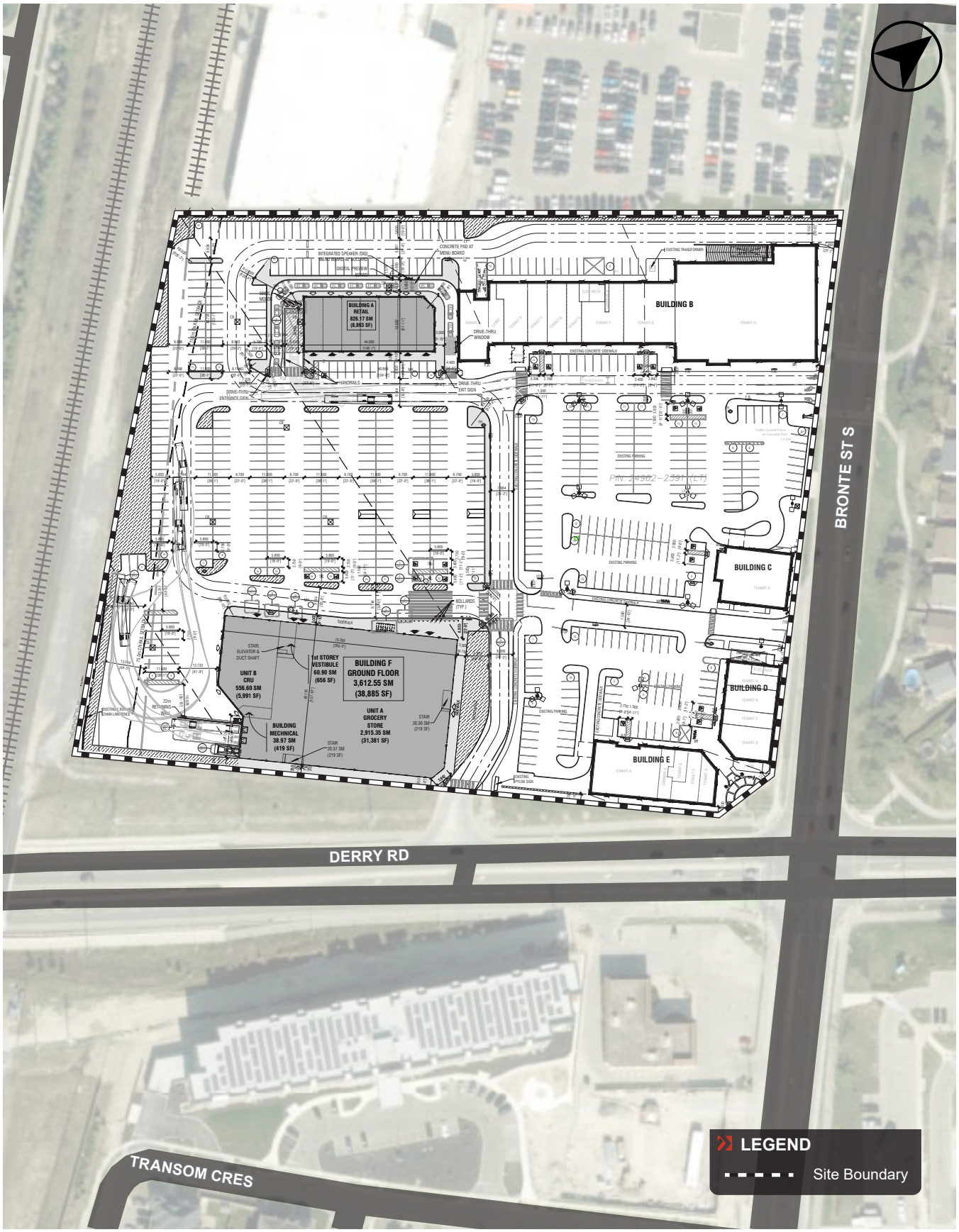
A fire route plan illustrating the proposed fire route is attached in **Appendix E**. Vehicle manoeuvring diagrams of a representative aerial fire truck are attached in **Appendix D**.



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FIGURE 1 SITE LOCATION



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

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FIGURE 2 SITE PLAN

2.0 TRANSPORTATION CONTEXT

2.1 Existing Street Network

2.1.1 Overview

The following sections provide an overview of the existing street network, as shown graphically in **Figure 3**.

2.1.2 Derry Road West

Derry Road extends generally in an east-west direction from Highway 427 in the City of Mississauga to Milburough Line at the west boundary of Halton Region. East of Highway 427, Derry Road East continues as Rexdale Boulevard into the City of Toronto. Adjacent the site, Derry Road West is a Major Arterial operated by Halton Region.

In the vicinity of the site, Derry Road West operates with 2 traffic lanes and a bicycle lane in each direction separated by a central median, with localized widening provided at some intersections for turn lanes. A multi-use trail is provided along both sides of the road.

The posted speed limit adjacent the site is 60 kilometres per hour.

As outlined in the Halton Region Transportation Master Plan to 2031 (September, 2011), Derry Road West in the vicinity of the site is planned to be widened to 6 lanes by 2031. This timing is also reflected in the Halton Region Budget and Business Plan Capital Report 2025.

2.1.3 Bronte Street South

Bronte Street is a Minor Arterial road operated by the Town of Milton, which extends generally in a north-south direction from Steeles Avenue West to Britannia Road. South of Britannia Road, Bronte Street South continues as First Line.

In the vicinity of the site, Bronte Street South operates with a single traffic lane and a bicycle lane in each direction separated by a central median, with localized widening provided at some intersections for turn lanes. A multi-use trail is provided along the east side of the road and a sidewalk is provided along the west side of the road.

The posted speed limit adjacent the site is 60 kilometres per hour.

2.2 Existing Transit Network

The site has good access to bus routes operated by Milton Transit, as summarized in **Table 3** and illustrated in **Figure 4**.

Table 3 Existing Transit Network

Route	Route Description	Approximate Peak Headways	Nearest Stop	Approximate Walk Distance
2 Main	Operates between Milton Hospital and Milton Crossroads Centre. Operates morning to night, 7 days a week.	30-45 mins	Derry Rd W / Bronte St S	Directly adjacent site
7 Harrison	Operates between Milton GO Station and Dymott Ave / Savoline Blvd. Operates morning to night, 7 days a week.	30-45 mins	Bronte St S / Central Bronte Site Driveway	Directly adjacent site
8 Willmott	Operates between Milton GO Station and Bronte St S / Louis St Laurent Ave. Operates morning to night, 7 days a week.	30-45 mins	Bronte St S / Milton Hospital Driveway	150 m

2.3 Existing and Proposed Cycling Network

The site has excellent access to Milton's existing cycling network, with bicycle lanes and multi-use trails along the site's Derry Road West and Bronte Street South frontages. This infrastructure subsequently provides access to the broader cycling network.

Planned infrastructure in the vicinity of the site includes bicycle lanes along Laurier Avenue approximately 250 metres north of the site, and an on-road signed route along McLaughlin Avenue approximately 400 metres south of the site.

The existing and proposed cycling network is shown in **Figure 5**.

2.4 Pedestrian Context

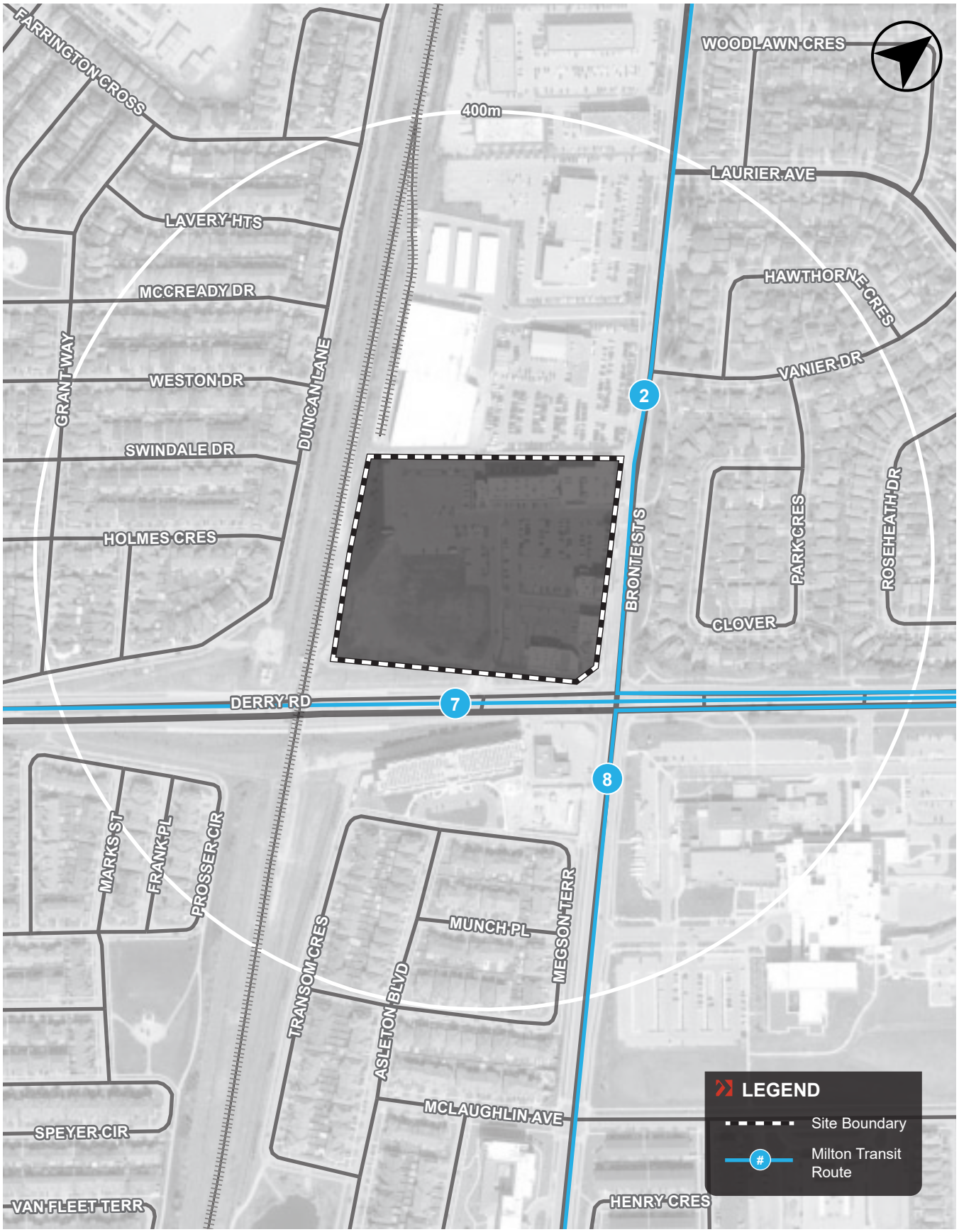
Pedestrians are accommodated in the site vicinity by multi-use trails and sidewalks along Derry Road West and Bronte Street South. Signalized crossing opportunities are available at the Derry Road West / Bronte Street South and Bronte Street South / Central Bronte Site Driveway intersections.



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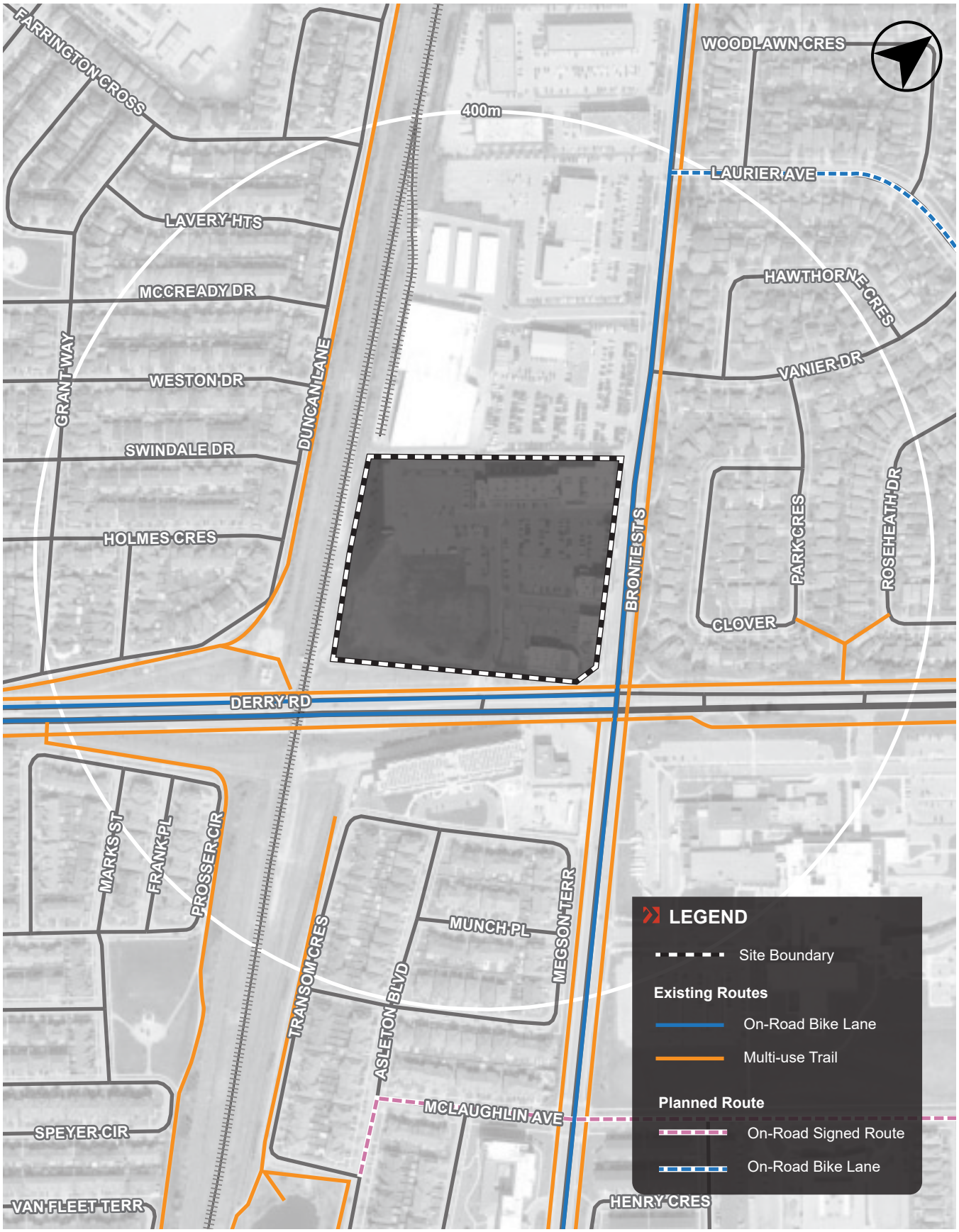
FIGURE 3 EXISTING STREET NETWORK



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FIGURE 4 EXISTING TRANSIT NETWORK



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FIGURE 5 EXISTING AND PROPOSED CYCLING NETWORK

3.0 ZONING ASSESSMENT

3.1 Car Parking

3.1.1 Car Parking Requirements – Town of Milton Zoning By-law 016-2014 Section 13.1.1.122

3.1.1.1 Total Car Parking

The site is currently subject to a required car parking rate of 1 space per 20 square metres GFA (equivalent to 5 spaces per 100 square metres GFA) in accordance with Section 13.1.1.122 of the Town of Milton Zoning By-law 016-2014, as amended by site specific By-law 144-2003. This rate has been applied to the proposed development in **Table 4**.

The proposed development has a requirement to provide 763 spaces.

Table 4 Car Parking Requirements – Town of Milton Zoning By-law 016-2014 Section 13.1.1.122

Car Parking Rate	GFA	Car Parking Requirement
1 space per 20 m^2 GFA	15,252 m^2	763 spaces
Total		**763 spaces**

Notes:
1. Car parking requirements rounded up to the nearest whole number in accordance with Section 5.2i) of the Town of Milton Zoning By-law 016-2014.

3.1.1.2 Accessible Car Parking

For the proposed car parking supply of 565 car spaces, the Town of Milton Zoning By-law 016-2014 requires an accessible car parking supply of 2 spaces plus 2% of the total car parking. Application of this rate equates to a requirement to provide 14 accessible spaces. The Town of Milton Zoning By-law 016-2014 requires an even number of Type A and Type B spaces, equating to 7 Type A spaces and 7 Type B spaces.

3.1.2 Car Parking Supply

The proposed car parking supply of 565 spaces represents a shortfall of 198 spaces from the car parking requirements of the Town of Milton Zoning By-law 016-2014.

The proposed supply of 18 accessible spaces, including 12 Type A spaces and 6 Type B spaces, satisfies the accessible car parking requirements of the Town of Milton Zoning By-law 016-2014 and is appropriate, noting the excess of the larger Type A spaces.

3.1.3 Car Parking Standards Review

3.1.3.1 Car Parking Demand Data

Derry Heights Plaza

In order to assess existing parking demands associated with the site, car parking demand surveys were undertaken on Friday April 11, 2025, Saturday April 12, 2025, Friday November 21, 2025, and Saturday November 22, 2025, between 8am-9pm. The parking counts were undertaken at 1-hour intervals.

The surveys identified a peak parking demand of 211 spaces, equating to a peak overall parking demand rate of 2.93 spaces per 100 square metres GFA. The surveys identify underutilization of the existing parking supply, with 45% of the overall supply occupied and 258 spaces remaining vacant. The parking demand survey results are summarized in **Table 5** and the survey data sheets are attached in **Appendix F**.

Table 5 Parking Demand Data – Derry Heights Plaza

Location	GFA	Tenant Summary	Study Date & Time	Peak Parking Demand	Peak Parking Demand Rate
Derry Heights Plaza 6901-6951 Derry Road West, Milton	7,202 m^2	Restaurant, Fast food restaurant, drug store, bank, service establishment, medical	Fri, Apr 11, 2025 8am-9pm	211 spaces	2.93 spaces / 100 m^2 GFA
			Sat, Apr 12, 2025 8am-9pm	158 spaces	2.19 spaces / 100 m^2 GFA
			Fri, Nov 21, 2025 8am-9pm	137 spaces	1.90 spaces / 100 m^2 GFA
			Sat, Nov 22, 2025 8am-9pm	149 spaces	2.07 spaces / 100 m^2 GFA

Proxy Sites

To supplement the existing parking demands measured at the site, parking demand surveys were undertaken on Friday April 11, 2025 between 8am-9pm, and on Saturday April 12, 2025 between 8am-9pm at 4 proxy retail plazas which are of a similar nature and location to the site. Consistent with the land uses being considered as part of the proposed expansion, all of the proxy sites include a grocery store, and the majority of them include a gymnasium. The parking counts were undertaken at 1-hour intervals.

A pre-consultation meeting was held with Town staff on June 24, 2025 and a follow up meeting was held with Town Transportation Planning staff on July 3, 2025. The abovementioned proxy data was discussed at these meetings and staff raised concerns with the proximity of the Guelph and Vaughan sites to Milton. Town staff suggested some additional sites to survey which are in closer proximity to the site as follows:

- NoFrills and Scotiabank Plaza – 6520 Derry Road, Milton; and
- Meadowvale Town Centre – 6677 Meadowvale Town Centre Circle, Mississauga

It's noted that the abovementioned proxy sites which were surveyed include 2 sites in Milton, which provide local parking demand context at retail plazas. However there are no sites in Milton within the same context that

comprise the combination of a full service gym plus a grocery store and other commercial / retail units, as is proposed at the site.

As such, BA Group identified and surveyed additional sites in Burlington, Guelph and Vaughan which comprise the abovementioned combination to provide parking demand context at these types of plazas. Town staff advised that the Burlington site was acceptable however as mentioned above, raised concerns with the proximity of the Guelph and Vaughan sites to Milton. While these concerns are acknowledged, it should be noted that the context of these sites are very similar to the site with respect to the following:

- Similar sized cities;
- Suburban, low-rise nature of the area;
- Similar transit access; and
- Availability of a surplus of surface parking.

Furthermore, it's noted that Guelph is not substantially further away from Milton than Burlington or Mississauga. On this basis, these sites are reasonably representative of the Derry Heights Plaza context and the future uses planned on the site.

Notwithstanding the above, as requested by Town staff, BA Group undertook additional surveys at the NoFrills and Scotiabank plaza in Milton on Friday July 4, 2025 between 8am-9pm, and on Saturday July 5, 2025 between 8am-9pm. The parking counts were undertaken at 1-hour intervals. In accordance with the definition of GFA in the Town of Milton Zoning By-law 016-2014 ("*the total area of all floors measured between the exterior face of the exterior walls of the building or structure at the level of each floor, exclusive of any basements used for storage purposes and/or for the parking of a motor vehicle*"), the GFA of this site includes the enclosed loading area. It's noted that this site is located in close proximity to Derry Heights Plaza and as such, parking demands may be split, to an extent, between the 2 sites, thereby reducing the existing demands at the NoFrills site. It's also noted that the GFA of grocery stores do not necessarily reflect a linear relationship with the level of activity, with many of the discount banner grocery stores located on smaller footprints compared with the flagship grocery stores located in larger and premium spaces.

Meadowvale Town Centre was also reviewed as a potential proxy site, however it was determined it would not be an appropriate proxy for Derry Heights Plaza for the following reasons:

- Meadowvale Town Centre is a large regional shopping centre with an indoor component and would operate differently to a local serving plaza such as Derry Heights Plaza.
- Meadowvale Town Centre is much larger than Derry Heights Plaza, with a GFA in the order of 395,000 square feet and 89 tenants, compared with the proposed expansion to Derry Heights Plaza which has a GFA in the order of 165,000 square feet and 30-40 tenants, several of which are small professional or medical offices; and
- There's a mosque on the west side of Winston Churchill Boulevard (Meadowvale Islamic Centre) and it's understood that overflow parking from the mosque regularly occurs on a daily basis within the Meadowvale Town Centre which would skew the parking demand results.

Based on the foregoing, the proxy data provided, including the addition of the NoFrills and Scotiabank Plaza in Milton, provides appropriate insights into the projected future parking demand at the site.

Across the 5 proxy sites, the surveys identified a peak parking demand rate of 3.41 spaces per 100 square metres GFA, occurring at the NoFrills site in Milton. As noted above, this demand may be split, to an extent, with the Derry Heights Plaza following the construction of a grocery store, thereby reducing these demands further. The parking demand survey results are summarized in **Table 6** and the survey data sheets are attached in **Appendix F**.

Table 6 Parking Demand Data – Proxy Sites

Location	Estimated GFA	Tenant Summary	Study Date & Time	Peak Parking Demand	Peak Parking Demand Rate
Laurier Centre 500 Laurier Avenue, Milton	10,125 m^2	Restaurant, Fast food restaurant, grocery store, retail store, bank, service establishment, medical	Fri, Apr 11, 2025 8am-9pm	160 spaces	1.58 spaces / 100 m^2 GFA
			Sat, Apr 12, 2025 8am-9pm	162 spaces	1.60 spaces / 100 m^2 GFA
Zehrs and Goodlife Plaza 297 Eramosa Road, Guelph	7,679 m^2	Grocery store, gymnasium	Fri, Apr 11, 2025 8am-9pm	236 spaces	3.07 spaces / 100 m^2 GFA
			Sat, Apr 12, 2025 8am-9pm	242 spaces	3.15 spaces / 100 m^2 GFA
Rutherford Marketplace 9300-9370 Bathurst Street, Vaughan	20,912 m^2	Restaurant, Fast food restaurant, grocery store, drug store, retail store, gymnasium, bank, service establishment, medical	Fri, Apr 11, 2025 8am-9pm	608 spaces	2.91 spaces / 100 m^2 GFA
			Sat, Apr 12, 2025 8am-9pm	632 spaces	3.02 spaces / 100 m^2 GFA
Appleby Crossing 2435 Appleby Line, Burlington	24,166 m^2	Restaurant, Fast food restaurant, grocery store, retail store, gymnasium, bank, service establishment	Fri, Apr 11, 2025 8am-9pm	541 spaces	2.24 spaces / 100 m^2 GFA
			Sat, Apr 12, 2025 8am-9pm	676 spaces	2.80 spaces / 100 m^2 GFA
Milton Crossroads 1280 Steeles Avenue East, Milton	50,588 m^2	Restaurant, Fast food restaurant, grocery store, retail store, gymnasium, service establishment, medical	Fri, Apr 11, 2025 8am-9pm	693 spaces	1.37 spaces / 100 m^2 GFA
			Sat, Apr 12, 2025 8am-9pm	764 spaces	1.51 spaces / 100 m^2 GFA
NoFrills and Scotiabank Plaza 6520 Derry Rd, Milton	3,201 m^2	Grocery store, bank	Fri, Jul 4, 2025 8am-9pm	108 spaces	3.37 spaces / 100 m^2 GFA
			Sat, Jul 5, 2025 8am-9pm	109 spaces	3.41 spaces / 100 m^2 GFA

3.1.4 Summary of Car Parking Supply

The site is currently subject to a required car parking rate of 1 space per 20 square metres GFA (equivalent to 5 spaces per 100 square metres GFA) in accordance with Section 13.1.1.122 of the Town of Milton Zoning By-law 016-2014, as amended by site specific By-law 144-2003.

The proposed development has a requirement to provide 763 spaces. The proposed car parking supply of 565 spaces represents a shortfall of 198 spaces from this requirement.

The proposed accessible car parking supply satisfies the requirements of the Town of Milton Zoning By-law 016-2014.

Car parking demand surveys were undertaken at the existing Derry Heights Plaza, and identify a peak overall parking demand rate of 2.93 spaces per 100 square metres GFA. The surveys identify underutilization of the existing parking supply, with only 45% of the overall parking supply occupied and 258 spaces remaining vacant.

Car parking demand surveys were also undertaken at 5 proxy retail plazas which are of a similar nature and location to the site. Consistent with the land uses being considered as part of the proposed expansion, all of the proxy sites include a grocery store, and the majority of them include a gymnasium. Across the 5 proxy sites, the surveys identified a peak parking demand rate of 3.41 spaces per 100 square metres GFA, occurring at the NoFrills site in Milton. As noted above, this demand may be split, to an extent, with the Derry Heights Plaza following the construction of a grocery store, thereby reducing these demands further.

The proposed car parking supply of 565 spaces, which equates to a parking supply ratio of 3.7 spaces per 100 square metres GFA, exceeds the projected demands identified by the car parking demand surveys, and is therefore appropriate.

3.2 Bicycle Parking

3.2.1 Bicycle Parking Requirements – Town of Milton Zoning By-law 016-2014

The site is subject to the bicycle parking rates outlined in the Town of Milton Zoning By-law 016-2014, as summarized in **Table 7**.

The proposed development has a requirement to provide 17 bicycle spaces.

Table 7 Bicycle Parking Requirements – Town of Milton Zoning By-law 016-2014

Land Use	Bicycle Parking Rate	Number of Car Spaces	Bicycle Parking Requirement
All other Commercial, Employment and Institutional Uses	3% of the required parking spaces	565 spaces	17 spaces
Total			**17 spaces**

Notes:
1. Bicycle parking requirements rounded up to the nearest whole number in accordance with Section 5.2i) of the Town of Milton Zoning By-law 016-2014.

3.2.2 Bicycle Parking Supply

The proposed bicycle parking supply of 36 spaces across the site satisfies the bicycle parking requirements of Town of Milton Zoning By-law 016-2014 and is appropriate.

3.3 Loading

3.3.1 Loading Requirements – Town of Milton Zoning By-law 016-2014

The site is subject to the loading rates outlined in the Town of Milton Zoning By-law 016-2014, as summarized in **Table 8**. The rates have only been applied to the new buildings, noting that no changes are proposed to the loading arrangements for the existing buildings.

The proposed development has a requirement to provide 1 loading area for Building A and 2 loading spaces for Building F. The Town of Milton Zoning By-law 016-2014 defines these as follows:

- **Loading Area:** Minimum 6 metres long by 3.5 metres wide with a minimum vertical clearance of 3 metres.
- **Loading Space:** Minimum 12 metres long by 3.5 metres wide with a minimum vertical clearance of 4.2 metres.

Table 8 Loading Requirements – Town of Milton Zoning By-law 016-2014

Building	Loading Rate	GFA	Loading Requirement
Building A	1 loading area for 281 m^2 to 930 m^2	826 m^2	1 loading area
Building F	2 loading spaces for 2,326 m^2 to 7,440 m^2	7,224 m^2	2 loading spaces
Total			**1 loading area 2 loading spaces**

3.3.2 Loading Supply

A total of 2 loading spaces are proposed to service Building F, with the loading spaces accessible by vehicles up to a tractor trailer in size. Consistent with existing tractor trailers accessing the site, these vehicles are proposed to enter via the north Bronte site driveway and exit via the central Bronte site driveway.

A total of 1 loading space is proposed to service Building A, accessible by vehicles up to a heavy single unit truck in size.

The proposed loading supply satisfies the requirements of the Town of Milton Zoning By-law 016-2014 and is appropriate.

Vehicle manoeuvring diagrams are attached in **Appendix D**.

3.4 Drive Through

The site is subject to the drive through and queueing lane requirements of the Town of Milton Zoning By-law 016-2014. As noted in **Section 1.3.6**, the proposed Building A is located adjacent to the existing drive through servicing the Tim Hortons restaurant on the west side of Building B, and some minor changes to the curbs are proposed in this location. In effect, the proposed modifications extend the length of this drive through along the west side of

Building A. An assessment against the requirements is provided in **Table 9**. As shown, the proposed modifications to the existing drive through servicing the Tim Hortons restaurant on the west side of Building B satisfy the requirements of the Town of Milton Zoning By-law 016-2014 and are appropriate.

No changes are proposed to the other existing drive throughs, therefore an assessment of these facilities has not been undertaken.

Table 9 Drive Through Requirements – Town of Milton Zoning By-law 016-2014

Drive Through Facility	Requirement	Required Minimum	Provided Minimum (approximate)
Existing Tim Hortons Restaurant	Number of Ingress Spaces[1] (length of 6 metres per space)	10 spaces	12 spaces
	Number of Egress Spaces[2] (length of 6 metres per space)	2 spaces	5 spaces
	Width	3 m	3.4 m
	Setback to Street Line	7.5 m	130 m
	Setback to Lot Line	4.5 m	40 m

Notes:
1. Measured from the first point of contact
2. Measured between the ingress space and the final point of contact

4.0 TRAFFIC ASSESSMENT

4.1 Scope

As outlined in the TOR, traffic analysis has been completed for a 3-year and 8-year analysis horizon during the AM, PM and Saturday peak hours at the following intersections:

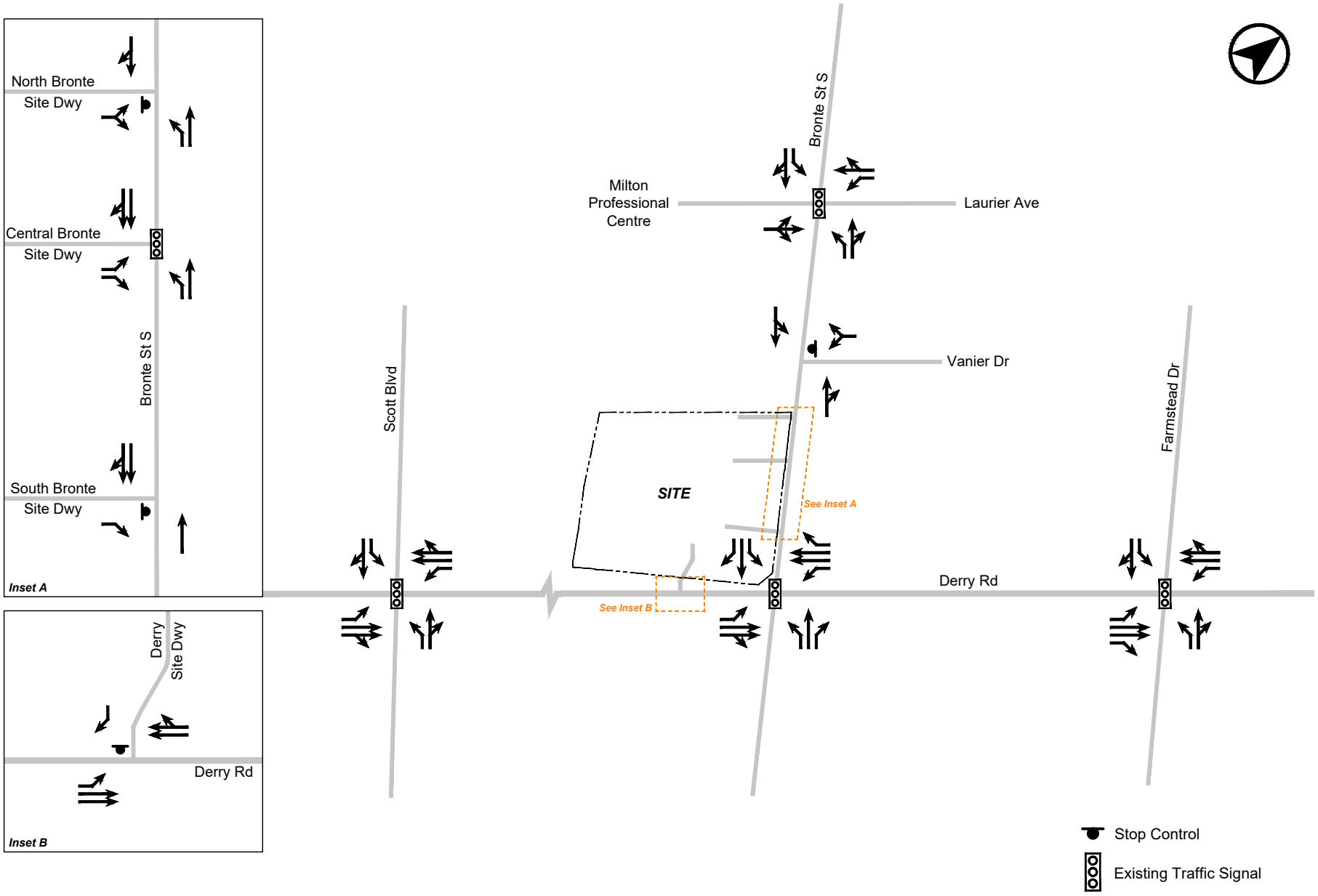
- Bronte Street South / Laurier Avenue
- Bronte Street South / Central Bronte Site Driveway
- Derry Road West / Scott Boulevard
- Derry Road West / Farmstead Drive
- Derry Road West / Bronte Street South
- Bronte Street South / Vanier Drive
- Bronte Street South / North Bronte Site Driveway
- Bronte Street South / South Bronte Site Driveway
- Derry Road West / Derry Site Driveway

Adopted lane configurations and traffic control in the study area remain consistent with existing conditions, as shown in **Figure 6**. As discussed in **Section 2.1.2**, Derry Road West in the vicinity of the site is planned to be widened to 6 lanes by 2031. Notwithstanding, as requested by Halton Region, the base analysis has been undertaken on the assumption that the Derry Road West widening has not yet been completed in either analysis horizon.

In addition to the base analysis outlined above, a sensitivity analysis has been undertaken which assumes the widening of Derry Road West has been completed by the 8-year horizon. The adopted lane configurations for this analysis are shown in **Figure 7**.

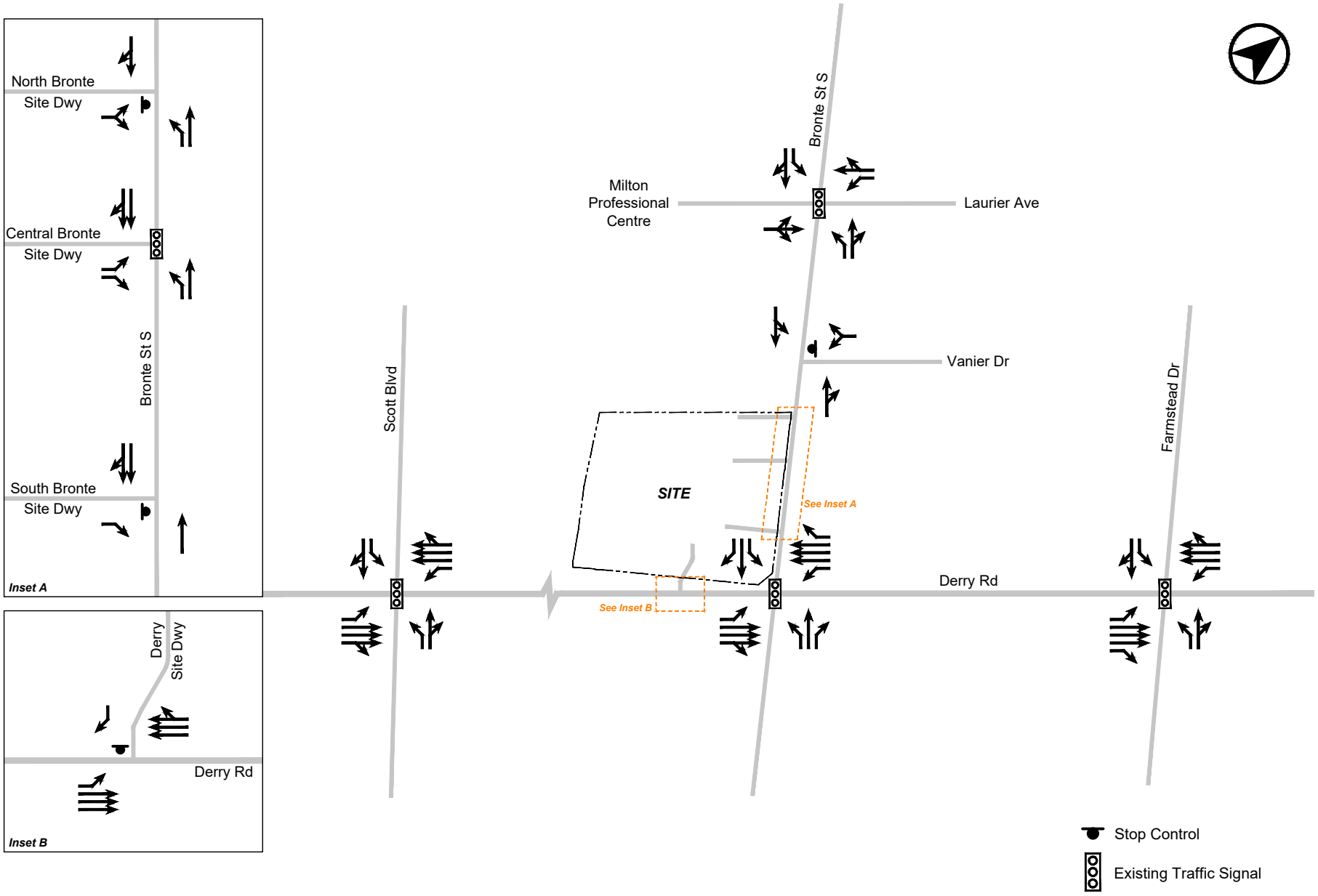
Accordingly, the analysis scenarios are outlined below:

- Existing Conditions
- Future Background Conditions (3-Year Horizon)
- Future Background Conditions (8-Year Horizon)
- Future Total Conditions (3-Year Horizon)
- Future Total Conditions (8-Year Horizon)
- Future Background Conditions (8-Year Horizon) – Sensitivity Analysis
- Future Total Conditions (8-Year Horizon) – Sensitivity Analysis



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FIGURE 6 EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL



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FIGURE 7 FUTURE LANE CONFIGURATION AND TRAFFIC CONTROL (8-YEAR HORIZON) - SENSITIVITY ANALYSIS

4.2 Base Analysis

4.2.1 Traffic Volume Projections

4.2.1.1 Existing Traffic Volumes

Base existing traffic volumes were established for the weekday morning, weekday afternoon, and Saturday mid-day peak hours for intersections within the study area based on turning movement counts collected by Spectrum Traffic Data Inc. on behalf of BA Group. A listing of count data and sources is summarized in **Table 10**. Existing turning movement counts are provided in **Appendix G.**

The existing turning movement counts were reviewed in detail to ensure a general consistency in the traffic volumes on roadways between intersections. Minor balancing was undertaken between the site driveway intersections to ensure consistency of volumes due to the rounding of volumes to the nearest 5 trips in this analysis. Existing, balanced traffic volumes for the weekday morning, weekday afternoon, and Saturday peak hours are illustrated in **Figure 8**.

Table 10 Turning Movement Count Summary

Intersection	Date of Count	Source
Signalized Intersections		
Bronte Street South / Laurier Avenue	Thursday, June 26, 2025 & Saturday, September 6, 2025	Spectrum Traffic Data Inc.
Bronte Street South / Central Bronte Site Driveway		
Derry Road West / Bronte Street South		
Derry Road West / Scott Boulevard		
Derry Road West / Farmstead Drive		
Unsignalized Intersections		
Bronte Street South / Vanier Avenue	Thursday, June 26, 2025 & Saturday, September 6, 2025	Spectrum Traffic Data Inc.
Bronte Street South / North Bronte Site Driveway		
Bronte Street South / South Bronte Site Driveway		
Derry Road West / Derry Site Driveway		

4.2.1.2 Future Background Traffic Volumes

Corridor Growth

As requested by Town and Region staff within the TOR, an annualized corridor growth rate of 2% was applied to the Derry Road West and Bronte Street South corridors for all directions and for all peak hours.

As requested by Region staff, corridor growth was applied to turning movements as well as through movements at the Derry Road West / Bronte Street South intersection. Corridor growth was not applied to turns at sideroads within the study area, noting that these sideroads primarily provide an access function for already established neighbourhoods, and any potential growth for these movements is expected to be related to specific development applications, which are discussed below.

Corridor growth traffic volumes for the 3-year and 8-year horizons are illustrated in **Figure 9** and **Figure 10**, respectively.

Background Development Growth

Specific background traffic allowances were made for a list of proposed area developments provided by Town and Region staff. A total of two development proposals have been considered, which represent a total of 905 residential units and 2,039 m^2 of retail GFA. Background developments included in this analysis are summarized in **Table 11.**

Background development traffic volumes as assigned onto the area street network are illustrated in **Figure 11**. As Saturday mid-day traffic volumes were not available within the background development transportation studies, weekday afternoon peak hour trips were utilized, with the directionality of the trips adjusted so that the inbound and outbound trips from each site were equal in accordance with typical travel patterns observed during weekend peak hour trips.

Table 11 Area Background Developments

Development Address		Development Statistics	Source	Date
1	550 Ontario Street South	649 residential units 2,039 m^2 retail GFA	Paradigm	September 2021
2	180 Bronte Street South	256 residential units	IBI Group	November 2021
Total		**905 residential units, 2,039 m^2 retail GFA**		

Future Background Traffic Volumes

Future background traffic volumes, including corridor growth traffic volumes and background development traffic volumes for the weekday morning, weekday afternoon, and Saturday mid-day peak hours are illustrated in **Figure 12** and **Figure 13** for the 3-year and 8-year horizons, respectively.

4.2.1.3 Site Traffic Generation

Existing Site Traffic

Existing site traffic for the plaza was derived from existing turning movement counts at each of the four site driveways. As all existing uses within the plaza are to be maintained following the buildout of the proposed development, all existing site traffic is anticipated to remain. Existing vehicular site traffic is summarized in **Table 12**.

The existing site generates in the order of 705, 780, and 785 two-way vehicle trips in the weekday morning, weekday afternoon, and Saturday mid-day peak hours, respectively.

Table 12 Existing Site Traffic

Site Driveway	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
	In	Out	2-Way	In	Out	2-Way	In	Out	2-Way
Bronte St S / North Bronte Site Dwy	25	5	30	10	0	10	10	10	20
Bronte St S / Central Bronte Site Dwy	145	205	350	190	240	430	170	255	425
Bronte St S / South Bronte Site Dwy	15	40	55	10	30	40	15	45	60
Derry Rd / Derry Site Dwy	190	80	270	165	135	300	150	130	280
Existing Site Traffic	**375**	**330**	**705**	**375**	**405**	**780**	**345**	**440**	**785**
Existing Site Traffic Rate [/1000 ft^2]	**4.84**	**4.26**	**9.10**	**4.84**	**5.22**	**10.06**	**4.45**	**5.68**	**10.13**

Notes:
1. Rounded to the nearest 5 trips.
2. Based on an existing site GFA of 77,527 ft^2.

New Site Traffic Generation

Given the unique trip generating characteristics of some of the existing tenants on the site, notably the Tim Hortons restaurant, trip generation for the proposed new uses were not based on the existing trip rates measured at the site. Instead, reference was made to the *ITE Trip Generation Manual, 11th Edition* for the individual uses as follows:

- **Commercial / retail units:** Land Use Code 821 – Shopping Plaza (40-150k), Supermarket – Yes, noting that while the new commercial / retail units themselves are 14,886 square feet, they are part of a larger shopping plaza.
- **Grocery store:** Land Use Code 850 – Supermarket
- **Gym:** Land Use Code 492 – Health/Fitness Club.

New site trips were differentiated between primary and pass-by trips for the proposed retail and grocery uses, based on average pass-by rates found in the *ITE Trip Generation Manual, 11th Edition*. New vehicular trips generated for the site are summarized in **Table 13**.

The proposed addition to the Derry Heights Plaza is projected to generate in the order of 195, 550, and 585 two-way vehicle trips in the weekday morning, weekday afternoon, and Saturday mid-day peak hours, respectively.

Table 13 New Site Traffic

Site Trips	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
	In	Out	2-Way	In	Out	2-Way	In	Out	2-Way
Retail (14,886 ft² GFA)									
LUC 821 – Shopping Plaza (40-150k) [/ 1000 ft² GFA]	*2.19*	*1.34*	*3.53*	*4.33*	*4.70*	*9.03*	*4.72*	*4.54*	*9.26*
Total Retail Trips	**35**	**20**	**55**	**65**	**70**	**135**	**70**	**70**	**140**
Pass-by Rate	*N/A*			*40%*			*31%*		
Retail Pass-by Trips	0	0	0	25	25	50	20	20	40
Retail Primary Trips	35	20	55	40	45	85	50	50	100
Grocery (31,377 ft² GFA)									
LUC 850 – Supermarket *[/ 1000 ft² GFA]*	*1.69*	*1.17*	*2.86*	*4.48*	*4.48*	*8.95*	*5.05*	*5.05*	*10.10*
Total Grocery Trips	**55**	**35**	**90**	**140**	**140**	**280**	**160**	**160**	**320**
Pass-by Rate	*N/A*			*24%*			*19%*		
Grocery Pass-by Trips	0	0	0	35	35	70	30	30	60
Grocery Primary Trips	55	35	90	105	105	210	130	130	260
Gym (38,868 ft² GFA)									
LUC 492 – Health/Fitness Club [/ 1000 ft² GFA]	*0.67*	*0.64*	*1.31*	*1.97*	*1.48*	*3.45*	*1.56*	*1.63*	*3.19*
Total Gym Trips	**25**	**25**	**50**	**75**	**60**	**135**	**60**	**65**	**125**
Site Summary									
New Site Primary Trips	115	80	195	220	210	430	240	245	485
New Site Pass-by Trips	0	0	0	60	60	120	50	50	100
Total New Site Trips	**115**	**80**	**195**	**280**	**270**	**550**	**290**	**295**	**585**

Notes:
1. Rounded to the nearest 5 trips.
2. All trip rates based on average rates from the ITE Trip Generation Manual – 11th Edition.
3. Trip generation estimates are based on floor areas of 14,886 ft², 31,377 ft² and 38,868 ft² for the retail, grocery and gym respectively.

Site Traffic Distribution

New site traffic was assigned onto the area street network based on a review of 2022 Transportation Tomorrow Survey ("TTS") data at the bounds of the network and existing travel patterns at the site driveways. The distribution of inbound and outbound new site traffic is summarized in **Table 14.** The raw data is provided in **Appendix H.**

Table 14 Site Traffic Distribution

Street	Direction	Inbound	Outbound
To / From Bronte Street South	North	20%	25%
	South	25%	20%
To / From Derry Road West	East	15%	5%
	West	15%	15%
To / From Farmstead Road	North	0%	0%
	South	5%	5%
To / From Scott Boulevard	North	5%	5%
	South	5%	15%
To / From Vanier Drive	East	5%	5%
To / From Laurier Avenue	East	5%	5%
Total		**100%**	**100%**

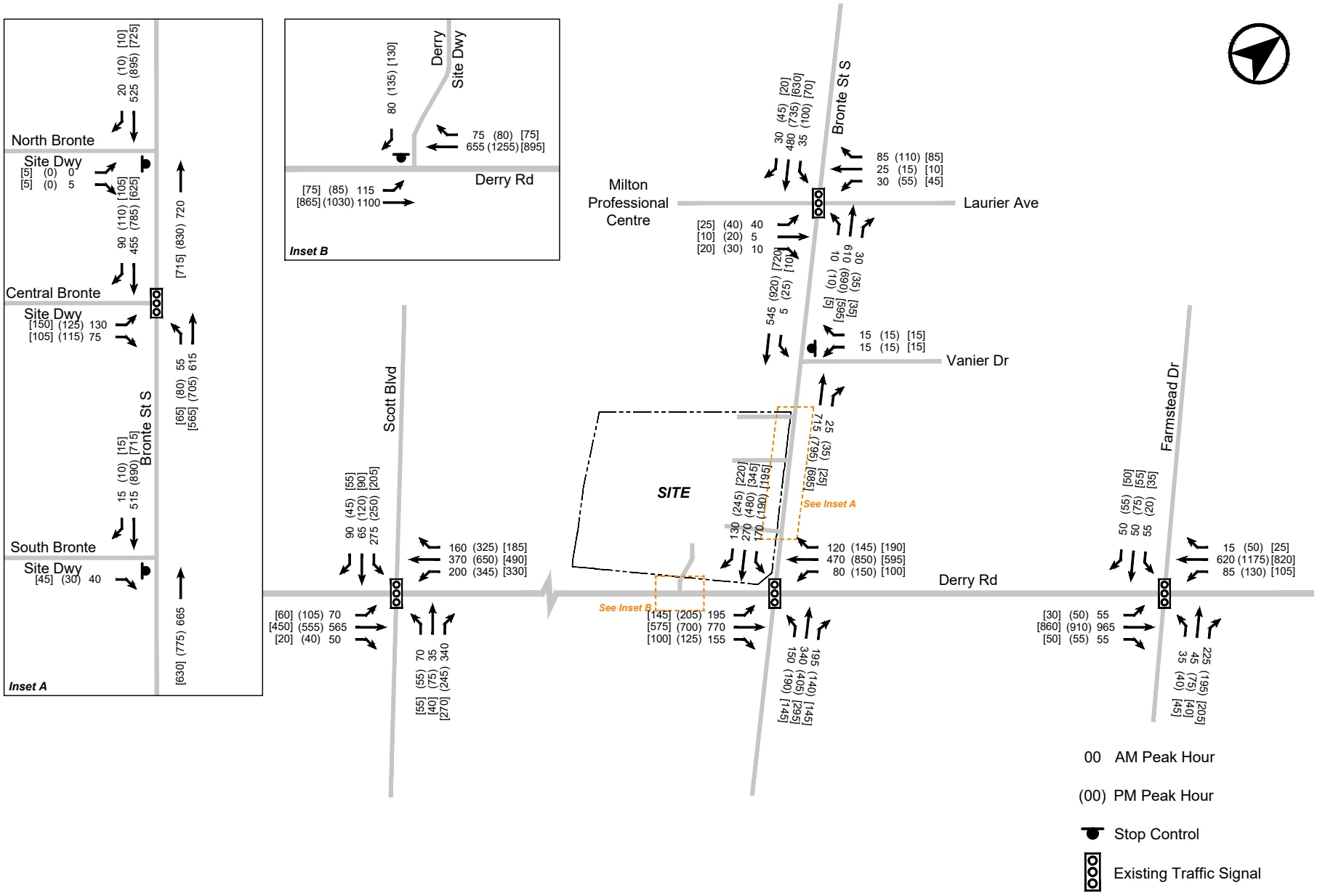
Notes:
1. Inbound and outbound trips based on weekday afternoon peak period for market-based trips to/from 2022 TTS zones 5359, 5400, 5404, 5405, 5412-5413, and 5419.

Site Traffic Volumes

Primary and pass-by site trips, as distributed onto the area street network, are illustrated in **Figure 14** and **Figure 15**, respectively. Total new site traffic, combining both primary and pass-by trips, is illustrated in **Figure 16.**

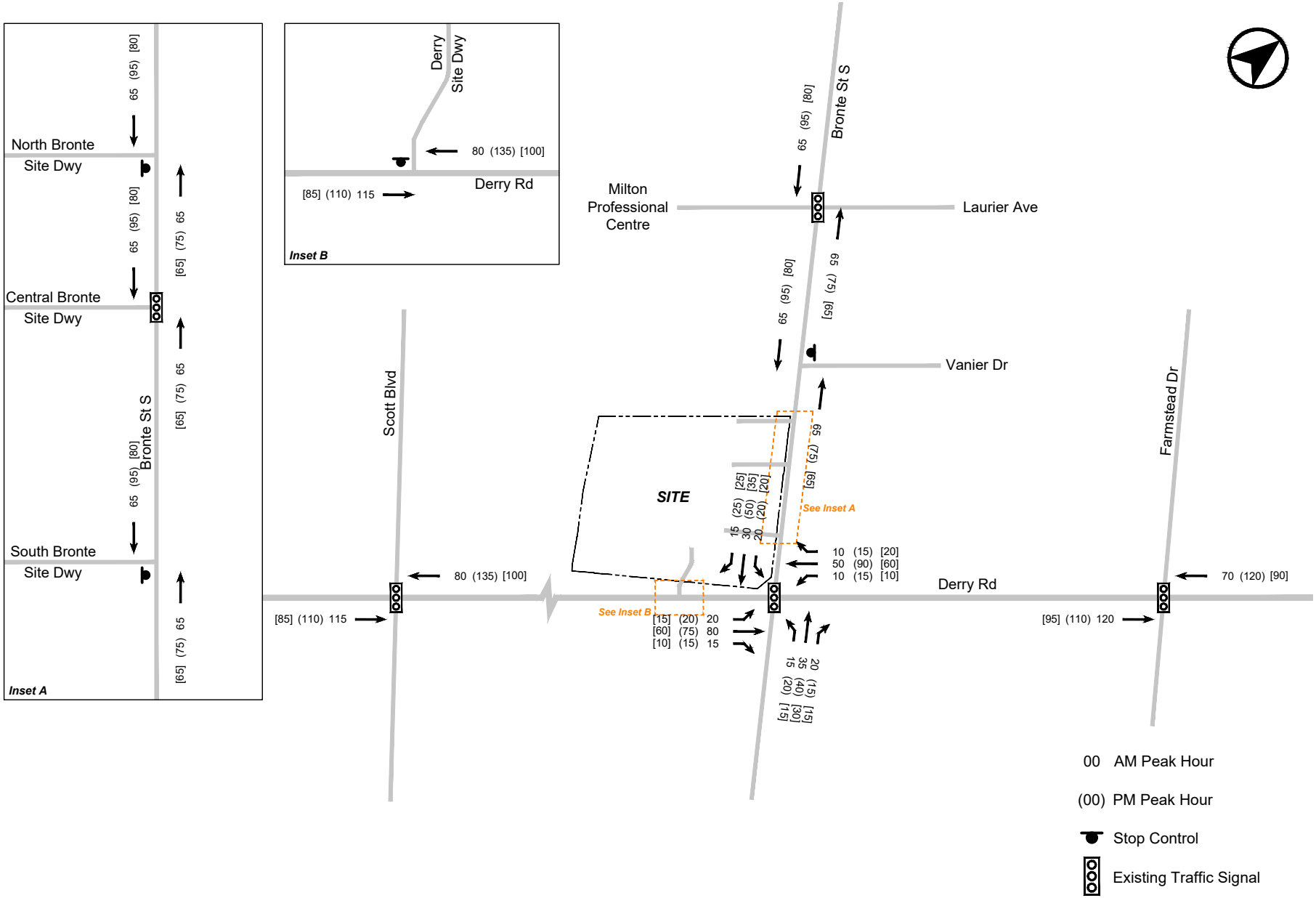
4.2.1.4 Future Total Traffic Volumes

Future total traffic volumes, established by combining future background traffic volumes with new site traffic, are illustrated for the 3-year and 8-year horizons in **Figure 17** and **Figure 18**, respectively.



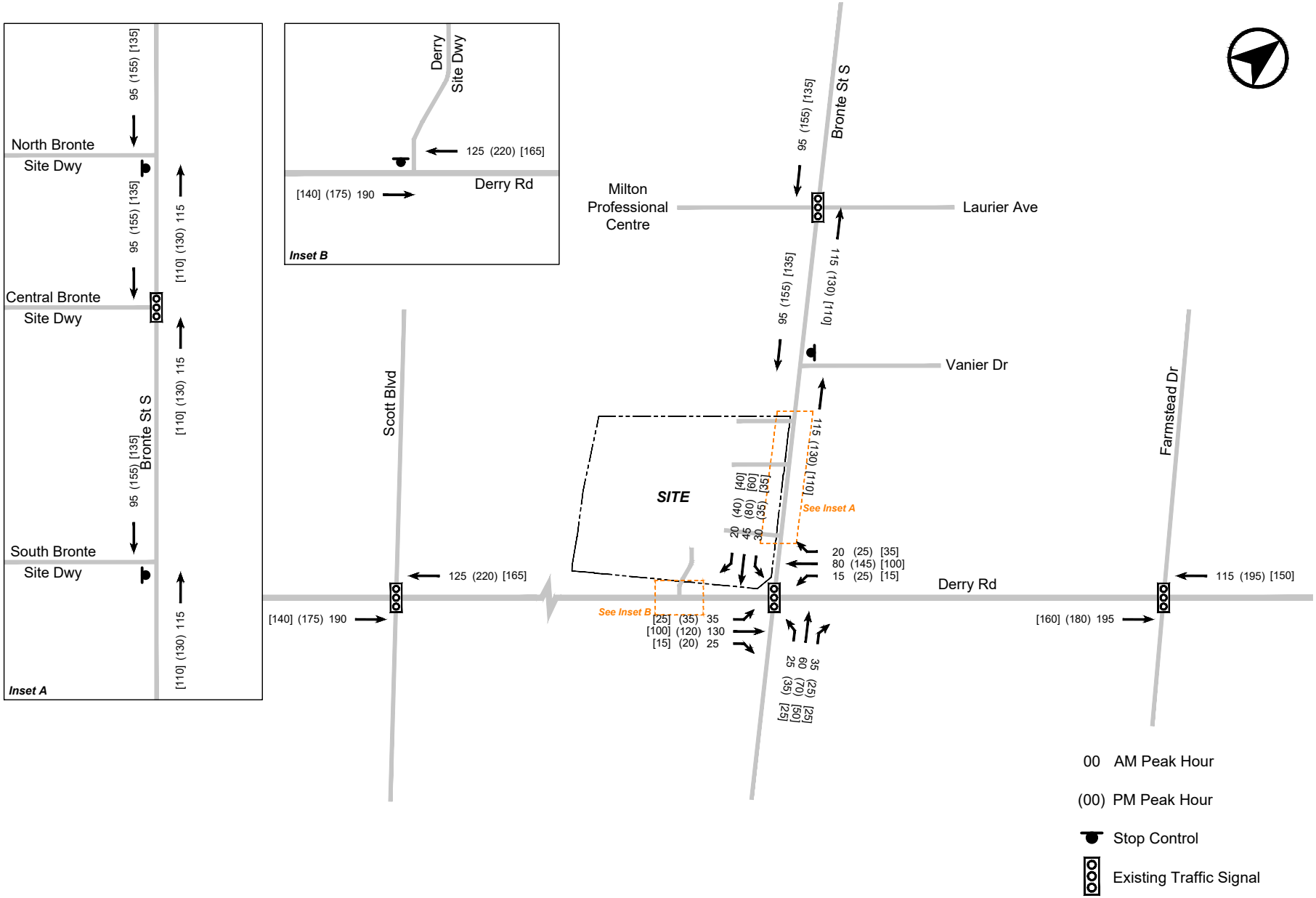
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FIGURE 8 EXISTING TRAFFIC VOLUMES



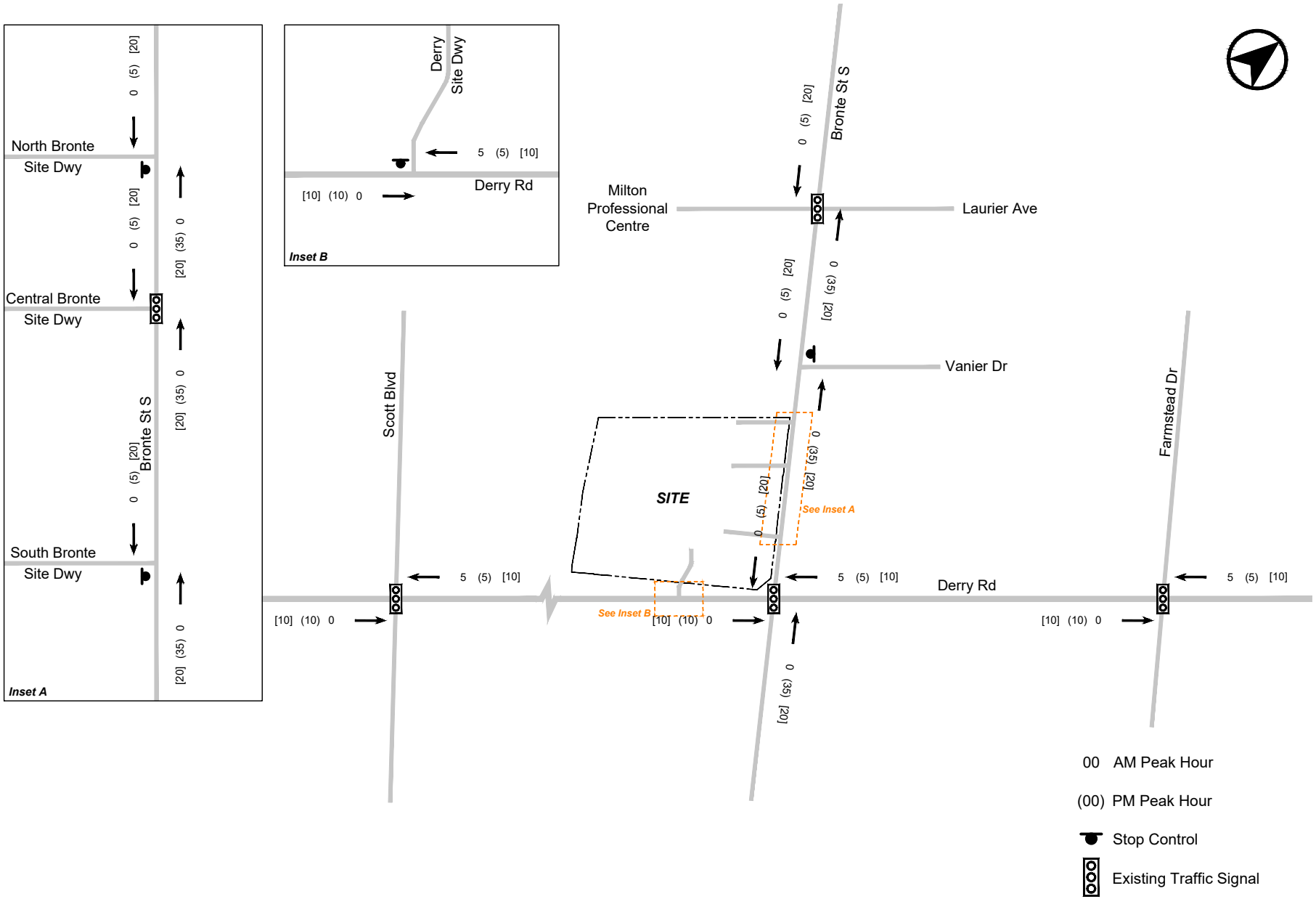
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FIGURE 9 CORRIDOR GROWTH TRAFFIC VOLUMES (3-YEAR HORIZON)



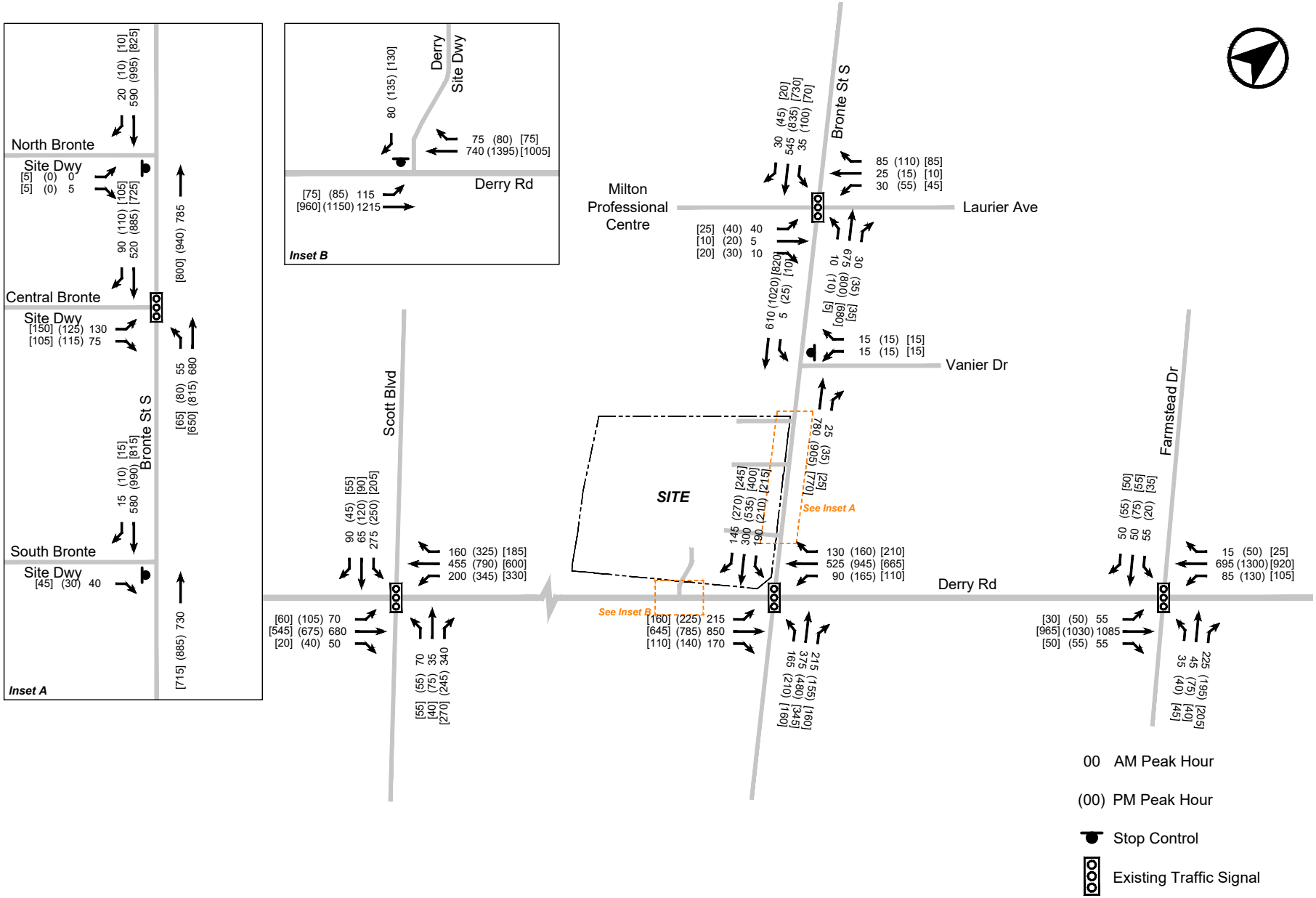
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FIGURE 10 CORRIDOR GROWTH TRAFFIC VOLUMES (8-YEAR HORIZON)



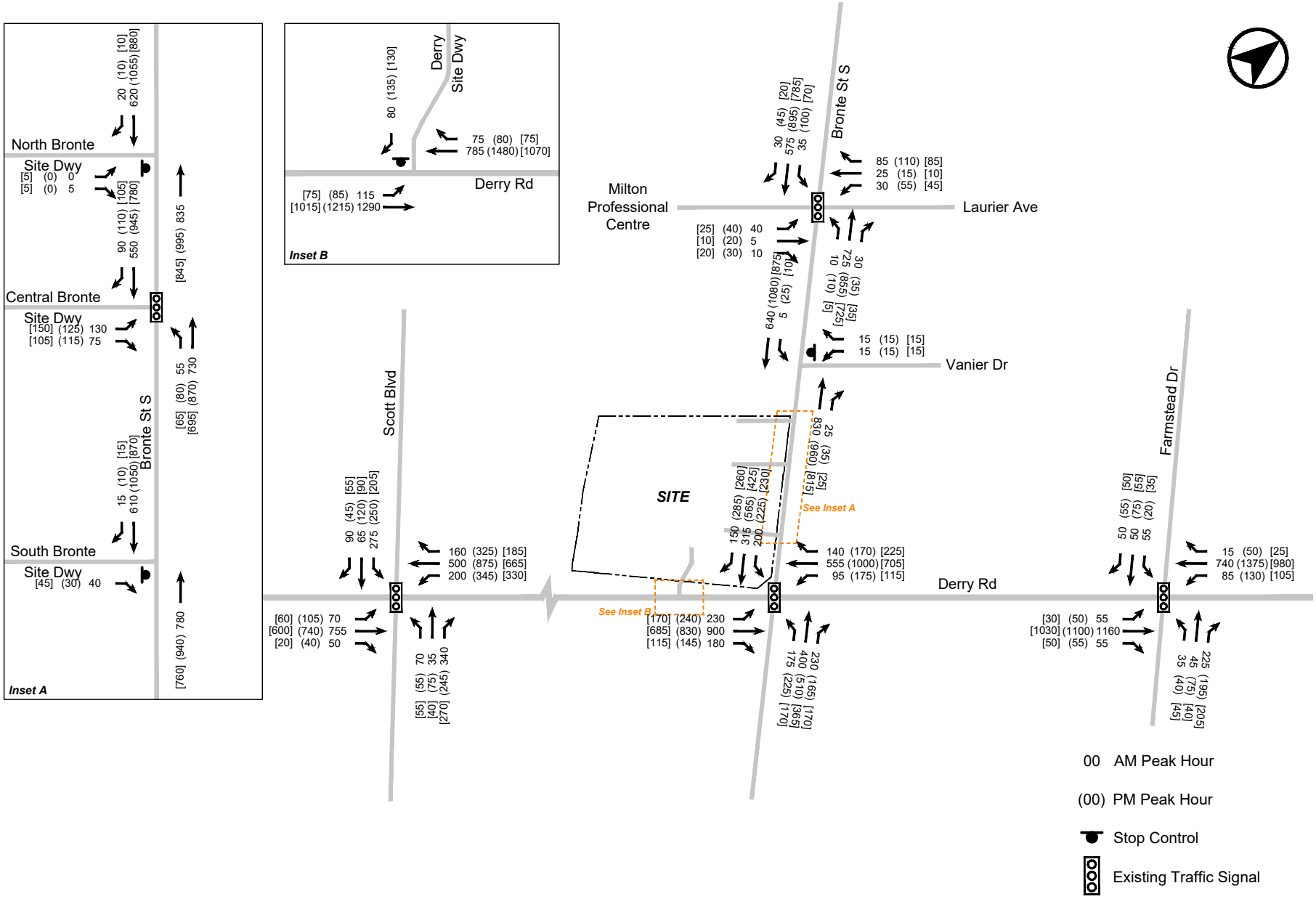
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FIGURE 11 BACKGROUND DEVELOPMENT TRAFFIC VOLUMES



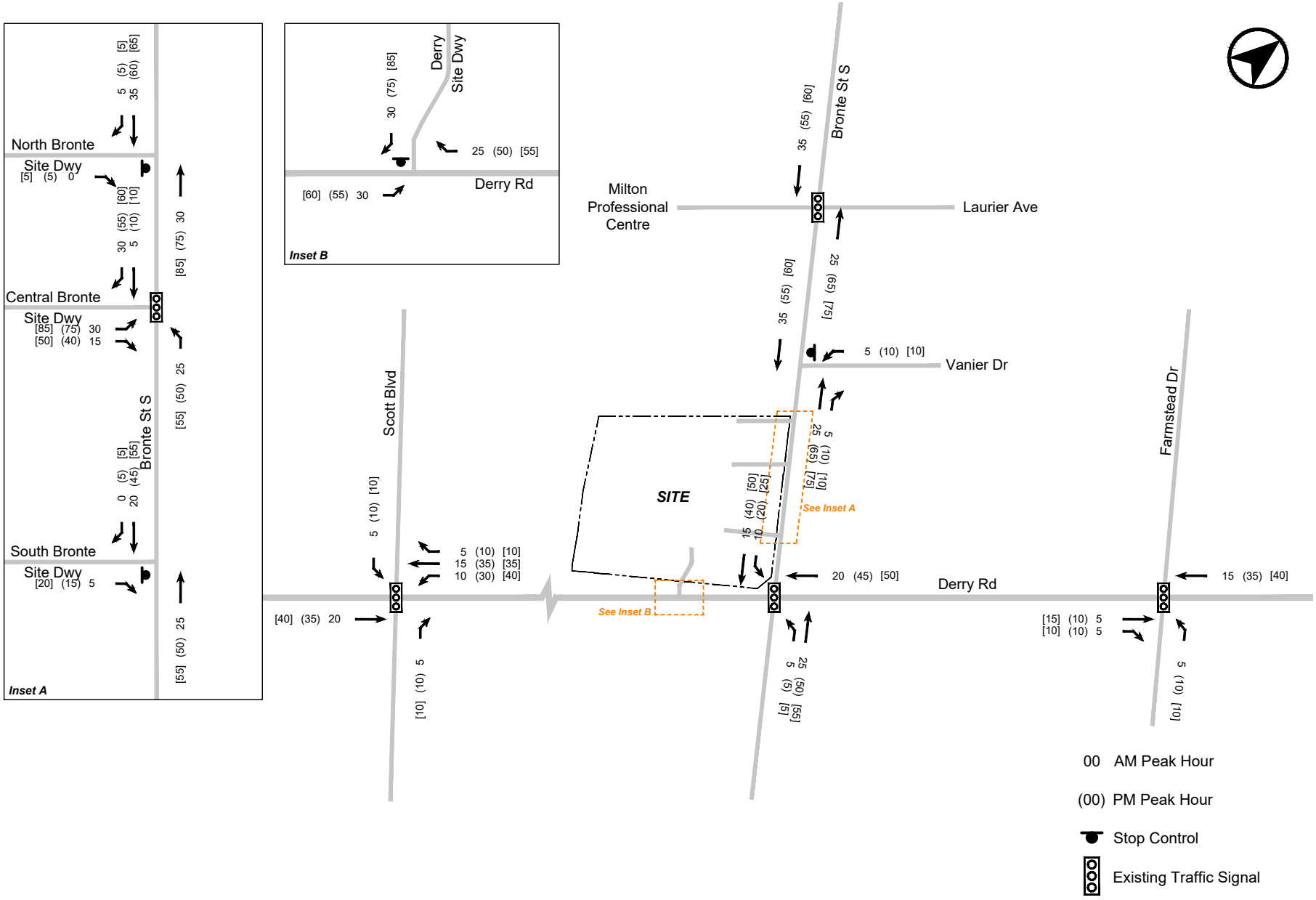
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FIGURE 12 FUTURE BACKGROUND TRAFFIC VOLUMES (3-YEAR HORIZON)



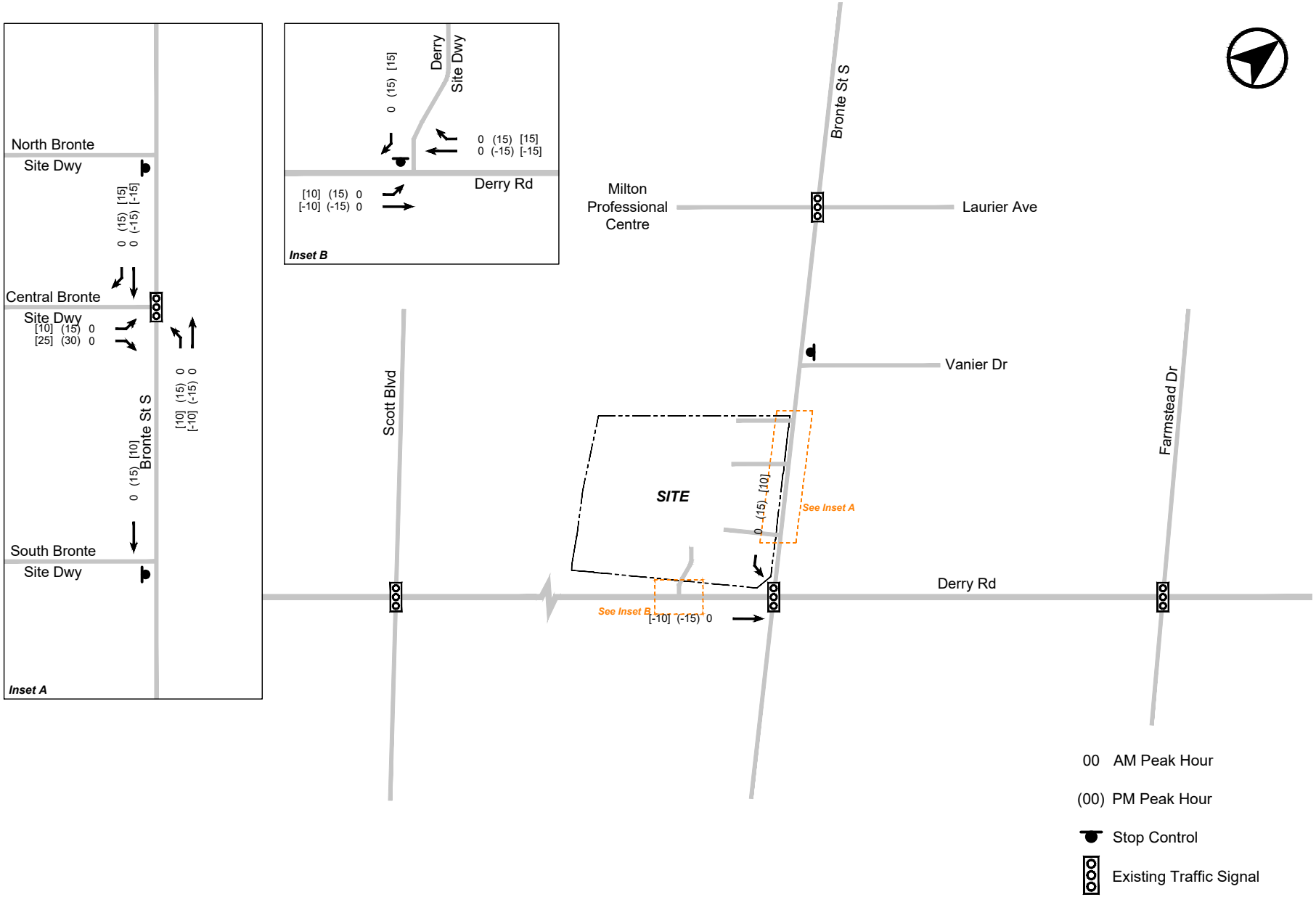
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FIGURE 13 FUTURE BACKGROUND TRAFFIC VOLUMES (8-YEAR HORIZON)



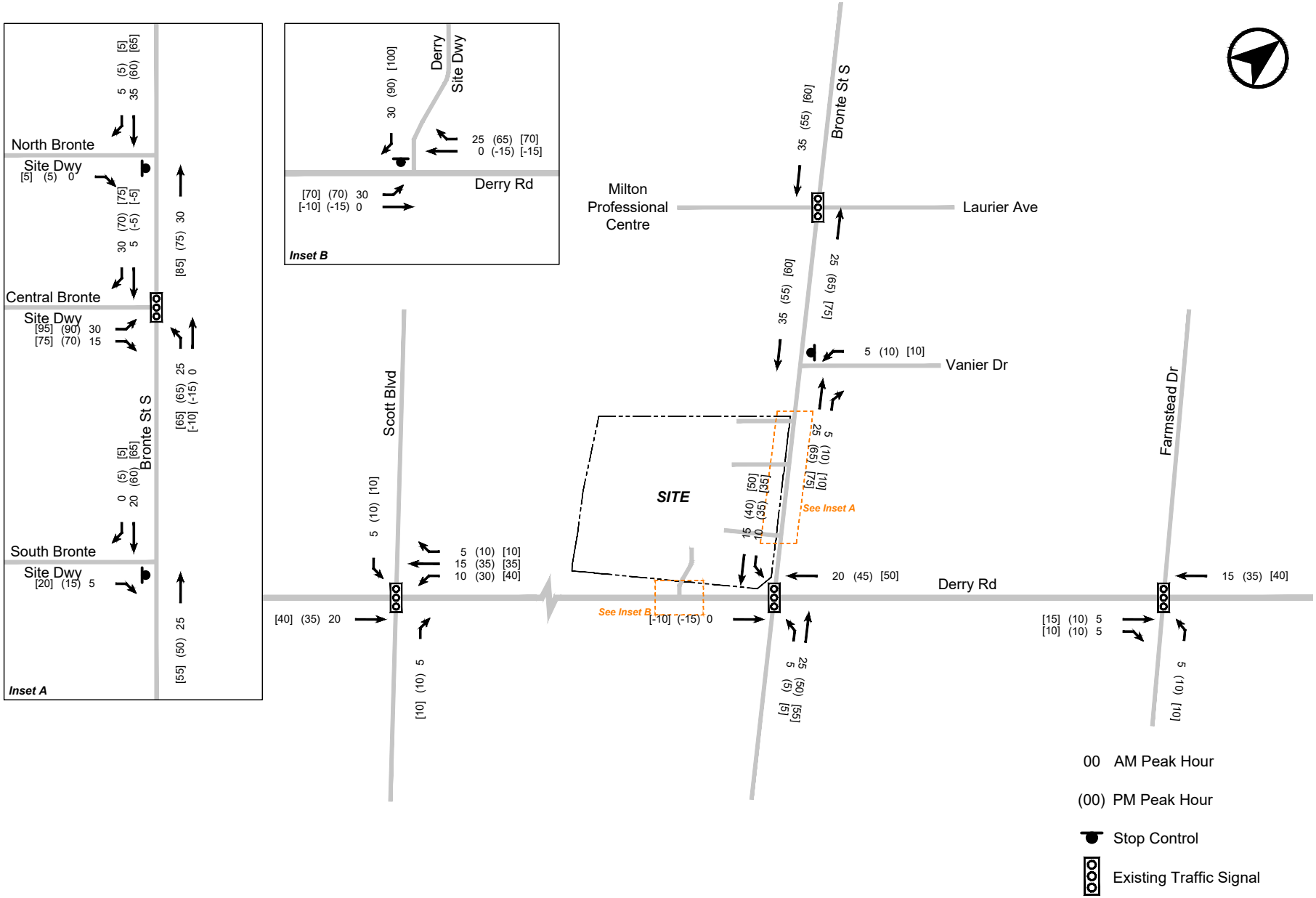
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FIGURE 14 PRIMARY NEW SITE TRAFFIC VOLUMES



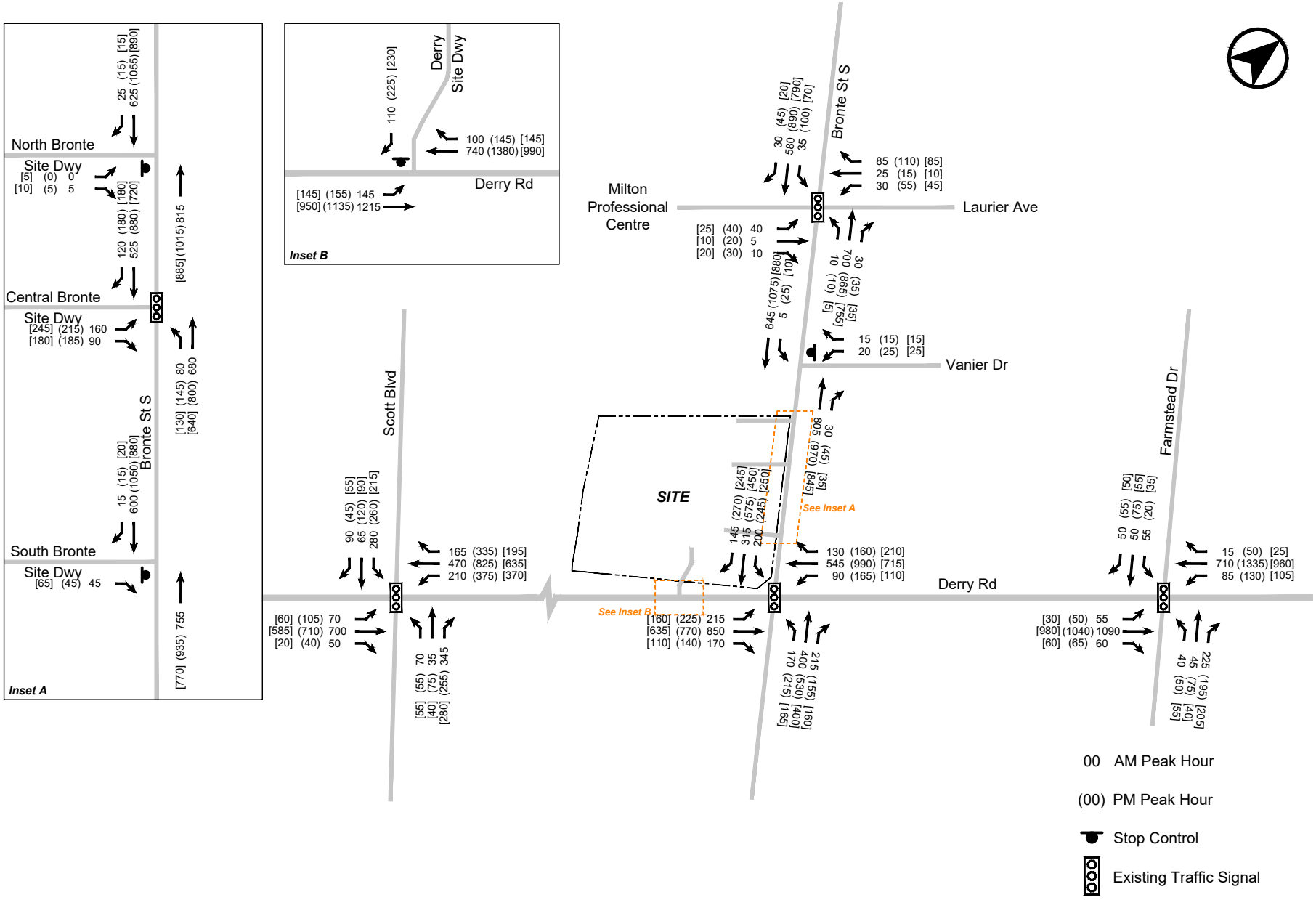
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FIGURE 15 PASS-BY NEW SITE TRAFFIC VOLUMES



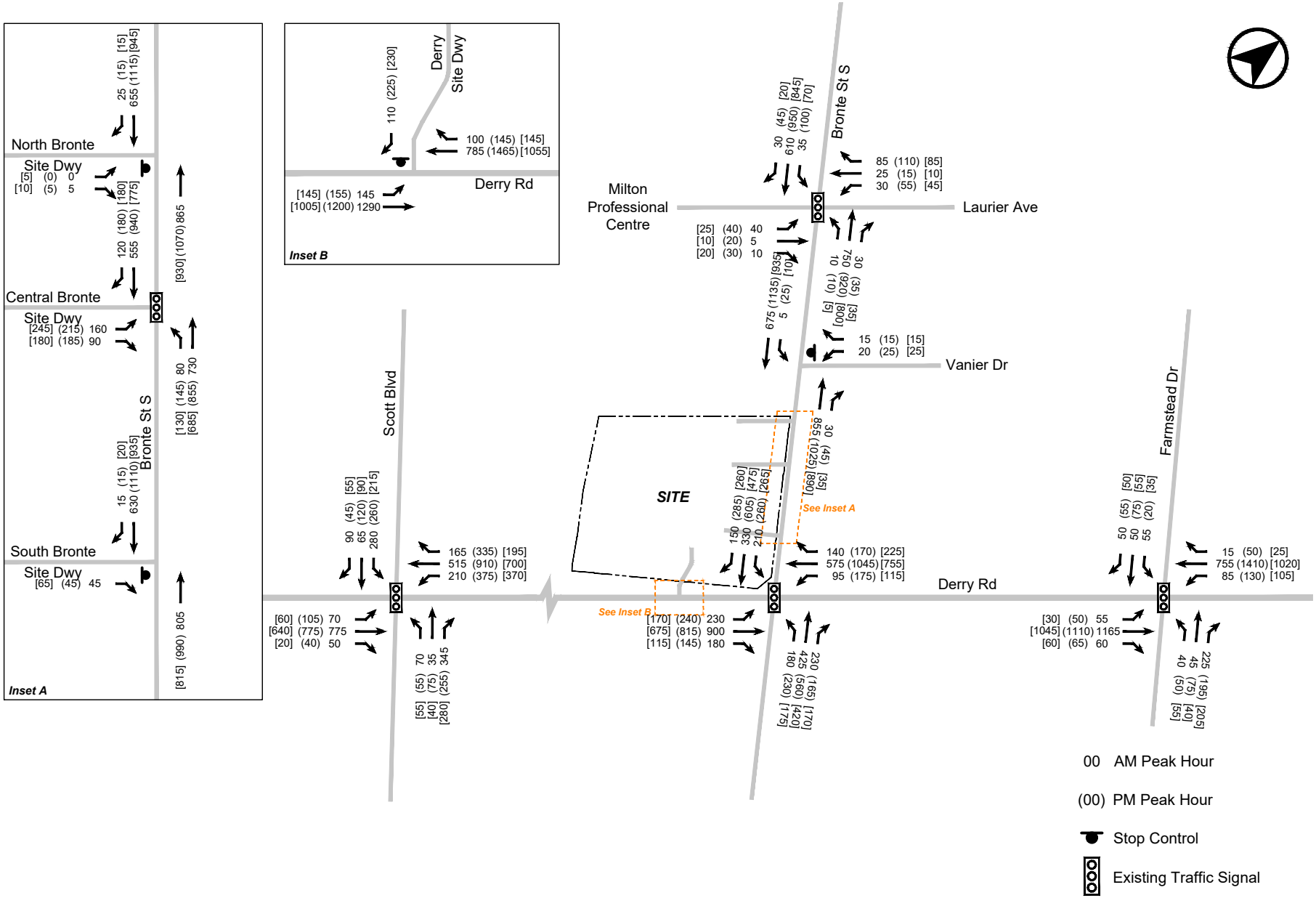
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FIGURE 16 TOTAL NEW SITE TRAFFIC VOLUMES



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FIGURE 17 FUTURE TOTAL TRAFFIC VOLUMES (3-YEAR HORIZON)



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FIGURE 18 FUTURE TOTAL TRAFFIC VOLUMES (8-YEAR HORIZON)

4.2.2 Traffic Operations Analysis

4.2.2.1 Analysis Methodology

Overview

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

Signalized Intersections

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

Further to the above, it is noted that the Town of Milton's *Traffic Impact Study Terms of Reference*, dated January 2023 (the "Milton TIS Guidelines") and Halton Region's *Transportation Impact Study Guidelines*, dated January 2015 (the "Halton TIS Guidelines") require that mitigation measures be reviewed for intersections where future traffic results in the following:

- The v/c ratio for overall intersection operations, through movements, or shared through/turning movements increased to 0.85 or above;
- The v/c ratio for exclusive turning movements increased to 0.95 or above; or
- Queues for an individual movement are projected to exceed available turning lane storage.

For ease of reference, movements that align with the above conditions have been **bolded** in the results tables.

Unsignalized Intersections

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

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

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

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

Further to the above, it is noted that the Milton TIS Guidelines and Halton TIS Guidelines require that mitigation measures be reviewed for intersections where future traffic results in the following:

- The LOS on an individual movement exceeds LOS D; or
- Queues for an individual movement are projected to exceed available turning lane storage.

For ease of reference, movements that align with the above conditions have been **bolded** in the results tables.

4.2.2.2 Analysis Assumptions and Parameters

Heavy Vehicle Assumptions

Heavy and medium truck percentages incorporated into the analysis were based upon information provided as part of intersection turning movement counts.

Saturation Flow Assumptions

The default base saturation flow rate of 1,900 passenger cars per hour of green time per lane (pcphgpl) was adopted for signalized intersections.

Signal Timings

Existing signal timings, phasing plans, and cycle lengths were obtained from the Town of Milton and Halton Region and were maintained in the analysis of future scenarios where possible. Existing signal timing plans are provided in **Appendix I**.

Peak Hour Factor

Peak hour factors were calculated based on the existing 15-minute traffic counts utilized in this study for the both the existing and future analyses.

Lane Utilization Factors

The default Synchro lane utilization factors (LUF) were adopted, which take into consideration the distribution of individual lane usage within each movement group.

Lost Time Adjustments

For left-turning phases at busy urban intersections that are near or at-capacity, the left turn phases are often coded with a protected (i.e. left turns have right-of-passage) and permissive (i.e. pedestrians and through and right turn traffic have right-of-passage but left turns may proceed on a suitable gap) phases. In both phase types at a busy urban intersection, drivers will continue to advance into the intersection during the intergreen time following each phase's respective green time.

At the Derry Road West / Bronte Street South intersection, a field study capturing the "intergreen effect" was undertaken at all left turn movements, which operate at close to theoretical capacity particularly during the

weekday afternoon peak hour. The lost time adjustment for these turns, summarized in **Table 15,** were applied to both existing and future scenarios. The full intergreen study is provided in **Appendix J**.

Table 15 Derry Road West / Bronte Street South Lost Time Adjustment

Movement	AM Peak Hour		PM Peak Hour		SAT Peak Hour	
	Avg. Sneakers / Cycle	Applied LTA	Avg. Sneakers / Cycle	Applied LTA	Avg. Sneakers / Cycle	Applied LTA
NBL	1.93	-1.9	3.37	-3.4	1.05	-1.0
SBL	2.03	-2.0	2.80	-2.8	1.37	-1.4
EBL	0.21	-0.6	1.44	-1.4	0.49	-0.5
WBL	0.62	-0.2	2.64	-2.6	0.41	-0.4

4.2.2.3 Analysis Results

Overview

Operations analysis results and turn lane queue analysis results for signalized intersections are provided in **Table 16** and **Table 17** respectively. Operations analysis results and turn lane queue analysis results for unsignalized intersections are provided in **Table 18** and **Table 19** respectively. Synchro outputs are attached in **Appendix K**.

Overall, it is concluded that the traffic associated with the development can be accommodated at all intersections within the study area. While not required to support the proposed development, a sensitivity analysis has also been undertaken which assumes the widening of Derry Road West has been completed by the 8-year horizon. This is discussed further in **Section 4.3**.

Bronte Street South / Laurier Avenue

The Bronte Street South / Laurier Avenue intersection is signalized and operates with a cycle length of 90 seconds during the AM, PM and Saturday peak hours. The following results are projected under each of the analysis scenarios:

- **Existing:** Operates with a v/c of 0.55, 0.59 and 0.55 during the AM, PM, and Saturday peak hours, respectively.
- **Future background (3-year horizon):** Operates with a v/c of 0.60, 0.64 and 0.61 during the AM, PM, and Saturday peak hours, respectively.
- **Future background (8-year horizon):** Operates with a v/c of 0.63, 0.67 and 0.65 during the AM, PM, and Saturday peak hours, respectively.
- **Future total (3-year horizon):** Operates with a v/c of 0.61, 0.67 and 0.65 during the AM, PM, and Saturday peak hours, respectively.
- **Future total (8-year horizon):** Operates with a v/c of 0.64, 0.69 and 0.68 during the AM, PM, and Saturday peak hours, respectively.

All movements and the overall intersection are projected to operate within the thresholds identified in the Milton TIS Guidelines and Halton TIS Guidelines under all scenarios.

The 50th and 95th percentile turn lane queue lengths are projected to be accommodated within the available turn lane length under all analysis scenarios.

Overall, it is concluded that the traffic associated with the development can be accommodated at this intersection.

Bronte Street South / Central Bronte Site Driveway

The Bronte Street South / Central Bronte Site Driveway intersection is signalized and operates with a cycle length of 80 seconds during the AM, PM, and Saturday peak hours. The following results are projected under each of the analysis scenarios:

- **Existing:** Operates with a v/c of 0.61, 0.60 and 0.55 during the AM, PM, and Saturday peak hours, respectively.
- **Future background (3-year horizon):** Operates with a v/c of 0.65, 0.66 and 0.60 during the AM, PM, and Saturday peak hours, respectively.

- **Future background (8-year horizon):** Operates with a v/c of 0.67, 0.69 and 0.62 during the AM, PM, and Saturday peak hours, respectively.
- **Future total (3-year horizon):** Operates with a v/c of 0.66, 0.71 and 0.65 during the AM, PM, and Saturday peak hours, respectively.
- **Future total (8-year horizon):** Operates with a v/c of 0.69, 0.74 and 0.68 during the AM, PM, and Saturday peak hours, respectively.

All movements and the overall intersection are projected to operate within the thresholds identified in the Milton TIS Guidelines and Halton TIS Guidelines under all scenarios.

The 50th and 95th percentile turn lane queue lengths are projected to be accommodated within the available turn lane length under all analysis scenarios.

Overall, it is concluded that the traffic associated with the development can be accommodated at this intersection.

Derry Road West / Scott Boulevard

The Derry Road West / Scott Boulevard intersection is signalized and operates with a cycle length of 120 seconds during the AM and PM peak hours, and 110 seconds during the Saturday peak hour. Under future conditions, signal timing optimizations were made while maintaining the cycle length and minimum pedestrian walk times. The following results are projected under each of the analysis scenarios:

- **Existing:** Operates with a v/c of 0.69, 0.81 and 0.64 during the AM, PM, and Saturday peak hours, respectively.
- **Future background (3-year horizon):** Operates with a v/c of 0.74, 0.83 and 0.68 during the AM, PM, and Saturday peak hours, respectively.
- **Future background (8-year horizon):** Operates with a v/c of 0.80, 0.86 and 0.70 during the AM, PM, and Saturday peak hours, respectively.
- **Future total (3-year horizon):** Operates with a v/c of 0.77, 0.87 and 0.74 during the AM, PM, and Saturday peak hours, respectively.
- **Future total (8-year horizon):** Operates with a v/c of 0.83, 0.93 and 0.75 during the AM, PM, and Saturday peak hours, respectively.

All movements are projected to operate within the thresholds identified in the Milton TIS Guidelines and Halton TIS Guidelines under all scenarios. However, the overall intersection is projected to exceed these thresholds in some scenarios as follows:

- The overall intersection is projected to operate with a v/c ratio of 0.86, 0.87 and 0.93 during the PM peak hour in the future background (8-year horizon), future total (3-year horizon), and future total (8-year horizon) scenarios respectively. This condition is projected to occur regardless of any development on the site under the future background (8-year horizon) scenario and is not specifically related to site traffic.

Some 50th and 95th percentile turn lane queue lengths are projected to exceed the available turn lane length as follows:

- The westbound left movement is projected to have a 95th percentile queue length which exceeds the available storage during the AM peak hour in the future total (8-year horizon) scenario, during the PM peak hour in the future background (3-year horizon), future background (8-year horizon), future total (3-year horizon), and future total (8-year horizon) scenarios, and during the Saturday peak hour in the future total (8-year horizon) scenario. It should be noted that given the above are all related to the 95th percentile queue, these are expected to occur infrequently. When they occur, westbound through vehicles will either wait behind the left turn queue and will be processed once the light turns green or go around them in the curbside lane. As noted above, the operations analysis results indicate that the queue is cleared each cycle, with a v/c value of less than 1.00. Notwithstanding, consideration could be given to extending the length of this turn lane to accommodate the queues. It's noted that this condition is projected to occur under the future background (3-year horizon) and future background (8-year horizon) scenarios and is not specifically related to site traffic.
- The southbound left movement is projected to have a 50th and 95th percentile queue length that exceeds the available storage under all analysis scenarios. When this occurs, southbound through vehicles will wait behind the left turn queue and will be processed once the light turns green. As noted above, the operations analysis results indicate that the queue is cleared each cycle, with a v/c value of less than 1.00. Notwithstanding, consideration could be given to extending the length of this turn lane to accommodate the queues. It's noted that this is an existing condition and is not a result of future traffic.

While the v/c ratios exceed the thresholds identified in the Milton TIS Guidelines and Halton TIS Guidelines, it's important to note that the intersection is projected to remain operating within capacity under all analysis scenarios. Additionally, it should be noted that queuing conditions such as the above are not uncommon in urban areas. As noted above, consideration could be given to extending the length of the westbound left and southbound left turn lanes to accommodate the turn lane queues.

Overall, it is concluded that the traffic associated with the development can be accommodated at this intersection.

As discussed in **Section 4.1**, while not required to support the proposed development, a sensitivity analysis has also been undertaken which assumes the widening of Derry Road West has been completed by the 8-year horizon. This is discussed further in **Section 4.3**.

Derry Road West / Farmstead Drive

The Derry Road West / Farmstead Drive intersection is signalized and operates with a cycle length of 120 seconds during the AM and PM peak hours, and 110 seconds during the Saturday peak hour. The following results are projected under each of the analysis scenarios:

- **Existing:** Operates with a v/c of 0.48, 0.58 and 0.38 during the AM, PM, and Saturday peak hours, respectively.

- **Future background (3-year horizon):** Operates with a v/c of 0.53, 0.63 and 0.43 during the AM, PM, and Saturday peak hours, respectively.
- **Future background (8-year horizon):** Operates with a v/c of 0.56, 0.66 and 0.45 during the AM, PM, and Saturday peak hours, respectively.
- **Future total (3-year horizon):** Operates with a v/c of 0.53, 0.64 and 0.43 during the AM, PM, and Saturday peak hours, respectively.
- **Future total (8-year horizon):** Operates with a v/c of 0.56, 0.67 and 0.46 during the AM, PM, and Saturday peak hours, respectively.

The overall intersection is projected to operate within the thresholds identified in the Milton TIS Guidelines and Halton TIS Guidelines under all scenarios. However, some movements are projected to exceed these thresholds in some scenarios as follows:

- The southbound left movement is projected to operate with a v/c ratio of 0.95 during the AM peak hour in all scenarios. This is an existing condition and is not a result of future traffic.

The 50th and 95th percentile turn lane queue lengths are projected to be accommodated within the available turn lane length under all analysis scenarios.

Overall, it is concluded that the traffic associated with the development can be accommodated at this intersection.

Derry Road West / Bronte Street South

The Derry Road West / Bronte Street South intersection is signalized and operates with a cycle length of 120 seconds during the AM and PM peak hours, and 110 seconds during the Saturday peak hour. Under future conditions, signal timing optimizations were made while maintaining the cycle length and minimum pedestrian walk times. The following results are projected under each of the analysis scenarios:

- **Existing:** Operates with a v/c of 0.69, 0.72 and 0.59 during the AM, PM, and Saturday peak hours, respectively.
- **Future background (3-year horizon):** Operates with a v/c of 0.77, 0.81 and 0.68 during the AM, PM, and Saturday peak hours, respectively.
- **Future background (8-year horizon):** Operates with a v/c of 0.82, 0.88 and 0.72 during the AM, PM, and Saturday peak hours, respectively.
- **Future total (3-year horizon):** Operates with a v/c of 0.80, 0.87 and 0.73 during the AM, PM, and Saturday peak hours, respectively.
- **Future total (8-year horizon):** Operates with a v/c of 0.85, 0.95 and 0.77 during the AM, PM, and Saturday peak hours, respectively.

Some movements and the overall intersection are projected to exceed the thresholds identified in the Milton TIS Guidelines and Halton TIS Guidelines in some scenarios as follows:

- The westbound through movement is projected to operate with a v/c ratio of 0.90, 0.88 and 0.93 during the PM peak hour in the future background (8-year horizon), future total (3-year horizon), and future

total (8-year horizon) scenarios respectively. This condition is projected to occur regardless of any development on the site under the future background (8-year horizon) scenario and is not specifically related to site traffic.

- The northbound through movement is projected to operate with a v/c ratio of 0.90 during the PM peak hour in the future total (8-year horizon) scenario. While this condition only occurs under future total conditions, it should be noted that the site specific impact on the movement is 0.04-0.06, and the majority (0.05-0.11) of the increase from existing conditions occurs under future background conditions.
- The southbound left movement is projected to operate with a v/c ratio of 0.95 during the PM peak hour in the future total (8-year horizon) scenario.
- The southbound through movement is projected to operate with a v/c ratio of 0.87, 0.86, 0.89, 0.89 and 0.92 during the PM peak hour in the existing, future background (3-year horizon), future background (8-year horizon), future total (3-year horizon) and future total (8-year horizon) respectively. This is an existing condition and is not a result of future traffic.
- The overall intersection is projected to operate with a v/c ratio of 0.85 during the AM peak hour in the future total (8-year horizon), and with a v/c ratio of 0.88, 0.87 and 0.95 during the PM peak hour in the future background (8-year horizon), future total (3-year horizon), and future total (8-year horizon) scenarios respectively. This condition is projected to occur regardless of any development on the site under the future background (8-year horizon) scenario and is not specifically related to site traffic.

The 50th percentile turn lane queue lengths are projected to be accommodated within the available turn lane length under all analysis scenarios. Some 95th percentile turn lane queue lengths are projected to exceed the available turn lane lengths as follows:

- The southbound left movement is projected to have a 95th percentile queue length which exceeds the available storage during the AM peak hour in the future total (8-year horizon) scenario, during the PM peak hour in the future total (3-year horizon), and future total (8-year horizon) scenarios, and during the Saturday peak hour in the future total (8-year horizon) scenario. It should be noted that given the above are all related to the 95th percentile queue, these are expected to occur infrequently. When they occur, southbound through vehicles will wait behind the left turn queue and will be processed once the light turns green. As noted above, the operations analysis results indicate that the queue is cleared each cycle, with a v/c value of less than 1.00. Due to the back to back left turn lanes with the Bronte Street South / Central Bronte Site Driveway intersection, there is no opportunity to extend the length of this turn lane.

While the above v/c ratios exceed the thresholds identified in the Milton TIS Guidelines and Halton TIS Guidelines, it's important to note that the intersection and all movements are projected to remain operating within capacity under all analysis scenarios. Additionally, it should be noted that queuing conditions such as the above are not uncommon in urban areas.

Overall, it is concluded that the traffic associated with the development can be accommodated at this intersection.

As discussed in **Section 4.1**, while not required to support the proposed development, a sensitivity analysis has also been undertaken which assumes the widening of Derry Road West has been completed by the 8-year horizon. This is discussed further in **Section 4.3**.

Unsignalized Intersections Operations

All unsignalized intersections in the study area are projected to operate with an LOS D or better under all analysis scenarios.

The 95th percentile turn lane queue lengths are projected to be accommodated within the available turn lane length under all analysis scenarios.

Overall, it is concluded that the traffic associated with the development can be accommodated at the unsignalized intersections within the study area.

Table 16: Operations Analysis Results – Signalized Intersections

Lane Group	Baseline Existing			Future Background (3-Year Horizon)			Future Background (8-Year Horizon)			Future Total (3-Year Horizon)			Future Total (8-Year Horizon)		
	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)
Bronte St S / Laurier Ave															
EBLTR	0.22 (0.26) [0.17]	B (B) [B]	16.0 (17.2) [15.8]	0.23 (0.29) [0.18]	B (B) [B]	17.1 (19.5) [17.8]	0.25 (0.31) [0.20]	B (C) [B]	18.4 (21.8) [19.4]	0.24 (0.31) [0.20]	B (C) [B]	17.7 (21.8) [19.6]	0.25 (0.36) [0.21]	B (C) [C]	19.1 (26.1) [22.1]
WBL	0.14 (0.24) [0.21]	B (B) [B]	15.5 (17.1) [16.0]	0.14 (0.26) [0.23]	B (B) [B]	16.6 (19.4) [18.0]	0.15 (0.23) [0.24]	B (C) [B]	17.9 (21.2) [19.7]	0.15 (0.23) [0.25]	B (C) [B]	17.2 (21.2) [20.0]	0.16 (0.28) [0.27]	B (C) [C]	18.5 (25.4) [22.5]
WBTR	0.15 (0.12) [0.10]	B (B) [B]	15.5 (16.4) [15.4]	0.16 (0.13) [0.10]	B (B) [B]	16.6 (18.6) [17.3]	0.16 (0.13) [0.11]	B (C) [B]	17.9 (20.7) [18.9]	0.16 (0.13) [0.11]	B (C) [B]	17.2 (20.7) [19.1]	0.17 (0.14) [0.11]	B (C) [C]	18.5 (24.5) [21.5]
NBL	0.03 (0.03) [0.02]	A (A) [A]	3.8 (3.7) [3.7]	0.03 (0.04) [0.02]	A (A) [A]	3.6 (3.4) [3.5]	0.03 (0.04) [0.02]	A (A) [A]	3.4 (3.1) [3.2]	0.03 (0.04) [0.02]	A (A) [A]	3.5 (3.2) [3.2]	0.03 (0.04) [0.03]	A (A) [A]	3.3 (2.7) [2.9]
NBT	0.65 (0.64) [0.63]	A (A) [A]	7.4 (7.0) [6.9]	0.70 (0.69) [0.68]	A (A) [A]	8.0 (7.6) [7.4]	0.73 (0.71) [0.70]	A (A) [A]	8.4 (7.5) [7.5]	0.71 (0.72) [0.72]	A (A) [A]	8.3 (7.8) [7.9]	0.74 (0.72) [0.73]	A (A) [A]	8.6 (7.1) [7.7]
SBL	0.12 (0.31) [0.24]	A (A) [A]	4.2 (4.9) [4.6]	0.14 (0.36) [0.27]	A (A) [A]	4.1 (5.0) [4.5]	0.15 (0.37) [0.28]	A (A) [A]	4.0 (4.8) [4.4]	0.15 (0.38) [0.30]	A (A) [A]	4.0 (5.0) [4.5]	0.16 (0.37) [0.31]	A (A) [A]	3.9 (4.4) [4.3]
SBTR	0.53 (0.68) [0.66]	A (A) [A]	5.9 (7.8) [7.4]	0.58 (0.73) [0.72]	A (A) [A]	6.2 (8.5) [8.3]	0.59 (0.75) [0.74]	A (A) [A]	6.2 (8.5) [8.6]	0.61 (0.75) [0.74]	A (A) [A]	6.5 (8.5) [8.6]	0.62 (0.75) [0.76]	A (A) [A]	6.4 (7.9) [8.5]
Overall	0.55 (0.59) [0.55]	A (A) [A]	7.9 (8.6) [8.1]	0.60 (0.64) [0.61]	A (A) [A]	8.4 (9.3) [8.8]	0.63 (0.67) [0.65]	A (A) [A]	8.6 (9.5) [9.1]	0.61 (0.67) [0.65]	A (A) [A]	8.6 (9.5) [9.3]	0.64 (0.69) [0.68]	A (A) [A]	8.8 (9.4) [9.3]
Bronte St S / Central Bronte Site Dwy															

Lane Group	Baseline Existing			Future Background (3-Year Horizon)			Future Background (8-Year Horizon)			Future Total (3-Year Horizon)			Future Total (8-Year Horizon)		
	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)
EBL	0.44 (0.32) [0.36]	B (B) [B]	18.0 (16.4) [14.6]	0.47 (0.35) [0.38]	B (B) [B]	19.8 (19.1) [16.2]	0.49 (0.37) [0.39]	C (C) [B]	21.4 (20.9) [17.1]	0.44 (0.50) [0.53]	B (B) [B]	18.3 (19.0) [16.7]	0.45 (0.52) [0.54]	B (C) [B]	19.5 (20.9) [17.8]
EBR	0.05 (0.07) [0.07]	B (B) [B]	15.9 (15.2) [13.2]	0.05 (0.07) [0.07]	B (B) [B]	17.4 (17.6) [14.6]	0.05 (0.11) [0.07]	B (B) [B]	18.7 (19.3) [15.3]	0.06 (0.25) [0.12]	B (B) [B]	16.1 (17.2) [14.0]	0.06 (0.29) [0.16]	B (B) [B]	17.1 (19.0) [15.1]
NBL	0.14 (0.29) [0.21]	A (A) [A]	5.1 (6.9) [6.9]	0.14 (0.31) [0.23]	A (A) [A]	4.9 (6.7) [6.8]	0.14 (0.32) [0.25]	A (A) [A]	4.6 (6.5) [6.8]	0.24 (0.70) [0.58]	A (B) [B]	6.7 (19.7) [12.8]	0.24 (0.73) [0.61]	A (C) [B]	6.5 (22.6) [14.3]
NBT	0.66 (0.72) [0.64]	A (B) [A]	8.9 (11.2) [10.0]	0.70 (0.77) [0.69]	A (B) [B]	9.3 (12.2) [10.9]	0.73 (0.79) [0.72]	A (B) [B]	9.7 (12.6) [11.5]	0.75 (0.81) [0.72]	B (B) [B]	12.6 (15.2) [13.0]	0.79 (0.83) [0.75]	B (B) [B]	13.6 (16.0) [13.6]
SBTR	0.31 (0.48) [0.44]	A (A) [A]	5.6 (7.4) [7.7]	0.33 (0.50) [0.47]	A (A) [A]	5.5 (7.1) [7.6]	0.34 (0.51) [0.49]	A (A) [A]	5.3 (6.9) [7.6]	0.38 (0.57) [0.54]	A (A) [A]	7.1 (9.0) [9.3]	0.39 (0.58) [0.56]	A (A) [A]	7.0 (8.9) [9.4]
Overall	0.61 (0.60) [0.55]	A (A) [A]	8.7 (9.8) [9.4]	0.65 (0.66) [0.60]	A (B) [A]	8.9 (10.3) [9.9]	0.67 (0.69) [0.62]	A (B) [B]	9.1 (10.5) [10.2]	0.66 (0.71) [0.65]	B (B) [B]	10.9 (13.2) [11.9]	0.69 (0.74) [0.68]	B (B) [B]	11.4 (13.8) [12.4]
Derry Rd W / Scott Blvd															
EBL	0.21 (0.41) [0.17]	C (C) [B]	22.6 (23.3) [18.9]	0.23 (0.46) [0.19]	C (C) [B]	22.7 (25.7) [19.6]	0.23 (0.52) [0.20]	C (C) [B]	23.2 (27.7) [19.9]	0.24 (0.48) [0.21]	C (C) [C]	23.9 (28.3) [23.0]	0.24 (0.55) [0.23]	C (C) [C]	24.7 (29.3) [24.1]
EBTR	0.54 (0.49) [0.37]	C (C) [C]	33.1 (32.0) [26.0]	0.64 (0.64) [0.46]	D (D) [C]	35.3 (37.8) [27.9]	0.73 (0.72) [0.51]	D (D) [C]	38.5 (40.6) [29.1]	0.69 (0.75) [0.56]	D (D) [C]	38.0 (43.7) [33.5]	0.78 (0.75) [0.64]	D (D) [D]	42.2 (41.4) [36.4]
WBL	0.60 (0.74) [0.60]	B (C) [A]	18.3 (34.2) [9.4]	0.65 (0.73) [0.64]	C (C) [A]	20.1 (23.1) [9.2]	0.64 (0.75) [0.66]	B (C) [A]	18.3 (30.1) [9.7]	0.69 (0.76) [0.70]	C (C) [B]	22.4 (30.3) [12.2]	0.66 (0.85) [0.71]	B (D) [B]	19.8 (40.6) [11.6]

Lane Group	Baseline Existing			Future Background (3-Year Horizon)			Future Background (8-Year Horizon)			Future Total (3-Year Horizon)			Future Total (8-Year Horizon)		
	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)
WBTR	0.41 (0.66) [0.42]	C (B) [B]	22.2 (16.2) [14.6]	0.47 (0.74) [0.49]	C (B) [B]	22.9 (19.4) [14.4]	0.49 (0.79) [0.53]	C (C) [B]	21.6 (21.0) [14.6]	0.49 (0.77) [0.52]	C (C) [B]	23.9 (20.2) [15.8]	0.51 (0.82) [0.56]	C (C) [B]	22.5 (21.8) [15.7]
NBL	0.35 (0.27) [0.41]	D (D) [D]	44.8 (43.8) [47.1]	0.34 (0.28) [0.39]	D (D) [D]	44.0 (44.0) [46.5]	0.32 (0.27) [0.38]	D (D) [D]	42.7 (43.8) [45.7]	0.33 (0.27) [0.36]	D (D) [D]	43.4 (43.5) [44.9]	0.31 (0.27) [0.35]	D (D) [D]	42.0 (43.4) [44.3]
NBTR	0.79 (0.77) [0.40]	E (E) [D]	61.5 (59.2) [46.5]	0.82 (0.76) [0.53]	E (E) [D]	64.5 (59.1) [48.3]	0.84 (0.77) [0.58]	E (E) [D]	64.6 (59.2) [49.6]	0.83 (0.77) [0.62]	E (E) [D]	65.2 (59.2) [50.3]	0.84 (0.77) [0.65]	E (E) [D]	63.7 (59.3) [51.7]
SBL	0.71 (0.79) [0.61]	C (D) [C]	33.0 (43.7) [33.6]	0.76 (0.87) [0.63]	D (E) [C]	37.4 (56.3) [34.8]	0.87 (0.88) [0.66]	D (E) [D]	51.8 (58.0) [36.2]	0.78 (0.94) [0.68]	D (E) [D]	38.9 (71.1) [36.4]	0.89 (0.92) [0.71]	E (E) [D]	56.5 (66.6) [38.5]
SBTR	0.18 (0.25) [0.24]	C (C) [C]	23.0 (27.9) [28.6]	0.18 (0.26) [0.24]	C (C) [C]	23.8 (29.5) [28.9]	0.19 (0.26) [0.24]	C (C) [C]	25.0 (29.5) [29.0]	0.18 (0.27) [0.24]	C (C) [C]	23.5 (29.6) [28.3]	0.18 (0.26) [0.24]	C (C) [C]	24.6 (29.3) [28.6]
Overall	0.69 (0.81) [0.64]	C (C) [C]	33.3 (30.6) [24.2]	0.74 (0.83) [0.68]	C (C) [C]	34.8 (32.4) [24.5]	0.80 **(0.86)** [0.70]	D (C) [C]	36.7 (34.4) [25.0]	0.77 **(0.87)** [0.74]	D (D) [C]	36.2 (36.2) [26.9]	0.83 **(0.93)** [0.75]	D (D) [C]	38.5 (36.8) [27.7]
Derry Rd W / Farmstead Dr															
EBL	0.10 (0.19) [0.07]	A (A) [A]	3.9 (6.0) [3.7]	0.11 (0.22) [0.08]	A (A) [A]	3.7 (7.5) [3.7]	0.12 (0.24) [0.08]	A (A) [A]	4.3 (7.9) [4.1]	0.11 (0.23) [0.08]	A (A) [A]	4.0 (7.9) [4.0]	0.12 (0.25) [0.09]	A (A) [A]	4.6 (8.2) [4.5]
EBT	0.42 (0.43) [0.37]	A (B) [A]	6.4 (13.3) [6.1]	0.48 (0.49) [0.43]	A (B) [A]	6.3 (13.2) [6.1]	0.52 (0.52) [0.46]	A (B) [A]	7.5 (13.0) [6.4]	0.48 (0.49) [0.43]	A (B) [A]	6.6 (13.2) [6.6]	0.52 (0.53) [0.47]	A (B) [A]	7.9 (13.6) [6.8]
EBR	0.04 (0.04) [0.03]	A (B) [A]	4.5 (19.1) [5.7]	0.04 (0.04) [0.03]	A (B) [A]	2.1 (20.0) [3.7]	0.04 (0.04) [0.03]	A (B) [A]	2.7 (17.0) [2.8]	0.04 (0.04) [0.04]	A (B) [A]	3.0 (16.4) [5.1]	0.04 (0.04) [0.04]	A (B) [A]	4.3 (14.7) [4.8]

Lane Group	Baseline Existing			Future Background (3-Year Horizon)			Future Background (8-Year Horizon)			Future Total (3-Year Horizon)			Future Total (8-Year Horizon)		
	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)
WBL	0.21 (0.32) [0.22]	A (A) [A]	4.8 (6.5) [4.1]	0.23 (0.37) [0.25]	A (A) [A]	5.5 (7.3) [4.7]	0.25 (0.39) [0.27]	A (A) [A]	6.1 (8.0) [5.1]	0.23 (0.37) [0.25]	A (A) [A]	5.6 (7.4) [4.8]	0.25 (0.39) [0.27]	A (A) [A]	6.2 (8.1) [5.2]
WBTR	0.27 (0.56) [0.35]	A (B) [A]	7.4 (12.2) [7.0]	0.31 (0.62) [0.40]	A (B) [A]	7.8 (13.2) [7.7]	0.33 (0.65) [0.42]	A (B) [A]	8.2 (13.8) [8.1]	0.31 (0.63) [0.41]	A (B) [A]	7.9 (13.5) [7.9]	0.34 (0.67) [0.44]	A (B) [A]	8.3 (14.1) [8.3]
NBL	0.23 (0.24) [0.32]	D (D) [D]	48.3 (45.0) [46.2]	0.22 (0.24) [0.30]	D (D) [D]	47.7 (45.0) [45.3]	0.21 (0.24) [0.29]	D (D) [D]	47.3 (45.0) [45.0]	0.25 (0.29) [0.37]	D (D) [D]	47.9 (45.6) [46.0]	0.24 (0.29) [0.36]	D (D) [D]	47.5 (45.6) [45.7]
NBTR	0.57 (0.72) [0.42]	D (E) [D]	53.7 (57.5) [47.0]	0.62 (0.72) [0.49]	E (E) [D]	55.0 (57.5) [47.3]	0.63 (0.72) [0.52]	E (E) [D]	55.4 (57.5) [47.6]	0.62 (0.72) [0.50]	D (E) [D]	55.0 (57.5) [47.3]	0.63 (0.72) [0.52]	E (E) [D]	55.4 (57.5) [47.7]
SBL	**0.95** (0.33) [0.53]	F (D) [D]	149.3 (48.1) [53.3]	**0.95** (0.33) [0.53]	F (D) [D]	149.0 (48.1) [52.8]	**0.95** (0.33) [0.53]	F (D) [D]	148.8 (48.1) [52.6]	**0.95** (0.33) [0.53]	F (D) [D]	149.0 (48.1) [52.7]	**0.95** (0.33) [0.53]	F (D) [D]	148.8 (48.1) [52.5]
SBTR	0.31 (0.40) [0.37]	D (D) [D]	49.0 (46.5) [46.4]	0.30 (0.40) [0.35]	D (D) [D]	48.3 (46.5) [45.6]	0.29 (0.40) [0.34]	D (D) [D]	47.9 (46.5) [45.3]	0.30 (0.40) [0.35]	D (D) [D]	48.3 (46.5) [45.5]	0.29 (0.40) [0.34]	D (D) [D]	47.8 (46.5) [45.1]
Overall	0.48 (0.58) [0.38]	B (B) [B]	18.2 (18.9) [13.9]	0.53 (0.63) [0.43]	B (B) [B]	17.5 (18.9) [13.5]	0.56 (0.66) [0.45]	B (B) [B]	17.7 (18.8) [13.5]	0.53 (0.64) [0.43]	B (B) [B]	17.6 (19.0) [13.8]	0.56 (0.67) [0.46]	B (B) [B]	17.9 (19.2) [13.8]
Derry Rd W / Bronte St S															
EBL	0.44 (0.64) [0.36]	B (C) [B]	14.5 (20.5) [16.4]	0.52 (0.77) [0.46]	B (C) [B]	14.9 (29.4) [17.8]	0.58 (0.85) [0.53]	B (D) [B]	14.6 (43.8) [19.3]	0.54 (0.83) [0.53]	B (D) [C]	16.0 (42.7) [20.1]	0.61 (0.93) [0.60]	B (E) [C]	16.0 (60.1) [24.8]
EBTR	0.68 (0.65) [0.51]	C (C) [C]	27.8 (30.2) [24.8]	0.78 (0.77) [0.60]	C (C) [C]	30.4 (30.9) [26.7]	0.82 (0.80) [0.66]	C (C) [C]	29.1 (30.6) [27.5]	0.80 (0.76) [0.63]	C (C) [C]	31.0 (28.7) [26.1]	0.84 (0.80) [0.68]	C (C) [C]	30.5 (29.7) [26.3]

Lane Group	Baseline Existing			Future Background (3-Year Horizon)			Future Background (8-Year Horizon)			Future Total (3-Year Horizon)			Future Total (8-Year Horizon)		
	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)
WBL	0.36 (0.52) [0.28]	C (B) [B]	23.6 (17.4) [16.5]	0.46 (0.66) [0.37]	D (C) [C]	35.0 (25.7) [22.6]	0.52 (0.78) [0.42]	D (D) [C]	42.3 (36.9) [27.5]	0.48 (0.69) [0.39]	D (C) [C]	37.5 (28.4) [24.6]	0.53 (0.82) [0.45]	D (D) [C]	44.6 (41.2) [28.9]
WBT	0.38 (0.68) [0.45]	C (C) [C]	22.6 (31.4) [24.3]	0.43 (0.83) [0.54]	C (D) [C]	27.2 (39.7) [28.8]	0.44 **(0.90)** [0.59]	C (D) [C]	27.1 (46.9) [32.1]	0.46 **(0.88)** [0.61]	C (D) [C]	28.5 (43.0) [31.0]	0.46 **(0.93)** [0.66]	C (D) [C]	28.3 (47.6) [34.8]
WBR	0.08 (0.09) [0.13]	B (D) [C]	13.2 (53.8) [23.1]	0.09 (0.11) [0.14]	C (D) [D]	33.4 (53.4) [38.2]	0.10 (0.12) [0.15]	D (E) [D]	40.8 (55.2) [52.8]	0.09 (0.11) [0.14]	D (D) [D]	36.0 (49.8) [42.8]	0.10 (0.13) [0.15]	D (D) [E]	43.4 (44.1) [57.4]
NBL	0.44 (0.59) [0.48]	C (C) [C]	28.6 (27.0) [28.0]	0.51 (0.74) [0.55]	C (C) [C]	28.5 (33.9) [27.8]	0.58 (0.84) [0.60]	C (D) [C]	30.1 (46.3) [28.2]	0.52 (0.82) [0.60]	C (D) [C]	28.1 (43.1) [28.1]	0.60 (0.92) [0.66]	C (E) [C]	29.6 (64.0) [30.1]
NBT	0.81 (0.73) [0.70]	D (D) [D]	53.1 (43.2) [44.1]	0.82 (0.78) [0.72]	D (D) [D]	52.4 (42.3) [41.9]	0.83 (0.84) [0.71]	D (D) [D]	51.6 (47.3) [40.2]	0.84 (0.82) [0.77]	D (D) [D]	53.2 (44.2) [43.2]	0.84 **(0.90)** [0.77]	D (D) [D]	51.6 (53.5) [41.9]
NBR	0.13 (0.09) [0.09]	D (C) [C]	35.9 (30.9) [33.6]	0.17 (0.10) [0.10]	C (C) [C]	34.5 (28.0) [31.0]	0.28 (0.11) [0.11]	C (C) [C]	34.4 (28.5) [29.7]	0.18 (0.10) [0.10]	C (C) [C]	33.7 (26.9) [29.4]	0.28 (0.13) [0.11]	C (C) [C]	33.3 (28.0) [28.3]
SBL	0.60 (0.52) [0.54]	C (C) [C]	30.9 (24.8) [26.6]	0.72 (0.68) [0.62]	D (C) [C]	36.3 (29.5) [27.4]	0.86 (0.75) [0.67]	E (C) [C]	56.9 (34.2) [28.2]	0.77 (0.87) [0.75]	D (D) [C]	40.3 (48.2) [32.3]	0.93 **(0.95)** [0.82]	E (E) [D]	72.3 (66.6) [37.8]
SBT	0.61 **(0.87)** [0.78]	D (D) [D]	42.3 (54.6) [47.6]	0.64 **(0.86)** [0.81]	D (D) [D]	41.5 (49.6) [46.4]	0.66 **(0.89)** [0.81]	D (D) [D]	41.7 (52.9) [45.4]	0.64 **(0.89)** [0.83]	D (D) [D]	40.7 (50.8) [46.5]	0.66 **(0.92)** [0.85]	D (E) [D]	40.6 (56.3) [46.9]
SBR	0.09 (0.21) [0.15]	C (C) [C]	34.7 (32.3) [32.9]	0.10 (0.33) [0.18]	C (C) [C]	33.3 (30.6) [30.9]	0.11 (0.36) [0.23]	C (C) [C]	32.8 (30.5) [30.2]	0.10 (0.32) [0.20]	C (C) [C]	32.3 (29.3) [29.2]	0.11 (0.36) [0.25]	C (C) [C]	31.7 (29.5) [28.8]
Overall	0.69 (0.72) [0.59]	C (C) [C]	30.6 (34.5) [29.7]	0.77 (0.81) [0.68]	C (D) [C]	33.2 (37.0) [31.7]	0.82 **(0.88)** [0.72]	C (D) [C]	34.4 (41.6) [33.3]	0.80 **(0.87)** [0.73]	C (D) [C]	34.1 (39.8) [33.0]	**0.85** **(0.95)** [0.77]	D (D) [D]	36.1 (46.1) [35.3]

Notes:
1. XX (XX) [XX] – AM Peak (PM Peak) [SAT Peak]

Table 17 Queue Analysis Results – Signalized Intersections

Lane Group	Approximate Turn Lane Length (m)	Baseline Existing		Future Background (3-Year Horizon)		Future Background (8-Year Horizon)		Future Total (3-Year Horizon)		Future Total (8-Year Horizon)	
		50%ile Queue (m)	95%ile Queue (m)	50%ile Queue (m)	95%ile Queue (m)	50%ile Queue (m)	95%ile Queue (m)	50%ile Queue (m)	95%ile Queue (m)	50%ile Queue (m)	95%ile Queue (m)
Bronte St S / Laurier Ave											
WBL	25	1.9 (3.5) [2.9]	8.7 (14.0) [11.8]	2.1 (4.1) [3.4]	9.5 (16.2) [13.8]	2.3 (4.6) [3.9]	10.3 (17.5) [15.1]	2.2 (4.5) [3.9]	9.9 (17.9) [15.1]	2.4 (6.3) [4.5]	10.6 (18.0) [16.7]
NBL	50	0.4 (0.3) [0.2]	1.8 (1.8) [1.2]	0.4 (0.3) [0.2]	1.8 (1.8) [1.2]	0.4 (0.3) [0.2]	1.7 (1.7) [1.2]	0.4 (0.3) [0.2]	1.8 (1.7) [1.2]	0.4 (0.3) [0.2]	1.7 (1.7) [1.1]
SBL	30	1.3 (3.9) [2.9]	4.6 (12.0) [8.5]	1.3 (4.1) [3.0]	4.8 (13.4) [9.0]	1.4 (4.2) [3.0]	4.8 (13.6) [9.2]	1.3 (4.2) [3.1]	4.8 (13.9) [9.6]	1.4 (4.3) [3.1]	4.8 (14.4) [9.5]
Bronte St S / Central Bronte Site Dwy											
EBR	30	0.0 (0.0) [0.0]	9.2 (11.3) [9.7]	0.0 (0.0) [0.0]	9.9 (12.6) [10.7]	0.0 (1.2) [0.0]	10.4 (14.5) [11.0]	0.0 (5.5) [0.3]	10.9 (24.8) [14.7]	0.0 (8.1) [2.0]	11.0 (27.4) [18.6]
NBL	50	2.4 (3.5) [2.7]	8.0 (11.8) [9.3]	2.4 (3.6) [2.8]	8.1 (11.9) [10.0]	2.4 (3.6) [2.8]	8.0 (12.5) [10.4]	3.8 (9.9) [7.8]	12.4 (#46.7) [30.0]	4.0 (10.9) [8.3]	12.5 (#49.6) [32.5]
Derry Rd W / Scott Blvd											
EBL	55	9.6 (13.4) [5.5]	21.2 (23.1) [14.4]	9.8 (11.9) [5.5]	20.2 (23.5) [13.4]	9.1 (11.4) [5.6]	19.8 (24.4) [13.1]	10.0 (11.0) [5.8]	20.2 (23.7) [13.4]	8.9 (11.5) [6.0]	20.1 (24.7) [12.9]
WBL	90	36.5 (52.3) [39.2]	#71.4 (#82.5) [51.2]	36.8 (23.8) [12.8]	#78.8 **(m#95.3)** [48.4]	34.0 (30.9) [13.2]	#76.2 **(m#104.6)** [49.4]	39.6 (35.5) [17.2]	#73.9 **(m#126.3)** [#80.3]	36.2 (41.8) [17.1]	**#93.0 (m#124.8) [#93.3]**

Lane Group	Approximate Turn Lane Length (m)	Baseline Existing		Future Background (3-Year Horizon)		Future Background (8-Year Horizon)		Future Total (3-Year Horizon)		Future Total (8-Year Horizon)	
		50%ile Queue (m)	95%ile Queue (m)	50%ile Queue (m)	95%ile Queue (m)	50%ile Queue (m)	95%ile Queue (m)	50%ile Queue (m)	95%ile Queue (m)	50%ile Queue (m)	95%ile Queue (m)
NBL	35	16.4 (12.4) [12.4]	28.1 (23.1) [23.8]	16.2 (12.4) [12.4]	28.1 (23.1) [23.5]	16.0 (12.4) [12.3]	27.1 (23.1) [23.2]	16.0 (12.4) [12.2]	28.1 (23.0) [22.9]	15.8 (12.3) [12.1]	26.8 (23.0) [22.6]
SBL	35	**47.0 (42.6) [36.9]**	**71.5 (#91.6) [49.1]**	**46.1 (46.6) [36.9]**	**#81.8 (#87.2) [52.0]**	**50.5 (47.9) [36.4]**	**#96.6 (#79.5) [52.9]**	**47.0 (~51.8) [37.4]**	**#86.7 (#93.3) [54.4]**	**53.6 (49.7) [36.9]**	**#100.7 (#85.3) [#59.4]**
Derry Rd W / Farmstead Dr											
EBL	70	2.4 (0.9) [1.3]	m5.1 (m8.9) [m2.6]	1.7 (0.8) [1.0]	m3.9 (m7.7) [m2.4]	1.4 (0.9) [1.0]	m4.0 (m5.7) [m2.4]	1.6 (0.9) [0.9]	m3.9 (m7.3) [m2.5]	1.6 (0.9) [0.9]	m4.0 (m5.3) [m2.5]
EBR	45	0.1 (0.8) [0.1]	m0.3 (m11.5) [m0.7]	0.2 (0.8) [0.1]	m0.2 (m8.5) [m0.2]	0.1 (1.0) [0.3]	m0.2 (m6.4) [m0.1]	0.2 (1.5) [0.3]	m0.2 (m10.1) [m0.4]	0.2 (2.1) [0.2]	m0.2 (m7.9) [m0.4]
WBL	55	3.8 (7.9) [3.8]	10.5 (18.3) [10.8]	3.9 (7.9) [4.1]	10.9 (18.3) [11.4]	4.1 (7.9) [4.2]	11.1 (18.3) [11.7]	3.9 (7.9) [4.1]	11.0 (18.3) [11.5]	4.1 (7.9) [4.3]	11.1 (18.3) [11.7]
NBL	50	8.3 (9.5) [10.0]	17.5 (19.1) [20.4]	8.2 (9.5) [9.9]	17.3 (19.1) [20.0]	8.2 (9.5) [9.8]	17.2 (19.1) [19.9]	9.4 (11.8) [12.3]	19.1 (22.6) [23.5]	9.3 (11.8) [12.2]	19.1 (22.6) [23.4]
SBL	35	~15.3 (4.7) [8.0]	#34.2 (12.5) [18.2]	~15.0 (4.7) [8.0]	#34.0 (12.5) [18.1]	~14.6 (4.7) [7.9]	#34.2 (12.5) [18.1]	~15.1 (4.7) [7.9]	#34.1 (12.5) [18.1]	~14.5 (4.7) [7.9]	#34.3 (12.5) [18.1]
Derry Rd W / Bronte St S											
EBL	150	18.8 (31.6) [13.9]	36.4 (m44.4) [23.1]	19.2 (17.3) [13.7]	m38.1 (m#83.1) [25.0]	19.5 (30.7) [12.5]	m34.2 (m#91.7) [27.2]	20.1 (27.6) [13.7]	m37.8 (m#89.4) [m25.5]	21.3 (~44.4) [14.2]	m32.8 (m#85.2) [m#35.0]

Lane Group	Approximate Turn Lane Length (m)	Baseline Existing		Future Background (3-Year Horizon)		Future Background (8-Year Horizon)		Future Total (3-Year Horizon)		Future Total (8-Year Horizon)	
		50%ile Queue (m)	95%ile Queue (m)	50%ile Queue (m)	95%ile Queue (m)	50%ile Queue (m)	95%ile Queue (m)	50%ile Queue (m)	95%ile Queue (m)	50%ile Queue (m)	95%ile Queue (m)
WBL	110	8.7 (25.6) [10.2]	21.6 (22.5) [20.2]	9.3 (28.2) [11.8]	33.8 (#47.4) [30.1]	10.1 (31.3) [12.3]	37.6 (#61.7) [37.7]	9.7 (28.3) [11.8]	34.2 (#44.5) [32.1]	11.2 (30.5) [13.7]	37.8 (#60.9) [38.3]
WBR	85	0.0 (10.6) [0.0]	6.4 (21.9) [14.8]	0.0 (12.3) [0.0]	17.5 (18.1) [24.3]	0.0 (13.6) [0.0]	21.5 (23.5) [33.5]	0.0 (12.2) [0.0]	18.4 (17.3) [25.9]	0.0 (15.1) [0.0]	22.5 (23.1) [34.6]
NBL	120	24.5 (25.9) [21.1]	38.3 (41.1) [31.7]	28.6 (29.7) [22.1]	40.1 (#53.1) [33.9]	31.0 (31.5) [22.5]	42.6 (#72.4) [34.5]	29.3 (29.9) [21.4]	41.4 (#66.3) [33.8]	31.0 (34.1) [22.0]	43.5 (#85.1) [#36.6]
NBR	175	0.0 (0.0) [0.0]	17.5 (14.2) [14.4]	2.8 (0.0) [0.0]	20.4 (13.7) [14.2]	13.6 (0.3) [0.0]	33.0 (15.2) [14.2]	3.8 (0.0) [0.0]	21.6 (13.7) [13.8]	13.8 (2.8) [0.0]	33.6 (17.9) [14.2]
SBL	65	28.2 (26.2) [29.2]	43.3 (41.7) [41.4]	33.5 (30.0) [30.6]	#47.1 (43.4) [44.7]	36.1 (31.8) [31.5]	#62.3 (#53.0) [46.1]	35.1 (35.2) [34.0]	#51.7 **(#71.6)** [#64.2]	36.9 (38.9) [35.2]	**#71.9 (#93.0) [#73.1]**
SBR	130	0.0 (6.0) [0.0]	14.7 (25.4) [17.2]	0.0 (19.8) [2.0]	15.0 (41.0) [19.3]	0.0 (23.5) [6.2]	15.0 (47.8) [24.0]	0.0 (20.2) [4.2]	14.9 (42.3) [21.1]	0.0 (24.1) [8.3]	14.9 (49.2) [26.9]

Notes:
1. XX (XX) [XX] – AM Peak (PM Peak) [SAT Peak]

Table 18: Operations Analysis Results – Unsignalized Intersections

Lane Group	Baseline Existing			Future Background (3-Year Horizon)			Future Background (8-Year Horizon)			Future Total (3-Year Horizon)			Future Total (8-Year Horizon)		
	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)
Bronte Street S / Vanier Dr															
WBLR	0.09 (0.09) [0.09]	C (C) [C]	15.5 (17.4) [15.6]	0.10 (0.11) [0.11]	C (C) [C]	16.9 (20.6) [17.7]	0.11 (0.13) [0.12]	C (C) [C]	18.3 (22.9) [19.2]	0.12 (0.19) [0.16]	C (D) [C]	17.8 (25.1) [20.7]	0.14 (0.21) [0.18]	C (D) [C]	19.4 (28.9) [23.0]
SBTL	0.01 (0.04) [0.01]	A (A) [A]	0.2 (1.2) [0.4]	0.01 (0.05) [0.02]	A (A) [A]	0.3 (1.6) [0.5]	0.01 (0.05) [0.02]	A (A) [A]	0.3 (2.1) [0.6]	0.01 (0.05) [0.02]	A (A) [A]	0.3 (2.2) [0.7]	0.01 (0.06) [0.02]	A (A) [A]	0.3 (2.9) [0.8]
Bronte St S / North Bronte Site Dwy															
EBLR	0.01 (0.01) [0.04]	B (A) [C]	13.3 (0.0) [16.2]	0.02 (0.03) [0.04]	B (A) [C]	14.1 (0.0) [18.5]	0.02 (0.03) [0.05]	B (A) [C]	14.7 (0.0) [20.3]	0.02 (0.03) [0.07]	B (C) [C]	14.7 (23.5) [21.4]	0.02 (0.03) [0.08]	C (D) [C]	15.3 (26.9) [24.1]
NBL	0.01 (0.00) [0.00]	B (A) [A]	10.1 (0.0) [0.0]	0.01 (0.00) [0.00]	B (A) [A]	10.6 (0.0) [0.0]	0.01 (0.00) [0.00]	B (A) [A]	10.8 (0.0) [0.0]	0.01 (0.00) [0.00]	B (A) [A]	10.9 (0.0) [0.0]	0.01 (0.00) [0.00]	B (A) [A]	11.2 (0.0) [0.0]
Bronte St S / South Bronte Site Dwy															
EBR	0.05 (0.03) [0.05]	A (A) [A]	9.4 (9.3) [9.2]	0.05 (0.04) [0.05]	A (A) [A]	9.5 (9.4) [9.2]	0.05 (0.04) [0.05]	A (A) [A]	9.5 (9.6) [9.2]	0.06 (0.05) [0.08]	A (A) [A]	9.3 (9.4) [9.3]	0.06 (0.05) [0.08]	A (A) [A]	9.3 (9.4) [9.4]
Derry Rd W / Derry Site Dwy															
EBL	0.13 (0.15) [0.10]	A (B) [B]	9.5 (12.5) [10.3]	0.14 (0.17) [0.11]	A (B) [B]	9.8 (13.7) [10.8]	0.15 (0.19) [0.12]	B (B) [B]	10.1 (14.6) [11.2]	0.18 (0.33) [0.22]	B (C) [B]	10.2 (16.1) [11.9]	0.19 (0.36) [0.23]	B (C) [B]	10.4 (17.6) [12.4]

Lane Group	Baseline Existing			Future Background (3-Year Horizon)			Future Background (8-Year Horizon)			Future Total (3-Year Horizon)			Future Total (8-Year Horizon)		
	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)
SBR	0.10 (0.19) [0.18]	A (B) [B]	9.9 (11.1) [10.9]	0.11 (0.18) [0.18]	A (B) [B]	10.0 (10.7) [10.9]	0.11 (0.18) [0.18]	B (B) [B]	10.1 (10.6) [10.9]	0.14 (0.29) [0.31]	B (B) [B]	10.2 (11.5) [11.8]	0.15 (0.30) [0.31]	B (B) [B]	10.3 (11.7) [11.8]

Notes:
1. XX (XX) [XX] – AM Peak (PM Peak) [SAT Peak]

Table 19 Queue Analysis Results – Unsignalized Intersections

Lane Group	Approximate Turn Lane Length (m)	Baseline Existing	Future Background (3-Year Horizon)	Future Background (8-Year Horizon)	Future Total (3-Year Horizon)	Future Total (8-Year Horizon)
		95%ile Queue (m)	95%ile Queue (m)	95%ile Queue (m)	95%ile Queue (m)	95%ile Queue (m)
Bronte Street S / Vanier Dr						
WBL	45	0.2 (1.0) [0.4]	0.2 (1.2) [0.4]	0.2 (1.3) [0.5]	3.3 (5.3) [4.6]	3.7 (6.3) [5.3]
Bronte St S / North Bronte Site Dwy						
NBL	25	0.2 (0.0) [0.0]	0.2 (0.0) [0.0]	0.2 (0.0) [0.0]	0.2 (0.0) [0.0]	0.2 (0.0) [0.0]
Derry Rd W / Derry Site Dwy						
EBL	40	3.6 (4.3) [2.7]	3.9 (5.0) [3.0]	4.1 (5.5) [3.2]	5.3 (11.4) [6.8]	5.5 (12.8) [7.3]

Notes:
1. XX (XX) [XX] – AM Peak (PM Peak) [SAT Peak]

4.3 Sensitivity Analysis

4.3.1 Overview

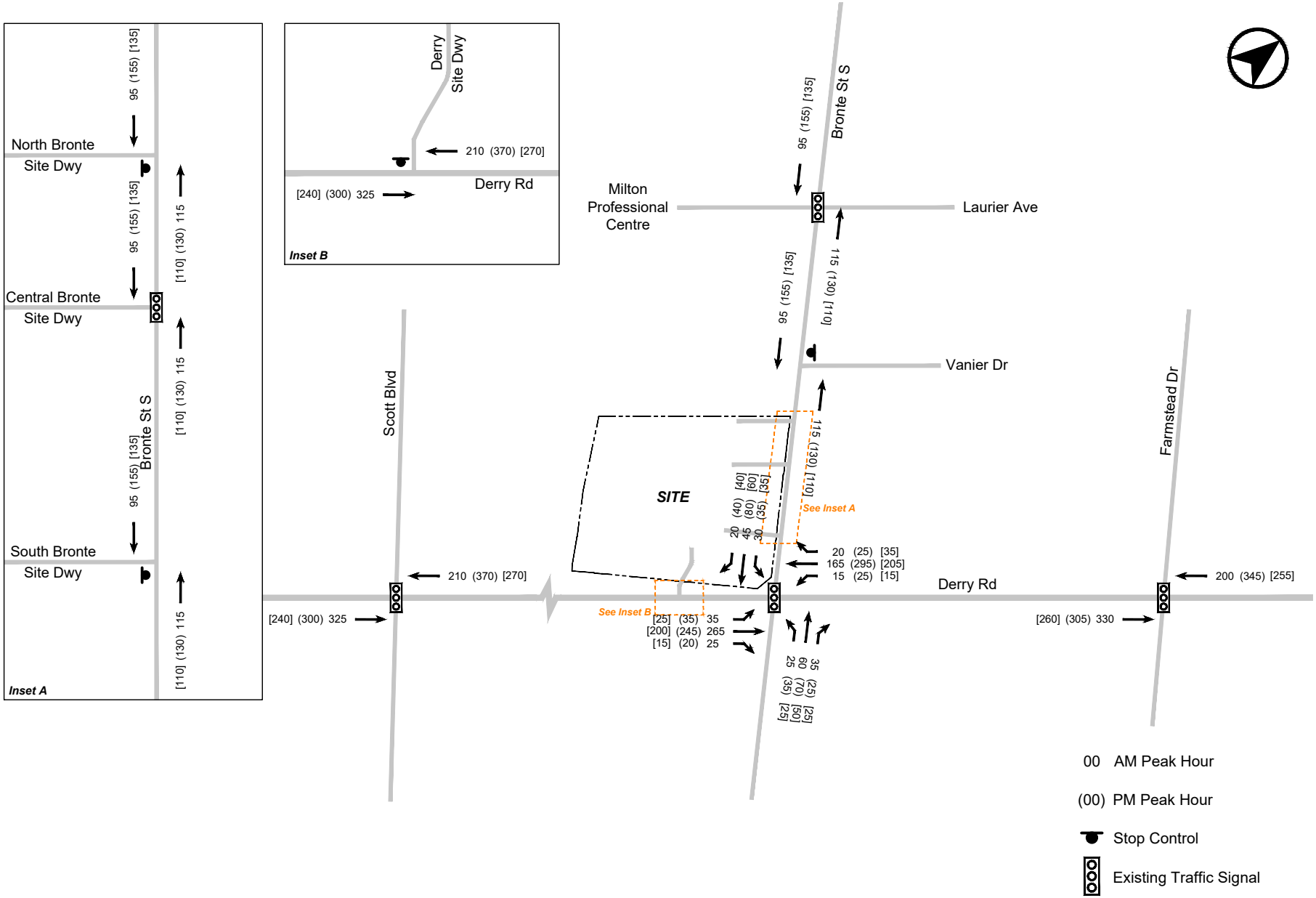
As discussed in **Section 4.1**, a sensitivity analysis has also been undertaken which assumes the widening of Derry Road West has been completed by the 8-year horizon. The analysis assumes an additional eastbound and westbound through lane to all intersections along Derry Road West, with existing turn lane configurations maintained, as shown in **Figure 7**.

4.3.2 Traffic Volume Projections

Existing traffic volumes, background development traffic volumes and site traffic volumes remain consistent with those outlined in the base analysis.

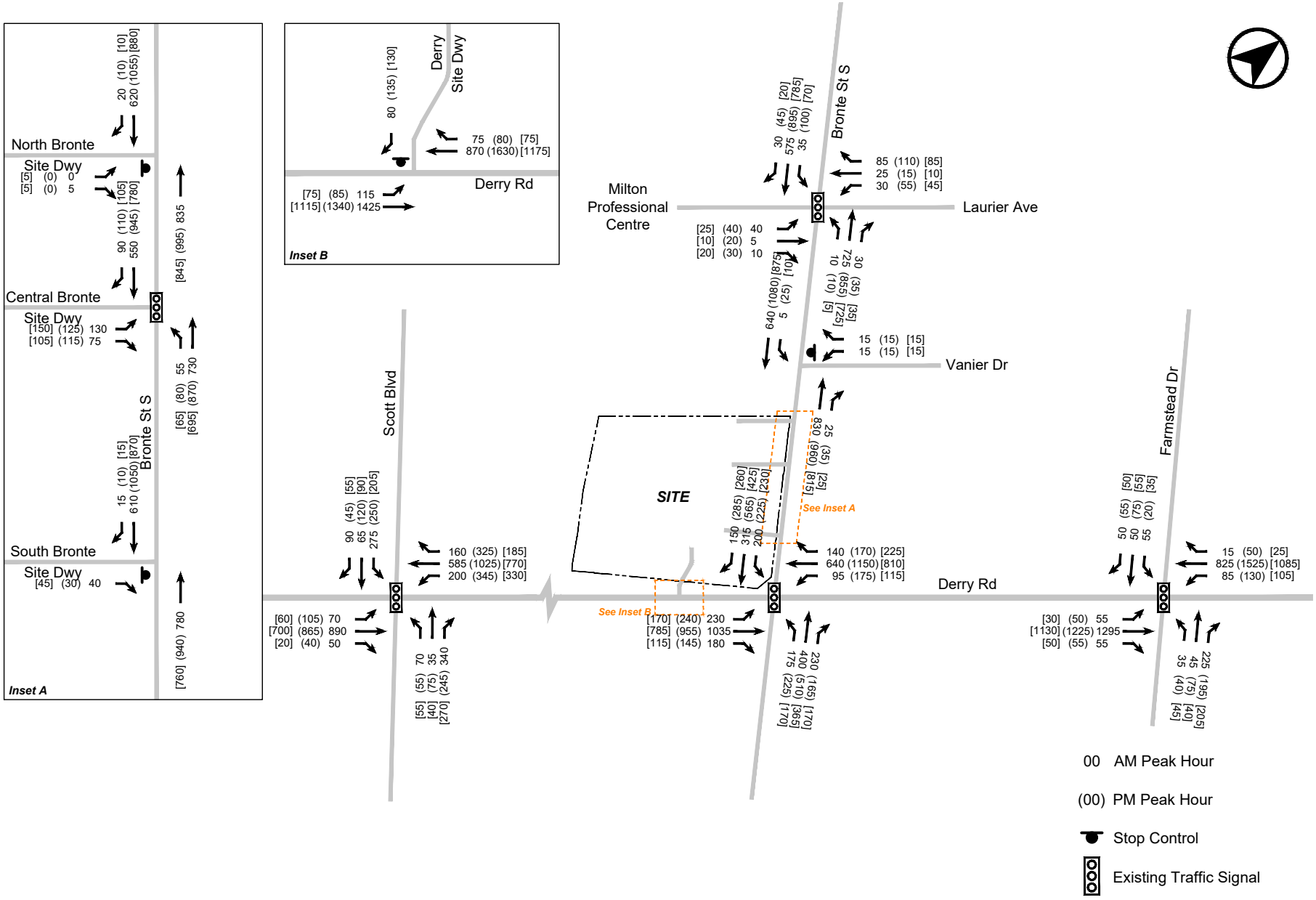
As requested by Region staff within the TOR, corridor growth for the eastbound and westbound through movements along Derry Road West was revised to apply an annualized rate of 4% applied to the future background (3-year horizon) scenario. Corridor growth volumes for all other movements remain consistent with those of the base future background (8-year horizon) scenario. Accordingly, the corridor growth traffic volumes (8-year horizon) for the sensitivity analysis are illustrated in **Figure 19**.

The resulting future background traffic volumes (8-year horizon), and future total traffic volumes (8-year horizon) volumes for the sensitivity analysis are shown in **Figure 20** and **Figure 21** respectively.



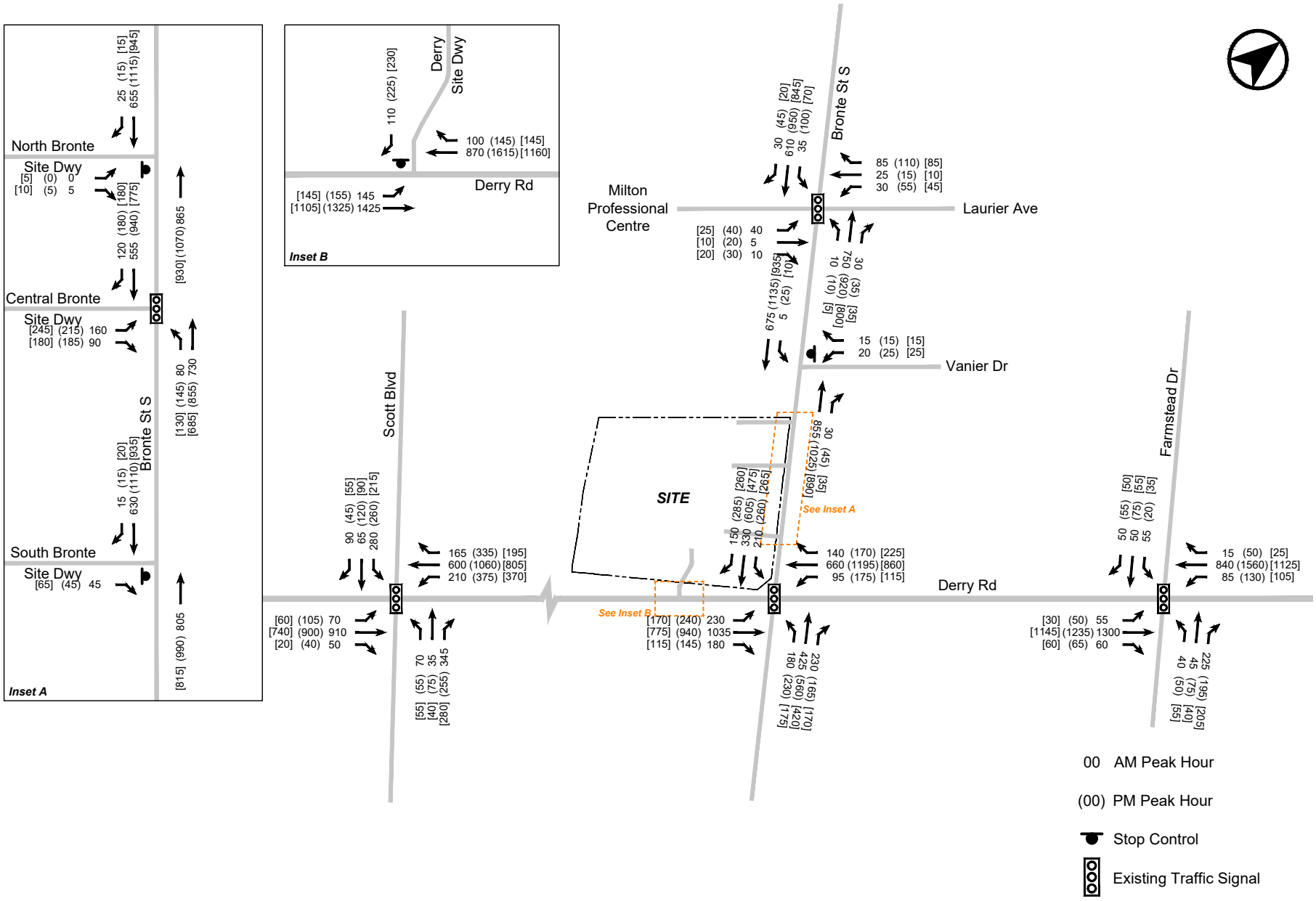
Date Plotted: September 19, 2025 Filename: \\bamediaaccount.file.core.windows.net\fp02data\WP\70\36\47\Graphics\CAD\Fig19-01-CGS-8H.dwg

FIGURE 19 CORRIDOR GROWTH TRAFFIC VOLUMES (8-YEAR HORIZON) - SENSITIVITY ANALYSIS



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FIGURE 20 FUTURE BACKGROUND TRAFFIC VOLUMES (8-YEAR HORIZON) - SENSITIVITY ANALYSIS



Date Plotted: June 2, 2026 Filename: \\bamediaaccount.file.core.windows.net\fp02data\WP\70\36\47\Graphics\CAD\Fig21-03-FTS-8H.dwg

FIGURE 21 FUTURE TOTAL TRAFFIC VOLUMES (8-YEAR HORIZON) - SENSITIVITY ANALYSIS

4.3.3 Traffic Operations Analysis

4.3.3.1 Overview

The analysis methodology, assumptions and parameters remain consistent with those outlined in the base analysis.

Operations analysis results and turn lane queue analysis results for signalized intersections along Derry Road West in the sensitivity analysis are provided in **Table 20** and **Table 21** respectively. Operations analysis results and turn lane queue analysis results for unsignalized intersections along Derry Road West in the sensitivity analysis are provided in **Table 22** and **Table 23** respectively. Synchro outputs are attached in **Appendix K**.

Overall, it is concluded that while not required to support the proposed development, the intersections in the study area along Derry Road West will operate under improved conditions with the planned widening of Derry Road West. It's recommended that the Region monitor the need and timing for the widening of Derry Road West as growth occurs.

4.3.3.2 Analysis Results

Derry Road West / Scott Boulevard

With the planned widening of Derry Road West, the following results are projected under each of the analysis scenarios:

- **Future background (8-year horizon):** Operates with a v/c of 0.79, 0.81 and 0.70 during the AM, PM, and Saturday peak hours, respectively.
- **Future total (8-year horizon):** Operates with a v/c of 0.82, 0.84 and 0.74 during the AM, PM, and Saturday peak hours, respectively.

Some movements and the overall intersection are projected to exceed the thresholds identified in the Milton TIS Guidelines and Halton TIS Guidelines in some scenarios as follows:

- The combined northbound through and right movement is projected to operate with a v/c ratio of 0.85 during the PM peak hour in the future total (8-year horizon) scenario. While this condition only occurs under future total conditions, it should be noted that the site specific impact on the movement is minor at 0.01.

Some 50th and 95th percentile turn lane queue lengths are projected to exceed the available turn lane length as follows:

- The westbound left movement is projected to have a 95th percentile queue length which exceeds the available storage during the AM peak hour in the future total (8-year horizon) scenario, during the PM peak hour in the future background (8-year horizon), and future total (8-year horizon) scenarios, and during the Saturday peak hour in the future total (8-year horizon) scenario. It should be noted that given the above are all related to the 95th percentile queue, these are expected to occur infrequently. When they occur, westbound through vehicles will either wait behind the left turn queue and will be processed once the light turns green or go around them in the middle lane. As noted above, the

operations analysis results indicate that the queue is cleared each cycle, with a v/c value of less than 1.00. Notwithstanding, consideration could be given to extending the length of this turn lane to accommodate the queues. It's noted that this condition is projected to occur under the future background (3-year horizon) and future background (8-year horizon) scenarios and is not specifically related to site traffic.

- The southbound left movement is projected to have a 50th and 95th percentile queue length that exceeds the available storage under both analysis scenarios. When this occurs, southbound through vehicles will wait behind the left turn queue and will be processed once the light turns green. As noted above, the operations analysis results indicate that the queue is cleared each cycle, with a v/c value of less than 1.00. Notwithstanding, consideration could be given to extending the length of this turn lane to accommodate the queues. It's noted that this is an existing condition and is not a result of future traffic.

It should be noted that queuing conditions such as the above are not uncommon in urban areas. As noted above, consideration could be given to extending the length of the westbound left and southbound left turn lanes to accommodate the turn lane queues.

Overall, it is concluded that while not required to support the proposed development, the intersection will operate under improved conditions with the planned widening of Derry Road West. It's recommended that the Region monitor the need and timing for the widening of Derry Road West as growth occurs.

Derry Road West / Farmstead Drive

With the planned widening of Derry Road West, the following results are projected under each of the analysis scenarios:

- **Future background (8-year horizon):** Operates with a v/c of 0.48, 0.54 and 0.38 during the AM, PM, and Saturday peak hours, respectively.
- **Future total (8-year horizon):** Operates with a v/c of 0.48, 0.55 and 0.38 during the AM, PM, and Saturday peak hours, respectively.

The overall intersection is projected to operate within the thresholds identified in the Milton TIS Guidelines and Halton TIS Guidelines under all scenarios. However, some movements are projected to exceed these thresholds in some scenarios as follows:

- The southbound left movement is projected to operate with a v/c ratio of 0.95 during the AM peak hour in all scenarios. This is an existing condition and is not a result of future traffic.

The 50th and 95th percentile turn lane queue lengths are projected to be accommodated within the available turn lane length under all analysis scenarios.

Overall, it is concluded that while not required to support the proposed development, the intersection will operate under improved conditions with the planned widening of Derry Road West. It's recommended that the Region monitor the need and timing for the widening of Derry Road West as growth occurs.

Derry Road West / Bronte Street South

With the planned widening of Derry Road West, the following results are projected under each of the analysis scenarios:

- **Future background (8-year horizon):** Operates with a v/c of 0.74, 0.80 and 0.67 during the AM, PM, and Saturday peak hours, respectively.
- **Future total (8-year horizon):** Operates with a v/c of 0.77, 0.84 and 0.74 during the AM, PM, and Saturday peak hours, respectively.

Some movements and the overall intersection are projected to exceed the thresholds identified in the Milton TIS Guidelines and Halton TIS Guidelines in some scenarios as follows:

- The westbound through movement is projected to operate with a v/c ratio of 0.85 during the PM peak hour in the future total (8-year horizon) scenario. While this condition only occurs under future total conditions, it should be noted that the site specific impact on the intersection is minor at 0.01.
- The southbound through movement is projected to operate with a v/c ratio of 0.85 during the PM peak hour and the Saturday peak hour in the future total (8-year horizon) scenario. While this condition only occurs under future total conditions, it should be noted that the site specific impact on the intersection is minor at 0.02-0.04.

The 50th percentile turn lane queue lengths are projected to be accommodated within the available turn lane length under all analysis scenarios. Some 95th percentile turn lane queue lengths are projected to exceed the available turn lane lengths as follows:

- The southbound left movement is projected to have a 95th percentile queue length which exceeds the available storage during the during the PM peak hour in the future total (8-year horizon) scenario. It should be noted that given the above is related to the 95th percentile queue, this is expected to occur infrequently. When this occurs, southbound through vehicles will wait behind the left turn queue and will be processed once the light turns green. As noted above, the operations analysis results indicate that the queue is cleared each cycle, with a v/c value of less than 1.00. Due to the back to back left turn lanes with the Bronte Street South / Central Bronte Site Driveway intersection, there is no opportunity to extend the length of this turn lane.

While the above v/c ratios exceed the thresholds identified in the Milton TIS Guidelines and Halton TIS Guidelines, it's important to note that the intersection and all movements are projected to remain operating within capacity under all analysis scenarios.

Overall, it is concluded that while not required to support the proposed development, the intersection will operate under improved conditions with the planned widening of Derry Road West. It's recommended that the Region monitor the need and timing for the widening of Derry Road West as growth occurs.

Unsignalized Intersections Operations

With the planned widening of Derry Road West, all unsignalized intersections in the study area along Derry Road West are projected to operate with an LOS C or better under both analysis scenarios.

The 50th and 95th percentile turn lane queue lengths are projected to be accommodated within the available turn lane length under all analysis scenarios.

Overall, it is concluded that while not required to support the proposed development, the unsignalized intersections in the study area along Derry Road West will operate under improved conditions with the planned widening of Derry Road West. It's recommended that the Region monitor the need and timing for the widening of Derry Road West as growth occurs.

Table 20: Operations Analysis Results – Signalized Intersections – Sensitivity Analysis

Lane Group	Future Background (8-Year Horizon)			Future Total (8-Year Horizon)		
	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)
Derry Rd W / Scott Blvd						
EBL	0.26 (0.50) [0.23]	C (C) [C]	25.3 (28.2) [21.5]	0.27 (0.53) [0.26]	C (C) [C]	26.1 (31.1) [25.6]
EBTR	0.63 (0.63) [0.44]	D (D) [C]	37.0 (39.1) [29.3]	0.67 (0.72) [0.55]	D (D) [D]	38.6 (43.8) [35.3]
WBL	0.75 (0.76) [0.68]	C (C) [B]	22.3 (23.8) [15.0]	0.78 (0.79) [0.72]	C (C) [B]	25.4 (25.2) [16.7]
WBTR	0.42 (0.65) [0.42]	B (B) [B]	18.5 (17.0) [10.8]	0.44 (0.67) [0.45]	B (B) [B]	19.2 (18.0) [12.0]
NBL	0.29 (0.27) [0.35]	D (D) [D]	40.9 (43.8) [44.7]	0.29 (0.27) [0.33]	D (D) [D]	40.4 (43.4) [43.6]
NBTR	0.84 (0.77) [0.65]	E (E) [D]	62.3 (59.2) [51.6]	**0.85** (0.77) [0.70]	E (E) [D]	63.0 (59.3) [53.7]
SBL	0.74 (0.77) [0.62]	D (D) [C]	35.8 (41.3) [32.8]	0.76 (0.80) [0.65]	D (D) [C]	37.5 (44.2) [33.2]
SBTR	0.18 (0.25) [0.23]	C (C) [C]	21.3 (27.4) [27.3]	0.17 (0.25) [0.22]	C (C) [C]	21.1 (27.2) [26.6]
Overall	0.79 (0.81) [0.70]	C (C) [C]	33.3 (30.2) [24.0]	0.82 (0.84) [0.74]	C (C) [C]	34.4 (32.3) [26.4]
Derry Rd W / Farmstead Dr						
EBL	0.13 (0.25) [0.09]	A (A) [A]	3.6 (7.5) [6.4]	0.13 (0.25) [0.09]	A (A) [A]	3.6 (7.6) [5.5]
EBT	0.40 (0.41) [0.35]	A (B) [A]	5.5 (11.1) [9.7]	0.41 (0.41) [0.36]	A (B) [A]	5.6 (11.2) [9.2]
EBR	0.04 (0.04) [0.03]	A (B) [B]	1.1 (19.7) [15.5]	0.04 (0.04) [0.04]	A (B) [B]	1.5 (16.5) [10.3]
WBL	0.27 (0.40) [0.28]	A (A) [A]	5.3 (6.7) [4.5]	0.27 (0.40) [0.28]	A (A) [A]	5.4 (6.7) [4.6]
WBTR	0.26 (0.50) [0.33]	A (B) [A]	7.7 (11.1) [7.3]	0.26 (0.51) [0.34]	A (B) [A]	7.8 (11.2) [7.4]
NBL	0.20 (0.24) [0.28]	D (D) [D]	46.7 (45.0) [44.5]	0.23 (0.29) [0.35]	D (D) [D]	47.0 (45.6) [45.2]

Lane Group	Future Background (8-Year Horizon)			Future Total (8-Year Horizon)		
	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)
NBTR	0.65 (0.72) [0.55]	E (E) [D]	55.6 (57.5) [48.4]	0.65 (0.72) [0.56]	E (E) [D]	55.9 (57.5) [48.4]
SBL	**0.95** (0.33) [0.53]	F (D) [D]	148.5 (48.1) [52.2]	**0.95** (0.33) [0.53]	F (D) [D]	148.5 (48.1) [52.2]
SBTR	0.28 (0.40) [0.33]	D (D) [D]	47.4 (46.5) [44.7]	0.28 (0.40) [0.33]	D (D) [D]	47.4 (46.5) [44.7]
Overall	0.48 (0.54) [0.38]	B (B) [B]	15.7 (16.5) [14.3]	0.48 (0.55) [0.38]	B (B) [B]	15.8 (16.6) [14.1]
Derry Rd W / Bronte St S						
EBL	0.61 (0.70) [0.54]	B (C) [B]	14.4 (28.8) [12.4]	0.64 (0.78) [0.60]	B (D) [B]	16.1 (35.2) [15.3]
EBTR	0.69 (0.74) [0.53]	C (C) [C]	25.2 (31.5) [22.0]	0.71 (0.74) [0.55]	C (C) [C]	26.2 (29.9) [21.0]
WBL	0.49 (0.62) [0.42]	D (C) [C]	39.2 (25.1) [23.5]	0.52 (0.66) [0.44]	D (C) [C]	43.0 (26.6) [24.9]
WBT	0.39 (0.84) [0.49]	C (D) [C]	27.0 (45.2) [24.4]	0.42 **(0.85)** [0.55]	C (D) [C]	28.2 (45.5) [26.1]
WBR	0.10 (0.11) [0.15]	C (F) [B]	27.0 (81.2) [10.0]	0.10 (0.11) [0.15]	C (E) [B]	29.6 (75.1) [10.9]
NBL	0.51 (0.82) [0.55]	C (D) [C]	26.8 (40.6) [26.2]	0.52 (0.88) [0.60]	C (D) [C]	26.0 (51.4) [27.2]
NBT	0.82 (0.76) [0.72]	D (D) [D]	50.6 (39.2) [41.0]	0.83 (0.81) [0.79]	D (D) [D]	49.3 (40.6) [43.4]
NBR	0.27 (0.12) [0.11]	C (C) [C]	34.2 (26.1) [30.0]	0.27 (0.13) [0.11]	C (C) [C]	32.8 (25.1) [28.8]
SBL	0.72 (0.74) [0.62]	D (C) [C]	35.1 (31.9) [25.6]	0.77 (0.92) [0.75]	D (E) [C]	37.5 (57.3) [30.9]
SBT	0.63 (0.83) [0.81]	D (D) [D]	39.7 (43.7) [45.7]	0.62 **(0.85)** **[0.85]**	D (D) [D]	38.2 (43.7) [47.3]
SBR	0.11 (0.35) [0.25]	C (C) [C]	31.8 (28.4) [30.5]	0.11 (0.34) [0.26]	C (C) [C]	30.4 (27.0) [29.0]
Overall	0.74 (0.80) [0.67]	C (D) [C]	30.6 (38.5) [27.2]	0.77 (0.84) [0.74]	C (D) [C]	31.2 (40.3) [28.6]

Notes:
1. XX (XX) [XX] – AM Peak (PM Peak) [SAT Peak]

Table 21 Queue Analysis Results – Signalized Intersections – Sensitivity Analysis

Lane Group	Approximate Turn Lane Length (m)	Future Background (8-Year Horizon)		Future Total (8-Year Horizon)	
		50%ile Queue (m)	95%ile Queue (m)	50%ile Queue (m)	95%ile Queue (m)
Derry Rd W / Scott Blvd					
EBL	55	10.6 (13.4) [5.8]	20.7 (24.4) [15.0]	10.5 (13.5) [6.2]	20.6 (24.7) [14.9]
WBL	90	28.2 (17.9) [15.4]	#86.1 **(m#113.3)** [37.1]	25.4 (30.2) [19.9]	**#96.3 (m#140.6) [#108.0]**
NBL	35	15.6 (12.4) [12.1]	26.7 (23.1) [22.8]	15.5 (12.3) [11.9]	26.7 (23.0) [22.4]
SBL	35	**45.3 (42.6) [35.6]**	**#92.0 (#79.5) [47.5]**	**47.6 (44.2) [36.2]**	**#98.4 (#85.3) [50.0]**
Derry Rd W / Farmstead Dr					
EBL	70	1.9 (0.8) [1.0]	m4.0 (m6.4) [m3.5]	2.0 (0.8) [1.0]	m3.9 (m6.9) [m2.9]
EBR	45	0.0 (0.4) [0.1]	m0.2 (m10.7) [m2.2]	0.1 (0.5) [0.2]	m0.3 (m12.0) [m1.0]
WBL	55	4.2 (7.9) [4.4]	11.4 (18.3) [12.0]	4.2 (7.9) [4.5]	11.4 (18.3) [12.1]
NBL	50	8.1 (9.5) [9.7]	17.1 (19.1) [19.7]	9.3 (11.8) [12.1]	18.9 (22.6) [23.2]
SBL	35	~14.4 (4.7) [7.9]	#34.4 (12.5) [18.0]	14.3 (4.7) [7.9]	#34.3 (12.5) [18.0]
Derry Rd W / Bronte St S					
EBL	150	16.7 (20.8) [8.6]	m#32.2 (m#101.5) [#16.3]	16.8 (22.6) [9.0]	m#60.5 (m#106.6) [#24.1]
WBL	110	10.9 (30.4) [13.0]	38.1 (#59.4) [28.1]	12.1 (30.9) [12.9]	38.9 (#65.7) [29.1]
WBR	85	0.0 (13.1) [0.0]	13.0 (36.7) [7.6]	0.0 (13.1) [0.0]	14.0 (36.3) [7.6]
NBL	120	27.5 (31.9) [22.5]	41.4 (#53.2) [32.5]	27.9 (31.3) [22.0]	40.9 (#57.9) [33.6]
NBR	175	13.1 (1.6) [0.0]	32.3 (14.4) [14.2]	13.5 (3.0) [0.0]	32.0 (15.5) [14.2]
SBL	65	32.0 (32.3) [31.4]	#55.7 (41.4) [43.3]	33.1 (36.6) [35.1]	#60.9 **(#67.1)** [#59.7]
SBR	130	0.0 (24.5) [8.4]	14.6 (42.9) [26.7]	0.0 (24.4) [9.8]	14.2 (42.7) [28.7]

Notes:
1. XX (XX) [XX] – AM Peak (PM Peak) [SAT Peak]

Table 22: Operations Analysis Results – Unsignalized Intersections – Sensitivity Analysis

Lane Group	Future Background (8-Year Horizon)			Future Total (8-Year Horizon)		
	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)
Derry Rd W / Derry Site Dwy						
EBL	0.14 (0.16) [0.11]	A (B) [B]	9.9 (13.2) [10.9]	0.18 (0.31) [0.22]	B (C) [B]	10.2 (15.2) [11.9]
SBR	0.09 (0.16) [0.14]	A (B) [A]	9.1 (10.1) [9.5]	0.12 (0.28) [0.26]	A (B) [B]	9.3 (10.9) [10.2]

Notes:
1. XX (XX) [XX] – AM Peak (PM Peak) [SAT Peak]

Table 23 Queue Analysis Results – Unsignalized Intersections – Sensitivity Analysis

Lane Group	Approximate Turn Lane Length (m)	Future Background (8-Year Horizon)	Future Total (8-Year Horizon)
		95%ile Queue (m)	95%ile Queue (m)
Derry Rd W / Derry Site Dwy			
EBL	40	4.0 (4.7) [3.0]	5.3 (10.4) [6.8]

Notes:
1. XX (XX) [XX] – AM Peak (PM Peak) [SAT Peak]

5.0 TRANSPORTATION DEMAND MANAGEMENT

5.1 Mobility Choice Travel Plan

The location of the site and its surrounding uses greatly influences the success of a Mobility Choice Travel Plan. The purpose of the Mobility Choice Travel Plan is to guide the provision of viable alternative personal transportation options beyond the single-occupant, private automobile. This plan intends to support the proposed development by outlining TDM measures and the suite of strategies under consideration to promote the use of more active and sustainable transportation modes; respond to the mobility needs of residents, employees and visitors of the site; and to reduce the overall dependence on the private automobile.

The existing and future site context provides for public transit services and good active transportation connectivity. While strong opportunities exist in the area infrastructure to accommodate sustainable transportation practices, the ability to fully leverage these opportunities is granted by the success of the implementation of the Mobility Choice Travel Plan.

Four specific objectives define the policy framework for the Mobility Choice Travel Plan:

- Encourage the use of alternate travel modes (transit, cycling, walking);
- Increase vehicle occupancy;
- Shift travel to off-peak periods; and
- Reduce vehicle kilometres travelled.

A detailed Mobility Choice Travel Plan will be developed and secured through the approvals process.

5.2 Organizational Framework

The four broader objectives can be organized within the following categories:

- Encourage Transit Use;
- Encourage and Facilitate Bicycle Use;
- Enhance Pedestrian Access and Walkability;
- Facilitation of Reduced Car Ownership and Usage;
- Vehicular Parking Supply and Management;
- Land Use and Building Infrastructure; and
- Coordination, Communication, and Promotion.

Measures from the Mobility Choice Travel Plan will be incorporated into the proposed development to minimize the need to use an automobile when travelling to and from the site. It is important to encourage and facilitate the use of non-automobile travel modes on a daily basis.

The Mobility Choice Travel Plan for the proposed development is outlined in **Table 24**.

Table 24 Mobility Choice Travel Plan Strategies

		Mobility Strategies
LAND USE INTEGRATION		The proposed development contains a mix of retail and commercial uses, allowing visitors to the site to complete multiple tasks in a single trip.
TRANSIT USE		At first occupancy, provide new employees with a transit information package detailing available services in the area.
BICYCLE FACILITIES		Provide a bicycle parking supply which meets or exceeds the requirements of the Town of Milton Zoning By-law 016-2014
		At first occupancy, provide new employees with a cycling information package detailing available routes in the area.
PEDESTRIAN CONNECTIVITY		Provide connections to existing pedestrian infrastructure
PARKING MANAGEMENT		Provide parking at a rate lower than the requirements outlined in Section 13.1.1.122 of the Town of Milton Zoning By-law 016-2014, as amended by site specific By-law 144-2003.

6.0 SUMMARY AND CONCLUSIONS

Overview

1. BA Group is retained by First Capital Asset Management LP to provide transportation consulting services in relation to the proposed retail expansion of the Derry Heights Plaza located at 6901-6951 Derry Road West in the Town of Milton. A Zoning By-law Amendment application is being made to the Town for the proposed expansion.

Existing Conditions

2. The site is currently occupied by 4 commercial / retail buildings comprising a variety of commercial and retail uses with a total floor area of 7,202 square metres gross floor area ("GFA"), of which 6,324 square metres is gross leasable area.
3. Site access is available at 4 locations, including an all-moves unsignalized driveway to Bronte Street South for trucks only, an all-moves signalized driveway to Bronte Street South, a right in / right out unsignalized driveway to Bronte Street South, and a right in / left in / right out unsignalized driveway to Derry Road West.
4. The site is serviced by an at grade parking lot comprising a total of 469 car spaces, which equates to a parking supply ratio of 6.51 spaces per 100 square metres GFA.
5. An existing bicycle parking supply in the order of 28 spaces is provided across the site.
6. There are currently 3 loading spaces servicing the site. One of the existing loading spaces services a Shoppers Drug Mart and facilitates tractor trailer access, with these vehicles entering via the north Bronte site driveway and exiting via the central Bronte site driveway.
7. There are 3 existing drive throughs across the site, with 2 servicing banks and 1 servicing a Tim Hortons restaurant.

Proposed Development

8. The proposed expansion contemplates the development of the west side of the site to construct 2 new commercial / retail buildings. No changes are contemplated to the existing commercial / retail buildings on the east side of the site.
9. The proposed development includes 8,050 square metres of new commercial / retail GFA, including additional commercial / retail units (826 square metres) in Building A, and a grocery store (2,915 square metres), additional commercial / retail units (557 square metres), a gym on the second floor (3,611 square metres), and circulation / vestibule (141 square metres) in Building F. The resulting overall total floor area is 15,252 square metres GFA.
10. No changes to the existing access arrangements are proposed.
11. It's proposed to reconfigure the car parking on the west side of the site to accommodate the proposed commercial / retail buildings, resulting in a car parking supply of 565 spaces across the site, including 18 accessible spaces. The proposed car parking supply equates to a parking supply ratio of 3.7 spaces per 100 square metres GFA.

12. A total of 8 additional bicycle spaces are proposed, resulting in a total bicycle parking supply of 36 spaces across the site.
13. A total of 3 additional loading spaces and a compactor are proposed, including 1 space for Building A and 2 spaces for Building F. The existing loading spaces are proposed to be retained, resulting in a total supply of 6 loading spaces across the site, plus a garbage compactor.
14. The Building F loading spaces will be accessible by vehicles up to a tractor trailer in size. Consistent with existing tractor trailers accessing the site, these vehicles are proposed to enter via the trucks only unsignalized driveway to Bronte Street South, and exit via the signalized driveway to Bronte Street South.
15. The Building A loading space will be accessible by vehicles up to a heavy single unit truck in size.
16. The proposed Building A is located adjacent to the existing drive through servicing the Tim Hortons restaurant. Some minor changes to the curbs are proposed in this location to accommodate the proposed Building A.

Car Parking

17. The site is currently subject to a required car parking rate of 1 space per 20 square metres GFA (equivalent to 5 spaces per 100 square metres GFA) in accordance with Section 13.1.1.122 of the Town of Milton Zoning By-law 016-2014, as amended by site specific By-law 144-2003, which equates to a requirement to provide 763 spaces. The proposed car parking supply of 565 spaces represents a shortfall of 198 spaces from this requirement.
18. The proposed accessible car parking supply satisfies the requirements of the Town of Milton Zoning By-law 016-2014.
19. Car parking demand surveys were undertaken at the existing Derry Heights Plaza, and identify a peak overall parking demand rate of 2.93 spaces per 100 square metres GFA. The surveys identify underutilization of the existing parking supply, with only 45% of the overall parking supply occupied and 258 spaces remaining vacant.
20. Car parking demand surveys were also undertaken at 5 proxy retail plazas which are of a similar nature and location to the site. Across the 5 proxy sites, the surveys identified a peak parking demand rate of 3.41 spaces per 100 square metres GFA.
21. The proposed car parking supply of 565 spaces, which equates to a parking supply ratio of 3.7 spaces per 100 square metres GFA, exceeds the projected demands identified by the car parking demand surveys, and is therefore appropriate.

Bicycle Parking

22. The proposed bicycle parking supply satisfies the bicycle parking requirements of Town of Milton Zoning By-law 016-2014 and is appropriate.

Loading Zoning

23. The proposed loading supply satisfies the requirements of the Town of Milton Zoning By-law 016-2014 and is appropriate.

Drive Through Modifications

24. The proposed modifications to the existing drive through servicing the Tim Hortons restaurant satisfy the requirements of the Town of Milton Zoning By-law 016-2014 and are appropriate.

Traffic Assessment

25. Base existing traffic volumes were established for the weekday morning, weekday afternoon, and Saturday mid-day peak hours for intersections within the study area based on turning movement counts collected by Spectrum Traffic Data Inc. on behalf of BA Group.
26. The existing site generates in the order of 705, 780, and 785 two-way vehicle trips in the weekday morning, weekday afternoon, and Saturday mid-day peak hours, respectively.
27. Traffic growth in the site vicinity has been considered based upon an evaluation of traffic volume changes related to general corridor growth on Bronte Street South and Derry Road West and specific area development traffic.
28. New vehicular trips for the proposed development were generated using the ITE Trip Generation Manual, 11th Edition for the individual uses of the development proposal. The proposed addition to the Derry Heights Plaza is projected to generate in the order of 195, 550, and 585 two-way vehicle trips in the weekday morning, weekday afternoon, and Saturday mid-day peak hours, respectively.
29. While some overall intersection and individual movement v/c ratios are projected to exceed the thresholds identified in the Milton TIS Guidelines and Halton TIS Guidelines, all intersections and movements are projected to remain operating within capacity under all analysis scenarios.
30. Overall, the analysis concludes that the traffic associated with the development can be accommodated at all intersections within the study area.
31. A sensitivity analysis has also been undertaken which assumes the widening of Derry Road West has been completed by the 8-year horizon. The analysis concludes that while not required to support the proposed development, the intersections in the study area along Derry Road West will operate under improved conditions with the planned widening of Derry Road West. It's recommended that the Region monitor the need and timing for the widening of Derry Road West as growth occurs.

Transportation Demand Management

32. A Mobility Choice Travel Plan has been prepared which strives to reduce automobile use and includes the following measures:

- Mix of retail uses allowing visitors to complete multiple tasks in a single trip
- Transit information package
- Bicycle parking
- Cycling information package
- Connections to existing pedestrian infrastructure

- Car parking below current zoning requirements

Overall

33. Overall, the proposed development is appropriate based on urban transportation principles and can be sufficiently accommodated.

Appendix A:
Approved Terms of Reference

Luke J. Richardson

From: Chris.Toews@milton.ca
Sent: August 6, 2025 11:14 AM
To: Loro, Darren; Luke J. Richardson
Cc: Lefu Fang
Subject: RE: Derry Heights Plaza - Transportation Terms of Reference
Attachments: Traffic Impact Study.pdf; Site Plan.pdf

Good morning Luke,

Apologies for the delay, see below comments from the Town of Milton in red.

Feel free to let me know if you have any questions.

Kind regards,
Chris

Chris Toews
Transportation Planning Technologist
150 Mary Street., Milton ON, L9T 6Z5
905-878-7252 ext. 2502
www.milton.ca

Confidentiality notice: This message and any attachments are intended only for the recipient named above. This message may contain confidential or personal information that may be subject to the Municipal Freedom of Information Act and must not be distributed or disclosed to unauthorized persons. If you received this message in error, please notify the sender immediately. Thank you for your assistance.

From: Loro, Darren <Darren.Loro@halton.ca>
Sent: Tuesday, August 5, 2025 2:48 PM
To: 'Luke J. Richardson' <richardson@bagroup.com>
Cc: Lefu Fang <Lefu.Fang@bagroup.com>; Chris Toews <Chris.Toews@milton.ca>
Subject: RE: Derry Heights Plaza - Transportation Terms of Reference

Hi Luke,

Hope you've been well and that you've been having a great summer!

Thank you for your patience. Please see Halton Region's comments below in blue on the proposed Terms of Reference in its entirety – I copied and pasted them below for easier reference and documentation.

Please let us know if you have any questions or wish to discuss further.

Cheers,
Darren

As noted in the Region's pre-consultation request comments, the overall subject property has an existing left-in/right-in/right-out (LI/RI/RO) access to Derry Road. To maximize conformance to Halton Region's Access Management Guideline (available online at: https://www.halton.ca/Repository/Access-Management-Guideline), the existing LI/RI/RO access to Derry Road must be maintained and no additional access to Derry Road will be permitted.

1.0 SCOPE

1.1 Study Guidelines

The TIS will be prepared in accordance with the Halton Region Transportation Impact Study Guidelines (dated January, 2015) and the Town of Milton Traffic Impact Study Terms of Reference (dated January, 2023).

1.2 Traffic Analysis

1.2.1 Study Area

The traffic analysis study area is proposed to comprise of the following intersections:

- Derry Road West / Bronte Street South
- Derry Road West / Scott Boulevard
- Bronte Street South / Laurier Avenue
- All existing site driveways
- As noted in the Region and Town's confirmation of study scope (e-mail dated May 26, 2025), the following two intersections must be added to the study intersection scope:
    - Derry Road and Farmstead Drive
    - Bronte Street and Vanier Drive

1.2.2 Analysis Periods

Traffic analysis will be undertaken for the following periods: Acceptable, as previously agreed upon with Region and Town staff (e-mail dated May 26, 2025).

- Weekday AM peak hour
- Weekday PM peak hour
- Saturday midday peak hour

1.2.3 Analysis Scenarios

Traffic analysis will assume a 3-year build-out. In accordance with Town of Milton Traffic Impact Study Terms of Reference, analysis will be undertaken for 5 years after build-out of the site, resulting in an 8-year horizon. This also satisfies the Halton Region Transportation Impact Study Guidelines requirements for a 5-year horizon. As such, the following scenarios will be reviewed: Given the scale of the proposed development, analysis of the full build-out horizon and five-year horizon from the year of full build-out will be required (e.g. 2028 and 2033).

- Existing Conditions
- Future Background Conditions (8-year horizon)
- Future Total Conditions (8-year horizon)

1.2.4 Existing Traffic Counts

Existing traffic counts will be undertaken to serve as the baseline for existing conditions. Acceptable.

1.2.5 Area Road Improvements

Based on the Halton Region Transportation Master Plan to 2031 (dated September, 2011), Derry Road West is planned to be widened to 6 lanes by 2031. This timing is also reflected in the Halton Region Budget and Business Plan Capital Report 2025. The planned widening will be incorporated into the future background and future total conditions analyses.

If there are any plans that have progressed for the proposed widening, please provide them and we can incorporate into the analysis. In the absence of any plans, we will assume an additional through lane is provided in each direction with no other lane configuration changes.

The future widening of Derry Road to six-lanes as described above must be documented in the TIS. Given the expected construction start date of 2031 (which is subject to change) and that the road widening could reasonably take 2-3 years to be completed, the road widening may not be completed by 2033 and thus the widening should not be accounted for under 2033 future background or total conditions for conservative analysis.

1.2.6 Background Developments

The Town of Milton Development Applications Map has been reviewed and the following background development has been identified in the vicinity of the site:

- 550 Ontario Street South – See attached concept plan (**labelled "Site Plan"**), given there is no TIS yet prepared for this development, site trips should be distributed to the road network based on existing travel patterns derived from the traffic counts undertaken for this study.
- 180 Bronte Street South – 8-storey, 268 unit residential apartment. See attached "New Site Traffic Volumes" (**labelled "Traffic Impact Study"**) excerpt from the TIS prepared for this development.

Please advise if there are additional background developments that should be incorporated into the traffic analysis and provide the associated Transportation Impact Study.

Acceptable. Town staff will confirm if any additional background developments must be accounted for.

1.2.7 Corridor Growth

Where available, historical traffic counts will be reviewed to determine traffic corridor growth along Derry Road West and Bronte Street South. In the event that sufficient data is not available to appropriately assess corridor growth, we propose to adopt an annual corridor growth rate of 2% along Derry Road West and Bronte Street South in accordance with the Town of Milton Traffic Impact Study Terms of Reference.

A growth rate of 2% compounded annually can be applied to all movements at the Derry Road, and Bronte Street South study intersections to forecast future background traffic operations.

1.2.8 Site Trip Generation

Site trip generation will be forecast for vehicle trips. Resources used to forecast this will include the latest edition of the ITE Trip Generation Manual, existing trip generation measured at the site, and proxy data for similar sites. Acceptable, as long as all trip generation assumptions are clearly documented in the TIS with supporting data appended. Internal trip synergies and pass-by trips resulting from the proposed development must be accounted for.

1.2.9 Vehicle Trip Distribution

Vehicle trip distribution will be determined based on a review of the 2022 Transportation Tomorrow Survey and existing travel patterns at the site driveways. Acceptable, as long as all trip distribution assumptions are clearly documented in the TIS with supporting data appended.

1.2.10 Traffic Operations Analysis

Traffic operations analysis will be undertaken using Synchro 11. Acceptable.

Existing signal timings will be used for the analysis. Proposed changes to signal timings under future background and future total conditions will be reported. Acceptable.

Traffic analysis results will be based on the HCM 2000 methodology. For signalized intersections, volume to capacity ratios and queue lengths will be reported. For unsignalized intersections, level of service, delays, and queue lengths will be reported.

All traffic operations analysis must conform to the Region's TIS Guidelines. This includes documenting all analysis methodologies and highlighting or bolding all critical volume-to-capacity ratios or 95th percentile queue lengths results that exceed the thresholds outlined in the TIS Guidelines.

The TIS must confirm that the existing geometrics at the LI/RI/RO access to Derry Road can accommodate site generated traffic. The TIS must recommend geometric improvements if warranted (e.g. auxiliary eastbound left-turn lane extension).

If traffic operations issues are identified under future background or total conditions, then the TIS will need to recommend mitigation measures to address these issues (even if not necessarily triggered by the proposed development) or at the very least, rationalize the traffic operations issues if there are no feasible mitigation measures. The TIS should identify who is responsible for each recommended mitigation measure, if required. Specifically, if traffic operations issues are identified along Derry Road under 2033 future background conditions specifically (i.e. as a result of background traffic growth without the subject development built), then a sensitivity analysis can be conducted under 2033 future background and future total conditions that accounts for the widening of Derry Road completed by this horizon. In this sensitivity scenario, a growth rate of 4% compounded annually (derived from Halton Region's transportation model for the ongoing Integrated Master Plan study) must be applied to the through movements along Derry Road under 2028 future background conditions to forecast 2033 future background traffic volumes to reflect the widening of Derry Road. A growth rate of 2% compounded annually can be maintained for all other intersection movements at the Derry Road study intersections in this sensitivity scenario. If traffic operations issues are expected to improve under 2033 future background and total conditions with the widening of Derry Road completed by this horizon, then the TIS must note this result and recommend that Halton Region monitor the need and timing for the widening of Derry Road as growth occurs.

1.3 Zoning Assessment

The proposed car parking, bicycle parking, and loading supply will be reviewed against the Town of Milton Zoning By-law. Where applicable, data will be reviewed for existing demands measured at the site, and proxy data for similar sites.

Parking Review
Include a review of the site's vehicle parking statistics, comparing the proposed to supply to what is required based on the Town's Zoning By-Law.
Include the contents of the Parking Memo (prepared and reviewed in advance of the development application) in the TIS as a Parking Justification component to the report.

Vehicle manoeuvring diagrams will be prepared for the proposed loading spaces. Town to confirm Zoning Assessment Requirements. – Ensure site design accommodates all design vehicles, including the largest design vehicles anticipated to access the site. Refer to the OBC for typical fire route requirements, Fire Routes in the Town of Milton need to be able to accommodate a typical aerial fire truck.

1.4 Transportation Demand Management

A Transportation Demand Management plan will be prepared which seeks to reduce single occupancy vehicle trips associated with the proposed development. Acceptable, as long as no modal split reductions are applied to the site trip generation forecasts.

From: Luke J. Richardson <richardson@bagroup.com>
Sent: Friday, July 25, 2025 10:58 AM
To: Loro, Darren <Darren.Loro@halton.ca>

Cc: chris.toews@milton.ca; Lefu Fang <Lefu.Fang@bagroup.com>
Subject: RE: Derry Heights Plaza - Transportation 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 Darren and Chris,

Further to the below, have you had an opportunity to review the rest of the Terms of Reference?

Feel free to get in touch if you'd like to discuss.

Thanks,
Luke

Luke J. Richardson, P.Eng.
Associate

BA Consulting Group Ltd.

60 - 40 Weber Street East | Kitchener
416 961 7110 x162 | richardson@bagroup.com

From: Luke J. Richardson
Sent: May 30, 2025 10:43 AM
To: Loro, Darren <Darren.Loro@halton.ca>
Cc: chris.toews@milton.ca
Subject: RE: Derry Heights Plaza - Transportation Terms of Reference

Thanks Darren and Chris, I appreciate you getting back to me on the study area and study periods. I look forward to receiving your comments on the rest of the Terms of Reference.

Thanks,
Luke

Luke J. Richardson, P.Eng.
Associate

BA Consulting Group Ltd.

60 - 40 Weber Street East | Kitchener
416 961 7110 x162 | richardson@bagroup.com

From: Loro, Darren <Darren.Loro@halton.ca>
Sent: May 26, 2025 2:10 PM
To: Luke J. Richardson <richardson@bagroup.com>
Cc: chris.toews@milton.ca
Subject: RE: Derry Heights Plaza - Transportation Terms of Reference

Hi Luke,

Thanks for reaching out – apologies for the delayed response!

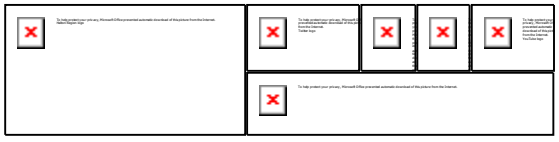
We appreciate your proactiveness in wanting to confirm the study intersections and study periods so that you can collect traffic data prior to the school vacation. Chris at the Town and I have spoke and we generally agree with the study intersections and study periods noted in your draft Terms of Reference, but the following two intersections must be added to the proposed study intersection scope:

- Derry Road and Farmstead Drive
- Bronte Street and Vanier Drive

We will review and co-ordinate the rest of the Terms of Reference items following the official pre-consultation, per our typical development review and co-ordination process. In the meantime, please let us know if you have any questions about the study scope/periods or wish to discuss further.

Cheers,
Darren

Darren Loro, C.E.T.
Project Manager I – Transportation Development Review
Development Services
Public Works
Halton Region
905-825-6000, ext. 2694 | 1-866-442-5866



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From: Luke J. Richardson <richardson@bagroup.com>
Sent: Friday, May 16, 2025 1:57 PM
To: chris.toews@milton.ca; Loro, Darren <Darren.Loro@halton.ca>
Subject: Derry Heights Plaza - Transportation 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 Chris and Darren,

BA Group has been retained by First Capital Realty Inc. to provide transportation consulting services in relation to a proposed expansion of the Derry Heights Plaza at 6901-6951 Derry Road West in the Town of Milton. It's noted that a pre-consultation meeting has been organized for June 24, 2025. Notwithstanding, we would like to confirm the Terms of Reference in advance of this date, such that we can organize traffic surveys prior to the school vacation period in July and August.

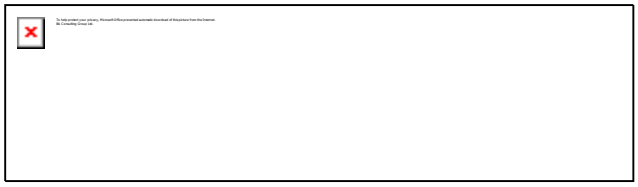
As such, please see our proposed Terms of Reference attached. We look forward to receiving your comments.

Thanks,
Luke

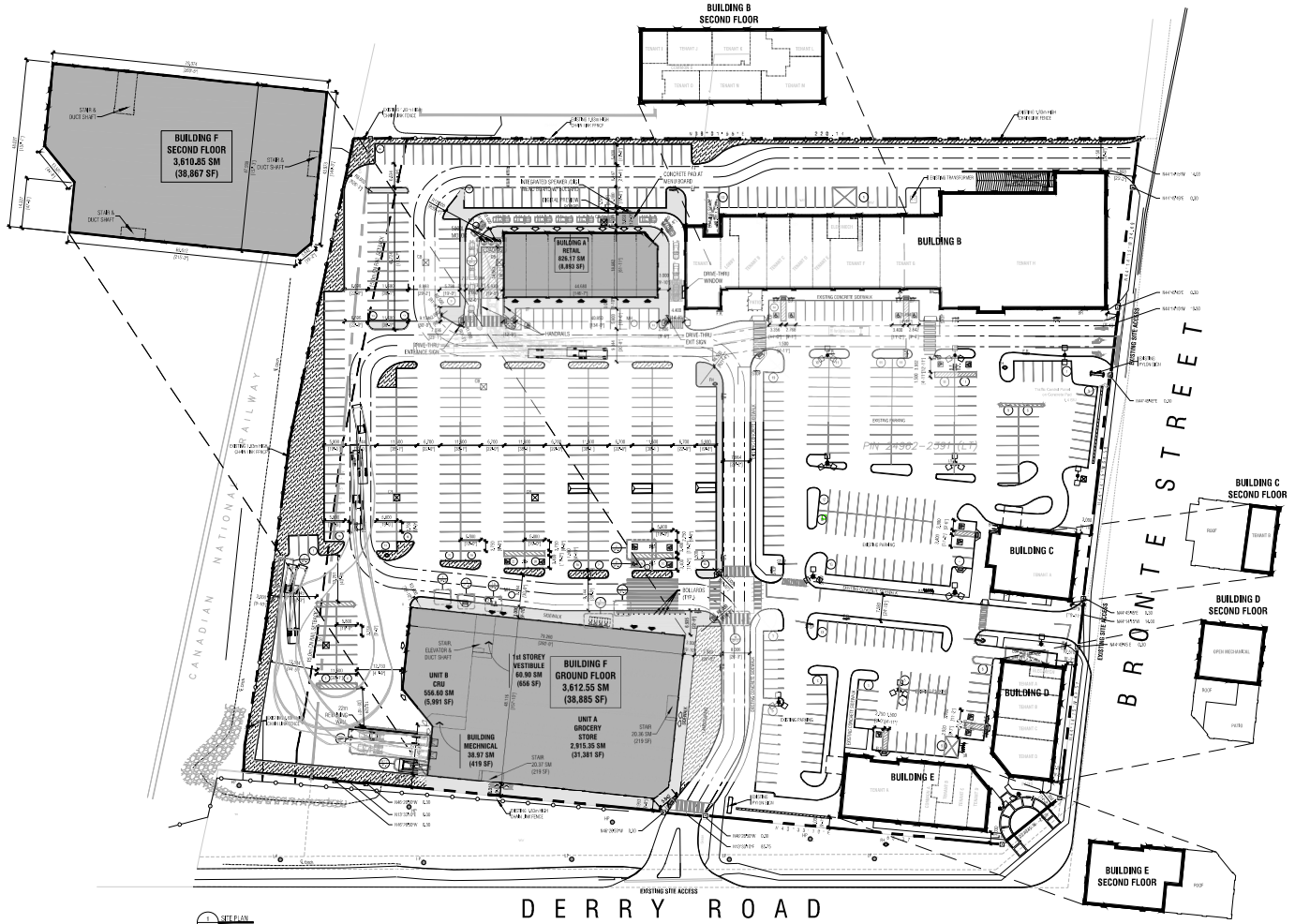
Luke J. Richardson, P.Eng.
Associate

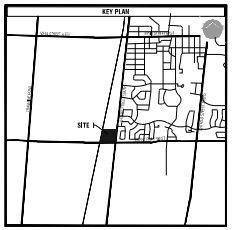
BA Consulting Group Ltd.

60 - 40 Weber Street East | Kitchener
416 961 7110 x162 | richardson@bagroup.com



Appendix B:
Site Plan (not to scale)





SITE DATA

	SF	SM	ACRES
COMMERCIAL DISTRICT ZONE (C2-0)			
TOTAL SITE	410,216	44,497.2	10.20
EXISTING BUILDING			COVERAGE
BUILDING A	6,863	635.17	1.4%
BUILDING B	40,715	4,002.8	7.4%
GROUND FLOOR	28,541	3,301.8	
SECOND FLOOR	12,173	1,131.9	
BUILDING C	6,907	646.4	1.7%
GROUND FLOOR	5,115	475.2	
SECOND FLOOR	1,843	171.2	
BUILDING D	9,669	897.2	1.2%
GROUND FLOOR	6,967	591.5	
SECOND FLOOR	2,703	305.8	
BUILDING E	13,795	1,225.0	1.7%
GROUND FLOOR	9,164	758.5	
SECOND FLOOR	5,631	467.4	
BUILDING F	77,757	7,293.49	
GROUND FLOOR	38,885	3,612.55	8.1%
GROCERY (UNIT A)	31,381	2,915.35	
CRU (UNIT B)	5,991	556.60	
COMMON 1ST STOREY VESTIBULE	656	60.90	
MECHANICAL ROOM	419	38.97	
STAIR & DUCT SHAFT	438	40.73	
SECOND FLOOR	38,867	3,610.95	
TOTAL GROUND FLOOR	197,965	9,965.82	21.58%
TOTAL SECOND FLOOR	61,207	5,686.35	
GROSS FLOOR AREA	164,172	15,252.17	
PATIO AREA	SF	SM	
BUILDING B	2465.5	23.2	
BUILDING D (AT GRADE)	355.2	33.0	
BUILDING D (ON ROOFTOP)	1,090.6	101.3	
TOTAL PATIO AREA	2,998.3	247.5	
PARKING DATA			
PARKING SPACE: 2.75m x 5.80m, 6.70m ABLE			
REQUIRED PARKING		- SPACES	
REQUIRED BARRIER FREE PARKING		- SPACES	
TOTAL REQUIRED PARKING		- SPACES	
PARKING DATA			
PARKING SPACE: 2.75m x 5.80m, 6.70m ABLE			
PROVIDED PARKING		547 SPACES	
PROVIDED BARRIER FREE PARKING		16 SPACES	
TOTAL PROVIDED PARKING		563 SPACES	
LANDSCAPING			
LANDSCAPED AREA: 4,699.06		LANDSCAPING COVERAGE: 9.21%	

LEGEND

PROPERTY LINE
SETBACKS
EXISTING CONDITIONS
FENCE
FIRE ROUTE
IRON BAR
ORNAMENTAL INTERSECTION
GM GAS METER
PARKING COUNT
PRINCIPLE ENTRANCE
SECONDARY ENTRANCE
CB CATCH BASIN
MH MANHOLE
FH FIRE HYDRANT
FDC FIRE DEPARTMENT CONNECTION
BIKE RACK - 10 SPOTS
BIKE RACK - 2 SPOTS
PEDESTRIAN CROSSWALK
NO PARKING ZONE
TRAFFIC FLOW ARROWS
PRECAST CONCRETE CURB
UNIT CORRAL
3m x 6m CAR SPACE
LIGHT STANDARD
LIGHT POLE
HP HYDRO POLE
BOLLARD
PYLON SIGN
TRANSFORMER
ADA TACTILE STRIP
FIRE ROUTE SIGN
STOP STOP SIGN
DNE DO NOT ENTER SIGN
ONE WAY ONE WAY SIGN
NEW SIDEWALK
NEW ASPHALT AREA
PLANTING BED
GRASS AREA
BARRIER FREE PARKING
EARTH BIN ON CONC. PAD
MOLOK GARBAGE SYSTEM
WARNER FIRE P.I.V. SIGN

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO:

- CHECK AND VERIFY ALL DIMENSIONS ON SITE
- REPORT ALL ERRORS AND/OR OMISSIONS TO GREYSTONE BEFORE CONTINUING WITH ANY WORK.

THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS NOTED OTHERWISE

THESE DRAWINGS SHALL NOT TO BE SCALED.ERRORS MADE BY PERSONS SCALING THESE DRAWINGS WILL NOT BE THE RESPONSIBILITY OF GREYSTONE ARCHITECTURAL PARTNERS

THESE DRAWINGS SHALL TO BE READ IN CONJUNCTION WITH ALL OTHER RELATED DOCUMENTS.

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PROJECT NORTH

Greystone
CAMBRIDGE • TORONTO • EDMONTON
154 King Street East
Cambridge, Ontario N3H 3H4
T: (519) 896-1010 ext.100

ONTARIO ASSOCIATION OF ARCHITECTS
4 Jun, 2026
ROBERT R. HUOT
LICENCE
10009

REV.	DESCRIPTION	DATE
10	ISSUED FOR ZBA	2026.06.05
9	ISSUED FOR COORDINATION	2026.05.29
8	ISSUED FOR COORDINATION	2026.05.14
7	ISSUED FOR ZBA	2025.09.26
6	ISSUED FOR COORDINATION	2025.09.23
5	ISSUED FOR COORDINATION	2025.09.19
4	ISSUED FOR COORDINATION	2025.09.17
3	ISSUED FOR COORDINATION	2025.09.11
2	ISSUED FOR REVIEW	2025.09.03
1	ISSUED FOR REVIEW	2025.08.15

△ REVISION ☐ ISSUED ○ APPROVAL

CLIENT:
FIRST CAPITAL

PROJECT:
SITE PLAN

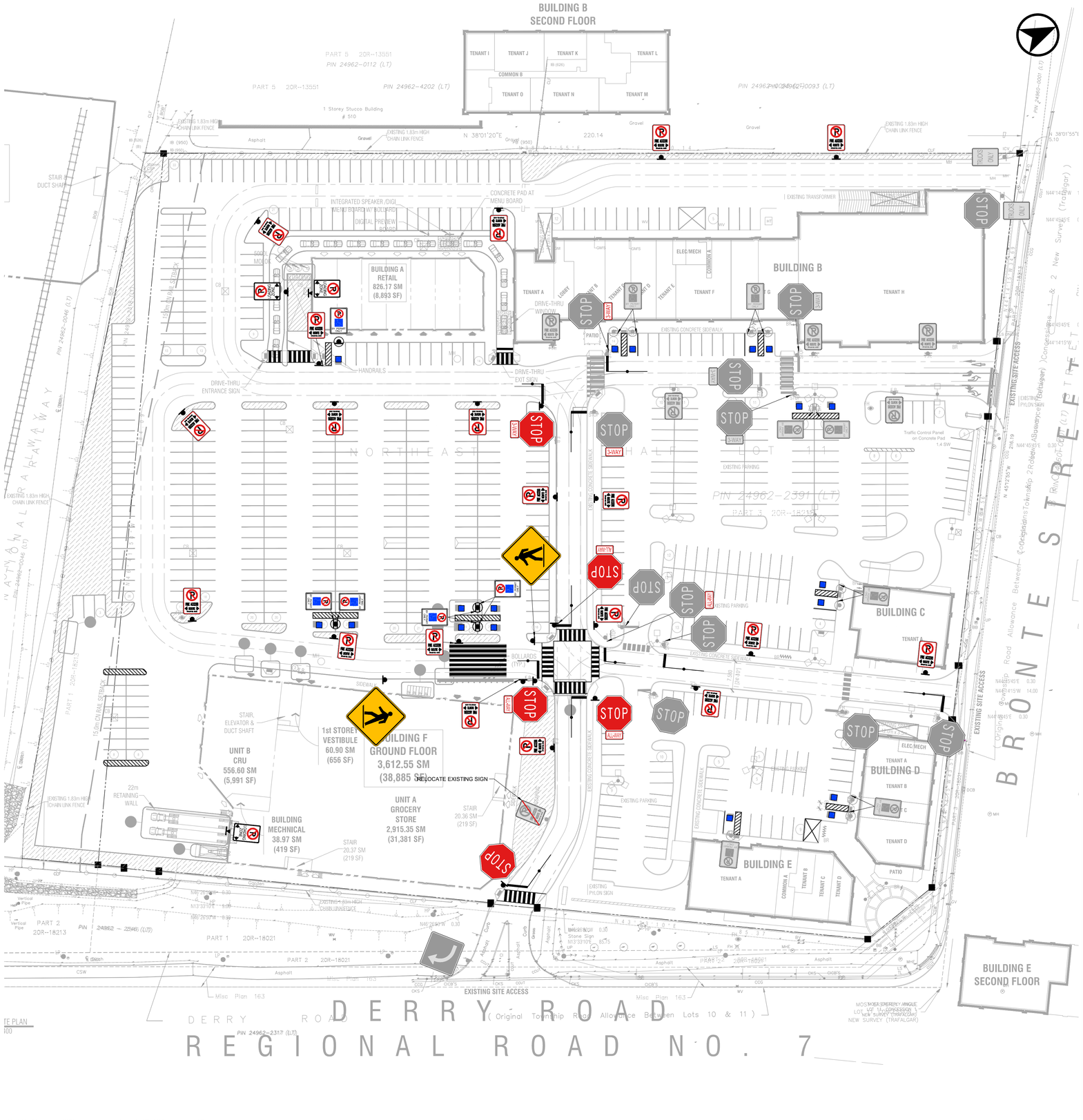
DERRY HEIGHTS
DERRY ROAD & BRONTE ST.
MILTON, ONTARIO

DRAWING:
OVERALL PROPOSED SITE PLAN

DATE YYYY/MM/DD: 2026.06.05	REVISION NUMBER: R10
SCALE: 1:400	DRAWING NUMBER: SP1.0
JOB NUMBER: 25201-E	

I:\E-J\Fi\Capital\25201-E\25201-Derry Heights, Milton, ON\SM\25201 - Derry Heights R10 (2026.06.05).DWG
Plotted: 2026.06.05 - 10:58:26 - by: Jeff Wilson

Appendix C:
Pavement Marking and Signage Plan



EXISTING SIGN LEGEND

- Ex. Ra-1 (600 x 600)mm
- EX_FIRE ROUTE (300 x 450)mm
- Ex. Rb-93 (300 x 450)mm
- TRUCKS ONLY (300 x 450)mm
- Ex. Rb-42 (600 x 600)mm
- Ex. Ra-1t (150 x 300)mm

PROPOSED SIGN LEGEND

- Ra-1 (600 x 600)mm
- LZ_LR (300 x 450)mm
- FIRE ROUTE (300 x 450)mm
- Rb-93 (300 x 450)mm
- Wc-7L (750 x 750)mm
- Ra-1t (150 x 300)mm

SIGN MOUNT LEGEND

ALL SIGNS ARE SHOWN IN APPROXIMATE LOCATIONS AND TO BE DETERMINED ON SITE. SIGNS MUST BE VISIBLE TO DRIVER AND NOT OBSTRUCTED BY LANDSCAPE.

- EXISTING POST
- EXISTING POST PROTECTION
- EXISTING WALL/COLUMN MOUNT SIGN
- PROPOSED POST
- PROPOSED POST PROTECTION
- PROPOSED WALL/COLUMN MOUNT SIGN

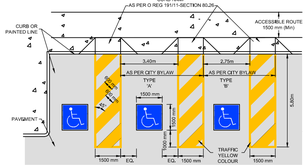
SIGN INSTALLATION

1. ALL SIGNS MUST CONFORM TO AND/BE EQUIVALENT TO THE STANDARDS AND SPECIFICATIONS SET OUT IN THE ONTARIO TRAFFIC MANUAL (OTM) BOOKS 1 THROUGH 10, EXCEPT WHERE OTHERWISE NOTED.
2. ALL SIGNS ARE SHOWN IN APPROXIMATE LOCATIONS AND TO BE DETERMINED ON SITE. SIGNS MUST BE VISIBLE TO DRIVER NOT OBSTRUCTED BY LANDSCAPE.
3. ALL SIGN POST LOCATIONS MUST BE PLACED SUCH THAT THE SIGN FACE OR EDGE OF SIGN WILL NOT PROJECT BEYOND THE CURB LINE.
4. REGULATORY TRAFFIC CONTROL SIGNS MUST BE MOUNTED SUCH THAT THERE IS A MINIMUM 2.1 METRES CLEARANCE FROM THE BOTTOM OF SIGN TO THE SURFACE.

PAVEMENT MARKING LEGEND

NOTE - ALL MARKINGS MUST CONFORM TO THE ONTARIO TRAFFIC MANUAL (OTM) BOOK 11

- 10cm (4 in.) YELLOW SOLID
- ALL STOP BARS TO BE 60cm (2 ft.) WHITE SOLID
- YELLOW HATCHING (10cm WIDE YELLOW STRIPS)
- INTERNATIONAL SYMBOL OF ACCESS
  - 1.5m x 1.5m
  - 10cm BORDER - TRAFFIC WHITE
  - SYMBOL - TRAFFIC WHITE
  - BLUE BACKGROUND
- PEDESTRIAN CROSSING
  - COLD PLASTIC "POLYMERIC"
  - WIDTH AS SHOWN
  - PATTERN: 60cm PAINTED, 60cm GAP
  - TRAFFIC WHITE



ACCESSIBLE PARKING
PAINTED STENCIL LAYOUT
NTS

00	MM-DD-YR	INT	REVISION NOTE

BA Group
BA Consulting Group Ltd.
1000 – 95 St. Clair Ave, W,
Toronto ON M4V 1N6
TEL 416 961 7110
EMAIL bagroup@bagroup.com
MOVEMENT IN URBAN ENVIRONMENTS
BAGROUP.COM

DERRY HEIGHTS PLAZA

TRAFFIC CONTROL SIGNAGE AND PAVEMENT MARKINGS PLAN

Date: June 2, 2026

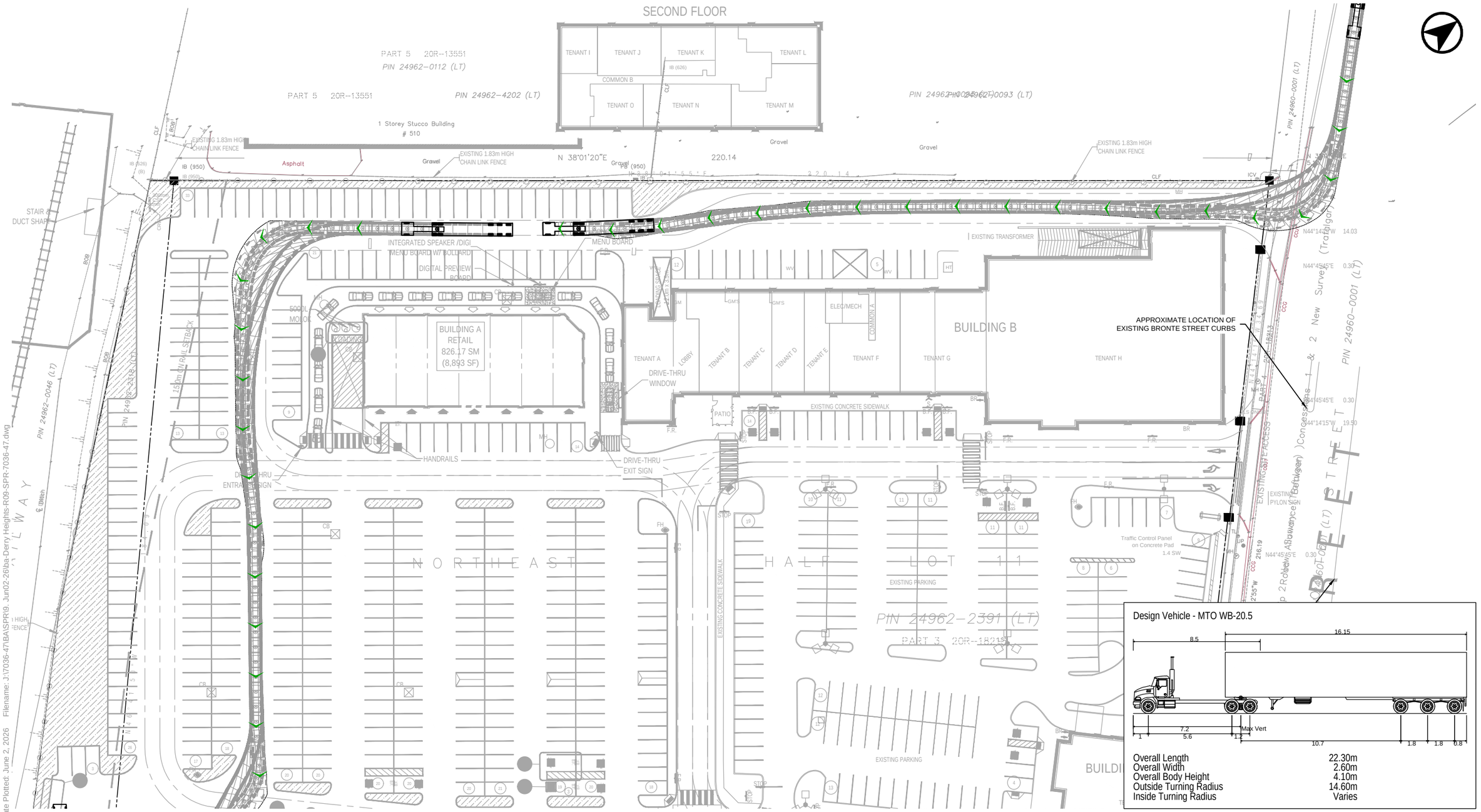
Project No.: 7036-47

Scale: 1:500 (0 5 10 15 20m)

SN_PM-01

Date Plotted: June 2, 2026 Filename: J:\7036-47\BA\SN5_Jun02-26\ba-Derry Heights-R05-SN-7036-47.dwg

Appendix D:
Vehicle Manoeuvring Diagrams



Date Plotted: June 2, 2026 Filename: J:\7036-47\BA\SPR\9. Jun\02-26\ba-Derry Heights-R09-SPR-7036-47.dwg

BA Group

DERRY HEIGHTS PLAZA

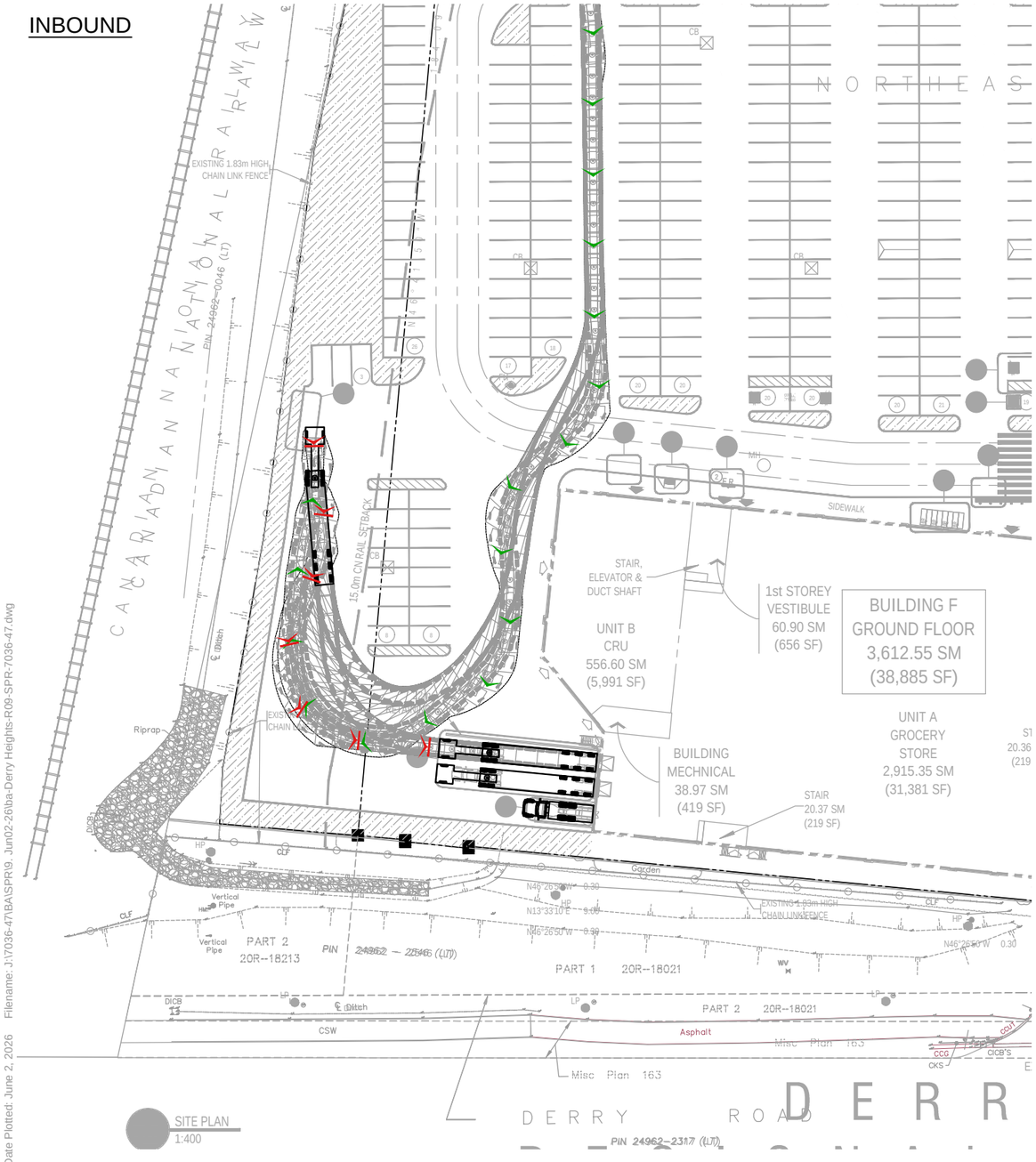
VEHICLE MANOEUVRING DIAGRAM
INBOUND SITE CIRCULATION
MTO WB-20 TRACTOR TRAILER

Project:	DERRY HEIGHTS PLAZA
Project No.	7036-47
Date:	June 2, 2026
Revised:	--

Scale 1:750 (0 15 30m)

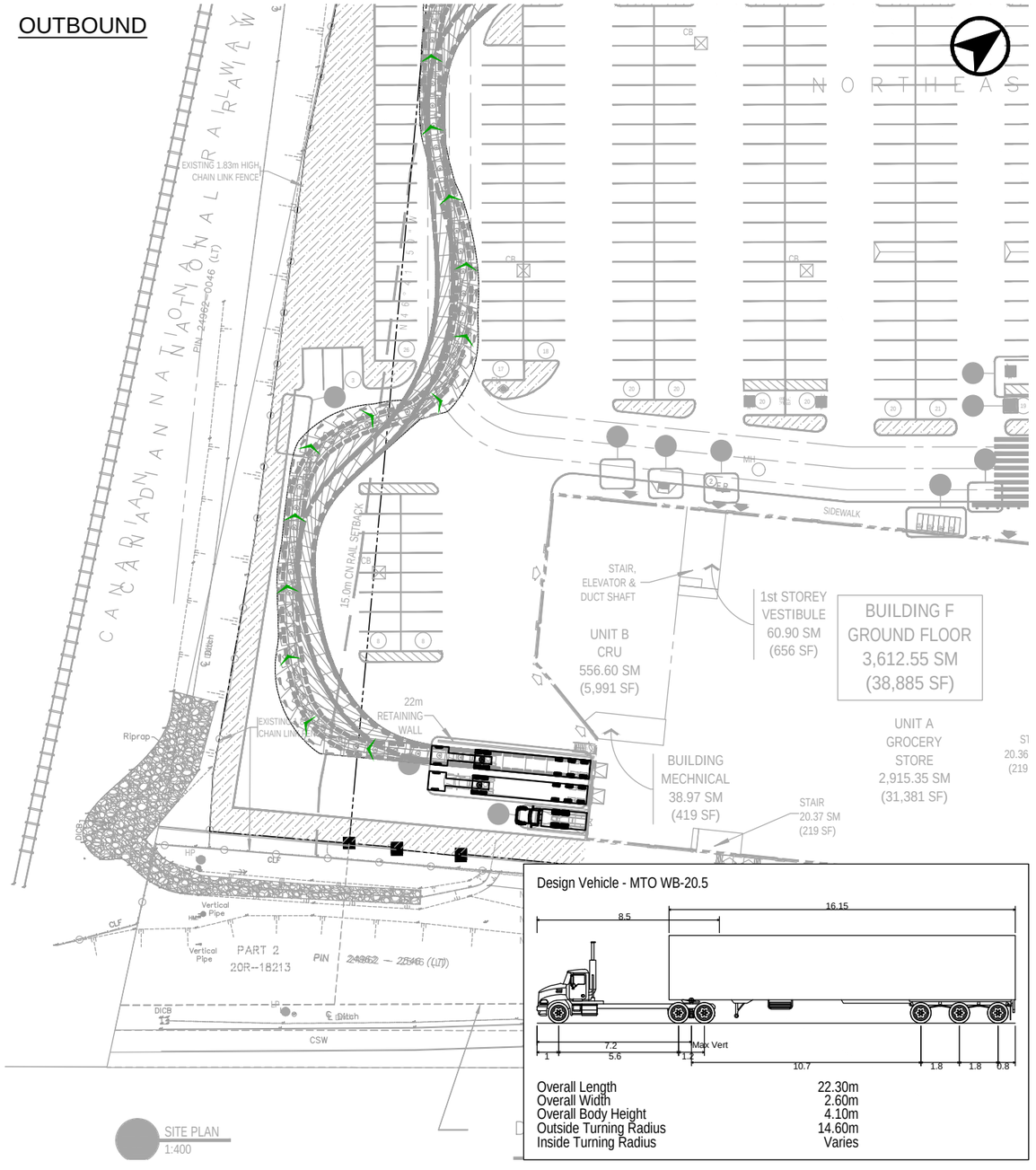
Drawing No. VMD-01

INBOUND



SITE PLAN
1:400

OUTBOUND



SITE PLAN
1:400

Design Vehicle - MTO WB-20.5

Overall Length	22.30m
Overall Width	2.60m
Overall Body Height	4.10m
Outside Turning Radius	14.60m
Inside Turning Radius	Varies

Filename: J:\7036-47\BA\SPR\9. Jun02-26\ba-Derry Heights-R09-SPR-7036-47.dwg
Date Plotted: June 2, 2026

BA Group

DERRY HEIGHTS PLAZA

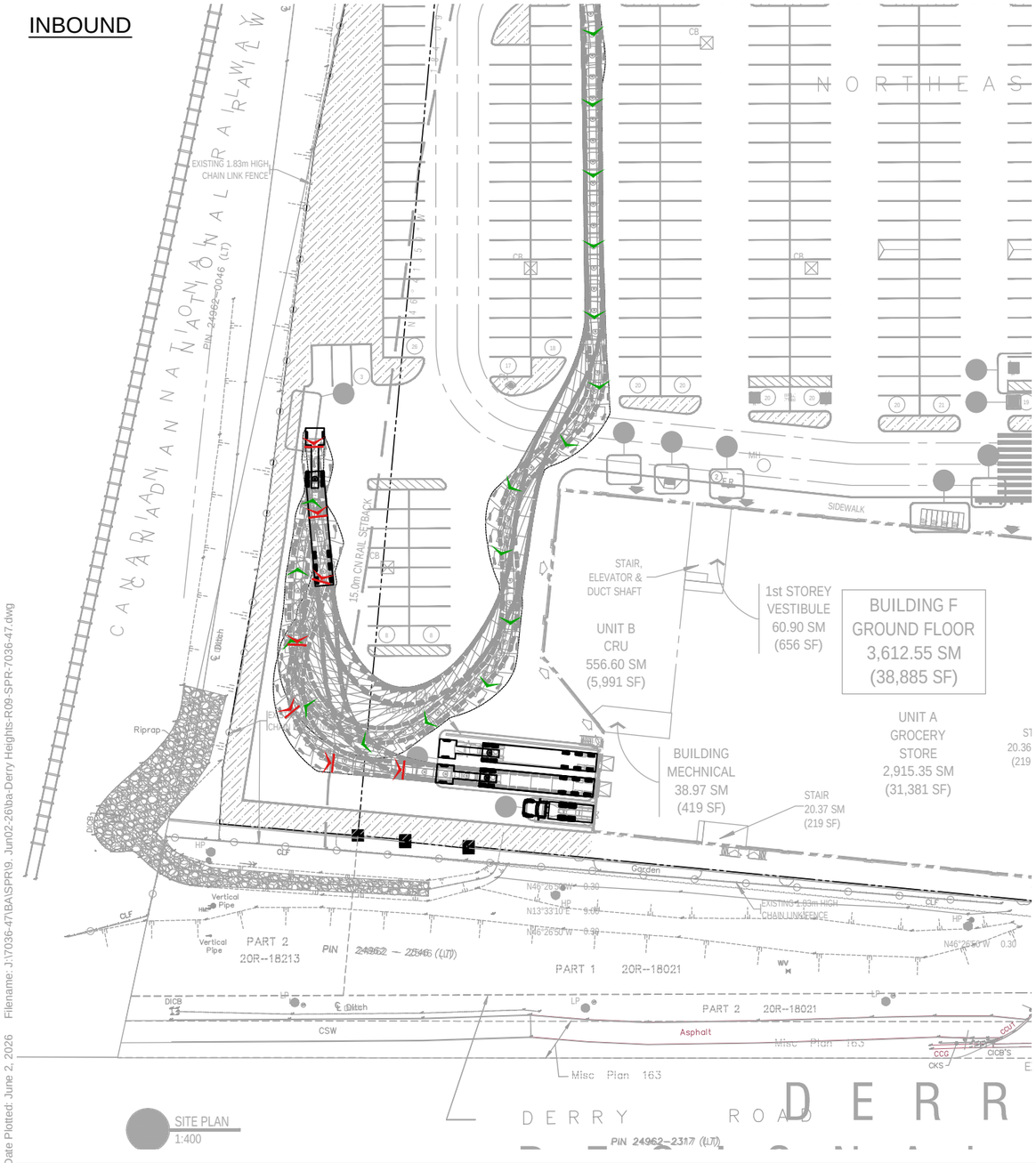
VEHICLE MANOEUVRING DIAGRAM
GROCERY LOADING BAY 1
MTO WB-20 TRACTOR TRAILER

Project:	DERRY HEIGHTS PLAZA
Project No.	7036-47
Date:	June 2, 2026
Revised:	--

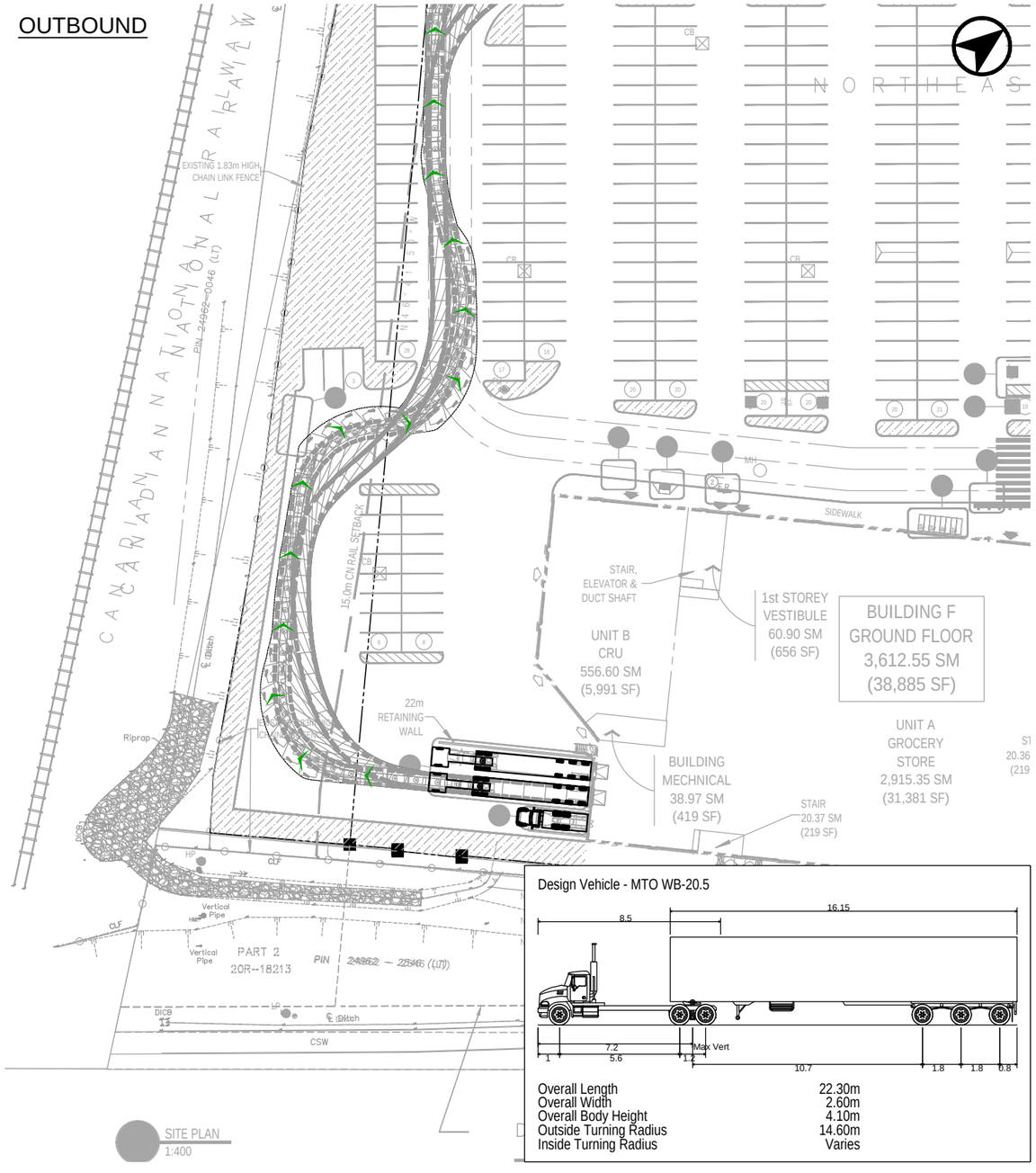
Scale 1:750 (0 – 15 – 30m)

Drawing No. VMD-02

INBOUND



OUTBOUND



Design Vehicle - MTO WB-20.5

Overall Length	22.30m
Overall Width	2.60m
Overall Body Height	4.10m
Outside Turning Radius	14.60m
Inside Turning Radius	Varies

Date Plotted: June 2, 2026 Filename: J:\7036-47\BA\SPR\9. Jun02-26\ba-Derry Heights-R09-SPR-7036-47.dwg

BA Group

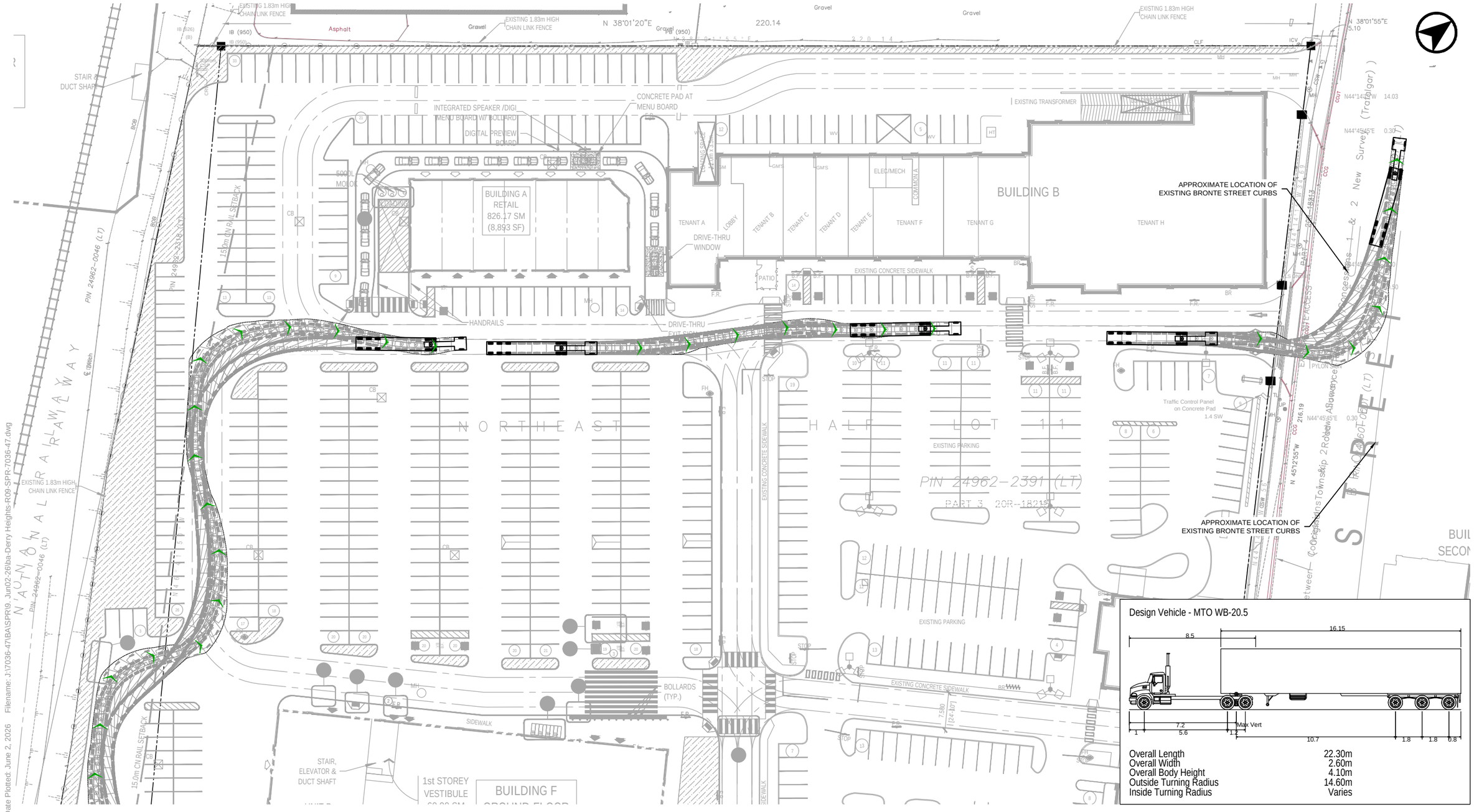
DERRY HEIGHTS PLAZA

VEHICLE MANOEUVRING DIAGRAM
GROCERY LOADING BAY 2
MTO WB-20 TRACTOR TRAILER

Project:	DERRY HEIGHTS PLAZA
Project No.	7036-47
Date:	June 2, 2026
Revised:	--

Scale 1:750 (0 – 15 – 30m)

Drawing No. VMD-03



Date Plotted: June 2, 2026 Filename: J:\7036-47\BA\SPR9 Jun02-26\ba-Derry Heights-R09-SPR-7036-47.dwg

BA Group

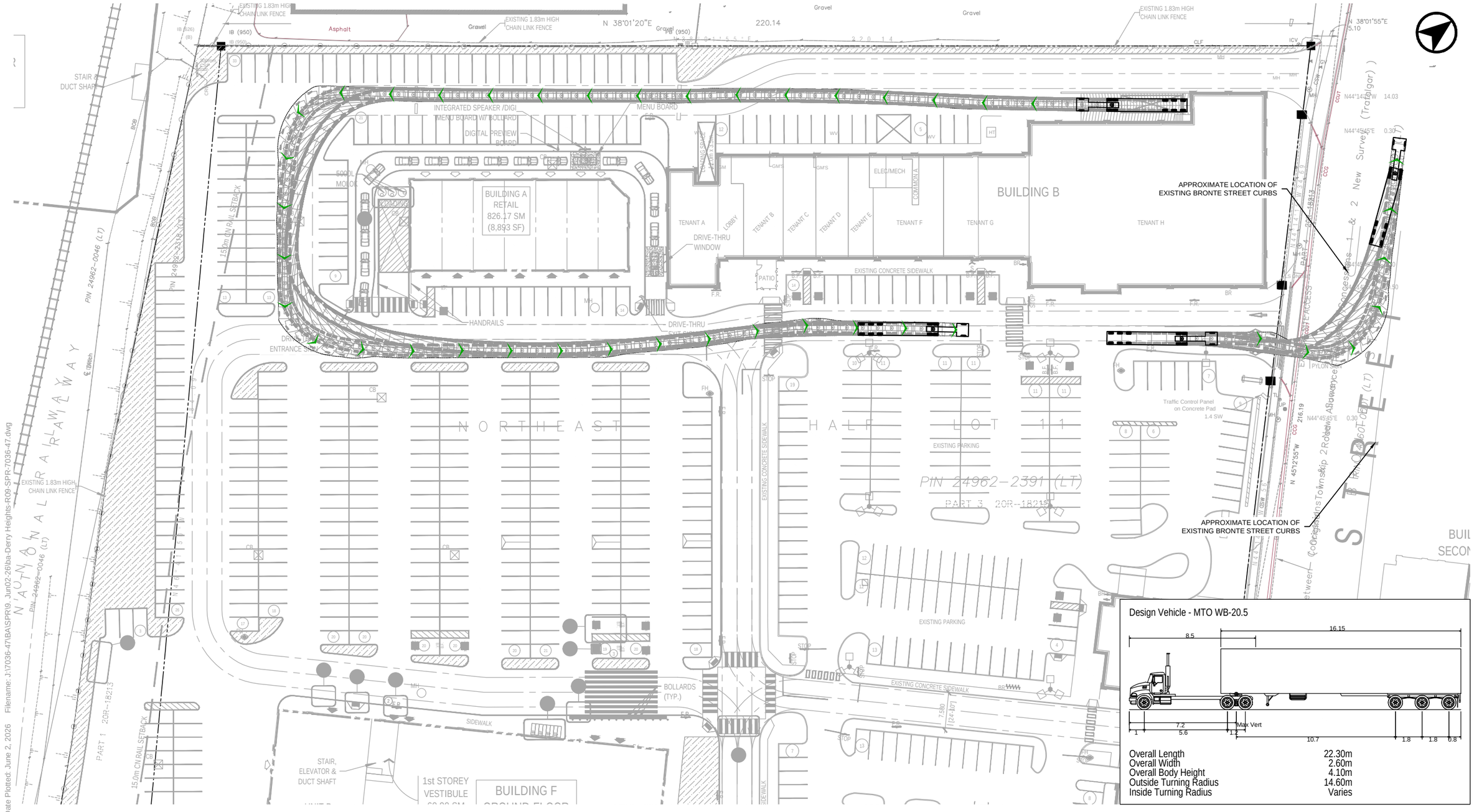
DERRY HEIGHTS PLAZA

VEHICLE MANOEUVRING DIAGRAM
OUTBOUND CIRCULATION
MTO WB-20 TRACTOR TRAILER

Project:	DERRY HEIGHTS PLAZA
Project No.	7036-47
Date:	June 2, 2026
Revised:	--

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

Drawing No. VMD-04



Date Plotted: June 2, 2026 Filename: J:\7036-47\BA\SPR\9. Jun\02-26\ba-Derry Heights-R09-SPR-7036-47.dwg

BA Group

DERRY HEIGHTS PLAZA

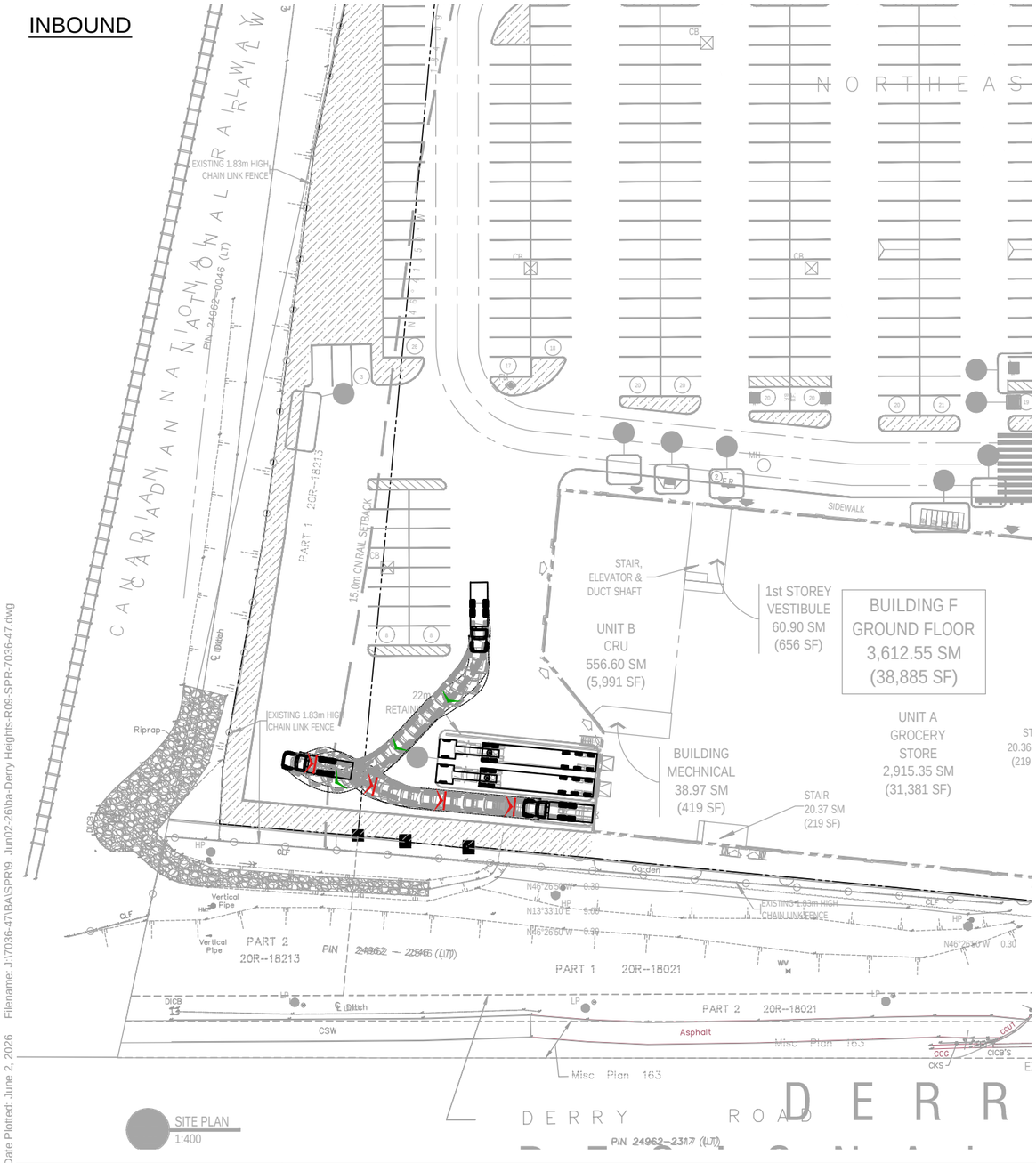
VEHICLE MANOEUVRING DIAGRAM
EXISTNG SHOPPERS OUTBOUND
MTO WB-20 TRACTOR TRAILER

Project:	DERRY HEIGHTS PLAZA
Project No.	7036-47
Date:	June 2, 2026
Revised:	--

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

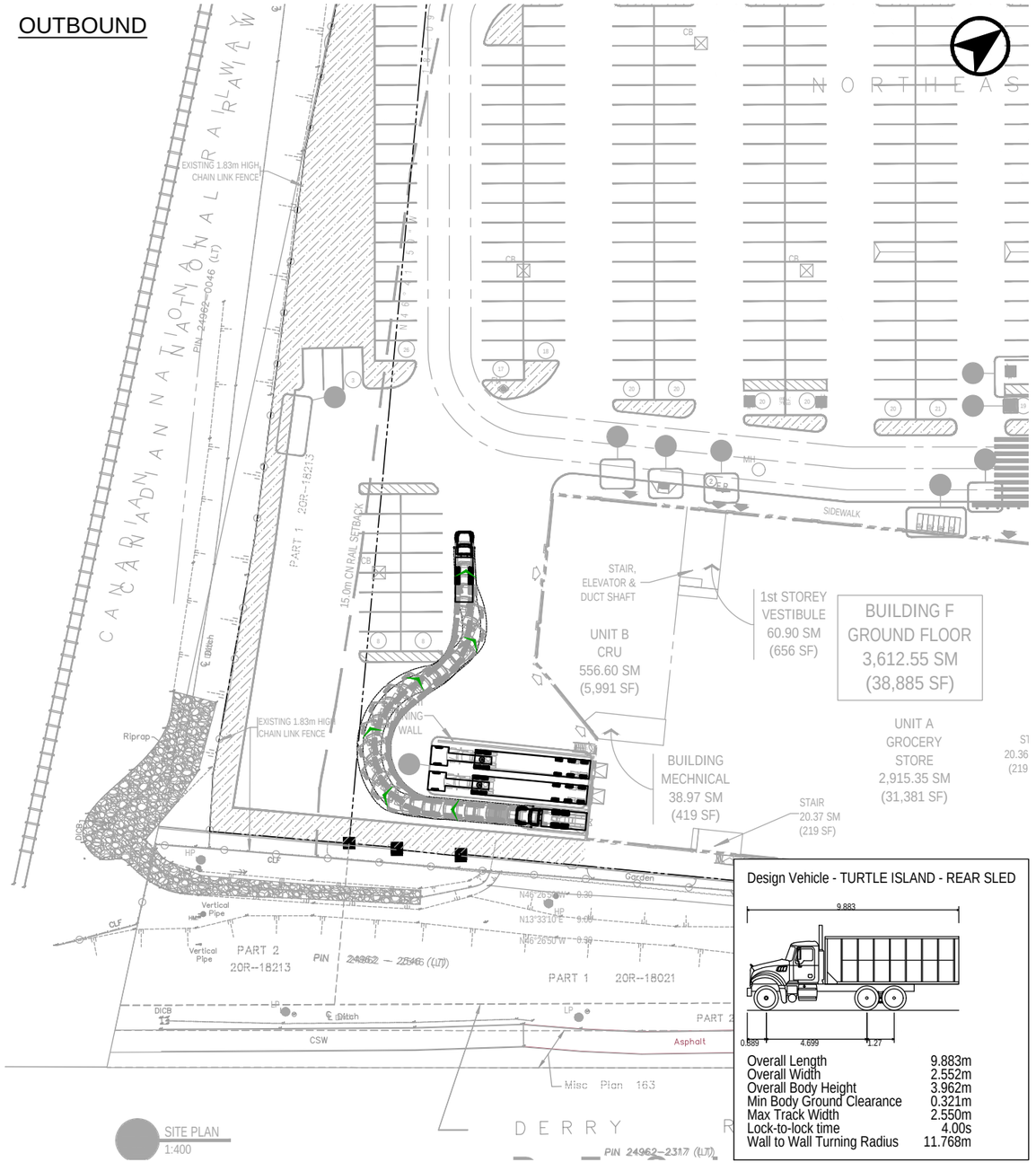
Drawing No. VMD-05

INBOUND



SITE PLAN
1:400

OUTBOUND



SITE PLAN
1:400

Design Vehicle - TURTLE ISLAND - REAR SLED

Overall Length	9.883m
Overall Width	2.552m
Overall Body Height	3.962m
Min Body Ground Clearance	0.321m
Max Track Width	2.550m
Lock-to-lock time	4.00s
Wall to Wall Turning Radius	11.768m

Date Plotted: June 2, 2026 Filename: J:\7036-47\BA\SPR\9. Jun02-26\ba-Derry Heights-R09-SPR-7036-47.dwg

BA Group

DERRY HEIGHTS PLAZA

VEHICLE MANOEUVRING DIAGRAM
GROCERY COMPACTOR
TURTLE ISLAND REAR LOADING GARBAGE TRUCK

Project:	DERRY HEIGHTS PLAZA
Project No.	7036-47
Date:	June 2, 2026
Revised:	--

Scale 1:750 (0 — 15 — 30m)

Drawing No. VMD-06

INBOUND

OUTBOUND

INTEGRATED SPEAKER /DIGI MENU BOARD W/ BOLLARD

DIGITAL PREVIEW BOARD

5000L MOLOK

LOADING

BUILDING A
RETAIL
826.17 SM
(8,893 SF)

150m CN RAIL SETBACK

HANDRAILS

DRIVE-THRU ENTRANCE SIGN

MH

CB

B.F.

21

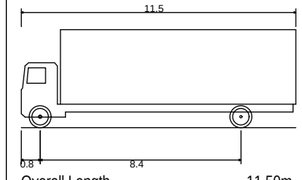
9

13

13

N O R T H E A S T

Design Vehicle - TAC HSU (Heavy Single Unit)



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

Date Plotted: June 2, 2026 Filename: J:\7036-47\BA\SPR\9. Jun\02-26\ba-Derry Heights-R09-SPR-7036-47.dwg

BA Group

DERRY HEIGHTS PLAZA

VEHICLE MANOEUVRING DIAGRAM
BUILDING A LOADING
TAC HEAVY SINGLE UNIT (HSU) TRUCK

Project:	DERRY HEIGHTS PLAZA
Project No.	7036-47
Date:	June 2, 2026
Revised:	--

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

Drawing No. VMD-07

INBOUND

OUTBOUND

INTEGRATED SPEAKER /DIGI MENU BOARD W/ BOLLARD

DIGITAL PREVIEW BOARD

5000L MOLOK

LOADING

BUILDING A
RETAIL
826.17 SM
(8,893 SF)

150m CN RAIL SETBACK

DRIVE-THRU ENTRANCE SIGN

HANDRAILS

MH

CB

B.F.

21

9

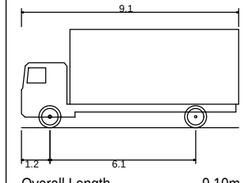
13

13

NORTHEA

NO

Design Vehicle - TAC SU (Single Unit Truck)



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

Date Plotted: June 2, 2026 Filename: J:\7036-47\BA\SPR\9. Jun02-26\ba-Derry Heights-R09-SPR-7036-47.dwg

BA Group

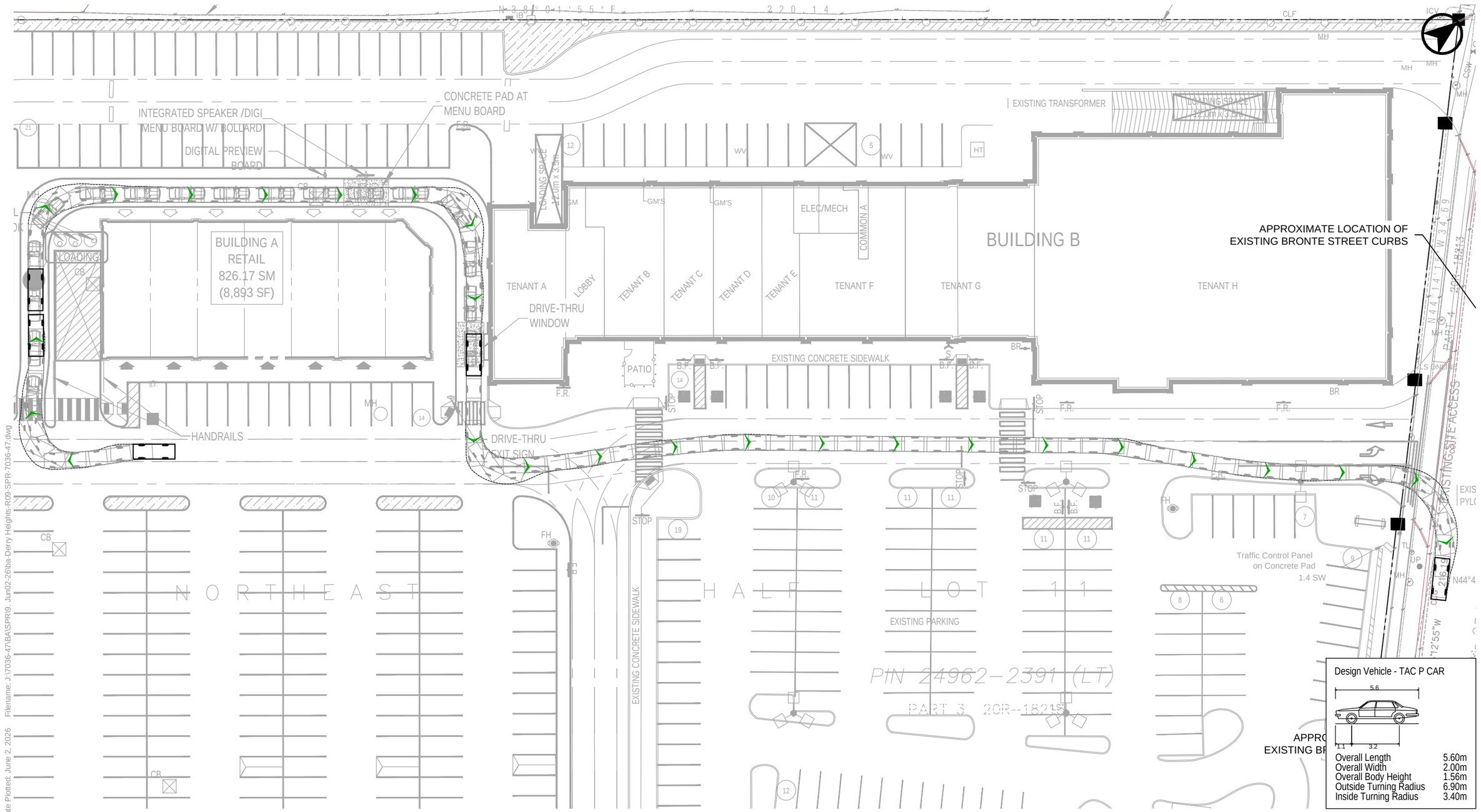
DERRY HEIGHTS PLAZA

VEHICLE MANOEUVRING DIAGRAM
BUILDING A LOADING
TAC SINGLE UNIT (SU) TRUCK

Project:	DERRY HEIGHTS PLAZA
Project No.	7036-47
Date:	June 2, 2026
Revised:	--

Scale 1:400 — 0 2 4 6 8 10 20m

Drawing No. VMD-08



Filename: J:\7036-47\BA\SPR9. Jun02-26\ba-Derry Heights-R09-SPR-7036-47.dwg
Date Plotted: June 2, 2026

BA Group

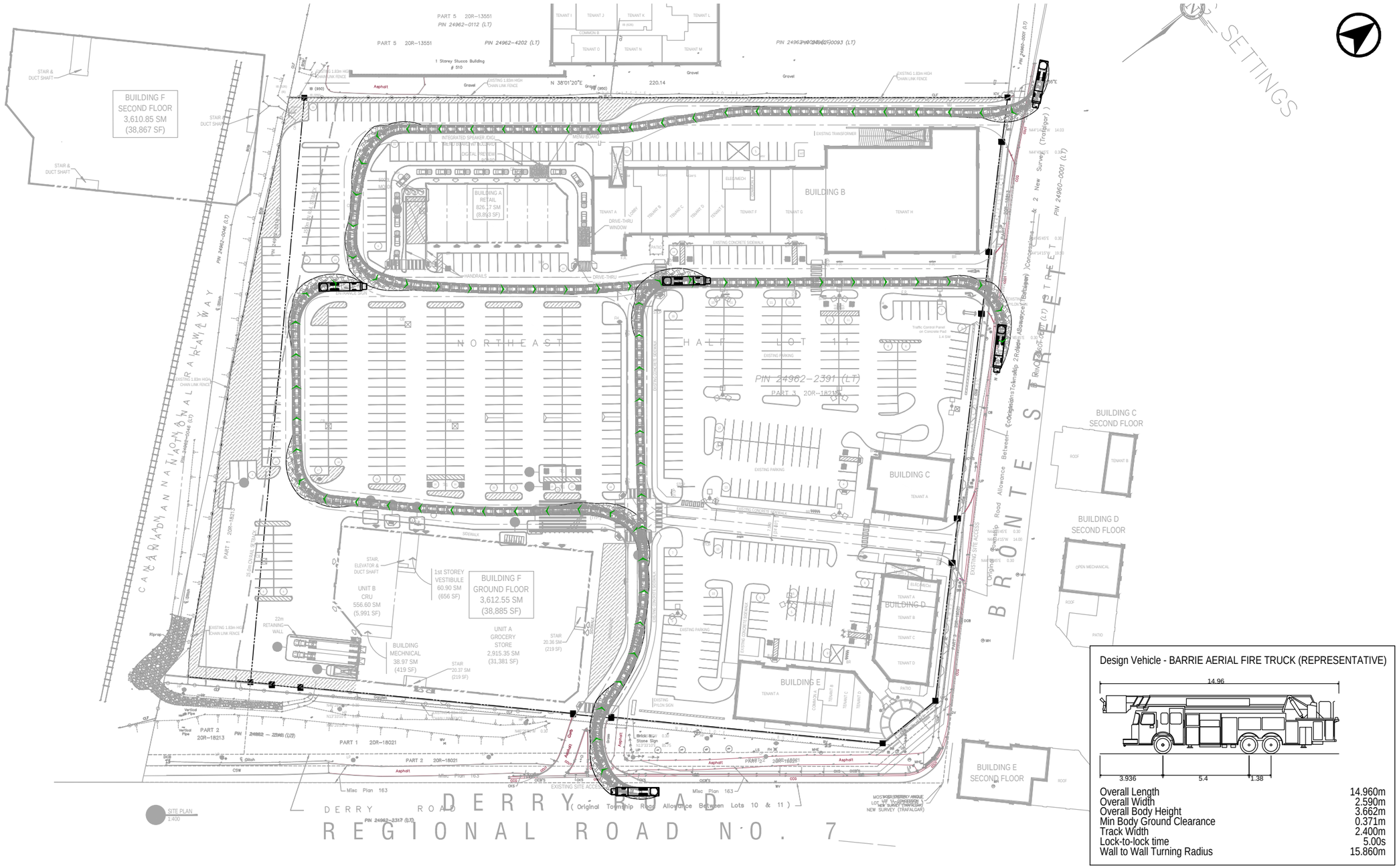
DERRY HEIGHTS PLAZA

VEHICLE MANOEUVRING DIAGRAM
TIM HORTONS DRIVE THRU
TAC P CAR

Project:	DERRY HEIGHTS PLAZA
Project No.	7036-47
Date:	June 2, 2026
Revised:	--

Scale 1:500 (0, 5, 10, 15, 20m)

Drawing No. VMD-09



Design Vehicle - BARRIE AERIAL FIRE TRUCK (REPRESENTATIVE)

Overall Length	14.960m
Overall Width	2.590m
Overall Body Height	3.662m
Min Body Ground Clearance	0.371m
Track Width	2.400m
Lock-to-lock time	5.00s
Wall to Wall Turning Radius	15.860m

BA Group

DERRY HEIGHTS PLAZA

VEHICLE MANOEUVRING DIAGRAM
FIRE TRUCK CIRCULATION
TOWN OF MILTON REPRESENTATIVE AERIAL FIRE TRUCK

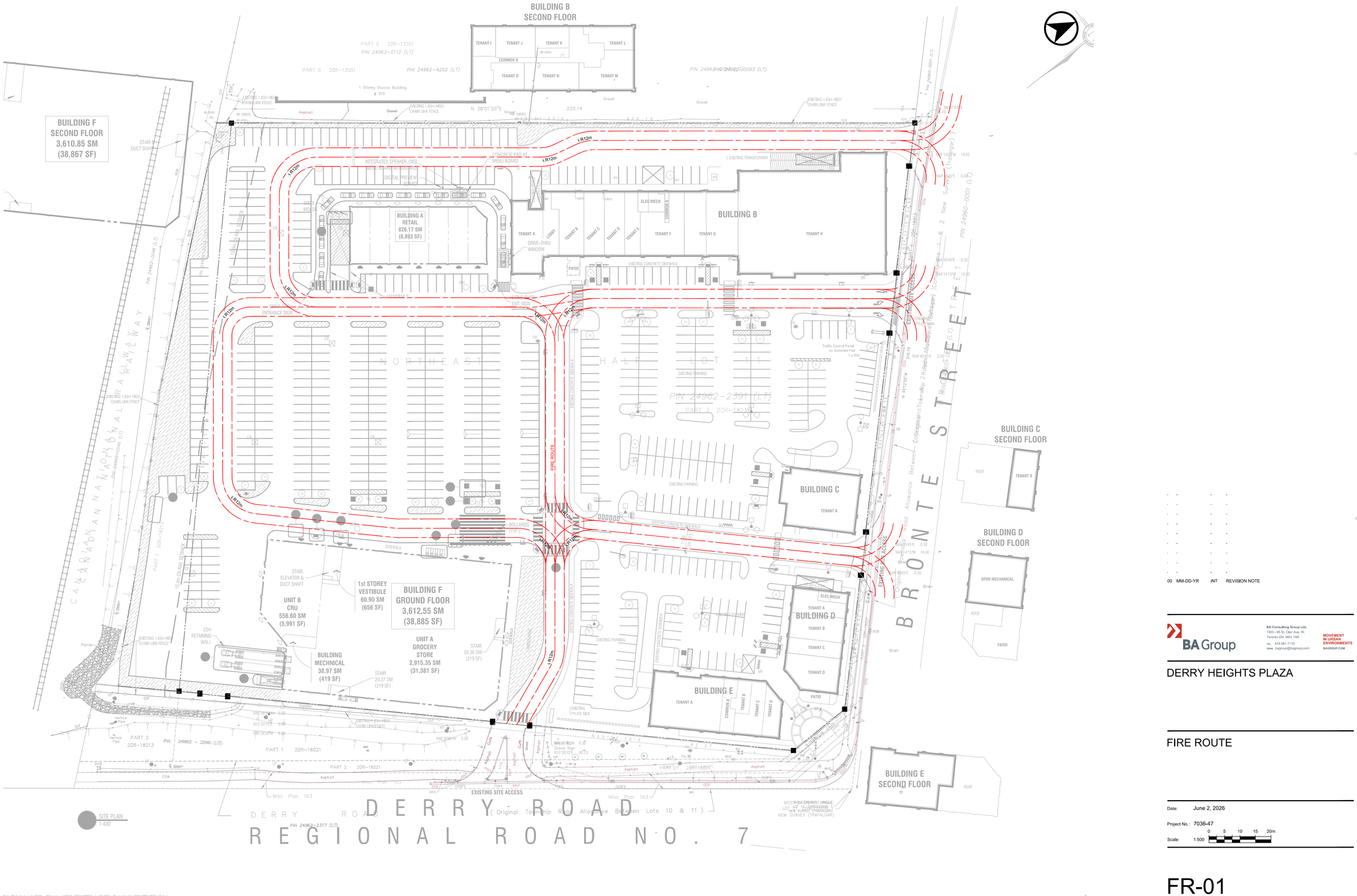
Project:	DERRY HEIGHTS PLAZA
Project No.	7036-47
Date:	June 2, 2026
Revised:	--

Scale 1:1,250 (0 – 25 – 50m)

Drawing No. VMD-10

Date Plotted: June 2, 2026 Filename: J:\7036-47\BA\SPR9. Jun02-26\ba-Derry Heights-R09-SPR-7036-47.dwg

Appendix E:
Fire Route Plan



SITE PLAN
1:400

Date Plotted: June 2, 2026 Filename: J:\7036-47\BA\SPR\9. Jun\02-26\ba-Derry Heights-R09-SPR-7036-47.dwg

00 MM-DD-YR INT REVISION NOTE

BA Group
BA Consulting Group Ltd.
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TEL 416 961 7110
EMAIL bagroup@bagroup.com
MOVEMENT IN URBAN ENVIRONMENTS
BAGROUP.COM

DERRY HEIGHTS PLAZA

FIRE ROUTE

Date: June 2, 2026

Project No.: 7036-47

Scale: 1:500 0 5 10 15 20m

FR-01

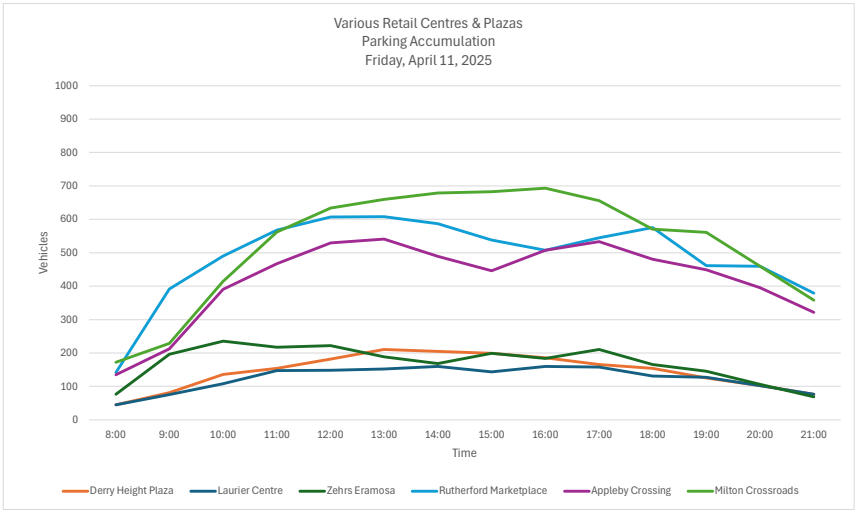
Appendix F:
Parking Demand Data

Project No: 7036.47
Project: Derry Heights Plaza
Study Location: Various Retail Centres & Plazas
Study Times: 8 am to 9 pm

Parking Demand Summary

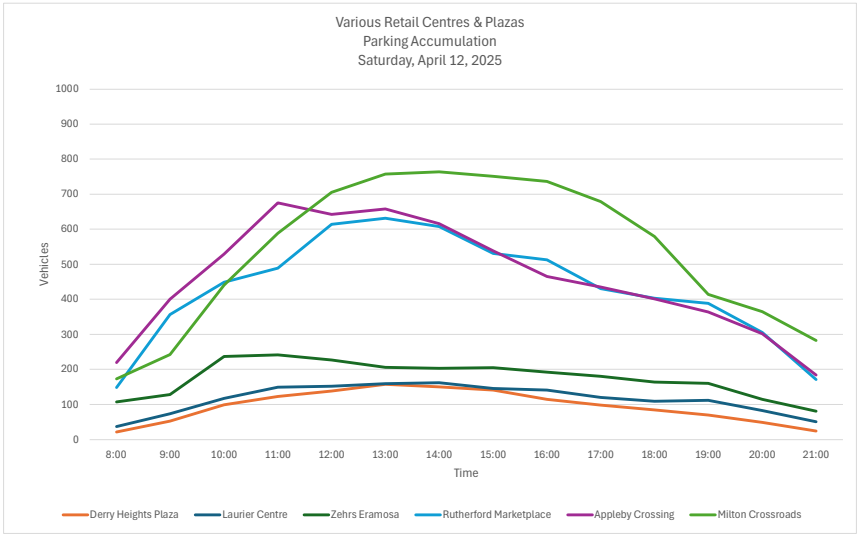
Friday, April 11, 2025

Area	Derry Heights Plaza, Mississauga	Laurier Centre, Milton	Zehrs Eramosa, Guelph	Rutherford Marketplace, Vaughan	Appleby Crossing, Burlington	Milton Crossroads
Supply	469	251	418	1014	1210	1558
Time						
8:00	45	45	77	142	135	173
9:00	81	76	196	391	212	229
10:00	136	108	236	490	390	414
11:00	154	147	217	568	467	562
12:00	182	148	222	607	529	634
13:00	211	152	189	608	541	659
14:00	205	160	168	587	489	679
15:00	199	144	199	538	446	682
16:00	186	160	184	507	507	693
17:00	166	158	211	545	533	656
18:00	154	131	166	575	480	570
19:00	125	127	145	461	449	561
20:00	102	102	106	459	395	459
21:00	77	77	69	379	322	358
Peak Hour	13:00	14:00	10:00	13:00	13:00	16:00
Peak Occupancy	211	160	236	608	541	693
Occupancy Rate	45%	64%	56%	60%	45%	44%
GFA	7202	10125	7679	20912	24166	50588
Demand Ratio (per 100 sm) based on Occupied GFA	**2.93**	**1.58**	**3.07**	**2.91**	**2.24**	**1.37**



Saturday, April 12, 2025

Area	Derry Heights Plaza, Mississauga	Laurier Centre, Milton	Zehrs Eramosa, Guelph	Rutherford Marketplace, Vaughan	Appleby Crossing, Burlington	Milton Crossroads
Supply	469	251	418	1014	1210	1558
Time						
8:00	22	37	107	149	219	173
9:00	52	73	128	356	400	242
10:00	99	117	237	449	529	440
11:00	123	149	242	489	676	588
12:00	138	152	227	614	642	705
13:00	158	159	206	632	658	757
14:00	150	162	203	608	616	764
15:00	141	145	205	531	538	751
16:00	114	141	192	513	465	736
17:00	98	120	180	430	435	679
18:00	84	109	164	403	401	579
19:00	70	112	160	388	364	414
20:00	49	82	114	305	302	365
21:00	24	50	81	171	184	282
Peak Hour	13:00	14:00	11:00	13:00	11:00	14:00
Peak Occupancy	158	162	242	632	676	764
Occupancy Rate	34%	65%	58%	62%	56%	49%
GFA	7202	10125	7679	20912	24166	50588
Demand Ratio (per 100 sm) based on Occupied GFA	**2.19**	**1.60**	**3.15**	**3.02**	**2.80**	**1.51**



Note: GFA(sm) for Laurier Centre, Zehrs Eramosa, Rutherford Marketplace, Appleby Crossing and Milton Crossroads are estimated from Google Earth.

Project No: 7036.47
Project: Derry Heights Plaza
Study Location: 6941 Derry Rd
Municipality: Mississauga
Study Times: 8 am to 9 pm

Parking Demand

Friday, April 11, 2025

Area	A	Accessible	B	Accessible	EV	C	D	E	Accessible	Total	Occupancy	Demand Ratio on Occ. GLA	Demand Ratio on Occ. GFA
Supply	196	2	155	8	4	17	18	66	3	469	Ratio	7.42	6.51
Time													
8:00	10	0	11	8	0	9	0	7	0	45	10%	0.71	0.62
9:00	17	0	34	0	0	11	0	19	0	81	17%	1.28	1.12
10:00	19	0	61	0	0	17	0	39	0	136	29%	2.15	1.89
11:00	21	0	73	0	1	17	0	42	0	154	33%	2.44	2.14
12:00	36	0	81	3	2	16	0	44	0	182	39%	2.88	2.53
13:00	44	0	85	3	2	17	0	59	1	211	45%	3.34	2.93
14:00	49	0	83	2	1	17	0	51	2	205	44%	3.24	2.85
15:00	41	0	86	3	1	17	0	49	2	199	42%	3.15	2.76
16:00	39	1	75	4	1	15	0	50	1	186	40%	2.94	2.58
17:00	36	1	61	2	1	15	0	50	0	166	35%	2.62	2.30
18:00	36	0	53	1	1	14	0	49	0	154	33%	2.44	2.14
19:00	29	0	39	1	1	13	0	41	1	125	27%	1.98	1.74
20:00	26	0	31	0	0	10	0	35	0	102	22%	1.61	1.42
21:00	13	0	27	0	0	10	0	27	0	77	16%	1.22	1.07

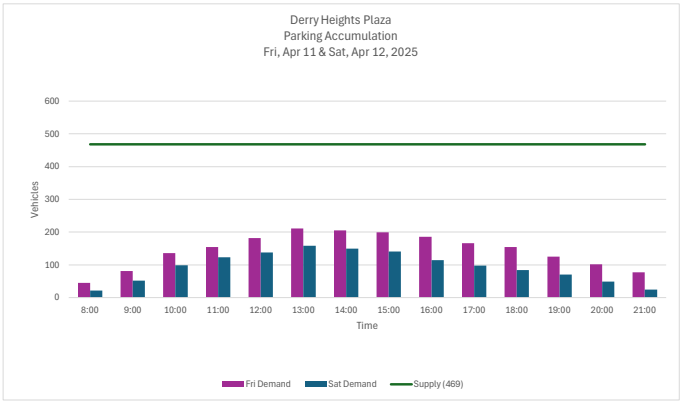
Saturday, April 12, 2025

Area	A	Accessible	B	Accessible	EV	C	D	E	Accessible	Total	Occupancy	Demand Ratio on Occ. GLA	Demand Ratio on Occ. GFA
Supply	196	2	155	8	4	17	18	66	3	469		7.42	6.51
Time													
8:00	12	0	6	0	0	1	1	2	0	22	5%	0.35	0.31
9:00	16	0	17	0	0	3	1	15	0	52	11%	0.82	0.72
10:00	22	0	35	3	0	11	1	27	0	99	21%	1.57	1.37
11:00	31	0	41	3	1	11	1	35	0	123	26%	1.94	1.71
12:00	39	0	40	4	1	11	1	41	1	138	29%	2.18	1.92
13:00	37	1	51	2	1	11	1	53	1	158	34%	2.50	2.19
14:00	38	1	49	1	0	10	1	49	1	150	32%	2.37	2.08
15:00	35	2	52	1	0	10	1	40	0	141	30%	2.23	1.96
16:00	23	0	45	1	0	7	1	36	1	114	24%	1.80	1.58
17:00	19	1	37	2	0	7	1	31	0	98	21%	1.55	1.36
18:00	22	0	29	1	0	5	1	26	0	84	18%	1.33	1.17
19:00	21	0	26	0	0	5	1	17	0	70	15%	1.11	0.97
20:00	15	0	21	0	0	0	1	12	0	49	10%	0.77	0.68
21:00	8	0	10	0	0	0	1	5	0	24	5%	0.38	0.33

Total GFA (sm) 7202
Total GLA (sm) 6324
Fully Occupied

Current Tenants:

Shoppers Drug Mart	Booster Juice
CIBC	Animal Hospital
RBC	Mustard Garden
Tim Hortons	Wild Wings
Impact	Great Clips
Sunset Grill	Medical Clinic
Pizza Nova	Kumon



Project No: 7036.47
Project: Derry Heights Plaza
Study Location: Laurier Centre, 500 Laurier Ave
Municipality: Milton
Study Times: 8 am to 9 pm

Parking Demand

Friday, April 11, 2025

Area	A	Accessible	B	Accessible	C	Total	Occupancy	Demand Ratio
Supply	172	6	52	1	20	251		2.48
Time								
8:00	23	2	19	1	0	45	18%	0.44
9:00	60	1	15	0	0	76	30%	0.75
10:00	71	2	32	0	3	108	43%	1.07
11:00	90	3	47	1	6	147	59%	1.45
12:00	104	0	36	0	8	148	59%	1.46
13:00	98	2	46	0	6	152	61%	1.50
14:00	103	5	37	1	14	160	64%	1.58
15:00	90	2	33	1	18	144	57%	1.42
16:00	105	3	39	1	12	160	64%	1.58
17:00	95	2	45	1	15	158	63%	1.56
18:00	86	2	26	0	17	131	52%	1.29
19:00	72	1	34	0	20	127	51%	1.25
20:00	56	0	25	1	20	102	41%	1.01
21:00	47	0	11	0	19	77	31%	0.76

Saturday, April 12, 2025

Area	A	Accessible	B	Accessible	C	Total	Occupancy	Demand Ratio
Supply	172	6	52	1	20	251		2.48
Time								
8:00	27	0	9	1	0	37	15%	0.37
9:00	46	1	23	1	2	73	29%	0.72
10:00	74	2	35	1	5	117	47%	1.16
11:00	92	2	40	0	15	149	59%	1.47
12:00	89	3	47	0	13	152	61%	1.50
13:00	92	4	44	1	18	159	63%	1.57
14:00	98	3	43	1	17	162	65%	1.60
15:00	91	2	36	0	16	145	58%	1.43
16:00	85	3	39	0	14	141	56%	1.39
17:00	73	2	31	0	14	120	48%	1.19
18:00	65	0	28	1	15	109	43%	1.08
19:00	67	2	28	0	15	112	45%	1.11
20:00	44	0	23	1	14	82	33%	0.81
21:00	31	0	0	0	19	50	20%	0.49



Estimate GFA (sm) 10125
from Google Earth

Current Tenants:

Food Basics
Scotia Bank
Pizza Pizaa
Zaytoona Grocery Store
Soghaat Sweets & Bakers
Freedom Mobile
Pho Milton Restaurant
CNT Nails & Spa
Xoomtech Computer Sales & Service
Shawarma Town
Silver Spoon Restaurant
Dairy Queen
H & R Block
Laurier Dental
Village Vitamins

Project No: 7036.47
Project: Derry Heights Plaza
Study Location: Zehrs Eramosa Plaza, 297 Eramosa Rd
Municipality: Guelph
Study Times: 8 am to 9 pm

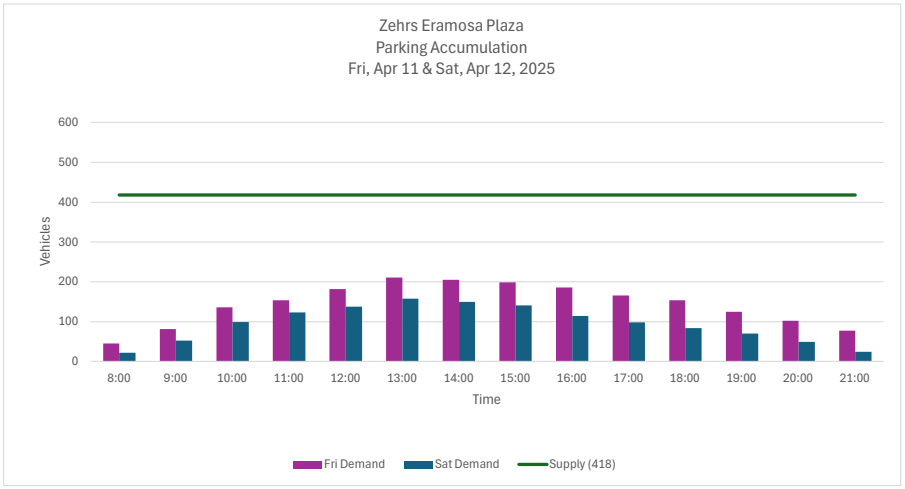
Parking Demand

Friday, April 11, 2025

Area	A	Accessible	B	Total	Occupancy	Demand Ratio
Supply	233	10	175	418		5.44
Time						
8:00	58	1	18	77	18%	1.00
9:00	153	4	39	196	47%	2.55
10:00	189	6	41	236	56%	3.07
11:00	158	8	51	217	52%	2.83
12:00	175	8	39	222	53%	2.89
13:00	145	6	38	189	45%	2.46
14:00	130	6	32	168	40%	2.19
15:00	158	5	36	199	48%	2.59
16:00	151	6	27	184	44%	2.40
17:00	171	9	31	211	50%	2.75
18:00	143	5	18	166	40%	2.16
19:00	122	5	18	145	35%	1.89
20:00	93	3	10	106	25%	1.38
21:00	61	0	8	69	17%	0.90

Saturday, April 12, 2025

Area	A	Accessible	B	Total	Occupancy	Demand Ratio
Supply	233	10	175	418		5.44
Time						
8:00	87	0	20	107	26%	1.39
9:00	105	2	21	128	31%	1.67
10:00	190	5	42	237	57%	3.09
11:00	201	8	33	242	58%	3.15
12:00	191	6	30	227	54%	2.96
13:00	172	6	28	206	49%	2.68
14:00	168	10	25	203	49%	2.64
15:00	171	10	24	205	49%	2.67
16:00	164	8	20	192	46%	2.50
17:00	158	8	14	180	43%	2.34
18:00	144	9	11	164	39%	2.14
19:00	145	4	11	160	38%	2.08
20:00	105	1	8	114	27%	1.48
21:00	74	1	6	81	19%	1.05



Estimate GFA (sm) 7679
from Google Earth

Current Tenants:

Zehrs Marketplace	The Mobile Shop
Good Life Fitness	The Wine Shop
Joe Fresh	President Choice ATM
Loblaws Pharmacy	Bento Sushi
Taylor King Health Cor	Starbucks

Project No: 7036.47
Project: Derry Heights Plaza
Study Location: Rutherford Marketplace, 9300-9370 Bathurst St
Municipality: Vaughan
Study Times: 8 am to 9 pm

Parking Demand
Friday, April 11, 2025

	LA Fitness				Longos / SDM						Duff's Wings / CIBC					RBC / LCBO					Underground Garage								
Area	A	Illegal	Accessible	30 min	B	Accessible	30 min	Reserved	EV	Illegal	C	Accessible	30 min	Illegal	Curb Side	D	Accessible	30 min	Illegal	Curb Side	Blue	Green	Accessible	Red	Accessible	Total	Occupancy	Demand Ratio	Demand Ratio
Supply	112	0	6	8	209	9	4	2	3	0	85	4	15	0	Loading	108	4	9	0	Loading	218	108	1	106	3	1014		Based on Total GLA 5.34	Based on Total GFA 4.85
Time																													
8:00	51	0	1	0	39	2	0	2	2	0	25	2	3	0	0	15	0	0	0	0	n/a	n/a	n/a	n/a	n/a	142	14%	0.75	0.68
9:00	83	0	5	0	66	2	0	2	2	0	45	2	3	0	0	33	0	6	2	1	62	27	0	49	1	391	39%	2.06	1.87
10:00	88	1	4	6	80	5	2	2	1	0	66	1	12	0	0	52	1	4	2	0	65	69	1	28	0	490	48%	2.58	2.34
11:00	95	1	3	3	131	2	3	2	3	0	79	2	13	0	1	58	0	2	2	1	72	61	0	34	0	568	56%	2.99	2.72
12:00	93	0	5	6	121	4	3	2	3	0	86	3	12	0	0	95	3	4	0	2	74	54	1	36	0	607	60%	3.20	2.90
13:00	97	1	5	8	120	4	4	0	2	0	82	4	12	0	0	78	2	5	3	1	81	58	0	41	0	608	60%	3.20	2.91
14:00	93	2	5	5	119	5	3	2	2	1	72	1	12	0	0	96	1	5	2	0	62	63	0	36	0	587	58%	3.09	2.81
15:00	72	1	5	3	138	6	2	1	2	0	56	0	7	0	0	78	2	1	4	0	67	62	1	30	0	538	53%	2.83	2.57
16:00	78	0	4	2	109	4	3	2	1	0	54	0	13	0	1	64	0	5	1	1	70	71	1	23	0	507	50%	2.67	2.42
17:00	86	1	2	5	135	7	3	0	2	0	60	0	11	0	0	72	1	4	1	0	61	74	1	19	0	545	54%	2.87	2.61
18:00	98	0	5	5	132	5	3	1	2	0	67	2	9	0	0	70	1	7	1	0	64	87	1	15	0	575	57%	3.03	2.75
19:00	83	1	4	6	59	1	3	0	0	0	63	2	13	0	0	71	3	9	2	0	51	77	1	12	0	461	45%	2.43	2.20
20:00	82	0	3	5	77	3	1	0	2	0	56	2	12	0	0	63	3	9	2	0	45	80	1	13	0	459	45%	2.42	2.19
21:00	67	0	3	4	59	0	3	0	2	0	46	1	12	0	0	44	1	5	0	0	39	82	1	10	0	379	37%	2.00	1.81

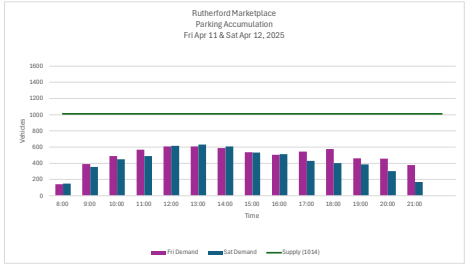
Saturday, April 12, 2025

	LA Fitness				Longos / SDM						Duff's Wings / CIBC					RBC / LCBO					Underground Garage								
Area	A	Illegal	Accessible	30 min	B	Accessible	30 min	Reserved	EV	Illegal	C	Accessible	30 min	Illegal	Curb Side	D	Accessible	30 min	Illegal	Curb Side	Blue	Green	Accessible	Red	Accessible	Total	Occupancy	Demand Ratio	Demand Ratio
Supply	112	0	6	8	209	9	4	2	3	0	85	4	15	0	Loading	108	4	9	0	Loading	218	108	1	106	3	1014		Based on Total GLA 5.34	Based on Total GFA 4.85
Time																													
8:00	39	0	1	2	43	1	0	1	2	0	4	0	0	0	1	9	0	1	0	0	14	19	0	12	0	149	15%	0.78	0.71
9:00	87	1	3	4	69	3	4	1	1	0	45	1	6	2	0	24	0	0	0	1	34	58	1	11	0	356	35%	1.88	1.70
10:00	91	0	3	5	102	2	3	2	1	0	70	1	9	1	0	42	0	2	0	0	52	52	0	11	0	449	44%	2.37	2.15
11:00	78	0	5	7	123	2	3	2	2	0	81	1	12	0	0	56	0	6	1	1	45	47	0	16	1	489	48%	2.58	2.34
12:00	93	0	6	5	171	8	3	2	2	0	83	3	12	2	0	73	2	8	0	2	46	71	1	20	1	614	61%	3.23	2.94
13:00	107	0	5	7	164	8	4	2	2	0	84	1	15	0	1	79	0	0	0	1	54	73	0	25	0	632	62%	3.33	3.02
14:00	101	1	6	6	157	4	3	2	2	0	77	1	13	4	2	90	1	3	4	0	57	50	0	24	0	608	60%	3.20	2.91
15:00	88	0	4	3	141	8	4	1	1	0	69	1	8	1	0	71	2	6	2	0	49	46	1	25	0	531	52%	2.80	2.54
16:00	84	0	3	7	138	2	4	0	1	0	60	2	8	0	0	75	1	3	0	1	53	54	1	16	0	513	51%	2.70	2.45
17:00	80	0	4	7	115	7	3	0	2	2	45	0	6	0	0	56	0	9	1	0	36	45	0	12	0	430	42%	2.27	2.06
18:00	92	0	5	6	87	2	3	0	2	0	40	1	11	0	0	52	1	4	0	0	31	53	1	12	0	403	40%	2.12	1.93
19:00	86	0	4	4	79	3	4	0	2	0	50	1	7	0	0	42	0	6	0	0	32	58	0	10	0	388	38%	2.04	1.86
20:00	76	0	2	4	57	2	2	0	1	0	50	0	8	0	0	30	0	4	0	0	18	41	0	10	0	305	30%	1.61	1.46
21:00	36	0	0	4	22	1	1	0	0	0	45	0	7	0	0	22	0	2	0	0	11	12	0	8	0	171	17%	0.90	0.82

Total GLA (sm) 18981 Total GFA (sm) 20912
Fully Occupied estimated from Google Earth

Current Tenants:

LA Fitness
Shoppers Drug Mart
Longo's
Signature Cosmetic Clinic
Impressions Dental
Childventures Early Learing
Fuwa Fuwa
Cobs Bakery
Thai Express
Booster Juice
Nutrition House
LCBO
Me Va Me
Rutherford Physio
D & R Beauty and Aestetics
RBC
CIBC
Landwer Café
Jimmy John's
Blo Blow Dry Bar
Landwer Café
Duff's Famous Wings
Pizzaville
Marketplace Dentistry
Kara Optical
Barburrito
Mobile Klink
Kung Fu Tea
Freshii
Waxon
What A Bagel
Nails to Go & Spa
Bone & Biscuit
Aroma Espresso Bar
Grab 'N Go
Great Clips
Harvey's



Project No: 7036.47
Project: Derry Heights Plaza
Study Location: Appleby Crossing, 2435 Appleby Line
Municipality: Burlington
Study Times: 8 am to 9 pm

Parking Demand

Friday, April 11, 2025

Area Supply	A 175	Accessible 10	B 301	Accessible 16	Parent 8	Curb PU 10	C 99	Accessible 2	D 148	Accessible 2	E 62	Accessible 3	F 324	Accessible 11	G 39	Total 1210	Occupancy	Demand Ratio based Total GLA (sm) 5.92	Demand Ratio based Total GFA (sm) 5.01
Time																			
8:00	2	0	48	0	0	0	20	0	15	0	14	1	32	0	3	135	11%	0.66	0.56
9:00	40	0	62	0	1	1	17	0	35	0	13	0	38	1	4	212	18%	1.04	0.88
10:00	65	1	78	0	3	1	37	0	49	0	37	0	111	2	6	390	32%	1.91	1.61
11:00	88	0	111	11	2	5	34	0	54	0	24	2	128	0	8	467	39%	2.28	1.93
12:00	78	1	135	9	8	2	33	0	56	0	27	0	166	4	10	529	44%	2.59	2.19
13:00	85	1	104	4	3	5	46	0	83	1	9	0	182	7	11	541	45%	2.65	2.24
14:00	76	2	117	10	1	3	36	0	41	0	4	0	183	5	11	489	40%	2.39	2.02
15:00	63	0	100	7	5	1	32	1	55	0	6	0	162	5	9	446	37%	2.18	1.85
16:00	71	2	119	8	3	5	38	0	68	0	4	0	177	4	8	507	42%	2.48	2.10
17:00	97	2	128	5	4	5	40	0	66	0	35	0	142	5	4	533	44%	2.61	2.21
18:00	49	2	118	2	3	0	54	0	73	0	34	0	136	5	4	480	40%	2.35	1.99
19:00	54	1	99	3	2	0	58	0	60	0	33	0	133	3	3	449	37%	2.20	1.86
20:00	38	0	68	0	2	0	70	0	56	0	22	0	136	1	2	395	33%	1.93	1.63
21:00	27	0	46	0	1	0	67	0	40	0	4	0	134	1	2	322	27%	1.58	1.33

Saturday, April 12, 2025

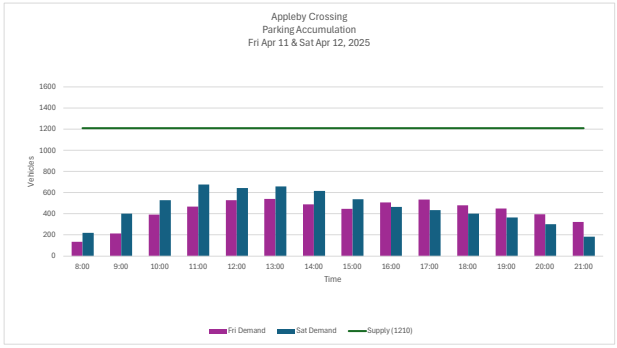
Area Supply	A 175	Accessible 10	B 301	Accessible 16	Parent 8	Curb PU 10	C 99	Accessible 2	D 148	Accessible 2	E 62	Accessible 3	F 324	Accessible 11	G 39	Total 1210	Occupancy	Demand Ratio based Total GLA (sm) 5.92	Demand Ratio based Total GFA (sm) 5.01
Time																			
8:00	14	0	57	0	0	0	27	0	68	0	38	0	15	0	0	219	18%	1.07	0.91
9:00	39	0	88	2	1	5	40	0	67	1	45	0	111	0	1	400	33%	1.96	1.66
10:00	60	0	132	4	1	1	62	0	83	0	49	0	128	2	7	529	44%	2.59	2.19
11:00	75	0	167	9	5	6	57	2	84	2	57	0	200	4	8	676	56%	3.31	2.80
12:00	84	2	140	8	3	2	55	2	72	1	60	1	200	4	8	642	53%	3.14	2.66
13:00	74	0	170	4	2	2	46	2	64	0	30	0	246	8	10	658	54%	3.22	2.72
14:00	71	0	159	11	6	2	46	1	56	0	32	0	212	5	15	616	51%	3.01	2.55
15:00	64	0	140	7	2	2	33	0	38	1	12	0	229	2	8	538	44%	2.63	2.23
16:00	60	0	128	6	1	2	31	0	46	0	5	0	174	5	7	465	38%	2.28	1.92
17:00	46	0	113	0	1	0	39	0	42	0	5	0	177	6	6	435	36%	2.13	1.80
18:00	38	0	105	7	2	1	35	0	43	0	7	0	156	2	5	401	33%	1.96	1.66
19:00	42	0	83	1	2	2	39	1	32	0	2	0	155	4	1	364	30%	1.78	1.51
20:00	32	0	58	0	0	2	38	1	30	0	0	0	138	2	1	302	25%	1.48	1.25
21:00	23	0	13	0	0	1	42	1	28	0	0	0	74	2	0	184	15%	0.90	0.76

Total GLA (s.f.) 220000
Total GLA (s.m.) 20439

Total GFA (s.m.) 24166 estimated from Google Earth

Current Tenants:

Area A	Area B	Area C	Area D	Area E	Area F	Area G
Mighty Bird	Fortinos	Avanti	Good Life Fitn	Cora Oxygen	Winners	Dollarama
Bell		Paramount		Sallys	Sportcheck	Carters
RBC				The Brick		Oshkosh
Wendys				Dental		
Pizza Pizza				Kumon		
Teo				Dolllarama		
Chorizo Etc						



Project No: 7036.47
Project: Derry Heights Plaza
Study Location: Milton Crossroads, 1280 Steeles Ave E
Municipality: Milton
Study Times: 8 am to 9 pm

Parking Demand

Friday, April 11, 2025

		Canadian Tire							Walmart					
Area Supply	A 414	Accessible 12	Curb PU 2	B 815	Accessible 12	Curb PU 4	C 296	Accessible 3	D 753	Accessible 16	Parents 8	Total 1558	Occupancy	Demand Ratio based on Total Occ GLA (sm) 3.75	Demand Ratio based on Total Occ GFA (sm) 3.08
Time															
8:00	17	0	0	46	0	0	4	0	104	2	0	173	11%	0.42	0.34
9:00	29	0	0	70	0	0	9	0	115	6	0	229	15%	0.55	0.45
10:00	62	0	0	92	0	0	65	0	186	9	0	414	27%	1.00	0.82
11:00	81	0	0	159	1	0	71	0	234	12	4	562	36%	1.35	1.11
12:00	96	0	0	162	0	0	89	0	266	14	7	634	41%	1.53	1.25
13:00	114	0	1	173	0	0	94	0	260	12	5	659	42%	1.59	1.30
14:00	116	0	0	160	0	0	80	0	306	12	5	679	44%	1.63	1.34
15:00	121	0	0	149	1	0	73	1	313	16	8	682	44%	1.64	1.35
16:00	117	0	0	152	0	0	95	1	306	14	8	693	44%	1.67	1.37
17:00	119	0	0	146	0	1	91	0	281	10	8	656	42%	1.58	1.30
18:00	127	0	0	130	0	0	83	0	218	6	6	570	37%	1.37	1.13
19:00	169	0	0	133	0	0	48	0	197	9	5	561	36%	1.35	1.11
20:00	121	0	0	109	0	0	29	0	187	5	8	459	29%	1.10	0.91
21:00	67	0	0	81	0	0	20	0	178	6	6	358	23%	0.86	0.71

Saturday, April 12, 2025

		Canadian Tire							Walmart					
Area Supply	A 414	Accessible 12	Curb PU 2	B 815	Accessible 12	Curb PU 4	C 296	Accessible 3	D 753	Accessible 16	Parents 8	Total 1558	Occupancy	Demand Ratio based on Total Occ GLA (sm) 3.75	Demand Ratio based on Total Occ GFA (sm) 3.08
Time															
8:00	3	0	0	47	0	0	17	0	104	2	0	173	11%	0.42	0.34
9:00	38	0	0	61	0	0	22	0	115	6	0	242	16%	0.58	0.48
10:00	71	1	0	122	0	0	49	0	186	9	2	440	28%	1.06	0.87
11:00	103	0	1	149	0	0	84	1	234	12	4	588	38%	1.41	1.16
12:00	131	0	0	212	0	0	75	0	266	14	7	705	45%	1.70	1.39
13:00	167	0	0	228	1	1	83	0	260	12	5	757	49%	1.82	1.50
14:00	156	0	0	205	1	1	78	0	306	12	5	764	49%	1.84	1.51
15:00	149	0	0	187	0	0	78	0	313	16	8	751	48%	1.81	1.48
16:00	137	0	0	210	0	0	61	0	306	14	8	736	47%	1.77	1.45
17:00	141	1	0	175	2	2	59	0	281	10	8	679	44%	1.63	1.34
18:00	135	0	0	170	0	0	44	0	218	6	6	579	37%	1.39	1.14
19:00	84	0	0	100	0	0	19	0	197	9	5	414	27%	1.00	0.82
20:00	70	0	0	86	0	0	9	0	187	5	8	365	23%	0.88	0.72
21:00	41	0	0	45	0	0	6	0	178	6	6	282	18%	0.68	0.56

Total GLA (s.f.)	461,820	Total GLA (s.m.)	42904
Vacant	14,509	Vacant	1348
Total Occupied	447,311	Total Occupied	41557

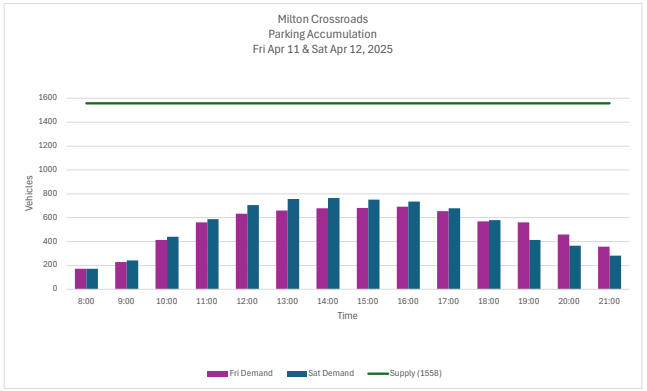
from First Gulf Marketing PDF from Apr 7, 2025

Total GFA (sm)	51936
Vacant	1348
Total Occupied	50588

estimated from Google Earth

Current Tenants:

Area A	Area B	Area C	Area D
Shoe Company	Staples	Orange Fitne	Walmart
Once Child	Dollarama	Reitmans	
Big & Tall	Marks	Healthy Planet	
Hallmark	Montana's	Cieo	
Snuggle Bugs	Canadian Tir	Rickis	
Indigo	Oshkosh	Dental	
Sportcheck	Carters	Skin Care	
Michaels	Tip Top	Eye Car	
Massage Addict	Ren's Pets	Mobilklink	
Wealth Manage	Bouclair	Boardwalk Burger	
Great Clips		Subway	
Popeyes		Cosmo	
Pita Pit		Game Stop	
Charizo		Easy Financial	
Toss Thai		Pedi Nail	
Lone Star		Cannabis	
		Living Lighting	



Project Number: 7036-47
Project Name: Derry Heights Plaza
Location: 6520 Derry Road - John's No Frills
Municipality: Milton
Date: Friday July 4, 2025
Time: 8:00 - 21:00

Parking Demand

Parking Area	No Frills					Scotiabank				Site Total			
	A		B	Total	Occupancy	C		Total	Occupancy				
Stall Type	Regular	Accessible	Regular		Rate	Regular	Accessible		Rate	Regular	Accessible	Total	Occupancy
Parking Supply	120	4	13	137	100%	14	1	15	100%	147	5	152	100%
Time Period													
8:00	24	1	3	28	20%	0	0	0	0%	27	1	28	18%
9:00	47	1	8	56	41%	0	0	0	0%	55	1	56	37%
10:00	62	4	8	74	54%	3	0	3	20%	73	4	77	51%
11:00	73	3	9	85	62%	5	0	5	33%	87	3	90	59%
12:00	81	3	9	93	68%	10	0	**10**	**67%**	100	3	103	68%
13:00	90	4	8	**102**	**74%**	6	0	6	40%	104	4	**108**	**71%**
14:00	83	0	8	91	66%	8	0	8	53%	99	0	99	65%
15:00	83	3	6	92	67%	5	0	5	33%	94	3	97	64%
16:00	71	3	8	82	60%	5	0	5	33%	84	3	87	57%
17:00	70	3	8	81	59%	4	0	4	27%	82	3	85	56%
18:00	66	2	7	75	55%	4	0	4	27%	77	2	79	52%
19:00	68	2	6	76	55%	3	0	3	20%	77	2	79	52%
20:00	55	1	6	62	45%	2	0	2	13%	63	1	64	42%
21:00	33	1	6	40	29%	1	0	1	7%	40	1	41	27%

Estimated GFA of Total Site in square metres: 3201
Parking Demand Rate: 3.37

Project Number: 7036-47
Project Name: Derry Heights Plaza
Location: 6520 Derry Road - John's No Frills
Municipality: Milton
Date: Saturday July 5, 2025
Time: 8:00 - 21:00

Parking Demand

Parking Area	No Frills					Scotiabank				Site Total			
	A		B	Total	Occupancy Rate	C		Total	Occupancy Rate				
Stall Type	Regular	Accessible	Regular			Regular	Accessible			Regular	Accessible	Total	Occupancy
Parking Supply	120	4	13	137	100%	14	1	15	100%	147	5	152	100%
Time Period													
8:00	15	0	3	18	13%	0	0	0	0%	18	0	18	12%
9:00	40	3	8	51	37%	2	0	2	13%	50	3	53	35%
10:00	53	2	11	66	48%	4	0	4	27%	68	2	70	46%
11:00	70	3	13	86	63%	2	0	2	13%	85	3	88	58%
12:00	59	2	12	73	53%	6	0	6	40%	77	2	79	52%
13:00	56	2	9	67	49%	5	0	5	33%	70	2	72	47%
14:00	65	4	7	76	55%	7	0	7	47%	79	4	83	55%
15:00	75	4	11	90	66%	9	0	9	60%	95	4	99	65%
16:00	88	3	9	**100**	**73%**	9	0	9	60%	106	3	**109**	**72%**
17:00	75	4	10	89	65%	13	0	**13**	**87%**	98	4	102	67%
18:00	56	1	7	64	47%	6	0	6	40%	69	1	70	46%
19:00	70	1	7	78	57%	4	0	4	27%	81	1	82	54%
20:00	58	2	8	68	50%	2	0	2	13%	68	2	70	46%
21:00	26	2	7	35	26%	2	0	2	13%	35	2	37	24%

Estimated GFA of Total Site in square metres: 3201
Parking Demand Rate: 3.41

Project No: 7036.47
Project: Derry Heights Plaza
Study Location: 6941 Derry Rd
Municipality: Milton
Study Times: 8 am to 9 pm

Parking Demand

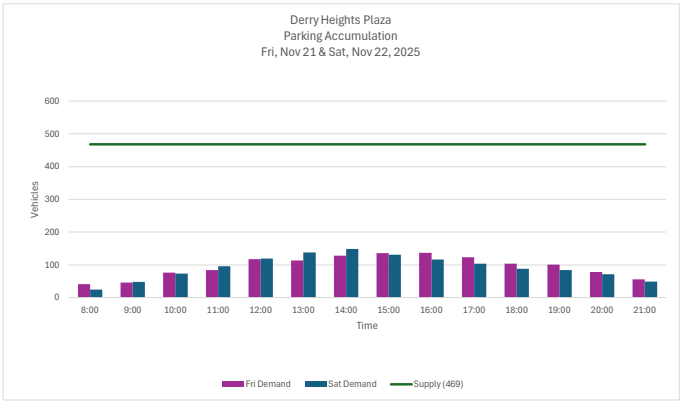
Friday, November 21, 2025

Area	A	Accessible	B	Accessible	EV	C	D	E	Accessible	Total	Occupancy	Demand Ratio on Occ. GLA	Demand Ratio on Occ. GFA
Supply	196	2	155	8	4	17	18	66	3	469		7.42	6.51
Time													
8:00	11	0	19	0	0	7	0	4	0	41	9%	0.65	0.57
9:00	10	0	18	0	0	9	0	9	0	46	10%	0.73	0.64
10:00	21	1	31	1	0	9	0	13	0	76	16%	1.20	1.06
11:00	19	1	35	2	0	9	1	17	0	84	18%	1.33	1.17
12:00	35	0	44	2	0	11	1	22	2	117	25%	1.85	1.62
13:00	29	0	44	1	0	11	1	25	2	113	24%	1.79	1.57
14:00	28	0	55	0	0	13	3	28	1	128	27%	2.02	1.78
15:00	31	0	57	0	0	13	3	31	1	136	29%	2.15	1.89
16:00	24	0	66	4	1	10	1	30	1	137	29%	2.17	1.90
17:00	17	0	61	2	1	9	2	30	1	123	26%	1.94	1.71
18:00	10	0	57	2	1	7	2	24	1	104	22%	1.64	1.44
19:00	8	0	38	3	0	6	2	43	1	101	22%	1.60	1.40
20:00	8	0	31	1	1	4	1	31	1	78	17%	1.23	1.08
21:00	6	0	24	1	1	3	1	19	1	56	12%	0.89	0.78

Saturday, November 22, 2025

Area	A	Accessible	B	Accessible	EV	C	D	E	Accessible	Total	Occupancy	Demand Ratio on Occ. GLA	Demand Ratio on Occ. GFA
Supply	196	2	155	8	4	17	18	66	3	469		7.42	6.51
Time													
8:00	8	0	8	0	0	2	2	4	0	24	5%	0.38	0.33
9:00	10	0	19	1	0	5	2	11	0	48	10%	0.76	0.67
10:00	17	0	23	3	0	7	2	21	0	73	16%	1.15	1.01
11:00	21	0	31	3	1	11	2	27	0	96	20%	1.52	1.33
12:00	20	0	39	4	1	11	2	41	1	119	25%	1.88	1.65
13:00	21	1	47	4	1	11	2	50	1	138	29%	2.18	1.92
14:00	25	1	49	3	1	12	2	55	1	149	32%	2.36	2.07
15:00	21	1	51	2	1	11	2	41	1	131	28%	2.07	1.82
16:00	17	0	47	2	1	11	2	35	1	116	25%	1.83	1.61
17:00	13	0	41	1	0	11	2	35	1	104	22%	1.64	1.44
18:00	10	0	35	1	0	9	2	31	0	88	19%	1.39	1.22
19:00	11	0	31	2	0	9	2	29	0	84	18%	1.33	1.17
20:00	7	0	27	1	1	6	2	27	0	71	15%	1.12	0.99
21:00	7	0	17	1	1	6	2	15	0	49	10%	0.77	0.68

Total GFA (sm) 7202
Total GLA (sm) 6324
Fully Occupied



Current Tenants:

Shoppers Drug Mart	Booster Juice
CIBC	Animal Hospital
RBC	Mustard Garden
Tim Hortons	Wild Wings
Impact	Great Clips
Sunset Grill	Medical Clinic
Pizza Nova	Kumon

Appendix G:
Turning Movement Counts

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (8 . BRONTE ST S & DERRY HEIGHTS PLAZA CENTRAL DRIVEWAY)

Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA CENTRAL DRIVEWAY					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-06-26 07:00:00	9	53	0	0	62	57	1	0	0	58	6	12	0	0	18	138	
2025-06-26 07:15:00	12	66	0	1	78	76	6	0	0	82	8	6	0	1	14	174	
2025-06-26 07:30:00	11	62	0	1	73	98	7	0	0	105	12	15	0	5	27	205	
2025-06-26 07:45:00	18	81	0	2	99	130	6	0	0	136	10	23	0	0	33	268	785
2025-06-26 08:00:00	23	116	0	1	139	144	9	0	1	153	15	24	0	1	39	331	978
2025-06-26 08:15:00	21	104	0	1	125	123	22	0	0	145	22	30	0	1	52	322	1126
2025-06-26 08:30:00	23	121	0	1	144	154	11	0	2	165	19	38	0	2	57	366	1287
2025-06-26 08:45:00	24	112	0	0	136	194	12	0	0	206	19	36	0	0	55	397	1416
BREAK																	
2025-06-26 16:00:00	29	170	0	0	199	176	24	0	0	200	19	29	0	2	48	447	
2025-06-26 16:15:00	24	171	0	0	195	160	18	0	0	178	22	24	0	4	46	419	
2025-06-26 16:30:00	42	178	0	1	220	173	11	0	0	184	28	17	0	1	45	449	
2025-06-26 16:45:00	32	181	0	1	213	181	22	0	0	203	34	45	0	3	79	495	1810
2025-06-26 17:00:00	24	209	0	1	233	172	14	0	1	186	28	22	0	9	50	469	1832
2025-06-26 17:15:00	26	194	0	0	220	183	19	0	0	202	28	28	0	2	56	478	1891
2025-06-26 17:30:00	26	202	0	2	228	167	25	0	0	192	24	29	0	6	53	473	1915
2025-06-26 17:45:00	33	163	0	2	196	169	15	0	0	184	20	34	0	2	54	434	1854
Grand Total	377	2183	0	14	2560	2357	222	0	4	2579	314	412	0	39	726	**5865**	-
Approach%	14.7%	85.3%	0%		-	91.4%	8.6%	0%		-	43.3%	56.7%	0%		-	**-**	-
Totals %	6.4%	37.2%	0%		43.6%	40.2%	3.8%	0%		44%	5.4%	7%	0%		12.4%	**-**	-
Heavy	1	34	0		-	27	0	0		-	1	5	0		-	**-**	-
Heavy %	0.3%	1.6%	0%		-	1.1%	0%	0%		-	0.3%	1.2%	0%		-	**-**	-
Bicycles	2	3	0		-	4	0	0		-	0	0	0		-	**-**	-
Bicycle %	0.5%	0.1%	0%		-	0.2%	0%	0%		-	0%	0%	0%		-	**-**	-

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16 °C)

Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA CENTRAL DRIVEWAY					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
2025-06-26 08:00:00	23	116	0	1	139	144	9	0	1	153	15	24	0	1	39	331
2025-06-26 08:15:00	21	104	0	1	125	123	22	0	0	145	22	30	0	1	52	322
2025-06-26 08:30:00	23	121	0	1	144	154	11	0	2	165	19	38	0	2	57	366
2025-06-26 08:45:00	24	112	0	0	136	194	12	0	0	206	19	36	0	0	55	397
Grand Total	91	453	0	3	544	615	54	0	3	669	75	128	0	4	203	**1416**
Approach%	16.7%	83.3%	0%		-	91.9%	8.1%	0%		-	36.9%	63.1%	0%		-	**-**
Totals %	6.4%	32%	0%		38.4%	43.4%	3.8%	0%		47.2%	5.3%	9%	0%		14.3%	**-**
PHF	0.95	0.94	0		0.94	0.79	0.61	0		0.81	0.85	0.84	0		0.89	0.89
Heavy	1	12	0		13	13	0	0		13	1	1	0		2	28
Heavy %	1.1%	2.6%	0%		2.4%	2.1%	0%	0%		1.9%	1.3%	0.8%	0%		1%	2%
Lights	90	441	0		531	602	54	0		656	74	127	0		201	1388
Lights %	98.9%	97.4%	0%		97.6%	97.9%	100%	0%		98.1%	98.7%	99.2%	0%		99%	98%
Single-Unit Trucks	0	5	0		5	6	0	0		6	0	0	0		0	11
Single-Unit Trucks %	0%	1.1%	0%		0.9%	1%	0%	0%		0.9%	0%	0%	0%		0%	0.8%
Buses	1	6	0		7	5	0	0		5	0	0	0		0	12
Buses %	1.1%	1.3%	0%		1.3%	0.8%	0%	0%		0.7%	0%	0%	0%		0%	0.8%
Articulated Trucks	0	1	0		1	2	0	0		2	1	1	0		2	5
Articulated Trucks %	0%	0.2%	0%		0.2%	0.3%	0%	0%		0.3%	1.3%	0.8%	0%		1%	0.4%
Pedestrians	-	-	-	3	-	-	-	-	3	-	-	-	-	3	-	**-**
Pedestrians%	-	-	-	30%		-	-	-	30%		-	-	-	30%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	10%		**-**
Bicycles on Road	0	0	0		-	1	0	0		-	0	0	0		-	**-**
Bicycles on Road%	0%	0%	0%			100%	0%	0%			0%	0%	0%			**-**

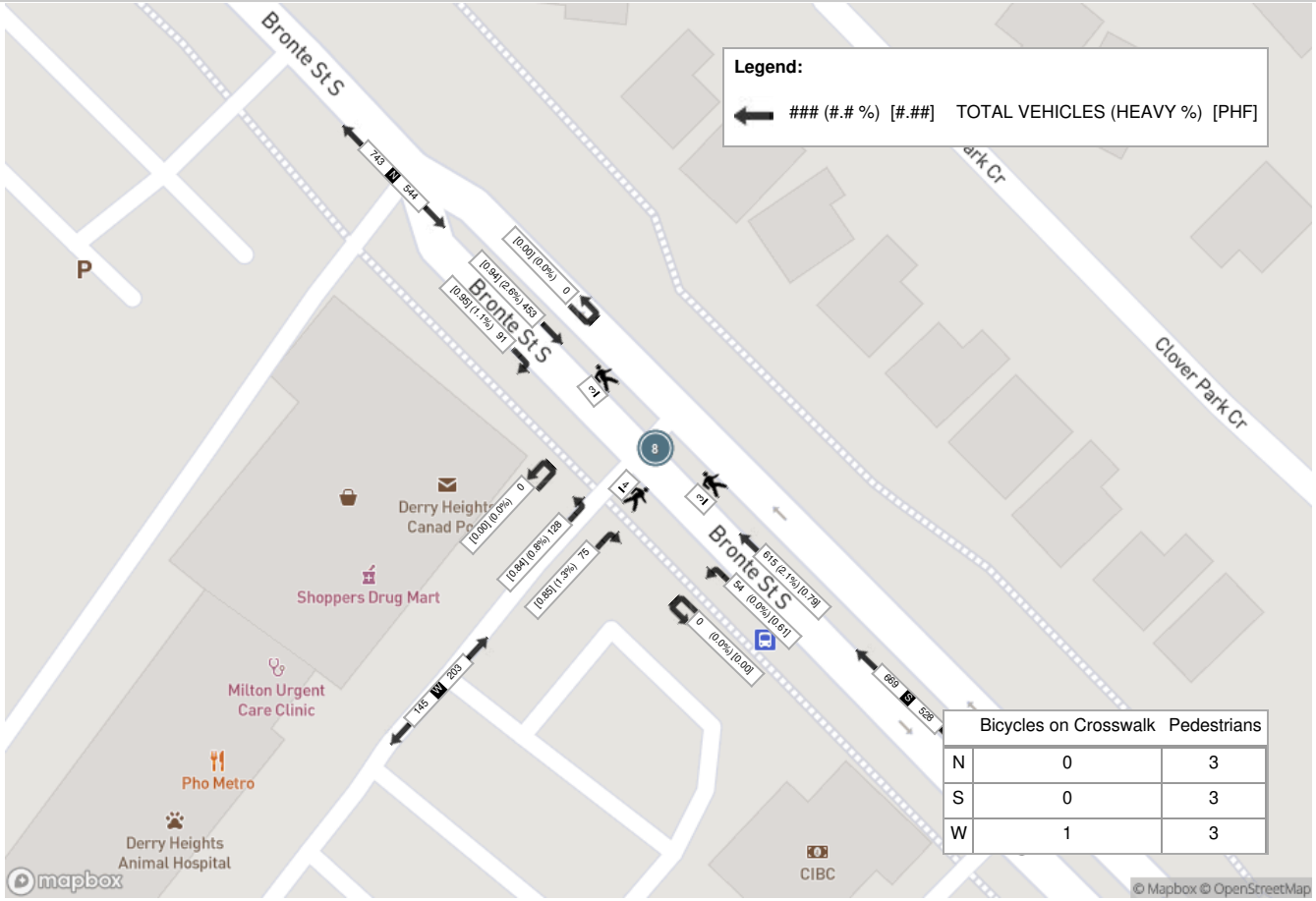
BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (17 °C)

Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA CENTRAL DRIVEWAY					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
2025-06-26 16:45:00	32	181	0	1	213	181	22	0	0	203	34	45	0	3	79	495
2025-06-26 17:00:00	24	209	0	1	233	172	14	0	1	186	28	22	0	9	50	469
2025-06-26 17:15:00	26	194	0	0	220	183	19	0	0	202	28	28	0	2	56	478
2025-06-26 17:30:00	26	202	0	2	228	167	25	0	0	192	24	29	0	6	53	473
Grand Total	108	786	0	4	894	703	80	0	1	783	114	124	0	20	238	**1915**
Approach%	12.1%	87.9%	0%		-	89.8%	10.2%	0%		-	47.9%	52.1%	0%		-	**-**
Totals %	5.6%	41%	0%		46.7%	36.7%	4.2%	0%		40.9%	6%	6.5%	0%		12.4%	**-**
PHF	0.84	0.94	0		0.96	0.96	0.8	0		0.96	0.84	0.69	0		0.75	0.97
Heavy	0	3	0		3	1	0	0		1	0	0	0		0	4
Heavy %	0%	0.4%	0%		0.3%	0.1%	0%	0%		0.1%	0%	0%	0%		0%	0.2%
Lights	108	783	0		891	702	80	0		782	114	124	0		238	1911
Lights %	100%	99.6%	0%		99.7%	99.9%	100%	0%		99.9%	100%	100%	0%		100%	99.8%
Single-Unit Trucks	0	2	0		2	1	0	0		1	0	0	0		0	3
Single-Unit Trucks %	0%	0.3%	0%		0.2%	0.1%	0%	0%		0.1%	0%	0%	0%		0%	0.2%
Buses	0	1	0		1	0	0	0		0	0	0	0		0	1
Buses %	0%	0.1%	0%		0.1%	0%	0%	0%		0%	0%	0%	0%		0%	0.1%
Articulated Trucks	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%
Pedestrians	-	-	-	3	-	-	-	-	1	-	-	-	-	19	-	**-**
Pedestrians%	-	-	-	12%		-	-	-	4%		-	-	-	76%		**-**
Bicycles on Crosswalk	-	-	-	1	-	-	-	-	0	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	4%		-	-	-	0%		-	-	-	4%		**-**
Bicycles on Road	1	1	0		-	0	0	0		-	0	0	0		-	**-**
Bicycles on Road%	100%	100%	0%			0%	0%	0%			0%	0%	0%			**-**

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

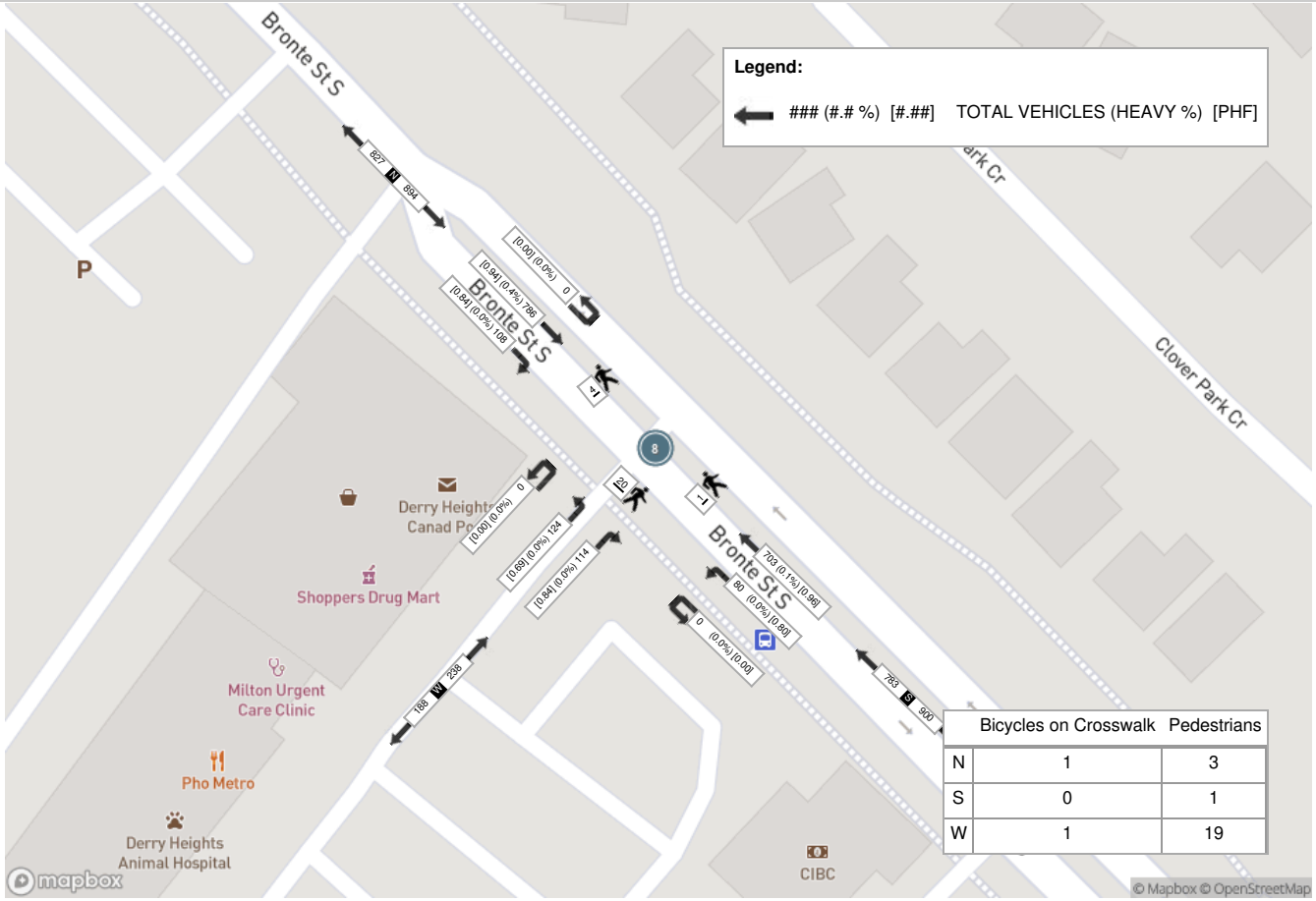
Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16 °C)



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

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (17 °C)



	Bicycles on Crosswalk	Pedestrians
N	1	3
S	0	1
W	1	19

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (8 . BRONTE ST S & DERRY HEIGHTS PLAZA CENTRAL DRIVEWAY)

Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA CENTRAL DRIVEWAY					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-09-06 12:00:00	29	157	0	1	186	161	14	0	0	175	27	38	0	5	65	426	
2025-09-06 12:15:00	26	170	0	1	196	116	18	0	0	134	30	39	0	2	69	399	
2025-09-06 12:30:00	25	157	0	4	182	135	13	0	0	148	28	31	0	0	59	389	
2025-09-06 12:45:00	23	142	0	0	165	153	22	1	0	176	21	41	0	4	62	403	1617
2025-09-06 13:00:00	25	159	0	1	184	129	14	0	0	143	24	30	0	2	54	381	1572
2025-09-06 13:15:00	23	146	0	0	169	136	14	0	0	150	23	21	0	3	44	363	1536
2025-09-06 13:30:00	21	134	0	0	155	127	20	0	0	147	23	17	0	4	40	342	1489
2025-09-06 13:45:00	34	130	0	0	164	125	11	0	0	136	17	26	0	3	43	343	1429
2025-09-06 14:00:00	33	137	0	0	170	130	16	0	0	146	26	25	0	4	51	367	1415
2025-09-06 14:15:00	15	123	0	0	138	134	24	0	0	158	22	24	0	1	46	342	1394
2025-09-06 14:30:00	31	156	0	5	187	104	13	0	2	117	16	20	0	7	36	340	1392
2025-09-06 14:45:00	17	131	0	2	148	128	17	0	0	145	27	27	0	0	54	347	1396
Grand Total	302	1742	0	14	2044	1578	196	1	2	1775	284	339	0	35	623	**4442**	-
Approach%	14.8%	85.2%	0%		-	88.9%	11%	0.1%		-	45.6%	54.4%	0%		-	**-**	-
Totals %	6.8%	39.2%	0%		46%	35.5%	4.4%	0%		40%	6.4%	7.6%	0%		14%	**-**	-
Heavy	0	11	0		-	3	1	0		-	1	0	0		-	**-**	-
Heavy %	0%	0.6%	0%		-	0.2%	0.5%	0%		-	0.4%	0%	0%		-	**-**	-
Bicycles	0	6	0		-	0	0	0		-	0	0	0		-	**-**	-
Bicycle %	0%	0.3%	0%		-	0%	0%	0%		-	0%	0%	0%		-	**-**	-

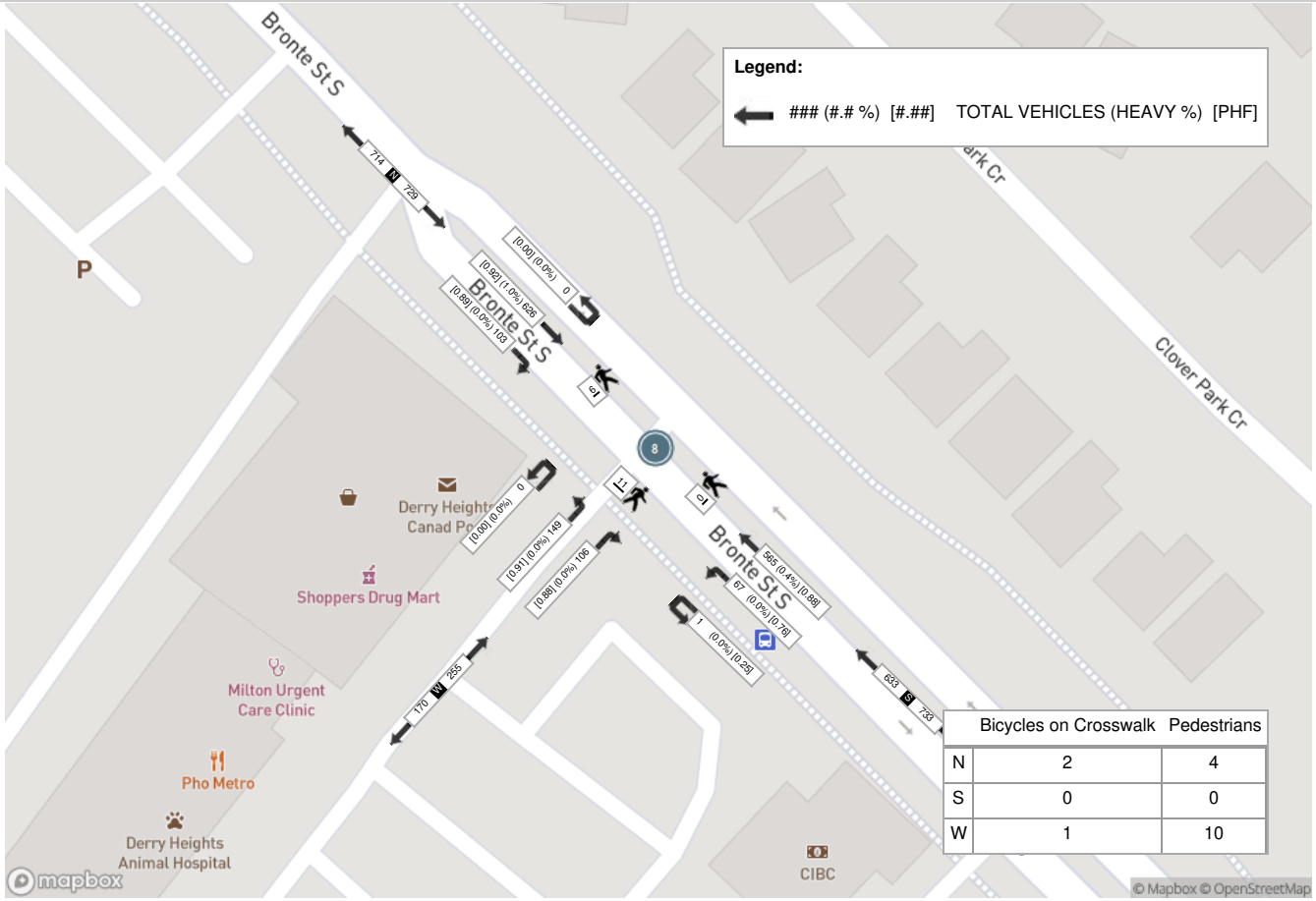
BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Overcast Clouds (18 °C)

Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA CENTRAL DRIVEWAY					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
2025-09-06 12:00:00	29	157	0	1	186	161	14	0	0	175	27	38	0	5	65	426
2025-09-06 12:15:00	26	170	0	1	196	116	18	0	0	134	30	39	0	2	69	399
2025-09-06 12:30:00	25	157	0	4	182	135	13	0	0	148	28	31	0	0	59	389
2025-09-06 12:45:00	23	142	0	0	165	153	22	1	0	176	21	41	0	4	62	403
Grand Total	103	626	0	6	729	565	67	1	0	633	106	149	0	11	255	**1617**
Approach%	14.1%	85.9%	0%		-	89.3%	10.6%	0.2%		-	41.6%	58.4%	0%		-	**-**
Totals %	6.4%	38.7%	0%		45.1%	34.9%	4.1%	0.1%		39.1%	6.6%	9.2%	0%		15.8%	**-**
PHF	0.89	0.92	0		0.93	0.88	0.76	0.25		0.9	0.88	0.91	0		0.92	0.95
Heavy	0	6	0		6	2	0	0		2	0	0	0		0	8
Heavy %	0%	1%	0%		0.8%	0.4%	0%	0%		0.3%	0%	0%	0%		0%	0.5%
Lights	103	620	0		723	563	67	1		631	106	149	0		255	1609
Lights %	100%	99%	0%		99.2%	99.6%	100%	100%		99.7%	100%	100%	0%		100%	99.5%
Single-Unit Trucks	0	4	0		4	2	0	0		2	0	0	0		0	6
Single-Unit Trucks %	0%	0.6%	0%		0.5%	0.4%	0%	0%		0.3%	0%	0%	0%		0%	0.4%
Buses	0	2	0		2	0	0	0		0	0	0	0		0	2
Buses %	0%	0.3%	0%		0.3%	0%	0%	0%		0%	0%	0%	0%		0%	0.1%
Pedestrians	-	-	-	4	-	-	-	-	0	-	-	-	-	10	-	**-**
Pedestrians%	-	-	-	23.5%		-	-	-	0%		-	-	-	58.8%		**-**
Bicycles on Crosswalk	-	-	-	2	-	-	-	-	0	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	11.8%		-	-	-	0%		-	-	-	5.9%		**-**
Bicycles on Road	0	4	0		-	0	0	0		-	0	0	0		-	**-**
Bicycles on Road%	0%	100%	0%			0%	0%	0%			0%	0%	0%			**-**

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Overcast Clouds (18 °C)



	Bicycles on Crosswalk	Pedestrians
N	2	4
S	0	0
W	1	10

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (9 . BRONTE ST S & DERRY HEIGHTS PLAZA NORTH DRIVEWAY)

Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA NORTH DRIVEWAY					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-06-26 07:00:00	3	65	0	0	68	67	0	0	0	67	0	2	0	1	2	137	
2025-06-26 07:15:00	3	80	0	0	83	79	1	0	0	80	0	0	0	4	0	163	
2025-06-26 07:30:00	6	70	0	0	76	108	0	0	0	108	0	1	0	2	1	185	
2025-06-26 07:45:00	2	107	0	0	109	152	0	0	0	152	0	0	0	5	0	261	746
2025-06-26 08:00:00	5	131	0	0	136	158	1	0	0	159	0	0	0	7	0	295	904
2025-06-26 08:15:00	9	119	0	0	128	147	2	0	0	149	1	0	0	0	1	278	1019
2025-06-26 08:30:00	5	139	0	0	144	190	1	1	0	192	3	0	0	5	3	339	1173
2025-06-26 08:45:00	1	136	0	0	137	226	3	0	0	229	1	0	0	0	1	367	1279
BREAK																	
2025-06-26 16:00:00	1	199	0	0	200	206	1	0	0	207	1	0	0	2	1	408	
2025-06-26 16:15:00	0	197	0	0	197	180	0	0	0	180	0	1	0	5	1	378	
2025-06-26 16:30:00	3	224	0	0	227	187	0	0	0	187	0	0	0	2	0	414	
2025-06-26 16:45:00	7	222	0	0	229	227	0	0	0	227	0	1	0	2	1	457	1657
2025-06-26 17:00:00	1	235	0	0	236	194	0	0	0	194	0	0	0	5	0	430	1679
2025-06-26 17:15:00	1	216	1	0	218	211	0	0	0	211	1	0	0	5	1	430	1731
2025-06-26 17:30:00	3	220	0	0	223	196	0	0	0	196	0	1	0	6	1	420	1737
2025-06-26 17:45:00	1	205	0	0	206	198	0	0	0	198	1	1	0	0	2	406	1686
Grand Total	51	2565	1	0	2617	2726	9	1	0	2736	8	7	0	51	15	**5368**	-
Approach%	1.9%	98%	0%		-	99.6%	0.3%	0%		-	53.3%	46.7%	0%		-	**-**	-
Totals %	1%	47.8%	0%		48.8%	50.8%	0.2%	0%		51%	0.1%	0.1%	0%		0.3%	**-**	-
Heavy	4	34	0		-	26	5	0		-	2	0	0		-	**-**	-
Heavy %	7.8%	1.3%	0%		-	1%	55.6%	0%		-	25%	0%	0%		-	**-**	-
Bicycles	0	3	0		-	4	0	0		-	0	0	0		-	**-**	-
Bicycle %	0%	0.1%	0%		-	0.1%	0%	0%		-	0%	0%	0%		-	**-**	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16 °C)

Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA NORTH DRIVEWAY					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
2025-06-26 08:00:00	5	131	0	0	136	158	1	0	0	159	0	0	0	7	0	295
2025-06-26 08:15:00	9	119	0	0	128	147	2	0	0	149	1	0	0	0	1	278
2025-06-26 08:30:00	5	139	0	0	144	190	1	1	0	192	3	0	0	5	3	339
2025-06-26 08:45:00	1	136	0	0	137	226	3	0	0	229	1	0	0	0	1	367
Grand Total	20	525	0	0	545	721	7	1	0	729	5	0	0	12	5	**1279**
Approach%	3.7%	96.3%	0%		-	98.9%	1%	0.1%		-	100%	0%	0%		-	**-**
Totals %	1.6%	41%	0%		42.6%	56.4%	0.5%	0.1%		57%	0.4%	0%	0%		0.4%	**-**
PHF	0.56	0.94	0		0.95	0.8	0.58	0.25		0.8	0.42	0	0		0.42	0.87
Heavy	3	11	0		14	11	4	0		15	2	0	0		2	31
Heavy %	15%	2.1%	0%		2.6%	1.5%	57.1%	0%		2.1%	40%	0%	0%		40%	2.4%
Lights	17	514	0		531	710	3	1		714	3	0	0		3	1248
Lights %	85%	97.9%	0%		97.4%	98.5%	42.9%	100%		97.9%	60%	0%	0%		60%	97.6%
Single-Unit Trucks	3	5	0		8	6	3	0		9	2	0	0		2	19
Single-Unit Trucks %	15%	1%	0%		1.5%	0.8%	42.9%	0%		1.2%	40%	0%	0%		40%	1.5%
Buses	0	5	0		5	5	0	0		5	0	0	0		0	10
Buses %	0%	1%	0%		0.9%	0.7%	0%	0%		0.7%	0%	0%	0%		0%	0.8%
Articulated Trucks	0	1	0		1	0	1	0		1	0	0	0		0	2
Articulated Trucks %	0%	0.2%	0%		0.2%	0%	14.3%	0%		0.1%	0%	0%	0%		0%	0.2%
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	10	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	83.3%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	16.7%		**-**
Bicycles on Road	0	0	0		-	1	0	0		-	0	0	0		-	**-**
Bicycles on Road%	0%	0%	0%			100%	0%	0%			0%	0%	0%			**-**

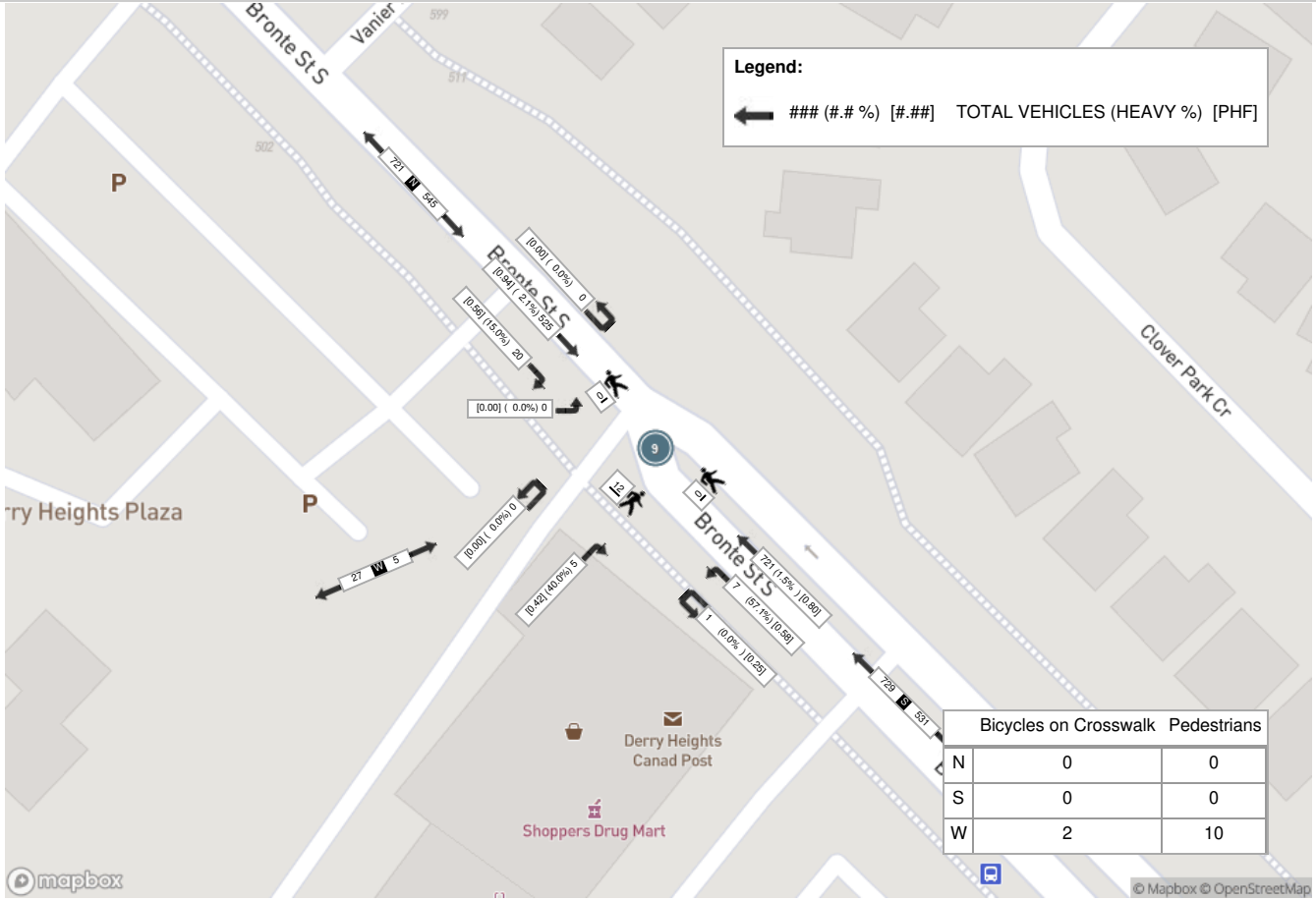
BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (17 °C)

Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA NORTH DRIVEWAY					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
2025-06-26 16:45:00	7	222	0	0	229	227	0	0	0	227	0	1	0	2	1	457
2025-06-26 17:00:00	1	235	0	0	236	194	0	0	0	194	0	0	0	5	0	430
2025-06-26 17:15:00	1	216	1	0	218	211	0	0	0	211	1	0	0	5	1	430
2025-06-26 17:30:00	3	220	0	0	223	196	0	0	0	196	0	1	0	6	1	420
Grand Total	12	893	1	0	906	828	0	0	0	828	1	2	0	18	3	**1737**
Approach%	1.3%	98.6%	0.1%		-	100%	0%	0%		-	33.3%	66.7%	0%		-	**-**
Totals %	0.7%	51.4%	0.1%		52.2%	47.7%	0%	0%		47.7%	0.1%	0.1%	0%		0.2%	**-**
PHF	0.43	0.95	0.25		0.96	0.91	0	0		0.91	0.25	0.5	0		0.75	0.95
Heavy	1	3	0		4	1	0	0		1	0	0	0		0	5
Heavy %	8.3%	0.3%	0%		0.4%	0.1%	0%	0%		0.1%	0%	0%	0%		0%	0.3%
Lights	11	890	1		902	827	0	0		827	1	2	0		3	1732
Lights %	91.7%	99.7%	100%		99.6%	99.9%	0%	0%		99.9%	100%	100%	0%		100%	99.7%
Single-Unit Trucks	1	2	0		3	1	0	0		1	0	0	0		0	4
Single-Unit Trucks %	8.3%	0.2%	0%		0.3%	0.1%	0%	0%		0.1%	0%	0%	0%		0%	0.2%
Buses	0	1	0		1	0	0	0		0	0	0	0		0	1
Buses %	0%	0.1%	0%		0.1%	0%	0%	0%		0%	0%	0%	0%		0%	0.1%
Articulated Trucks	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%
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	12	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	66.7%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	6	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	33.3%		**-**
Bicycles on Road	0	1	0		-	0	0	0		-	0	0	0		-	**-**
Bicycles on Road%	0%	100%	0%			0%	0%	0%			0%	0%	0%			**-**

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

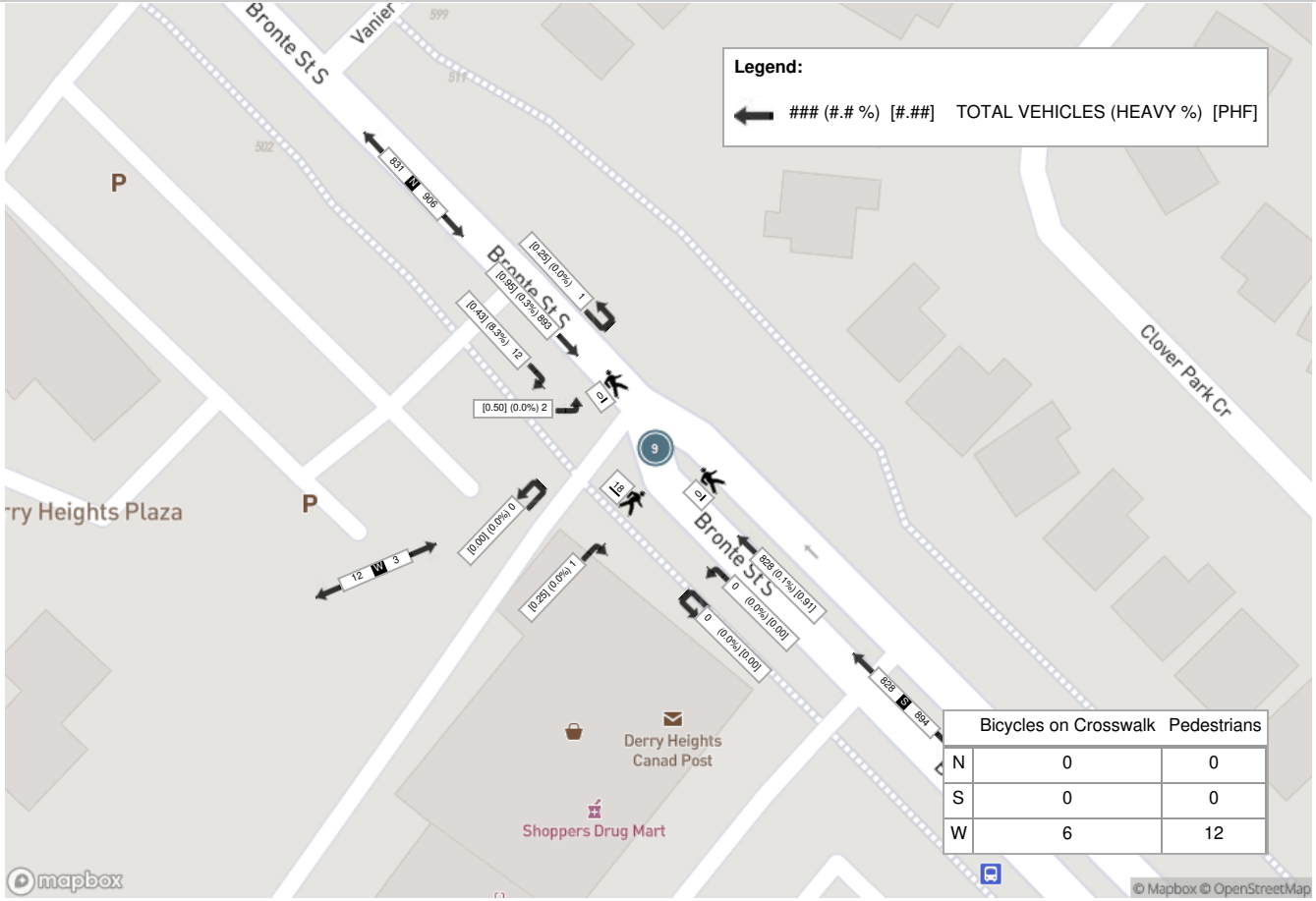
Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	0
W	2	10

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (17 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	0
W	6	12

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (9 . BRONTE ST S & DERRY HEIGHTS PLAZA NORTH DRIVEWAY)

Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA NORTH DRIVEWAY					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-09-06 12:00:00	6	198	0	0	204	199	0	0	0	199	1	1	0	9	2	405	
2025-09-06 12:15:00	2	187	0	0	189	152	1	0	0	153	2	1	0	11	3	345	
2025-09-06 12:30:00	2	183	0	0	185	168	0	0	0	168	1	2	0	4	3	356	
2025-09-06 12:45:00	1	161	0	0	162	193	1	0	0	194	0	0	0	15	0	356	1462
2025-09-06 13:00:00	3	186	0	0	189	156	0	0	0	156	0	1	0	2	1	346	1403
2025-09-06 13:15:00	3	170	0	0	173	158	0	0	0	158	1	1	0	3	2	333	1391
2025-09-06 13:30:00	1	149	0	0	150	144	0	0	0	144	1	2	0	5	3	297	1332
2025-09-06 13:45:00	0	160	0	0	160	149	0	1	0	150	1	1	0	2	2	312	1288
2025-09-06 14:00:00	1	175	0	0	176	156	0	0	0	156	0	0	0	0	0	332	1274
2025-09-06 14:15:00	1	138	0	0	139	157	0	0	0	157	0	1	0	1	1	297	1238
2025-09-06 14:30:00	1	188	0	0	189	124	0	0	0	124	0	0	0	5	0	313	1254
2025-09-06 14:45:00	1	150	0	0	151	154	0	0	0	154	0	1	0	3	1	306	1248
Grand Total	22	2045	0	0	2067	1910	2	1	0	1913	7	11	0	60	18	**3998**	-
Approach%	1.1%	98.9%	0%		-	99.8%	0.1%	0.1%		-	38.9%	61.1%	0%		-	**-**	-
Totals %	0.6%	51.2%	0%		51.7%	47.8%	0.1%	0%		47.8%	0.2%	0.3%	0%		0.5%	**-**	-
Heavy	0	10	0		-	3	0	0		-	1	1	0		-	**-**	-
Heavy %	0%	0.5%	0%		-	0.2%	0%	0%		-	14.3%	9.1%	0%		-	**-**	-
Bicycles	0	4	0		-	1	0	0		-	0	0	0		-	**-**	-
Bicycle %	0%	0.2%	0%		-	0.1%	0%	0%		-	0%	0%	0%		-	**-**	-

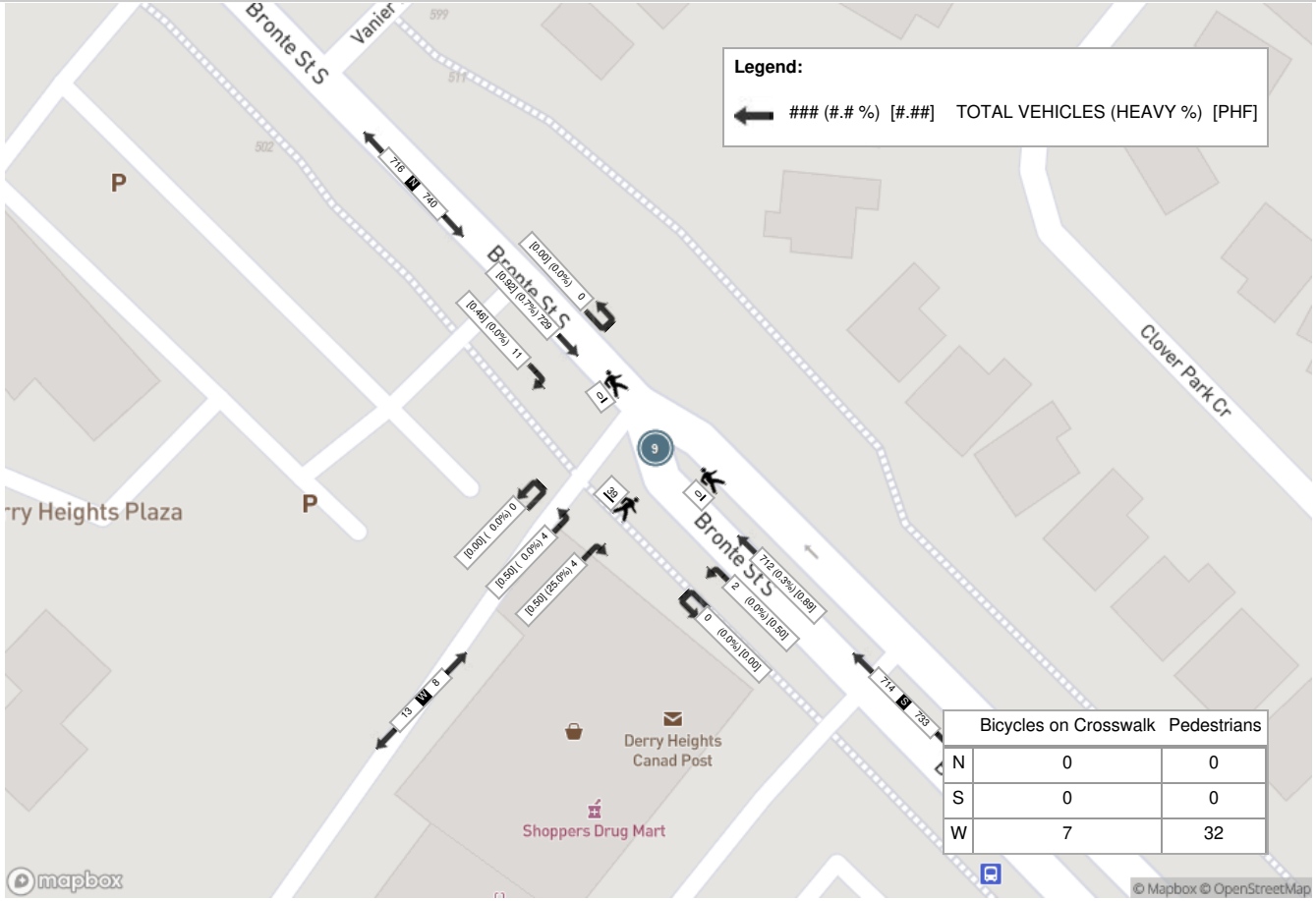
BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Overcast Clouds (18 °C)

Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA NORTH DRIVEWAY					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
2025-09-06 12:00:00	6	198	0	0	204	199	0	0	0	199	1	1	0	9	2	405
2025-09-06 12:15:00	2	187	0	0	189	152	1	0	0	153	2	1	0	11	3	345
2025-09-06 12:30:00	2	183	0	0	185	168	0	0	0	168	1	2	0	4	3	356
2025-09-06 12:45:00	1	161	0	0	162	193	1	0	0	194	0	0	0	15	0	356
Grand Total	11	729	0	0	740	712	2	0	0	714	4	4	0	39	8	**1462**
Approach%	1.5%	98.5%	0%		-	99.7%	0.3%	0%		-	50%	50%	0%		-	**-**
Totals %	0.8%	49.9%	0%		50.6%	48.7%	0.1%	0%		48.8%	0.3%	0.3%	0%		0.5%	**-**
PHF	0.46	0.92	0		0.91	0.89	0.5	0		0.9	0.5	0.5	0		0.67	0.9
Heavy	0	5	0		5	2	0	0		2	1	0	0		1	8
Heavy %	0%	0.7%	0%		0.7%	0.3%	0%	0%		0.3%	25%	0%	0%		12.5%	0.5%
Lights	11	724	0		735	710	2	0		712	3	4	0		7	1454
Lights %	100%	99.3%	0%		99.3%	99.7%	100%	0%		99.7%	75%	100%	0%		87.5%	99.5%
Single-Unit Trucks	0	3	0		3	2	0	0		2	1	0	0		1	6
Single-Unit Trucks %	0%	0.4%	0%		0.4%	0.3%	0%	0%		0.3%	25%	0%	0%		12.5%	0.4%
Buses	0	2	0		2	0	0	0		0	0	0	0		0	2
Buses %	0%	0.3%	0%		0.3%	0%	0%	0%		0%	0%	0%	0%		0%	0.1%
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	32	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	82.1%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	7	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	17.9%		**-**
Bicycles on Road	0	3	0		-	0	0	0		-	0	0	0		-	**-**
Bicycles on Road%	0%	100%	0%			0%	0%	0%			0%	0%	0%			**-**

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Overcast Clouds (18 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	0
W	7	32

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (7 . BRONTE ST S & DERRY HEIGHTS PLAZA SOUTH DRIVEWAY)

Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA SOUTH DRIVEWAY					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-06-26 07:00:00	1	59	0	0	60	59	0	0	0	59	3	0	0	0	3	122	
2025-06-26 07:15:00	0	73	0	0	73	84	0	0	0	84	1	0	0	1	1	158	
2025-06-26 07:30:00	1	73	0	0	74	104	0	0	0	104	4	0	0	1	4	182	
2025-06-26 07:45:00	0	91	0	0	91	143	0	0	0	143	4	0	0	0	4	238	700
2025-06-26 08:00:00	4	127	0	0	131	154	0	0	0	154	8	0	0	0	8	293	871
2025-06-26 08:15:00	5	120	0	0	125	146	0	0	0	146	17	0	0	1	17	288	1001
2025-06-26 08:30:00	3	138	0	0	141	163	0	0	0	163	8	0	0	0	8	312	1131
2025-06-26 08:45:00	2	129	0	0	131	202	0	0	0	202	6	0	0	1	6	339	1232
BREAK																	
2025-06-26 16:00:00	1	194	0	0	195	199	0	0	0	199	12	0	0	2	12	406	
2025-06-26 16:15:00	5	184	0	0	189	178	0	0	0	178	5	0	0	1	5	372	
2025-06-26 16:30:00	1	208	0	0	209	188	0	0	0	188	10	0	0	1	10	407	
2025-06-26 16:45:00	4	209	0	0	213	203	0	0	0	203	8	0	0	2	8	424	1609
2025-06-26 17:00:00	1	241	0	1	242	185	0	0	0	185	6	0	0	11	6	433	1636
2025-06-26 17:15:00	4	214	0	0	218	200	0	0	0	200	8	0	0	2	8	426	1690
2025-06-26 17:30:00	2	231	0	0	233	188	0	0	0	188	8	0	0	6	8	429	1712
2025-06-26 17:45:00	2	186	0	0	188	184	0	0	0	184	5	0	0	6	5	377	1665
Grand Total	36	2477	0	1	2513	2580	0	0	0	2580	113	0	0	35	113	**5206**	-
Approach%	1.4%	98.6%	0%		-	100%	0%	0%		-	100%	0%	0%		-	**-**	-
Totals %	0.7%	47.6%	0%		48.3%	49.6%	0%	0%		49.6%	2.2%	0%	0%		2.2%	**-**	-
Heavy	0	37	0		-	27	0	0		-	2	0	0		-	**-**	-
Heavy %	0%	1.5%	0%		-	1%	0%	0%		-	1.8%	0%	0%		-	**-**	-
Bicycles	0	3	0		-	4	0	0		-	2	0	0		-	**-**	-
Bicycle %	0%	0.1%	0%		-	0.2%	0%	0%		-	1.8%	0%	0%		-	**-**	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16 °C)

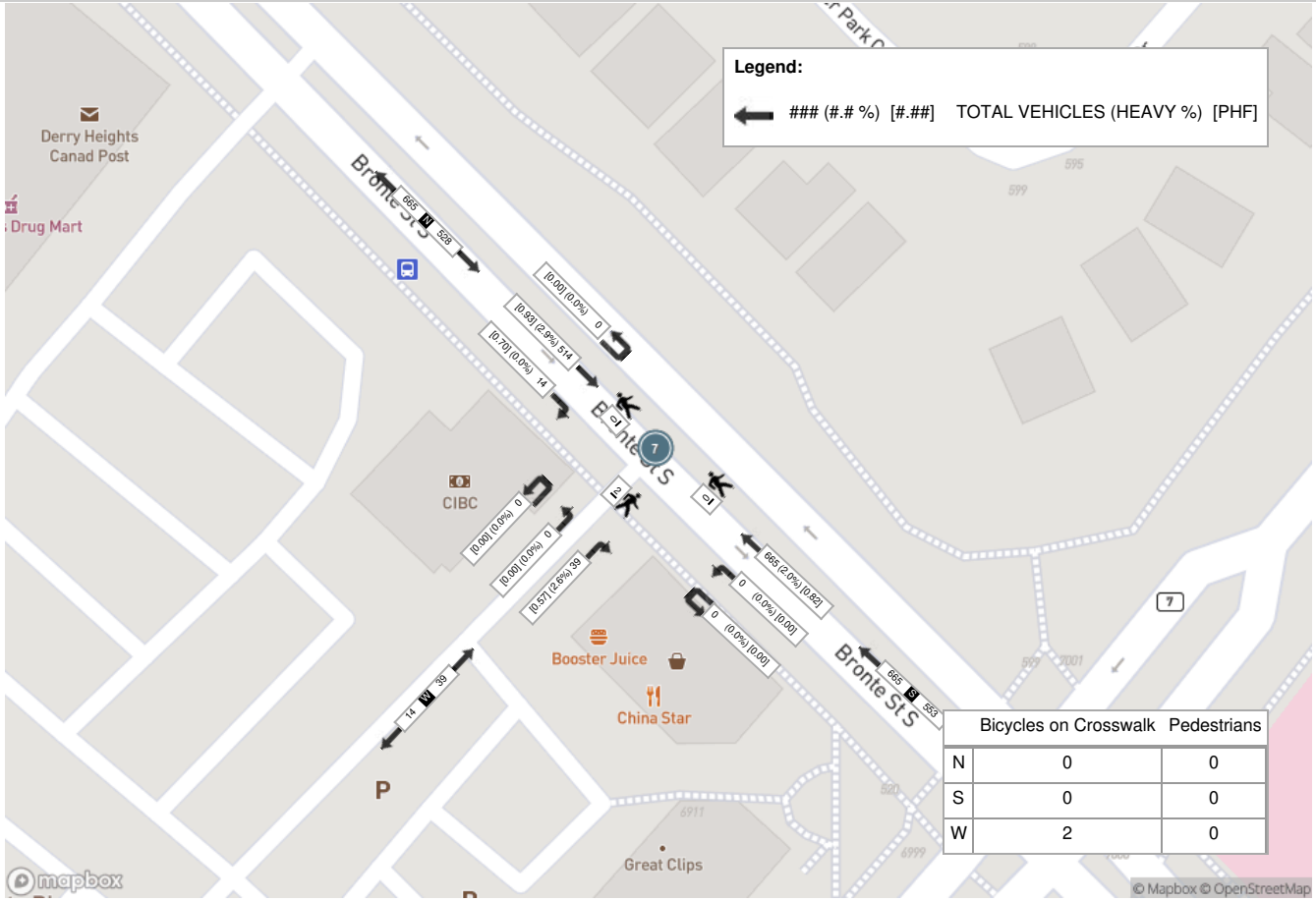
Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA SOUTH DRIVEWAY					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
2025-06-26 08:00:00	4	127	0	0	131	154	0	0	0	154	8	0	0	0	8	293
2025-06-26 08:15:00	5	120	0	0	125	146	0	0	0	146	17	0	0	1	17	288
2025-06-26 08:30:00	3	138	0	0	141	163	0	0	0	163	8	0	0	0	8	312
2025-06-26 08:45:00	2	129	0	0	131	202	0	0	0	202	6	0	0	1	6	339
Grand Total	14	514	0	0	528	665	0	0	0	665	39	0	0	2	39	**1232**
Approach%	2.7%	97.3%	0%		-	100%	0%	0%		-	100%	0%	0%		-	**-**
Totals %	1.1%	41.7%	0%		42.9%	54%	0%	0%		54%	3.2%	0%	0%		3.2%	**-**
PHF	0.7	0.93	0		0.94	0.82	0	0		0.82	0.57	0	0		0.57	0.91
Heavy	0	15	0		15	13	0	0		13	1	0	0		1	29
Heavy %	0%	2.9%	0%		2.8%	2%	0%	0%		2%	2.6%	0%	0%		2.6%	2.4%
Lights	14	499	0		513	652	0	0		652	38	0	0		38	1203
Lights %	100%	97.1%	0%		97.2%	98%	0%	0%		98%	97.4%	0%	0%		97.4%	97.6%
Single-Unit Trucks	0	7	0		7	7	0	0		7	0	0	0		0	14
Single-Unit Trucks %	0%	1.4%	0%		1.3%	1.1%	0%	0%		1.1%	0%	0%	0%		0%	1.1%
Buses	0	6	0		6	5	0	0		5	0	0	0		0	11
Buses %	0%	1.2%	0%		1.1%	0.8%	0%	0%		0.8%	0%	0%	0%		0%	0.9%
Articulated Trucks	0	2	0		2	1	0	0		1	1	0	0		1	4
Articulated Trucks %	0%	0.4%	0%		0.4%	0.2%	0%	0%		0.2%	2.6%	0%	0%		2.6%	0.3%
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	100%		**-**
Bicycles on Road	0	0	0		-	1	0	0		-	0	0	0		-	**-**
Bicycles on Road%	0%	0%	0%			100%	0%	0%			0%	0%	0%			**-**

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (17 °C)

Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA SOUTH DRIVEWAY					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
2025-06-26 16:45:00	4	209	0	0	213	203	0	0	0	203	8	0	0	2	8	424
2025-06-26 17:00:00	1	241	0	1	242	185	0	0	0	185	6	0	0	11	6	433
2025-06-26 17:15:00	4	214	0	0	218	200	0	0	0	200	8	0	0	2	8	426
2025-06-26 17:30:00	2	231	0	0	233	188	0	0	0	188	8	0	0	6	8	429
Grand Total	11	895	0	1	906	776	0	0	0	776	30	0	0	21	30	**1712**
Approach%	1.2%	98.8%	0%		-	100%	0%	0%		-	100%	0%	0%		-	**-**
Totals %	0.6%	52.3%	0%		52.9%	45.3%	0%	0%		45.3%	1.8%	0%	0%		1.8%	**-**
PHF	0.69	0.93	0		0.94	0.96	0	0		0.96	0.94	0	0		0.94	0.99
Heavy	0	3	0		3	1	0	0		1	0	0	0		0	4
Heavy %	0%	0.3%	0%		0.3%	0.1%	0%	0%		0.1%	0%	0%	0%		0%	0.2%
Lights	11	892	0		903	775	0	0		775	30	0	0		30	1708
Lights %	100%	99.7%	0%		99.7%	99.9%	0%	0%		99.9%	100%	0%	0%		100%	99.8%
Single-Unit Trucks	0	2	0		2	1	0	0		1	0	0	0		0	3
Single-Unit Trucks %	0%	0.2%	0%		0.2%	0.1%	0%	0%		0.1%	0%	0%	0%		0%	0.2%
Buses	0	1	0		1	0	0	0		0	0	0	0		0	1
Buses %	0%	0.1%	0%		0.1%	0%	0%	0%		0%	0%	0%	0%		0%	0.1%
Articulated Trucks	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%
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	16	-	**-**
Pedestrians%	-	-	-	4.5%		-	-	-	0%		-	-	-	72.7%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	5	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	22.7%		**-**
Bicycles on Road	0	1	0		-	0	0	0		-	2	0	0		-	**-**
Bicycles on Road%	0%	100%	0%			0%	0%	0%			100%	0%	0%			**-**

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

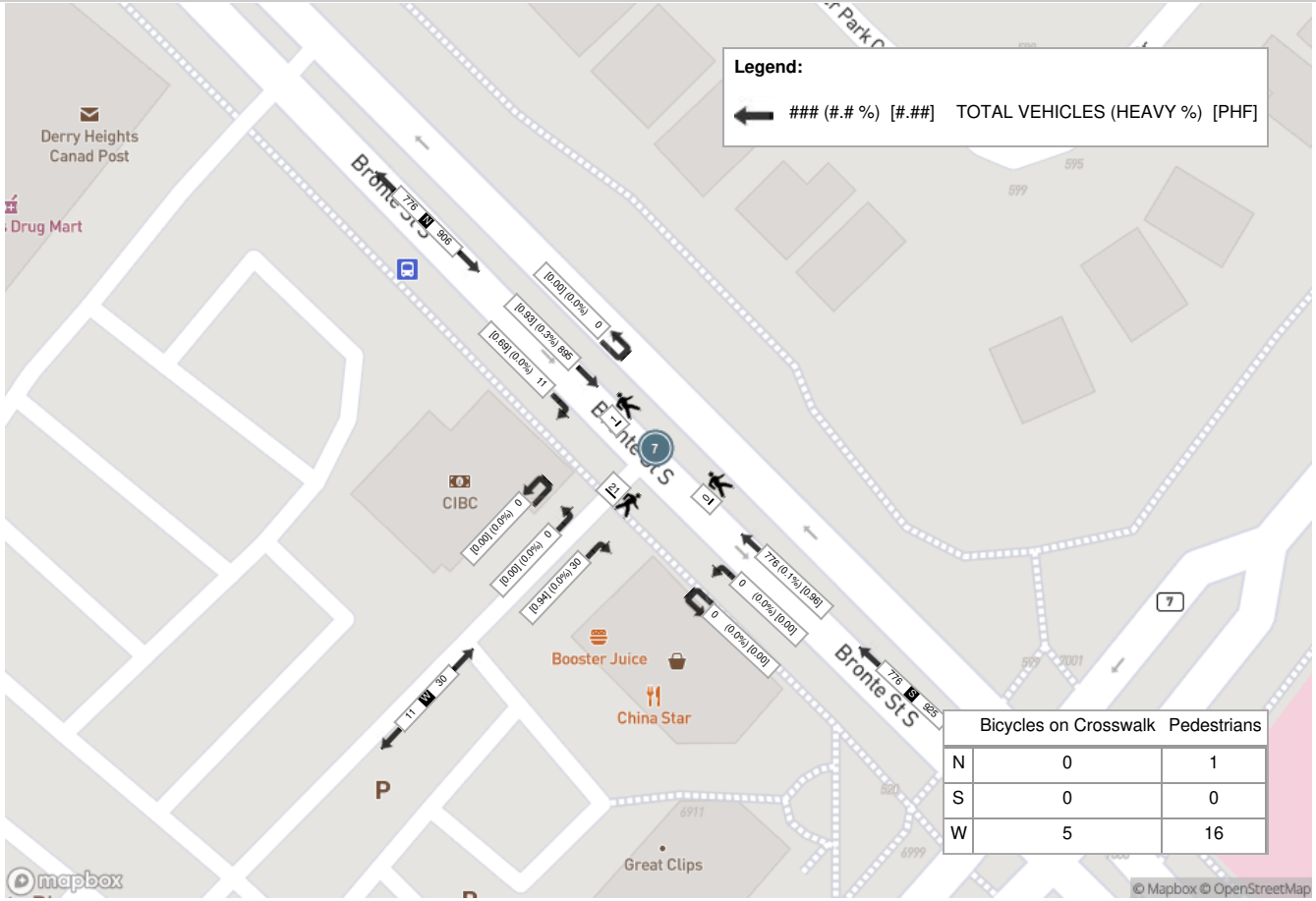
Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	0
W	2	0

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (17 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	1
S	0	0
W	5	16

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (7 . BRONTE ST S & DERRY HEIGHTS PLAZA SOUTH DRIVEWAY)

Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA SOUTH DRIVEWAY					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-09-06 12:00:00	4	172	0	0	176	171	0	0	0	171	17	0	0	6	17	364	
2025-09-06 12:15:00	5	204	0	0	209	133	0	0	0	133	11	0	0	1	11	353	
2025-09-06 12:30:00	2	173	0	0	175	147	0	0	0	147	9	0	0	1	9	331	
2025-09-06 12:45:00	3	165	0	0	168	175	0	0	0	175	8	0	0	3	8	351	1399
2025-09-06 13:00:00	2	179	0	0	181	150	0	0	0	150	8	0	0	2	8	339	1374
2025-09-06 13:15:00	5	174	0	0	179	156	0	0	0	156	9	0	0	4	9	344	1365
2025-09-06 13:30:00	2	151	0	0	153	136	0	0	0	136	9	0	0	5	9	298	1332
2025-09-06 13:45:00	2	144	0	0	146	143	0	0	0	143	7	0	0	0	7	296	1277
2025-09-06 14:00:00	3	160	0	0	163	140	0	0	0	140	12	0	0	1	12	315	1253
2025-09-06 14:15:00	1	151	0	0	152	159	0	0	0	159	7	0	0	1	7	318	1227
2025-09-06 14:30:00	7	160	0	0	167	119	0	0	0	119	7	0	0	7	7	293	1222
2025-09-06 14:45:00	3	159	0	0	162	146	0	0	0	146	6	0	0	1	6	314	1240
Grand Total	39	1992	0	0	2031	1775	0	0	0	1775	110	0	0	32	110	**3916**	-
Approach%	1.9%	98.1%	0%		-	100%	0%	0%		-	100%	0%	0%		-	**-**	-
Totals %	1%	50.9%	0%		51.9%	45.3%	0%	0%		45.3%	2.8%	0%	0%		2.8%	**-**	-
Heavy	0	13	0		-	2	0	0		-	1	0	0		-	**-**	-
Heavy %	0%	0.7%	0%		-	0.1%	0%	0%		-	0.9%	0%	0%		-	**-**	-
Bicycles	0	6	0		-	1	0	0		-	0	0	0		-	**-**	-
Bicycle %	0%	0.3%	0%		-	0.1%	0%	0%		-	0%	0%	0%		-	**-**	-

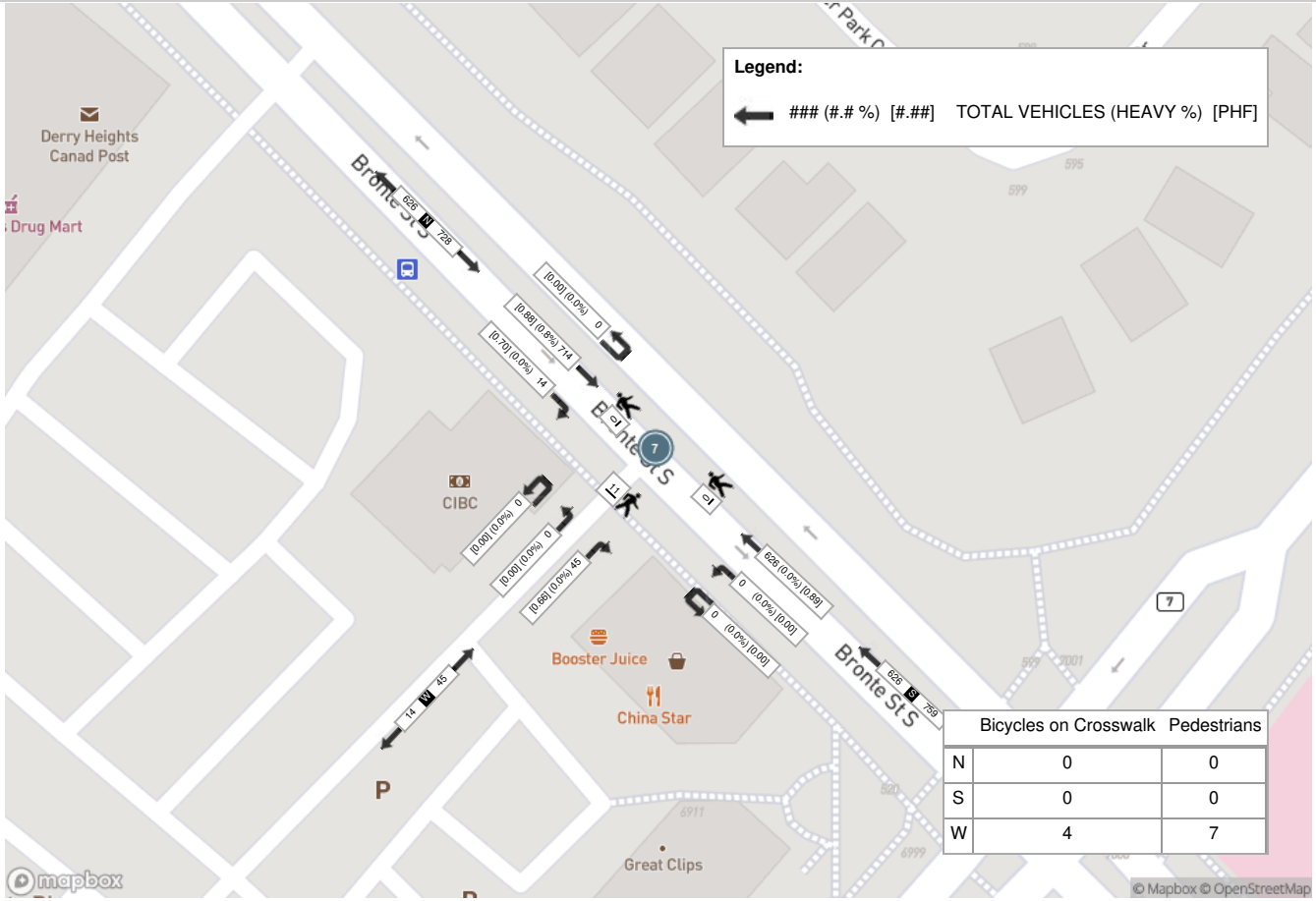
BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Overcast Clouds (18 °C)

Start Time	N Approach BRONTE ST S					S Approach BRONTE ST S					W Approach DERRY HEIGHTS PLAZA SOUTH DRIVEWAY					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
2025-09-06 12:00:00	4	172	0	0	176	171	0	0	0	171	17	0	0	6	17	364
2025-09-06 12:15:00	5	204	0	0	209	133	0	0	0	133	11	0	0	1	11	353
2025-09-06 12:30:00	2	173	0	0	175	147	0	0	0	147	9	0	0	1	9	331
2025-09-06 12:45:00	3	165	0	0	168	175	0	0	0	175	8	0	0	3	8	351
Grand Total	14	714	0	0	728	626	0	0	0	626	45	0	0	11	45	**1399**
Approach%	1.9%	98.1%	0%		-	100%	0%	0%		-	100%	0%	0%		-	**-**
Totals %	1%	51%	0%		52%	44.7%	0%	0%		44.7%	3.2%	0%	0%		3.2%	**-**
PHF	0.7	0.88	0		0.87	0.89	0	0		0.89	0.66	0	0		0.66	0.96
Heavy	0	6	0		6	0	0	0		0	0	0	0		0	6
Heavy %	0%	0.8%	0%		0.8%	0%	0%	0%		0%	0%	0%	0%		0%	0.4%
Lights	14	708	0		722	626	0	0		626	45	0	0		45	1393
Lights %	100%	99.2%	0%		99.2%	100%	0%	0%		100%	100%	0%	0%		100%	99.6%
Single-Unit Trucks	0	4	0		4	0	0	0		0	0	0	0		0	4
Single-Unit Trucks %	0%	0.6%	0%		0.5%	0%	0%	0%		0%	0%	0%	0%		0%	0.3%
Buses	0	2	0		2	0	0	0		0	0	0	0		0	2
Buses %	0%	0.3%	0%		0.3%	0%	0%	0%		0%	0%	0%	0%		0%	0.1%
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	7	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	63.6%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	4	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	36.4%		**-**
Bicycles on Road	0	4	0		-	0	0	0		-	0	0	0		-	**-**
Bicycles on Road%	0%	100%	0%			0%	0%	0%			0%	0%	0%			**-**

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Overcast Clouds (18 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	0
W	4	7

Spectrum

Turning Movement Count
Location Name: BRONTE ST S & LAURIER AVE
Date: Thu, Jun 26, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (5 . BRONTE ST S & LAURIER AVE)

Start Time	N Approach BRONTE ST S						E Approach LAURIER AVE						S Approach BRONTE ST S						W Approach LAURIER AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-06-26 07:00:00	6	64	1	0	1	71	10	1	4	0	0	15	2	61	0	0	0	63	0	0	1	0	1	1	150	
2025-06-26 07:15:00	5	77	2	0	0	84	9	5	5	0	1	19	0	73	0	0	0	73	2	4	3	0	3	9	185	
2025-06-26 07:30:00	5	61	3	0	0	69	6	4	10	0	2	20	6	90	0	0	0	96	3	2	5	0	0	10	195	
2025-06-26 07:45:00	8	87	3	0	2	98	16	5	8	0	1	29	8	126	3	0	0	137	4	0	6	0	3	10	274	804
2025-06-26 08:00:00	3	118	7	0	0	128	24	4	11	0	0	39	7	129	0	0	2	136	2	2	6	0	5	10	313	967
2025-06-26 08:15:00	9	108	8	0	0	125	31	4	5	0	0	40	5	128	2	0	0	135	4	2	10	0	1	16	316	1098
2025-06-26 08:30:00	10	134	10	0	1	154	14	9	11	0	0	34	12	155	2	0	1	169	1	2	10	0	3	13	370	1273
2025-06-26 08:45:00	6	120	12	0	2	138	17	9	4	0	2	30	6	197	4	0	0	207	3	1	14	0	1	18	393	1392
BREAK																										
2025-06-26 16:00:00	11	149	24	0	0	184	28	2	19	0	1	49	9	186	3	0	0	198	11	4	17	0	3	32	463	
2025-06-26 16:15:00	13	162	27	0	1	202	29	4	12	0	0	45	12	152	5	0	1	169	5	7	9	0	10	21	437	
2025-06-26 16:30:00	11	190	26	0	0	227	28	3	16	0	1	47	6	168	3	0	1	177	6	6	13	0	1	25	476	
2025-06-26 16:45:00	14	173	22	0	2	209	29	4	12	0	2	45	10	179	1	0	0	190	11	6	11	0	3	28	472	1848
2025-06-26 17:00:00	8	193	35	0	1	236	19	6	12	0	1	37	13	156	4	0	1	173	7	3	12	0	8	22	468	1853
2025-06-26 17:15:00	10	181	17	0	1	208	35	3	15	0	2	53	6	185	4	0	1	195	4	6	4	0	2	14	470	1886
2025-06-26 17:30:00	3	190	22	0	1	215	26	6	11	0	1	43	9	144	4	0	0	157	7	2	6	0	5	15	430	1840
2025-06-26 17:45:00	5	165	11	0	2	181	42	2	18	0	2	62	12	180	2	0	3	194	8	4	5	0	2	17	454	1822
Grand Total	127	2172	230	0	14	2529	363	71	173	0	16	607	123	2309	37	0	10	2469	78	51	132	0	51	261	**5866**	-
Approach%	5%	85.9%	9.1%	0%		-	59.8%	11.7%	28.5%	0%		-	5%	93.5%	1.5%	0%		-	29.9%	19.5%	50.6%	0%		-	-	-
Totals %	2.2%	37%	3.9%	0%		43.1%	6.2%	1.2%	2.9%	0%		10.3%	2.1%	39.4%	0.6%	0%		42.1%	1.3%	0.9%	2.3%	0%		4.4%	-	-
Heavy	1	40	2	0		-	10	0	1	0		-	1	26	0	0		-	0	0	0	0		-	-	-
Heavy %	0.8%	1.8%	0.9%	0%		-	2.8%	0%	0.6%	0%		-	0.8%	1.1%	0%	0%		-	0%	0%	0%	0%		-	-	-
Bicycles	0	8	0	0		-	0	0	0	0		-	0	4	0	0		-	0	0	0	0		-	-	-
Bicycle %	0%	0.4%	0%	0%		-	0%	0%	0%	0%		-	0%	0.2%	0%	0%		-	0%	0%	0%	0%		-	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16 °C)

Start Time	N Approach BRONTE ST S						E Approach LAURIER AVE						S Approach BRONTE ST S						W Approach LAURIER AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-06-26 08:00:00	3	118	7	0	0	128	24	4	11	0	0	39	7	129	0	0	2	136	2	2	6	0	5	10	313
2025-06-26 08:15:00	9	108	8	0	0	125	31	4	5	0	0	40	5	128	2	0	0	135	4	2	10	0	1	16	316
2025-06-26 08:30:00	10	134	10	0	1	154	14	9	11	0	0	34	12	155	2	0	1	169	1	2	10	0	3	13	370
2025-06-26 08:45:00	6	120	12	0	2	138	17	9	4	0	2	30	6	197	4	0	0	207	3	1	14	0	1	18	393
Grand Total	28	480	37	0	3	545	86	26	31	0	2	143	30	609	8	0	3	647	10	7	40	0	10	57	**1392**
Approach%	5.1%	88.1%	6.8%	0%		-	60.1%	18.2%	21.7%	0%		-	4.6%	94.1%	1.2%	0%		-	17.5%	12.3%	70.2%	0%		-	**-**
Totals %	2%	34.5%	2.7%	0%		39.2%	6.2%	1.9%	2.2%	0%		10.3%	2.2%	43.8%	0.6%	0%		46.5%	0.7%	0.5%	2.9%	0%		4.1%	**-**
PHF	0.7	0.9	0.77	0		0.88	0.69	0.72	0.7	0		0.89	0.63	0.77	0.5	0		0.78	0.63	0.88	0.71	0		0.79	0.89
Heavy	1	17	1	0		19	2	0	0	0		2	1	10	0	0		11	0	0	0	0		0	32
Heavy %	3.6%	3.5%	2.7%	0%		3.5%	2.3%	0%	0%	0%		1.4%	3.3%	1.6%	0%	0%		1.7%	0%	0%	0%	0%		0%	2.3%
Lights	27	463	36	0		526	84	26	31	0		141	29	599	8	0		636	10	7	40	0		57	1360
Lights %	96.4%	96.5%	97.3%	0%		96.5%	97.7%	100%	100%	0%		98.6%	96.7%	98.4%	100%	0%		98.3%	100%	100%	100%	0%		100%	97.7%
Single-Unit Trucks	1	9	0	0		10	0	0	0	0		0	0	4	0	0		4	0	0	0	0		0	14
Single-Unit Trucks %	3.6%	1.9%	0%	0%		1.8%	0%	0%	0%	0%		0%	0%	0.7%	0%	0%		0.6%	0%	0%	0%	0%		0%	1%
Buses	0	7	1	0		8	2	0	0	0		2	1	4	0	0		5	0	0	0	0		0	15
Buses %	0%	1.5%	2.7%	0%		1.5%	2.3%	0%	0%	0%		1.4%	3.3%	0.7%	0%	0%		0.8%	0%	0%	0%	0%		0%	1.1%
Articulated Trucks	0	1	0	0		1	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	3
Articulated Trucks %	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	0%	0%	0%	0%		0%	0.2%
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	8	-	**-**
Pedestrians%	-	-	-	-	5.6%		-	-	-	-	0%		-	-	-	-	16.7%		-	-	-	-	44.4%		**-**
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	2	-	**-**
Bicycles on Crosswalk%	-	-	-	-	11.1%		-	-	-	-	11.1%		-	-	-	-	0%		-	-	-	-	11.1%		**-**
Bicycles on Road	0	0	0	0		-	0	0	0	0		-	0	1	0	0		-	0	0	0	0		-	**-**
Bicycles on Road%	0%	0%	0%	0%			0%	0%	0%	0%			0%	100%	0%	0%			0%	0%	0%	0%			**-**

Spectrum

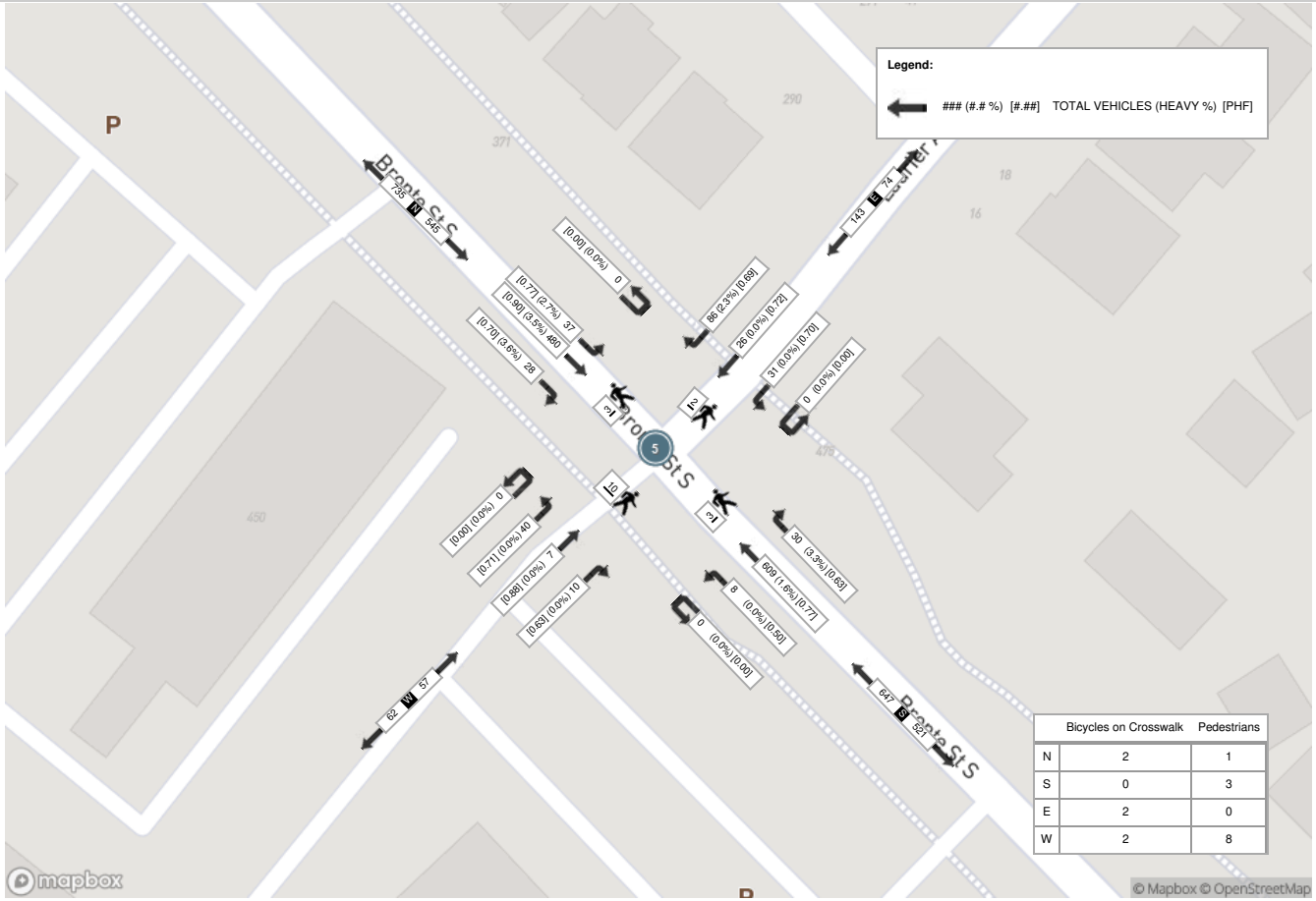
Turning Movement Count
Location Name: BRONTE ST S & LAURIER AVE
Date: Thu, Jun 26, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

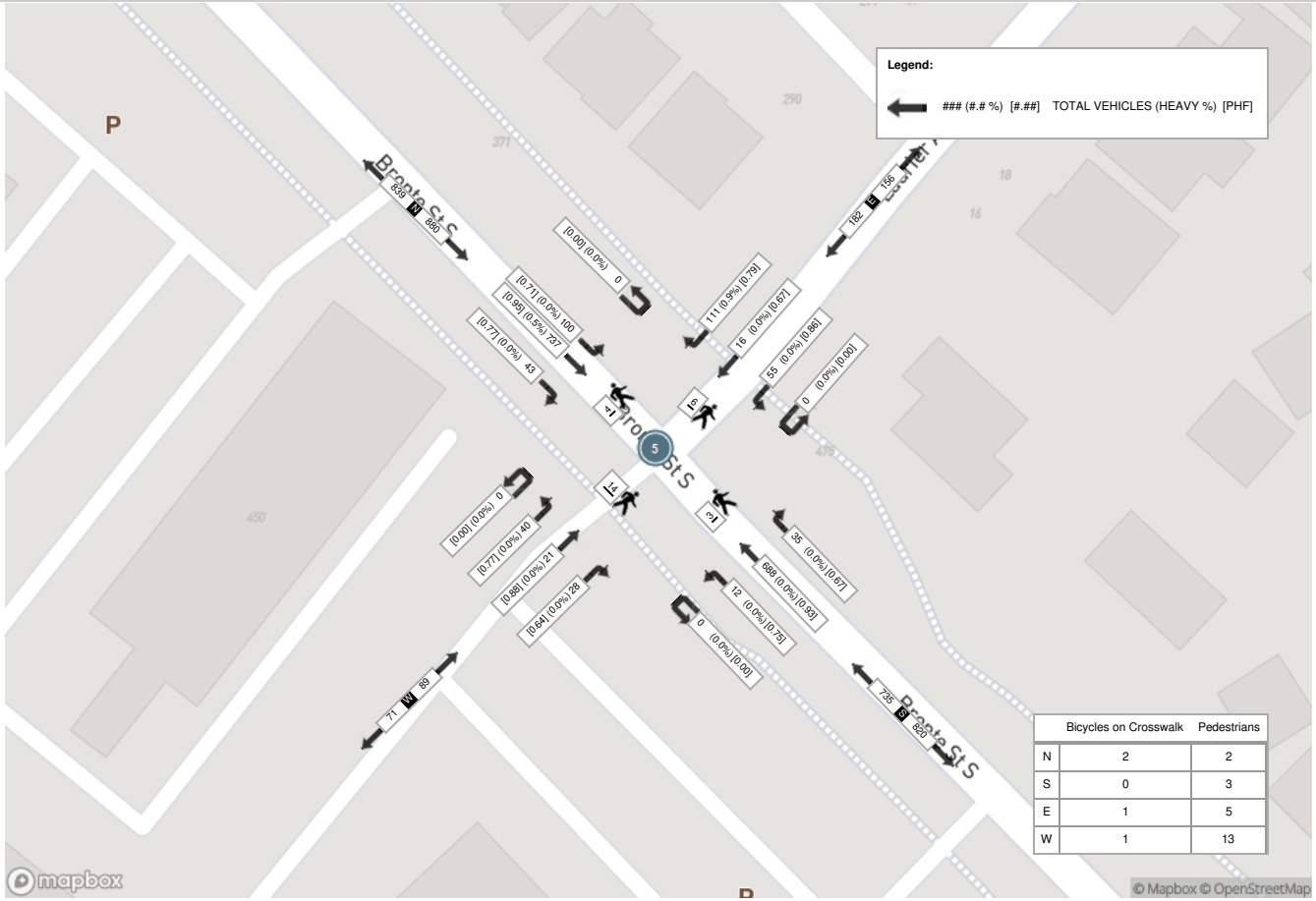
Peak Hour: 04:30 PM - 05:30 PM Weather: Overcast Clouds (17 °C)

Start Time	N Approach BRONTE ST S						E Approach LAURIER AVE						S Approach BRONTE ST S						W Approach LAURIER AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-06-26 16:30:00	11	190	26	0	0	227	28	3	16	0	1	47	6	168	3	0	1	177	6	6	13	0	1	25	476
2025-06-26 16:45:00	14	173	22	0	2	209	29	4	12	0	2	45	10	179	1	0	0	190	11	6	11	0	3	28	472
2025-06-26 17:00:00	8	193	35	0	1	236	19	6	12	0	1	37	13	156	4	0	1	173	7	3	12	0	8	22	468
2025-06-26 17:15:00	10	181	17	0	1	208	35	3	15	0	2	53	6	185	4	0	1	195	4	6	4	0	2	14	470
Grand Total	43	737	100	0	4	880	111	16	55	0	6	182	35	688	12	0	3	735	28	21	40	0	14	89	**1886**
Approach%	4.9%	83.8%	11.4%	0%		-	61%	8.8%	30.2%	0%		-	4.8%	93.6%	1.6%	0%		-	31.5%	23.6%	44.9%	0%		-	**-**
Totals %	2.3%	39.1%	5.3%	0%		46.7%	5.9%	0.8%	2.9%	0%		9.7%	1.9%	36.5%	0.6%	0%		39%	1.5%	1.1%	2.1%	0%		4.7%	**-**
PHF	0.77	0.95	0.71	0		0.93	0.79	0.67	0.86	0		0.86	0.67	0.93	0.75	0		0.94	0.64	0.88	0.77	0		0.79	0.99
Heavy	0	4	0	0		4	1	0	0	0		1	0	0	0	0		0	0	0	0	0		0	5
Heavy %	0%	0.5%	0%	0%		0.5%	0.9%	0%	0%	0%		0.5%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0.3%
Lights	43	733	100	0		876	110	16	55	0		181	35	688	12	0		735	28	21	40	0		89	1881
Lights %	100%	99.5%	100%	0%		99.5%	99.1%	100%	100%	0%		99.5%	100%	100%	100%	0%		100%	100%	100%	100%	0%		100%	99.7%
Single-Unit Trucks	0	2	0	0		2	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	2
Single-Unit Trucks %	0%	0.3%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0.1%
Buses	0	2	0	0		2	1	0	0	0		1	0	0	0	0		0	0	0	0	0		0	3
Buses %	0%	0.3%	0%	0%		0.2%	0.9%	0%	0%	0%		0.5%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0.2%
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%
Pedestrians	-	-	-	-	2	-	-	-	-	-	5	-	-	-	-	-	3	-	-	-	-	-	13	-	**-**
Pedestrians%	-	-	-	-	7.4%		-	-	-	-	18.5%		-	-	-	-	11.1%		-	-	-	-	48.1%		**-**
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	7.4%		-	-	-	-	3.7%		-	-	-	-	0%		-	-	-	-	3.7%		**-**
Bicycles on Road	0	3	0	0		-	0	0	0	0		-	0	0	0	0		-	0	0	0	0		-	**-**
Bicycles on Road%	0%	100%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			**-**

Peak Hour: 08:00 AM - 09:00 AM **Weather: Overcast Clouds (16 °C)**



Peak Hour: 04:30 PM - 05:30 PM **Weather: Overcast Clouds (17 °C)**



Spectrum

Turning Movement Count
Location Name: BRONTE ST S & LAURIER AVE
Date: Sat, Sep 06, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (5 . BRONTE ST S & LAURIER AVE)

Start Time	N Approach BRONTE ST S						E Approach LAURIER AVE						S Approach BRONTE ST S						W Approach LAURIER AVE						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-09-06 12:00:00	6	176	27	0	1	209	26	5	6	0	6	37	10	161	3	0	1	174	6	4	6	0	10	16	436	
2025-09-06 12:15:00	5	150	14	0	1	169	17	3	6	0	0	26	10	130	1	0	0	141	4	0	10	0	3	14	350	
2025-09-06 12:30:00	7	157	15	0	0	179	16	1	19	0	6	36	8	141	0	0	3	149	5	4	6	0	2	15	379	
2025-09-06 12:45:00	4	145	12	0	2	161	28	2	12	0	4	42	9	161	3	0	2	173	3	1	1	0	10	5	381	1546
2025-09-06 13:00:00	6	147	23	0	0	176	21	1	11	0	2	33	9	145	2	0	0	156	8	3	3	0	3	14	379	1489
2025-09-06 13:15:00	6	159	7	0	0	172	18	0	12	0	2	30	11	145	1	0	1	157	4	3	6	0	2	13	372	1511
2025-09-06 13:30:00	4	127	17	0	0	148	28	1	6	0	0	35	9	121	0	0	1	130	3	1	2	0	2	6	319	1451
2025-09-06 13:45:00	6	133	15	0	0	154	21	0	13	0	0	34	6	138	2	0	0	146	1	2	1	0	3	4	338	1408
2025-09-06 14:00:00	4	156	16	0	0	176	21	1	12	0	1	34	7	130	1	0	0	138	2	0	4	0	1	6	354	1383
2025-09-06 14:15:00	1	123	15	1	1	140	25	1	11	0	5	37	10	141	0	0	0	151	0	2	3	0	2	5	333	1344
2025-09-06 14:30:00	3	163	10	0	0	176	15	1	11	0	4	27	10	101	1	0	0	112	1	0	0	0	5	1	316	1341
2025-09-06 14:45:00	4	132	10	0	0	146	24	0	11	0	2	35	8	138	1	0	0	147	4	0	0	0	3	4	332	1335
Grand Total	56	1768	181	1	5	2006	260	16	130	0	32	406	107	1652	15	0	8	1774	41	20	42	0	46	103	**4289**	-
Approach%	2.8%	88.1%	9%	0%		-	64%	3.9%	32%	0%		-	6%	93.1%	0.8%	0%		-	39.8%	19.4%	40.8%	0%		-	**-**	-
Totals %	1.3%	41.2%	4.2%	0%		46.8%	6.1%	0.4%	3%	0%		9.5%	2.5%	38.5%	0.3%	0%		41.4%	1%	0.5%	1%	0%		2.4%	**-**	-
Heavy	1	10	0	0		-	3	0	0	0		-	0	4	0	0		-	0	0	1	0		-	**-**	-
Heavy %	1.8%	0.6%	0%	0%		-	1.2%	0%	0%	0%		-	0%	0.2%	0%	0%		-	0%	0%	2.4%	0%		-	**-**	-
Bicycles	0	5	2	0		-	0	0	0	0		-	0	0	0	0		-	0	0	0	0		-	**-**	-
Bicycle %	0%	0.3%	1.1%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: BRONTE ST S & LAURIER AVE
Date: Sat, Sep 06, 2025 Deployment Lead: Rey Fernandez

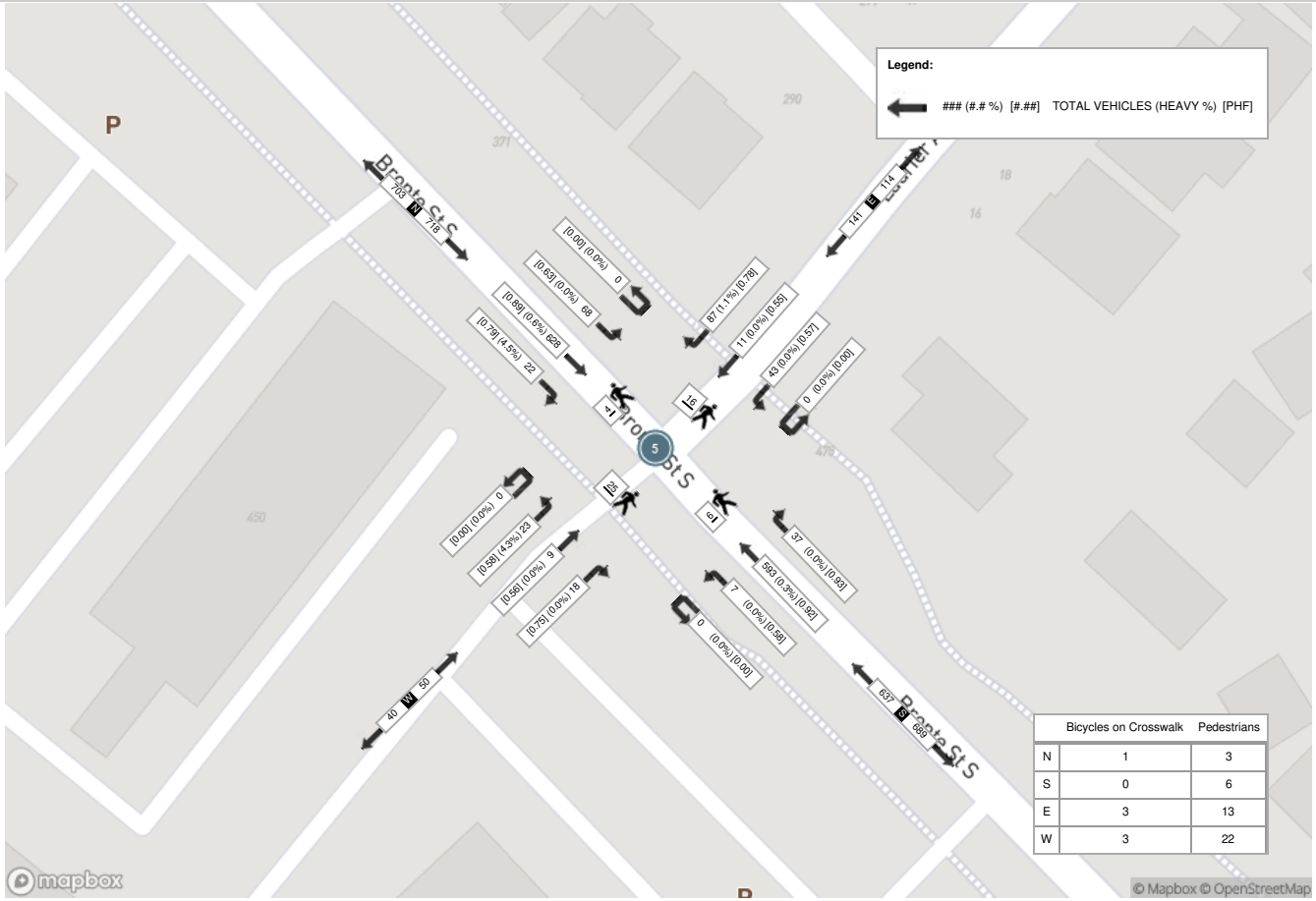
BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Overcast Clouds (18 °C)

Start Time	N Approach BRONTE ST S						E Approach LAURIER AVE						S Approach BRONTE ST S						W Approach LAURIER AVE						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-09-06 12:00:00	6	176	27	0	1	209	26	5	6	0	6	37	10	161	3	0	1	174	6	4	6	0	10	16	436
2025-09-06 12:15:00	5	150	14	0	1	169	17	3	6	0	0	26	10	130	1	0	0	141	4	0	10	0	3	14	350
2025-09-06 12:30:00	7	157	15	0	0	179	16	1	19	0	6	36	8	141	0	0	3	149	5	4	6	0	2	15	379
2025-09-06 12:45:00	4	145	12	0	2	161	28	2	12	0	4	42	9	161	3	0	2	173	3	1	1	0	10	5	381
Grand Total	22	628	68	0	4	718	87	11	43	0	16	141	37	593	7	0	6	637	18	9	23	0	25	50	**1546**
Approach%	3.1%	87.5%	9.5%	0%		-	61.7%	7.8%	30.5%	0%		-	5.8%	93.1%	1.1%	0%		-	36%	18%	46%	0%		-	**-**
Totals %	1.4%	40.6%	4.4%	0%		46.4%	5.6%	0.7%	2.8%	0%		9.1%	2.4%	38.4%	0.5%	0%		41.2%	1.2%	0.6%	1.5%	0%		3.2%	**-**
PHF	0.79	0.89	0.63	0		0.86	0.78	0.55	0.57	0		0.84	0.93	0.92	0.58	0		0.92	0.75	0.56	0.58	0		0.78	0.89
Heavy	1	4	0	0		5	1	0	0	0		1	0	2	0	0		2	0	0	1	0		1	9
Heavy %	4.5%	0.6%	0%	0%		0.7%	1.1%	0%	0%	0%		0.7%	0%	0.3%	0%	0%		0.3%	0%	0%	4.3%	0%		2%	0.6%
Lights	21	624	68	0		713	86	11	43	0		140	37	591	7	0		635	18	9	22	0		49	1537
Lights %	95.5%	99.4%	100%	0%		99.3%	98.9%	100%	100%	0%		99.3%	100%	99.7%	100%	0%		99.7%	100%	100%	95.7%	0%		98%	99.4%
Single-Unit Trucks	0	2	0	0		2	1	0	0	0		1	0	2	0	0		2	0	0	0	0		0	5
Single-Unit Trucks %	0%	0.3%	0%	0%		0.3%	1.1%	0%	0%	0%		0.7%	0%	0.3%	0%	0%		0.3%	0%	0%	0%	0%		0%	0.3%
Buses	1	2	0	0		3	0	0	0	0		0	0	0	0	0		0	0	0	1	0		1	4
Buses %	4.5%	0.3%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	4.3%	0%		2%	0.3%
Pedestrians	-	-	-	-	3	-	-	-	-	-	13	-	-	-	-	-	6	-	-	-	-	-	22	-	**-**
Pedestrians%	-	-	-	-	5.9%		-	-	-	-	25.5%		-	-	-	-	11.8%		-	-	-	-	43.1%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	3	-	**-**
Bicycles on Crosswalk%	-	-	-	-	2%		-	-	-	-	5.9%		-	-	-	-	0%		-	-	-	-	5.9%		**-**
Bicycles on Road	0	4	2	0		-	0	0	0	0		-	0	0	0	0		-	0	0	0	0		-	**-**
Bicycles on Road%	0%	100%	100%	0%			0%	0%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			**-**

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Overcast Clouds (18 °C)



Turning Movement Count (4 . BRONTE ST S & VANIER DR)

Start Time	N Approach BRONTE ST S					E Approach VANIER DR					S Approach BRONTE ST S					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	UTurn S:S	Peds S:	Approach Total		
2025-06-26 07:00:00	64	1	0	0	65	0	2	0	3	2	2	66	0	0	68	135	
2025-06-26 07:15:00	84	1	0	0	85	2	4	0	1	6	1	80	0	0	81	172	
2025-06-26 07:30:00	72	1	0	0	73	5	7	0	3	12	7	105	0	0	112	197	
2025-06-26 07:45:00	106	0	0	0	106	5	3	0	1	8	6	149	0	0	155	269	773
2025-06-26 08:00:00	137	1	0	0	138	4	6	0	0	10	12	157	0	0	169	317	955
2025-06-26 08:15:00	125	2	0	0	127	5	5	0	2	10	6	146	0	0	152	289	1072
2025-06-26 08:30:00	148	0	0	0	148	2	3	0	4	5	3	188	0	0	191	344	1219
2025-06-26 08:45:00	137	2	0	0	139	2	0	0	3	2	2	224	0	0	226	367	1317
BREAK																	
2025-06-26 16:00:00	207	1	0	0	208	3	1	0	1	4	1	208	0	0	209	421	
2025-06-26 16:15:00	200	1	0	0	201	1	0	0	1	1	5	181	0	0	186	388	
2025-06-26 16:30:00	231	10	0	0	241	3	3	0	0	6	6	185	0	0	191	438	
2025-06-26 16:45:00	227	2	0	0	229	2	5	0	2	7	11	218	0	0	229	465	1712
2025-06-26 17:00:00	240	7	0	0	247	4	0	0	3	4	6	187	0	0	193	444	1735
2025-06-26 17:15:00	219	6	0	0	225	5	5	0	2	10	12	201	0	0	213	448	1795
2025-06-26 17:30:00	232	8	0	0	240	5	3	0	2	8	5	189	0	0	194	442	1799
2025-06-26 17:45:00	208	4	0	0	212	4	4	0	2	8	8	202	0	0	210	430	1764
Grand Total	2637	47	0	0	2684	52	51	0	30	103	93	2686	0	0	2779	**5566**	-
Approach%	98.2%	1.8%	0%		-	50.5%	49.5%	0%		-	3.3%	96.7%	0%		-	**-**	-
Totals %	47.4%	0.8%	0%		48.2%	0.9%	0.9%	0%		1.9%	1.7%	48.3%	0%		49.9%	**-**	-
Heavy	34	1	0		-	1	2	0		-	1	22	0		-	**-**	-
Heavy %	1.3%	2.1%	0%		-	1.9%	3.9%	0%		-	1.1%	0.8%	0%		-	**-**	-
Bicycles	4	0	0		-	0	0	0		-	0	2	0		-	**-**	-
Bicycle %	0.2%	0%	0%		-	0%	0%	0%		-	0%	0.1%	0%		-	**-**	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16 °C)

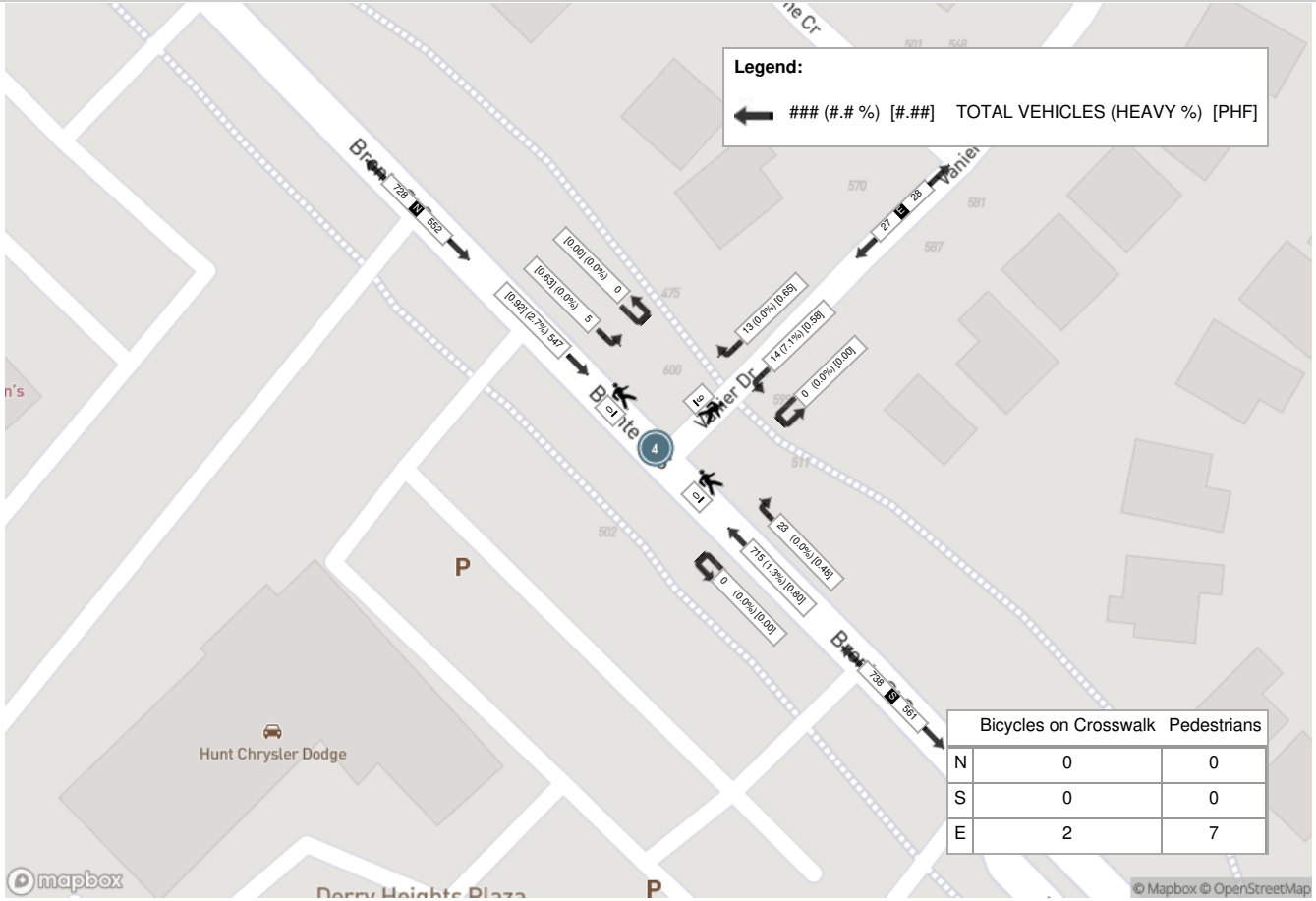
Start Time	N Approach BRONTE ST S					E Approach VANIER DR					S Approach BRONTE ST S					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
2025-06-26 08:00:00	137	1	0	0	138	4	6	0	0	10	12	157	0	0	169	317
2025-06-26 08:15:00	125	2	0	0	127	5	5	0	2	10	6	146	0	0	152	289
2025-06-26 08:30:00	148	0	0	0	148	2	3	0	4	5	3	188	0	0	191	344
2025-06-26 08:45:00	137	2	0	0	139	2	0	0	3	2	2	224	0	0	226	367
Grand Total	547	5	0	0	552	13	14	0	9	27	23	715	0	0	738	**1317**
Approach%	99.1%	0.9%	0%		-	48.1%	51.9%	0%		-	3.1%	96.9%	0%		-	**-**
Totals %	41.5%	0.4%	0%		41.9%	1%	1.1%	0%		2.1%	1.7%	54.3%	0%		56%	**-**
PHF	0.92	0.63	0		0.93	0.65	0.58	0		0.68	0.48	0.8	0		0.82	0.9
Heavy	15	0	0		15	0	1	0		1	0	9	0		9	25
Heavy %	2.7%	0%	0%		2.7%	0%	7.1%	0%		3.7%	0%	1.3%	0%		1.2%	1.9%
Lights	532	5	0		537	13	13	0		26	23	706	0		729	1292
Lights %	97.3%	100%	0%		97.3%	100%	92.9%	0%		96.3%	100%	98.7%	0%		98.8%	98.1%
Single-Unit Trucks	9	0	0		9	0	0	0		0	0	3	0		3	12
Single-Unit Trucks %	1.6%	0%	0%		1.6%	0%	0%	0%		0%	0%	0.4%	0%		0.4%	0.9%
Buses	5	0	0		5	0	1	0		1	0	5	0		5	11
Buses %	0.9%	0%	0%		0.9%	0%	7.1%	0%		3.7%	0%	0.7%	0%		0.7%	0.8%
Articulated Trucks	1	0	0		1	0	0	0		0	0	1	0		1	2
Articulated Trucks %	0.2%	0%	0%		0.2%	0%	0%	0%		0%	0%	0.1%	0%		0.1%	0.2%
Pedestrians	-	-	-	0	-	-	-	-	7	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	77.8%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	2	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	22.2%		-	-	-	0%		**-**
Bicycles on Road	0	0	0		-	0	0	0		-	0	1	0		-	**-**
Bicycles on Road%	0%	0%	0%			0%	0%	0%			0%	100%	0%			**-**

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (17 °C)

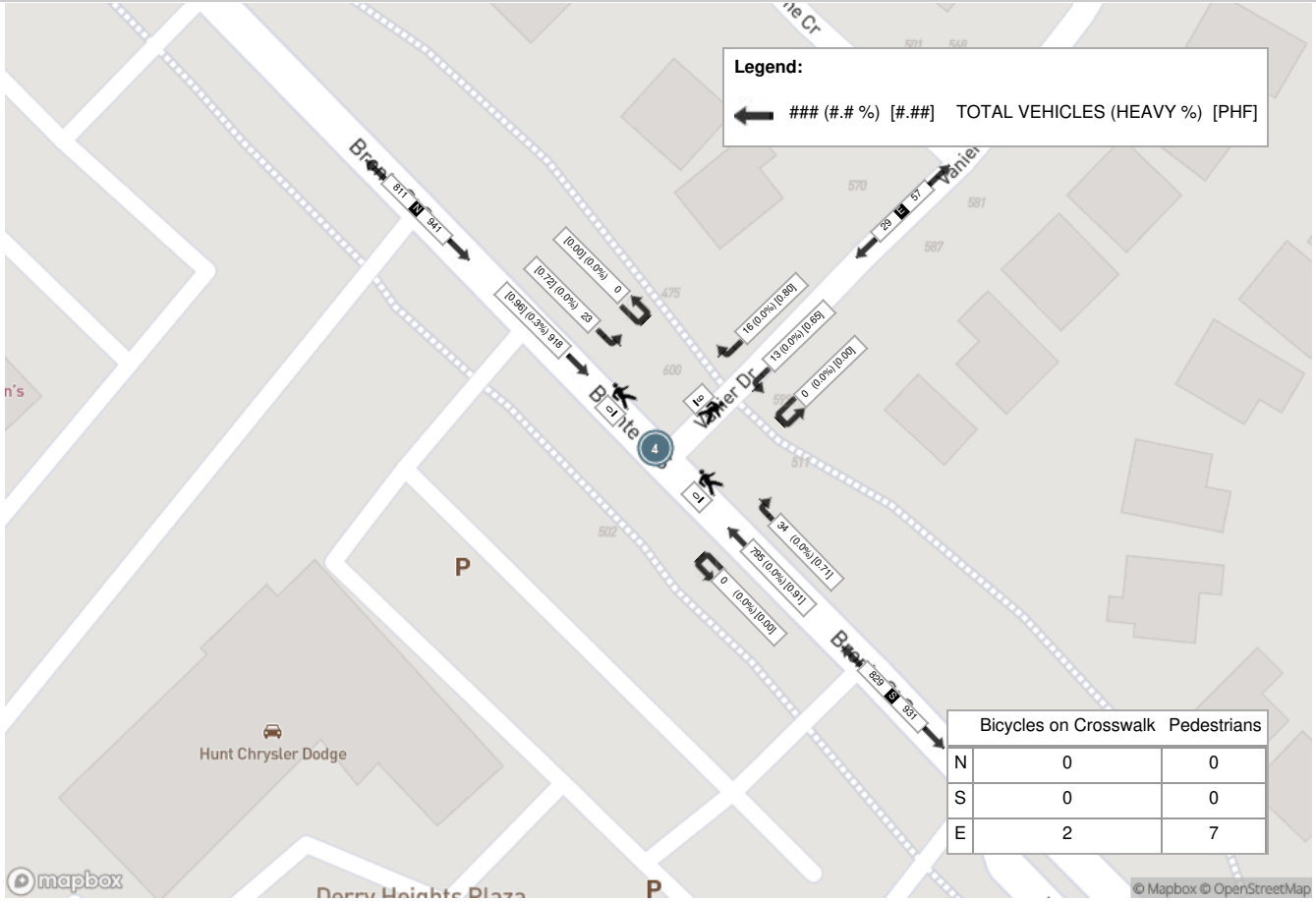
Start Time	N Approach BRONTE ST S					E Approach VANIER DR					S Approach BRONTE ST S					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
2025-06-26 16:45:00	227	2	0	0	229	2	5	0	2	7	11	218	0	0	229	465
2025-06-26 17:00:00	240	7	0	0	247	4	0	0	3	4	6	187	0	0	193	444
2025-06-26 17:15:00	219	6	0	0	225	5	5	0	2	10	12	201	0	0	213	448
2025-06-26 17:30:00	232	8	0	0	240	5	3	0	2	8	5	189	0	0	194	442
Grand Total	918	23	0	0	941	16	13	0	9	29	34	795	0	0	829	**1799**
Approach%	97.6%	2.4%	0%		-	55.2%	44.8%	0%		-	4.1%	95.9%	0%		-	**-**
Totals %	51%	1.3%	0%		52.3%	0.9%	0.7%	0%		1.6%	1.9%	44.2%	0%		46.1%	**-**
PHF	0.96	0.72	0		0.95	0.8	0.65	0		0.73	0.71	0.91	0		0.91	0.97
Heavy	3	0	0		3	0	0	0		0	0	0	0		0	3
Heavy %	0.3%	0%	0%		0.3%	0%	0%	0%		0%	0%	0%	0%		0%	0.2%
Lights	915	23	0		938	16	13	0		29	34	795	0		829	1796
Lights %	99.7%	100%	0%		99.7%	100%	100%	0%		100%	100%	100%	0%		100%	99.8%
Single-Unit Trucks	2	0	0		2	0	0	0		0	0	0	0		0	2
Single-Unit Trucks %	0.2%	0%	0%		0.2%	0%	0%	0%		0%	0%	0%	0%		0%	0.1%
Buses	1	0	0		1	0	0	0		0	0	0	0		0	1
Buses %	0.1%	0%	0%		0.1%	0%	0%	0%		0%	0%	0%	0%		0%	0.1%
Articulated Trucks	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%
Pedestrians	-	-	-	0	-	-	-	-	7	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	77.8%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	2	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	22.2%		-	-	-	0%		**-**
Bicycles on Road	2	0	0		-	0	0	0		-	0	0	0		-	**-**
Bicycles on Road%	100%	0%	0%			0%	0%	0%			0%	0%	0%			**-**

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	0
E	2	7

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (17 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	0
E	2	7

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (4 . BRONTE ST S & VANIER DR)

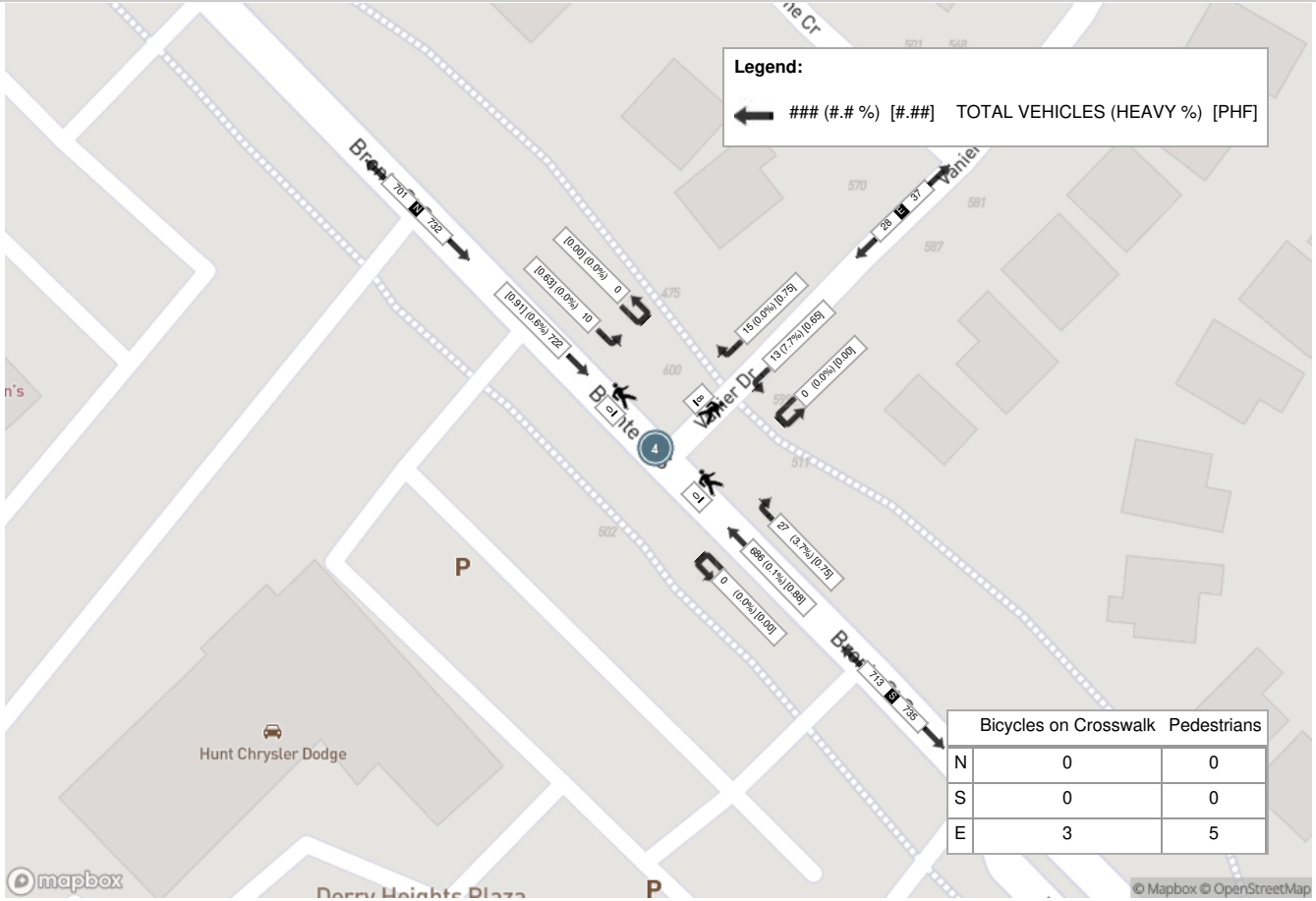
Start Time	N Approach BRONTE ST S					E Approach VANIER DR					S Approach BRONTE ST S					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	UTurn S:S	Peds S:	Approach Total		
2025-09-06 12:00:00	199	2	0	0	201	5	5	0	2	10	6	196	0	0	202	413	
2025-09-06 12:15:00	180	2	0	0	182	4	5	0	1	9	6	143	0	0	149	340	
2025-09-06 12:30:00	182	4	0	0	186	2	2	0	5	4	9	162	0	0	171	361	
2025-09-06 12:45:00	161	2	0	0	163	4	1	0	0	5	6	185	0	0	191	359	1473
2025-09-06 13:00:00	187	4	0	0	191	2	2	0	4	4	4	152	0	0	156	351	1411
2025-09-06 13:15:00	174	7	0	0	181	2	1	0	3	3	4	158	0	0	162	346	1417
2025-09-06 13:30:00	141	3	0	0	144	2	6	0	0	8	8	137	0	0	145	297	1353
2025-09-06 13:45:00	156	3	0	0	159	2	3	0	0	5	5	145	0	0	150	314	1308
2025-09-06 14:00:00	173	7	0	0	180	2	4	0	1	6	12	144	0	0	156	342	1299
2025-09-06 14:15:00	135	2	0	0	137	3	3	0	5	6	8	151	0	0	159	302	1255
2025-09-06 14:30:00	183	2	0	0	185	1	4	0	8	5	9	118	0	0	127	317	1275
2025-09-06 14:45:00	150	0	0	0	150	0	2	0	1	2	6	145	0	0	151	303	1264
Grand Total	2021	38	0	0	2059	29	38	0	30	67	83	1836	0	0	1919	**4045**	-
Approach%	98.2%	1.8%	0%		-	43.3%	56.7%	0%		-	4.3%	95.7%	0%		-	**-**	-
Totals %	50%	0.9%	0%		50.9%	0.7%	0.9%	0%		1.7%	2.1%	45.4%	0%		47.4%	**-**	-
Heavy	10	0	0		-	0	1	0		-	1	3	0		-	**-**	-
Heavy %	0.5%	0%	0%		-	0%	2.6%	0%		-	1.2%	0.2%	0%		-	**-**	-
Bicycles	4	0	0		-	0	1	0		-	2	0	0		-	**-**	-
Bicycle %	0.2%	0%	0%		-	0%	2.6%	0%		-	2.4%	0%	0%		-	**-**	-

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Overcast Clouds (18 °C)

Start Time	N Approach BRONTE ST S					E Approach VANIER DR					S Approach BRONTE ST S					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
2025-09-06 12:00:00	199	2	0	0	201	5	5	0	2	10	6	196	0	0	202	413
2025-09-06 12:15:00	180	2	0	0	182	4	5	0	1	9	6	143	0	0	149	340
2025-09-06 12:30:00	182	4	0	0	186	2	2	0	5	4	9	162	0	0	171	361
2025-09-06 12:45:00	161	2	0	0	163	4	1	0	0	5	6	185	0	0	191	359
Grand Total	722	10	0	0	732	15	13	0	8	28	27	686	0	0	713	**1473**
Approach%	98.6%	1.4%	0%		-	53.6%	46.4%	0%		-	3.8%	96.2%	0%		-	**-**
Totals %	49%	0.7%	0%		49.7%	1%	0.9%	0%		1.9%	1.8%	46.6%	0%		48.4%	**-**
PHF	0.91	0.63	0		0.91	0.75	0.65	0		0.7	0.75	0.88	0		0.88	0.89
Heavy	4	0	0		4	0	1	0		1	1	1	0		2	7
Heavy %	0.6%	0%	0%		0.5%	0%	7.7%	0%		3.6%	3.7%	0.1%	0%		0.3%	0.5%
Lights	718	10	0		728	15	12	0		27	26	685	0		711	1466
Lights %	99.4%	100%	0%		99.5%	100%	92.3%	0%		96.4%	96.3%	99.9%	0%		99.7%	99.5%
Single-Unit Trucks	2	0	0		2	0	1	0		1	1	1	0		2	5
Single-Unit Trucks %	0.3%	0%	0%		0.3%	0%	7.7%	0%		3.6%	3.7%	0.1%	0%		0.3%	0.3%
Buses	2	0	0		2	0	0	0		0	0	0	0		0	2
Buses %	0.3%	0%	0%		0.3%	0%	0%	0%		0%	0%	0%	0%		0%	0.1%
Pedestrians	-	-	-	0	-	-	-	-	5	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	62.5%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	3	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	37.5%		-	-	-	0%		**-**
Bicycles on Road	3	0	0		-	0	1	0		-	1	0	0		-	**-**
Bicycles on Road%	100%	0%	0%			0%	100%	0%			100%	0%	0%			**-**

Peak Hour: 12:00 PM - 01:00 PM Weather: Overcast Clouds (18 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	0
E	3	5

Spectrum

Turning Movement Count
Location Name: DERRY RD W & BRONTE ST S
Date: Thu, Jun 26, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (2 . DERRY RD W & BRONTE ST S)

Start Time	N Approach BRONTE ST S						E Approach DERRY RD W						S Approach BRONTE ST S						W Approach DERRY RD W						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-06-26 07:00:00	10	34	30	0	0	74	15	32	4	0	3	51	32	33	10	0	3	75	19	115	9	0	0	143	343	
2025-06-26 07:15:00	25	37	17	0	2	79	13	51	3	0	1	67	30	46	6	0	2	82	10	131	25	0	1	166	394	
2025-06-26 07:30:00	17	34	28	0	0	79	17	56	8	0	1	81	36	50	15	0	1	101	19	130	33	0	2	182	443	
2025-06-26 07:45:00	23	39	25	0	3	87	32	94	19	0	2	145	29	57	16	0	1	102	28	193	54	0	6	275	609	1789
2025-06-26 08:00:00	41	62	38	0	3	141	21	124	13	0	1	158	44	74	29	0	0	147	23	184	54	0	1	261	707	2153
2025-06-26 08:15:00	30	66	40	0	0	136	27	115	21	0	0	163	53	77	40	0	4	170	43	186	38	0	1	267	736	2495
2025-06-26 08:30:00	27	79	42	0	0	148	26	114	19	0	1	159	55	89	46	0	0	190	46	193	43	0	7	282	779	2831
2025-06-26 08:45:00	31	62	50	0	0	143	46	117	29	0	1	192	43	98	36	0	5	177	43	207	59	0	8	309	821	3043
BREAK																										
2025-06-26 16:00:00	70	100	50	0	1	220	46	185	27	0	5	258	37	113	61	0	6	211	27	137	38	0	8	202	891	
2025-06-26 16:15:00	53	94	40	0	5	187	38	204	23	0	1	265	42	86	43	0	3	171	37	157	53	0	5	247	870	
2025-06-26 16:30:00	62	116	50	0	0	228	38	206	38	0	2	282	42	108	50	0	2	200	31	145	52	0	2	228	938	
2025-06-26 16:45:00	70	102	41	0	0	213	42	210	27	0	0	279	39	101	51	0	4	191	35	154	55	0	9	244	927	3626
2025-06-26 17:00:00	72	133	50	0	3	255	29	208	33	0	8	270	34	102	51	0	4	187	32	172	50	0	14	254	966	3701
2025-06-26 17:15:00	59	113	44	0	3	216	46	207	36	0	1	289	35	102	48	0	4	185	35	190	49	0	10	274	964	3795
2025-06-26 17:30:00	60	131	64	0	2	255	32	237	41	0	2	310	40	108	52	0	8	200	23	129	49	1	10	202	967	3824
2025-06-26 17:45:00	52	104	34	0	6	190	40	198	42	0	6	280	30	92	41	0	3	163	35	211	59	1	8	306	939	3836
Grand Total	702	1306	643	0	28	2651	508	2358	383	0	35	3249	621	1336	595	0	50	2552	486	2634	720	2	92	3842	**12294**	-
Approach%	26.5%	49.3%	24.3%	0%		-	15.6%	72.6%	11.8%	0%		-	24.3%	52.4%	23.3%	0%		-	12.6%	68.6%	18.7%	0.1%		-	**-**	-
Totals %	5.7%	10.6%	5.2%	0%		21.6%	4.1%	19.2%	3.1%	0%		26.4%	5.1%	10.9%	4.8%	0%		20.8%	4%	21.4%	5.9%	0%		31.3%	**-**	-
Heavy	11	4	17	0		-	7	55	13	0		-	4	8	9	0		-	16	52	9	0		-	**-**	-
Heavy %	1.6%	0.3%	2.6%	0%		-	1.4%	2.3%	3.4%	0%		-	0.6%	0.6%	1.5%	0%		-	3.3%	2%	1.3%	0%		-	**-**	-
Bicycles	0	2	0	0		-	0	4	0	0		-	0	2	0	0		-	0	1	0	0		-	**-**	-
Bicycle %	0%	0.2%	0%	0%		-	0%	0.2%	0%	0%		-	0%	0.1%	0%	0%		-	0%	0%	0%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: DERRY RD W & BRONTE ST S
Date: Thu, Jun 26, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16 °C)

Start Time	N Approach BRONTE ST S						E Approach DERRY RD W						S Approach BRONTE ST S						W Approach DERRY RD W						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-06-26 08:00:00	41	62	38	0	3	141	21	124	13	0	1	158	44	74	29	0	0	147	23	184	54	0	1	261	707
2025-06-26 08:15:00	30	66	40	0	0	136	27	115	21	0	0	163	53	77	40	0	4	170	43	186	38	0	1	267	736
2025-06-26 08:30:00	27	79	42	0	0	148	26	114	19	0	1	159	55	89	46	0	0	190	46	193	43	0	7	282	779
2025-06-26 08:45:00	31	62	50	0	0	143	46	117	29	0	1	192	43	98	36	0	5	177	43	207	59	0	8	309	821
Grand Total	129	269	170	0	3	568	120	470	82	0	3	672	195	338	151	0	9	684	155	770	194	0	17	1119	**3043**
Approach%	22.7%	47.4%	29.9%	0%		-	17.9%	69.9%	12.2%	0%		-	28.5%	49.4%	22.1%	0%		-	13.9%	68.8%	17.3%	0%		-	**-**
Totals %	4.2%	8.8%	5.6%	0%		18.7%	3.9%	15.4%	2.7%	0%		22.1%	6.4%	11.1%	5%	0%		22.5%	5.1%	25.3%	6.4%	0%		36.8%	**-**
PHF	0.79	0.85	0.85	0		0.96	0.65	0.95	0.71	0		0.88	0.89	0.86	0.82	0		0.9	0.84	0.93	0.82	0		0.91	0.93
Heavy	4	1	7	0		12	3	16	3	0		22	2	4	3	0		9	7	24	5	0		36	79
Heavy %	3.1%	0.4%	4.1%	0%		2.1%	2.5%	3.4%	3.7%	0%		3.3%	1%	1.2%	2%	0%		1.3%	4.5%	3.1%	2.6%	0%		3.2%	2.6%
Lights	125	268	163	0		556	117	454	79	0		650	193	334	148	0		675	148	746	189	0		1083	2964
Lights %	96.9%	99.6%	95.9%	0%		97.9%	97.5%	96.6%	96.3%	0%		96.7%	99%	98.8%	98%	0%		98.7%	95.5%	96.9%	97.4%	0%		96.8%	97.4%
Single-Unit Trucks	2	0	2	0		4	2	9	0	0		11	1	1	0	0		2	0	6	2	0		8	25
Single-Unit Trucks %	1.6%	0%	1.2%	0%		0.7%	1.7%	1.9%	0%	0%		1.6%	0.5%	0.3%	0%	0%		0.3%	0%	0.8%	1%	0%		0.7%	0.8%
Buses	1	1	4	0		6	0	7	3	0		10	1	3	3	0		7	7	17	2	0		26	49
Buses %	0.8%	0.4%	2.4%	0%		1.1%	0%	1.5%	3.7%	0%		1.5%	0.5%	0.9%	2%	0%		1%	4.5%	2.2%	1%	0%		2.3%	1.6%
Articulated Trucks	1	0	1	0		2	1	0	0	0		1	0	0	0	0		0	0	1	1	0		2	5
Articulated Trucks %	0.8%	0%	0.6%	0%		0.4%	0.8%	0%	0%	0%		0.1%	0%	0%	0%	0%		0%	0%	0.1%	0.5%	0%		0.2%	0.2%
Pedestrians	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	7	-	-	-	-	-	13	-	**-**
Pedestrians%	-	-	-	-	3.1%		-	-	-	-	9.4%		-	-	-	-	21.9%		-	-	-	-	40.6%		**-**
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	4	-	**-**
Bicycles on Crosswalk%	-	-	-	-	6.3%		-	-	-	-	0%		-	-	-	-	6.3%		-	-	-	-	12.5%		**-**
Bicycles on Road	0	0	0	0		-	0	0	0	0		-	0	1	0	0		-	0	0	0	0		-	**-**
Bicycles on Road%	0%	0%	0%	0%			0%	0%	0%	0%			0%	100%	0%	0%			0%	0%	0%	0%			**-**

Spectrum

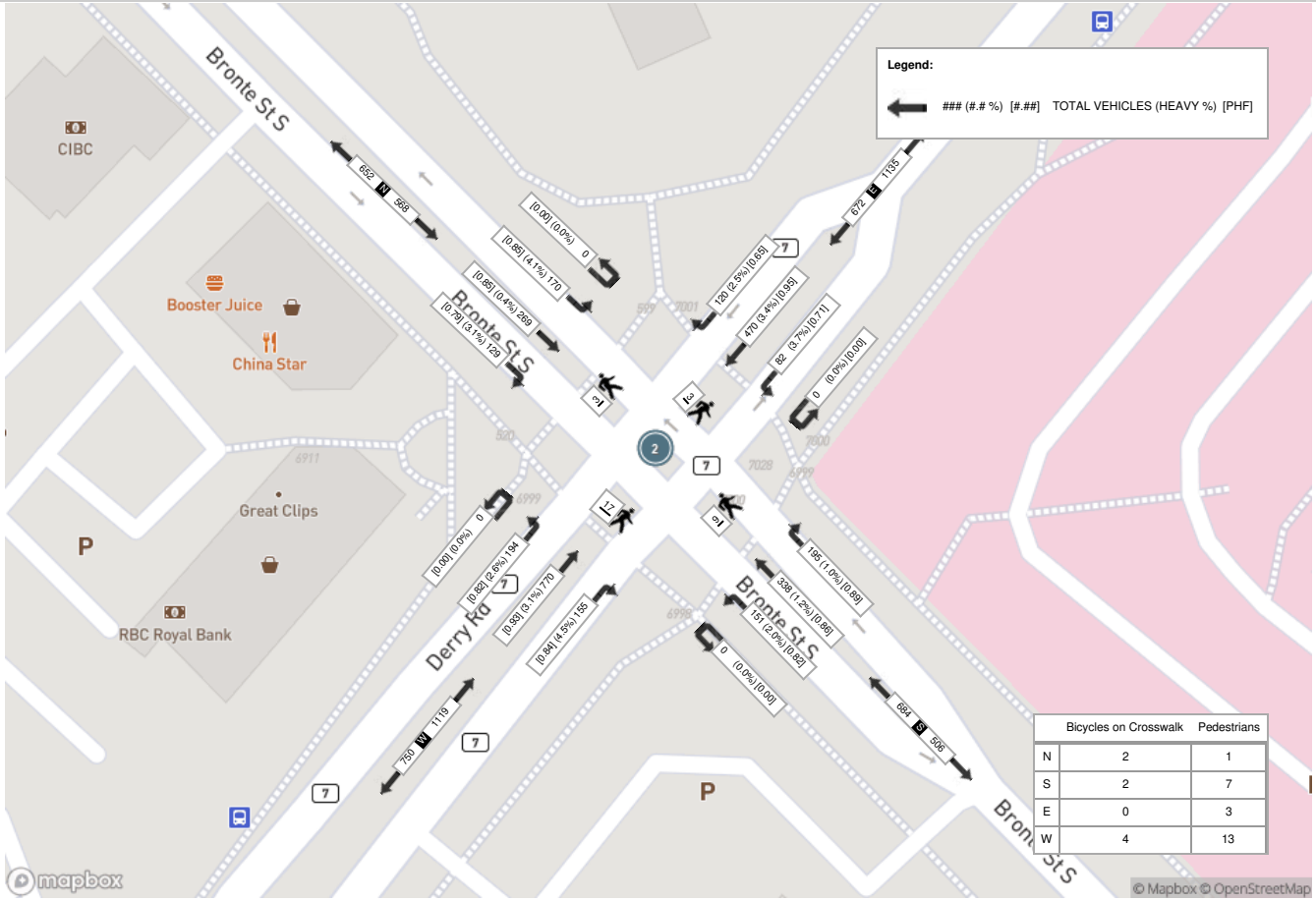
Turning Movement Count
Location Name: DERRY RD W & BRONTE ST S
Date: Thu, Jun 26, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

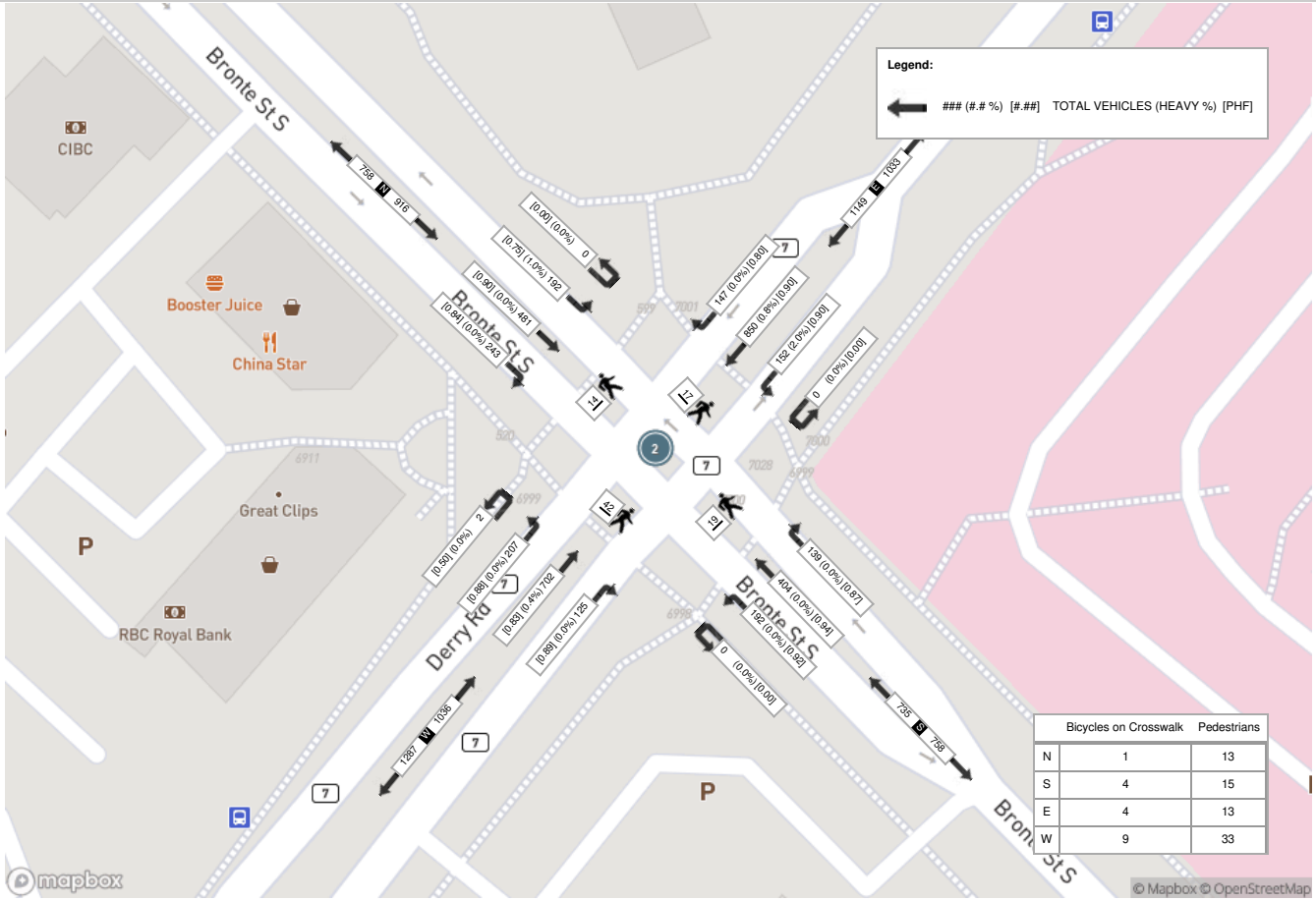
Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (17 °C)

Start Time	N Approach BRONTE ST S						E Approach DERRY RD W						S Approach BRONTE ST S						W Approach DERRY RD W						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-06-26 17:00:00	72	133	50	0	3	255	29	208	33	0	8	270	34	102	51	0	4	187	32	172	50	0	14	254	966
2025-06-26 17:15:00	59	113	44	0	3	216	46	207	36	0	1	289	35	102	48	0	4	185	35	190	49	0	10	274	964
2025-06-26 17:30:00	60	131	64	0	2	255	32	237	41	0	2	310	40	108	52	0	8	200	23	129	49	1	10	202	967
2025-06-26 17:45:00	52	104	34	0	6	190	40	198	42	0	6	280	30	92	41	0	3	163	35	211	59	1	8	306	939
Grand Total	243	481	192	0	14	916	147	850	152	0	17	1149	139	404	192	0	19	735	125	702	207	2	42	1036	**3836**
Approach%	26.5%	52.5%	21%	0%		-	12.8%	74%	13.2%	0%		-	18.9%	55%	26.1%	0%		-	12.1%	67.8%	20%	0.2%		-	**-**
Totals %	6.3%	12.5%	5%	0%		23.9%	3.8%	22.2%	4%	0%		30%	3.6%	10.5%	5%	0%		19.2%	3.3%	18.3%	5.4%	0.1%		27%	**-**
PHF	0.84	0.9	0.75	0		0.9	0.8	0.9	0.9	0		0.93	0.87	0.94	0.92	0		0.92	0.89	0.83	0.88	0.5		0.85	0.99
Heavy	0	0	2	0		2	0	7	3	0		10	0	0	0	0		0	0	3	0	0		3	15
Heavy %	0%	0%	1%	0%		0.2%	0%	0.8%	2%	0%		0.9%	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.3%	0.4%
Lights	243	481	190	0		914	147	843	149	0		1139	139	404	192	0		735	125	699	207	2		1033	3821
Lights %	100%	100%	99%	0%		99.8%	100%	99.2%	98%	0%		99.1%	100%	100%	100%	0%		100%	100%	99.6%	100%	100%		99.7%	99.6%
Single-Unit Trucks	0	0	0	0		0	0	4	1	0		5	0	0	0	0		0	0	2	0	0		2	7
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0.5%	0.7%	0%		0.4%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.2%	0.2%
Buses	0	0	2	0		2	0	2	2	0		4	0	0	0	0		0	0	1	0	0		1	7
Buses %	0%	0%	1%	0%		0.2%	0%	0.2%	1.3%	0%		0.3%	0%	0%	0%	0%		0%	0%	0.1%	0%	0%		0.1%	0.2%
Articulated Trucks	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	1
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.1%	0%	0%		0.1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%
Pedestrians	-	-	-	-	13	-	-	-	-	-	13	-	-	-	-	-	15	-	-	-	-	-	33	-	**-**
Pedestrians%	-	-	-	-	14.1%		-	-	-	-	14.1%		-	-	-	-	16.3%		-	-	-	-	35.9%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	9	-	**-**
Bicycles on Crosswalk%	-	-	-	-	1.1%		-	-	-	-	4.3%		-	-	-	-	4.3%		-	-	-	-	9.8%		**-**
Bicycles on Road	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%			**-**

Peak Hour: 08:00 AM - 09:00 AM **Weather: Overcast Clouds (16 °C)**



Peak Hour: 05:00 PM - 06:00 PM **Weather: Overcast Clouds (17 °C)**



Spectrum

Turning Movement Count
Location Name: DERRY RD W & BRONTE ST S
Date: Sat, Sep 06, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (2 . DERRY RD W & BRONTE ST S)

Start Time	N Approach BRONTE ST S						E Approach DERRY RD W						S Approach BRONTE ST S						W Approach DERRY RD W						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-09-06 12:00:00	56	83	56	0	1	195	50	171	25	0	3	246	34	88	24	1	10	147	18	135	45	0	12	198	786	
2025-09-06 12:15:00	60	97	60	0	3	217	38	130	24	0	2	192	46	62	45	0	0	153	32	147	28	0	3	207	769	
2025-09-06 12:30:00	51	84	40	0	4	175	47	147	34	0	4	228	30	68	38	0	5	136	25	132	34	0	3	191	730	
2025-09-06 12:45:00	54	79	39	0	1	172	57	148	18	0	3	223	34	78	37	0	1	149	26	160	40	0	2	226	770	3055
2025-09-06 13:00:00	47	94	61	0	5	202	34	127	22	0	3	183	48	76	51	0	5	175	29	149	37	1	8	216	776	3045
2025-09-06 13:15:00	47	76	52	0	2	175	34	130	24	0	3	188	35	73	25	0	4	133	23	146	47	0	3	216	712	2988
2025-09-06 13:30:00	42	67	46	0	4	155	37	165	24	1	0	227	43	67	40	0	10	150	34	142	38	0	11	214	746	3004
2025-09-06 13:45:00	45	76	33	0	4	154	37	147	21	0	0	205	42	66	27	0	7	135	34	171	33	0	1	238	732	2966
2025-09-06 14:00:00	49	72	48	0	3	169	44	170	25	0	5	239	46	72	37	0	2	155	22	140	35	0	1	197	760	2950
2025-09-06 14:15:00	44	78	33	0	2	155	50	151	26	0	7	227	32	69	52	0	11	153	37	149	34	0	13	220	755	2993
2025-09-06 14:30:00	43	78	52	1	3	174	27	119	23	0	1	169	36	50	39	0	9	125	30	141	39	0	12	210	678	2925
2025-09-06 14:45:00	49	82	33	0	7	164	31	130	28	0	5	189	31	71	35	0	5	137	25	161	50	0	2	236	726	2919
Grand Total	587	966	553	1	39	2107	486	1735	294	1	36	2516	457	840	450	1	69	1748	335	1773	460	1	71	2569	**8940**	-
Approach%	27.9%	45.8%	26.2%	0%		-	19.3%	69%	11.7%	0%		-	26.1%	48.1%	25.7%	0.1%		-	13%	69%	17.9%	0%		-	**-**	-
Totals %	6.6%	10.8%	6.2%	0%		23.6%	5.4%	19.4%	3.3%	0%		28.1%	5.1%	9.4%	5%	0%		19.6%	3.7%	19.8%	5.1%	0%		28.7%	**-**	-
Heavy	1	5	8	0		-	2	21	5	0		-	2	1	5	0		-	1	11	1	0		-	**-**	-
Heavy %	0.2%	0.5%	1.4%	0%		-	0.4%	1.2%	1.7%	0%		-	0.4%	0.1%	1.1%	0%		-	0.3%	0.6%	0.2%	0%		-	**-**	-
Bicycles	1	5	0	0		-	0	0	0	0		-	0	0	0	0		-	3	0	0	0		-	**-**	-
Bicycle %	0.2%	0.5%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0.9%	0%	0%	0%		-	**-**	-

Spectrum

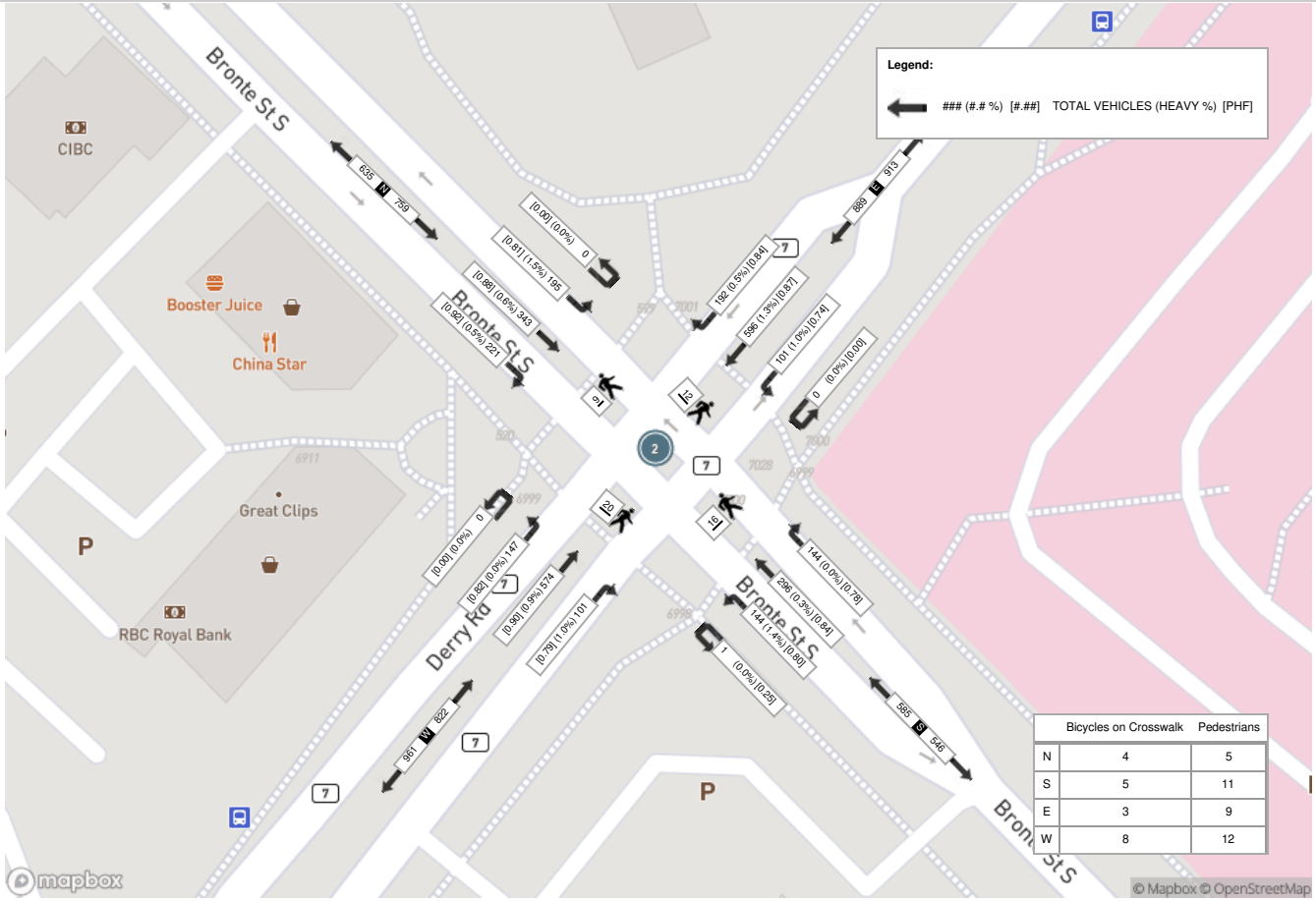
Turning Movement Count
Location Name: DERRY RD W & BRONTE ST S
Date: Sat, Sep 06, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Overcast Clouds (18 °C)

Start Time	N Approach BRONTE ST S						E Approach DERRY RD W						S Approach BRONTE ST S						W Approach DERRY RD W						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-09-06 12:00:00	56	83	56	0	1	195	50	171	25	0	3	246	34	88	24	1	10	147	18	135	45	0	12	198	786
2025-09-06 12:15:00	60	97	60	0	3	217	38	130	24	0	2	192	46	62	45	0	0	153	32	147	28	0	3	207	769
2025-09-06 12:30:00	51	84	40	0	4	175	47	147	34	0	4	228	30	68	38	0	5	136	25	132	34	0	3	191	730
2025-09-06 12:45:00	54	79	39	0	1	172	57	148	18	0	3	223	34	78	37	0	1	149	26	160	40	0	2	226	770
Grand Total	221	343	195	0	9	759	192	596	101	0	12	889	144	296	144	1	16	585	101	574	147	0	20	822	**3055**
Approach%	29.1%	45.2%	25.7%	0%		-	21.6%	67%	11.4%	0%		-	24.6%	50.6%	24.6%	0.2%		-	12.3%	69.8%	17.9%	0%		-	**-**
Totals %	7.2%	11.2%	6.4%	0%		24.8%	6.3%	19.5%	3.3%	0%		29.1%	4.7%	9.7%	4.7%	0%		19.1%	3.3%	18.8%	4.8%	0%		26.9%	**-**
PHF	0.92	0.88	0.81	0		0.87	0.84	0.87	0.74	0		0.9	0.78	0.84	0.8	0.25		0.96	0.79	0.9	0.82	0		0.91	0.97
Heavy	1	2	3	0		6	1	8	1	0		10	0	1	2	0		3	1	5	0	0		6	25
Heavy %	0.5%	0.6%	1.5%	0%		0.8%	0.5%	1.3%	1%	0%		1.1%	0%	0.3%	1.4%	0%		0.5%	1%	0.9%	0%	0%		0.7%	0.8%
Lights	220	341	192	0		753	191	588	100	0		879	144	295	142	1		582	100	569	147	0		816	3030
Lights %	99.5%	99.4%	98.5%	0%		99.2%	99.5%	98.7%	99%	0%		98.9%	100%	99.7%	98.6%	100%		99.5%	99%	99.1%	100%	0%		99.3%	99.2%
Single-Unit Trucks	1	2	1	0		4	1	5	0	0		6	0	1	1	0		2	0	3	0	0		3	15
Single-Unit Trucks %	0.5%	0.6%	0.5%	0%		0.5%	0.5%	0.8%	0%	0%		0.7%	0%	0.3%	0.7%	0%		0.3%	0%	0.5%	0%	0%		0.4%	0.5%
Buses	0	0	2	0		2	0	1	1	0		2	0	0	1	0		1	1	2	0	0		3	8
Buses %	0%	0%	1%	0%		0.3%	0%	0.2%	1%	0%		0.2%	0%	0%	0.7%	0%		0.2%	1%	0.3%	0%	0%		0.4%	0.3%
Articulated Trucks	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	0	0	0	0		0	2
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0.1%
Pedestrians	-	-	-	-	5	-	-	-	-	-	9	-	-	-	-	-	11	-	-	-	-	-	12	-	**-**
Pedestrians%	-	-	-	-	8.8%		-	-	-	-	15.8%		-	-	-	-	19.3%		-	-	-	-	21.1%		**-**
Bicycles on Crosswalk	-	-	-	-	4	-	-	-	-	-	3	-	-	-	-	-	5	-	-	-	-	-	8	-	**-**
Bicycles on Crosswalk%	-	-	-	-	7%		-	-	-	-	5.3%		-	-	-	-	8.8%		-	-	-	-	14%		**-**
Bicycles on Road	0	4	0	0		-	0	0	0	0		-	0	0	0	0		-	1	0	0	0		-	**-**
Bicycles on Road%	0%	100%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			100%	0%	0%	0%			**-**

Peak Hour: 12:00 PM - 01:00 PM **Weather: Overcast Clouds (18 °C)**



	Bicycles on Crosswalk	Pedestrians
N	4	5
S	5	11
E	3	9
W	8	12

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (6 . DERRY RD W & DERRY HEIGHTS PLAZA DRIVEWAY)

Start Time	N Approach DERRY HEIGHTS PLAZA DRIVEWAY					E Approach DERRY RD W					W Approach DERRY RD W					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-06-26 07:00:00	9	0	0	2	9	6	47	0	0	53	155	6	0	0	161	223	
2025-06-26 07:15:00	7	0	0	1	7	10	70	0	0	80	158	8	0	0	166	253	
2025-06-26 07:30:00	7	0	0	5	7	9	81	0	0	90	188	6	0	0	194	291	
2025-06-26 07:45:00	7	0	0	6	7	10	121	0	0	131	264	28	0	0	292	430	1197
2025-06-26 08:00:00	18	0	0	3	18	20	170	0	0	190	268	24	0	0	292	500	1474
2025-06-26 08:15:00	25	0	0	1	25	21	150	0	0	171	269	22	0	0	291	487	1708
2025-06-26 08:30:00	25	0	0	5	25	16	178	0	0	194	277	41	0	0	318	537	1954
2025-06-26 08:45:00	13	1	0	2	14	19	157	0	0	176	287	28	0	0	315	505	2029
BREAK																	
2025-06-26 16:00:00	40	0	0	3	40	21	298	0	0	319	208	30	1	0	239	598	
2025-06-26 16:15:00	25	0	0	6	25	16	290	0	0	306	234	26	0	0	260	591	
2025-06-26 16:30:00	49	0	0	2	49	28	298	0	0	326	242	18	0	0	260	635	
2025-06-26 16:45:00	33	0	0	5	33	16	311	0	0	327	233	27	0	0	260	620	2444
2025-06-26 17:00:00	38	0	0	4	38	23	314	0	0	337	261	22	0	0	283	658	2504
2025-06-26 17:15:00	35	0	0	6	35	20	311	0	0	331	255	20	0	0	275	641	2554
2025-06-26 17:30:00	35	0	0	4	35	24	341	0	0	365	213	20	0	0	233	633	2552
2025-06-26 17:45:00	25	0	0	4	25	14	287	0	0	301	299	21	0	0	320	646	2578
Grand Total	391	1	0	59	392	273	3424	0	0	3697	3811	347	1	0	4159	**8248**	-
Approach%	99.7%	0.3%	0%		-	7.4%	92.6%	0%		-	91.6%	8.3%	0%		-	**-**	-
Totals %	4.7%	0%	0%		4.8%	3.3%	41.5%	0%		44.8%	46.2%	4.2%	0%		50.4%	**-**	-
Heavy	5	0	0		-	5	76	0		-	79	1	0		-	**-**	-
Heavy %	1.3%	0%	0%		-	1.8%	2.2%	0%		-	2.1%	0.3%	0%		-	**-**	-
Bicycles	2	0	0		-	0	1	0		-	1	0	0		-	**-**	-
Bicycle %	0.5%	0%	0%		-	0%	0%	0%		-	0%	0%	0%		-	**-**	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16 °C)

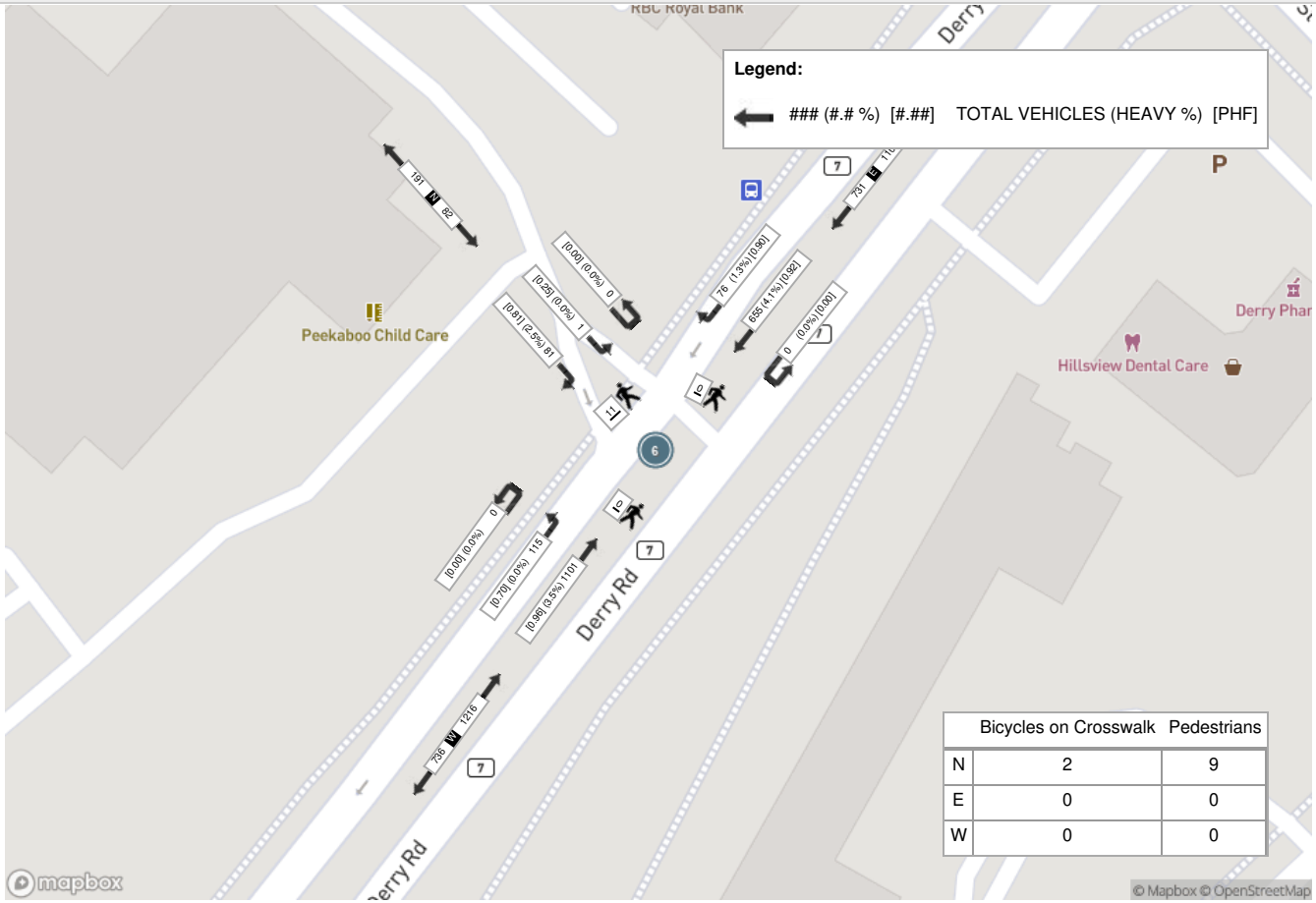
Start Time	N Approach DERRY HEIGHTS PLAZA DRIVEWAY					E Approach DERRY RD W					W Approach DERRY RD W					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
2025-06-26 08:00:00	18	0	0	3	18	20	170	0	0	190	268	24	0	0	292	500
2025-06-26 08:15:00	25	0	0	1	25	21	150	0	0	171	269	22	0	0	291	487
2025-06-26 08:30:00	25	0	0	5	25	16	178	0	0	194	277	41	0	0	318	537
2025-06-26 08:45:00	13	1	0	2	14	19	157	0	0	176	287	28	0	0	315	505
Grand Total	81	1	0	11	82	76	655	0	0	731	1101	115	0	0	1216	**2029**
Approach%	98.8%	1.2%	0%		-	10.4%	89.6%	0%		-	90.5%	9.5%	0%		-	**-**
Totals %	4%	0%	0%		4%	3.7%	32.3%	0%		36%	54.3%	5.7%	0%		59.9%	**-**
PHF	0.81	0.25	0		0.82	0.9	0.92	0		0.94	0.96	0.7	0		0.96	0.94
Heavy	2	0	0		2	1	27	0		28	39	0	0		39	69
Heavy %	2.5%	0%	0%		2.4%	1.3%	4.1%	0%		3.8%	3.5%	0%	0%		3.2%	3.4%
Lights	79	1	0		80	75	628	0		703	1062	115	0		1177	1960
Lights %	97.5%	100%	0%		97.6%	98.7%	95.9%	0%		96.2%	96.5%	100%	0%		96.8%	96.6%
Single-Unit Trucks	1	0	0		1	0	15	0		15	9	0	0		9	25
Single-Unit Trucks %	1.2%	0%	0%		1.2%	0%	2.3%	0%		2.1%	0.8%	0%	0%		0.7%	1.2%
Buses	1	0	0		1	0	12	0		12	28	0	0		28	41
Buses %	1.2%	0%	0%		1.2%	0%	1.8%	0%		1.6%	2.5%	0%	0%		2.3%	2%
Articulated Trucks	0	0	0		0	1	0	0		1	2	0	0		2	3
Articulated Trucks %	0%	0%	0%		0%	1.3%	0%	0%		0.1%	0.2%	0%	0%		0.2%	0.1%
Pedestrians	-	-	-	9	-	-	-	-	0	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	81.8%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	2	-	-	-	-	0	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	18.2%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Road	1	0	0		-	0	0	0		-	0	0	0		-	**-**
Bicycles on Road%	100%	0%	0%			0%	0%	0%			0%	0%	0%			**-**

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (17 °C)

Start Time	N Approach DERRY HEIGHTS PLAZA DRIVEWAY					E Approach DERRY RD W					W Approach DERRY RD W					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
2025-06-26 17:00:00	38	0	0	4	38	23	314	0	0	337	261	22	0	0	283	658
2025-06-26 17:15:00	35	0	0	6	35	20	311	0	0	331	255	20	0	0	275	641
2025-06-26 17:30:00	35	0	0	4	35	24	341	0	0	365	213	20	0	0	233	633
2025-06-26 17:45:00	25	0	0	4	25	14	287	0	0	301	299	21	0	0	320	646
Grand Total	133	0	0	18	133	81	1253	0	0	1334	1028	83	0	0	1111	**2578**
Approach%	100%	0%	0%		-	6.1%	93.9%	0%		-	92.5%	7.5%	0%		-	**-**
Totals %	5.2%	0%	0%		5.2%	3.1%	48.6%	0%		51.7%	39.9%	3.2%	0%		43.1%	**-**
PHF	0.88	0	0		0.88	0.84	0.92	0		0.91	0.86	0.94	0		0.87	0.98
Heavy	0	0	0		0	1	8	0		9	4	0	0		4	13
Heavy %	0%	0%	0%		0%	1.2%	0.6%	0%		0.7%	0.4%	0%	0%		0.4%	0.5%
Lights	133	0	0		133	80	1245	0		1325	1024	83	0		1107	2565
Lights %	100%	0%	0%		100%	98.8%	99.4%	0%		99.3%	99.6%	100%	0%		99.6%	99.5%
Single-Unit Trucks	0	0	0		0	1	4	0		5	2	0	0		2	7
Single-Unit Trucks %	0%	0%	0%		0%	1.2%	0.3%	0%		0.4%	0.2%	0%	0%		0.2%	0.3%
Buses	0	0	0		0	0	3	0		3	2	0	0		2	5
Buses %	0%	0%	0%		0%	0%	0.2%	0%		0.2%	0.2%	0%	0%		0.2%	0.2%
Articulated Trucks	0	0	0		0	0	1	0		1	0	0	0		0	1
Articulated Trucks %	0%	0%	0%		0%	0%	0.1%	0%		0.1%	0%	0%	0%		0%	0%
Pedestrians	-	-	-	8	-	-	-	-	0	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	44.4%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	10	-	-	-	-	0	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	55.6%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Road	1	0	0		-	0	0	0		-	0	0	0		-	**-**
Bicycles on Road%	100%	0%	0%			0%	0%	0%			0%	0%	0%			**-**

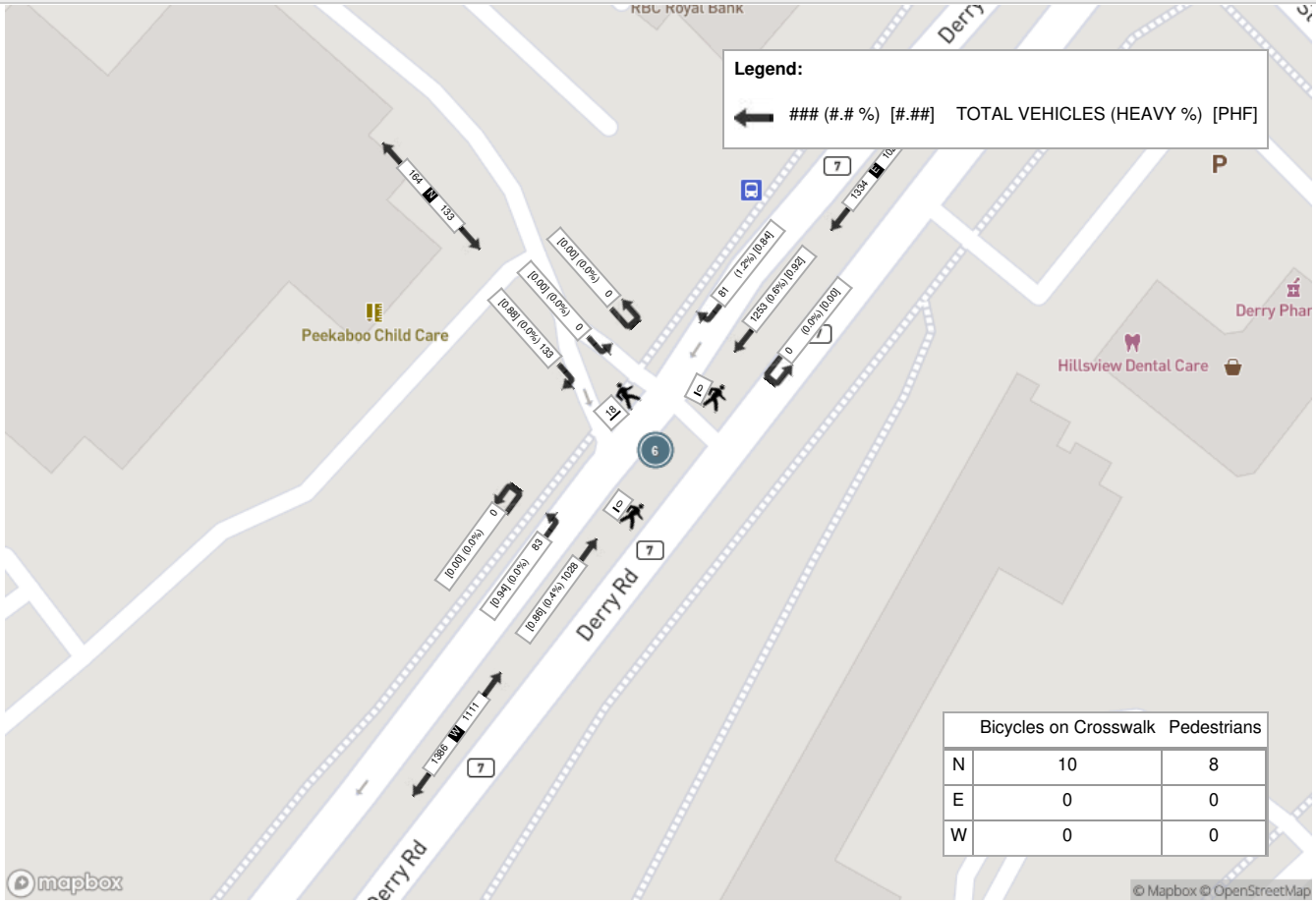
Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16 °C)



	Bicycles on Crosswalk	Pedestrians
N	2	9
E	0	0
W	0	0

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (17 °C)



	Bicycles on Crosswalk	Pedestrians
N	10	8
E	0	0
W	0	0

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (6 . DERRY RD W & DERRY HEIGHTS PLAZA DRIVEWAY)

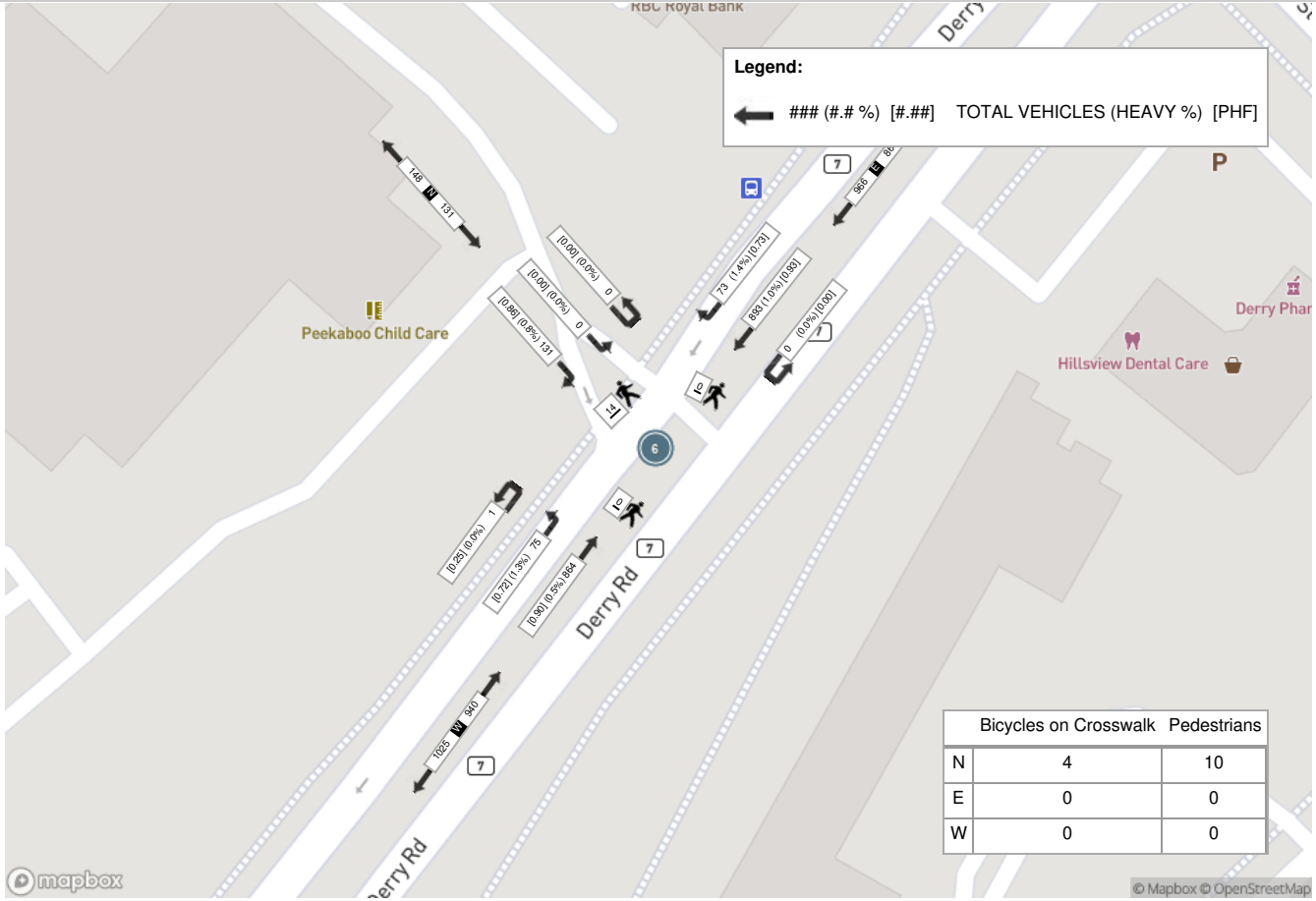
Start Time	N Approach DERRY HEIGHTS PLAZA DRIVEWAY					E Approach DERRY RD W					W Approach DERRY RD W					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-09-06 12:00:00	33	0	0	4	33	15	225	0	0	240	200	25	0	0	225	498	
2025-09-06 12:15:00	31	0	0	6	31	22	223	0	0	245	209	27	1	0	237	513	
2025-09-06 12:30:00	33	0	0	11	33	15	219	0	0	234	185	22	0	0	207	474	
2025-09-06 12:45:00	20	0	0	7	20	19	220	0	0	239	226	23	0	0	249	508	1993
2025-09-06 13:00:00	28	0	0	4	28	19	209	0	1	228	229	21	0	0	250	506	2001
2025-09-06 13:15:00	24	0	0	7	24	15	189	0	0	204	214	16	1	1	231	459	1947
2025-09-06 13:30:00	38	0	0	5	38	25	219	0	0	244	198	26	1	0	225	507	1980
2025-09-06 13:45:00	32	0	0	6	32	11	209	0	0	220	240	15	0	0	255	507	1979
2025-09-06 14:00:00	27	0	0	1	27	16	239	0	0	255	197	18	0	0	215	497	1970
2025-09-06 14:15:00	34	0	0	2	34	21	226	0	0	247	229	16	0	0	245	526	2037
2025-09-06 14:30:00	30	0	0	7	30	16	176	0	0	192	204	20	0	0	224	446	1976
2025-09-06 14:45:00	31	0	0	8	31	17	209	0	0	226	246	20	1	0	267	524	1993
Grand Total	361	0	0	68	361	211	2563	0	1	2774	2577	249	4	1	2830	**5965**	-
Approach%	100%	0%	0%		-	7.6%	92.4%	0%		-	91.1%	8.8%	0.1%		-	**-**	-
Totals %	6.1%	0%	0%		6.1%	3.5%	43%	0%		46.5%	43.2%	4.2%	0.1%		47.4%	**-**	-
Heavy	1	0	0		-	2	25	0		-	13	1	0		-	**-**	-
Heavy %	0.3%	0%	0%		-	0.9%	1%	0%		-	0.5%	0.4%	0%		-	**-**	-
Bicycles	0	0	0		-	0	1	0		-	4	0	0		-	**-**	-
Bicycle %	0%	0%	0%		-	0%	0%	0%		-	0.2%	0%	0%		-	**-**	-

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 01:30 PM - 02:30 PM Weather: Overcast Clouds (18 °C)

Start Time	N Approach DERRY HEIGHTS PLAZA DRIVEWAY					E Approach DERRY RD W					W Approach DERRY RD W					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
2025-09-06 13:30:00	38	0	0	5	38	25	219	0	0	244	198	26	1	0	225	507
2025-09-06 13:45:00	32	0	0	6	32	11	209	0	0	220	240	15	0	0	255	507
2025-09-06 14:00:00	27	0	0	1	27	16	239	0	0	255	197	18	0	0	215	497
2025-09-06 14:15:00	34	0	0	2	34	21	226	0	0	247	229	16	0	0	245	526
Grand Total	131	0	0	14	131	73	893	0	0	966	864	75	1	0	940	**2037**
Approach%	100%	0%	0%		-	7.6%	92.4%	0%		-	91.9%	8%	0.1%		-	**-**
Totals %	6.4%	0%	0%		6.4%	3.6%	43.8%	0%		47.4%	42.4%	3.7%	0%		46.1%	**-**
PHF	0.86	0	0		0.86	0.73	0.93	0		0.95	0.9	0.72	0.25		0.92	0.97
Heavy	1	0	0		1	1	9	0		10	4	1	0		5	16
Heavy %	0.8%	0%	0%		0.8%	1.4%	1%	0%		1%	0.5%	1.3%	0%		0.5%	0.8%
Lights	130	0	0		130	72	884	0		956	860	74	1		935	2021
Lights %	99.2%	0%	0%		99.2%	98.6%	99%	0%		99%	99.5%	98.7%	100%		99.5%	99.2%
Single-Unit Trucks	1	0	0		1	1	7	0		8	2	1	0		3	12
Single-Unit Trucks %	0.8%	0%	0%		0.8%	1.4%	0.8%	0%		0.8%	0.2%	1.3%	0%		0.3%	0.6%
Buses	0	0	0		0	0	1	0		1	2	0	0		2	3
Buses %	0%	0%	0%		0%	0%	0.1%	0%		0.1%	0.2%	0%	0%		0.2%	0.1%
Articulated Trucks	0	0	0		0	0	1	0		1	0	0	0		0	1
Articulated Trucks %	0%	0%	0%		0%	0%	0.1%	0%		0.1%	0%	0%	0%		0%	0%
Pedestrians	-	-	-	10	-	-	-	-	0	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	71.4%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	4	-	-	-	-	0	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	28.6%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Road	0	0	0		-	0	0	0		-	1	0	0		-	**-**
Bicycles on Road%	0%	0%	0%			0%	0%	0%			100%	0%	0%			**-**

Peak Hour: 01:30 PM - 02:30 PM Weather: Overcast Clouds (18 °C)



Spectrum

Turning Movement Count
Location Name: DERRY RD W & FARMSTEAD DR
Date: Thu, Jun 26, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (3 . DERRY RD W & FARMSTEAD DR)

Start Time	N Approach FARMSTEAD DR						E Approach DERRY RD W						S Approach FARMSTEAD DR						W Approach DERRY RD W						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-06-26 07:00:00	0	2	8	0	0	10	0	51	19	0	0	70	41	6	4	0	3	51	15	157	4	0	0	176	307	
2025-06-26 07:15:00	2	1	12	0	2	15	2	75	18	0	1	95	44	6	2	0	1	52	8	158	1	0	4	167	329	
2025-06-26 07:30:00	5	2	9	0	2	16	1	84	16	0	1	101	82	11	7	0	2	100	3	195	4	0	0	202	419	
2025-06-26 07:45:00	8	4	18	0	3	30	5	113	17	0	0	135	68	13	19	0	1	100	10	202	14	0	0	226	491	1546
2025-06-26 08:00:00	20	16	12	0	3	48	2	150	22	0	1	174	60	11	9	1	3	81	11	243	26	0	0	280	583	1822
2025-06-26 08:15:00	11	16	15	0	3	42	1	139	18	0	3	158	62	13	10	0	0	85	17	219	7	0	3	243	528	2021
2025-06-26 08:30:00	9	15	13	0	0	37	4	151	19	0	0	174	48	11	9	0	2	68	17	260	14	1	2	292	571	2173
2025-06-26 08:45:00	12	2	17	0	3	31	7	182	26	0	1	215	55	11	5	0	3	71	12	244	8	0	0	264	581	2263
BREAK																										
2025-06-26 16:00:00	12	11	5	0	3	28	7	230	31	0	0	268	52	14	15	0	3	81	15	227	10	1	0	253	630	
2025-06-26 16:15:00	4	19	1	0	5	24	13	252	43	0	0	308	43	12	15	0	1	70	11	189	11	0	3	211	613	
2025-06-26 16:30:00	5	21	6	0	2	32	8	314	47	0	1	369	42	16	15	0	3	73	17	237	11	0	0	265	739	
2025-06-26 16:45:00	9	23	9	0	4	41	17	265	39	0	4	321	52	32	11	0	5	95	14	214	6	1	1	235	692	2674
2025-06-26 17:00:00	12	14	6	0	3	32	11	294	28	0	2	333	44	13	12	0	2	69	10	246	12	0	2	268	702	2746
2025-06-26 17:15:00	10	27	5	0	0	42	11	271	28	1	2	311	32	24	8	0	3	64	19	215	11	0	0	245	662	2795
2025-06-26 17:30:00	21	17	6	0	2	44	14	324	35	0	0	373	58	18	10	0	6	86	14	230	11	0	1	255	758	2814
2025-06-26 17:45:00	13	16	3	0	1	32	16	286	39	0	0	341	61	21	11	0	0	93	13	217	17	0	1	247	713	2835
Grand Total	153	206	145	0	36	504	119	3181	445	1	16	3746	844	232	162	1	38	1239	206	3453	167	3	17	3829	**9318**	-
Approach%	30.4%	40.9%	28.8%	0%		-	3.2%	84.9%	11.9%	0%		-	68.1%	18.7%	13.1%	0.1%		-	5.4%	90.2%	4.4%	0.1%		-	-	-
Totals %	1.6%	2.2%	1.6%	0%		5.4%	1.3%	34.1%	4.8%	0%		40.2%	9.1%	2.5%	1.7%	0%		13.3%	2.2%	37.1%	1.8%	0%		41.1%	-	-
Heavy	1	3	5	0		-	0	71	3	0		-	7	3	2	0		-	3	65	4	0		-	-	-
Heavy %	0.7%	1.5%	3.4%	0%		-	0%	2.2%	0.7%	0%		-	0.8%	1.3%	1.2%	0%		-	1.5%	1.9%	2.4%	0%		-	-	-
Bicycles	0	1	0	0		-	0	0	0	0		-	1	0	0	0		-	1	1	0	0		-	-	-
Bicycle %	0%	0.5%	0%	0%		-	0%	0%	0%	0%		-	0.1%	0%	0%	0%		-	0.5%	0%	0%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: DERRY RD W & FARMSTEAD DR
Date: Thu, Jun 26, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

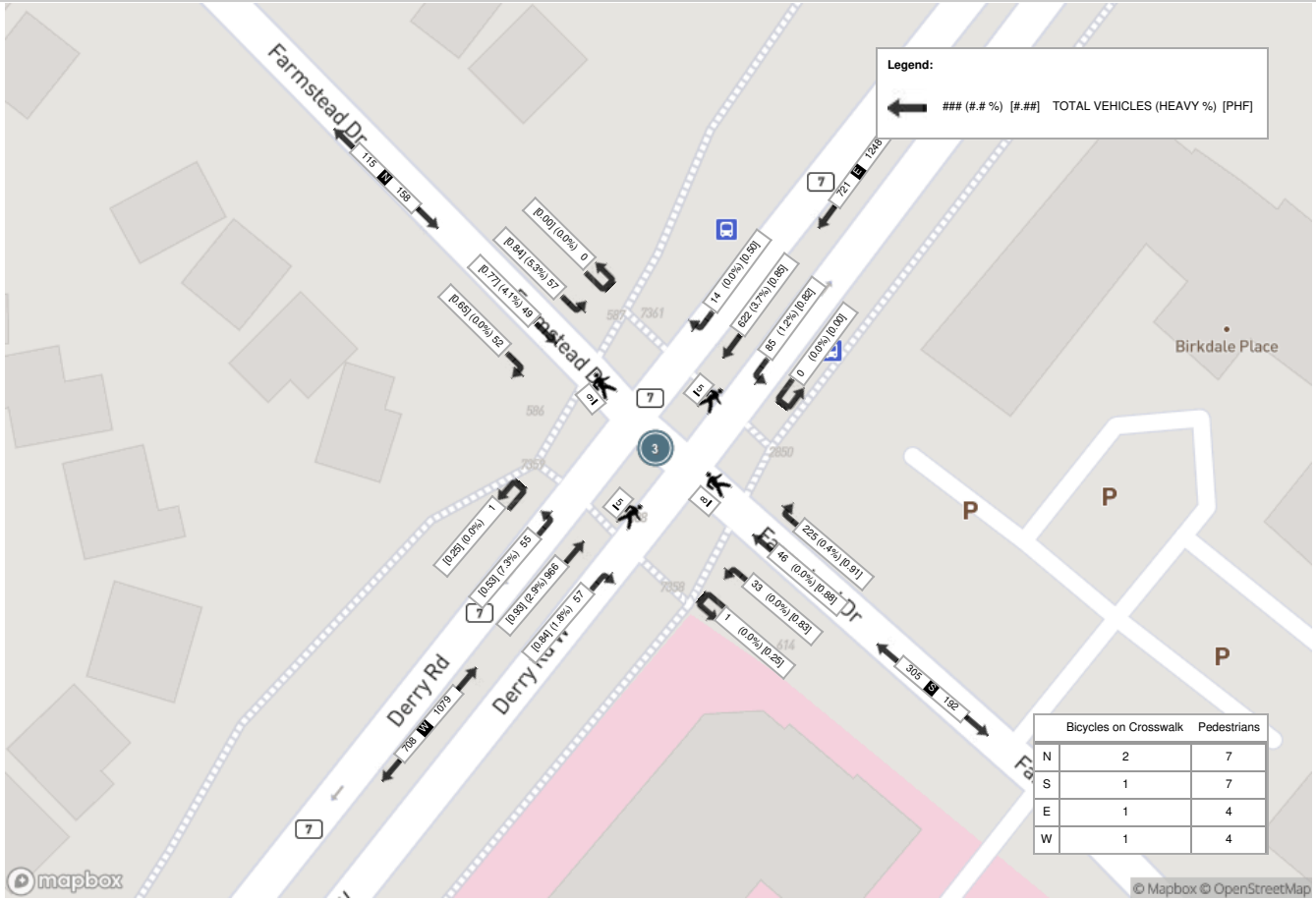
Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16 °C)

Start Time	N Approach FARMSTEAD DR						E Approach DERRY RD W						S Approach FARMSTEAD DR						W Approach DERRY RD W						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-06-26 08:00:00	20	16	12	0	3	48	2	150	22	0	1	174	60	11	9	1	3	81	11	243	26	0	0	280	583
2025-06-26 08:15:00	11	16	15	0	3	42	1	139	18	0	3	158	62	13	10	0	0	85	17	219	7	0	3	243	528
2025-06-26 08:30:00	9	15	13	0	0	37	4	151	19	0	0	174	48	11	9	0	2	68	17	260	14	1	2	292	571
2025-06-26 08:45:00	12	2	17	0	3	31	7	182	26	0	1	215	55	11	5	0	3	71	12	244	8	0	0	264	581
Grand Total	52	49	57	0	9	158	14	622	85	0	5	721	225	46	33	1	8	305	57	966	55	1	5	1079	**2263**
Approach%	32.9%	31%	36.1%	0%		-	1.9%	86.3%	11.8%	0%		-	73.8%	15.1%	10.8%	0.3%		-	5.3%	89.5%	5.1%	0.1%		-	**-**
Totals %	2.3%	2.2%	2.5%	0%		7%	0.6%	27.5%	3.8%	0%		31.9%	9.9%	2%	1.5%	0%		13.5%	2.5%	42.7%	2.4%	0%		47.7%	**-**
PHF	0.65	0.77	0.84	0		0.82	0.5	0.85	0.82	0		0.84	0.91	0.88	0.83	0.25		0.9	0.84	0.93	0.53	0.25		0.92	0.97
Heavy	0	2	3	0		5	0	23	1	0		24	1	0	0	0		1	1	28	4	0		33	63
Heavy %	0%	4.1%	5.3%	0%		3.2%	0%	3.7%	1.2%	0%		3.3%	0.4%	0%	0%	0%		0.3%	1.8%	2.9%	7.3%	0%		3.1%	2.8%
Lights	52	47	54	0		153	14	599	84	0		697	224	46	33	1		304	56	938	51	1		1046	2200
Lights %	100%	95.9%	94.7%	0%		96.8%	100%	96.3%	98.8%	0%		96.7%	99.6%	100%	100%	100%		99.7%	98.2%	97.1%	92.7%	100%		96.9%	97.2%
Single-Unit Trucks	0	0	1	0		1	0	11	1	0		12	1	0	0	0		1	1	8	0	0		9	23
Single-Unit Trucks %	0%	0%	1.8%	0%		0.6%	0%	1.8%	1.2%	0%		1.7%	0.4%	0%	0%	0%		0.3%	1.8%	0.8%	0%	0%		0.8%	1%
Buses	0	2	2	0		4	0	11	0	0		11	0	0	0	0		0	0	18	4	0		22	37
Buses %	0%	4.1%	3.5%	0%		2.5%	0%	1.8%	0%	0%		1.5%	0%	0%	0%	0%		0%	0%	1.9%	7.3%	0%		2%	1.6%
Articulated Trucks	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	2	0	0		2	3
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.1%	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	0.1%
Pedestrians	-	-	-	-	7	-	-	-	-	-	4	-	-	-	-	-	7	-	-	-	-	-	4	-	**-**
Pedestrians%	-	-	-	-	25.9%		-	-	-	-	14.8%		-	-	-	-	25.9%		-	-	-	-	14.8%		**-**
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	7.4%		-	-	-	-	3.7%		-	-	-	-	3.7%		-	-	-	-	3.7%		**-**
Bicycles on Road	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%			**-**

Peak Hour: 05:00 PM - 06:00 PM **Weather: Overcast Clouds (17 °C)**

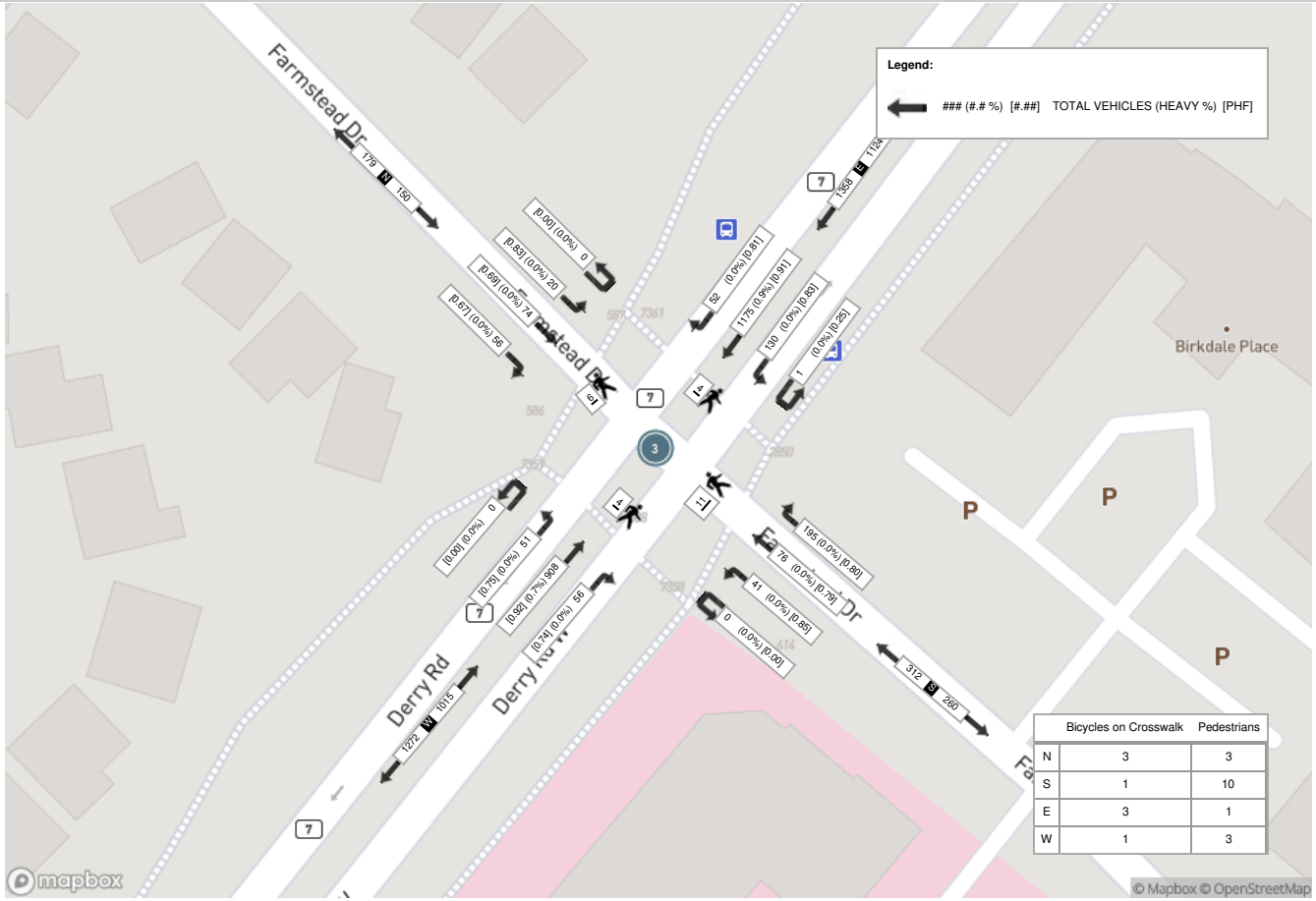
Start Time	N Approach FARMSTEAD DR						E Approach DERRY RD W						S Approach FARMSTEAD DR						W Approach DERRY RD W						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-06-26 17:00:00	12	14	6	0	3	32	11	294	28	0	2	333	44	13	12	0	2	69	10	246	12	0	2	268	702
2025-06-26 17:15:00	10	27	5	0	0	42	11	271	28	1	2	311	32	24	8	0	3	64	19	215	11	0	0	245	662
2025-06-26 17:30:00	21	17	6	0	2	44	14	324	35	0	0	373	58	18	10	0	6	86	14	230	11	0	1	255	758
2025-06-26 17:45:00	13	16	3	0	1	32	16	286	39	0	0	341	61	21	11	0	0	93	13	217	17	0	1	247	713
Grand Total	56	74	20	0	6	150	52	1175	130	1	4	1358	195	76	41	0	11	312	56	908	51	0	4	1015	**2835**
Approach%	37.3%	49.3%	13.3%	0%		-	3.8%	86.5%	9.6%	0.1%		-	62.5%	24.4%	13.1%	0%		-	5.5%	89.5%	5%	0%		-	**-**
Totals %	2%	2.6%	0.7%	0%		5.3%	1.8%	41.4%	4.6%	0%		47.9%	6.9%	2.7%	1.4%	0%		11%	2%	32%	1.8%	0%		35.8%	**-**
PHF	0.67	0.69	0.83	0		0.85	0.81	0.91	0.83	0.25		0.91	0.8	0.79	0.85	0		0.84	0.74	0.92	0.75	0		0.95	0.94
Heavy	0	0	0	0		0	0	10	0	0		10	0	0	0	0		0	0	6	0	0		6	16
Heavy %	0%	0%	0%	0%		0%	0%	0.9%	0%	0%		0.7%	0%	0%	0%	0%		0%	0%	0.7%	0%	0%		0.6%	0.6%
Lights	56	74	20	0		150	52	1165	130	1		1348	195	76	41	0		312	56	902	51	0		1009	2819
Lights %	100%	100%	100%	0%		100%	100%	99.1%	100%	100%		99.3%	100%	100%	100%	0%		100%	100%	99.3%	100%	0%		99.4%	99.4%
Single-Unit Trucks	0	0	0	0		0	0	5	0	0		5	0	0	0	0		0	0	3	0	0		3	8
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	0.3%
Buses	0	0	0	0		0	0	4	0	0		4	0	0	0	0		0	0	3	0	0		3	7
Buses %	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	0%	0%	0%	0%		0%	0%	0.3%	0%	0%		0.3%	0.2%
Articulated Trucks	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	1
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.1%	0%	0%		0.1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%
Pedestrians	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	10	-	-	-	-	-	3	-	**-**
Pedestrians%	-	-	-	-	12%		-	-	-	-	4%		-	-	-	-	40%		-	-	-	-	12%		**-**
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	12%		-	-	-	-	12%		-	-	-	-	4%		-	-	-	-	4%		**-**
Bicycles on Road	0	1	0	0		-	0	0	0	0		-	0	0	0	0		-	0	0	0	0		-	**-**
Bicycles on Road%	0%	100%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			**-**

Peak Hour: 08:00 AM - 09:00 AM **Weather: Overcast Clouds (16 °C)**



	Bicycles on Crosswalk	Pedestrians
N	2	7
S	1	7
E	1	4
W	1	4

Peak Hour: 05:00 PM - 06:00 PM **Weather: Overcast Clouds (17 °C)**



	Bicycles on Crosswalk	Pedestrians
N	3	3
S	1	10
E	3	1
W	1	3

Spectrum

Turning Movement Count
Location Name: DERRY RD W & FARMSTEAD DR
Date: Sat, Sep 06, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (3 . DERRY RD W & FARMSTEAD DR)

Start Time	N Approach FARMSTEAD DR						E Approach DERRY RD W						S Approach FARMSTEAD DR						W Approach DERRY RD W						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-09-06 12:00:00	16	9	3	0	2	28	8	219	25	0	3	252	52	11	14	0	4	77	9	209	8	0	2	226	583	
2025-09-06 12:15:00	10	10	8	0	4	28	4	182	27	0	1	213	55	10	12	0	3	77	17	251	11	0	1	279	597	
2025-09-06 12:30:00	14	20	11	0	5	45	8	205	28	0	1	241	50	10	10	0	4	70	14	192	4	0	3	210	566	
2025-09-06 12:45:00	9	15	11	0	2	35	5	212	24	0	2	241	48	11	9	0	6	68	11	206	6	0	2	223	567	2313
2025-09-06 13:00:00	8	8	7	0	3	23	7	176	23	0	1	206	48	7	11	0	2	66	14	247	9	0	1	270	565	2295
2025-09-06 13:15:00	9	8	8	0	0	25	4	165	33	0	2	202	43	8	12	0	2	63	12	216	5	0	0	233	523	2221
2025-09-06 13:30:00	12	7	11	0	4	30	4	198	21	0	1	223	40	6	11	0	6	57	10	212	6	0	2	228	538	2193
2025-09-06 13:45:00	4	11	12	0	3	27	7	205	26	0	1	238	37	12	12	0	2	61	8	234	6	0	4	248	574	2200
2025-09-06 14:00:00	6	11	8	0	0	25	9	224	23	0	3	256	37	6	10	0	6	53	11	223	6	0	1	240	574	2209
2025-09-06 14:15:00	11	5	10	0	6	26	6	208	32	0	2	246	32	13	13	0	2	58	6	200	12	0	0	218	548	2234
2025-09-06 14:30:00	8	8	12	0	5	28	7	153	23	0	2	183	33	5	9	0	5	47	14	206	7	1	0	228	486	2182
2025-09-06 14:45:00	4	6	9	0	3	19	13	181	33	0	1	227	44	10	8	0	7	62	14	202	2	0	3	218	526	2134
Grand Total	111	118	110	0	37	339	82	2328	318	0	20	2728	519	109	131	0	49	759	140	2598	82	1	19	2821	**6647**	-
Approach%	32.7%	34.8%	32.4%	0%		-	3%	85.3%	11.7%	0%		-	68.4%	14.4%	17.3%	0%		-	5%	92.1%	2.9%	0%		-	**-**	-
Totals %	1.7%	1.8%	1.7%	0%		5.1%	1.2%	35%	4.8%	0%		41%	7.8%	1.6%	2%	0%		11.4%	2.1%	39.1%	1.2%	0%		42.4%	**-**	-
Heavy	2	2	1	0		-	1	24	8	0		-	11	1	2	0		-	1	18	2	0		-	**-**	-
Heavy %	1.8%	1.7%	0.9%	0%		-	1.2%	1%	2.5%	0%		-	2.1%	0.9%	1.5%	0%		-	0.7%	0.7%	2.4%	0%		-	**-**	-
Bicycles	0	1	0	0		-	0	0	0	0		-	0	0	0	0		-	0	0	1	0		-	**-**	-
Bicycle %	0%	0.8%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	1.2%	0%		-	**-**	-

Spectrum

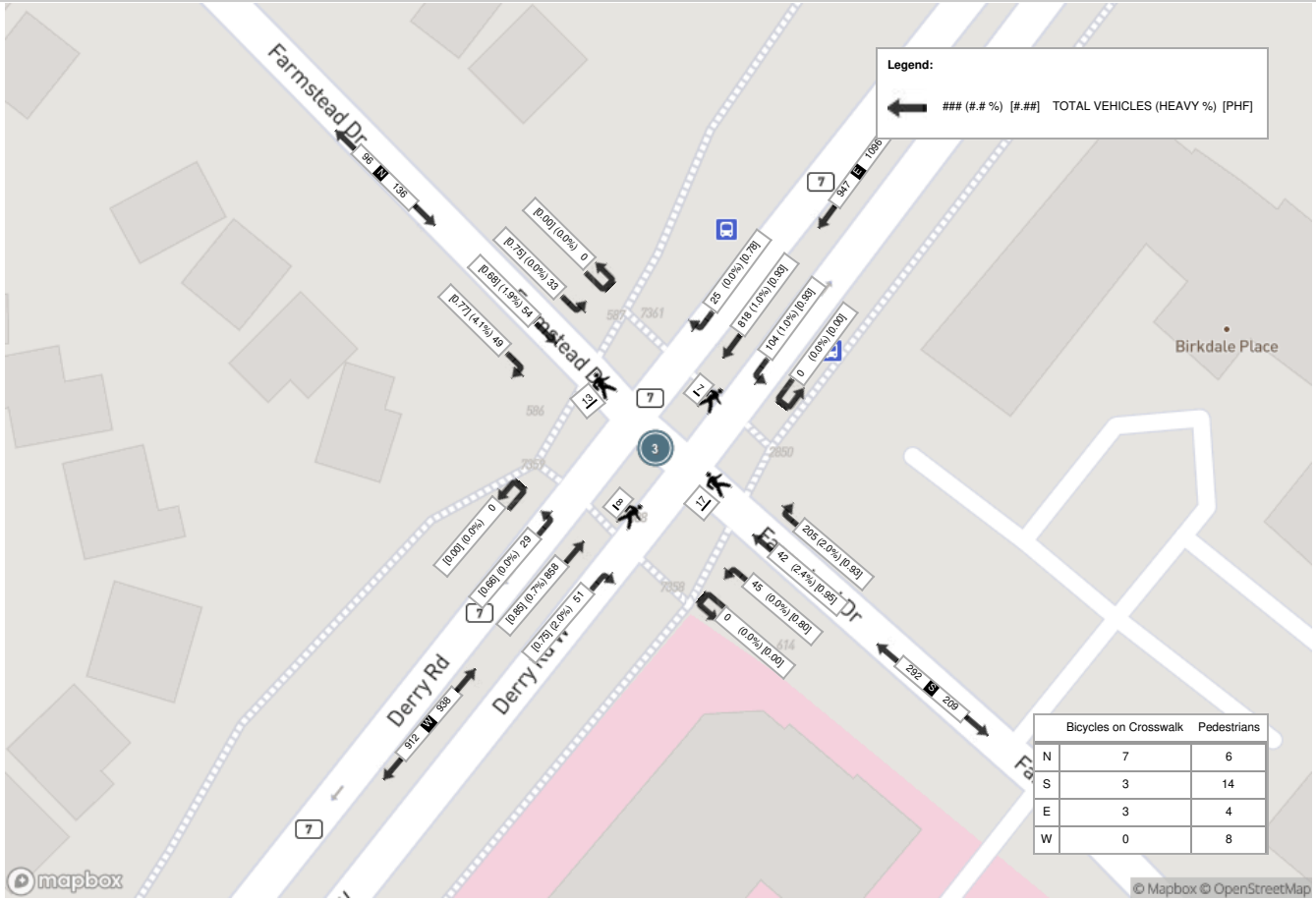
Turning Movement Count
Location Name: DERRY RD W & FARMSTEAD DR
Date: Sat, Sep 06, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Overcast Clouds (18 °C)

Start Time	N Approach FARMSTEAD DR						E Approach DERRY RD W						S Approach FARMSTEAD DR						W Approach DERRY RD W						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-09-06 12:00:00	16	9	3	0	2	28	8	219	25	0	3	252	52	11	14	0	4	77	9	209	8	0	2	226	583
2025-09-06 12:15:00	10	10	8	0	4	28	4	182	27	0	1	213	55	10	12	0	3	77	17	251	11	0	1	279	597
2025-09-06 12:30:00	14	20	11	0	5	45	8	205	28	0	1	241	50	10	10	0	4	70	14	192	4	0	3	210	566
2025-09-06 12:45:00	9	15	11	0	2	35	5	212	24	0	2	241	48	11	9	0	6	68	11	206	6	0	2	223	567
Grand Total	49	54	33	0	13	136	25	818	104	0	7	947	205	42	45	0	17	292	51	858	29	0	8	938	**2313**
Approach%	36%	39.7%	24.3%	0%		-	2.6%	86.4%	11%	0%		-	70.2%	14.4%	15.4%	0%		-	5.4%	91.5%	3.1%	0%		-	**-**
Totals %	2.1%	2.3%	1.4%	0%		5.9%	1.1%	35.4%	4.5%	0%		40.9%	8.9%	1.8%	1.9%	0%		12.6%	2.2%	37.1%	1.3%	0%		40.6%	**-**
PHF	0.77	0.68	0.75	0		0.76	0.78	0.93	0.93	0		0.94	0.93	0.95	0.8	0		0.95	0.75	0.85	0.66	0		0.84	0.97
Heavy	2	1	0	0		3	0	8	1	0		9	4	1	0	0		5	1	6	0	0		7	24
Heavy %	4.1%	1.9%	0%	0%		2.2%	0%	1%	1%	0%		1%	2%	2.4%	0%	0%		1.7%	2%	0.7%	0%	0%		0.7%	1%
Lights	47	53	33	0		133	25	810	103	0		938	201	41	45	0		287	50	852	29	0		931	2289
Lights %	95.9%	98.1%	100%	0%		97.8%	100%	99%	99%	0%		99%	98%	97.6%	100%	0%		98.3%	98%	99.3%	100%	0%		99.3%	99%
Single-Unit Trucks	2	1	0	0		3	0	4	1	0		5	3	1	0	0		4	0	3	0	0		3	15
Single-Unit Trucks %	4.1%	1.9%	0%	0%		2.2%	0%	0.5%	1%	0%		0.5%	1.5%	2.4%	0%	0%		1.4%	0%	0.3%	0%	0%		0.3%	0.6%
Buses	0	0	0	0		0	0	2	0	0		2	1	0	0	0		1	1	3	0	0		4	7
Buses %	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	0.5%	0%	0%	0%		0.3%	2%	0.3%	0%	0%		0.4%	0.3%
Articulated Trucks	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	0	0	0	0		0	2
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0.1%
Pedestrians	-	-	-	-	6	-	-	-	-	-	4	-	-	-	-	-	14	-	-	-	-	-	8	-	**-**
Pedestrians%	-	-	-	-	13.3%		-	-	-	-	8.9%		-	-	-	-	31.1%		-	-	-	-	17.8%		**-**
Bicycles on Crosswalk	-	-	-	-	7	-	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	15.6%		-	-	-	-	6.7%		-	-	-	-	6.7%		-	-	-	-	0%		**-**
Bicycles on Road	0	1	0	0		-	0	0	0	0		-	0	0	0	0		-	0	0	0	0		-	**-**
Bicycles on Road%	0%	100%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			**-**

Peak Hour: 12:00 PM - 01:00 PM **Weather: Overcast Clouds (18 °C)**



	Bicycles on Crosswalk	Pedestrians
N	7	6
S	3	14
E	3	4
W	0	8

Spectrum

Turning Movement Count
Location Name: DERRY RD W & SCOTT BLVD
Date: Thu, Jun 26, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (1 . DERRY RD W & SCOTT BLVD)

Start Time	N Approach SCOTT BLVD						E Approach DERRY RD W						S Approach SCOTT BLVD						W Approach DERRY RD W						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-06-26 07:00:00	10	2	40	0	2	52	13	38	6	1	0	58	52	4	6	0	0	62	2	67	3	0	1	72	244	
2025-06-26 07:15:00	17	4	28	0	3	49	8	44	13	0	0	65	70	4	4	0	3	78	4	75	5	0	6	84	276	
2025-06-26 07:30:00	22	6	45	0	2	73	13	66	16	0	0	95	66	5	10	0	0	81	2	83	8	0	1	93	342	
2025-06-26 07:45:00	13	9	62	0	3	84	18	84	28	0	0	130	98	10	9	0	3	117	4	137	7	0	2	148	479	1341
2025-06-26 08:00:00	23	10	62	0	0	95	33	92	54	0	2	179	87	6	15	0	1	108	7	131	20	0	2	158	540	1637
2025-06-26 08:15:00	19	16	65	0	0	100	41	96	47	0	1	184	78	10	14	0	1	102	23	138	29	0	4	190	576	1937
2025-06-26 08:30:00	21	25	79	0	0	125	51	99	54	0	1	204	88	7	20	0	7	115	15	139	9	1	0	164	608	2203
2025-06-26 08:45:00	25	12	67	0	3	104	34	84	44	1	6	163	85	13	19	0	5	117	5	158	13	2	3	178	562	2286
BREAK																										
2025-06-26 16:00:00	15	21	55	0	3	91	75	190	82	1	2	348	36	10	11	0	1	57	11	144	26	2	4	183	679	
2025-06-26 16:15:00	13	25	69	0	3	107	64	157	72	0	0	293	58	20	17	0	1	95	9	106	20	0	5	135	630	
2025-06-26 16:30:00	9	27	72	0	4	108	76	184	78	0	1	338	51	17	19	0	1	87	10	140	20	1	4	171	704	
2025-06-26 16:45:00	17	21	49	0	5	87	84	158	88	1	3	331	64	19	20	1	1	104	9	124	34	1	2	168	690	2703
2025-06-26 17:00:00	11	33	57	0	4	101	96	154	83	0	0	333	58	19	14	0	2	91	10	160	20	1	5	191	716	2740
2025-06-26 17:15:00	13	26	69	0	2	108	70	171	89	0	0	330	61	16	11	0	0	88	8	132	27	1	4	168	694	2804
2025-06-26 17:30:00	9	30	53	0	4	92	87	183	94	2	4	366	57	13	14	0	4	84	12	107	22	0	5	141	683	2783
2025-06-26 17:45:00	13	31	73	0	0	117	70	141	78	0	4	289	68	28	17	0	3	113	9	157	36	3	6	205	724	2817
Grand Total	250	298	945	0	38	1493	833	1941	926	6	24	3706	1077	201	220	1	33	1499	140	1998	299	12	54	2449	**9147**	-
Approach%	16.7%	20%	63.3%	0%		-	22.5%	52.4%	25%	0.2%		-	71.8%	13.4%	14.7%	0.1%		-	5.7%	81.6%	12.2%	0.5%		-	-	-
Totals %	2.7%	3.3%	10.3%	0%		16.3%	9.1%	21.2%	10.1%	0.1%		40.5%	11.8%	2.2%	2.4%	0%		16.4%	1.5%	21.8%	3.3%	0.1%		26.8%	-	-
Heavy	13	4	11	0		-	14	39	23	0		-	12	3	2	0		-	4	52	8	0		-	-	-
Heavy %	5.2%	1.3%	1.2%	0%		-	1.7%	2%	2.5%	0%		-	1.1%	1.5%	0.9%	0%		-	2.9%	2.6%	2.7%	0%		-	-	-
Bicycles	0	2	0	0		-	0	1	0	0		-	0	1	0	0		-	1	0	0	0		-	-	-
Bicycle %	0%	0.7%	0%	0%		-	0%	0.1%	0%	0%		-	0%	0.5%	0%	0%		-	0.7%	0%	0%	0%		-	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16 °C)

Start Time	N Approach SCOTT BLVD						E Approach DERRY RD W						S Approach SCOTT BLVD						W Approach DERRY RD W						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-06-26 08:00:00	23	10	62	0	0	95	33	92	54	0	2	179	87	6	15	0	1	108	7	131	20	0	2	158	540
2025-06-26 08:15:00	19	16	65	0	0	100	41	96	47	0	1	184	78	10	14	0	1	102	23	138	29	0	4	190	576
2025-06-26 08:30:00	21	25	79	0	0	125	51	99	54	0	1	204	88	7	20	0	7	115	15	139	9	1	0	164	608
2025-06-26 08:45:00	25	12	67	0	3	104	34	84	44	1	6	163	85	13	19	0	5	117	5	158	13	2	3	178	562
Grand Total	88	63	273	0	3	424	159	371	199	1	10	730	338	36	68	0	14	442	50	566	71	3	9	690	**2286**
Approach%	20.8%	14.9%	64.4%	0%		-	21.8%	50.8%	27.3%	0.1%		-	76.5%	8.1%	15.4%	0%		-	7.2%	82%	10.3%	0.4%		-	**-**
Totals %	3.8%	2.8%	11.9%	0%		18.5%	7%	16.2%	8.7%	0%		31.9%	14.8%	1.6%	3%	0%		19.3%	2.2%	24.8%	3.1%	0.1%		30.2%	**-**
PHF	0.88	0.63	0.86	0		0.85	0.78	0.94	0.92	0.25		0.89	0.96	0.69	0.85	0		0.94	0.54	0.9	0.61	0.38		0.91	0.94
Heavy	5	1	6	0		12	4	14	7	0		25	5	1	1	0		7	2	24	3	0		29	73
Heavy %	5.7%	1.6%	2.2%	0%		2.8%	2.5%	3.8%	3.5%	0%		3.4%	1.5%	2.8%	1.5%	0%		1.6%	4%	4.2%	4.2%	0%		4.2%	3.2%
Lights	83	62	267	0		412	155	357	192	1		705	333	35	67	0		435	48	542	68	3		661	2213
Lights %	94.3%	98.4%	97.8%	0%		97.2%	97.5%	96.2%	96.5%	100%		96.6%	98.5%	97.2%	98.5%	0%		98.4%	96%	95.8%	95.8%	100%		95.8%	96.8%
Single-Unit Trucks	1	1	1	0		3	1	11	0	0		12	1	0	0	0		1	0	6	0	0		6	22
Single-Unit Trucks %	1.1%	1.6%	0.4%	0%		0.7%	0.6%	3%	0%	0%		1.6%	0.3%	0%	0%	0%		0.2%	0%	1.1%	0%	0%		0.9%	1%
Buses	4	0	5	0		9	3	3	7	0		13	3	1	1	0		5	1	17	3	0		21	48
Buses %	4.5%	0%	1.8%	0%		2.1%	1.9%	0.8%	3.5%	0%		1.8%	0.9%	2.8%	1.5%	0%		1.1%	2%	3%	4.2%	0%		3%	2.1%
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	1	0	0	0		1	1	1	0	0		2	3
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0.3%	0%	0%	0%		0.2%	2%	0.2%	0%	0%		0.3%	0.1%
Pedestrians	-	-	-	-	2	-	-	-	-	-	8	-	-	-	-	-	13	-	-	-	-	-	8	-	**-**
Pedestrians%	-	-	-	-	5.6%		-	-	-	-	22.2%		-	-	-	-	36.1%		-	-	-	-	22.2%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	2.8%		-	-	-	-	5.6%		-	-	-	-	2.8%		-	-	-	-	2.8%		**-**
Bicycles on Road	0	2	0	0		-	0	1	0	0		-	0	0	0	0		-	0	0	0	0		-	**-**
Bicycles on Road%	0%	100%	0%	0%			0%	100%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			**-**

Spectrum

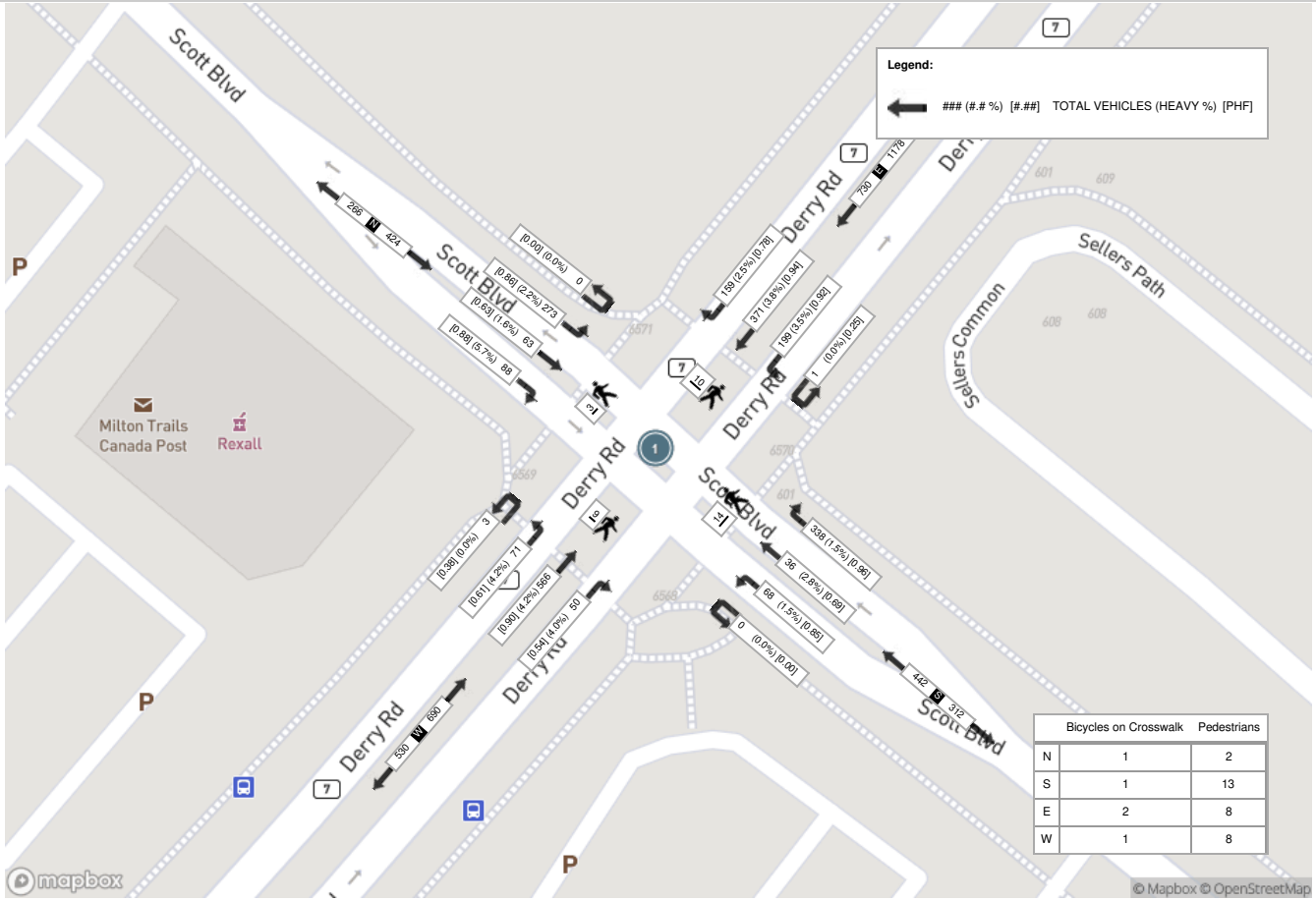
Turning Movement Count
Location Name: DERRY RD W & SCOTT BLVD
Date: Thu, Jun 26, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 05:00 PM - 06:00 PM Weather: Overcast Clouds (17 °C)

Start Time	N Approach SCOTT BLVD						E Approach DERRY RD W						S Approach SCOTT BLVD						W Approach DERRY RD W						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-06-26 17:00:00	11	33	57	0	4	101	96	154	83	0	0	333	58	19	14	0	2	91	10	160	20	1	5	191	716
2025-06-26 17:15:00	13	26	69	0	2	108	70	171	89	0	0	330	61	16	11	0	0	88	8	132	27	1	4	168	694
2025-06-26 17:30:00	9	30	53	0	4	92	87	183	94	2	4	366	57	13	14	0	4	84	12	107	22	0	5	141	683
2025-06-26 17:45:00	13	31	73	0	0	117	70	141	78	0	4	289	68	28	17	0	3	113	9	157	36	3	6	205	724
Grand Total	46	120	252	0	10	418	323	649	344	2	8	1318	244	76	56	0	9	376	39	556	105	5	20	705	**2817**
Approach%	11%	28.7%	60.3%	0%		-	24.5%	49.2%	26.1%	0.2%		-	64.9%	20.2%	14.9%	0%		-	5.5%	78.9%	14.9%	0.7%		-	**-**
Totals %	1.6%	4.3%	8.9%	0%		14.8%	11.5%	23%	12.2%	0.1%		46.8%	8.7%	2.7%	2%	0%		13.3%	1.4%	19.7%	3.7%	0.2%		25%	**-**
PHF	0.88	0.91	0.86	0		0.89	0.84	0.89	0.91	0.25		0.9	0.9	0.68	0.82	0		0.83	0.81	0.87	0.73	0.42		0.86	0.97
Heavy	2	0	0	0		2	1	4	2	0		7	1	0	0	0		1	0	1	0	0		1	11
Heavy %	4.3%	0%	0%	0%		0.5%	0.3%	0.6%	0.6%	0%		0.5%	0.4%	0%	0%	0%		0.3%	0%	0.2%	0%	0%		0.1%	0.4%
Lights	44	120	252	0		416	322	645	342	2		1311	243	76	56	0		375	39	555	105	5		704	2806
Lights %	95.7%	100%	100%	0%		99.5%	99.7%	99.4%	99.4%	100%		99.5%	99.6%	100%	100%	0%		99.7%	100%	99.8%	100%	100%		99.9%	99.6%
Single-Unit Trucks	0	0	0	0		0	1	3	0	0		4	1	0	0	0		1	0	0	0	0		0	5
Single-Unit Trucks %	0%	0%	0%	0%		0%	0.3%	0.5%	0%	0%		0.3%	0.4%	0%	0%	0%		0.3%	0%	0%	0%	0%		0%	0.2%
Buses	2	0	0	0		2	0	0	2	0		2	0	0	0	0		0	0	1	0	0		1	5
Buses %	4.3%	0%	0%	0%		0.5%	0%	0%	0.6%	0%		0.2%	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.1%	0.2%
Articulated Trucks	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	1
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%
Pedestrians	-	-	-	-	9	-	-	-	-	-	6	-	-	-	-	-	9	-	-	-	-	-	19	-	**-**
Pedestrians%	-	-	-	-	19.1%		-	-	-	-	12.8%		-	-	-	-	19.1%		-	-	-	-	40.4%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	2.1%		-	-	-	-	4.3%		-	-	-	-	0%		-	-	-	-	2.1%		**-**
Bicycles on Road	0	0	0	0		-	0	0	0	0		-	0	1	0	0		-	1	0	0	0		-	**-**
Bicycles on Road%	0%	0%	0%	0%			0%	0%	0%	0%			0%	100%	0%	0%			100%	0%	0%	0%			**-**

Peak Hour: 08:00 AM - 09:00 AM **Weather: Overcast Clouds (16 °C)**



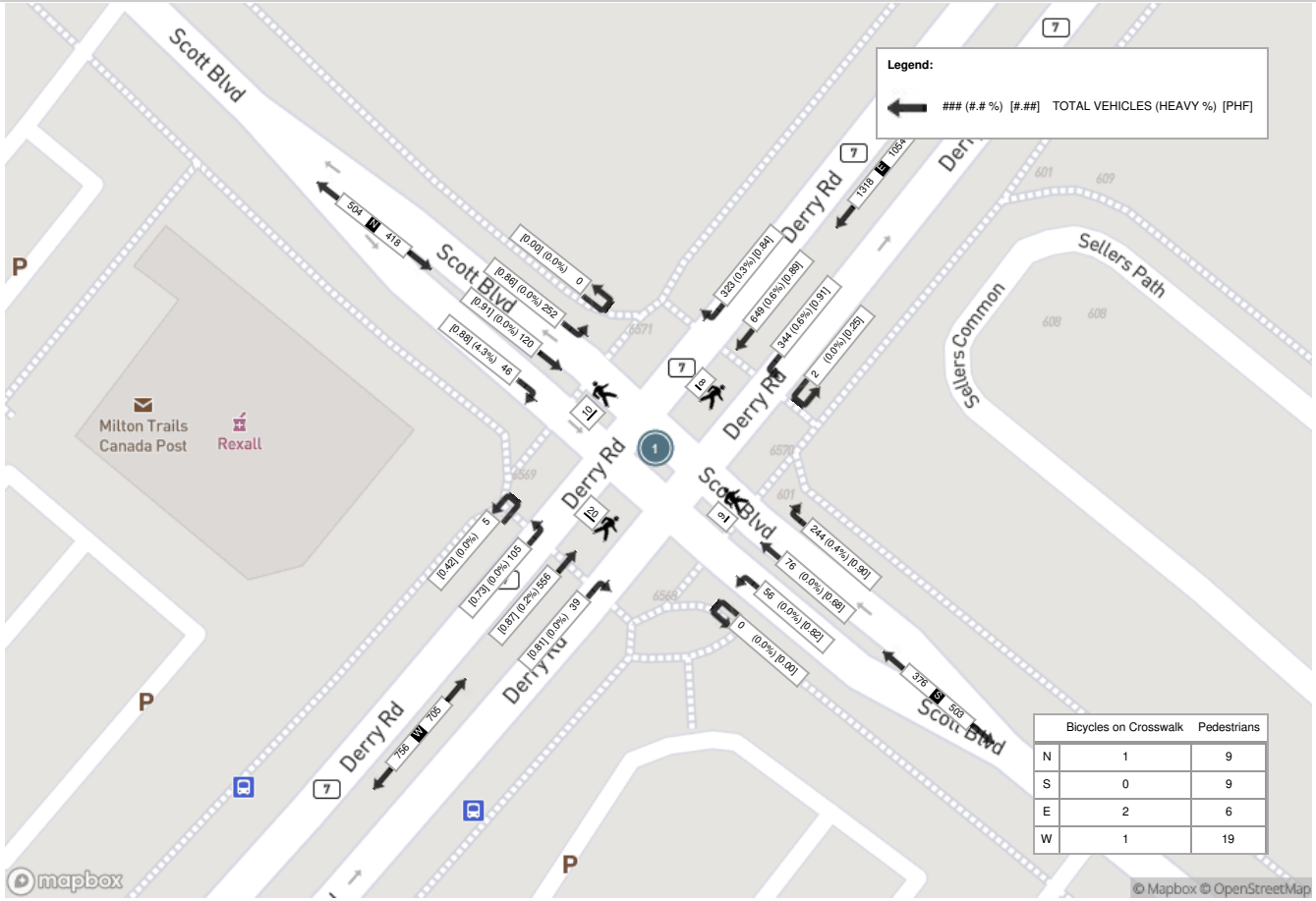
	Bicycles on Crosswalk	Pedestrians
N	1	2
S	1	13
E	2	8
W	1	8

Spectrum

Turning Movement Count
Location Name: DERRY RD W & SCOTT BLVD
Date: Thu, Jun 26, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 05:00 PM - 06:00 PM **Weather: Overcast Clouds (17 °C)**



	Bicycles on Crosswalk	Pedestrians
N	1	9
S	0	9
E	2	6
W	1	19

Spectrum

Turning Movement Count
Location Name: DERRY RD W & SCOTT BLVD
Date: Sat, Sep 06, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (1 . DERRY RD W & SCOTT BLVD)

Start Time	N Approach SCOTT BLVD						E Approach DERRY RD W						S Approach SCOTT BLVD						W Approach DERRY RD W						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-09-06 12:00:00	13	12	47	0	4	72	55	122	82	0	1	259	62	8	8	0	11	78	4	103	17	0	12	124	533	
2025-09-06 12:15:00	10	21	40	0	0	71	53	123	86	0	2	262	66	12	12	0	6	90	3	133	11	0	8	147	570	
2025-09-06 12:30:00	16	15	40	0	5	71	38	124	86	1	5	249	64	16	12	0	9	92	9	107	14	1	10	131	543	
2025-09-06 12:45:00	17	14	54	0	4	85	63	113	60	0	8	236	61	14	23	0	14	98	9	132	10	0	6	151	570	2216
2025-09-06 13:00:00	12	22	53	0	0	87	58	116	68	0	4	242	71	19	9	0	1	99	5	125	16	0	5	146	574	2257
2025-09-06 13:15:00	10	20	49	0	1	79	36	113	70	1	0	220	64	12	16	0	2	92	7	122	18	1	8	148	539	2226
2025-09-06 13:30:00	16	24	53	0	3	93	50	132	72	0	0	254	57	10	12	0	2	79	2	109	18	0	4	129	555	2238
2025-09-06 13:45:00	9	19	54	1	1	83	44	111	75	2	0	232	84	9	19	0	6	112	6	108	16	0	12	130	557	2225
2025-09-06 14:00:00	17	19	37	0	2	73	31	141	95	0	3	267	62	8	10	0	4	80	3	124	14	1	2	142	562	2213
2025-09-06 14:15:00	13	30	62	0	2	105	58	108	89	3	1	258	67	13	13	0	4	93	10	111	14	0	3	135	591	2265
2025-09-06 14:30:00	13	15	51	0	3	79	45	99	69	0	1	213	61	8	13	0	6	82	5	109	16	1	7	131	505	2215
2025-09-06 14:45:00	9	16	50	0	0	75	48	116	80	0	2	244	79	12	5	0	6	96	5	138	15	2	1	160	575	2233
Grand Total	155	227	590	1	25	973	579	1418	932	7	27	2936	798	141	152	0	71	1091	68	1421	179	6	78	1674	**6674**	-
Approach%	15.9%	23.3%	60.6%	0.1%		-	19.7%	48.3%	31.7%	0.2%		-	73.1%	12.9%	13.9%	0%		-	4.1%	84.9%	10.7%	0.4%		-	-	-
Totals %	2.3%	3.4%	8.8%	0%		14.6%	8.7%	21.2%	14%	0.1%		44%	12%	2.1%	2.3%	0%		16.3%	1%	21.3%	2.7%	0.1%		25.1%	-	-
Heavy	2	2	3	0		-	7	13	6	0		-	3	1	2	0		-	0	8	0	0		-	-	-
Heavy %	1.3%	0.9%	0.5%	0%		-	1.2%	0.9%	0.6%	0%		-	0.4%	0.7%	1.3%	0%		-	0%	0.6%	0%	0%		-	-	-
Bicycles	0	1	1	0		-	0	1	0	0		-	0	5	0	0		-	0	3	0	0		-	-	-
Bicycle %	0%	0.4%	0.2%	0%		-	0%	0.1%	0%	0%		-	0%	3.5%	0%	0%		-	0%	0.2%	0%	0%		-	-	-

Spectrum

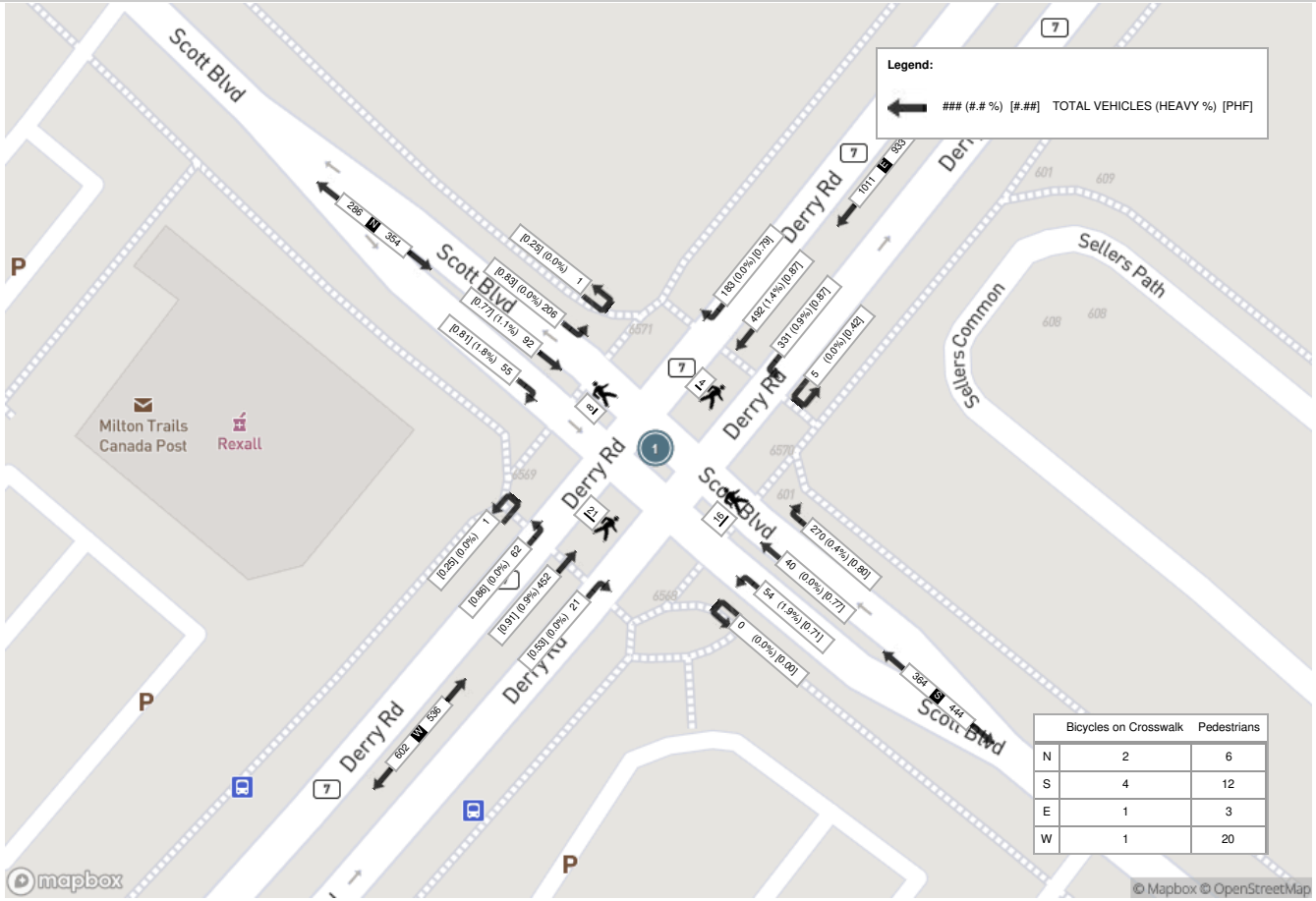
Turning Movement Count
Location Name: DERRY RD W & SCOTT BLVD
Date: Sat, Sep 06, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 01:30 PM - 02:30 PM Weather: Overcast Clouds (18 °C)

Start Time	N Approach SCOTT BLVD						E Approach DERRY RD W						S Approach SCOTT BLVD						W Approach DERRY RD W						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-09-06 13:30:00	16	24	53	0	3	93	50	132	72	0	0	254	57	10	12	0	2	79	2	109	18	0	4	129	555
2025-09-06 13:45:00	9	19	54	1	1	83	44	111	75	2	0	232	84	9	19	0	6	112	6	108	16	0	12	130	557
2025-09-06 14:00:00	17	19	37	0	2	73	31	141	95	0	3	267	62	8	10	0	4	80	3	124	14	1	2	142	562
2025-09-06 14:15:00	13	30	62	0	2	105	58	108	89	3	1	258	67	13	13	0	4	93	10	111	14	0	3	135	591
Grand Total	55	92	206	1	8	354	183	492	331	5	4	1011	270	40	54	0	16	364	21	452	62	1	21	536	**2265**
Approach%	15.5%	26%	58.2%	0.3%		-	18.1%	48.7%	32.7%	0.5%		-	74.2%	11%	14.8%	0%		-	3.9%	84.3%	11.6%	0.2%		-	**-**
Totals %	2.4%	4.1%	9.1%	0%		15.6%	8.1%	21.7%	14.6%	0.2%		44.6%	11.9%	1.8%	2.4%	0%		16.1%	0.9%	20%	2.7%	0%		23.7%	**-**
PHF	0.81	0.77	0.83	0.25		0.84	0.79	0.87	0.87	0.42		0.95	0.8	0.77	0.71	0		0.81	0.53	0.91	0.86	0.25		0.94	0.96
Heavy	1	1	0	0		2	0	7	3	0		10	1	0	1	0		2	0	4	0	0		4	18
Heavy %	1.8%	1.1%	0%	0%		0.6%	0%	1.4%	0.9%	0%		1%	0.4%	0%	1.9%	0%		0.5%	0%	0.9%	0%	0%		0.7%	0.8%
Lights	54	91	206	1		352	183	485	328	5		1001	269	40	53	0		362	21	448	62	1		532	2247
Lights %	98.2%	98.9%	100%	100%		99.4%	100%	98.6%	99.1%	100%		99%	99.6%	100%	98.1%	0%		99.5%	100%	99.1%	100%	100%		99.3%	99.2%
Single-Unit Trucks	0	1	0	0		1	0	6	2	0		8	1	0	1	0		2	0	2	0	0		2	13
Single-Unit Trucks %	0%	1.1%	0%	0%		0.3%	0%	1.2%	0.6%	0%		0.8%	0.4%	0%	1.9%	0%		0.5%	0%	0.4%	0%	0%		0.4%	0.6%
Buses	1	0	0	0		1	0	0	1	0		1	0	0	0	0		0	0	2	0	0		2	4
Buses %	1.8%	0%	0%	0%		0.3%	0%	0%	0.3%	0%		0.1%	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.4%	0.2%
Articulated Trucks	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	1
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%
Pedestrians	-	-	-	-	6	-	-	-	-	-	3	-	-	-	-	-	12	-	-	-	-	-	20	-	**-**
Pedestrians%	-	-	-	-	12.2%		-	-	-	-	6.1%		-	-	-	-	24.5%		-	-	-	-	40.8%		**-**
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	4.1%		-	-	-	-	2%		-	-	-	-	8.2%		-	-	-	-	2%		**-**
Bicycles on Road	0	1	1	0		-	0	0	0	0		-	0	2	0	0		-	0	0	0	0		-	**-**
Bicycles on Road%	0%	100%	100%	0%			0%	0%	0%	0%			0%	100%	0%	0%			0%	0%	0%	0%			**-**

Peak Hour: 01:30 PM - 02:30 PM **Weather: Overcast Clouds (18 °C)**



	Bicycles on Crosswalk	Pedestrians
N	2	6
S	4	12
E	1	3
W	1	20

Appendix H:
2022 TTS Trip Distribution

Derry Heights
PM Peak Hour
Inbound

Traffic Volume Allocation

Zone	Trips	%	NORTH Bronte	NORTH Farmstead	NORTH Scott	SOUTH Bronte	SOUTH Farmstead	SOUTH Scott	EAST Derry	EAST Vanier	EAST Laurier	WEST Derry	TOTAL
Brampton	13	1%	100%										100.00%
Mississauga	83	7%	20%			80%							100.00%
Halton Hills	7	1%	100%										100.00%
5310	35	3%	100%										100.00%
5312	27	2%	100%										100.00%
5315	16	1%	100%										100.00%
5329	6	0%							100%				100.00%
5334	41	3%	20%						80%				100.00%
5338	7	1%							100%				100.00%
5340	28	2%								50%	50%		100.00%
5342	53	4%							80%	10%	10%		100.00%
5343	31	2%				100%							100.00%
5345	10	1%	100%										100.00%
5385	33	3%										100%	100.00%
5386	13	1%	50%		50%								100.00%
5389	6	0%	50%									50%	100.00%
5390	65	5%	50%							25%	25%		100.00%
5392	39	3%	100%										100.00%
5393	8	1%	50%							25%	25%		100.00%
5394	9	1%								50%	50%		100.00%
5396	75	6%							60%	20%	20%		100.00%
5398	9	1%								50%	50%		100.00%
5400	23	2%	50%							25%	25%		100.00%
5406	35	3%								50%	50%		100.00%
5408	36	3%			10%							90%	100.00%
5409	14	1%				100%							100.00%
5410	94	8%				50%	50%						100.00%
5412	78	6%						100%					100.00%
5413	35	3%			100%								100.00%
5416	57	5%										100%	100.00%
5418	90	7%				50%	50%						100.00%
5422	19	2%				50%			50%				100.00%
Oakville	116	9%				80%			20%				100.00%
Burlington	26	2%				50%						50%	100.00%
Hamilton	13	1%										100%	100.00%
TOTAL TRIPS	1250	100%											

Route Split Totals

Zone	NORTH Bronte	NORTH Farmstead	NORTH Scott	SOUTH Bronte	SOUTH Farmstead	SOUTH Scott	EAST Derry	EAST Vanier	EAST Laurier	WEST Derry	TOTAL
	1.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.0%
	1.33%	0.00%	0.00%	5.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.6%
	0.56%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
5310	2.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.8%
5312	2.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.2%
5315	1.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.3%
5329	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.48%	0.00%	0.00%	0.00%	0.5%
5334	0.66%	0.00%	0.00%	0.00%	0.00%	0.00%	2.62%	0.00%	0.00%	0.00%	3.3%
5338	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.56%	0.00%	0.00%	0.00%	0.6%
5340	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.12%	1.12%	0.00%	2.2%
5342	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.39%	0.42%	0.42%	0.00%	4.2%
5343	0.00%	0.00%	0.00%	2.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.5%
5345	0.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.8%
5385	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.64%	2.6%
5386	0.52%	0.00%	0.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.0%
5389	0.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.24%	0.5%
5390	2.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.30%	1.30%	0.00%	5.2%
5392	3.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.1%
5393	0.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.16%	0.16%	0.00%	0.6%
5394	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.36%	0.36%	0.00%	0.7%
5396	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.60%	1.20%	1.20%	0.00%	6.0%
5398	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.36%	0.36%	0.00%	0.7%
5400	0.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.46%	0.46%	0.00%	1.8%
5406	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.40%	1.40%	0.00%	2.8%
5408	0.00%	0.00%	0.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.59%	2.9%
5409	0.00%	0.00%	0.00%	1.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
5410	0.00%	0.00%	0.00%	3.76%	3.76%	0.00%	0.00%	0.00%	0.00%	0.00%	7.5%
5412	0.00%	0.00%	0.00%	0.00%	0.00%	6.24%	0.00%	0.00%	0.00%	0.00%	6.2%
5413	0.00%	0.00%	2.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.8%
5416	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.56%	4.6%
5418	0.00%	0.00%	0.00%	3.60%	3.60%	0.00%	0.00%	0.00%	0.00%	0.00%	7.2%
5422	0.00%	0.00%	0.00%	0.76%	0.00%	0.00%	0.76%	0.00%	0.00%	0.00%	1.5%
	0.00%	0.00%	0.00%	7.42%	0.00%	0.00%	1.86%	0.00%	0.00%	0.00%	9.3%
	0.00%	0.00%	0.00%	1.04%	0.00%	0.00%	0.00%	0.00%	0.00%	1.04%	2.1%
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.04%	1.0%
	18%	**0%**	**4%**	**25%**	**7%**	**6%**	**13%**	**7%**	**7%**	**12%**	100.0%
Assumed Split	**20.00%**	**0.00%**	**5.00%**	**25.00%**	**5.00%**	**5.00%**	**15.00%**	**5.00%**	**5.00%**	**15.00%**	100.00%

Derry Heights
PM Peak Hour
Outbound

Traffic Volume Allocation

Zone	Trips	%	NORTH Bronte	NORTH Farmstead	NORTH Scott	SOUTH Bronte	SOUTH Farmstead	SOUTH Scott	EAST Derry	EAST Vanier	EAST Laurier	WEST Derry	TOTAL
Mississauga	42	4%	100%										100.00%
Halton Hills	13	1%	100%										100.00%
5315	65	6%	100%										100.00%
5321	24	2%				100%							100.00%
5322	29	2%				50%	50%						100.00%
5340	47	4%							30%	35%	35%		100.00%
5343	31	3%				70%			30%				100.00%
5344	7	1%							100%				100.00%
5345	10	1%	60%							20%	20%		100.00%
5361	50	4%										100%	100.00%
5385	8	1%										100%	100.00%
5386	13	1%	30%									70%	100.00%
5387	8	1%										100%	100.00%
5389	6	1%										100%	100.00%
5392	33	3%	100%										100.00%
5393	13	1%	50%							25%	25%		100.00%
5394	9	1%								50%	50%		100.00%
5396	46	4%							20%	40%	40%		100.00%
5398	9	1%								50%	50%		100.00%
5404	35	3%								50%	50%		100.00%
5406	35	3%								50%	50%		100.00%
5408	36	3%			100%								100.00%
5410	110	9%				80%		20%					100.00%
5412	114	10%						100%					100.00%
5413	26	2%			100%								100.00%
5415	38	3%	50%		50%								100.00%
5416	70	6%										100%	100.00%
5417	14	1%				20%		80%					100.00%
5418	66	6%					100%						100.00%
5419	53	5%				100%							100.00%
5420	10	1%						100%					100.00%
5422	44	4%	100%										100.00%
Burlington	11	1%				100%							100.00%
Cambridge	46	4%	100%										100.00%
TOTAL TRIPS	1171	100%											

Route Split Totals

Zone	NORTH Bronte	NORTH Farmstead	NORTH Scott	SOUTH Bronte	SOUTH Farmstead	SOUTH Scott	EAST Derry	EAST Vanier	EAST Laurier	WEST Derry	TOTAL
Mississauga	3.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.6%
Halton Hills	1.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
5315	5.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.6%
5321	0.00%	0.00%	0.00%	2.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.0%
5322	0.00%	0.00%	0.00%	1.24%	1.24%	0.00%	0.00%	0.00%	0.00%	0.00%	2.5%
5340	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.20%	1.40%	1.40%	0.00%	4.0%
5343	0.00%	0.00%	0.00%	1.85%	0.00%	0.00%	0.79%	0.00%	0.00%	0.00%	2.6%
5344	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.60%	0.00%	0.00%	0.00%	0.6%
5345	0.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.17%	0.17%	0.00%	0.9%
5361	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.27%	4.3%
5385	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.68%	0.7%
5386	0.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.78%	1.1%
5387	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.68%	0.7%
5389	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.51%	0.5%
5392	2.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.8%
5393	0.56%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.28%	0.28%	0.00%	1.1%
5394	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.38%	0.38%	0.00%	0.8%
5396	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.79%	1.57%	1.57%	0.00%	3.9%
5398	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.38%	0.38%	0.00%	0.8%
5404	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.49%	1.49%	0.00%	3.0%
5406	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.49%	1.49%	0.00%	3.0%
5408	0.00%	0.00%	3.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.1%
5410	0.00%	0.00%	0.00%	7.51%	0.00%	1.88%	0.00%	0.00%	0.00%	0.00%	9.4%
5412	0.00%	0.00%	0.00%	0.00%	0.00%	9.74%	0.00%	0.00%	0.00%	0.00%	9.7%
5413	0.00%	0.00%	2.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.2%
5415	1.62%	0.00%	1.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.2%
5416	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.98%	6.0%
5417	0.00%	0.00%	0.00%	0.24%	0.00%	0.96%	0.00%	0.00%	0.00%	0.00%	1.2%
5418	0.00%	0.00%	0.00%	0.00%	5.64%	0.00%	0.00%	0.00%	0.00%	0.00%	5.6%
5419	0.00%	0.00%	0.00%	4.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.5%
5420	0.00%	0.00%	0.00%	0.00%	0.00%	0.85%	0.00%	0.00%	0.00%	0.00%	0.9%
5422	3.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.8%
Burlington	0.00%	0.00%	0.00%	0.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.9%
Cambridge	3.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.9%
TOTAL TRIPS	**24%**	**0%**	**7%**	**18%**	**7%**	**13%**	**3%**	**7%**	**7%**	**13%**	100.0%
Assumed Split	**25.00%**	**0.00%**	**5.00%**	**20.00%**	**5.00%**	**15.00%**	**5.00%**	**5.00%**	**5.00%**	**15.00%**	100.00%

Appendix I:
Signal Timing Plans

Date: 9-Jul-2018
Intersection: Derry Road & Scott Boulevard

8 Phase Basic Timing Sheet												
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**2 Ped**	**4 Ped**	**6 Ped**	**8 Ped**
Phases in use	X	X		X	X	X	X	X				
Direction	WBLT	EB		SB	EBLT	WB	SBLT	NB				
Min Green	5	20		10	5	20	5	10				
Veh Ext.	-	4.0		4.0	-	4.0		4.0				
Yellow	3	3.7		3.7	3	3.7	3	3.7				
Red	1	3.3		3.1	1	3.3	1	3.1				
Walk	-	7		7	-	7	-	7				
Don't Walk	-	30		25	-	30	-	25				
Max 1	15	40		25	15	40	15	25				
Max 2												
Max 3												
Veh Recall												
Ped Recall												
Notes:	Sync Reference to 3:15											

Pattern 1
Time: 6:00
Cycle Length: 120
Offset (%): 91%

Direction	WBLT	EB		SB
Phase	*1*	*2*	*3*	*4*
%	10	38	0	53
Direction	**EBLT**	**WB**	**SBLT**	**NB**
Phase	*5*	*6*	*7*	*8*
%	9	38	20	33

Pattern 2
Time: 9:30, 18:30
Cycle Length: 110
Offset (%): 85%

Direction	WBLT	EB		SB
Phase	*1*	*2*	*3*	*4*
%	12	41	0	47
Direction	**EBLT**	**WB**	**SBLT**	**NB**
Phase	*5*	*6*	*7*	*8*
%	10	43	12	35

Pattern 3
Time: 15:15
Cycle Length: 120
Offset (%): 36%

Direction	WBLT	EB		SB
Phase	*1*	*2*	*3*	*4*
%	14	40	0	46
Direction	**EBLT**	**WB**	**SBLT**	**NB**
Phase	*5*	*6*	*7*	*8*
%	9	45	13	33

Pattern 4
Time: Weekend, 07:00-19:00
Cycle Length: 110
Offset (%): 85%

Direction	WBLT	EB		SB
Phase	*1*	*2*	*3*	*4*
%	14	41	0	46
Direction	**EBLT**	**WB**	**SBLT**	**NB**
Phase	*5*	*6*	*7*	*8*
%	10	44	11	35

Pattern 5
Time: 21:00
Cycle Length: Local
Offset (%):

Direction	WBLT	EB		SB
Phase	*1*	*2*	*3*	*4*
%				
Direction	**EBLT**	**WB**	**SBLT**	**NB**
Phase	**5**	**6**	**7**	**8**
%				

Pattern 6
Time:
Cycle Length:
Offset (%):

Direction				
Phase	*1*	*2*	*3*	*4*
%		x		x
Direction				
Phase	**5**	**6**	**7**	**8**
%		x		x

Date: 9-Jul-2018
Intersection: Derry & Bronte

8 Phase Basic Timing Sheet

	1	2	3	4	5	6	7	8	2 Ped	4 Ped	6 Ped	8 Ped
Phases in use	X	X	X	x	X	x	X	x	X	x	x	x
Direction	WBL	EB	NBL	SB	EBL	WB	SBL	NB				
Min Green	5	20	5	10	5	20	5	10				
Veh Ext.	3.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0				
Yellow	3	3.7	3	3.7	3	3.7	3	3.7				
Red	1	3	1	3	1	3	1	3				
Walk		7		7		7		7				
Don't Walk		26		31		26		31				
Max 1	15	40	15	25	15	40	15	25				
Max 2												
Max 3												
Veh Recall		x				x						
Ped Recall		x				x						

Notes:

Local Zero Override active
Sync Reference to 3:15

Pattern 1
Time: 6:00
Cycle Length: 120
Offset (%): 27%

Direction	WBL	EB	NBL	SB
Phase	1	2	3	4
%	10	41	10	39
Direction	**EBL**	**WB**	**SBL**	**NB**
Phase	5	6	7	8
%	13	38	10	39

Pattern 2
Time: 9:30, 18:30
Cycle Length: 110
Offset (%): 20%

Direction	WBL	EB	NBL	SB
Phase	1	2	3	4
%	10	37	10	43
Direction	**EBL**	**WB**	**SBL**	**NB**
Phase	5	6	7	8
%	10	37	11	42

Pattern 3
Time: 15:15
Cycle Length: 120
Offset (%): 4%

Direction	WBL	EB	NBL	SB
Phase	1	2	3	4
%	10	40	11	39
Direction	**EBL**	**WB**	**SBL**	**NB**
Phase	5	6	7	8
%	10	40	11	39

Pattern 4
Time: Weekend, 07:00-19:00
Cycle Length: 110
Offset (%): 20%

Direction	WBL	EB	NBL	SB
Phase	1	2	3	4
%	10	37	10	43
Direction	**EBL**	**WB**	**SBL**	**NB**
Phase	5	6	7	8
%	10	37	10	43

Pattern 5
Time: 21:00
Cycle Length: Local
Offset (%):

Direction	WBL	EB	NBL	SB
Phase	1	2	3	4
%				
Direction	**EBL**	**WB**	**SBL**	**NB**
Phase	5	6	7	8
%				

Pattern 6
Time:
Cycle Length:
Offset (%):

Direction				
Phase	1	2	3	4
%				
Direction				
Phase	5	6	7	8
%				

Date: 9-Jul-2018
Intersection: Derry & Farmstead

8 Phase Basic Timing Sheet

	1	2	3	4	5	6		8	2 Ped	4 Ped	6 Ped	8 Ped
Phases in use	X	X		X	X	X		X	X	x	x	x
Direction	WBL	EB		SB	EBL	WB		NB				
Min Green	5	20		10	5	20		10				
Veh Ext.	3.0			3.0	3.0			3.0				
Yellow	3	3.7		3.7	3	3.7		3.7				
Red	1	2.4		3.3	1	2.4		3.3				
Walk		7		7		7		7				
Don't Walk		24		28		24		28				
Max 1	15	40		25	15	40		25				
Max 2												
Max 3												
Veh Recall												
Ped Recall												

Notes: Check timings in controller

Sync Reference to 3:15

Pattern 1
Time: 6:00
Cycle Length: 120
Offset (%): 52%

Direction	WBL	EB		SB
Phase	*1*	*2*	*3*	*4*
%	10	51	0	39
Direction	**EBL**	**WB**		**NB**
Phase	*5*	*6*	*7*	*8*
%	10	51	0	39

Pattern 2
Time: 9:30, 18:30
Cycle Length: 110
Offset (%): 46%

Direction	WBL	EB		SB
Phase	*1*	*2*	*3*	*4*
%	10	51	0	39
Direction	**EBL**	**WB**		**NB**
Phase	*5*	*6*	*7*	*8*
%	10	51	0	39

Pattern 3
Time: 15:15
Cycle Length: 120
Offset (%): 70%

Direction	WBL	EB		SB
Phase	*1*	*2*	*3*	*4*
%	10	51	0	39
Direction	**EBL**	**WB**		**NB**
Phase	*5*	*6*	*7*	*8*
%	10	51	0	39

Pattern 4
Time: Weekend, 07:00-19:00
Cycle Length: 110
Offset (%): 46%

Direction	WBL	EB		SB
Phase	*1*	*2*	*3*	*4*
%	10	51	0	39
Direction	**EBL**	**WB**		**NB**
Phase	*5*	*6*	*7*	*8*
%	10	51	0	39

Pattern 5
Time: 21:00
Cycle Length: Local
Offset (%):

Direction	WBL	EB		SB
Phase	*1*	*2*	*3*	*4*
%				
Direction	**EBL**	**WB**		**NB**
Phase	5	6	7	8
%				

Pattern 6
Time:
Cycle Length:
Offset (%):

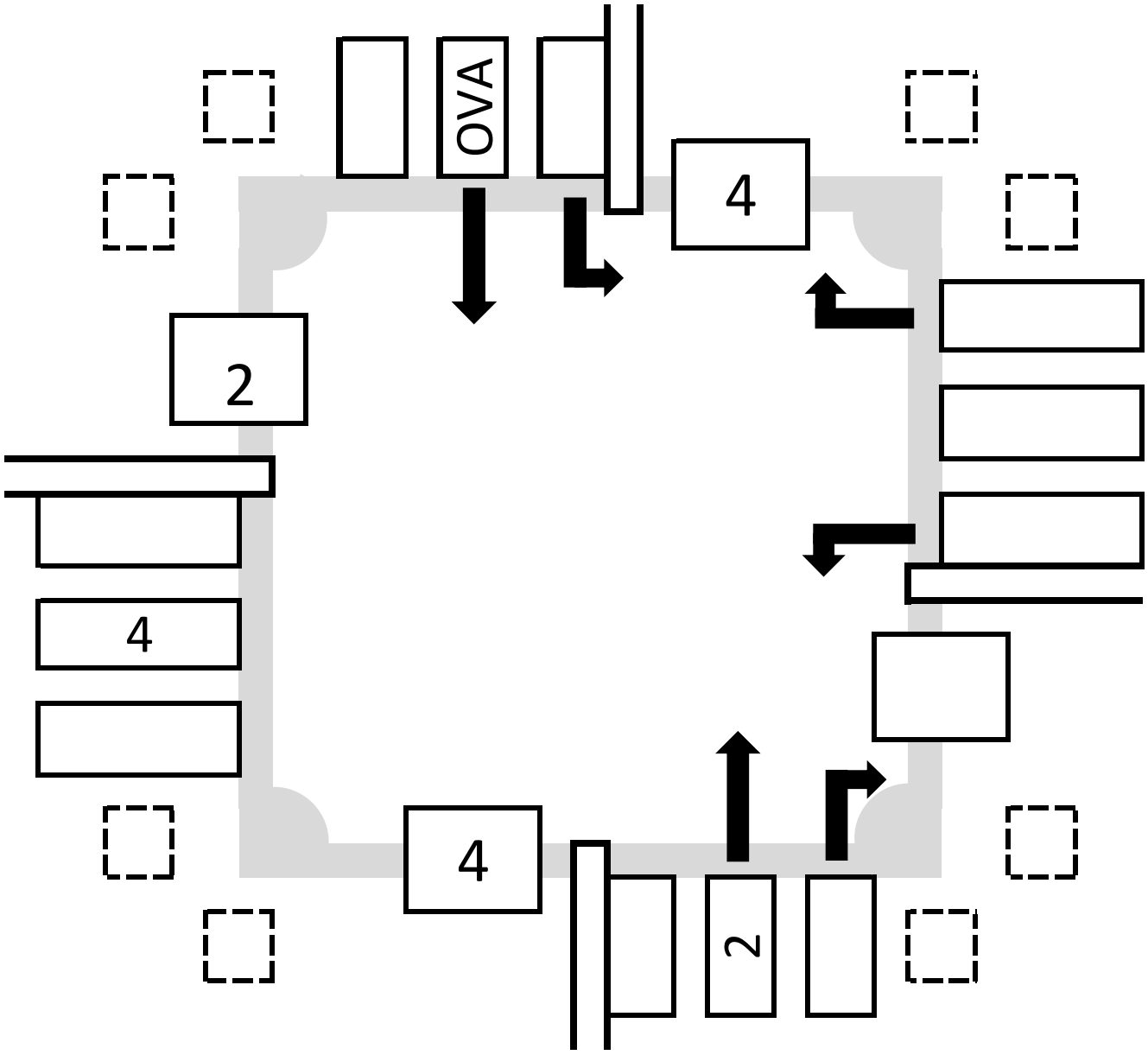
Direction				
Phase	*1*	*2*	*3*	*4*
%				
Direction				
Phase	5	6	7	8
%				

Program Reference Card

N

Intersection : Bronte St S & Commercial Entrance

Controller #: ASC/3 **Date:** 06/2009



Cabinet Installed:

Controller Timing Data

Timing Plan 1																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green		15		10												
Delayed Green																
Walk		7		7												
Walk 2																
Walk Max																
Pedestrian Clearance		12		15												
Pedestrian Clearance 2																
Pedestrian Clearance Max																
Vehicle Extension		4.0		5.0												
Vehicle Extension 2																
Max 1		42		28												
Max 2		52		28												
Max 3																
Dynamic Max																
Dynamic Max Step																
Yellow Change		4.0		4.0												
Red Clearance		2.0		2.0												
Red Revert		2.0		2.0												

Coordinator Options

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

Coordinator Pattern **Time Period** AM

Coordinator Pattern			
Use Split Pattern 1			
TS2 Pattern/Offset			
Cycle		STD(COS)	
Offset Val			
Actuated Coord		Timing Plan	
Act Walk Resto		Sequence	
Phase Resrvce 0		Action Plan	

Split Preference Phases								
Phases	1	2	3	4	5	6	7	8
SPT								
Pref 1								
Pref2								
Splt Ext								
Veh Perm				Disp				
Ring Disp					(Ring 2-4)			

Split Preference Phases								
Phases	9	10	11	12	13	14	15	16
SPT								
Pref 1								
Pref2								

Split Demand Ptrn		Xart Ptrn	

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Recal																
PD Recal																
MX Recal																
OMIT																
SF OUT									(1-8)							

Coordinator Pattern **Time Period** PM

Coordinator Pattern								
Use Split Pattern 1								
TS2 Pattern/Offset								
Cycle				STD(COS)				
Offset Val								
Actuated Coord				Timing Plan				
Act Walk Resto				Sequence				
Phase Resrvce 0				Action Plan				
Split Preference Phases								
Phases	1	2	3	4	5	6	7	8
SPT								
Pref 1								
Pref2								
Splt Ext								
Veh Perm				Disp				
Ring Disp					(Ring 2-4)			
Split Preference Phases								
Phases	9	10	11	12	13	14	15	16
SPT								
Pref 1								
Pref2								
Split Demand Ptrn					Xart Ptrn			

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Recal																
PD Recal																
MX Recal																
OMIT																
SF OUT									(1-8)							

Split Pattern

TIME:																
Split Pattern Number							Cycle Length									
Phase	1		2		3		4		5		6		7		8	
Split																
Phase	9		10		11		12		13		14		15		16	
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

TIME:																
Split Pattern Number							Cycle Time									
Phase	1		2		3		4		5		6		7		8	
Split																
Phase	9		10		11		12		13		14		15		16	
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

TIME:																
Split Pattern Number							Cycle Time									
Phase	1		2		3		4		5		6		7		8	
Split																
Phase	9		10		11		12		13		14		15		16	
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

Day Plan

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

Schedule

Schedule Number	1
Day Plan Number	1

Month						
Jan	Feb	Mar	Apr	May	Jun
x	x	x	x	x	x
Jul	Aug	Sep	Oct	Nov	Dec
x	x	x	x	x	x

Day Of Week (DOW)							
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
	x	x	x	x	x	

Day Of Month (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 (Cont)

Schedule Number	
Day Plan Number	

Month	Jan	Feb	Mar	Apr	May	Jun
	Jul	Aug	Sep	Oct	Nov	Dec

Day Of Week (DOW)	Sun	Mon	Tues	Wed	Thurs	Fri	Sat

Day Of Month (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	
Day Plan Number	

Month	Jan	Feb	Mar	Apr	May	Jun
	Jul	Aug	Sep	Oct	Nov	Dec

Day Of Week (DOW)	Sun	Mon	Tues	Wed	Thurs	Fri	Sat

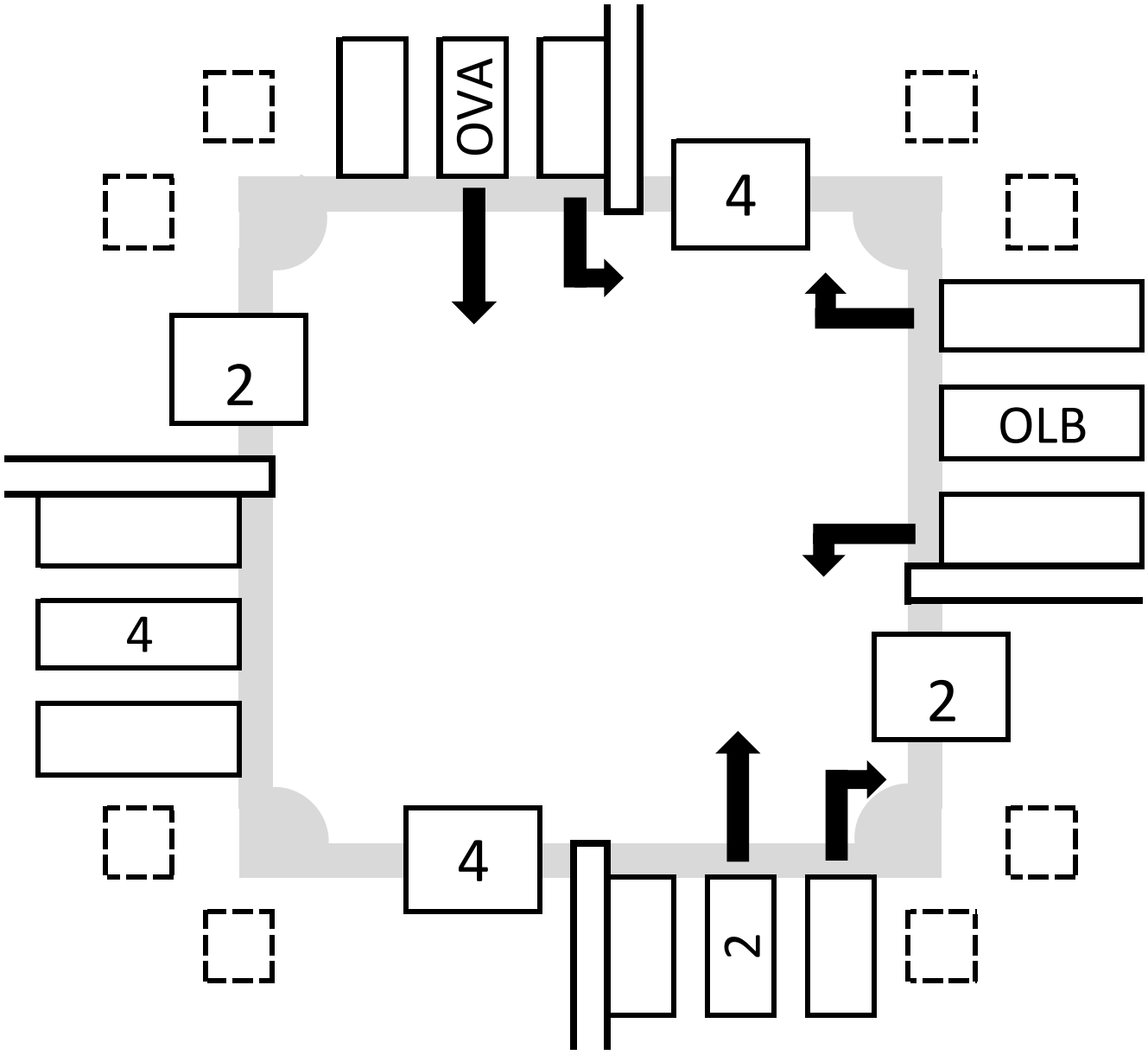
Day Of Month (DOM)											
	1	2	3	4	5	6	7	8	9	10	11
	12	13	14	15	16	17	18	19	20	21	22
	23	24	25	26	27	28	29	30	31		

Program Reference Card

N

Intersection : Bronte St S & Laurier Ave

Controller #: ASC/3 **Date:** 07/2012



Cabinet Installed:

Controller Timing Data

Timing Plan 1																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green		20	5	10												
Delayed Green																
Walk		7		7												
Walk 2																
Walk Max																
Pedestrian Clearance		15		15												
Pedestrian Clearance 2																
Pedestrian Clearance Max																
Vehicle Extension		5.0		5.0												
Vehicle Extension 2																
Max 1		60		30												
Max 2																
Max 3																
Dynamic Max																
Dynamic Max Step																
Yellow Change		4.0		4.0												
Red Clearance		1.0		1.0												
Red Revert		2.0		2.0												

Coordinator Options

Coord Options			
Manual Pattern	AUTO	ECPI Coord	YES
System Source	SYS	System Format	SID
Splits In	SECONDS	Offset IN	SECONDS
Transition	SMOOTH	Max Select	MAXINH
Dwell/Add Time	0	Enable Man Sync	NO
DLY Coord WK-LZ	NO	No Force Off	FLOAT
Offset Ref	LEAD	Lead Cal Use Ped Tm	YES
Ped Recall	NO	Ped Reserve	NO
Local Zero Ovrd	NO	FO Add INI Green	NO
Re-Sync Count	0	Multisync	NO

Coordinator Pattern **Time Period** AM

Coordinator Pattern			
Use Split Pattern 1			
TS2 Pattern/Offset			
Cycle		STD(COS)	
Offset Val			
Actuated Coord		Timing Plan	
Act Walk Resto		Sequence	
Phase Resrvce 0		Action Plan	

Split Preference Phases								
Phases	1	2	3	4	5	6	7	8
SPT								
Pref 1								
Pref2								
Splt Ext								
Veh Perm				Disp				
Ring Disp					(Ring 2-4)			

Split Preference Phases								
Phases	9	10	11	12	13	14	15	16
SPT								
Pref 1								
Pref2								

Split Demand Ptrn		Xart Ptrn	

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Recal																
PD Recal																
MX Recal																
OMIT																
SF OUT									(1-8)							

Coordinator Pattern **Time Period** PM

Coordinator Pattern								
Use Split Pattern 1								
TS2 Pattern/Offset								
Cycle				STD(COS)				
Offset Val								
Actuated Coord				Timing Plan				
Act Walk Resto				Sequence				
Phase Resrvce 0				Action Plan				
Split Preference Phases								
Phases	1	2	3	4	5	6	7	8
SPT								
Pref 1								
Pref2								
Splt Ext								
Veh Perm				Disp				
Ring Disp					(Ring 2-4)			
Split Preference Phases								
Phases	9	10	11	12	13	14	15	16
SPT								
Pref 1								
Pref2								
Split Demand Ptrn					Xart Ptrn			

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Recal																
PD Recal																
MX Recal																
OMIT																
SF OUT									(1-8)							

Split Pattern

TIME:																
Split Pattern Number							Cycle Length									
Phase	1		2		3		4		5		6		7		8	
Split																
Phase	9		10		11		12		13		14		15		16	
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

TIME:																
Split Pattern Number							Cycle Time									
Phase	1		2		3		4		5		6		7		8	
Split																
Phase	9		10		11		12		13		14		15		16	
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

TIME:																
Split Pattern Number							Cycle Time									
Phase	1		2		3		4		5		6		7		8	
Split																
Phase	9		10		11		12		13		14		15		16	
Split Value																
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord																
VE Rcal																
PD Rcal																
MX Rcall																
OMIT																

Day Plan

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

Schedule

Schedule Number	1
Day Plan Number	1

Month						
Jan	Feb	Mar	Apr	May	Jun
x	x	x	x	x	x
Jul	Aug	Sep	Oct	Nov	Dec
x	x	x	x	x	x

Day Of Week (DOW)							
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
	x	x	x	x	x	

Day Of Month (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 (Cont)

Schedule Number	
Day Plan Number	

Month	Jan	Feb	Mar	Apr	May	Jun
	Jul	Aug	Sep	Oct	Nov	Dec

Day Of Week (DOW)	Sun	Mon	Tues	Wed	Thurs	Fri	Sat

Day Of Month (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	
Day Plan Number	

Month	Jan	Feb	Mar	Apr	May	Jun
	Jul	Aug	Sep	Oct	Nov	Dec

Day Of Week (DOW)	Sun	Mon	Tues	Wed	Thurs	Fri	Sat

Day Of Month (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		

Appendix J:
Intergreen Study

Project Number: 7036-47
Project Name: Derry Heights Plaza
Study Location: Derry Road and Bronte Street South
Municipality: Milton
Study Date: Thursday June 26, 2025
Study Time: 8:00-9:00

INTERGREEN STUDY

Northbound Left Turn

Start	Cycle	Advance Cycle				Regular Cycle				Total			
Time	No.	Green	Amber	Red	Total	Green	Amber	Red	Total	Green	Amber	Red	Total
8:00:29	1	0	0	0	0	6	0	0	6	6	0	0	6
8:02:29	2	0	0	0	0	0	0	0	0	0	0	0	0
8:04:29	3	3	1	0	4	5	0	2	7	8	1	2	11
8:06:29	4	0	0	0	0	0	0	0	0	0	0	0	0
8:08:29	5	3	0	1	4	1	0	0	1	4	0	1	5
8:10:29	6	0	0	0	0	0	0	0	0	0	0	0	0
8:12:29	7	2	0	0	2	0	0	0	0	2	0	0	2
8:14:29	8	2	2	1	5	0	0	1	1	2	2	2	6
8:16:29	9	0	0	0	0	1	0	1	2	1	0	1	2
8:18:29	10	2	2	1	5	1	1	0	2	3	3	1	7
8:20:29	11	1	2	0	3	1	1	0	2	2	3	0	5
8:22:29	12	2	0	0	2	2	0	0	2	4	0	0	4
8:24:29	13	2	1	0	3	1	0	0	1	3	1	0	4
8:26:29	14	2	2	0	4	4	0	0	4	6	2	0	8
8:28:29	15	2	2	0	4	1	2	1	4	3	4	1	8
8:30:29	16	0	0	0	0	3	2	0	5	3	2	0	5
8:32:29	17	2	2	0	4	2	0	0	2	4	2	0	6
8:34:29	18	2	2	2	6	2	2	0	4	4	4	2	10
8:36:29	19	2	1	0	3	3	0	0	3	5	1	0	6
8:38:29	20	2	1	0	3	1	1	1	3	3	2	1	6
8:40:29	21	2	2	0	4	0	0	1	1	2	2	1	5
8:42:29	22	0	0	0	0	1	1	0	2	1	1	0	2
8:44:29	23	2	2	0	4	1	0	1	2	3	2	1	6
8:46:29	24	2	2	0	4	4	1	0	5	6	3	0	9
8:48:29	25	0	0	0	0	3	1	0	4	3	1	0	4
8:50:29	26	1	1	1	3	3	0	0	3	4	1	1	6
8:52:29	27	2	1	0	3	0	0	0	0	2	1	0	3
8:54:29	28	1	1	1	3	1	0	0	1	2	1	1	4
8:56:29	29	0	0	0	0	3	1	1	5	3	1	1	5
8:58:29	30	0	0	0	0	1	0	2	3	1	0	2	3
Total		**39**	**27**	**7**	**73**	**51**	**13**	**11**	**75**	**90**	**40**	**18**	**148**
Vehicles per Cycle		**1.30**	**0.90**	**0.23**	**2.43**	**1.70**	**0.43**	**0.37**	**2.50**	**3.00**	**1.33**	**0.60**	**4.93**

Total Sneakers **1.93**

Project Number: 7036-47
Project Name: Derry Heights Plaza
Study Location: Derry Road and Bronte Street South
Municipality: Milton
Study Date: Thursday June 26, 2025
Study Time: 8:00-9:00

INTERGREEN STUDY

Southbound Left Turn

Start	Cycle	Advance Cycle				Regular Cycle				Total			
Time	No.	Green	Amber	Red	Total	Green	Amber	Red	Total	Green	Amber	Red	Total
8:00:29	1	1	2	0	3	2	1	0	3	3	3	0	6
8:02:29	2	0	0	0	0	1	0	0	1	1	0	0	1
8:04:29	3	2	1	0	3	1	0	0	1	3	1	0	4
8:06:29	4	0	0	0	0	3	0	0	3	3	0	0	3
8:08:29	5	3	2	0	5	1	0	2	3	4	2	2	8
8:10:29	6	3	2	0	5	2	2	1	5	5	4	1	10
8:12:29	7	2	1	0	3	0	0	0	0	2	1	0	3
8:14:29	8	0	0	0	0	4	0	2	6	4	0	2	6
8:16:29	9	0	0	0	0	1	0	0	1	1	0	0	1
8:18:29	10	2	1	0	3	1	2	0	3	3	3	0	6
8:20:29	11	2	2	1	5	1	1	0	2	3	3	1	7
8:22:29	12	0	0	0	0	5	0	0	5	5	0	0	5
8:24:29	13	0	0	0	0	5	0	0	5	5	0	0	5
8:26:29	14	1	1	0	2	1	0	2	3	2	1	2	5
8:28:29	15	2	1	1	4	1	2	0	3	3	3	1	7
8:30:29	16	0	0	0	0	1	0	1	2	1	0	1	2
8:32:29	17	2	1	2	5	0	0	0	0	2	1	2	5
8:34:29	18	2	0	1	3	0	0	1	1	2	0	2	4
8:36:29	19	2	2	0	4	2	0	0	2	4	2	0	6
8:38:29	20	0	0	0	0	3	0	3	6	3	0	3	6
8:40:29	21	3	1	1	5	4	0	0	4	7	1	1	9
8:42:29	22	0	0	0	0	2	0	1	3	2	0	1	3
8:44:29	23	2	1	1	4	1	1	0	2	3	2	1	6
8:46:29	24	2	1	2	5	5	0	0	5	7	1	2	10
8:48:29	25	0	0	0	0	2	0	1	3	2	0	1	3
8:50:29	26	2	2	1	5	0	0	1	1	2	2	2	6
8:52:29	27	0	0	0	0	3	0	1	4	3	0	1	4
8:54:29	28	2	2	0	4	3	0	0	3	5	2	0	7
8:56:29	29	4	0	0	4	0	0	2	2	4	0	2	6
8:58:29	30	0	0	0	0	4	1	0	5	4	1	0	5
Total		**39**	**23**	**10**	**72**	**59**	**10**	**18**	**87**	**98**	**33**	**28**	**159**
Vehicles per Cycle		**1.30**	**0.77**	**0.33**	**2.40**	**1.97**	**0.33**	**0.60**	**2.90**	**3.27**	**1.10**	**0.93**	**5.30**

Total Sneakers **2.03**

Project Number: 7036-47
Project Name: Derry Heights Plaza
Study Location: Derry Road and Bronte Street South
Municipality: Milton
Study Date: Thursday June 26, 2025
Study Time: 8:00-9:00

INTERGREEN STUDY

Westbound Left Turn

Start	Cycle	Advance Cycle				Regular Cycle				Total			
Time	No.	Green	Amber	Red	Total	Green	Amber	Red	Total	Green	Amber	Red	Total
8:01:25	1	4	0	0	4	0	0	0	0	4	0	0	4
8:03:02	2	0	0	0	0	1	0	0	1	1	0	0	1
8:05:28	3	0	0	0	0	0	0	0	0	0	0	0	0
8:07:02	4	0	0	0	0	1	0	0	1	1	0	0	1
8:09:28	5	0	0	0	0	1	0	0	1	1	0	0	1
8:11:16	6	1	0	0	1	3	0	0	3	4	0	0	4
8:13:18	7	0	0	0	0	0	0	0	0	0	0	0	0
8:15:13	8	0	0	0	0	2	0	0	2	2	0	0	2
8:17:03	9	0	0	0	0	3	0	0	3	3	0	0	3
8:19:28	10	0	0	0	0	3	0	0	3	3	0	0	3
8:21:36	11	0	0	0	0	3	0	0	3	3	0	0	3
8:23:39	12	4	0	0	4	0	0	1	1	4	0	1	5
8:25:19	13	0	0	0	0	2	0	0	2	2	0	0	2
8:27:28	14	0	0	0	0	0	0	0	0	0	0	0	0
8:29:28	15	0	0	0	0	2	0	0	2	2	0	0	2
8:31:15	16	0	0	0	0	2	0	0	2	2	0	0	2
8:33:34	17	2	0	0	2	1	0	0	1	3	0	0	3
8:35:27	18	0	0	0	0	1	0	0	1	1	0	0	1
8:37:18	19	1	0	0	1	1	0	0	1	2	0	0	2
8:39:40	20	3	0	0	3	0	0	0	0	3	0	0	3
8:41:39	21	2	0	0	2	0	0	2	2	2	0	2	4
8:43:15	22	0	0	0	0	0	0	0	0	0	0	0	0
8:45:27	23	0	0	0	0	2	0	0	2	2	0	0	2
8:47:27	24	2	0	0	2	0	0	0	0	2	0	0	2
8:49:15	25	0	0	0	0	4	2	0	6	4	2	0	6
8:51:27	26	0	0	0	0	1	0	0	1	1	0	0	1
8:53:28	27	4	0	0	4	0	0	0	0	4	0	0	4
8:55:24	28	0	0	0	0	3	0	0	3	3	0	0	3
8:57:39	29	3	0	0	3	0	0	1	1	3	0	1	4
Total		**26**	**0**	**0**	**26**	**36**	**2**	**4**	**42**	**62**	**2**	**4**	**68**
Vehicles per Cycle		**0.90**	**0.00**	**0.00**	**0.90**	**1.24**	**0.07**	**0.14**	**1.45**	**2.14**	**0.07**	**0.14**	**2.34**

Total Sneakers **0.21**

Project Number: 7036-47
Project Name: Derry Heights Plaza
Study Location: Derry Road and Bronte Street South
Municipality: Milton
Study Date: Thursday June 26, 2025
Study Time: 8:00-9:00

INTERGREEN STUDY

Eastbound Left Turn

Start	Cycle	Advance Cycle				Regular Cycle				Total			
Time	No.	Green	Amber	Red	Total	Green	Amber	Red	Total	Green	Amber	Red	Total
8:01:25	1	5	0	0	5	3	1	0	4	8	1	0	9
8:03:02	2	0	0	0	0	8	0	0	8	8	0	0	8
8:05:28	3	5	0	0	5	4	1	0	5	9	1	0	10
8:07:02	4	0	0	0	0	6	0	0	6	6	0	0	6
8:09:28	5	0	0	0	0	8	0	0	8	8	0	0	8
8:11:16	6	4	2	0	6	1	0	0	1	5	2	0	7
8:13:18	7	3	0	0	3	1	1	0	2	4	1	0	5
8:15:13	8	3	0	0	3	4	1	0	5	7	1	0	8
8:17:03	9	4	0	0	4	4	0	0	4	8	0	0	8
8:19:28	10	3	1	0	4	2	0	0	2	5	1	0	6
8:21:36	11	0	0	0	0	1	0	0	1	1	0	0	1
8:23:39	12	0	0	0	0	4	2	0	6	4	2	0	6
8:25:19	13	0	0	0	0	5	0	0	5	5	0	0	5
8:27:28	14	0	0	0	0	1	0	0	1	1	0	0	1
8:29:28	15	5	0	0	5	1	1	1	3	6	1	1	8
8:31:15	16	0	0	0	0	5	0	0	5	5	0	0	5
8:33:34	17	0	0	0	0	5	0	0	5	5	0	0	5
8:35:27	18	0	0	0	0	8	1	0	9	8	1	0	9
8:37:18	19	1	0	0	1	4	0	0	4	5	0	0	5
8:39:40	20	0	0	0	0	7	0	0	7	7	0	0	7
8:41:39	21	0	0	0	0	4	0	0	4	4	0	0	4
8:43:15	22	0	0	0	0	5	0	0	5	5	0	0	5
8:45:27	23	0	0	0	0	8	1	0	9	8	1	0	9
8:47:27	24	3	0	0	3	3	0	1	4	6	0	1	7
8:49:15	25	5	0	0	5	6	0	0	6	11	0	0	11
8:51:27	26	2	0	0	2	3	0	1	4	5	0	1	6
8:53:28	27	5	0	0	5	1	1	0	2	6	1	0	7
8:55:24	28	0	0	0	0	9	0	0	9	9	0	0	9
8:57:39	29	0	0	0	0	2	0	2	4	2	0	2	4
Total		**48**	**3**	**0**	**51**	**123**	**10**	**5**	**138**	**171**	**13**	**5**	**189**
Vehicles per Cycle		**1.66**	**0.10**	**0.00**	**1.76**	**4.24**	**0.34**	**0.17**	**4.76**	**5.90**	**0.45**	**0.17**	**6.52**

Total Sneakers **0.62**

Project Number: 7036-47
Project Name: Derry Heights Plaza
Study Location: Derry Road and Bronte Street South
Municipality: Milton
Study Date: Thursday June 26, 2025
Study Time: 17:00-18:00

INTERGREEN STUDY

Northbound Left Turn

Start	Cycle	Advance Cycle				Regular Cycle				Total			
Time	No.	Green	Amber	Red	Total	Green	Amber	Red	Total	Green	Amber	Red	Total
16:59:57	1	3	2	0	5	0	1	1	2	3	3	1	7
17:01:57	2	2	2	0	4	0	0	1	1	2	2	1	5
17:03:57	3	2	1	0	3	0	0	2	2	2	1	2	5
17:05:57	4	2	2	0	4	0	0	2	2	2	2	2	6
17:07:57	5	3	2	0	5	0	0	2	2	3	2	2	7
17:09:57	6	0	0	0	0	2	2	0	4	2	2	0	4
17:11:57	7	3	2	0	5	0	0	2	2	3	2	2	7
17:13:57	8	3	2	0	5	0	1	1	2	3	3	1	7
17:15:57	9	0	0	0	0	3	2	0	5	3	2	0	5
17:17:57	10	3	2	0	5	1	2	0	3	4	4	0	8
17:19:57	11	2	2	1	5	1	1	0	2	3	3	1	7
17:21:57	12	3	2	0	5	0	0	0	0	3	2	0	5
17:23:57	13	1	1	1	3	0	0	3	3	1	1	4	6
17:25:57	14	2	2	0	4	1	3	0	4	3	5	0	8
17:27:57	15	3	2	0	5	0	0	1	1	3	2	1	6
17:29:57	16	3	2	0	5	3	2	0	5	6	4	0	10
17:31:57	17	0	2	0	2	1	0	1	2	1	2	1	4
17:33:57	18	1	2	0	3	0	1	1	2	1	3	1	5
17:35:57	19	2	1	0	3	1	2	0	3	3	3	0	6
17:37:57	20	3	3	0	6	0	0	3	3	3	3	3	9
17:39:57	21	2	1	0	3	0	1	0	1	2	2	0	4
17:41:57	22	2	2	0	4	0	0	2	2	2	2	2	6
17:43:57	23	3	2	0	5	2	0	1	3	5	2	1	8
17:45:57	24	3	2	0	5	1	0	0	1	4	2	0	6
17:47:57	25	0	0	0	0	0	0	3	3	0	0	3	3
17:49:57	26	3	1	0	4	4	0	0	4	7	1	0	8
17:51:57	27	3	2	0	5	0	1	0	1	3	3	0	6
17:53:57	28	2	1	0	3	1	0	1	2	3	1	1	5
17:55:57	29	2	2	0	4	0	0	2	2	2	2	2	6
17:57:57	30	3	2	0	5	0	0	2	2	3	2	2	7
Total		**64**	**49**	**2**	**115**	**21**	**19**	**31**	**71**	**85**	**68**	**33**	**186**
Vehicles per Cycle		**2.13**	**1.63**	**0.07**	**3.83**	**0.70**	**0.63**	**1.03**	**2.37**	**2.83**	**2.27**	**1.10**	**6.20**

Total Sneakers **3.37**

Project Number: 7036-47
Project Name: Derry Heights Plaza
Study Location: Derry Road and Bronte Street South
Municipality: Milton
Study Date: Thursday June 26, 2025
Study Time: 17:00-18:00

INTERGREEN STUDY

Southbound Left Turn

Start	Cycle	Advance Cycle				Regular Cycle				Total			
Time	No.	Green	Amber	Red	Total	Green	Amber	Red	Total	Green	Amber	Red	Total
16:59:57	1	0	0	0	0	2	1	0	3	2	1	0	3
17:01:57	2	0	0	0	0	2	0	1	3	2	0	1	3
17:03:57	3	0	0	0	0	9	1	0	10	9	1	0	10
17:05:57	4	1	2	2	5	1	0	0	1	2	2	2	6
17:07:57	5	3	1	0	4	3	1	0	4	6	2	0	8
17:09:57	6	2	0	0	2	1	1	1	3	3	1	1	5
17:11:57	7	2	2	0	4	1	0	1	2	3	2	1	6
17:13:57	8	2	2	0	4	0	1	0	1	2	3	0	5
17:15:57	9	2	2	2	6	0	1	1	2	2	3	3	8
17:17:57	10	3	1	0	4	3	1	1	5	6	2	1	9
17:19:57	11	2	2	1	5	2	0	1	3	4	2	2	8
17:21:57	12	0	0	0	0	3	1	0	4	3	1	0	4
17:23:57	13	1	2	2	5	2	0	0	2	3	2	2	7
17:25:57	14	0	0	0	0	1	0	2	3	1	0	2	3
17:27:57	15	0	0	0	0	1	2	0	3	1	2	0	3
17:29:57	16	3	1	2	6	2	1	1	4	5	2	3	10
17:31:57	17	1	1	3	5	3	0	0	3	4	1	3	8
17:33:57	18	2	1	0	3	0	1	1	2	2	2	1	5
17:35:57	19	3	2	1	6	0	1	1	2	3	3	2	8
17:37:57	20	2	2	1	5	2	0	0	2	4	2	1	7
17:39:57	21	1	2	1	4	0	0	2	2	1	2	3	6
17:41:57	22	2	1	1	4	5	1	0	6	7	2	1	10
17:43:57	23	3	1	0	4	0	2	0	2	3	3	0	6
17:45:57	24	3	1	0	4	1	0	1	2	4	1	1	6
17:47:57	25	0	0	0	0	0	1	0	1	0	1	0	1
17:49:57	26	2	1	0	3	2	0	0	2	4	1	0	5
17:51:57	27	0	0	0	0	2	2	0	4	2	2	0	4
17:53:57	28	2	2	0	4	1	0	2	3	3	2	2	7
17:55:57	29	2	1	0	3	0	0	0	0	2	1	0	3
17:57:57	30	0	0	1	1	4	2	0	6	4	2	1	7
Total		**44**	**30**	**17**	**91**	**53**	**21**	**16**	**90**	**97**	**51**	**33**	**181**
Vehicles per Cycle		**1.47**	**1.00**	**0.57**	**3.03**	**1.77**	**0.70**	**0.53**	**3.00**	**3.23**	**1.70**	**1.10**	**6.03**

Total Sneakers **2.80**

Project Number: 7036-47
Project Name: Derry Heights Plaza
Study Location: Derry Road and Bronte Street South
Municipality: Milton
Study Date: Thursday June 26, 2025
Study Time: 17:00-18:00

INTERGREEN STUDY

Westbound Left Turn

Start	Cycle	Advance Cycle				Regular Cycle				Total			
Time	No.	Green	Amber	Red	Total	Green	Amber	Red	Total	Green	Amber	Red	Total
17:00:57	1	2	0	0	2	0	0	1	1	2	0	1	3
17:02:57	2	0	0	0	0	2	0	1	3	2	0	1	3
17:04:57	3	3	1	1	5	1	0	1	2	4	1	2	7
17:06:57	4	3	1	0	4	1	0	0	1	4	1	0	5
17:08:57	5	0	0	0	0	2	1	0	3	2	1	0	3
17:10:57	6	0	0	0	0	2	1	0	3	2	1	0	3
17:12:57	7	2	1	0	3	3	0	0	3	5	1	0	6
17:14:57	8	0	0	0	0	3	2	0	5	3	2	0	5
17:16:57	9	0	0	0	0	3	1	0	4	3	1	0	4
17:18:57	10	0	0	0	0	2	0	1	3	2	0	1	3
17:20:57	11	0	0	0	0	2	0	0	2	2	0	0	2
17:22:57	12	3	1	0	4	0	0	1	1	3	1	1	5
17:24:57	13	2	2	1	5	0	0	1	1	2	2	2	6
17:26:57	14	0	0	0	0	2	0	1	3	2	0	1	3
17:28:57	15	3	2	0	5	0	0	0	0	3	2	0	5
17:30:57	16	0	0	0	0	3	0	0	3	3	0	0	3
17:32:57	17	0	0	0	0	2	0	1	3	2	0	1	3
17:34:57	18	3	2	0	5	1	0	2	3	4	2	2	8
17:36:57	19	2	2	0	4	2	0	0	2	4	2	0	6
17:38:57	20	2	1	0	3	2	0	2	4	4	1	2	7
17:40:57	21	2	1	0	3	3	0	1	4	5	1	1	7
17:42:57	22	0	0	0	0	4	0	0	4	4	0	0	4
17:44:57	23	1	0	0	1	1	0	2	3	2	0	2	4
17:46:57	24	2	1	0	3	0	0	2	2	2	1	2	5
17:48:57	25	0	0	0	0	3	0	2	5	3	0	2	5
17:50:57	26	3	2	0	5	0	0	1	1	3	2	1	6
17:52:57	27	1	0	0	1	1	0	1	2	2	0	1	3
17:54:57	28	2	0	1	3	1	2	0	3	3	2	1	6
17:56:57	29	0	0	0	0	1	1	2	4	1	1	2	4
17:58:57	39	2	2	1	5	0	0	2	2	2	2	3	7
Total		**38**	**19**	**4**	**61**	**47**	**8**	**25**	**80**	**85**	**27**	**29**	**141**
Vehicles per Cycle		**0.97**	**0.49**	**0.10**	**1.56**	**1.21**	**0.21**	**0.64**	**2.05**	**2.18**	**0.69**	**0.74**	**3.62**

Total Sneakers **1.44**

Project Number: 7036-47
Project Name: Derry Heights Plaza
Study Location: Derry Road and Bronte Street South
Municipality: Milton
Study Date: Thursday June 26, 2025
Study Time: 17:00-18:00

INTERGREEN STUDY

Eastbound Left Turn

Start	Cycle	Advance Cycle				Regular Cycle				Total			
Time	No.	Green	Amber	Red	Total	Green	Amber	Red	Total	Green	Amber	Red	Total
17:00:57	1	3	1	0	4	2	2	0	4	5	3	0	8
17:02:57	2	3	2	0	5	0	0	2	2	3	2	2	7
17:04:57	3	2	2	0	4	0	0	2	2	2	2	2	6
17:06:57	4	3	2	0	5	0	0	1	1	3	2	1	6
17:08:57	5	2	2	1	5	0	0	2	2	2	2	3	7
17:10:57	6	3	2	0	5	1	1	0	2	4	3	0	7
17:12:57	7	2	2	1	5	0	1	0	1	2	3	1	6
17:14:57	8	2	2	2	6	2	1	0	3	4	3	2	9
17:16:57	9	2	2	0	4	0	0	1	1	2	2	1	5
17:18:57	10	2	2	1	5	1	1	0	2	3	3	1	7
17:20:57	11	0	0	0	0	1	0	3	4	1	0	3	4
17:22:57	12	3	0	0	3	0	0	2	2	3	0	2	5
17:24:57	13	3	2	0	5	0	0	2	2	3	2	2	7
17:26:57	14	2	2	1	5	0	1	0	1	2	3	1	6
17:28:57	15	3	1	0	4	2	0	2	4	5	1	2	8
17:30:57	16	2	1	0	3	1	2	0	3	3	3	0	6
17:32:57	17	2	2	0	4	0	0	2	2	2	2	2	6
17:34:57	18	3	1	0	4	0	0	2	2	3	1	2	6
17:36:57	19	2	1	0	3	0	0	2	2	2	1	2	5
17:38:57	20	3	1	0	4	0	0	2	2	3	1	2	6
17:40:57	21	2	2	0	4	4	1	0	5	6	3	0	9
17:42:57	22	2	2	1	5	0	0	1	1	2	2	2	6
17:44:57	23	3	1	0	4	0	0	1	1	3	1	1	5
17:46:57	24	2	1	0	3	0	0	2	2	2	1	2	5
17:48:57	25	3	1	0	4	4	0	2	6	7	1	2	10
17:50:57	26	2	2	0	4	0	0	1	1	2	2	1	5
17:52:57	27	2	2	0	4	0	0	2	2	2	2	2	6
17:54:57	28	2	2	0	4	1	0	2	3	3	2	2	7
17:56:57	29	2	1	1	4	1	1	1	3	3	2	2	7
17:58:57	39	3	1	0	4	0	0	2	2	3	1	2	6
Total		**70**	**45**	**8**	**123**	**20**	**11**	**39**	**70**	**90**	**56**	**47**	**193**
Vehicles per Cycle		**1.79**	**1.15**	**0.21**	**3.15**	**0.51**	**0.28**	**1.00**	**1.79**	**2.31**	**1.44**	**1.21**	**4.95**

Total Sneakers **2.64**

Project Number: 7036-47
Project Name: Derry Heights Plaza
Study Location: Derry Road and Bronte Street South
Municipality: Milton
Study Date: Saturday September 6, 2025
Study Time: 12:00-13:00

INTERGREEN STUDY

Northbound Left Turn

Start	Cycle	Advance Cycle				Regular Cycle				Total			
Time	No.	Green	Amber	Red	Total	Green	Amber	Red	Total	Green	Amber	Red	Total
12:01:15	1	2	0	0	2	0	1	0	1	2	1	0	3
12:03:00	2	0	0	0	0	4	0	0	4	4	0	0	4
12:04:32	3	0	0	0	0	0	1	0	1	0	1	0	1
12:06:16	4	0	0	0	0	1	1	1	3	1	1	1	3
12:07:26	5	0	0	0	0	1	1	1	3	1	1	1	3
12:08:38	6	0	0	0	0	1	0	0	1	1	0	0	1
12:09:48	7	3	0	0	3	0	0	1	1	3	0	1	4
12:11:27	8	0	0	0	0	0	0	1	1	0	0	1	1
12:13:17	9	4	0	0	4	0	0	0	0	4	0	0	4
12:15:25	10	4	1	0	5	0	0	2	2	4	1	2	7
12:17:08	11	3	0	0	3	0	0	1	1	3	0	1	4
12:18:42	12	6	0	0	6	0	0	1	1	6	0	1	7
12:20:21	13	0	0	0	0	0	0	2	2	0	0	2	2
12:21:33	14	4	0	0	4	0	1	0	1	4	1	0	5
12:22:43	15	0	0	0	0	2	0	0	2	2	0	0	2
12:24:16	16	3	0	0	3	0	1	0	1	3	1	0	4
12:26:12	17	4	0	0	4	3	0	0	3	7	0	0	7
12:28:13	18	0	0	0	0	5	0	2	7	5	0	2	7
12:29:34	19	0	0	0	0	0	2	0	2	0	2	0	2
12:30:50	20	0	0	0	0	4	1	1	6	4	1	1	6
12:32:22	21	2	0	0	2	1	0	0	1	3	0	0	3
12:34:06	22	0	0	0	0	0	0	2	2	0	0	2	2
12:35:37	23	6	0	0	6	1	1	0	2	7	1	0	8
12:37:17	24	0	0	0	0	0	0	2	2	0	0	2	2
12:38:33	25	3	0	0	3	0	1	0	1	3	1	0	4
12:40:35	26	0	0	0	0	0	0	2	2	0	0	2	2
12:42:08	27	0	0	0	0	1	1	1	3	1	1	1	3
12:43:23	28	0	0	0	0	0	1	1	2	0	1	1	2
12:44:47	29	4	0	0	4	0	0	1	1	4	0	1	5
12:46:35	30	1	0	0	1	2	2	0	4	3	2	0	5
12:48:08	31	4	0	0	4	0	0	0	0	4	0	0	4
12:49:47	32	0	0	0	0	0	0	1	1	0	0	1	1
12:51:02	33	0	0	0	0	1	0	0	1	1	0	0	1
12:52:20	34	7	0	0	7	1	0	1	2	8	0	1	9
12:53:55	35	0	0	0	0	0	0	0	0	0	0	0	0
12:54:54	36	0	0	0	0	3	0	0	3	3	0	0	3
12:56:11	37	6	0	0	6	0	0	0	0	6	0	0	6
12:58:17	38	5	0	0	5	0	0	0	0	5	0	0	5
Total		**71**	**1**	**0**	**72**	**31**	**15**	**24**	**70**	**102**	**16**	**24**	**142**
Vehicles per Cycle		**1.87**	**0.03**	**0.00**	**1.89**	**0.82**	**0.39**	**0.63**	**1.84**	**2.68**	**0.42**	**0.63**	**3.74**

Total Sneakers **1.05**

Project Number: 7036-47
Project Name: Derry Heights Plaza
Study Location: Derry Road and Bronte Street South
Municipality: Milton
Study Date: Saturday September 6, 2025
Study Time: 12:00-13:00

INTERGREEN STUDY

Southbound Left Turn

Start	Cycle	Advance Cycle				Regular Cycle				Total			
Time	No.	Green	Amber	Red	Total	Green	Amber	Red	Total	Green	Amber	Red	Total
12:01:15	1	0	0	0	0	1	0	2	3	1	0	2	3
12:03:00	2	0	0	0	0	3	3	0	6	3	3	0	6
12:04:32	3	0	0	0	0	1	2	1	4	1	2	1	4
12:06:16	4	6	2	0	8	0	1	0	1	6	3	0	9
12:07:26	5	0	0	0	0	5	0	0	5	5	0	0	5
12:08:38	6	0	0	0	0	2	0	0	2	2	0	0	2
12:09:48	7	5	1	0	6	0	2	0	2	5	3	0	8
12:11:27	8	0	0	0	0	0	0	2	2	0	0	2	2
12:13:17	9	0	0	0	0	13	2	1	16	13	2	1	16
12:15:25	10	0	0	0	0	6	0	0	6	6	0	0	6
12:17:08	11	6	0	0	6	2	0	1	3	8	0	1	9
12:18:42	12	0	0	0	0	9	1	0	10	9	1	0	10
12:20:21	13	0	0	0	0	3	2	1	6	3	2	1	6
12:21:33	14	0	0	0	0	5	0	0	5	5	0	0	5
12:22:43	15	0	0	0	0	2	0	0	2	2	0	0	2
12:24:16	16	0	0	0	0	5	0	1	6	5	0	1	6
12:26:12	17	5	0	0	5	3	1	0	4	8	1	0	9
12:28:13	18	3	0	0	3	0	1	1	2	3	1	1	5
12:29:34	19	0	0	0	0	2	1	1	4	2	1	1	4
12:30:50	20	0	0	0	0	2	0	1	3	2	0	1	3
12:32:22	21	0	0	0	0	3	0	0	3	3	0	0	3
12:34:06	22	4	0	0	4	0	1	1	2	4	1	1	6
12:35:37	23	0	0	0	0	5	0	0	5	5	0	0	5
12:37:17	24	1	0	0	1	0	1	1	2	1	1	1	3
12:38:33	25	6	0	0	6	0	0	2	2	6	0	2	8
12:40:35	26	3	0	0	3	0	0	0	0	3	0	0	3
12:42:08	27	0	0	0	0	0	2	1	3	0	2	1	3
12:43:23	28	0	0	0	0	0	2	0	2	0	2	0	2
12:44:47	29	4	2	0	6	0	0	3	3	4	2	3	9
12:46:35	30	2	0	0	2	0	1	0	1	2	1	0	3
12:48:08	31	3	0	0	3	1	0	0	1	4	0	0	4
12:49:47	32	0	0	0	0	3	0	0	3	3	0	0	3
12:51:02	33	3	0	0	3	0	1	0	1	3	1	0	4
12:52:20	34	1	0	0	1	0	1	0	1	1	1	0	2
12:53:55	35	0	0	0	0	1	0	2	3	1	0	2	3
12:54:54	36	0	0	0	0	3	0	0	3	3	0	0	3
12:56:11	37	3	0	0	3	2	0	0	2	5	0	0	5
12:58:17	38	4	0	0	4	0	0	0	0	4	0	0	4
Total		**59**	**5**	**0**	**64**	**82**	**25**	**22**	**129**	**141**	**30**	**22**	**193**
Vehicles per Cycle		**1.55**	**0.13**	**0.00**	**1.68**	**2.16**	**0.66**	**0.58**	**3.39**	**3.71**	**0.79**	**0.58**	**5.08**

Total Sneakers **1.37**

Project Number: 7036-47
Project Name: Derry Heights Plaza
Study Location: Derry Road and Bronte Street South
Municipality: Milton
Study Date: Saturday September 6, 2025
Study Time: 12:00-13:00

INTERGREEN STUDY

Westbound Left Turn

Start	Cycle	Advance Cycle				Regular Cycle				Total			
Time	No.	Green	Amber	Red	Total	Green	Amber	Red	Total	Green	Amber	Red	Total
12:00:29	1	0	0	0	0	2	0	0	2	2	0	0	2
12:02:01	2	0	0	0	0	3	0	0	3	3	0	0	3
12:03:47	3	0	0	0	0	1	1	0	2	1	1	0	2
12:05:18	4	0	0	0	0	3	0	0	3	3	0	0	3
12:06:37	5	0	0	0	0	6	0	0	6	6	0	0	6
12:07:56	6	0	0	0	0	2	0	0	2	2	0	0	2
12:09:03	7	0	0	0	0	0	0	0	0	0	0	0	0
12:10:40	8	0	0	0	0	2	0	0	2	2	0	0	2
12:12:12	9	0	0	0	0	1	0	0	1	1	0	0	1
12:14:22	10	5	0	0	5	2	0	0	2	7	0	0	7
12:16:20	11	0	0	0	0	1	0	0	1	1	0	0	1
12:17:38	12	4	0	0	4	0	0	0	0	4	0	0	4
12:19:35	13	0	0	0	0	0	2	0	2	0	2	0	2
12:20:53	14	0	0	0	0	2	2	0	4	2	2	0	4
12:22:17	15	0	0	0	0	0	0	0	0	0	0	0	0
12:23:30	16	0	0	0	0	3	0	0	3	3	0	0	3
12:25:13	17	3	0	0	3	0	0	0	0	3	0	0	3
12:27:13	18	2	0	0	2	0	0	0	0	2	0	0	2
12:29:00	19	0	0	0	0	2	0	0	2	2	0	0	2
12:30:08	20	0	0	0	0	2	0	0	2	2	0	0	2
12:31:35	21	0	0	0	0	2	0	1	3	2	0	1	3
12:33:03	22	0	0	0	0	1	0	0	1	1	0	0	1
12:34:39	23	0	0	0	0	5	1	0	6	5	1	0	6
12:36:28	24	0	0	0	0	0	3	0	3	0	3	0	3
12:37:47	25	0	0	0	0	2	0	0	2	2	0	0	2
12:39:26	26	3	0	0	3	2	0	0	2	5	0	0	5
12:41:05	27	0	0	0	0	6	0	0	6	6	0	0	6
12:42:37	28	0	0	0	0	2	0	0	2	2	0	0	2
12:43:57	29	0	0	0	0	4	0	0	4	4	0	0	4
12:45:39	30	3	0	0	3	0	0	0	0	3	0	0	3
12:47:16	31	1	0	0	1	0	0	0	0	1	0	0	1
12:49:06	32	0	0	0	0	0	2	0	2	0	2	0	2
12:50:20	33	1	0	0	1	0	0	0	0	1	0	0	1
12:51:35	34	0	0	0	0	2	0	0	2	2	0	0	2
12:53:25	35	0	0	0	0	0	0	0	0	0	0	0	0
12:54:29	36	0	0	0	0	2	0	0	2	2	0	0	2
12:55:25	37	0	0	0	0	0	1	1	2	0	1	1	2
12:57:15	38	0	0	0	0	2	0	1	3	2	0	1	3
12:59:08	39	0	0	0	0	1	1	0	2	1	1	0	2
Total		**22**	**0**	**0**	**22**	**63**	**13**	**3**	**79**	**85**	**13**	**3**	**101**
Vehicles per Cycle		**0.56**	**0.00**	**0.00**	**0.56**	**1.62**	**0.33**	**0.08**	**2.03**	**2.18**	**0.33**	**0.08**	**2.59**

Total Sneakers **0.41**

Project Number: 7036-47
Project Name: Derry Heights Plaza
Study Location: Derry Road and Bronte Street South
Municipality: Milton
Study Date: Saturday September 6, 2025
Study Time: 12:00-13:00

INTERGREEN STUDY

Eastbound Left Turn

Start	Cycle	Advance Cycle				Regular Cycle				Total			
Time	No.	Green	Amber	Red	Total	Green	Amber	Red	Total	Green	Amber	Red	Total
12:00:29	1	0	0	0	0	1	1	0	2	1	1	0	2
12:02:01	2	5	0	0	5	0	0	0	0	5	0	0	5
12:03:47	3	0	0	0	0	2	1	1	4	2	1	1	4
12:05:18	4	0	0	0	0	0	1	1	2	0	1	1	2
12:06:37	5	0	0	0	0	2	1	1	4	2	1	1	4
12:07:56	6	5	0	0	5	0	0	0	0	5	0	0	5
12:09:03	7	0	0	0	0	1	0	0	1	1	0	0	1
12:10:40	8	0	0	0	0	5	0	0	5	5	0	0	5
12:12:12	9	6	2	0	8	2	1	0	3	8	3	0	11
12:14:22	10	6	0	0	6	0	0	0	0	6	0	0	6
12:16:20	11	0	0	0	0	1	0	0	1	1	0	0	1
12:17:38	12	0	0	0	0	4	0	0	4	4	0	0	4
12:19:35	13	6	0	0	6	1	0	0	1	7	0	0	7
12:20:53	14	0	0	0	0	2	0	0	2	2	0	0	2
12:22:17	15	0	0	0	0	2	0	0	2	2	0	0	2
12:23:30	16	0	0	0	0	0	0	0	0	0	0	0	0
12:25:13	17	3	0	0	3	1	0	0	1	4	0	0	4
12:27:13	18	0	0	0	0	4	0	0	4	4	0	0	4
12:29:00	19	0	0	0	0	4	0	0	4	4	0	0	4
12:30:08	20	0	0	0	0	2	0	0	2	2	0	0	2
12:31:35	21	0	0	0	0	1	0	0	1	1	0	0	1
12:33:03	22	0	0	0	0	3	0	0	3	3	0	0	3
12:34:39	23	4	0	0	4	0	0	0	0	4	0	0	4
12:36:28	24	0	0	0	0	3	0	0	3	3	0	0	3
12:37:47	25	0	0	0	0	4	0	0	4	4	0	0	4
12:39:26	26	0	0	0	0	3	0	0	3	3	0	0	3
12:41:05	27	4	0	0	4	1	0	0	1	5	0	0	5
12:42:37	28	0	0	0	0	3	0	0	3	3	0	0	3
12:43:57	29	5	1	0	6	0	0	0	0	5	1	0	6
12:45:39	30	2	0	0	2	3	0	0	3	5	0	0	5
12:47:16	31	4	0	0	4	0	0	0	0	4	0	0	4
12:49:06	32	4	0	0	4	0	0	0	0	4	0	0	4
12:50:20	33	0	0	0	0	4	2	0	6	4	2	0	6
12:51:35	34	0	0	0	0	3	1	0	4	3	1	0	4
12:53:25	35	0	0	0	0	3	0	0	3	3	0	0	3
12:54:29	36	0	0	0	0	0	0	2	2	0	0	2	2
12:55:25	37	0	0	0	0	0	3	0	3	0	3	0	3
12:57:15	38	5	0	0	5	1	0	0	1	6	0	0	6
12:59:08	39	0	0	0	0	2	0	0	2	2	0	0	2
Total		**59**	**3**	**0**	**62**	**68**	**11**	**5**	**84**	**127**	**14**	**5**	**146**
Vehicles per Cycle		**1.51**	**0.08**	**0.00**	**1.59**	**1.74**	**0.28**	**0.13**	**2.15**	**3.26**	**0.36**	**0.13**	**3.74**

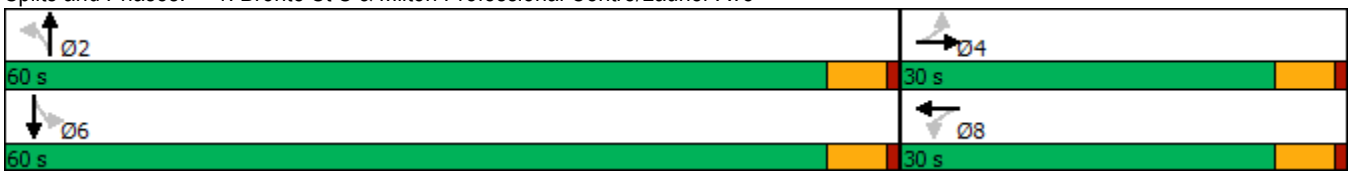
Total Sneakers **0.49**

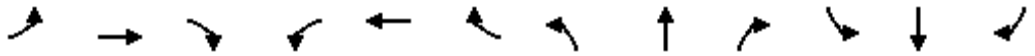
Appendix K:
Synchro Outputs

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	40	5	30	25	10	610	35	480
Future Volume (vph)	40	5	30	25	10	610	35	480
Lane Group Flow (vph)	0	62	34	124	11	719	39	573
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.20	0.11	0.27	0.02	0.62	0.12	0.50
Control Delay		15.0	16.1	8.2	4.6	9.7	5.9	8.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		15.0	16.1	8.2	4.6	9.7	5.9	8.0
Queue Length 50th (m)		2.9	1.9	1.6	0.4	36.3	1.3	25.8
Queue Length 95th (m)		12.5	8.7	13.2	1.8	65.5	4.6	46.4
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		760	785	980	736	1849	529	1806
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.08	0.04	0.13	0.01	0.39	0.07	0.32

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 43.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	5	10	30	25	85	10	610	30	35	480	30
Future Volume (vph)	40	5	10	30	25	85	10	610	30	35	480	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.98		1.00	0.88		1.00	0.99		1.00	0.99	
Flt Protected		0.96		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1776		1797	1622		1797	1849		1752	1807	
Flt Permitted		0.71		0.72	1.00		0.39	1.00		0.29	1.00	
Satd. Flow (perm)		1303		1355	1622		738	1849		529	1807	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	45	6	11	34	28	96	11	685	34	39	539	34
RTOR Reduction (vph)	0	9	0	0	78	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	53	0	34	46	0	11	717	0	39	571	0
Confl. Peds. (#/hr)	5		5	5		5	10					10
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	3%	3%	4%	4%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.1		8.1	8.1		26.3	26.3		26.3	26.3	
Effective Green, g (s)		8.1		8.1	8.1		26.3	26.3		26.3	26.3	
Actuated g/C Ratio		0.18		0.18	0.18		0.59	0.59		0.59	0.59	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		237		247	295		437	1095		313	1070	
v/s Ratio Prot					0.03			c0.39			0.32	
v/s Ratio Perm		c0.04		0.03			0.01			0.07		
v/c Ratio		0.22		0.14	0.15		0.03	0.65		0.12	0.53	
Uniform Delay, d1		15.5		15.2	15.3		3.7	6.0		4.0	5.4	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5		0.3	0.2		0.0	1.4		0.2	0.5	
Delay (s)		16.0		15.5	15.5		3.8	7.4		4.2	5.9	
Level of Service		B		B	B		A	A		A	A	
Approach Delay (s)		16.0			15.5			7.4			5.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	44.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

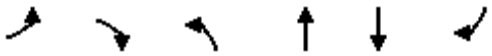
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	15	715	25	5	545
Future Volume (Veh/h)	15	15	715	25	5	545
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	17	794	28	6	606
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.77	0.67			0.67	
vC, conflicting volume	1436	818			832	
vC1, stage 1 conf vol	818					
vC2, stage 2 conf vol	618					
vCu, unblocked vol	885	490			510	
tC, single (s)	6.5	6.2			4.1	
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.3			2.2	
p0 queue free %	95	96			99	
cM capacity (veh/h)	366	390			713	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	34	822	612
Volume Left	17	0	6
Volume Right	17	28	0
cSH	378	1700	713
Volume to Capacity	0.09	0.48	0.01
Queue Length 95th (m)	2.4	0.0	0.2
Control Delay (s)	15.5	0.0	0.2
Lane LOS	C		A
Approach Delay (s)	15.5	0.0	0.2
Approach LOS	C		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	5	5	720	525	20
Future Volume (Veh/h)	0	5	5	720	525	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	6	6	828	603	23
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.74	0.84	0.84			
vC, conflicting volume	1464	624	636			
vC1, stage 1 conf vol	624					
vC2, stage 2 conf vol	840					
vCu, unblocked vol	975	461	475			
tC, single (s)	6.4	6.6	4.7			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.7	2.7			
p0 queue free %	100	99	99			
cM capacity (veh/h)	357	442	713			

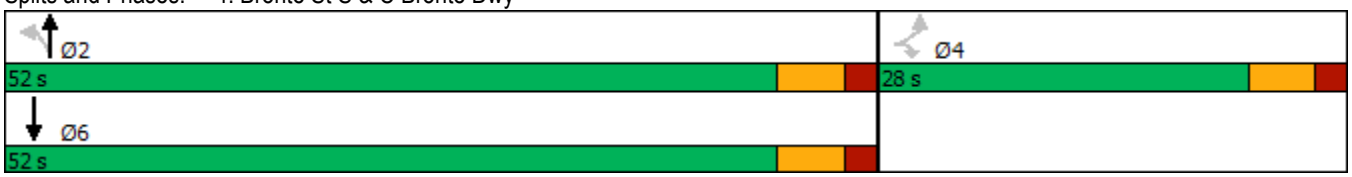
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	6	6	828	626
Volume Left	0	6	0	0
Volume Right	6	0	0	23
cSH	442	713	1700	1700
Volume to Capacity	0.01	0.01	0.49	0.37
Queue Length 95th (m)	0.3	0.2	0.0	0.0
Control Delay (s)	13.3	10.1	0.0	0.0
Lane LOS	B	B		
Approach Delay (s)	13.3	0.1		0.0
Approach LOS	B			

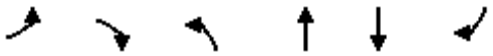
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	130	75	55	615	455
Future Volume (vph)	130	75	55	615	455
Lane Group Flow (vph)	146	84	62	691	612
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.34	0.19	0.13	0.61	0.29
Control Delay	19.4	6.6	7.0	11.3	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	6.6	7.0	11.3	6.2
Queue Length 50th (m)	9.7	0.0	2.4	39.1	12.6
Queue Length 95th (m)	29.2	9.2	8.0	82.0	24.2
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	877	820	741	1736	3182
Starvation Cap Reductn	0	0	0	17	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.10	0.08	0.40	0.19

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 46.2
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Bronte St S & C Bronte Dwy

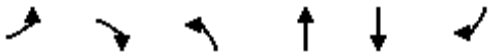




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	130	75	55	615	455	90
Future Volume (vph)	130	75	55	615	455	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1778	1575	1800	1863	3414	
Flt Permitted	0.95	1.00	0.42	1.00	1.00	
Satd. Flow (perm)	1778	1575	796	1863	3414	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	146	84	62	691	511	101
RTOR Reduction (vph)	0	68	0	0	21	0
Lane Group Flow (vph)	146	16	62	691	591	0
Confl. Peds. (#/hr)	5	5	5			5
Heavy Vehicles (%)	1%	1%	0%	2%	3%	1%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	8.8	8.8	26.5	26.5	26.5	
Effective Green, g (s)	8.8	8.8	26.5	26.5	26.5	
Actuated g/C Ratio	0.19	0.19	0.56	0.56	0.56	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	330	293	445	1043	1912	
v/s Ratio Prot				c0.37	0.17	
v/s Ratio Perm	c0.08	0.01	0.08			
v/c Ratio	0.44	0.05	0.14	0.66	0.31	
Uniform Delay, d1	17.1	15.8	5.0	7.3	5.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.1	0.1	1.6	0.1	
Delay (s)	18.0	15.9	5.1	8.9	5.6	
Level of Service	B	B	A	A	A	
Approach Delay (s)	17.2			8.6	5.6	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	47.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	40	0	665	515	15
Future Volume (Veh/h)	0	40	0	665	515	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	44	0	731	566	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.77	0.94	0.94			
vC, conflicting volume	1305	291	582			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	948	114	424			
tC, single (s)	6.8	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	100			
cM capacity (veh/h)	202	858	1076			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	44	731	377	205
Volume Left	0	0	0	0
Volume Right	44	0	0	16
cSH	858	1700	1700	1700
Volume to Capacity	0.05	0.43	0.22	0.12
Queue Length 95th (m)	1.3	0.0	0.0	0.0
Control Delay (s)	9.4	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.4	0.0	0.0	
Approach LOS	A			

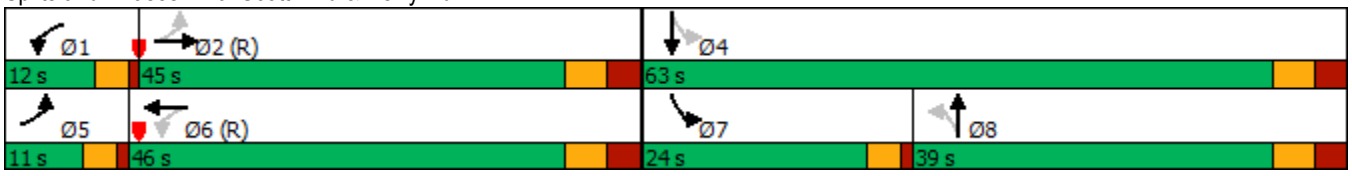
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		

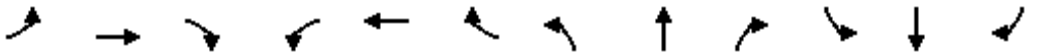
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	70	565	200	370	70	35	275	65
Future Volume (vph)	70	565	200	370	70	35	275	65
Lane Group Flow (vph)	74	654	213	564	74	399	293	165
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	45.0	12.0	46.0	39.0	39.0	24.0	63.0
Total Split (%)	9.2%	37.5%	10.0%	38.3%	32.5%	32.5%	20.0%	52.5%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.19	0.55	0.59	0.42	0.35	0.87	0.70	0.23
Control Delay	20.4	35.6	24.3	22.2	45.6	40.1	34.4	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	35.6	24.3	22.2	45.6	40.1	34.4	10.7
Queue Length 50th (m)	9.6	72.3	36.5	55.0	16.4	45.3	47.0	12.7
Queue Length 95th (m)	21.2	94.9	#71.4	76.1	28.1	76.6	71.5	23.8
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	397	1283	364	1404	326	588	428	826
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.51	0.59	0.40	0.23	0.68	0.68	0.20

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 109 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Scott Blvd & Derry Rd

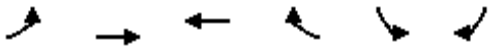




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	565	50	200	370	160	70	35	340	275	65	90
Future Volume (vph)	70	565	50	200	370	160	70	35	340	275	65	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.95		1.00	0.86		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1733	3417		1732	3296		1771	1588		1769	1640	
Flt Permitted	0.42	1.00		0.27	1.00		0.65	1.00		0.16	1.00	
Satd. Flow (perm)	762	3417		489	3296		1217	1588		302	1640	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	74	601	53	213	394	170	74	37	362	293	69	96
RTOR Reduction (vph)	0	5	0	0	36	0	0	184	0	0	47	0
Lane Group Flow (vph)	74	649	0	213	528	0	74	215	0	293	118	0
Confl. Peds. (#/hr)	5		15	15		5	10		10	10		10
Heavy Vehicles (%)	4%	4%	4%	4%	4%	3%	1%	3%	1%	2%	2%	6%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	48.4	42.0		57.6	47.2		20.7	20.7		48.6	48.6	
Effective Green, g (s)	48.4	42.0		57.6	47.2		20.7	20.7		48.6	48.6	
Actuated g/C Ratio	0.40	0.35		0.48	0.39		0.17	0.17		0.41	0.41	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	359	1195		354	1296		209	273		414	664	
v/s Ratio Prot	0.01	0.19		c0.06	0.16			0.14		c0.14	0.07	
v/s Ratio Perm	0.07			c0.23			0.06			c0.15		
v/c Ratio	0.21	0.54		0.60	0.41		0.35	0.79		0.71	0.18	
Uniform Delay, d1	22.3	31.3		19.9	26.3		43.8	47.6		27.6	22.9	
Progression Factor	1.00	1.00		0.78	0.81		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	1.8		2.8	0.9		1.0	14.0		5.5	0.1	
Delay (s)	22.6	33.1		18.3	22.2		44.8	61.5		33.0	23.0	
Level of Service	C	C		B	C		D	E		C	C	
Approach Delay (s)		32.0			21.1			58.9			29.4	
Approach LOS		C			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	115	1100	655	75	0	80
Future Volume (Veh/h)	115	1100	655	75	0	80
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	122	1170	697	80	0	85
Pedestrians					10	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.90				0.90	0.90
vC, conflicting volume	787				1576	398
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	545				1420	114
tC, single (s)	4.1				6.8	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	87				100	90
cM capacity (veh/h)	925				101	817

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	122	585	585	465	312	85
Volume Left	122	0	0	0	0	0
Volume Right	0	0	0	0	80	85
cSH	925	1700	1700	1700	1700	817
Volume to Capacity	0.13	0.34	0.34	0.27	0.18	0.10
Queue Length 95th (m)	3.6	0.0	0.0	0.0	0.0	2.8
Control Delay (s)	9.5	0.0	0.0	0.0	0.0	9.9
Lane LOS	A					A
Approach Delay (s)	0.9			0.0		9.9
Approach LOS						A

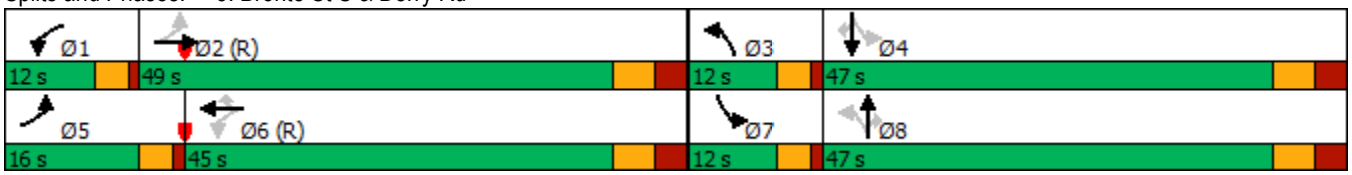
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

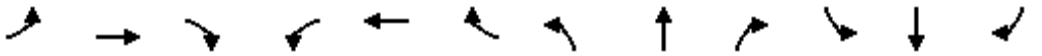
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	195	770	80	470	120	150	340	195	170	270	130
Future Volume (vph)	195	770	80	470	120	150	340	195	170	270	130
Lane Group Flow (vph)	210	995	86	505	129	161	366	210	183	290	140
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	16.0	49.0	12.0	45.0	45.0	12.0	47.0	47.0	12.0	47.0	47.0
Total Split (%)	13.3%	40.8%	10.0%	37.5%	37.5%	10.0%	39.2%	39.2%	10.0%	39.2%	39.2%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-0.6	0.0	-0.2	0.0	0.0	-1.9	0.0	0.0	-2.0	0.0	0.0
Total Lost Time (s)	3.4	6.7	3.8	6.7	6.7	2.1	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.42	0.67	0.33	0.38	0.19	0.42	0.81	0.39	0.58	0.61	0.29
Control Delay	15.6	28.8	19.8	24.1	3.4	25.9	56.4	6.4	30.8	45.0	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.6	28.8	19.8	24.1	3.4	25.9	56.4	6.4	30.8	45.0	6.6
Queue Length 50th (m)	18.8	117.6	8.7	34.2	0.0	24.5	86.0	0.0	28.2	63.3	0.0
Queue Length 95th (m)	36.4	156.5	21.6	45.8	6.4	38.3	110.6	17.5	43.3	85.6	14.7
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	504	1484	271	1346	664	384	631	667	317	638	605
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.67	0.32	0.38	0.19	0.42	0.58	0.31	0.58	0.45	0.23

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 32 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	770	155	80	470	120	150	340	195	170	270	130
Future Volume (vph)	195	770	155	80	470	120	150	340	195	170	270	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.4	6.7		3.8	6.7	6.7	2.1	6.7	6.7	2.0	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1750	3384		1735	3505	1523	1764	1881	1572	1735	1900	1527
Flt Permitted	0.38	1.00		0.19	1.00	1.00	0.40	1.00	1.00	0.24	1.00	1.00
Satd. Flow (perm)	696	3384		343	3505	1523	744	1881	1572	446	1900	1527
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	210	828	167	86	505	129	161	366	210	183	290	140
RTOR Reduction (vph)	0	13	0	0	0	79	0	0	159	0	0	105
Lane Group Flow (vph)	210	982	0	86	505	50	161	366	51	183	290	35
Confl. Peds. (#/hr)	5		10	10		5	15		5	5		15
Heavy Vehicles (%)	3%	3%	5%	4%	3%	3%	2%	1%	1%	4%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	62.6	51.4		53.3	46.1	46.1	39.0	28.9	28.9	41.0	29.9	29.9
Effective Green, g (s)	63.2	51.4		53.7	46.1	46.1	42.8	28.9	28.9	45.0	29.9	29.9
Actuated g/C Ratio	0.53	0.43		0.45	0.38	0.38	0.36	0.24	0.24	0.38	0.25	0.25
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	481	1449		239	1346	585	367	453	378	307	473	380
v/s Ratio Prot	c0.05	c0.29		0.02	0.14		0.04	c0.19		c0.06	0.15	
v/s Ratio Perm	0.18			0.14		0.03	0.11		0.03	0.16		0.02
v/c Ratio	0.44	0.68		0.36	0.38	0.08	0.44	0.81	0.13	0.60	0.61	0.09
Uniform Delay, d1	15.8	27.6		20.6	26.6	23.5	27.8	42.9	35.7	27.8	39.9	34.6
Progression Factor	0.88	0.93		1.10	0.82	0.55	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	2.1		0.9	0.8	0.3	0.8	10.2	0.2	3.1	2.4	0.1
Delay (s)	14.5	27.8		23.6	22.6	13.2	28.6	53.1	35.9	30.9	42.3	34.7
Level of Service	B	C		C	C	B	C	D	D	C	D	C
Approach Delay (s)		25.4			21.0			42.9			37.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.3
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Queues
9: Farmstead Dr & Derry Rd

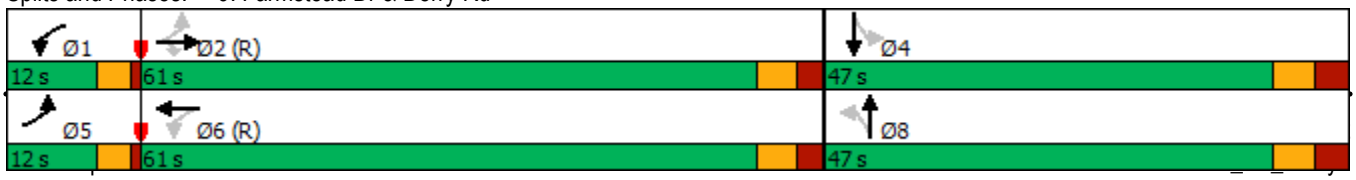
Existing AM Peak Hour

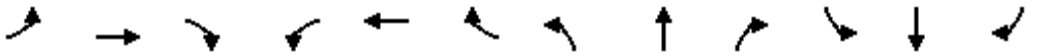
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	55	965	55	85	620	35	45	55	50
Future Volume (vph)	55	965	55	85	620	35	45	55	50
Lane Group Flow (vph)	57	995	57	88	654	36	278	57	104
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	12.0	61.0	61.0	12.0	61.0	47.0	47.0	47.0	47.0
Total Split (%)	10.0%	50.8%	50.8%	10.0%	50.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.10	0.42	0.05	0.20	0.27	0.23	0.77	0.95	0.42
Control Delay	3.3	7.0	1.1	4.7	8.1	48.7	30.9	156.7	32.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.3	7.0	1.1	4.7	8.1	48.7	30.9	156.7	32.4
Queue Length 50th (m)	2.4	32.2	0.1	3.8	28.8	8.3	21.6	~15.3	13.7
Queue Length 95th (m)	m5.1	52.6	m0.3	10.5	50.0	17.5	49.3	#34.2	29.0
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	599	2370	1053	448	2415	435	671	164	599
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.42	0.05	0.20	0.27	0.08	0.41	0.35	0.17

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 62 (52%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	965	55	85	620	15	35	45	225	55	50	50
Future Volume (vph)	55	965	55	85	620	15	35	45	225	55	50	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1682	3505	1522	1786	3459		1797	1639		1714	1708	
Flt Permitted	0.40	1.00	1.00	0.25	1.00		0.69	1.00		0.27	1.00	
Satd. Flow (perm)	705	3505	1522	466	3459		1305	1639		494	1708	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	57	995	57	88	639	15	36	46	232	57	52	52
RTOR Reduction (vph)	0	0	18	0	1	0	0	164	0	0	40	0
Lane Group Flow (vph)	57	995	39	88	653	0	36	114	0	57	64	0
Confl. Peds. (#/hr)	10		10	10		10	5		5	5		5
Heavy Vehicles (%)	7%	3%	2%	1%	4%	0%	0%	0%	0%	5%	4%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	86.6	81.2	81.2	90.0	82.9		14.6	14.6		14.6	14.6	
Effective Green, g (s)	86.6	81.2	81.2	90.0	82.9		14.6	14.6		14.6	14.6	
Actuated g/C Ratio	0.72	0.68	0.68	0.75	0.69		0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	552	2371	1029	427	2389		158	199		60	207	
v/s Ratio Prot	0.00	c0.28		c0.01	0.19			0.07			0.04	
v/s Ratio Perm	0.07		0.03	0.14			0.03			c0.12		
v/c Ratio	0.10	0.42	0.04	0.21	0.27		0.23	0.57		0.95	0.31	
Uniform Delay, d1	4.8	8.8	6.4	4.6	7.1		47.6	49.7		52.3	48.1	
Progression Factor	0.79	0.68	0.69	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.4	0.1	0.2	0.3		0.7	3.9		97.0	0.9	
Delay (s)	3.9	6.4	4.5	4.8	7.4		48.3	53.7		149.3	49.0	
Level of Service	A	A	A	A	A		D	D		F	D	
Approach Delay (s)		6.2			7.1			53.1			84.5	
Approach LOS		A			A			D			F	

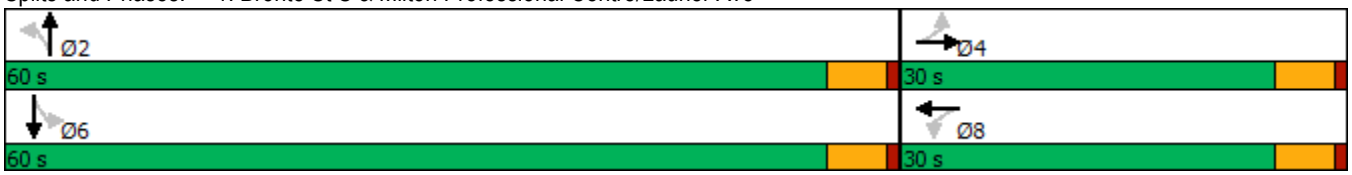
Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

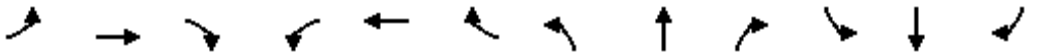
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	40	20	55	15	10	690	100	735
Future Volume (vph)	40	20	55	15	10	690	100	735
Lane Group Flow (vph)	0	90	56	126	10	732	101	787
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.26	0.18	0.28	0.03	0.60	0.29	0.65
Control Delay		15.0	18.6	7.8	4.7	9.2	8.2	10.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		15.0	18.6	7.8	4.7	9.2	8.2	10.1
Queue Length 50th (m)		3.9	3.5	0.9	0.3	37.0	3.9	41.8
Queue Length 95th (m)		16.9	14.0	13.2	1.8	71.4	12.0	81.9
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		806	733	935	465	1853	531	1846
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.11	0.08	0.13	0.02	0.40	0.19	0.43

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 45.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	20	30	55	15	110	10	690	35	100	735	45
Future Volume (vph)	40	20	30	55	15	110	10	690	35	100	735	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.95		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected		0.98		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1757		1797	1598		1797	1884		1802	1880	
Flt Permitted		0.80		0.70	1.00		0.25	1.00		0.29	1.00	
Satd. Flow (perm)		1432		1321	1598		472	1884		541	1880	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	40	20	30	56	15	111	10	697	35	101	742	45
RTOR Reduction (vph)	0	23	0	0	91	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	67	0	56	35	0	10	730	0	101	785	0
Confl. Peds. (#/hr)	5		5	5		5	15		5	5		15
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.3		8.3	8.3		28.6	28.6		28.6	28.6	
Effective Green, g (s)		8.3		8.3	8.3		28.6	28.6		28.6	28.6	
Actuated g/C Ratio		0.18		0.18	0.18		0.61	0.61		0.61	0.61	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		253		233	282		287	1148		329	1146	
v/s Ratio Prot					0.02			0.39			c0.42	
v/s Ratio Perm		c0.05		0.04			0.02			0.19		
v/c Ratio		0.26		0.24	0.12		0.03	0.64		0.31	0.68	
Uniform Delay, d1		16.7		16.6	16.2		3.6	5.8		4.4	6.1	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6		0.5	0.2		0.0	1.2		0.5	1.7	
Delay (s)		17.2		17.1	16.4		3.7	7.0		4.9	7.8	
Level of Service		B		B	B		A	A		A	A	
Approach Delay (s)		17.2			16.6			7.0			7.5	
Approach LOS		B			B			A			A	

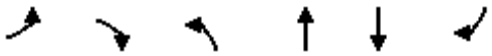
Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	46.9	Sum of lost time (s)	10.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	15	795	35	25	920
Future Volume (Veh/h)	15	15	795	35	25	920
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	15	15	820	36	26	948
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.81	0.65			0.65	
vC, conflicting volume	1848	848			866	
vC1, stage 1 conf vol	848					
vC2, stage 2 conf vol	1000					
vCu, unblocked vol	1043	502			530	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	96			96	
cM capacity (veh/h)	280	371			679	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	30	856	974
Volume Left	15	0	26
Volume Right	15	36	0
cSH	319	1700	679
Volume to Capacity	0.09	0.50	0.04
Queue Length 95th (m)	2.5	0.0	1.0
Control Delay (s)	17.4	0.0	1.2
Lane LOS	C		A
Approach Delay (s)	17.4	0.0	1.2
Approach LOS	C		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	830	895	10
Future Volume (Veh/h)	0	0	0	830	895	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	874	942	11
Pedestrians	20					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.79	0.69	0.69			
vC, conflicting volume	1842	968	973			
vC1, stage 1 conf vol	968					
vC2, stage 2 conf vol	874					
vCu, unblocked vol	1060	732	740			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	290	289	597			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	0	0	874	953
Volume Left	0	0	0	0
Volume Right	0	0	0	11
cSH	1700	1700	1700	1700
Volume to Capacity	0.01	0.00	0.51	0.56
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	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	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

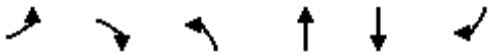
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	125	115	80	705	785
Future Volume (vph)	125	115	80	705	785
Lane Group Flow (vph)	129	119	82	727	922
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.32	0.26	0.29	0.72	0.49
Control Delay	19.7	6.5	9.8	13.8	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	6.5	9.8	13.8	8.1
Queue Length 50th (m)	8.6	0.0	3.5	41.9	22.3
Queue Length 95th (m)	26.8	11.3	11.8	85.8	39.5
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	815	800	492	1775	3289
Starvation Cap Reductn	0	0	0	22	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.16	0.15	0.17	0.41	0.28

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 49.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Bronte St S & C Bronte Dwy

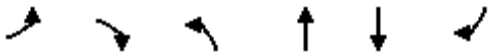




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	125	115	80	705	785	110
Future Volume (vph)	125	115	80	705	785	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	0.99	1.00	0.99	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1795	1615	1793	1900	3524	
Flt Permitted	0.95	1.00	0.28	1.00	1.00	
Satd. Flow (perm)	1795	1615	529	1900	3524	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	129	119	82	727	809	113
RTOR Reduction (vph)	0	92	0	0	15	0
Lane Group Flow (vph)	129	27	82	727	907	0
Confl. Peds. (#/hr)	5		20			20
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	11.0	11.0	26.2	26.2	26.2	
Effective Green, g (s)	11.0	11.0	26.2	26.2	26.2	
Actuated g/C Ratio	0.22	0.22	0.53	0.53	0.53	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	401	361	281	1011	1876	
v/s Ratio Prot				c0.38	0.26	
v/s Ratio Perm	c0.07	0.02	0.16			
v/c Ratio	0.32	0.07	0.29	0.72	0.48	
Uniform Delay, d1	16.0	15.1	6.4	8.7	7.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	0.1	0.6	2.5	0.2	
Delay (s)	16.4	15.2	6.9	11.2	7.4	
Level of Service	B	B	A	B	A	
Approach Delay (s)	15.8			10.8	7.4	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	49.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	30	0	775	890	10
Future Volume (Veh/h)	0	30	0	775	890	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	30	0	783	899	10
Pedestrians	20					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.80	0.85	0.85			
vC, conflicting volume	1707	474	929			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1061	33	567			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	97	100			
cM capacity (veh/h)	175	871	850			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	30	783	599	310
Volume Left	0	0	0	0
Volume Right	30	0	0	10
cSH	871	1700	1700	1700
Volume to Capacity	0.03	0.46	0.35	0.18
Queue Length 95th (m)	0.9	0.0	0.0	0.0
Control Delay (s)	9.3	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.3	0.0	0.0	
Approach LOS	A			

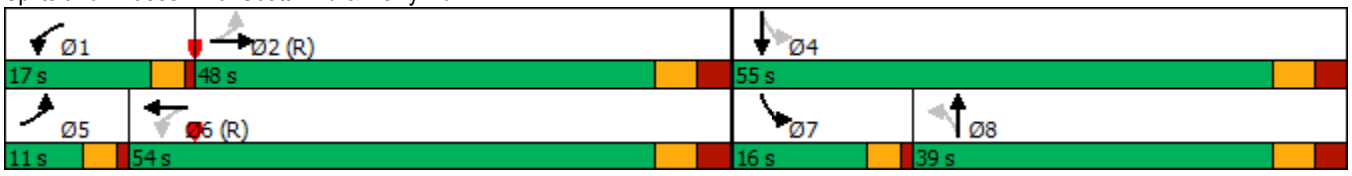
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

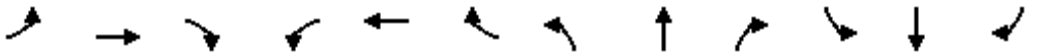
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	555	345	650	55	75	250	120
Future Volume (vph)	105	555	345	650	55	75	250	120
Lane Group Flow (vph)	108	613	356	1005	57	330	258	170
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	48.0	17.0	54.0	39.0	39.0	16.0	55.0
Total Split (%)	9.2%	40.0%	14.2%	45.0%	32.5%	32.5%	13.3%	45.8%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.40	0.49	0.73	0.67	0.27	0.83	0.77	0.27
Control Delay	19.5	33.3	35.2	15.9	43.5	45.3	44.9	24.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.5	33.3	35.2	15.9	43.5	45.3	44.9	24.4
Queue Length 50th (m)	13.4	69.9	52.3	45.0	12.4	48.3	42.6	24.4
Queue Length 95th (m)	23.1	80.5	#82.5	50.1	23.1	76.3	#91.6	41.6
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	274	1338	491	1515	325	542	333	728
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.46	0.73	0.66	0.18	0.61	0.77	0.23

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 43 (36%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Scott Blvd & Derry Rd

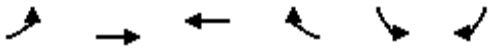




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	555	40	345	650	325	55	75	245	250	120	45
Future Volume (vph)	105	555	40	345	650	325	55	75	245	250	120	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.95		1.00	0.89		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1804	3565		1785	3366		1773	1652		1804	1787	
Flt Permitted	0.21	1.00		0.29	1.00		0.65	1.00		0.16	1.00	
Satd. Flow (perm)	389	3565		547	3366		1212	1652		308	1787	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	108	572	41	356	670	335	57	77	253	258	124	46
RTOR Reduction (vph)	0	5	0	0	48	0	0	112	0	0	12	0
Lane Group Flow (vph)	108	608	0	356	957	0	57	218	0	258	158	0
Confl. Peds. (#/hr)	10		10	10		10	20		10	10		20
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	4%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	50.3	41.9		64.0	51.6		20.7	20.7		42.2	42.2	
Effective Green, g (s)	50.3	41.9		64.0	51.6		20.7	20.7		42.2	42.2	
Actuated g/C Ratio	0.42	0.35		0.53	0.43		0.17	0.17		0.35	0.35	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	262	1244		478	1447		209	284		326	628	
v/s Ratio Prot	0.03	0.17		c0.11	0.28			0.13		c0.12	0.09	
v/s Ratio Perm	0.14			c0.28			0.05			c0.16		
v/c Ratio	0.41	0.49		0.74	0.66		0.27	0.77		0.79	0.25	
Uniform Delay, d1	22.3	30.6		17.8	27.2		43.1	47.4		31.4	27.7	
Progression Factor	1.00	1.00		1.61	0.52		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	1.4		5.5	2.1		0.7	11.8		12.3	0.2	
Delay (s)	23.3	32.0		34.2	16.2		43.8	59.2		43.7	27.9	
Level of Service	C	C		C	B		D	E		D	C	
Approach Delay (s)		30.7			20.9			56.9			37.4	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	103.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	1030	1255	80	0	135
Future Volume (Veh/h)	85	1030	1255	80	0	135
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	87	1051	1281	82	0	138
Pedestrians					20	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					2	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.79				0.79	0.79
vC, conflicting volume	1383				2042	702
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	965				1794	107
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	85				100	81
cM capacity (veh/h)	564				49	729

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	87	526	526	854	509	138
Volume Left	87	0	0	0	0	0
Volume Right	0	0	0	0	82	138
cSH	564	1700	1700	1700	1700	729
Volume to Capacity	0.15	0.31	0.31	0.50	0.30	0.19
Queue Length 95th (m)	4.3	0.0	0.0	0.0	0.0	5.6
Control Delay (s)	12.5	0.0	0.0	0.0	0.0	11.1
Lane LOS	B					B
Approach Delay (s)	1.0			0.0		11.1
Approach LOS						B

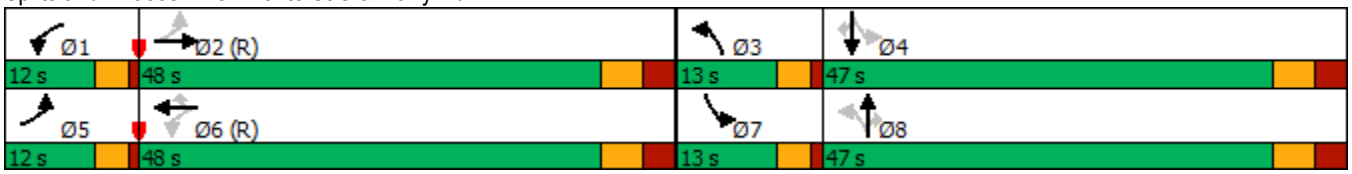
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		

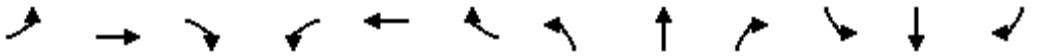
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	205	700	150	850	145	190	405	140	190	480	245
Future Volume (vph)	205	700	150	850	145	190	405	140	190	480	245
Lane Group Flow (vph)	207	833	152	859	146	192	409	141	192	485	247
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	12.0	48.0	12.0	48.0	48.0	13.0	47.0	47.0	13.0	47.0	47.0
Total Split (%)	10.0%	40.0%	10.0%	40.0%	40.0%	10.8%	39.2%	39.2%	10.8%	39.2%	39.2%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.6	0.0	-1.4	0.0	0.0	-3.4	0.0	0.0	-2.8	0.0	0.0
Total Lost Time (s)	1.4	6.7	2.6	6.7	6.7	0.6	6.7	6.7	1.2	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.63	0.65	0.51	0.68	0.23	0.58	0.73	0.25	0.51	0.87	0.41
Control Delay	22.8	30.8	18.5	32.6	10.2	25.5	46.0	5.7	23.5	57.1	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0
Total Delay	22.8	30.8	18.5	32.6	10.2	25.5	46.0	5.7	23.5	59.2	8.2
Queue Length 50th (m)	31.6	93.2	25.6	112.1	10.6	25.9	89.3	0.0	26.2	112.0	6.0
Queue Length 95th (m)	m44.4	111.1	22.5	125.7	21.9	41.1	121.0	14.2	41.7	149.0	25.4
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	330	1318	302	1316	659	331	638	621	377	638	657
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	63	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.63	0.50	0.65	0.22	0.58	0.64	0.23	0.51	0.84	0.38

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 5 (4%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	700	125	150	850	145	190	405	140	190	480	245
Future Volume (vph)	205	700	125	150	850	145	190	405	140	190	480	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.4	6.7		2.6	6.7	6.7	0.6	6.7	6.7	1.2	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1804	3498		1767	3574	1540	1802	1900	1573	1785	1900	1536
Flt Permitted	0.18	1.00		0.21	1.00	1.00	0.18	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)	348	3498		387	3574	1540	332	1900	1573	512	1900	1536
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	207	707	126	152	859	146	192	409	141	192	485	247
RTOR Reduction (vph)	0	11	0	0	0	94	0	0	100	0	0	151
Lane Group Flow (vph)	207	822	0	152	859	52	192	409	41	192	485	96
Confl. Peds. (#/hr)	15		20	20		15	40		15	15		40
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	0%	0%	0%	1%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	53.5	43.5		51.3	42.4	42.4	46.3	35.2	35.2	46.1	35.1	35.1
Effective Green, g (s)	58.7	43.5		54.1	42.4	42.4	53.1	35.2	35.2	51.7	35.1	35.1
Actuated g/C Ratio	0.49	0.36		0.45	0.35	0.35	0.44	0.29	0.29	0.43	0.29	0.29
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	323	1268		292	1262	544	324	557	461	366	555	449
v/s Ratio Prot	c0.07	0.23		0.04	c0.24		c0.07	0.22		0.06	c0.26	
v/s Ratio Perm	0.25			0.19		0.03	0.19		0.03	0.17		0.06
v/c Ratio	0.64	0.65		0.52	0.68	0.09	0.59	0.73	0.09	0.52	0.87	0.21
Uniform Delay, d1	20.3	31.9		21.4	33.0	26.0	24.1	38.2	30.8	23.5	40.3	32.0
Progression Factor	0.83	0.88		0.75	0.87	2.06	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.7	2.2		1.4	2.6	0.3	2.9	5.0	0.1	1.4	14.2	0.2
Delay (s)	20.5	30.2		17.4	31.4	53.8	27.0	43.2	30.9	24.8	54.6	32.3
Level of Service	C	C		B	C	D	C	D	C	C	D	C
Approach Delay (s)		28.2			32.4			36.6			42.4	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	34.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.2
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

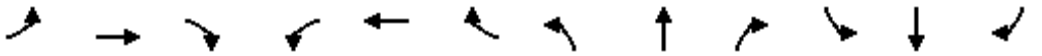
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	50	910	55	130	1175	40	75	20	75
Future Volume (vph)	50	910	55	130	1175	40	75	20	75
Lane Group Flow (vph)	53	968	59	138	1303	43	287	21	139
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	12.0	61.0	61.0	12.0	61.0	47.0	47.0	47.0	47.0
Total Split (%)	10.0%	50.8%	50.8%	10.0%	50.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.18	0.43	0.06	0.32	0.55	0.24	0.80	0.34	0.46
Control Delay	5.0	14.8	4.8	6.9	13.5	44.5	44.5	56.6	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.0	14.8	4.8	6.9	13.5	44.5	44.5	56.6	38.0
Queue Length 50th (m)	0.9	90.4	0.8	7.9	86.4	9.5	41.9	4.7	23.9
Queue Length 95th (m)	m8.9	137.2	m11.5	18.3	136.0	19.1	68.2	12.5	40.7
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	325	2263	1009	438	2355	388	635	134	610
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.43	0.06	0.32	0.55	0.11	0.45	0.16	0.23

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 84 (70%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	910	55	130	1175	50	40	75	195	20	75	55
Future Volume (vph)	50	910	55	130	1175	50	40	75	195	20	75	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.89		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1552	1804	3550		1798	1674		1800	1766	
Flt Permitted	0.17	1.00	1.00	0.24	1.00		0.62	1.00		0.21	1.00	
Satd. Flow (perm)	315	3574	1552	461	3550		1166	1674		403	1766	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	968	59	138	1250	53	43	80	207	21	80	59
RTOR Reduction (vph)	0	0	22	0	2	0	0	98	0	0	28	0
Lane Group Flow (vph)	53	968	37	138	1301	0	43	189	0	21	111	0
Confl. Peds. (#/hr)	5		10	10		5	5		5	5		5
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	81.3	75.9	75.9	86.9	78.7		18.8	18.8		18.8	18.8	
Effective Green, g (s)	81.3	75.9	75.9	86.9	78.7		18.8	18.8		18.8	18.8	
Actuated g/C Ratio	0.68	0.63	0.63	0.72	0.66		0.16	0.16		0.16	0.16	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	280	2260	981	425	2328		182	262		63	276	
v/s Ratio Prot	0.01	0.27		c0.02	c0.37			c0.11			0.06	
v/s Ratio Perm	0.12		0.02	0.21			0.04			0.05		
v/c Ratio	0.19	0.43	0.04	0.32	0.56		0.24	0.72		0.33	0.40	
Uniform Delay, d1	7.7	11.1	8.3	6.0	11.2		44.3	48.1		45.0	45.5	
Progression Factor	0.74	1.15	2.29	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.5	0.1	0.4	1.0		0.7	9.4		3.1	1.0	
Delay (s)	6.0	13.3	19.1	6.5	12.2		45.0	57.5		48.1	46.5	
Level of Service	A	B	B	A	B		D	E		D	D	
Approach Delay (s)		13.3			11.6			55.9			46.7	
Approach LOS		B			B			E			D	

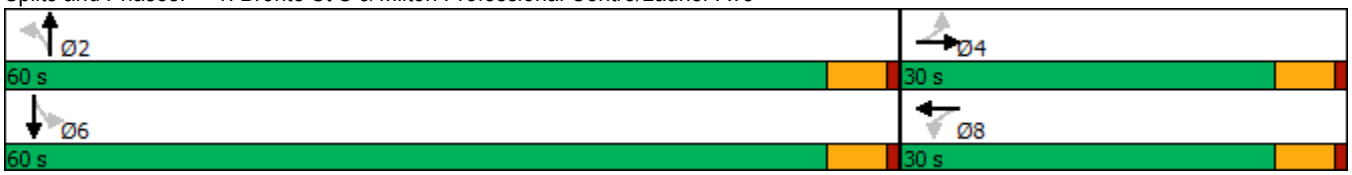
Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

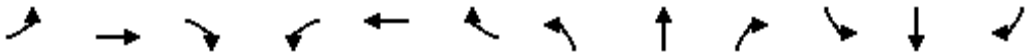
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	25	10	45	10	5	595	70	630
Future Volume (vph)	25	10	45	10	5	595	70	630
Lane Group Flow (vph)	0	61	51	107	6	708	79	730
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.18	0.16	0.24	0.02	0.59	0.22	0.62
Control Delay		12.7	16.7	7.2	4.6	9.2	7.2	9.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		12.7	16.7	7.2	4.6	9.2	7.2	9.7
Queue Length 50th (m)		2.2	2.9	0.6	0.2	35.1	2.9	37.3
Queue Length 95th (m)		11.2	11.8	10.9	1.2	62.3	8.5	66.3
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		826	783	960	528	1880	559	1865
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.07	0.07	0.11	0.01	0.38	0.14	0.39

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 43.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	10	20	45	10	85	5	595	35	70	630	20
Future Volume (vph)	25	10	20	45	10	85	5	595	35	70	630	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt		0.95		1.00	0.87		1.00	0.99		1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1716		1797	1593		1791	1881		1796	1868	
Flt Permitted		0.80		0.72	1.00		0.28	1.00		0.30	1.00	
Satd. Flow (perm)		1413		1356	1593		530	1881		560	1868	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	28	11	22	51	11	96	6	669	39	79	708	22
RTOR Reduction (vph)	0	18	0	0	79	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	43	0	51	28	0	6	706	0	79	729	0
Confl. Peds. (#/hr)	5		5	5		5	25		15	15		25
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	4%	0%	0%	0%	0%	1%	0%	0%	0%	0%	1%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.0		8.0	8.0		26.5	26.5		26.5	26.5	
Effective Green, g (s)		8.0		8.0	8.0		26.5	26.5		26.5	26.5	
Actuated g/C Ratio		0.18		0.18	0.18		0.60	0.60		0.60	0.60	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		254		243	286		315	1120		333	1112	
v/s Ratio Prot					0.02			0.38			c0.39	
v/s Ratio Perm		0.03		c0.04			0.01			0.14		
v/c Ratio		0.17		0.21	0.10		0.02	0.63		0.24	0.66	
Uniform Delay, d1		15.4		15.6	15.2		3.7	5.8		4.2	6.0	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3		0.4	0.2		0.0	1.1		0.4	1.4	
Delay (s)		15.8		16.0	15.4		3.7	6.9		4.6	7.4	
Level of Service		B		B	B		A	A		A	A	
Approach Delay (s)		15.8			15.6			6.9			7.1	
Approach LOS		B			B			A			A	

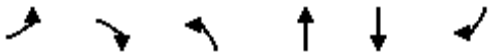
Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	44.5	Sum of lost time (s)	10.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	15	685	25	10	720
Future Volume (Veh/h)	15	15	685	25	10	720
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	17	17	770	28	11	809
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.85	0.70			0.70	
vC, conflicting volume	1625	794			808	
vC1, stage 1 conf vol	794					
vC2, stage 2 conf vol	831					
vCu, unblocked vol	866	498			518	
tC, single (s)	6.5	6.2			4.1	
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.3			2.2	
p0 queue free %	95	96			99	
cM capacity (veh/h)	348	403			740	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	34	798	820
Volume Left	17	0	11
Volume Right	17	28	0
cSH	374	1700	740
Volume to Capacity	0.09	0.47	0.01
Queue Length 95th (m)	2.4	0.0	0.4
Control Delay (s)	15.6	0.0	0.4
Lane LOS	C		A
Approach Delay (s)	15.6	0.0	0.4
Approach LOS	C		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	5	0	715	725	10
Future Volume (Veh/h)	5	5	0	715	725	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	6	0	794	806	11
Pedestrians	40					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	3					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.83	0.71	0.71			
vC, conflicting volume	1646	852	857			
vC1, stage 1 conf vol	852					
vC2, stage 2 conf vol	794					
vCu, unblocked vol	899	590	598			
tC, single (s)	6.4	6.5	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.5	2.2			
p0 queue free %	98	98	100			
cM capacity (veh/h)	345	322	681			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	12	0	794	817
Volume Left	6	0	0	0
Volume Right	6	0	0	11
cSH	333	1700	1700	1700
Volume to Capacity	0.04	0.00	0.47	0.48
Queue Length 95th (m)	0.9	0.0	0.0	0.0
Control Delay (s)	16.2	0.0	0.0	0.0
Lane LOS	C			
Approach Delay (s)	16.2	0.0		0.0
Approach LOS	C			

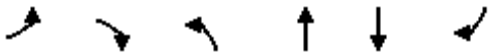
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	150	105	65	565	625
Future Volume (vph)	150	105	65	565	625
Lane Group Flow (vph)	158	111	68	595	769
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.36	0.23	0.21	0.64	0.45
Control Delay	17.3	5.6	8.8	12.6	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	5.6	8.8	12.6	8.2
Queue Length 50th (m)	8.9	0.0	2.7	30.9	17.2
Queue Length 95th (m)	27.2	9.7	9.3	64.8	31.9
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	887	856	624	1800	3298
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	0.13	0.11	0.33	0.23

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 45.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

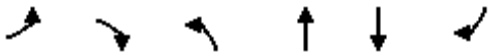
Splits and Phases: 4: Bronte St S & C Bronte Dwy





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	105	65	565	625	105
Future Volume (vph)	150	105	65	565	625	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1796	1615	1798	1900	3484	
Flt Permitted	0.95	1.00	0.35	1.00	1.00	
Satd. Flow (perm)	1796	1615	661	1900	3484	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	111	68	595	658	111
RTOR Reduction (vph)	0	84	0	0	20	0
Lane Group Flow (vph)	158	27	68	595	749	0
Confl. Peds. (#/hr)	5		10			10
Confl. Bikes (#/hr)						5
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	11.0	11.0	22.1	22.1	22.1	
Effective Green, g (s)	11.0	11.0	22.1	22.1	22.1	
Actuated g/C Ratio	0.24	0.24	0.49	0.49	0.49	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	438	393	323	931	1707	
v/s Ratio Prot				c0.31	0.21	
v/s Ratio Perm	c0.09	0.02	0.10			
v/c Ratio	0.36	0.07	0.21	0.64	0.44	
Uniform Delay, d1	14.1	13.1	6.5	8.5	7.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	0.1	0.3	1.5	0.2	
Delay (s)	14.6	13.2	6.9	10.0	7.7	
Level of Service	B	B	A	A	A	
Approach Delay (s)	14.0			9.7	7.7	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	45.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	45	0	630	715	15
Future Volume (Veh/h)	0	45	0	630	715	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	47	0	656	745	16
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.86	0.88	0.88			
vC, conflicting volume	1419	390	771			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	882	34	467			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	100			
cM capacity (veh/h)	247	905	964			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	47	656	497	264
Volume Left	0	0	0	0
Volume Right	47	0	0	16
cSH	905	1700	1700	1700
Volume to Capacity	0.05	0.39	0.29	0.16
Queue Length 95th (m)	1.3	0.0	0.0	0.0
Control Delay (s)	9.2	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.2	0.0	0.0	
Approach LOS	A			

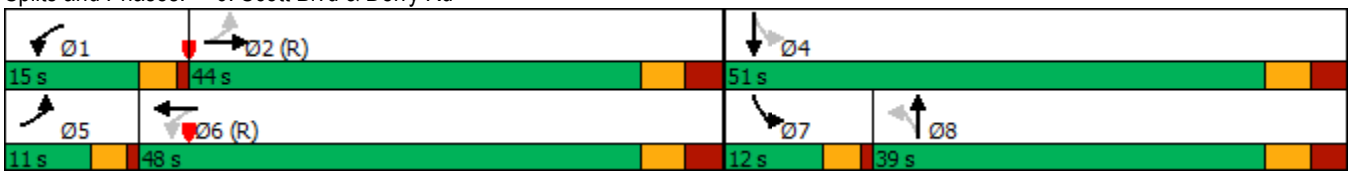
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	36.5%	ICU Level of Service	A
Analysis Period (min)	15		

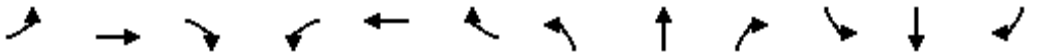
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	60	450	330	490	55	40	205	90
Future Volume (vph)	60	450	330	490	55	40	205	90
Lane Group Flow (vph)	63	490	344	703	57	323	214	151
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	44.0	15.0	48.0	39.0	39.0	12.0	51.0
Total Split (%)	10.0%	40.0%	13.6%	43.6%	35.5%	35.5%	10.9%	46.4%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.15	0.37	0.58	0.42	0.41	0.74	0.59	0.27
Control Delay	13.8	28.8	11.3	14.8	52.9	19.4	33.3	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.8	28.8	11.3	14.8	52.9	19.4	33.3	21.8
Queue Length 50th (m)	5.5	40.9	39.2	51.4	12.4	9.0	36.9	20.1
Queue Length 95th (m)	14.4	70.2	51.2	85.9	23.8	36.6	49.1	31.6
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	415	1426	592	1678	354	675	364	721
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.34	0.58	0.42	0.16	0.48	0.59	0.21

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 93 (85%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 6: Scott Blvd & Derry Rd

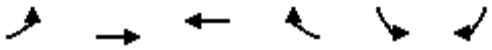




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	450	20	330	490	185	55	40	270	205	90	55
Future Volume (vph)	60	450	20	330	490	185	55	40	270	205	90	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.87		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1801	3546		1781	3404		1740	1628		1804	1747	
Flt Permitted	0.38	1.00		0.38	1.00		0.66	1.00		0.24	1.00	
Satd. Flow (perm)	729	3546		718	3404		1211	1628		455	1747	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	62	469	21	344	510	193	57	42	281	214	94	57
RTOR Reduction (vph)	0	3	0	0	30	0	0	249	0	0	23	0
Lane Group Flow (vph)	63	487	0	344	673	0	57	74	0	214	128	0
Confl. Peds. (#/hr)	10		15	15		10	20		5	5		20
Heavy Vehicles (%)	0%	1%	0%	1%	1%	0%	2%	0%	0%	0%	1%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	47.0	40.9		62.2	52.1		12.7	12.7		34.0	34.0	
Effective Green, g (s)	47.0	40.9		62.2	52.1		12.7	12.7		34.0	34.0	
Actuated g/C Ratio	0.43	0.37		0.57	0.47		0.12	0.12		0.31	0.31	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	370	1318		573	1612		139	187		352	539	
v/s Ratio Prot	0.01	0.14		c0.09	0.20			0.05		c0.10	0.07	
v/s Ratio Perm	0.06			c0.24			0.05			c0.09		
v/c Ratio	0.17	0.37		0.60	0.42		0.41	0.40		0.61	0.24	
Uniform Delay, d1	18.7	25.2		13.4	19.0		45.2	45.1		30.6	28.3	
Progression Factor	1.00	1.00		0.57	0.73		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.8		1.7	0.8		2.0	1.4		3.0	0.2	
Delay (s)	18.9	26.0		9.4	14.6		47.1	46.5		33.6	28.6	
Level of Service	B	C		A	B		D	D		C	C	
Approach Delay (s)		25.2			12.9			46.6			31.5	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	865	895	75	0	130
Future Volume (Veh/h)	75	865	895	75	0	130
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	77	892	923	77	0	134
Pedestrians					15	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	1015				1576	515
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	726				1369	153
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	90				100	82
cM capacity (veh/h)	758				109	749

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	77	446	446	615	385	134
Volume Left	77	0	0	0	0	0
Volume Right	0	0	0	0	77	134
cSH	758	1700	1700	1700	1700	749
Volume to Capacity	0.10	0.26	0.26	0.36	0.23	0.18
Queue Length 95th (m)	2.7	0.0	0.0	0.0	0.0	5.2
Control Delay (s)	10.3	0.0	0.0	0.0	0.0	10.9
Lane LOS	B					B
Approach Delay (s)	0.8			0.0		10.9
Approach LOS						B

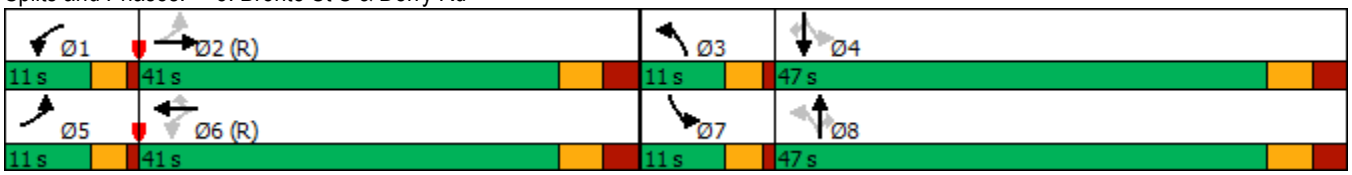
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		

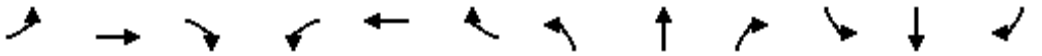
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	145	575	100	595	190	145	295	145	195	345	220
Future Volume (vph)	145	575	100	595	190	145	295	145	195	345	220
Lane Group Flow (vph)	149	696	103	613	196	149	304	149	201	356	227
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	11.0	41.0	11.0	41.0	41.0	11.0	47.0	47.0	11.0	47.0	47.0
Total Split (%)	10.0%	37.3%	10.0%	37.3%	37.3%	10.0%	42.7%	42.7%	10.0%	42.7%	42.7%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-0.5	0.0	-0.4	0.0	0.0	-1.0	0.0	0.0	-1.4	0.0	0.0
Total Lost Time (s)	3.5	6.7	3.6	6.7	6.7	3.0	6.7	6.7	2.6	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.35	0.51	0.27	0.45	0.28	0.46	0.70	0.31	0.52	0.78	0.41
Control Delay	16.6	26.1	15.6	26.3	5.3	24.5	47.2	6.6	25.6	51.0	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	26.1	15.6	26.3	5.3	24.5	47.2	6.6	25.6	51.0	6.2
Queue Length 50th (m)	13.9	70.3	10.2	44.0	0.0	21.1	63.9	0.0	29.2	75.6	0.0
Queue Length 95th (m)	23.1	99.7	20.2	61.9	14.8	31.7	82.8	14.4	41.4	99.0	17.2
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	431	1376	381	1371	718	326	696	673	386	689	716
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.51	0.27	0.45	0.27	0.46	0.44	0.22	0.52	0.52	0.32

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 22 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	575	100	100	595	190	145	295	145	195	345	220
Future Volume (vph)	145	575	100	100	595	190	145	295	145	195	345	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.7		3.6	6.7	6.7	3.0	6.7	6.7	2.6	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1802	3472		1783	3574	1556	1783	1900	1582	1785	1881	1561
Flt Permitted	0.33	1.00		0.30	1.00	1.00	0.29	1.00	1.00	0.33	1.00	1.00
Satd. Flow (perm)	625	3472		565	3574	1556	542	1900	1582	615	1881	1561
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	149	593	103	103	613	196	149	304	149	201	356	227
RTOR Reduction (vph)	0	12	0	0	0	122	0	0	115	0	0	172
Lane Group Flow (vph)	149	684	0	103	613	74	149	304	34	201	356	55
Confl. Peds. (#/hr)	10		15	15		10	20		10	10		20
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	1%	0%	0%	1%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	52.7	42.8		50.5	41.7	41.7	35.5	25.1	25.1	38.5	26.6	26.6
Effective Green, g (s)	53.7	42.8		51.3	41.7	41.7	37.5	25.1	25.1	41.3	26.6	26.6
Actuated g/C Ratio	0.49	0.39		0.47	0.38	0.38	0.34	0.23	0.23	0.38	0.24	0.24
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	416	1350		365	1354	589	313	433	360	372	454	377
v/s Ratio Prot	c0.03	c0.20		0.02	0.17		0.05	0.16		c0.07	c0.19	
v/s Ratio Perm	0.14			0.11		0.05	0.11		0.02	0.14		0.04
v/c Ratio	0.36	0.51		0.28	0.45	0.13	0.48	0.70	0.09	0.54	0.78	0.15
Uniform Delay, d1	16.2	25.6		17.1	25.6	22.3	26.9	39.0	33.5	25.0	39.0	32.8
Progression Factor	0.98	0.92		0.94	0.91	1.02	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	1.2		0.4	1.1	0.4	1.1	5.1	0.1	1.6	8.6	0.2
Delay (s)	16.4	24.8		16.5	24.3	23.1	28.0	44.1	33.6	26.6	47.6	32.9
Level of Service	B	C		B	C	C	C	D	C	C	D	C
Approach Delay (s)		23.3			23.2			37.5			38.0	
Approach LOS		C			C			D			D	

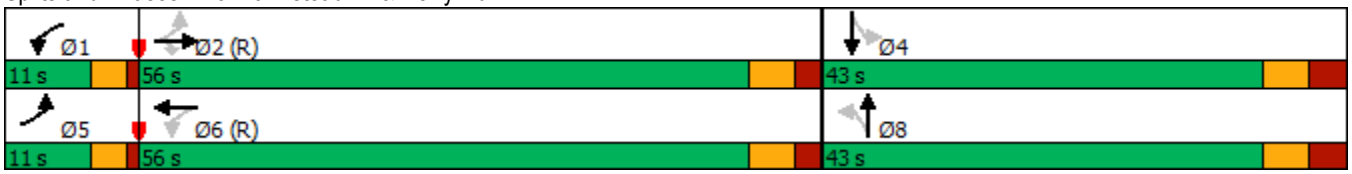
Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

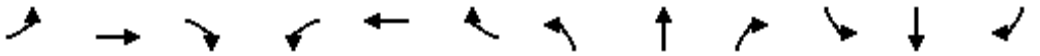
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	30	860	50	105	820	45	40	35	55
Future Volume (vph)	30	860	50	105	820	45	40	35	55
Lane Group Flow (vph)	31	887	52	108	871	46	252	36	109
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	11.0	56.0	56.0	11.0	56.0	43.0	43.0	43.0	43.0
Total Split (%)	10.0%	50.9%	50.9%	10.0%	50.9%	39.1%	39.1%	39.1%	39.1%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.06	0.37	0.05	0.22	0.34	0.32	0.71	0.53	0.47
Control Delay	2.6	6.6	0.9	4.2	7.4	49.5	22.9	71.9	34.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.6	6.6	0.9	4.2	7.4	49.5	22.9	71.9	34.2
Queue Length 50th (m)	1.3	26.7	0.1	3.8	36.1	10.0	11.5	8.0	14.1
Queue Length 95th (m)	m2.6	40.4	m0.7	10.8	61.8	20.4	36.3	18.2	29.7
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	526	2373	1029	492	2535	423	659	200	584
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.37	0.05	0.22	0.34	0.11	0.38	0.18	0.19

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 51 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	860	50	105	820	25	45	40	205	35	55	50
Future Volume (vph)	30	860	50	105	820	25	45	40	205	35	55	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1801	3574	1510	1784	3554		1790	1606		1800	1696	
Flt Permitted	0.32	1.00	1.00	0.28	1.00		0.69	1.00		0.32	1.00	
Satd. Flow (perm)	605	3574	1510	519	3554		1294	1606		611	1696	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	31	887	52	108	845	26	46	41	211	36	57	52
RTOR Reduction (vph)	0	0	17	0	1	0	0	177	0	0	39	0
Lane Group Flow (vph)	31	887	35	108	870	0	46	75	0	36	70	0
Confl. Peds. (#/hr)	15		15	15		15	10		5	5		10
Heavy Vehicles (%)	0%	1%	2%	1%	1%	0%	0%	2%	2%	0%	2%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	76.7	73.0	73.0	84.3	76.8		12.4	12.4		12.4	12.4	
Effective Green, g (s)	76.7	73.0	73.0	84.3	76.8		12.4	12.4		12.4	12.4	
Actuated g/C Ratio	0.70	0.66	0.66	0.77	0.70		0.11	0.11		0.11	0.11	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	462	2371	1002	483	2481		145	181		68	191	
v/s Ratio Prot	0.00	c0.25		c0.02	0.24			0.05			0.04	
v/s Ratio Perm	0.04		0.02	0.16			0.04			c0.06		
v/c Ratio	0.07	0.37	0.03	0.22	0.35		0.32	0.42		0.53	0.37	
Uniform Delay, d1	5.1	8.3	6.4	3.8	6.6		44.9	45.4		46.0	45.2	
Progression Factor	0.71	0.69	0.89	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.4	0.1	0.2	0.4		1.3	1.6		7.3	1.2	
Delay (s)	3.7	6.1	5.7	4.1	7.0		46.2	47.0		53.3	46.4	
Level of Service	A	A	A	A	A		D	D		D	D	
Approach Delay (s)		6.0			6.7			46.9			48.1	
Approach LOS		A			A			D			D	

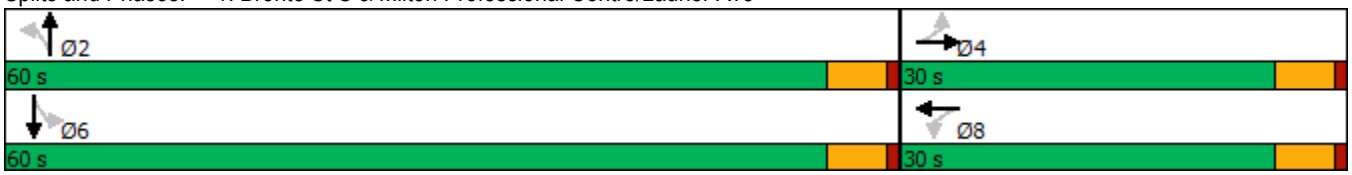
Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

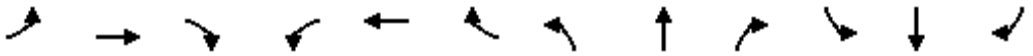
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	40	5	30	25	10	675	35	545
Future Volume (vph)	40	5	30	25	10	675	35	545
Lane Group Flow (vph)	0	62	34	124	11	792	39	646
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.20	0.11	0.28	0.03	0.66	0.13	0.55
Control Delay		16.6	17.8	9.0	4.5	10.3	6.0	8.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		16.6	17.8	9.0	4.5	10.3	6.0	8.4
Queue Length 50th (m)		3.2	2.1	1.7	0.4	42.8	1.3	31.0
Queue Length 95th (m)		13.7	9.5	14.2	1.8	79.0	4.8	56.7
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		729	753	944	643	1831	452	1788
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.09	0.05	0.13	0.02	0.43	0.09	0.36

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 45.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	5	10	30	25	85	10	675	30	35	545	30
Future Volume (vph)	40	5	10	30	25	85	10	675	30	35	545	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.98		1.00	0.88		1.00	0.99		1.00	0.99	
Flt Protected		0.96		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1776		1796	1621		1798	1850		1752	1810	
Flt Permitted		0.71		0.72	1.00		0.34	1.00		0.25	1.00	
Satd. Flow (perm)		1302		1355	1621		651	1850		457	1810	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	45	6	11	34	28	96	11	758	34	39	612	34
RTOR Reduction (vph)	0	9	0	0	79	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	53	0	34	45	0	11	790	0	39	644	0
Confl. Peds. (#/hr)	5		5	5		5	10					10
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	3%	3%	4%	4%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.1		8.1	8.1		28.5	28.5		28.5	28.5	
Effective Green, g (s)		8.1		8.1	8.1		28.5	28.5		28.5	28.5	
Actuated g/C Ratio		0.17		0.17	0.17		0.61	0.61		0.61	0.61	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		226		235	281		398	1131		279	1106	
v/s Ratio Prot					0.03			c0.43			0.36	
v/s Ratio Perm		c0.04		0.03			0.02			0.09		
v/c Ratio		0.23		0.14	0.16		0.03	0.70		0.14	0.58	
Uniform Delay, d1		16.6		16.3	16.4		3.6	6.1		3.8	5.5	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5		0.3	0.3		0.0	1.9		0.2	0.8	
Delay (s)		17.1		16.6	16.6		3.6	8.0		4.1	6.2	
Level of Service		B		B	B		A	A		A	A	
Approach Delay (s)		17.1			16.6			8.0			6.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

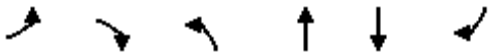
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	15	780	25	5	610
Future Volume (Veh/h)	15	15	780	25	5	610
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	17	867	28	6	678
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.74	0.63			0.63	
vC, conflicting volume	1581	891			905	
vC1, stage 1 conf vol	891					
vC2, stage 2 conf vol	690					
vCu, unblocked vol	938	537			559	
tC, single (s)	6.5	6.2			4.1	
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.3			2.2	
p0 queue free %	95	95			99	
cM capacity (veh/h)	328	344			641	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	34	895	684
Volume Left	17	0	6
Volume Right	17	28	0
cSH	336	1700	641
Volume to Capacity	0.10	0.53	0.01
Queue Length 95th (m)	2.7	0.0	0.2
Control Delay (s)	16.9	0.0	0.3
Lane LOS	C		A
Approach Delay (s)	16.9	0.0	0.3
Approach LOS	C		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	5	5	785	590	20
Future Volume (Veh/h)	0	5	5	785	590	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	6	6	902	678	23
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.73	0.79	0.79			
vC, conflicting volume	1614	700	711			
vC1, stage 1 conf vol	700					
vC2, stage 2 conf vol	914					
vCu, unblocked vol	1017	490	505			
tC, single (s)	6.4	6.6	4.7			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.7	2.7			
p0 queue free %	100	98	99			
cM capacity (veh/h)	320	400	652			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	6	6	902	701
Volume Left	0	6	0	0
Volume Right	6	0	0	23
cSH	400	652	1700	1700
Volume to Capacity	0.02	0.01	0.53	0.41
Queue Length 95th (m)	0.4	0.2	0.0	0.0
Control Delay (s)	14.1	10.6	0.0	0.0
Lane LOS	B	B		
Approach Delay (s)	14.1	0.1		0.0
Approach LOS	B			

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

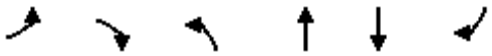
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	130	75	55	680	520
Future Volume (vph)	130	75	55	680	520
Lane Group Flow (vph)	146	84	62	764	685
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.35	0.19	0.13	0.65	0.31
Control Delay	21.7	7.1	6.8	11.7	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	7.1	6.8	11.7	6.1
Queue Length 50th (m)	10.7	0.0	2.4	46.1	14.8
Queue Length 95th (m)	32.3	9.9	8.1	96.8	28.1
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	827	779	669	1683	3096
Starvation Cap Reductn	0	0	0	37	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	0.11	0.09	0.46	0.22

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 49.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Bronte St S & C Bronte Dwy

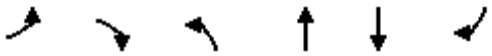




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	130	75	55	680	520	90
Future Volume (vph)	130	75	55	680	520	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1777	1574	1800	1863	3424	
Flt Permitted	0.95	1.00	0.39	1.00	1.00	
Satd. Flow (perm)	1777	1574	741	1863	3424	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	146	84	62	764	584	101
RTOR Reduction (vph)	0	69	0	0	17	0
Lane Group Flow (vph)	146	15	62	764	668	0
Confl. Peds. (#/hr)	5	5	5			5
Heavy Vehicles (%)	1%	1%	0%	2%	3%	1%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	8.9	8.9	29.7	29.7	29.7	
Effective Green, g (s)	8.9	8.9	29.7	29.7	29.7	
Actuated g/C Ratio	0.18	0.18	0.59	0.59	0.59	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	312	276	434	1093	2009	
v/s Ratio Prot				c0.41	0.20	
v/s Ratio Perm	c0.08	0.01	0.08			
v/c Ratio	0.47	0.05	0.14	0.70	0.33	
Uniform Delay, d1	18.7	17.3	4.7	7.3	5.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.1	0.1	0.2	2.0	0.1	
Delay (s)	19.8	17.4	4.9	9.3	5.5	
Level of Service	B	B	A	A	A	
Approach Delay (s)	19.0			9.0	5.5	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	50.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	40	0	730	580	15
Future Volume (Veh/h)	0	40	0	730	580	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	44	0	802	637	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.75	0.92	0.92			
vC, conflicting volume	1447	326	653			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1050	108	461			
tC, single (s)	6.8	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	100			
cM capacity (veh/h)	169	852	1027			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	44	802	425	228
Volume Left	0	0	0	0
Volume Right	44	0	0	16
cSH	852	1700	1700	1700
Volume to Capacity	0.05	0.47	0.25	0.13
Queue Length 95th (m)	1.3	0.0	0.0	0.0
Control Delay (s)	9.5	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.5	0.0	0.0	
Approach LOS	A			

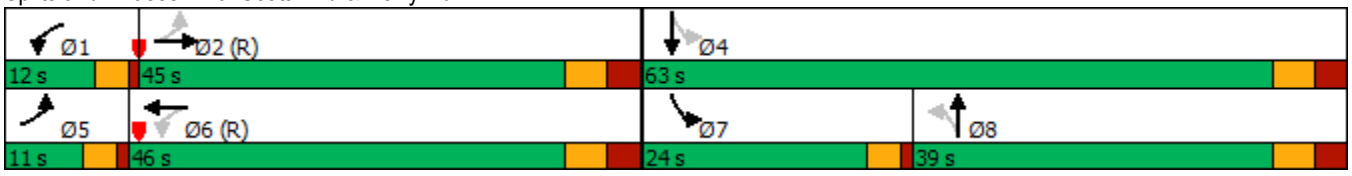
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

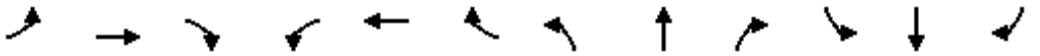
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	70	680	200	455	70	35	275	65
Future Volume (vph)	70	680	200	455	70	35	275	65
Lane Group Flow (vph)	74	776	213	654	74	399	293	165
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	45.0	12.0	46.0	39.0	39.0	24.0	63.0
Total Split (%)	9.2%	37.5%	10.0%	38.3%	32.5%	32.5%	20.0%	52.5%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.20	0.64	0.64	0.47	0.34	0.89	0.75	0.24
Control Delay	19.3	37.2	26.2	23.4	44.5	44.4	39.2	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.3	37.2	26.2	23.4	44.5	44.4	39.2	11.4
Queue Length 50th (m)	9.8	94.0	36.8	68.9	16.2	50.3	46.1	12.5
Queue Length 95th (m)	20.2	111.5	#78.8	94.0	28.1	82.3	#81.8	25.2
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	365	1252	333	1389	326	573	398	810
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.62	0.64	0.47	0.23	0.70	0.74	0.20

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 109 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Scott Blvd & Derry Rd

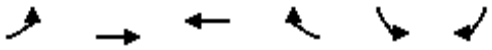




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	680	50	200	455	160	70	35	340	275	65	90
Future Volume (vph)	70	680	50	200	455	160	70	35	340	275	65	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.86		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1734	3425		1734	3320		1771	1588		1769	1640	
Flt Permitted	0.37	1.00		0.20	1.00		0.65	1.00		0.16	1.00	
Satd. Flow (perm)	675	3425		372	3320		1217	1588		292	1640	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	74	723	53	213	484	170	74	37	362	293	69	96
RTOR Reduction (vph)	0	5	0	0	26	0	0	166	0	0	48	0
Lane Group Flow (vph)	74	771	0	213	628	0	74	233	0	293	117	0
Confl. Peds. (#/hr)	5		15	15		5	10		10	10		10
Heavy Vehicles (%)	4%	4%	4%	4%	4%	3%	1%	3%	1%	2%	2%	6%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	48.4	42.1		58.8	48.5		21.5	21.5		47.4	47.4	
Effective Green, g (s)	48.4	42.1		58.8	48.5		21.5	21.5		47.4	47.4	
Actuated g/C Ratio	0.40	0.35		0.49	0.40		0.18	0.18		0.39	0.39	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	327	1201		326	1341		218	284		384	647	
v/s Ratio Prot	0.01	0.23		c0.07	0.19			0.15		c0.14	0.07	
v/s Ratio Perm	0.08			c0.25			0.06			c0.16		
v/c Ratio	0.23	0.64		0.65	0.47		0.34	0.82		0.76	0.18	
Uniform Delay, d1	22.4	32.6		20.2	26.3		43.0	47.4		28.7	23.7	
Progression Factor	1.00	1.00		0.78	0.83		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	2.6		4.4	1.1		0.9	17.1		8.7	0.1	
Delay (s)	22.7	35.3		20.1	22.9		44.0	64.5		37.4	23.8	
Level of Service	C	D		C	C		D	E		D	C	
Approach Delay (s)		34.2			22.2			61.3			32.5	
Approach LOS		C			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	115	1215	740	75	0	80
Future Volume (Veh/h)	115	1215	740	75	0	80
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	122	1293	787	80	0	85
Pedestrians					10	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	877				1728	444
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	599				1561	109
tC, single (s)	4.1				6.8	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	86				100	89
cM capacity (veh/h)	866				79	807

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	122	646	646	525	342	85
Volume Left	122	0	0	0	0	0
Volume Right	0	0	0	0	80	85
cSH	866	1700	1700	1700	1700	807
Volume to Capacity	0.14	0.38	0.38	0.31	0.20	0.11
Queue Length 95th (m)	3.9	0.0	0.0	0.0	0.0	2.8
Control Delay (s)	9.8	0.0	0.0	0.0	0.0	10.0
Lane LOS	A					A
Approach Delay (s)	0.8			0.0		10.0
Approach LOS						A

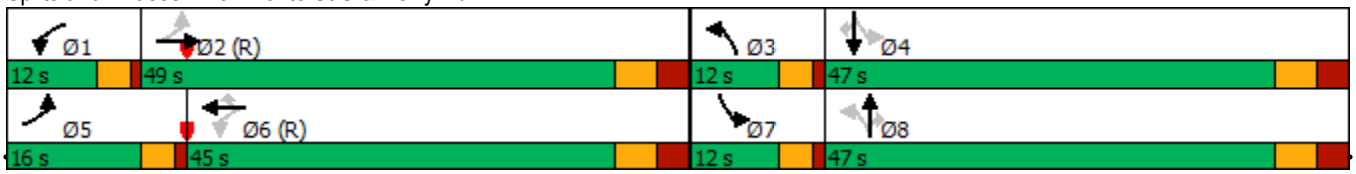
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		

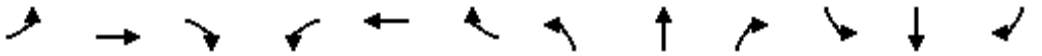
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	215	850	90	525	130	165	375	215	190	300	145
Future Volume (vph)	215	850	90	525	130	165	375	215	190	300	145
Lane Group Flow (vph)	231	1097	97	565	140	177	403	231	204	323	156
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	16.0	49.0	12.0	45.0	45.0	12.0	47.0	47.0	12.0	47.0	47.0
Total Split (%)	13.3%	40.8%	10.0%	37.5%	37.5%	10.0%	39.2%	39.2%	10.0%	39.2%	39.2%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-0.6	0.0	-0.2	0.0	0.0	-1.9	0.0	0.0	-2.0	0.0	0.0
Total Lost Time (s)	3.4	6.7	3.8	6.7	6.7	2.1	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.51	0.78	0.45	0.43	0.21	0.49	0.82	0.41	0.69	0.64	0.30
Control Delay	16.4	31.4	30.4	28.7	7.3	26.9	55.3	7.2	36.4	44.1	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.4	31.4	30.4	28.7	7.3	26.9	55.3	7.2	36.4	44.1	6.1
Queue Length 50th (m)	19.2	116.1	9.3	35.6	0.0	28.6	94.4	2.8	33.5	71.6	0.0
Queue Length 95th (m)	m38.1	#180.3	33.8	69.2	17.5	40.1	120.0	20.4	#47.1	93.2	15.0
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	464	1402	222	1309	656	363	631	671	295	638	616
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.78	0.44	0.43	0.21	0.49	0.64	0.34	0.69	0.51	0.25

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 32 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	850	170	90	525	130	165	375	215	190	300	145
Future Volume (vph)	215	850	170	90	525	130	165	375	215	190	300	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.4	6.7		3.8	6.7	6.7	2.1	6.7	6.7	2.0	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1751	3385		1735	3505	1523	1765	1881	1572	1735	1900	1527
Flt Permitted	0.34	1.00		0.13	1.00	1.00	0.36	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	619	3385		240	3505	1523	675	1881	1572	406	1900	1527
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	231	914	183	97	565	140	177	403	231	204	323	156
RTOR Reduction (vph)	0	13	0	0	0	88	0	0	160	0	0	114
Lane Group Flow (vph)	231	1084	0	97	565	52	177	403	71	204	323	42
Confl. Peds. (#/hr)	5		10	10		5	15		5	5		15
Heavy Vehicles (%)	3%	3%	5%	4%	3%	3%	2%	1%	1%	4%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	61.5	49.3		53.1	44.9	44.9	40.4	31.3	31.3	41.8	32.0	32.0
Effective Green, g (s)	62.1	49.3		53.5	44.9	44.9	44.2	31.3	31.3	45.8	32.0	32.0
Actuated g/C Ratio	0.52	0.41		0.45	0.37	0.37	0.37	0.26	0.26	0.38	0.27	0.27
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	444	1390		211	1311	569	348	490	410	285	506	407
v/s Ratio Prot	c0.06	c0.32		0.03	0.16		0.05	c0.21		c0.07	0.17	
v/s Ratio Perm	0.21			0.17		0.03	0.14		0.05	0.20		0.03
v/c Ratio	0.52	0.78		0.46	0.43	0.09	0.51	0.82	0.17	0.72	0.64	0.10
Uniform Delay, d1	16.9	30.6		22.1	28.0	24.3	27.3	41.7	34.3	28.0	38.9	33.2
Progression Factor	0.83	0.88		1.51	0.94	1.36	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	3.4		1.5	1.0	0.3	1.2	10.7	0.2	8.3	2.6	0.1
Delay (s)	14.9	30.4		35.0	27.2	33.4	28.5	52.4	34.5	36.3	41.5	33.3
Level of Service	B	C		D	C	C	C	D	C	D	D	C
Approach Delay (s)		27.7			29.3			42.1			38.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.3
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Queues
9: Farmstead Dr & Derry Rd

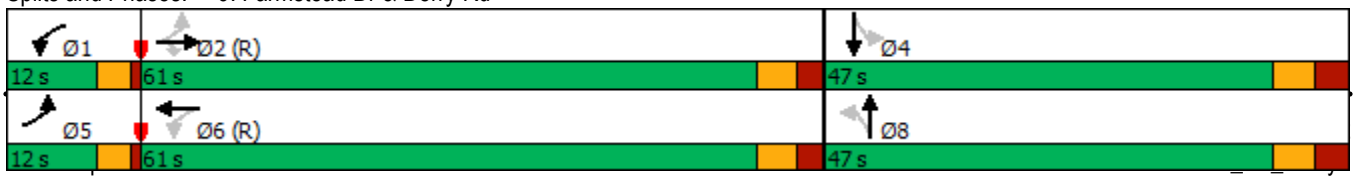
Future Background AM - 3-year

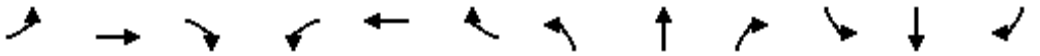
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	55	1085	55	85	695	35	45	55	50
Future Volume (vph)	55	1085	55	85	695	35	45	55	50
Lane Group Flow (vph)	57	1119	57	88	731	36	278	57	104
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	12.0	61.0	61.0	12.0	61.0	47.0	47.0	47.0	47.0
Total Split (%)	10.0%	50.8%	50.8%	10.0%	50.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.11	0.48	0.05	0.23	0.30	0.22	0.78	0.95	0.41
Control Delay	3.2	7.0	0.5	5.3	8.7	47.6	33.9	155.2	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.2	7.0	0.5	5.3	8.7	47.6	33.9	155.2	31.5
Queue Length 50th (m)	1.7	37.8	0.2	3.9	34.0	8.2	25.6	~15.0	13.6
Queue Length 95th (m)	m3.9	46.7	m0.2	10.9	58.7	17.3	52.9	#34.0	28.6
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	553	2341	1041	395	2397	435	661	158	599
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.48	0.05	0.22	0.30	0.08	0.42	0.36	0.17

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 62 (52%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	1085	55	85	695	15	35	45	225	55	50	50
Future Volume (vph)	55	1085	55	85	695	15	35	45	225	55	50	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1683	3505	1522	1786	3460		1797	1639		1714	1708	
Flt Permitted	0.36	1.00	1.00	0.21	1.00		0.69	1.00		0.26	1.00	
Satd. Flow (perm)	646	3505	1522	389	3460		1305	1639		475	1708	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	57	1119	57	88	716	15	36	46	232	57	52	52
RTOR Reduction (vph)	0	0	19	0	1	0	0	150	0	0	39	0
Lane Group Flow (vph)	57	1119	38	88	730	0	36	128	0	57	65	0
Confl. Peds. (#/hr)	10		10	10		10	5		5	5		5
Heavy Vehicles (%)	7%	3%	2%	1%	4%	0%	0%	0%	0%	5%	4%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	85.6	80.2	80.2	89.8	82.3		15.2	15.2		15.2	15.2	
Effective Green, g (s)	85.6	80.2	80.2	89.8	82.3		15.2	15.2		15.2	15.2	
Actuated g/C Ratio	0.71	0.67	0.67	0.75	0.69		0.13	0.13		0.13	0.13	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	507	2342	1017	378	2372		165	207		60	216	
v/s Ratio Prot	0.01	c0.32		c0.01	0.21			0.08			0.04	
v/s Ratio Perm	0.08		0.03	0.16			0.03			c0.12		
v/c Ratio	0.11	0.48	0.04	0.23	0.31		0.22	0.62		0.95	0.30	
Uniform Delay, d1	5.1	9.7	6.8	5.2	7.5		47.1	49.6		52.0	47.6	
Progression Factor	0.71	0.60	0.30	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.5	0.0	0.3	0.3		0.7	5.4		97.0	0.8	
Delay (s)	3.7	6.3	2.1	5.5	7.8		47.7	55.0		149.0	48.3	
Level of Service	A	A	A	A	A		D	E		F	D	
Approach Delay (s)		6.0			7.6			54.2			84.0	
Approach LOS		A			A			D			F	

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

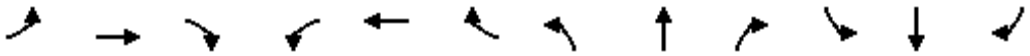
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	40	5	30	25	10	725	35	575
Future Volume (vph)	40	5	30	25	10	725	35	575
Lane Group Flow (vph)	0	62	34	124	11	849	39	680
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.21	0.12	0.29	0.03	0.68	0.14	0.56
Control Delay		18.4	19.8	9.8	4.2	10.5	5.9	8.2
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		18.4	19.8	9.8	4.2	10.5	5.9	8.2
Queue Length 50th (m)		3.5	2.3	1.9	0.4	48.6	1.4	33.6
Queue Length 95th (m)		14.7	10.3	15.2	1.7	88.9	4.8	60.5
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		696	719	905	604	1805	400	1764
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.09	0.05	0.14	0.02	0.47	0.10	0.39

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 48.2
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	5	10	30	25	85	10	725	30	35	575	30
Future Volume (vph)	40	5	10	30	25	85	10	725	30	35	575	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt		0.98		1.00	0.88		1.00	0.99		1.00	0.99	
Flt Protected		0.96		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1775		1796	1621		1798	1851		1752	1810	
Flt Permitted		0.71		0.72	1.00		0.33	1.00		0.22	1.00	
Satd. Flow (perm)		1302		1355	1621		621	1851		410	1810	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	45	6	11	34	28	96	11	815	34	39	646	34
RTOR Reduction (vph)	0	9	0	0	80	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	53	0	34	44	0	11	848	0	39	678	0
Confl. Peds. (#/hr)	5		5	5		5	10					10
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	3%	3%	4%	4%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.1		8.1	8.1		31.0	31.0		31.0	31.0	
Effective Green, g (s)		8.1		8.1	8.1		31.0	31.0		31.0	31.0	
Actuated g/C Ratio		0.16		0.16	0.16		0.63	0.63		0.63	0.63	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		214		223	267		392	1168		258	1142	
v/s Ratio Prot					0.03			c0.46			0.37	
v/s Ratio Perm		c0.04		0.03			0.02			0.10		
v/c Ratio		0.25		0.15	0.16		0.03	0.73		0.15	0.59	
Uniform Delay, d1		17.8		17.6	17.6		3.4	6.2		3.7	5.3	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6		0.3	0.3		0.0	2.3		0.3	0.8	
Delay (s)		18.4		17.9	17.9		3.4	8.4		4.0	6.2	
Level of Service		B		B	B		A	A		A	A	
Approach Delay (s)		18.4			17.9			8.4			6.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	49.1	Sum of lost time (s)	10.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

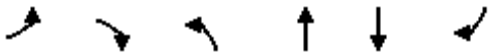
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	15	830	25	5	640
Future Volume (Veh/h)	15	15	830	25	5	640
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	17	922	28	6	711
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.71	0.60			0.60	
vC, conflicting volume	1669	946			960	
vC1, stage 1 conf vol	946					
vC2, stage 2 conf vol	723					
vCu, unblocked vol	1001	574			597	
tC, single (s)	6.5	6.2			4.1	
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.3			2.2	
p0 queue free %	94	95			99	
cM capacity (veh/h)	300	310			587	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	34	950	717
Volume Left	17	0	6
Volume Right	17	28	0
cSH	305	1700	587
Volume to Capacity	0.11	0.56	0.01
Queue Length 95th (m)	3.0	0.0	0.2
Control Delay (s)	18.3	0.0	0.3
Lane LOS	C		A
Approach Delay (s)	18.3	0.0	0.3
Approach LOS	C		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	5	5	835	620	20
Future Volume (Veh/h)	0	5	5	835	620	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	6	6	960	713	23
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.71	0.78	0.78			
vC, conflicting volume	1706	734	746			
vC1, stage 1 conf vol	734					
vC2, stage 2 conf vol	972					
vCu, unblocked vol	1082	514	529			
tC, single (s)	6.4	6.6	4.7			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.7	2.7			
p0 queue free %	100	98	99			
cM capacity (veh/h)	292	379	624			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	6	6	960	736
Volume Left	0	6	0	0
Volume Right	6	0	0	23
cSH	379	624	1700	1700
Volume to Capacity	0.02	0.01	0.56	0.43
Queue Length 95th (m)	0.4	0.2	0.0	0.0
Control Delay (s)	14.7	10.8	0.0	0.0
Lane LOS	B	B		
Approach Delay (s)	14.7	0.1		0.0
Approach LOS	B			

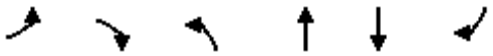
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	130	75	55	730	550
Future Volume (vph)	130	75	55	730	550
Lane Group Flow (vph)	146	84	62	820	719
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.37	0.20	0.13	0.68	0.32
Control Delay	23.7	7.6	6.5	12.0	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	7.6	6.5	12.1	6.0
Queue Length 50th (m)	11.5	0.0	2.4	52.0	15.9
Queue Length 95th (m)	34.3	10.4	8.0	108.4	29.5
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	787	744	625	1626	2996
Starvation Cap Reductn	0	0	0	46	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.19	0.11	0.10	0.52	0.24

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 52.3
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Bronte St S & C Bronte Dwy

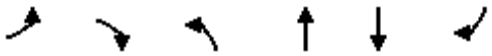




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	130	75	55	730	550	90
Future Volume (vph)	130	75	55	730	550	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1776	1574	1800	1863	3427	
Flt Permitted	0.95	1.00	0.38	1.00	1.00	
Satd. Flow (perm)	1776	1574	717	1863	3427	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	146	84	62	820	618	101
RTOR Reduction (vph)	0	70	0	0	15	0
Lane Group Flow (vph)	146	14	62	820	704	0
Confl. Peds. (#/hr)	5	5	5			5
Heavy Vehicles (%)	1%	1%	0%	2%	3%	1%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	8.9	8.9	32.3	32.3	32.3	
Effective Green, g (s)	8.9	8.9	32.3	32.3	32.3	
Actuated g/C Ratio	0.17	0.17	0.61	0.61	0.61	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	297	263	435	1131	2080	
v/s Ratio Prot				c0.44	0.21	
v/s Ratio Perm	c0.08	0.01	0.09			
v/c Ratio	0.49	0.05	0.14	0.73	0.34	
Uniform Delay, d1	20.1	18.6	4.5	7.3	5.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.3	0.1	0.2	2.3	0.1	
Delay (s)	21.4	18.7	4.6	9.7	5.3	
Level of Service	C	B	A	A	A	
Approach Delay (s)	20.4			9.3	5.3	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	53.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	40	0	780	610	15
Future Volume (Veh/h)	0	40	0	780	610	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	44	0	857	670	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.73	0.92	0.92			
vC, conflicting volume	1535	343	686			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1139	113	486			
tC, single (s)	6.8	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	100			
cM capacity (veh/h)	144	842	1001			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	44	857	447	239
Volume Left	0	0	0	0
Volume Right	44	0	0	16
cSH	842	1700	1700	1700
Volume to Capacity	0.05	0.50	0.26	0.14
Queue Length 95th (m)	1.3	0.0	0.0	0.0
Control Delay (s)	9.5	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.5	0.0	0.0	
Approach LOS	A			

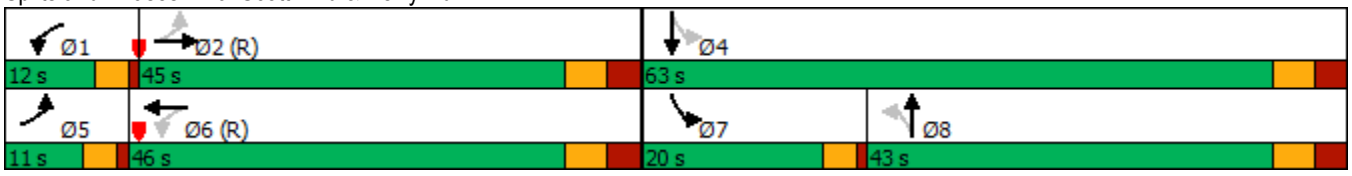
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

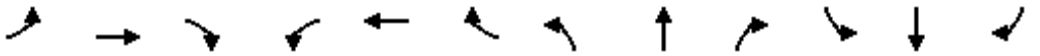
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	70	755	200	500	70	35	275	65
Future Volume (vph)	70	755	200	500	70	35	275	65
Lane Group Flow (vph)	74	856	213	702	74	399	293	165
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	45.0	12.0	46.0	43.0	43.0	20.0	63.0
Total Split (%)	9.2%	37.5%	10.0%	38.3%	35.8%	35.8%	16.7%	52.5%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.21	0.73	0.63	0.49	0.32	0.89	0.85	0.25
Control Delay	18.1	39.6	23.8	22.0	42.5	46.4	52.1	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.1	39.6	23.8	22.0	42.5	46.4	52.1	12.4
Queue Length 50th (m)	9.1	102.6	34.0	72.4	16.0	55.5	50.5	13.3
Queue Length 95th (m)	19.8	126.1	#76.2	98.0	27.1	84.9	#96.6	25.7
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	359	1186	340	1437	367	606	344	810
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.72	0.63	0.49	0.20	0.66	0.85	0.20

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 109 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Scott Blvd & Derry Rd

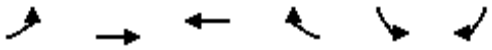




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	755	50	200	500	160	70	35	340	275	65	90
Future Volume (vph)	70	755	50	200	500	160	70	35	340	275	65	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.86		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1734	3430		1735	3330		1771	1588		1769	1640	
Flt Permitted	0.37	1.00		0.16	1.00		0.65	1.00		0.15	1.00	
Satd. Flow (perm)	669	3430		291	3330		1217	1588		278	1640	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	74	803	53	213	532	170	74	37	362	293	69	96
RTOR Reduction (vph)	0	4	0	0	22	0	0	147	0	0	49	0
Lane Group Flow (vph)	74	852	0	213	680	0	74	252	0	293	116	0
Confl. Peds. (#/hr)	5		15	15		5	10		10	10		10
Heavy Vehicles (%)	4%	4%	4%	4%	4%	3%	1%	3%	1%	2%	2%	6%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	47.6	41.1		60.7	50.2		22.8	22.8		45.5	45.5	
Effective Green, g (s)	47.6	41.1		60.7	50.2		22.8	22.8		45.5	45.5	
Actuated g/C Ratio	0.40	0.34		0.51	0.42		0.19	0.19		0.38	0.38	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	323	1174		334	1393		231	301		337	621	
v/s Ratio Prot	0.01	c0.25		c0.08	0.20			0.16		c0.14	0.07	
v/s Ratio Perm	0.08			0.24			0.06			c0.19		
v/c Ratio	0.23	0.73		0.64	0.49		0.32	0.84		0.87	0.19	
Uniform Delay, d1	22.8	34.5		20.2	25.5		41.9	46.8		31.3	24.9	
Progression Factor	1.00	1.00		0.72	0.80		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	3.9		3.7	1.2		0.8	17.8		20.5	0.1	
Delay (s)	23.2	38.5		18.3	21.6		42.7	64.6		51.8	25.0	
Level of Service	C	D		B	C		D	E		D	C	
Approach Delay (s)		37.2			20.8			61.2			42.1	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	36.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	115	1290	785	75	0	80
Future Volume (Veh/h)	115	1290	785	75	0	80
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	122	1372	835	80	0	85
Pedestrians					10	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	925				1815	468
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	640				1652	120
tC, single (s)	4.1				6.8	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	85				100	89
cM capacity (veh/h)	832				68	790

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	122	686	686	557	358	85
Volume Left	122	0	0	0	0	0
Volume Right	0	0	0	0	80	85
cSH	832	1700	1700	1700	1700	790
Volume to Capacity	0.15	0.40	0.40	0.33	0.21	0.11
Queue Length 95th (m)	4.1	0.0	0.0	0.0	0.0	2.9
Control Delay (s)	10.1	0.0	0.0	0.0	0.0	10.1
Lane LOS	B					B
Approach Delay (s)	0.8			0.0		10.1
Approach LOS						B

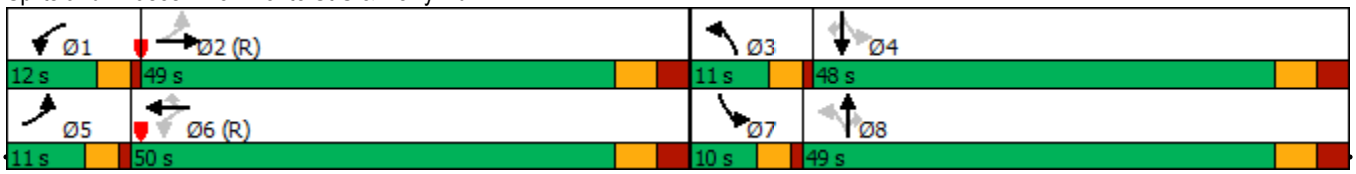
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		

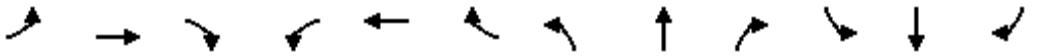
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	230	900	95	555	140	175	400	230	200	315	150
Future Volume (vph)	230	900	95	555	140	175	400	230	200	315	150
Lane Group Flow (vph)	247	1162	102	597	151	188	430	247	215	339	161
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	11.0	49.0	12.0	50.0	50.0	11.0	49.0	49.0	10.0	48.0	48.0
Total Split (%)	9.2%	40.8%	10.0%	41.7%	41.7%	9.2%	40.8%	40.8%	8.3%	40.0%	40.0%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-0.6	0.0	-0.2	0.0	0.0	-1.9	0.0	0.0	-2.0	0.0	0.0
Total Lost Time (s)	3.4	6.7	3.8	6.7	6.7	2.1	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.57	0.82	0.50	0.43	0.22	0.56	0.83	0.44	0.84	0.66	0.30
Control Delay	17.8	30.2	36.0	28.0	8.0	29.6	54.2	12.4	54.4	44.4	5.9
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	17.8	30.2	36.0	28.0	8.0	29.6	54.2	12.4	54.4	44.4	5.9
Queue Length 50th (m)	19.5	141.4	10.1	36.3	0.0	31.0	100.2	13.6	36.1	75.1	0.0
Queue Length 95th (m)	m34.2	#197.8	37.6	78.2	21.5	42.6	125.9	33.0	#62.3	96.9	15.0
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	434	1419	208	1373	688	338	663	667	256	653	631
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.82	0.49	0.43	0.22	0.56	0.65	0.37	0.84	0.52	0.26

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 32 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	900	180	95	555	140	175	400	230	200	315	150
Future Volume (vph)	230	900	180	95	555	140	175	400	230	200	315	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.4	6.7		3.8	6.7	6.7	2.1	6.7	6.7	2.0	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1751	3385		1735	3505	1523	1766	1881	1572	1735	1900	1527
Flt Permitted	0.33	1.00		0.11	1.00	1.00	0.33	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)	605	3385		196	3505	1523	622	1881	1572	392	1900	1527
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	247	968	194	102	597	151	188	430	247	215	339	161
RTOR Reduction (vph)	0	13	0	0	0	92	0	0	127	0	0	117
Lane Group Flow (vph)	247	1149	0	102	597	59	188	430	120	215	339	44
Confl. Peds. (#/hr)	5		10	10		5	15		5	5		15
Heavy Vehicles (%)	3%	3%	5%	4%	3%	3%	2%	1%	1%	4%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	61.0	49.9		55.2	47.0	47.0	40.9	33.1	33.1	40.1	32.7	32.7
Effective Green, g (s)	62.2	49.9		55.6	47.0	47.0	44.7	33.1	33.1	44.1	32.7	32.7
Actuated g/C Ratio	0.52	0.42		0.46	0.39	0.39	0.37	0.28	0.28	0.37	0.27	0.27
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	425	1407		198	1372	596	324	518	433	249	517	416
v/s Ratio Prot	c0.06	c0.34		0.04	0.17		c0.05	c0.23		c0.07	0.18	
v/s Ratio Perm	0.24			0.20		0.04	0.17		0.08	0.25		0.03
v/c Ratio	0.58	0.82		0.52	0.44	0.10	0.58	0.83	0.28	0.86	0.66	0.11
Uniform Delay, d1	17.0	31.0		22.1	26.8	23.1	27.4	40.8	34.1	31.7	38.7	32.7
Progression Factor	0.77	0.81		1.81	0.98	1.75	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	3.8		2.2	1.0	0.3	2.6	10.8	0.4	25.2	3.0	0.1
Delay (s)	14.6	29.1		42.3	27.1	40.8	30.1	51.6	34.4	56.9	41.7	32.8
Level of Service	B	C		D	C	D	C	D	C	E	D	C
Approach Delay (s)		26.5			31.3			42.0			44.2	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.3
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Queues
9: Farmstead Dr & Derry Rd

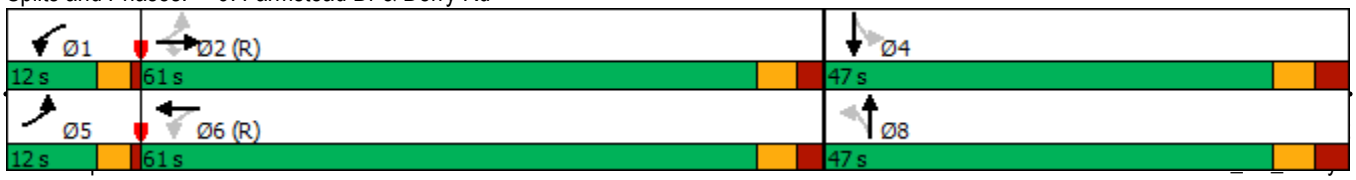
Future Background AM - 8-year

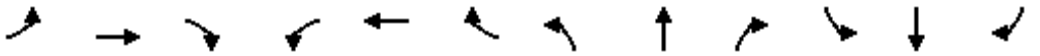
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	55	1160	55	85	740	35	45	55	50
Future Volume (vph)	55	1160	55	85	740	35	45	55	50
Lane Group Flow (vph)	57	1196	57	88	778	36	278	57	104
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	12.0	61.0	61.0	12.0	61.0	47.0	47.0	47.0	47.0
Total Split (%)	10.0%	50.8%	50.8%	10.0%	50.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.11	0.52	0.06	0.25	0.33	0.21	0.78	0.95	0.40
Control Delay	3.6	8.3	0.7	5.6	9.1	46.9	35.0	156.0	31.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.6	8.3	0.7	5.6	9.1	46.9	35.0	156.0	31.0
Queue Length 50th (m)	1.4	43.8	0.1	4.1	37.4	8.2	27.4	~14.6	13.5
Queue Length 95th (m)	m4.0	53.8	m0.2	11.1	63.8	17.2	54.5	#34.2	28.4
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	526	2322	1033	367	2385	435	656	154	599
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.52	0.06	0.24	0.33	0.08	0.42	0.37	0.17

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 62 (52%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	1160	55	85	740	15	35	45	225	55	50	50
Future Volume (vph)	55	1160	55	85	740	15	35	45	225	55	50	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1684	3505	1522	1786	3461		1797	1639		1714	1708	
Flt Permitted	0.34	1.00	1.00	0.18	1.00		0.69	1.00		0.26	1.00	
Satd. Flow (perm)	611	3505	1522	345	3461		1305	1639		463	1708	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	57	1196	57	88	763	15	36	46	232	57	52	52
RTOR Reduction (vph)	0	0	19	0	1	0	0	144	0	0	39	0
Lane Group Flow (vph)	57	1196	38	88	777	0	36	134	0	57	65	0
Confl. Peds. (#/hr)	10		10	10		10	5		5	5		5
Heavy Vehicles (%)	7%	3%	2%	1%	4%	0%	0%	0%	0%	5%	4%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	84.9	79.5	79.5	89.7	81.9		15.6	15.6		15.6	15.6	
Effective Green, g (s)	84.9	79.5	79.5	89.7	81.9		15.6	15.6		15.6	15.6	
Actuated g/C Ratio	0.71	0.66	0.66	0.75	0.68		0.13	0.13		0.13	0.13	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	480	2322	1008	351	2362		169	213		60	222	
v/s Ratio Prot	0.01	c0.34		c0.02	0.22			0.08			0.04	
v/s Ratio Perm	0.08		0.02	0.17			0.03			c0.12		
v/c Ratio	0.12	0.52	0.04	0.25	0.33		0.21	0.63		0.95	0.29	
Uniform Delay, d1	5.3	10.4	7.0	5.7	7.8		46.7	49.5		51.8	47.2	
Progression Factor	0.79	0.67	0.38	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.5	0.0	0.4	0.4		0.6	6.0		97.0	0.7	
Delay (s)	4.3	7.5	2.7	6.1	8.2		47.3	55.4		148.8	47.9	
Level of Service	A	A	A	A	A		D	E		F	D	
Approach Delay (s)		7.1			8.0			54.5			83.7	
Approach LOS		A			A			D			F	

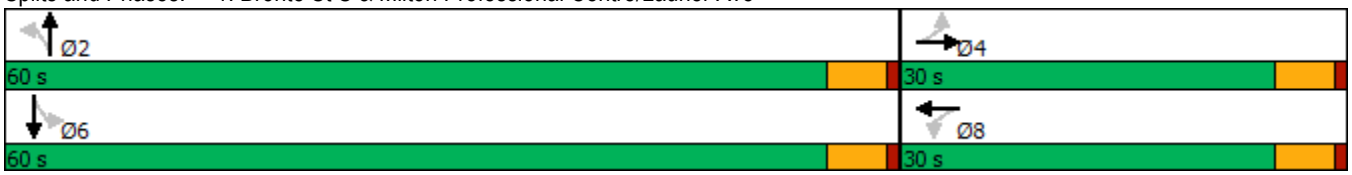
Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

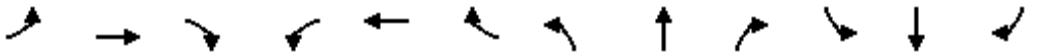
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	40	20	55	15	10	800	100	835
Future Volume (vph)	40	20	55	15	10	800	100	835
Lane Group Flow (vph)	0	90	56	126	10	843	101	888
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.28	0.20	0.30	0.04	0.66	0.34	0.69
Control Delay		17.7	22.0	8.9	4.4	9.7	9.0	10.6
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		17.7	22.0	8.9	4.4	9.7	9.0	10.6
Queue Length 50th (m)		4.6	4.1	1.1	0.3	47.1	4.1	52.2
Queue Length 95th (m)		19.3	16.2	14.8	1.8	90.3	13.4	101.1
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		749	680	875	375	1812	424	1806
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.12	0.08	0.14	0.03	0.47	0.24	0.49

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 50.2
Natural Cycle: 70
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	20	30	55	15	110	10	800	35	100	835	45
Future Volume (vph)	40	20	30	55	15	110	10	800	35	100	835	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt		0.95		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected		0.98		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1756		1796	1598		1799	1886		1803	1882	
Flt Permitted		0.80		0.70	1.00		0.20	1.00		0.23	1.00	
Satd. Flow (perm)		1431		1321	1598		388	1886		440	1882	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	40	20	30	56	15	111	10	808	35	101	843	45
RTOR Reduction (vph)	0	23	0	0	93	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	67	0	56	33	0	10	842	0	101	886	0
Confl. Peds. (#/hr)	5		5	5		5	15		5	5		15
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.2		8.2	8.2		32.8	32.8		32.8	32.8	
Effective Green, g (s)		8.2		8.2	8.2		32.8	32.8		32.8	32.8	
Actuated g/C Ratio		0.16		0.16	0.16		0.64	0.64		0.64	0.64	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		230		212	256		249	1212		282	1210	
v/s Ratio Prot					0.02			0.45			c0.47	
v/s Ratio Perm		c0.05		0.04			0.03			0.23		
v/c Ratio		0.29		0.26	0.13		0.04	0.69		0.36	0.73	
Uniform Delay, d1		18.8		18.8	18.3		3.3	5.9		4.2	6.1	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7		0.7	0.2		0.1	1.7		0.8	2.3	
Delay (s)		19.5		19.4	18.6		3.4	7.6		5.0	8.5	
Level of Service		B		B	B		A	A		A	A	
Approach Delay (s)		19.5			18.8			7.6			8.1	
Approach LOS		B			B			A			A	

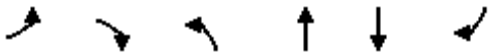
Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	51.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	15	905	35	25	1020
Future Volume (Veh/h)	15	15	905	35	25	1020
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	15	15	933	36	26	1052
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.77	0.58			0.58	
vC, conflicting volume	2065	961			979	
vC1, stage 1 conf vol	961					
vC2, stage 2 conf vol	1104					
vCu, unblocked vol	1111	572			603	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	95			95	
cM capacity (veh/h)	230	301			567	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	30	969	1078
Volume Left	15	0	26
Volume Right	15	36	0
cSH	261	1700	567
Volume to Capacity	0.11	0.57	0.05
Queue Length 95th (m)	3.1	0.0	1.2
Control Delay (s)	20.6	0.0	1.6
Lane LOS	C		A
Approach Delay (s)	20.6	0.0	1.6
Approach LOS	C		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	940	995	10
Future Volume (Veh/h)	0	0	0	940	995	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	989	1047	11
Pedestrians	20					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.77	0.62	0.62			
vC, conflicting volume	2062	1072	1078			
vC1, stage 1 conf vol	1072					
vC2, stage 2 conf vol	989					
vCu, unblocked vol	1112	808	817			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	243	233	498			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	0	0	989	1058
Volume Left	0	0	0	0
Volume Right	0	0	0	11
cSH	1700	1700	1700	1700
Volume to Capacity	0.02	0.00	0.58	0.62
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	0.0	0.0		0.0
Approach LOS	A			

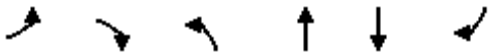
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	125	115	80	815	885
Future Volume (vph)	125	115	80	815	885
Lane Group Flow (vph)	129	119	82	840	1025
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.35	0.28	0.31	0.77	0.51
Control Delay	23.6	7.5	9.8	14.8	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	7.5	9.8	14.9	7.7
Queue Length 50th (m)	9.9	0.0	3.6	53.7	26.1
Queue Length 95th (m)	31.3	12.6	11.9	107.4	44.7
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	737	735	392	1620	3011
Starvation Cap Reductn	0	0	0	51	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	0.16	0.21	0.54	0.34

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 54.9
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Bronte St S & C Bronte Dwy

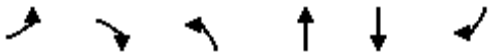




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	125	115	80	815	885	110
Future Volume (vph)	125	115	80	815	885	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	0.99	1.00	0.99	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1794	1615	1794	1900	3531	
Flt Permitted	0.95	1.00	0.24	1.00	1.00	
Satd. Flow (perm)	1794	1615	462	1900	3531	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	129	119	82	840	912	113
RTOR Reduction (vph)	0	95	0	0	12	0
Lane Group Flow (vph)	129	24	82	840	1013	0
Confl. Peds. (#/hr)	5		20			20
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	11.2	11.2	31.3	31.3	31.3	
Effective Green, g (s)	11.2	11.2	31.3	31.3	31.3	
Actuated g/C Ratio	0.21	0.21	0.57	0.57	0.57	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	368	331	265	1091	2027	
v/s Ratio Prot				c0.44	0.29	
v/s Ratio Perm	c0.07	0.02	0.18			
v/c Ratio	0.35	0.07	0.31	0.77	0.50	
Uniform Delay, d1	18.5	17.5	6.0	8.9	6.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	0.1	0.7	3.3	0.2	
Delay (s)	19.1	17.6	6.7	12.2	7.1	
Level of Service	B	B	A	B	A	
Approach Delay (s)	18.4			11.7	7.1	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	54.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	30	0	885	990	10
Future Volume (Veh/h)	0	30	0	885	990	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	30	0	894	1000	10
Pedestrians	20					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.76	0.84	0.84			
vC, conflicting volume	1919	525	1030			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1250	45	648			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	100			
cM capacity (veh/h)	125	841	780			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	30	894	667	343
Volume Left	0	0	0	0
Volume Right	30	0	0	10
cSH	841	1700	1700	1700
Volume to Capacity	0.04	0.53	0.39	0.20
Queue Length 95th (m)	0.9	0.0	0.0	0.0
Control Delay (s)	9.4	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.4	0.0	0.0	
Approach LOS	A			

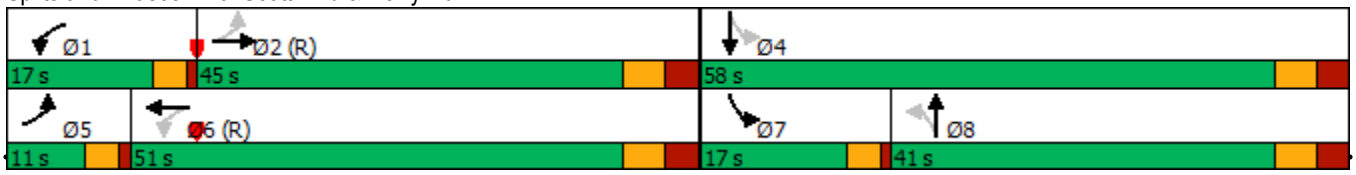
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

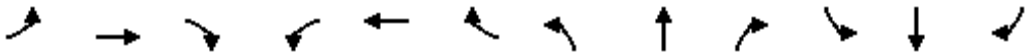
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	675	345	790	55	75	250	120
Future Volume (vph)	105	675	345	790	55	75	250	120
Lane Group Flow (vph)	108	737	356	1149	57	330	258	170
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	45.0	17.0	51.0	41.0	41.0	17.0	58.0
Total Split (%)	9.2%	37.5%	14.2%	42.5%	34.2%	34.2%	14.2%	48.3%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.44	0.65	0.71	0.75	0.28	0.83	0.85	0.28
Control Delay	20.6	38.2	24.9	20.0	43.6	44.7	55.8	26.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	38.2	24.9	20.0	43.6	44.7	55.8	26.0
Queue Length 50th (m)	11.9	84.5	23.8	133.5	12.4	47.5	46.6	26.6
Queue Length 95th (m)	23.5	103.6	m#95.3	#177.1	23.1	75.5	#87.2	41.0
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	245	1168	498	1542	345	569	302	772
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.63	0.71	0.75	0.17	0.58	0.85	0.22

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 67 (56%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Scott Blvd & Derry Rd

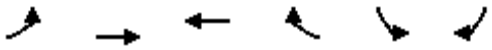




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	675	40	345	790	325	55	75	245	250	120	45
Future Volume (vph)	105	675	40	345	790	325	55	75	245	250	120	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.89		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1804	3573		1786	3392		1773	1652		1804	1787	
Flt Permitted	0.17	1.00		0.20	1.00		0.65	1.00		0.16	1.00	
Satd. Flow (perm)	327	3573		378	3392		1212	1652		310	1787	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	108	696	41	356	814	335	57	77	253	258	124	46
RTOR Reduction (vph)	0	3	0	0	33	0	0	114	0	0	13	0
Lane Group Flow (vph)	108	734	0	356	1116	0	57	216	0	258	157	0
Confl. Peds. (#/hr)	10		10	10		10	20		10	10		20
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	4%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	47.1	38.3		66.2	53.4		20.5	20.5		40.0	40.0	
Effective Green, g (s)	47.1	38.3		66.2	53.4		20.5	20.5		40.0	40.0	
Actuated g/C Ratio	0.39	0.32		0.55	0.44		0.17	0.17		0.33	0.33	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	236	1140		488	1509		207	282		296	595	
v/s Ratio Prot	0.03	0.21		c0.15	c0.33			0.13		c0.11	0.09	
v/s Ratio Perm	0.15			0.26			0.05			c0.18		
v/c Ratio	0.46	0.64		0.73	0.74		0.28	0.76		0.87	0.26	
Uniform Delay, d1	24.3	35.0		18.3	27.6		43.3	47.4		33.0	29.2	
Progression Factor	1.00	1.00		1.03	0.61		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	2.8		4.3	2.6		0.7	11.6		23.3	0.2	
Delay (s)	25.7	37.8		23.1	19.4		44.0	59.1		56.3	29.5	
Level of Service	C	D		C	B		D	E		E	C	
Approach Delay (s)		36.3			20.3			56.9			45.7	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	103.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	1150	1395	80	0	135
Future Volume (Veh/h)	85	1150	1395	80	0	135
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	87	1173	1423	82	0	138
Pedestrians					20	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					2	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.75				0.75	0.75
vC, conflicting volume	1525				2244	772
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1037				1994	35
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	83				100	82
cM capacity (veh/h)	501				33	766

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	87	586	586	949	556	138
Volume Left	87	0	0	0	0	0
Volume Right	0	0	0	0	82	138
cSH	501	1700	1700	1700	1700	766
Volume to Capacity	0.17	0.34	0.34	0.56	0.33	0.18
Queue Length 95th (m)	5.0	0.0	0.0	0.0	0.0	5.2
Control Delay (s)	13.7	0.0	0.0	0.0	0.0	10.7
Lane LOS	B					B
Approach Delay (s)	0.9			0.0		10.7
Approach LOS						B

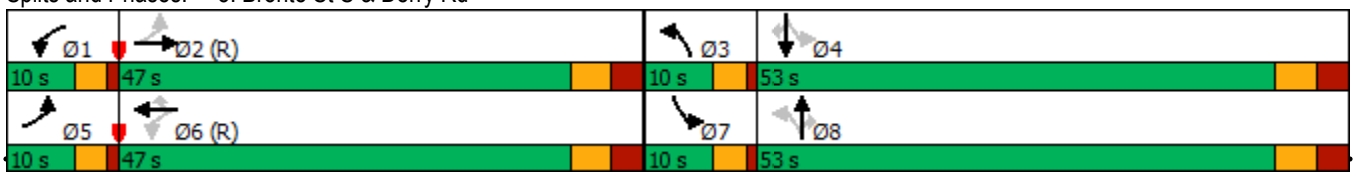
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

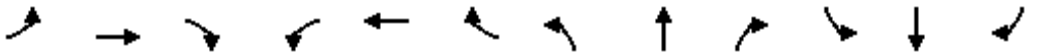
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	225	785	165	945	160	210	480	155	210	535	270
Future Volume (vph)	225	785	165	945	160	210	480	155	210	535	270
Lane Group Flow (vph)	227	934	167	955	162	212	485	157	212	540	273
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	10.0	47.0	10.0	47.0	47.0	10.0	53.0	53.0	10.0	53.0	53.0
Total Split (%)	8.3%	39.2%	8.3%	39.2%	39.2%	8.3%	44.2%	44.2%	8.3%	44.2%	44.2%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.6	0.0	-1.4	0.0	0.0	-3.4	0.0	0.0	-2.8	0.0	0.0
Total Lost Time (s)	1.4	6.7	2.6	6.7	6.7	0.6	6.7	6.7	1.2	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.75	0.77	0.64	0.83	0.27	0.72	0.78	0.25	0.66	0.87	0.45
Control Delay	34.7	31.0	28.2	39.9	9.0	33.8	44.9	4.8	29.6	52.2	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0
Total Delay	34.7	31.0	28.2	39.9	9.0	33.8	44.9	4.8	29.6	55.3	13.8
Queue Length 50th (m)	17.3	106.5	28.2	125.7	12.3	29.7	106.4	0.0	30.0	123.2	19.8
Queue Length 95th (m)	m#83.1	128.1	#47.4	140.4	18.1	#53.1	136.9	13.7	43.4	157.2	41.0
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	301	1238	259	1202	625	294	733	703	321	733	691
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	109	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.75	0.64	0.79	0.26	0.72	0.66	0.22	0.66	0.87	0.40

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	785	140	165	945	160	210	480	155	210	535	270
Future Volume (vph)	225	785	140	165	945	160	210	480	155	210	535	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.4	6.7		2.6	6.7	6.7	0.6	6.7	6.7	1.2	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1804	3499		1768	3574	1540	1803	1900	1573	1785	1900	1536
Flt Permitted	0.12	1.00		0.15	1.00	1.00	0.16	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	221	3499		281	3574	1540	309	1900	1573	418	1900	1536
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	227	793	141	167	955	162	212	485	157	212	540	273
RTOR Reduction (vph)	0	12	0	0	0	110	0	0	105	0	0	108
Lane Group Flow (vph)	227	922	0	167	955	52	212	485	52	212	540	165
Confl. Peds. (#/hr)	15		20	20		15	40		15	15		40
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	0%	0%	0%	1%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	53.2	41.3		48.2	38.8	38.8	47.9	39.5	39.5	47.9	39.5	39.5
Effective Green, g (s)	57.3	41.3		51.0	38.8	38.8	54.7	39.5	39.5	53.5	39.5	39.5
Actuated g/C Ratio	0.48	0.34		0.42	0.32	0.32	0.46	0.33	0.33	0.45	0.33	0.33
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	296	1204		253	1155	497	287	625	517	313	625	505
v/s Ratio Prot	c0.09	0.26		0.06	c0.27		c0.07	0.26		0.06	c0.28	
v/s Ratio Perm	0.27			0.22		0.03	0.26		0.03	0.24		0.11
v/c Ratio	0.77	0.77		0.66	0.83	0.11	0.74	0.78	0.10	0.68	0.86	0.33
Uniform Delay, d1	24.1	35.0		24.4	37.5	28.4	24.4	36.3	27.9	23.8	37.7	30.3
Progression Factor	0.85	0.78		0.84	0.91	1.86	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.8	3.6		5.2	5.7	0.3	9.5	6.0	0.1	5.7	11.9	0.4
Delay (s)	29.4	30.9		25.7	39.7	53.4	33.9	42.3	28.0	29.5	49.6	30.6
Level of Service	C	C		C	D	D	C	D	C	C	D	C
Approach Delay (s)		30.6			39.6			37.6			40.4	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.2
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

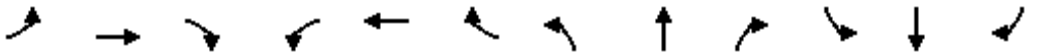
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	50	1030	55	130	1300	40	75	20	75
Future Volume (vph)	50	1030	55	130	1300	40	75	20	75
Lane Group Flow (vph)	53	1096	59	138	1436	43	287	21	139
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	12.0	61.0	61.0	12.0	61.0	47.0	47.0	47.0	47.0
Total Split (%)	10.0%	50.8%	50.8%	10.0%	50.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.20	0.49	0.06	0.36	0.61	0.24	0.80	0.34	0.46
Control Delay	5.8	14.7	5.1	7.6	14.6	44.5	44.5	56.6	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	14.7	5.1	7.6	14.6	44.5	44.5	56.6	38.0
Queue Length 50th (m)	0.8	110.1	0.8	7.9	101.1	9.5	41.9	4.7	23.9
Queue Length 95th (m)	m7.7	156.5	m8.5	18.3	159.0	19.1	68.2	12.5	40.7
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	285	2257	1006	389	2354	388	635	134	610
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.49	0.06	0.35	0.61	0.11	0.45	0.16	0.23

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81 (68%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	1030	55	130	1300	50	40	75	195	20	75	55
Future Volume (vph)	50	1030	55	130	1300	50	40	75	195	20	75	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.89		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1552	1804	3552		1798	1674		1800	1766	
Flt Permitted	0.13	1.00	1.00	0.20	1.00		0.62	1.00		0.21	1.00	
Satd. Flow (perm)	255	3574	1552	383	3552		1166	1674		403	1766	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	1096	59	138	1383	53	43	80	207	21	80	59
RTOR Reduction (vph)	0	0	22	0	1	0	0	98	0	0	28	0
Lane Group Flow (vph)	53	1096	37	138	1435	0	43	189	0	21	111	0
Confl. Peds. (#/hr)	5		10	10		5	5		5	5		5
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	81.1	75.7	75.7	87.1	78.7		18.8	18.8		18.8	18.8	
Effective Green, g (s)	81.1	75.7	75.7	87.1	78.7		18.8	18.8		18.8	18.8	
Actuated g/C Ratio	0.68	0.63	0.63	0.73	0.66		0.16	0.16		0.16	0.16	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	242	2254	979	377	2329		182	262		63	276	
v/s Ratio Prot	0.01	0.31		c0.03	c0.40			c0.11			0.06	
v/s Ratio Perm	0.14		0.02	0.24			0.04			0.05		
v/c Ratio	0.22	0.49	0.04	0.37	0.62		0.24	0.72		0.33	0.40	
Uniform Delay, d1	8.6	11.8	8.4	6.7	11.9		44.3	48.1		45.0	45.5	
Progression Factor	0.83	1.07	2.38	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.6	0.1	0.6	1.2		0.7	9.4		3.1	1.0	
Delay (s)	7.5	13.2	20.0	7.3	13.2		45.0	57.5		48.1	46.5	
Level of Service	A	B	B	A	B		D	E		D	D	
Approach Delay (s)		13.3			12.6			55.9			46.7	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

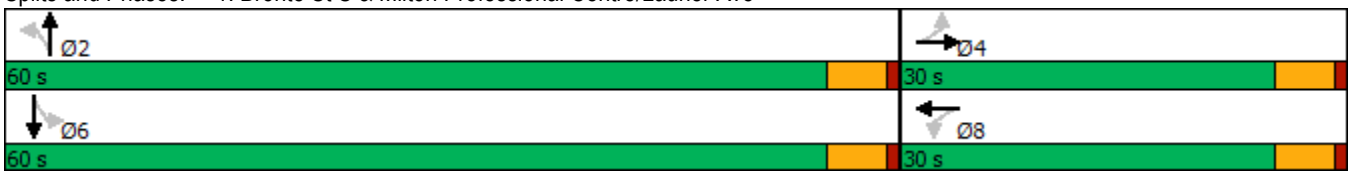
c Critical Lane Group

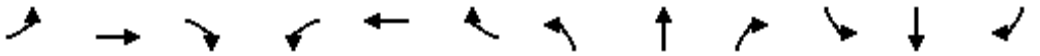
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	40	20	55	15	10	855	100	895
Future Volume (vph)	40	20	55	15	10	855	100	895
Lane Group Flow (vph)	0	90	56	126	10	899	101	949
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.29	0.17	0.31	0.04	0.67	0.35	0.71
Control Delay		20.2	24.1	10.0	4.0	9.6	9.0	10.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		20.2	24.1	10.0	4.0	9.6	9.0	10.5
Queue Length 50th (m)		5.1	4.6	1.2	0.3	53.3	4.2	59.2
Queue Length 95th (m)		21.4	17.5	16.1	1.7	99.8	13.6	112.5
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		704	790	827	330	1763	380	1760
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.13	0.07	0.15	0.03	0.51	0.27	0.54

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 54.2
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	20	30	55	15	110	10	855	35	100	895	45
Future Volume (vph)	40	20	30	55	15	110	10	855	35	100	895	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt		0.95		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected		0.98		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1755		1795	1597		1799	1887		1803	1883	
Flt Permitted		0.80		0.87	1.00		0.19	1.00		0.21	1.00	
Satd. Flow (perm)		1431		1638	1597		352	1887		406	1883	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	40	20	30	56	15	111	10	864	35	101	904	45
RTOR Reduction (vph)	0	24	0	0	95	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	66	0	56	31	0	10	898	0	101	947	0
Confl. Peds. (#/hr)	5		5	5		5	15		5	5		15
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.1		8.1	8.1		36.9	36.9		36.9	36.9	
Effective Green, g (s)		8.1		8.1	8.1		36.9	36.9		36.9	36.9	
Actuated g/C Ratio		0.15		0.15	0.15		0.67	0.67		0.67	0.67	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		210		241	235		236	1266		272	1263	
v/s Ratio Prot					0.02			0.48			c0.50	
v/s Ratio Perm		c0.05		0.03			0.03			0.25		
v/c Ratio		0.31		0.23	0.13		0.04	0.71		0.37	0.75	
Uniform Delay, d1		21.0		20.7	20.4		3.1	5.7		4.0	6.0	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9		0.5	0.3		0.1	1.8		0.9	2.6	
Delay (s)		21.8		21.2	20.7		3.1	7.5		4.8	8.5	
Level of Service		C		C	C		A	A		A	A	
Approach Delay (s)		21.8			20.8			7.5			8.2	
Approach LOS		C			C			A			A	

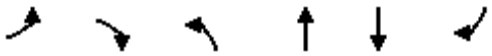
Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	15	960	35	25	1080
Future Volume (Veh/h)	15	15	960	35	25	1080
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	15	15	990	36	26	1113
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.75	0.54			0.54	
vC, conflicting volume	2183	1018			1036	
vC1, stage 1 conf vol	1018					
vC2, stage 2 conf vol	1165					
vCu, unblocked vol	1141	610			643	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	94			95	
cM capacity (veh/h)	203	268			511	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	30	1026	1139
Volume Left	15	0	26
Volume Right	15	36	0
cSH	231	1700	511
Volume to Capacity	0.13	0.60	0.05
Queue Length 95th (m)	3.5	0.0	1.3
Control Delay (s)	22.9	0.0	2.1
Lane LOS	C		A
Approach Delay (s)	22.9	0.0	2.1
Approach LOS	C		

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	995	1055	10
Future Volume (Veh/h)	0	0	0	995	1055	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	1047	1111	11
Pedestrians	20					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.76	0.57	0.57			
vC, conflicting volume	2184	1136	1142			
vC1, stage 1 conf vol	1136					
vC2, stage 2 conf vol	1047					
vCu, unblocked vol	1133	864	874			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	217	200	439			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	0	0	1047	1122
Volume Left	0	0	0	0
Volume Right	0	0	0	11
cSH	1700	1700	1700	1700
Volume to Capacity	0.02	0.00	0.62	0.66
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	0.0	0.0		0.0
Approach LOS	A			

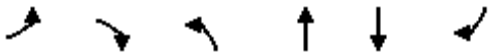
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	125	115	80	870	945
Future Volume (vph)	125	115	80	870	945
Lane Group Flow (vph)	129	119	82	897	1087
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.37	0.30	0.32	0.79	0.51
Control Delay	25.4	9.4	10.1	15.3	7.6
Queue Delay	0.0	0.0	0.0	0.1	0.0
Total Delay	25.4	9.4	10.1	15.4	7.6
Queue Length 50th (m)	11.4	1.2	3.6	60.5	28.3
Queue Length 95th (m)	31.3	14.5	12.5	123.2	48.6
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	693	690	345	1538	2864
Starvation Cap Reductn	0	0	0	46	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.19	0.17	0.24	0.60	0.38

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 58
Natural Cycle: 70
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Bronte St S & C Bronte Dwy

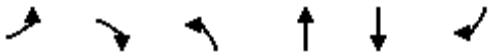




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	125	115	80	870	945	110
Future Volume (vph)	125	115	80	870	945	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	0.99	1.00	0.99	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1793	1615	1794	1900	3535	
Flt Permitted	0.95	1.00	0.23	1.00	1.00	
Satd. Flow (perm)	1793	1615	427	1900	3535	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	129	119	82	897	974	113
RTOR Reduction (vph)	0	85	0	0	10	0
Lane Group Flow (vph)	129	34	82	897	1077	0
Confl. Peds. (#/hr)	5		20			20
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	11.2	11.2	34.5	34.5	34.5	
Effective Green, g (s)	11.2	11.2	34.5	34.5	34.5	
Actuated g/C Ratio	0.19	0.19	0.60	0.60	0.60	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	348	313	255	1136	2113	
v/s Ratio Prot				c0.47	0.30	
v/s Ratio Perm	c0.07	0.02	0.19			
v/c Ratio	0.37	0.11	0.32	0.79	0.51	
Uniform Delay, d1	20.2	19.1	5.8	8.8	6.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.7	0.2	0.7	3.7	0.2	
Delay (s)	20.9	19.3	6.5	12.6	6.9	
Level of Service	C	B	A	B	A	
Approach Delay (s)	20.1			12.1	6.9	
Approach LOS	C			B	A	

Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	57.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	30	0	940	1050	10
Future Volume (Veh/h)	0	30	0	940	1050	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	30	0	949	1061	10
Pedestrians	20					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.73	0.83	0.83			
vC, conflicting volume	2035	556	1091			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1364	58	702			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	100			
cM capacity (veh/h)	102	819	739			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	30	949	707	364
Volume Left	0	0	0	0
Volume Right	30	0	0	10
cSH	819	1700	1700	1700
Volume to Capacity	0.04	0.56	0.42	0.21
Queue Length 95th (m)	0.9	0.0	0.0	0.0
Control Delay (s)	9.6	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.6	0.0	0.0	
Approach LOS	A			

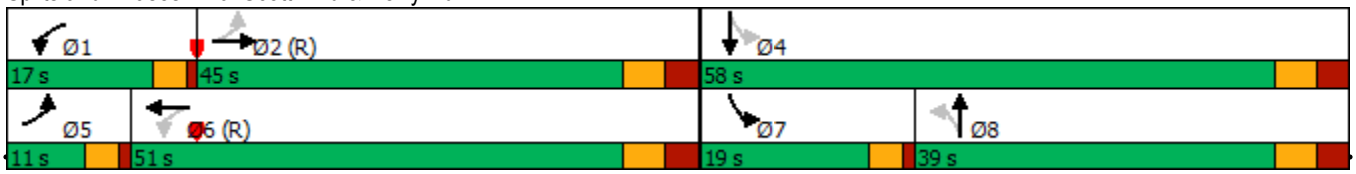
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

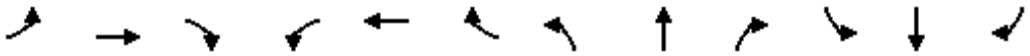
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	740	345	875	55	75	250	120
Future Volume (vph)	105	740	345	875	55	75	250	120
Lane Group Flow (vph)	108	804	356	1237	57	330	258	170
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	45.0	17.0	51.0	39.0	39.0	19.0	58.0
Total Split (%)	9.2%	37.5%	14.2%	42.5%	32.5%	32.5%	15.8%	48.3%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.50	0.72	0.74	0.79	0.27	0.83	0.86	0.28
Control Delay	23.6	40.6	30.7	22.1	43.5	45.3	56.0	25.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	40.6	30.7	22.1	43.5	45.3	56.0	25.8
Queue Length 50th (m)	11.4	91.6	30.9	144.5	12.4	48.3	47.9	27.3
Queue Length 95th (m)	24.4	114.8	m#104.6	#204.0	23.1	76.3	#79.5	39.8
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	217	1135	481	1556	325	542	300	772
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.71	0.74	0.79	0.18	0.61	0.86	0.22

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 70 (58%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Scott Blvd & Derry Rd

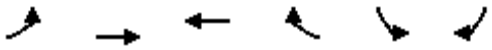




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	740	40	345	875	325	55	75	245	250	120	45
Future Volume (vph)	105	740	40	345	875	325	55	75	245	250	120	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.89		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3576		1786	3405		1773	1652		1804	1787	
Flt Permitted	0.14	1.00		0.16	1.00		0.65	1.00		0.16	1.00	
Satd. Flow (perm)	267	3576		301	3405		1212	1652		308	1787	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	108	763	41	356	902	335	57	77	253	258	124	46
RTOR Reduction (vph)	0	3	0	0	28	0	0	112	0	0	13	0
Lane Group Flow (vph)	108	801	0	356	1209	0	57	218	0	258	157	0
Confl. Peds. (#/hr)	10		10	10		10	20		10	10		20
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	4%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	45.8	37.4		66.2	53.8		20.7	20.7		40.0	40.0	
Effective Green, g (s)	45.8	37.4		66.2	53.8		20.7	20.7		40.0	40.0	
Actuated g/C Ratio	0.38	0.31		0.55	0.45		0.17	0.17		0.33	0.33	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	209	1114		472	1526		209	284		293	595	
v/s Ratio Prot	0.04	0.22		c0.16	c0.36			0.13		c0.11	0.09	
v/s Ratio Perm	0.16			0.26			0.05			c0.18		
v/c Ratio	0.52	0.72		0.75	0.79		0.27	0.77		0.88	0.26	
Uniform Delay, d1	25.5	36.6		23.1	28.3		43.1	47.4		33.0	29.2	
Progression Factor	1.00	1.00		1.09	0.63		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.2	4.0		4.9	3.1		0.7	11.8		25.0	0.2	
Delay (s)	27.7	40.6		30.1	21.0		43.8	59.2		58.0	29.5	
Level of Service	C	D		C	C		D	E		E	C	
Approach Delay (s)		39.1			23.0			56.9			46.7	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	103.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	1215	1480	80	0	135
Future Volume (Veh/h)	85	1215	1480	80	0	135
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	87	1240	1510	82	0	138
Pedestrians					20	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					2	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.73				0.73	0.73
vC, conflicting volume	1612				2365	816
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1093				2128	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 %	81				100	82
cM capacity (veh/h)	462				25	781

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	87	620	620	1007	585	138
Volume Left	87	0	0	0	0	0
Volume Right	0	0	0	0	82	138
cSH	462	1700	1700	1700	1700	781
Volume to Capacity	0.19	0.36	0.36	0.59	0.34	0.18
Queue Length 95th (m)	5.5	0.0	0.0	0.0	0.0	5.1
Control Delay (s)	14.6	0.0	0.0	0.0	0.0	10.6
Lane LOS	B					B
Approach Delay (s)	1.0			0.0		10.6
Approach LOS						B

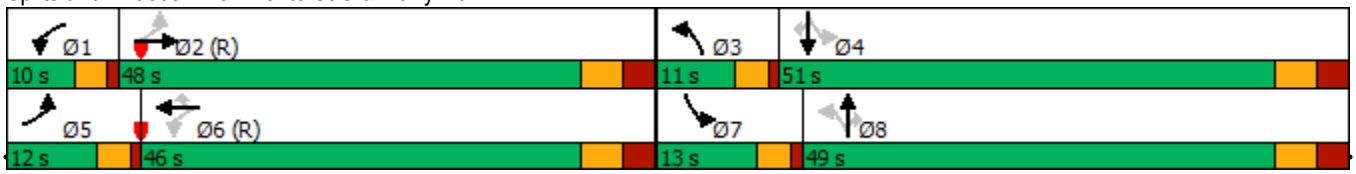
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		

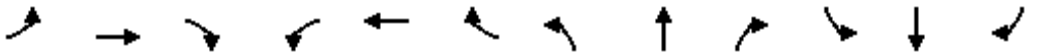
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	240	830	175	1000	170	225	510	165	225	565	285
Future Volume (vph)	240	830	175	1000	170	225	510	165	225	565	285
Lane Group Flow (vph)	242	984	177	1010	172	227	515	167	227	571	288
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	12.0	48.0	10.0	46.0	46.0	11.0	49.0	49.0	13.0	51.0	51.0
Total Split (%)	10.0%	40.0%	8.3%	38.3%	38.3%	9.2%	40.8%	40.8%	10.8%	42.5%	42.5%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.6	0.0	-1.4	0.0	0.0	-3.4	0.0	0.0	-2.8	0.0	0.0
Total Lost Time (s)	1.4	6.7	2.6	6.7	6.7	0.6	6.7	6.7	1.2	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.84	0.80	0.76	0.89	0.29	0.83	0.84	0.27	0.74	0.90	0.47
Control Delay	45.6	30.4	39.3	46.8	9.9	45.8	50.4	5.3	33.8	55.4	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	0.0
Total Delay	45.6	30.4	39.3	46.8	9.9	45.8	50.4	5.3	33.8	67.0	15.7
Queue Length 50th (m)	30.7	113.6	31.3	134.2	13.6	31.5	115.5	0.3	31.8	129.9	23.5
Queue Length 95th (m)	m#91.7	137.6	#61.7	159.7	23.5	#72.4	156.4	15.2	#53.0	#176.6	47.8
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	289	1233	233	1170	617	273	669	661	307	701	664
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	114	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.80	0.76	0.86	0.28	0.83	0.77	0.25	0.74	0.97	0.43

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 8 (7%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	240	830	145	175	1000	170	225	510	165	225	565	285
Future Volume (vph)	240	830	145	175	1000	170	225	510	165	225	565	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.4	6.7		2.6	6.7	6.7	0.6	6.7	6.7	1.2	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3501		1769	3574	1540	1803	1900	1573	1786	1900	1536
Flt Permitted	0.10	1.00		0.13	1.00	1.00	0.14	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	181	3501		247	3574	1540	270	1900	1573	330	1900	1536
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	242	838	146	177	1010	172	227	515	167	227	571	288
RTOR Reduction (vph)	0	12	0	0	0	115	0	0	112	0	0	103
Lane Group Flow (vph)	242	972	0	177	1010	57	227	515	55	227	571	185
Confl. Peds. (#/hr)	15		20	20		15	40		15	15		40
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	0%	0%	0%	1%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	53.7	41.5		46.5	37.9	37.9	47.1	38.9	38.9	49.9	40.3	40.3
Effective Green, g (s)	56.7	41.5		49.3	37.9	37.9	53.9	38.9	38.9	55.3	40.3	40.3
Actuated g/C Ratio	0.47	0.35		0.41	0.32	0.32	0.45	0.32	0.32	0.46	0.34	0.34
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	285	1210		228	1128	486	269	615	509	302	638	515
v/s Ratio Prot	c0.10	0.28		0.06	c0.28		c0.08	0.27		c0.08	c0.30	
v/s Ratio Perm	0.30			0.25		0.04	0.30		0.04	0.27		0.12
v/c Ratio	0.85	0.80		0.78	0.90	0.12	0.84	0.84	0.11	0.75	0.89	0.36
Uniform Delay, d1	31.4	35.6		26.0	39.2	29.2	25.6	37.6	28.4	24.1	37.8	30.1
Progression Factor	0.90	0.74		0.95	0.97	1.88	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.4	4.1		12.3	9.1	0.4	20.8	9.7	0.1	10.1	15.0	0.4
Delay (s)	43.8	30.6		36.9	46.9	55.2	46.3	47.3	28.5	34.2	52.9	30.5
Level of Service	D	C		D	D	E	D	D	C	C	D	C
Approach Delay (s)		33.2			46.6			43.6			43.0	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.2
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

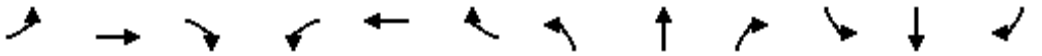
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	50	1100	55	130	1375	40	75	20	75
Future Volume (vph)	50	1100	55	130	1375	40	75	20	75
Lane Group Flow (vph)	53	1170	59	138	1516	43	287	21	139
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	12.0	61.0	61.0	12.0	61.0	47.0	47.0	47.0	47.0
Total Split (%)	10.0%	50.8%	50.8%	10.0%	50.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.22	0.52	0.06	0.38	0.64	0.24	0.80	0.34	0.46
Control Delay	5.9	14.5	4.4	8.1	15.3	44.5	44.5	56.6	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	14.5	4.4	8.1	15.3	44.5	44.5	56.6	38.0
Queue Length 50th (m)	0.9	116.2	1.0	7.9	111.0	9.5	41.9	4.7	23.9
Queue Length 95th (m)	m5.7	171.1	m6.4	18.3	174.1	19.1	68.2	12.5	40.7
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	264	2241	1000	365	2357	388	635	134	610
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.52	0.06	0.38	0.64	0.11	0.45	0.16	0.23

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 79 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	1100	55	130	1375	50	40	75	195	20	75	55
Future Volume (vph)	50	1100	55	130	1375	50	40	75	195	20	75	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.89		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1552	1804	3553		1798	1674		1800	1766	
Flt Permitted	0.12	1.00	1.00	0.18	1.00		0.62	1.00		0.21	1.00	
Satd. Flow (perm)	224	3574	1552	339	3553		1166	1674		403	1766	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	1170	59	138	1463	53	43	80	207	21	80	59
RTOR Reduction (vph)	0	0	22	0	1	0	0	98	0	0	28	0
Lane Group Flow (vph)	53	1170	37	138	1515	0	43	189	0	21	111	0
Confl. Peds. (#/hr)	5		10	10		5	5		5	5		5
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	80.6	75.2	75.2	87.6	78.7		18.8	18.8		18.8	18.8	
Effective Green, g (s)	80.6	75.2	75.2	87.6	78.7		18.8	18.8		18.8	18.8	
Actuated g/C Ratio	0.67	0.63	0.63	0.73	0.66		0.16	0.16		0.16	0.16	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	221	2239	972	356	2330		182	262		63	276	
v/s Ratio Prot	0.01	0.33		c0.03	c0.43			c0.11			0.06	
v/s Ratio Perm	0.15		0.02	0.25			0.04			0.05		
v/c Ratio	0.24	0.52	0.04	0.39	0.65		0.24	0.72		0.33	0.40	
Uniform Delay, d1	9.4	12.4	8.6	7.3	12.4		44.3	48.1		45.0	45.5	
Progression Factor	0.80	0.99	1.98	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.6	0.1	0.7	1.4		0.7	9.4		3.1	1.0	
Delay (s)	7.9	13.0	17.0	8.0	13.8		45.0	57.5		48.1	46.5	
Level of Service	A	B	B	A	B		D	E		D	D	
Approach Delay (s)		12.9			13.3			55.9			46.7	
Approach LOS		B			B			E			D	

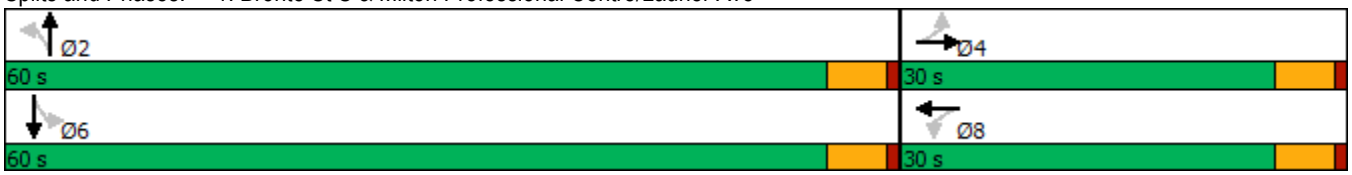
Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	90.5%	ICU Level of Service	E
Analysis Period (min)	15		

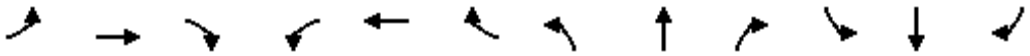
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	25	10	45	10	5	680	70	730
Future Volume (vph)	25	10	45	10	5	680	70	730
Lane Group Flow (vph)	0	61	51	107	6	803	79	842
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.19	0.17	0.25	0.02	0.64	0.25	0.68
Control Delay		15.2	20.0	8.3	4.2	9.5	7.4	10.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		15.2	20.0	8.3	4.2	9.5	7.4	10.4
Queue Length 50th (m)		2.6	3.4	0.7	0.2	43.2	3.0	47.5
Queue Length 95th (m)		13.1	13.8	12.3	1.2	77.7	9.0	86.2
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		765	725	896	416	1838	462	1824
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.08	0.07	0.12	0.01	0.44	0.17	0.46

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 47.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	10	20	45	10	85	5	680	35	70	730	20
Future Volume (vph)	25	10	20	45	10	85	5	680	35	70	730	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt		0.95		1.00	0.87		1.00	0.99		1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1715		1796	1593		1793	1883		1797	1869	
Flt Permitted		0.80		0.72	1.00		0.22	1.00		0.25	1.00	
Satd. Flow (perm)		1409		1356	1593		424	1883		470	1869	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	28	11	22	51	11	96	6	764	39	79	820	22
RTOR Reduction (vph)	0	18	0	0	80	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	43	0	51	27	0	6	801	0	79	841	0
Confl. Peds. (#/hr)	5		5	5		5	25		15	15		25
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	4%	0%	0%	0%	0%	1%	0%	0%	0%	0%	1%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.1		8.1	8.1		30.5	30.5		30.5	30.5	
Effective Green, g (s)		8.1		8.1	8.1		30.5	30.5		30.5	30.5	
Actuated g/C Ratio		0.17		0.17	0.17		0.63	0.63		0.63	0.63	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		234		226	265		266	1181		294	1172	
v/s Ratio Prot					0.02			0.43			c0.45	
v/s Ratio Perm		0.03		c0.04			0.01			0.17		
v/c Ratio		0.18		0.23	0.10		0.02	0.68		0.27	0.72	
Uniform Delay, d1		17.4		17.5	17.2		3.4	5.9		4.1	6.1	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4		0.5	0.2		0.0	1.6		0.5	2.1	
Delay (s)		17.8		18.0	17.3		3.5	7.4		4.5	8.3	
Level of Service		B		B	B		A	A		A	A	
Approach Delay (s)		17.8			17.6			7.4			7.9	
Approach LOS		B			B			A			A	

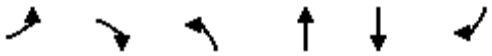
Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	48.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	15	770	25	10	820
Future Volume (Veh/h)	15	15	770	25	10	820
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	17	17	865	28	11	921
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.80	0.65			0.65	
vC, conflicting volume	1832	889			903	
vC1, stage 1 conf vol	889					
vC2, stage 2 conf vol	943					
vCu, unblocked vol	938	562			584	
tC, single (s)	6.5	6.2			4.1	
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.3			2.2	
p0 queue free %	94	95			98	
cM capacity (veh/h)	295	343			647	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	34	893	932
Volume Left	17	0	11
Volume Right	17	28	0
cSH	317	1700	647
Volume to Capacity	0.11	0.53	0.02
Queue Length 95th (m)	2.9	0.0	0.4
Control Delay (s)	17.7	0.0	0.5
Lane LOS	C		A
Approach Delay (s)	17.7	0.0	0.5
Approach LOS	C		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	5	0	800	825	10
Future Volume (Veh/h)	5	5	0	800	825	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	6	0	889	917	11
Pedestrians	40					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	3					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.80	0.63	0.63			
vC, conflicting volume	1852	962	968			
vC1, stage 1 conf vol	962					
vC2, stage 2 conf vol	889					
vCu, unblocked vol	945	642	651			
tC, single (s)	6.4	6.5	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.5	2.2			
p0 queue free %	98	98	100			
cM capacity (veh/h)	295	264	572			

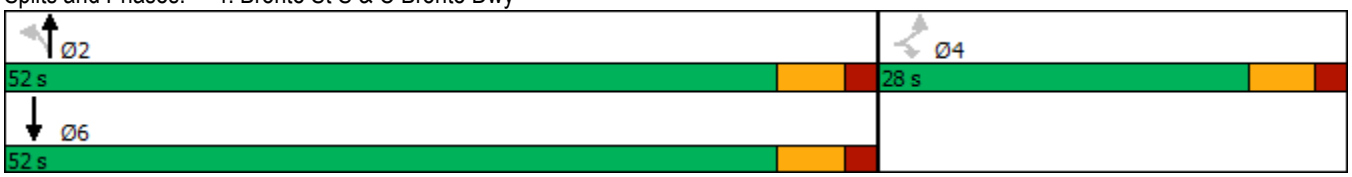
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	12	0	889	928
Volume Left	6	0	0	0
Volume Right	6	0	0	11
cSH	278	1700	1700	1700
Volume to Capacity	0.04	0.00	0.52	0.55
Queue Length 95th (m)	1.1	0.0	0.0	0.0
Control Delay (s)	18.5	0.0	0.0	0.0
Lane LOS	C			
Approach Delay (s)	18.5	0.0		0.0
Approach LOS	C			

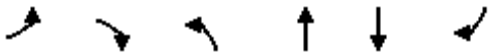
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	150	105	65	650	725
Future Volume (vph)	150	105	65	650	725
Lane Group Flow (vph)	158	111	68	684	874
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.38	0.24	0.23	0.70	0.48
Control Delay	19.7	6.2	9.1	13.6	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	6.2	9.1	13.6	8.3
Queue Length 50th (m)	10.4	0.0	2.8	38.1	20.7
Queue Length 95th (m)	31.1	10.7	10.0	82.0	39.0
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	827	806	516	1738	3196
Starvation Cap Reductn	0	0	0	16	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.19	0.14	0.13	0.40	0.27

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 48.8
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

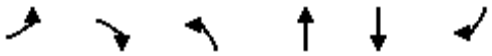
Splits and Phases: 4: Bronte St S & C Bronte Dwy





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	105	65	650	725	105
Future Volume (vph)	150	105	65	650	725	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1795	1615	1799	1900	3495	
Flt Permitted	0.95	1.00	0.30	1.00	1.00	
Satd. Flow (perm)	1795	1615	566	1900	3495	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	111	68	684	763	111
RTOR Reduction (vph)	0	85	0	0	16	0
Lane Group Flow (vph)	158	26	68	684	858	0
Confl. Peds. (#/hr)	5		10			10
Confl. Bikes (#/hr)						5
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	11.3	11.3	25.2	25.2	25.2	
Effective Green, g (s)	11.3	11.3	25.2	25.2	25.2	
Actuated g/C Ratio	0.23	0.23	0.52	0.52	0.52	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	418	376	294	987	1815	
v/s Ratio Prot				c0.36	0.25	
v/s Ratio Perm	c0.09	0.02	0.12			
v/c Ratio	0.38	0.07	0.23	0.69	0.47	
Uniform Delay, d1	15.6	14.5	6.4	8.7	7.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	0.1	0.4	2.1	0.2	
Delay (s)	16.2	14.6	6.8	10.9	7.6	
Level of Service	B	B	A	B	A	
Approach Delay (s)	15.5			10.5	7.6	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	48.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	45	0	715	815	15
Future Volume (Veh/h)	0	45	0	715	815	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	47	0	745	849	16
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.84	0.86	0.86			
vC, conflicting volume	1612	442	875			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	997	19	523			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	100			
cM capacity (veh/h)	203	903	897			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	47	745	566	299
Volume Left	0	0	0	0
Volume Right	47	0	0	16
cSH	903	1700	1700	1700
Volume to Capacity	0.05	0.44	0.33	0.18
Queue Length 95th (m)	1.3	0.0	0.0	0.0
Control Delay (s)	9.2	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.2	0.0	0.0	
Approach LOS	A			

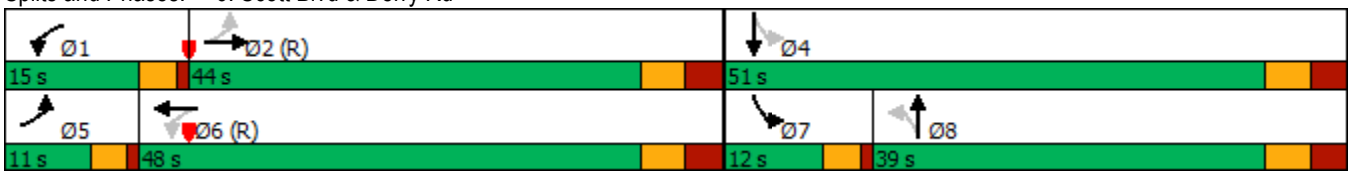
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

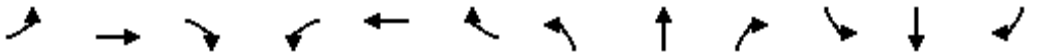
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	60	545	330	600	55	40	205	90
Future Volume (vph)	60	545	330	600	55	40	205	90
Lane Group Flow (vph)	63	589	344	818	57	323	214	151
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	44.0	15.0	48.0	39.0	39.0	12.0	51.0
Total Split (%)	10.0%	40.0%	13.6%	43.6%	35.5%	35.5%	10.9%	46.4%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.17	0.46	0.62	0.49	0.39	0.78	0.61	0.27
Control Delay	13.6	30.1	11.0	14.8	51.2	25.3	34.8	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.6	30.1	11.0	14.8	51.2	25.3	34.8	22.3
Queue Length 50th (m)	5.5	53.1	12.8	62.2	12.4	16.1	36.9	20.1
Queue Length 95th (m)	13.4	80.2	48.4	98.4	23.5	44.7	52.0	33.5
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	378	1383	554	1683	354	652	349	721
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.43	0.62	0.49	0.16	0.50	0.61	0.21

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 93 (85%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 6: Scott Blvd & Derry Rd

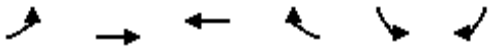




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	545	20	330	600	185	55	40	270	205	90	55
Future Volume (vph)	60	545	20	330	600	185	55	40	270	205	90	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.87		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1802	3551		1783	3428		1740	1628		1804	1747	
Flt Permitted	0.34	1.00		0.32	1.00		0.66	1.00		0.23	1.00	
Satd. Flow (perm)	651	3551		594	3428		1211	1628		442	1747	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	62	568	21	344	625	193	57	42	281	214	94	57
RTOR Reduction (vph)	0	3	0	0	22	0	0	219	0	0	23	0
Lane Group Flow (vph)	63	586	0	344	796	0	57	104	0	214	128	0
Confl. Peds. (#/hr)	10		15	15		10	20		5	5		20
Heavy Vehicles (%)	0%	1%	0%	1%	1%	0%	2%	0%	0%	0%	1%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	46.0	39.9		62.6	52.5		13.2	13.2		33.6	33.6	
Effective Green, g (s)	46.0	39.9		62.6	52.5		13.2	13.2		33.6	33.6	
Actuated g/C Ratio	0.42	0.36		0.57	0.48		0.12	0.12		0.31	0.31	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	336	1288		540	1636		145	195		338	533	
v/s Ratio Prot	0.01	0.17		c0.11	0.23			0.06		c0.09	0.07	
v/s Ratio Perm	0.07			c0.25			0.05			c0.10		
v/c Ratio	0.19	0.46		0.64	0.49		0.39	0.53		0.63	0.24	
Uniform Delay, d1	19.3	26.8		13.7	19.6		44.7	45.5		31.0	28.6	
Progression Factor	1.00	1.00		0.50	0.69		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	1.2		2.3	1.0		1.8	2.8		3.8	0.2	
Delay (s)	19.6	27.9		9.2	14.4		46.5	48.3		34.8	28.9	
Level of Service	B	C		A	B		D	D		C	C	
Approach Delay (s)		27.1			12.9			48.0			32.4	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	960	1005	75	0	130
Future Volume (Veh/h)	75	960	1005	75	0	130
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	77	990	1036	77	0	134
Pedestrians					15	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.85				0.85	0.85
vC, conflicting volume	1128				1738	572
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	791				1511	134
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	89				100	82
cM capacity (veh/h)	696				84	747

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	77	495	495	691	422	134
Volume Left	77	0	0	0	0	0
Volume Right	0	0	0	0	77	134
cSH	696	1700	1700	1700	1700	747
Volume to Capacity	0.11	0.29	0.29	0.41	0.25	0.18
Queue Length 95th (m)	3.0	0.0	0.0	0.0	0.0	5.2
Control Delay (s)	10.8	0.0	0.0	0.0	0.0	10.9
Lane LOS	B					B
Approach Delay (s)	0.8			0.0		10.9
Approach LOS						B

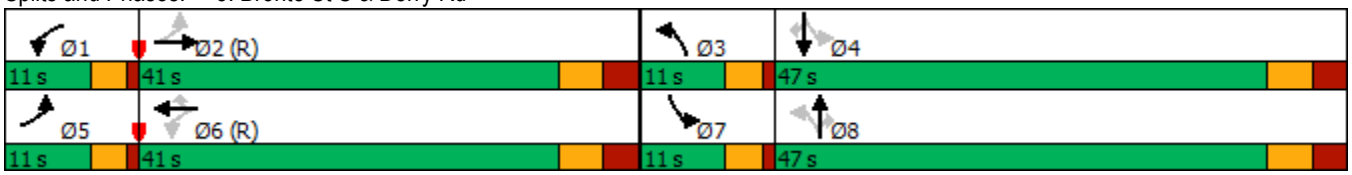
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		

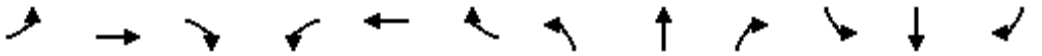
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	160	645	110	665	210	160	345	160	215	400	245
Future Volume (vph)	160	645	110	665	210	160	345	160	215	400	245
Lane Group Flow (vph)	165	778	113	686	216	165	356	165	222	412	253
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	11.0	41.0	11.0	41.0	41.0	11.0	47.0	47.0	11.0	47.0	47.0
Total Split (%)	10.0%	37.3%	10.0%	37.3%	37.3%	10.0%	42.7%	42.7%	10.0%	42.7%	42.7%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-0.5	0.0	-0.4	0.0	0.0	-1.0	0.0	0.0	-1.4	0.0	0.0
Total Lost Time (s)	3.5	6.7	3.6	6.7	6.7	3.0	6.7	6.7	2.6	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.44	0.61	0.35	0.54	0.31	0.53	0.72	0.31	0.60	0.81	0.42
Control Delay	18.6	27.6	21.2	30.5	7.4	25.6	44.6	5.6	27.3	49.5	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	18.6	27.6	21.2	30.5	7.4	25.6	44.6	5.6	27.3	49.6	6.4
Queue Length 50th (m)	13.7	86.2	11.8	46.8	0.0	22.1	74.3	0.0	30.6	86.9	2.0
Queue Length 95th (m)	25.0	106.5	30.1	79.8	24.3	33.9	93.8	14.2	44.7	111.2	19.3
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	373	1292	322	1291	700	309	696	684	370	689	725
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	24	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.60	0.35	0.53	0.31	0.53	0.51	0.24	0.60	0.62	0.35

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 22 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	645	110	110	665	210	160	345	160	215	400	245
Future Volume (vph)	160	645	110	110	665	210	160	345	160	215	400	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.7		3.6	6.7	6.7	3.0	6.7	6.7	2.6	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1803	3474		1785	3574	1556	1784	1900	1582	1785	1881	1562
Flt Permitted	0.27	1.00		0.24	1.00	1.00	0.24	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)	516	3474		457	3574	1556	455	1900	1582	551	1881	1562
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	165	665	113	113	686	216	165	356	165	222	412	253
RTOR Reduction (vph)	0	11	0	0	0	139	0	0	122	0	0	175
Lane Group Flow (vph)	165	767	0	113	686	77	165	356	43	222	412	78
Confl. Peds. (#/hr)	10		15	15		10	20		10	10		20
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	1%	0%	0%	1%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	50.2	40.3		47.6	39.0	39.0	38.5	28.7	28.7	40.9	29.9	29.9
Effective Green, g (s)	51.2	40.3		48.4	39.0	39.0	40.5	28.7	28.7	43.7	29.9	29.9
Actuated g/C Ratio	0.47	0.37		0.44	0.35	0.35	0.37	0.26	0.26	0.40	0.27	0.27
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	361	1272		309	1267	551	298	495	412	358	511	424
v/s Ratio Prot	c0.04	c0.22		0.03	0.19		0.05	0.19		c0.07	c0.22	
v/s Ratio Perm	0.17			0.13		0.05	0.15		0.03	0.18		0.05
v/c Ratio	0.46	0.60		0.37	0.54	0.14	0.55	0.72	0.10	0.62	0.81	0.18
Uniform Delay, d1	18.2	28.3		19.3	28.4	24.1	25.6	37.0	30.9	24.0	37.3	30.7
Progression Factor	0.93	0.87		1.14	0.96	1.56	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	1.9		0.7	1.6	0.5	2.2	5.0	0.1	3.3	9.0	0.2
Delay (s)	17.8	26.7		22.6	28.8	38.2	27.8	41.9	31.0	27.4	46.4	30.9
Level of Service	B	C		C	C	D	C	D	C	C	D	C
Approach Delay (s)		25.1			30.1			35.9			37.2	
Approach LOS		C			C			D			D	

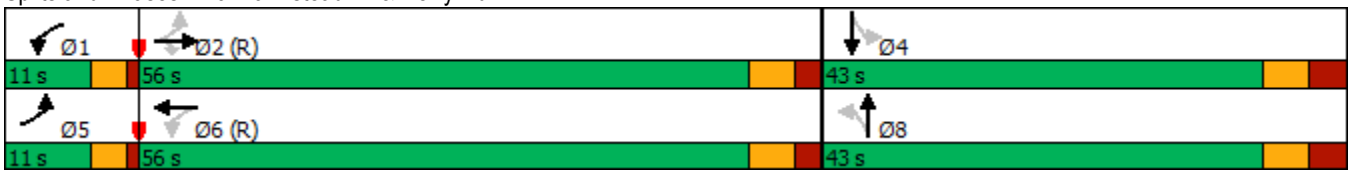
Intersection Summary			
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

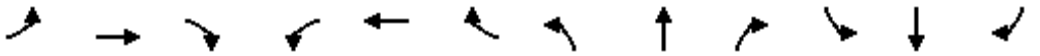
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	30	965	50	105	920	45	40	35	55
Future Volume (vph)	30	965	50	105	920	45	40	35	55
Lane Group Flow (vph)	31	995	52	108	974	46	252	36	109
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	11.0	56.0	56.0	11.0	56.0	43.0	43.0	43.0	43.0
Total Split (%)	10.0%	50.9%	50.9%	10.0%	50.9%	39.1%	39.1%	39.1%	39.1%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.07	0.43	0.05	0.25	0.39	0.30	0.72	0.53	0.45
Control Delay	2.7	6.6	0.6	4.7	8.2	47.8	26.4	71.2	32.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.7	6.6	0.6	4.7	8.2	47.8	26.4	71.2	32.8
Queue Length 50th (m)	1.0	29.2	0.1	4.1	43.5	9.9	15.6	8.0	14.0
Queue Length 95th (m)	m2.4	44.8	m0.2	11.4	73.8	20.0	40.6	18.1	29.2
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	472	2338	1015	444	2513	423	646	189	584
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.43	0.05	0.24	0.39	0.11	0.39	0.19	0.19

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 51 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	965	50	105	920	25	45	40	205	35	55	50
Future Volume (vph)	30	965	50	105	920	25	45	40	205	35	55	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1802	3574	1510	1785	3557		1790	1606		1800	1696	
Flt Permitted	0.28	1.00	1.00	0.24	1.00		0.69	1.00		0.31	1.00	
Satd. Flow (perm)	533	3574	1510	445	3557		1294	1606		578	1696	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	31	995	52	108	948	26	46	41	211	36	57	52
RTOR Reduction (vph)	0	0	18	0	1	0	0	159	0	0	39	0
Lane Group Flow (vph)	31	995	34	108	973	0	46	93	0	36	70	0
Confl. Peds. (#/hr)	15		15	15		15	10		5	5		10
Heavy Vehicles (%)	0%	1%	2%	1%	1%	0%	0%	2%	2%	0%	2%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	75.6	71.9	71.9	83.8	76.1		13.1	13.1		13.1	13.1	
Effective Green, g (s)	75.6	71.9	71.9	83.8	76.1		13.1	13.1		13.1	13.1	
Actuated g/C Ratio	0.69	0.65	0.65	0.76	0.69		0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	409	2336	986	435	2460		154	191		68	201	
v/s Ratio Prot	0.00	c0.28		c0.02	0.27			0.06			0.04	
v/s Ratio Perm	0.05		0.02	0.17			0.04			c0.06		
v/c Ratio	0.08	0.43	0.03	0.25	0.40		0.30	0.49		0.53	0.35	
Uniform Delay, d1	5.5	9.1	6.8	4.4	7.2		44.3	45.3		45.6	44.5	
Progression Factor	0.66	0.61	0.54	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.5	0.1	0.3	0.5		1.1	2.0		7.3	1.1	
Delay (s)	3.7	6.1	3.7	4.7	7.7		45.3	47.3		52.8	45.6	
Level of Service	A	A	A	A	A		D	D		D	D	
Approach Delay (s)		5.9			7.4			47.0			47.4	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

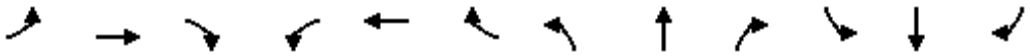
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	25	10	45	10	5	725	70	785
Future Volume (vph)	25	10	45	10	5	725	70	785
Lane Group Flow (vph)	0	61	51	107	6	854	79	904
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.20	0.18	0.26	0.02	0.66	0.26	0.70
Control Delay		16.9	22.4	9.1	4.0	9.5	7.3	10.6
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		16.9	22.4	9.1	4.0	9.5	7.3	10.6
Queue Length 50th (m)		2.9	3.9	0.8	0.2	48.5	3.0	54.2
Queue Length 95th (m)		14.2	15.1	13.2	1.2	84.7	9.2	96.5
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		724	687	855	367	1811	420	1798
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.08	0.07	0.13	0.02	0.47	0.19	0.50

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 50.7
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

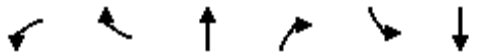
Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	10	20	45	10	85	5	725	35	70	785	20
Future Volume (vph)	25	10	20	45	10	85	5	725	35	70	785	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt		0.95		1.00	0.87		1.00	0.99		1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1715		1795	1592		1794	1884		1798	1870	
Flt Permitted		0.80		0.72	1.00		0.20	1.00		0.23	1.00	
Satd. Flow (perm)		1405		1355	1592		379	1884		435	1870	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	28	11	22	51	11	96	6	815	39	79	882	22
RTOR Reduction (vph)	0	19	0	0	81	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	42	0	51	26	0	6	852	0	79	903	0
Confl. Peds. (#/hr)	5		5	5		5	25		15	15		25
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	4%	0%	0%	0%	0%	1%	0%	0%	0%	0%	1%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.0		8.0	8.0		33.6	33.6		33.6	33.6	
Effective Green, g (s)		8.0		8.0	8.0		33.6	33.6		33.6	33.6	
Actuated g/C Ratio		0.16		0.16	0.16		0.65	0.65		0.65	0.65	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		217		210	246		246	1226		283	1217	
v/s Ratio Prot					0.02			0.45			c0.48	
v/s Ratio Perm		0.03		c0.04			0.02			0.18		
v/c Ratio		0.20		0.24	0.11		0.02	0.70		0.28	0.74	
Uniform Delay, d1		19.0		19.1	18.7		3.2	5.7		3.8	6.1	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4		0.6	0.2		0.0	1.7		0.5	2.5	
Delay (s)		19.4		19.7	18.9		3.2	7.5		4.4	8.6	
Level of Service		B		B	B		A	A		A	A	
Approach Delay (s)		19.4			19.2			7.4			8.2	
Approach LOS		B			B			A			A	

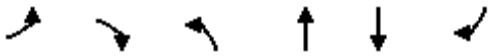
Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	51.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	15	815	25	10	875
Future Volume (Veh/h)	15	15	815	25	10	875
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	17	17	916	28	11	983
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.78	0.62			0.62	
vC, conflicting volume	1945	940			954	
vC1, stage 1 conf vol	940					
vC2, stage 2 conf vol	1005					
vCu, unblocked vol	973	597			620	
tC, single (s)	6.5	6.2			4.1	
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.3			2.2	
p0 queue free %	94	95			98	
cM capacity (veh/h)	266	312			597	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	34	944	994
Volume Left	17	0	11
Volume Right	17	28	0
cSH	287	1700	597
Volume to Capacity	0.12	0.56	0.02
Queue Length 95th (m)	3.2	0.0	0.5
Control Delay (s)	19.2	0.0	0.6
Lane LOS	C		A
Approach Delay (s)	19.2	0.0	0.6
Approach LOS	C		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	5	0	845	880	10
Future Volume (Veh/h)	5	5	0	845	880	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	6	0	939	978	11
Pedestrians	40					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	3					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.77	0.58	0.58			
vC, conflicting volume	1962	1024	1029			
vC1, stage 1 conf vol	1024					
vC2, stage 2 conf vol	939					
vCu, unblocked vol	988	675	685			
tC, single (s)	6.4	6.5	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.5	2.2			
p0 queue free %	98	97	100			
cM capacity (veh/h)	264	232	513			

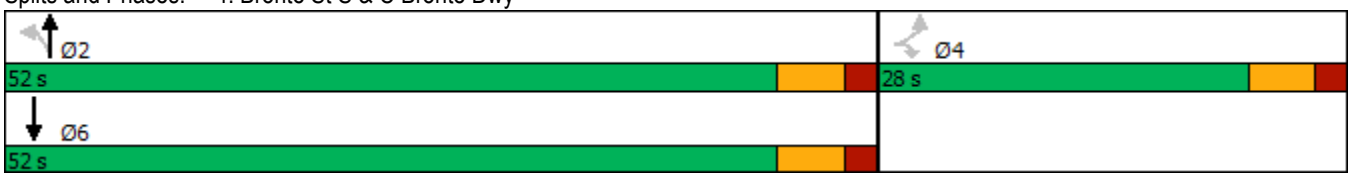
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	12	0	939	989
Volume Left	6	0	0	0
Volume Right	6	0	0	11
cSH	247	1700	1700	1700
Volume to Capacity	0.05	0.00	0.55	0.58
Queue Length 95th (m)	1.2	0.0	0.0	0.0
Control Delay (s)	20.3	0.0	0.0	0.0
Lane LOS	C			
Approach Delay (s)	20.3	0.0		0.0
Approach LOS	C			

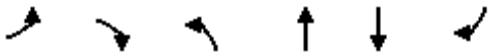
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	150	105	65	695	780
Future Volume (vph)	150	105	65	695	780
Lane Group Flow (vph)	158	111	68	732	932
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.39	0.25	0.25	0.73	0.50
Control Delay	20.9	6.5	9.4	14.3	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.9	6.5	9.4	14.3	8.4
Queue Length 50th (m)	11.0	0.0	2.8	42.4	22.8
Queue Length 95th (m)	33.0	11.0	10.4	93.3	43.5
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	798	782	466	1702	3134
Starvation Cap Reductn	0	0	0	30	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.20	0.14	0.15	0.44	0.30

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 50.8
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

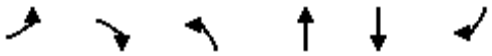
Splits and Phases: 4: Bronte St S & C Bronte Dwy





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	105	65	695	780	105
Future Volume (vph)	150	105	65	695	780	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1795	1615	1799	1900	3499	
Flt Permitted	0.95	1.00	0.27	1.00	1.00	
Satd. Flow (perm)	1795	1615	520	1900	3499	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	111	68	732	821	111
RTOR Reduction (vph)	0	86	0	0	14	0
Lane Group Flow (vph)	158	25	68	732	918	0
Confl. Peds. (#/hr)	5		10			10
Confl. Bikes (#/hr)						5
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	11.5	11.5	26.9	26.9	26.9	
Effective Green, g (s)	11.5	11.5	26.9	26.9	26.9	
Actuated g/C Ratio	0.23	0.23	0.53	0.53	0.53	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	409	368	277	1014	1867	
v/s Ratio Prot				c0.39	0.26	
v/s Ratio Perm	c0.09	0.02	0.13			
v/c Ratio	0.39	0.07	0.25	0.72	0.49	
Uniform Delay, d1	16.5	15.3	6.3	8.9	7.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	0.1	0.5	2.6	0.2	
Delay (s)	17.1	15.3	6.8	11.5	7.6	
Level of Service	B	B	A	B	A	
Approach Delay (s)	16.4			11.1	7.6	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	50.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	45	0	760	870	15
Future Volume (Veh/h)	0	45	0	760	870	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	47	0	792	906	16
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.83	0.85	0.85			
vC, conflicting volume	1716	471	932			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1065	11	556			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	100			
cM capacity (veh/h)	182	901	860			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	47	792	604	318
Volume Left	0	0	0	0
Volume Right	47	0	0	16
cSH	901	1700	1700	1700
Volume to Capacity	0.05	0.47	0.36	0.19
Queue Length 95th (m)	1.3	0.0	0.0	0.0
Control Delay (s)	9.2	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.2	0.0	0.0	
Approach LOS	A			

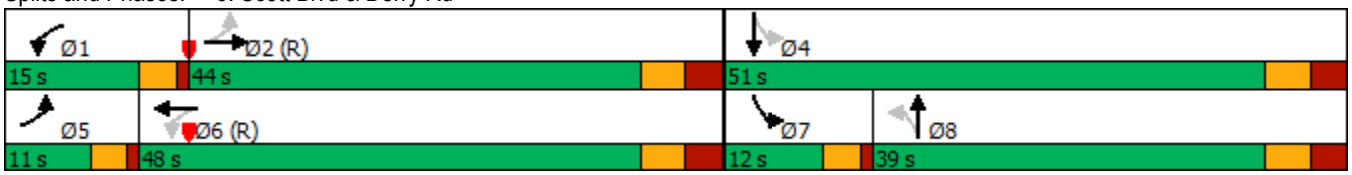
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		

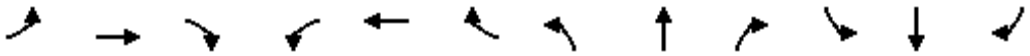
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	60	600	330	665	55	40	205	90
Future Volume (vph)	60	600	330	665	55	40	205	90
Lane Group Flow (vph)	63	646	344	886	57	323	214	151
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	44.0	15.0	48.0	39.0	39.0	12.0	51.0
Total Split (%)	10.0%	40.0%	13.6%	43.6%	35.5%	35.5%	10.9%	46.4%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.18	0.51	0.64	0.52	0.38	0.79	0.64	0.27
Control Delay	13.5	31.0	11.3	15.0	49.5	28.1	36.4	22.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.5	31.0	11.3	15.0	49.5	28.1	36.4	22.5
Queue Length 50th (m)	5.6	61.8	13.2	72.4	12.3	19.6	36.4	19.8
Queue Length 95th (m)	13.1	86.8	49.4	105.9	23.2	48.4	52.9	34.0
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	359	1346	536	1693	354	641	335	721
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.48	0.64	0.52	0.16	0.50	0.64	0.21

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 93 (85%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 6: Scott Blvd & Derry Rd

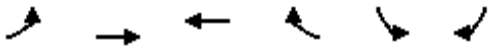




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	600	20	330	665	185	55	40	270	205	90	55
Future Volume (vph)	60	600	20	330	665	185	55	40	270	205	90	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	0.87		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1803	3553		1784	3439		1740	1628		1804	1747	
Flt Permitted	0.32	1.00		0.28	1.00		0.66	1.00		0.22	1.00	
Satd. Flow (perm)	609	3553		527	3439		1211	1628		427	1747	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	62	625	21	344	693	193	57	42	281	214	94	57
RTOR Reduction (vph)	0	2	0	0	19	0	0	204	0	0	23	0
Lane Group Flow (vph)	63	644	0	344	867	0	57	119	0	214	128	0
Confl. Peds. (#/hr)	10		15	15		10	20		5	5		20
Heavy Vehicles (%)	0%	1%	0%	1%	1%	0%	2%	0%	0%	0%	1%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	45.5	39.4		62.8	52.7		13.8	13.8		33.4	33.4	
Effective Green, g (s)	45.5	39.4		62.8	52.7		13.8	13.8		33.4	33.4	
Actuated g/C Ratio	0.41	0.36		0.57	0.48		0.13	0.13		0.30	0.30	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	318	1272		522	1647		151	204		324	530	
v/s Ratio Prot	0.01	0.18		c0.12	0.25			0.07		c0.09	0.07	
v/s Ratio Perm	0.07			c0.26			0.05			c0.11		
v/c Ratio	0.20	0.51		0.66	0.53		0.38	0.58		0.66	0.24	
Uniform Delay, d1	19.6	27.7		14.0	20.0		44.2	45.4		31.2	28.8	
Progression Factor	1.00	1.00		0.50	0.68		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	1.4		2.7	1.1		1.6	4.2		5.0	0.2	
Delay (s)	19.9	29.1		9.7	14.6		45.7	49.6		36.2	29.0	
Level of Service	B	C		A	B		D	D		D	C	
Approach Delay (s)		28.3			13.2			49.0			33.2	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	25.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	1015	1070	75	0	130
Future Volume (Veh/h)	75	1015	1070	75	0	130
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	77	1046	1103	77	0	134
Pedestrians					15	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	1195				1834	605
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	833				1600	125
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				100	82
cM capacity (veh/h)	660				72	745

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	77	523	523	735	445	134
Volume Left	77	0	0	0	0	0
Volume Right	0	0	0	0	77	134
cSH	660	1700	1700	1700	1700	745
Volume to Capacity	0.12	0.31	0.31	0.43	0.26	0.18
Queue Length 95th (m)	3.2	0.0	0.0	0.0	0.0	5.2
Control Delay (s)	11.2	0.0	0.0	0.0	0.0	10.9
Lane LOS	B					B
Approach Delay (s)	0.8			0.0		10.9
Approach LOS						B

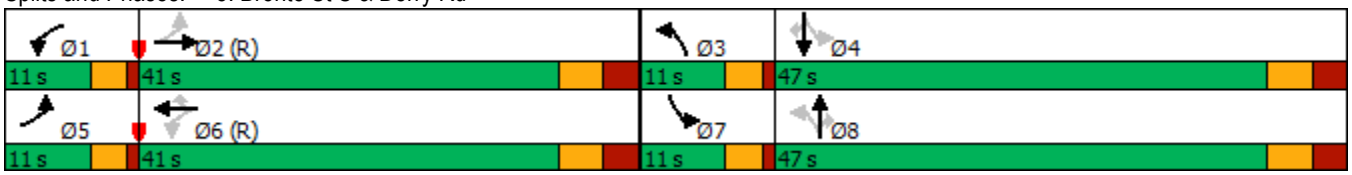
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

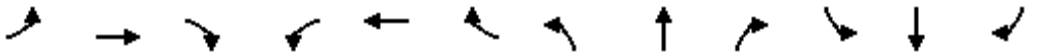
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	170	685	115	705	225	170	365	170	230	425	260
Future Volume (vph)	170	685	115	705	225	170	365	170	230	425	260
Lane Group Flow (vph)	175	825	119	727	232	175	376	175	237	438	268
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	11.0	41.0	11.0	41.0	41.0	11.0	47.0	47.0	11.0	47.0	47.0
Total Split (%)	10.0%	37.3%	10.0%	37.3%	37.3%	10.0%	42.7%	42.7%	10.0%	42.7%	42.7%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-0.5	0.0	-0.4	0.0	0.0	-1.0	0.0	0.0	-1.4	0.0	0.0
Total Lost Time (s)	3.5	6.7	3.6	6.7	6.7	3.0	6.7	6.7	2.6	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.51	0.66	0.41	0.59	0.34	0.58	0.71	0.31	0.65	0.81	0.44
Control Delay	21.5	28.3	25.9	33.6	9.3	26.4	42.7	5.2	28.5	48.4	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	21.5	28.3	25.9	33.6	9.3	26.4	42.7	5.2	28.5	48.6	7.8
Queue Length 50th (m)	12.5	94.8	12.3	48.6	0.0	22.5	75.7	0.0	31.5	91.4	6.2
Queue Length 95th (m)	27.2	110.6	37.7	97.4	33.5	34.5	96.7	14.2	46.1	116.4	24.0
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	342	1252	292	1255	696	302	696	690	367	689	718
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	30	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.66	0.41	0.58	0.33	0.58	0.54	0.25	0.65	0.66	0.37

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 22 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	685	115	115	705	225	170	365	170	230	425	260
Future Volume (vph)	170	685	115	115	705	225	170	365	170	230	425	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.7		3.6	6.7	6.7	3.0	6.7	6.7	2.6	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1803	3474		1785	3574	1556	1785	1900	1582	1785	1881	1562
Flt Permitted	0.24	1.00		0.21	1.00	1.00	0.23	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)	461	3474		396	3574	1556	426	1900	1582	544	1881	1562
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	175	706	119	119	727	232	175	376	175	237	438	268
RTOR Reduction (vph)	0	12	0	0	0	152	0	0	126	0	0	164
Lane Group Flow (vph)	175	813	0	119	727	80	175	376	49	237	438	104
Confl. Peds. (#/hr)	10		15	15		10	20		10	10		20
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	1%	0%	0%	1%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	48.7	39.1		46.3	37.9	37.9	40.1	30.6	30.6	42.1	31.6	31.6
Effective Green, g (s)	49.7	39.1		47.1	37.9	37.9	42.1	30.6	30.6	44.9	31.6	31.6
Actuated g/C Ratio	0.45	0.36		0.43	0.34	0.34	0.38	0.28	0.28	0.41	0.29	0.29
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	331	1234		280	1231	536	292	528	440	356	540	448
v/s Ratio Prot	c0.05	c0.23		0.03	0.20		0.06	0.20		c0.07	c0.23	
v/s Ratio Perm	0.19			0.15		0.05	0.17		0.03	0.20		0.07
v/c Ratio	0.53	0.66		0.42	0.59	0.15	0.60	0.71	0.11	0.67	0.81	0.23
Uniform Delay, d1	19.5	29.8		20.5	29.7	24.9	24.9	35.7	29.6	23.6	36.4	29.9
Progression Factor	0.92	0.84		1.30	1.02	2.10	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	2.4		1.0	2.0	0.6	3.3	4.5	0.1	4.6	9.0	0.3
Delay (s)	19.3	27.5		27.5	32.1	52.8	28.2	40.2	29.7	28.2	45.4	30.2
Level of Service	B	C		C	C	D	C	D	C	C	D	C
Approach Delay (s)		26.1			36.0			34.8			36.8	
Approach LOS		C			D			C			D	

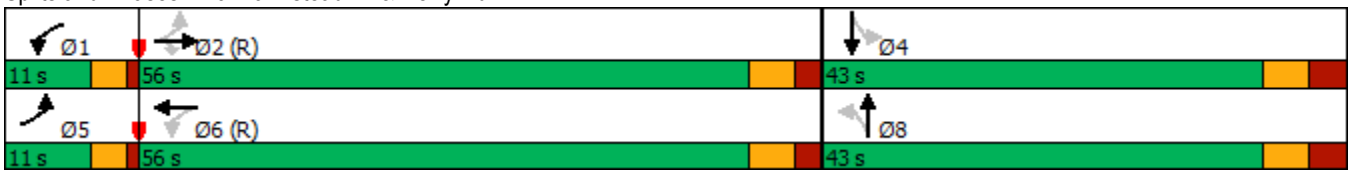
Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

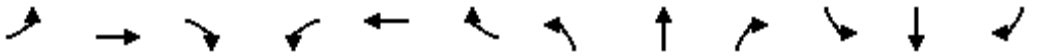
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	30	1030	50	105	980	45	40	35	55
Future Volume (vph)	30	1030	50	105	980	45	40	35	55
Lane Group Flow (vph)	31	1062	52	108	1036	46	252	36	109
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	11.0	56.0	56.0	11.0	56.0	43.0	43.0	43.0	43.0
Total Split (%)	10.0%	50.9%	50.9%	10.0%	50.9%	39.1%	39.1%	39.1%	39.1%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.07	0.46	0.05	0.26	0.41	0.29	0.73	0.52	0.44
Control Delay	3.0	7.0	0.5	5.0	8.7	47.0	27.8	70.1	32.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.0	7.0	0.5	5.0	8.7	47.0	27.8	70.1	32.1
Queue Length 50th (m)	1.0	32.4	0.3	4.2	48.4	9.8	17.3	7.9	13.9
Queue Length 95th (m)	m2.4	48.4	m0.1	11.7	81.6	19.9	42.3	18.1	29.0
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	442	2321	1008	417	2500	423	640	185	584
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.46	0.05	0.26	0.41	0.11	0.39	0.19	0.19

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 51 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1030	50	105	980	25	45	40	205	35	55	50
Future Volume (vph)	30	1030	50	105	980	25	45	40	205	35	55	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1803	3574	1510	1786	3558		1790	1606		1800	1696	
Flt Permitted	0.26	1.00	1.00	0.22	1.00		0.69	1.00		0.30	1.00	
Satd. Flow (perm)	491	3574	1510	404	3558		1294	1606		566	1696	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	31	1062	52	108	1010	26	46	41	211	36	57	52
RTOR Reduction (vph)	0	0	18	0	1	0	0	151	0	0	39	0
Lane Group Flow (vph)	31	1062	34	108	1035	0	46	101	0	36	70	0
Confl. Peds. (#/hr)	15		15	15		15	10		5	5		10
Heavy Vehicles (%)	0%	1%	2%	1%	1%	0%	0%	2%	2%	0%	2%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	75.3	71.5	71.5	83.5	75.7		13.4	13.4		13.4	13.4	
Effective Green, g (s)	75.3	71.5	71.5	83.5	75.7		13.4	13.4		13.4	13.4	
Actuated g/C Ratio	0.68	0.65	0.65	0.76	0.69		0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	381	2323	981	407	2448		157	195		68	206	
v/s Ratio Prot	0.00	c0.30		c0.02	0.29			0.06			0.04	
v/s Ratio Perm	0.05		0.02	0.18			0.04			c0.06		
v/c Ratio	0.08	0.46	0.03	0.27	0.42		0.29	0.52		0.53	0.34	
Uniform Delay, d1	5.7	9.6	6.9	4.7	7.5		44.0	45.3		45.3	44.3	
Progression Factor	0.70	0.61	0.40	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.5	0.1	0.4	0.5		1.0	2.3		7.3	1.0	
Delay (s)	4.1	6.4	2.8	5.1	8.1		45.0	47.6		52.6	45.3	
Level of Service	A	A	A	A	A		D	D		D	D	
Approach Delay (s)		6.2			7.8			47.2			47.1	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

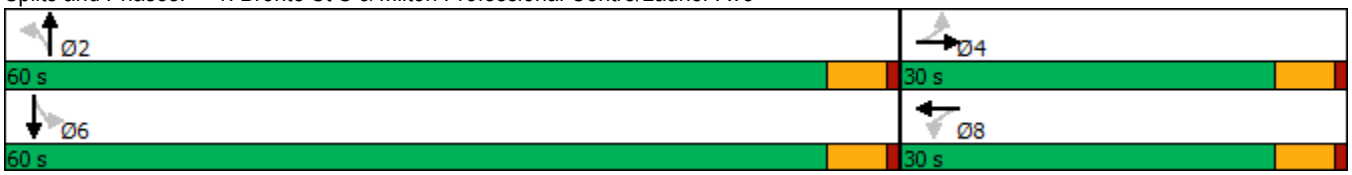
c Critical Lane Group

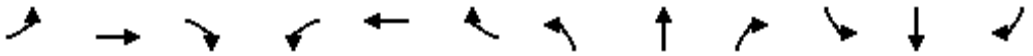
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	40	5	30	25	10	700	35	580
Future Volume (vph)	40	5	30	25	10	700	35	580
Lane Group Flow (vph)	0	62	34	124	11	821	39	686
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.21	0.11	0.29	0.03	0.67	0.14	0.58
Control Delay		17.4	18.7	9.4	4.4	10.5	5.9	8.6
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		17.4	18.7	9.4	4.4	10.5	5.9	8.6
Queue Length 50th (m)		3.3	2.2	1.8	0.4	45.7	1.3	34.2
Queue Length 95th (m)		14.2	9.9	14.7	1.8	84.1	4.8	62.1
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		713	737	926	594	1817	424	1778
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.09	0.05	0.13	0.02	0.45	0.09	0.39

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 46.8
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	5	10	30	25	85	10	700	30	35	580	30
Future Volume (vph)	40	5	10	30	25	85	10	700	30	35	580	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.98		1.00	0.88		1.00	0.99		1.00	0.99	
Flt Protected		0.96		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1776		1796	1621		1799	1850		1752	1811	
Flt Permitted		0.71		0.72	1.00		0.32	1.00		0.23	1.00	
Satd. Flow (perm)		1302		1355	1621		606	1850		431	1811	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	45	6	11	34	28	96	11	787	34	39	652	34
RTOR Reduction (vph)	0	9	0	0	80	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	53	0	34	44	0	11	819	0	39	684	0
Confl. Peds. (#/hr)	5		5	5		5	10					10
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	3%	3%	4%	4%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.1		8.1	8.1		29.6	29.6		29.6	29.6	
Effective Green, g (s)		8.1		8.1	8.1		29.6	29.6		29.6	29.6	
Actuated g/C Ratio		0.17		0.17	0.17		0.62	0.62		0.62	0.62	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		221		230	275		376	1148		267	1123	
v/s Ratio Prot					0.03			c0.44			0.38	
v/s Ratio Perm		c0.04		0.03			0.02			0.09		
v/c Ratio		0.24		0.15	0.16		0.03	0.71		0.15	0.61	
Uniform Delay, d1		17.1		16.9	16.9		3.5	6.2		3.8	5.5	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6		0.3	0.3		0.0	2.1		0.3	0.9	
Delay (s)		17.7		17.2	17.2		3.5	8.3		4.0	6.5	
Level of Service		B		B	B		A	A		A	A	
Approach Delay (s)		17.7			17.2			8.2			6.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	47.7	Sum of lost time (s)	10.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		

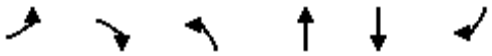
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	15	805	30	5	645
Future Volume (Veh/h)	20	15	805	30	5	645
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	22	17	894	33	6	717
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.71	0.58			0.58	
vC, conflicting volume	1650	920			937	
vC1, stage 1 conf vol	920					
vC2, stage 2 conf vol	729					
vCu, unblocked vol	932	508			537	
tC, single (s)	6.5	6.2			4.1	
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.3			2.2	
p0 queue free %	93	95			99	
cM capacity (veh/h)	313	330			604	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	39	927	723
Volume Left	22	0	6
Volume Right	17	33	0
cSH	320	1700	604
Volume to Capacity	0.12	0.55	0.01
Queue Length 95th (m)	3.3	0.0	0.2
Control Delay (s)	17.8	0.0	0.3
Lane LOS	C		A
Approach Delay (s)	17.8	0.0	0.3
Approach LOS	C		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	5	5	815	625	25
Future Volume (Veh/h)	0	5	5	815	625	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	6	6	937	718	29
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.70	0.76	0.76			
vC, conflicting volume	1692	742	757			
vC1, stage 1 conf vol	742					
vC2, stage 2 conf vol	949					
vCu, unblocked vol	1018	509	528			
tC, single (s)	6.4	6.6	4.7			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.7	2.7			
p0 queue free %	100	98	99			
cM capacity (veh/h)	302	376	615			

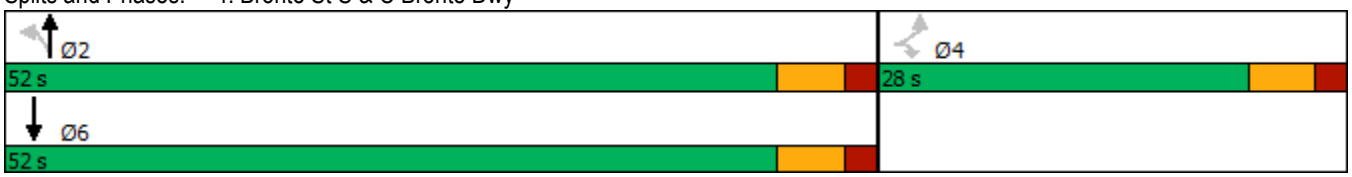
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	6	6	937	747
Volume Left	0	6	0	0
Volume Right	6	0	0	29
cSH	376	615	1700	1700
Volume to Capacity	0.02	0.01	0.55	0.44
Queue Length 95th (m)	0.4	0.2	0.0	0.0
Control Delay (s)	14.7	10.9	0.0	0.0
Lane LOS	B	B		
Approach Delay (s)	14.7	0.1		0.0
Approach LOS	B			

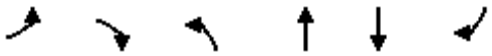
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	160	90	80	680	525
Future Volume (vph)	160	90	80	680	525
Lane Group Flow (vph)	180	101	90	764	725
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.45	0.23	0.24	0.76	0.39
Control Delay	23.6	7.0	8.5	15.5	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	7.0	8.5	15.5	7.2
Queue Length 50th (m)	13.8	0.0	3.8	48.1	16.2
Queue Length 95th (m)	40.2	10.9	12.4	104.0	31.9
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	753	726	609	1624	2972
Starvation Cap Reductn	0	0	0	45	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.24	0.14	0.15	0.48	0.24

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 53.8
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Bronte St S & C Bronte Dwy

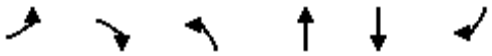




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	160	90	80	680	525	120
Future Volume (vph)	160	90	80	680	525	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	0.98	1.00	1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1776	1574	1800	1863	3402	
Flt Permitted	0.95	1.00	0.37	1.00	1.00	
Satd. Flow (perm)	1776	1574	700	1863	3402	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	180	101	90	764	590	135
RTOR Reduction (vph)	0	78	0	0	26	0
Lane Group Flow (vph)	180	23	90	764	699	0
Confl. Peds. (#/hr)	5	5	5			5
Heavy Vehicles (%)	1%	1%	0%	2%	3%	1%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	12.3	12.3	29.0	29.0	29.0	
Effective Green, g (s)	12.3	12.3	29.0	29.0	29.0	
Actuated g/C Ratio	0.23	0.23	0.54	0.54	0.54	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	409	363	380	1013	1850	
v/s Ratio Prot				c0.41	0.21	
v/s Ratio Perm	c0.10	0.01	0.13			
v/c Ratio	0.44	0.06	0.24	0.75	0.38	
Uniform Delay, d1	17.6	16.0	6.4	9.4	7.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.8	0.1	0.3	3.2	0.1	
Delay (s)	18.3	16.1	6.7	12.6	7.1	
Level of Service	B	B	A	B	A	
Approach Delay (s)	17.5			12.0	7.1	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	53.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	45	0	755	600	15
Future Volume (Veh/h)	0	45	0	755	600	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	49	0	830	659	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.74	0.91	0.91			
vC, conflicting volume	1497	338	675			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1032	69	441			
tC, single (s)	6.8	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	94	100			
cM capacity (veh/h)	172	887	1027			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	49	830	439	236
Volume Left	0	0	0	0
Volume Right	49	0	0	16
cSH	887	1700	1700	1700
Volume to Capacity	0.06	0.49	0.26	0.14
Queue Length 95th (m)	1.4	0.0	0.0	0.0
Control Delay (s)	9.3	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.3	0.0	0.0	
Approach LOS	A			

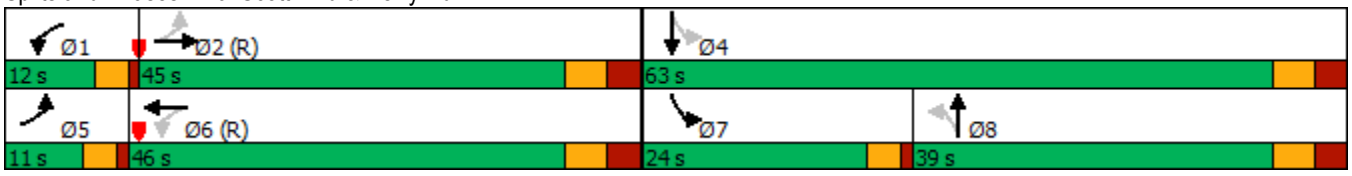
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

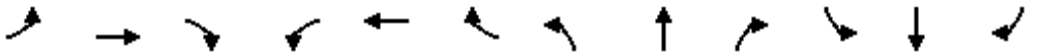
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	70	700	210	470	70	35	280	65
Future Volume (vph)	70	700	210	470	70	35	280	65
Lane Group Flow (vph)	74	798	223	676	74	404	298	165
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	45.0	12.0	46.0	39.0	39.0	24.0	63.0
Total Split (%)	9.2%	37.5%	10.0%	38.3%	32.5%	32.5%	20.0%	52.5%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.21	0.69	0.68	0.49	0.33	0.89	0.76	0.24
Control Delay	19.6	39.4	28.8	24.3	43.7	45.8	40.6	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	39.4	28.8	24.3	43.7	45.8	40.6	11.3
Queue Length 50th (m)	10.0	101.2	39.6	72.1	16.0	52.9	47.0	12.2
Queue Length 95th (m)	20.2	115.6	#73.9	96.6	28.1	85.9	#86.7	25.2
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	352	1207	330	1374	326	570	396	810
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.66	0.68	0.49	0.23	0.71	0.75	0.20

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 109 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Scott Blvd & Derry Rd

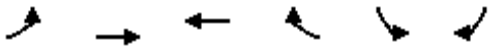




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	700	50	210	470	165	70	35	345	280	65	90
Future Volume (vph)	70	700	50	210	470	165	70	35	345	280	65	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.86		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1734	3427		1734	3320		1771	1588		1769	1640	
Flt Permitted	0.37	1.00		0.18	1.00		0.65	1.00		0.15	1.00	
Satd. Flow (perm)	668	3427		331	3320		1217	1588		285	1640	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	74	745	53	223	500	176	74	37	367	298	69	96
RTOR Reduction (vph)	0	4	0	0	26	0	0	161	0	0	47	0
Lane Group Flow (vph)	74	794	0	223	650	0	74	243	0	298	118	0
Confl. Peds. (#/hr)	5		15	15		5	10		10	10		10
Heavy Vehicles (%)	4%	4%	4%	4%	4%	3%	1%	3%	1%	2%	2%	6%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	46.5	40.2		58.3	48.0		22.1	22.1		47.9	47.9	
Effective Green, g (s)	46.5	40.2		58.3	48.0		22.1	22.1		47.9	47.9	
Actuated g/C Ratio	0.39	0.34		0.49	0.40		0.18	0.18		0.40	0.40	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	314	1148		325	1328		224	292		383	654	
v/s Ratio Prot	0.01	0.23		c0.08	0.20			0.15		c0.14	0.07	
v/s Ratio Perm	0.08			c0.25			0.06			c0.17		
v/c Ratio	0.24	0.69		0.69	0.49		0.33	0.83		0.78	0.18	
Uniform Delay, d1	23.6	34.5		21.1	26.9		42.5	47.2		29.3	23.3	
Progression Factor	1.00	1.00		0.80	0.84		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	3.4		5.6	1.2		0.9	18.1		9.6	0.1	
Delay (s)	23.9	38.0		22.4	23.9		43.4	65.2		38.9	23.5	
Level of Service	C	D		C	C		D	E		D	C	
Approach Delay (s)		36.8			23.5			61.9			33.4	
Approach LOS		D			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	36.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	145	1215	740	100	0	110
Future Volume (Veh/h)	145	1215	740	100	0	110
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	154	1293	787	106	0	117
Pedestrians					10	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	903				1804	456
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	608				1636	99
tC, single (s)	4.1				6.8	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	82				100	86
cM capacity (veh/h)	852				67	812

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	154	646	646	525	368	117
Volume Left	154	0	0	0	0	0
Volume Right	0	0	0	0	106	117
cSH	852	1700	1700	1700	1700	812
Volume to Capacity	0.18	0.38	0.38	0.31	0.22	0.14
Queue Length 95th (m)	5.3	0.0	0.0	0.0	0.0	4.0
Control Delay (s)	10.2	0.0	0.0	0.0	0.0	10.2
Lane LOS	B					B
Approach Delay (s)	1.1			0.0		10.2
Approach LOS						B

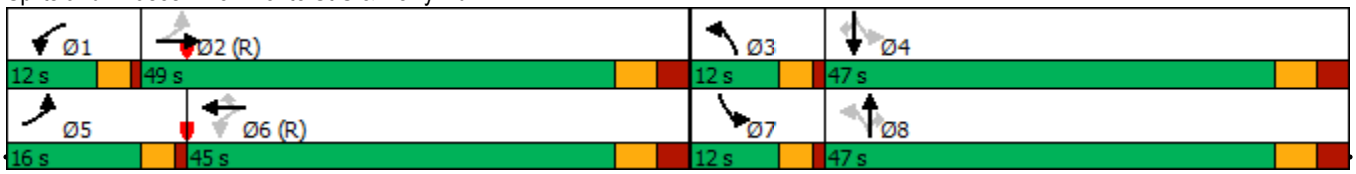
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

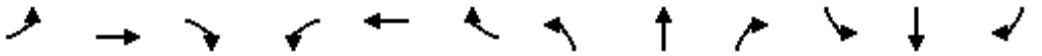
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	215	850	90	545	130	170	400	215	200	315	145
Future Volume (vph)	215	850	90	545	130	170	400	215	200	315	145
Lane Group Flow (vph)	231	1097	97	586	140	183	430	231	215	339	156
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	16.0	49.0	12.0	45.0	45.0	12.0	47.0	47.0	12.0	47.0	47.0
Total Split (%)	13.3%	40.8%	10.0%	37.5%	37.5%	10.0%	39.2%	39.2%	10.0%	39.2%	39.2%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-0.6	0.0	-0.2	0.0	0.0	-1.9	0.0	0.0	-2.0	0.0	0.0
Total Lost Time (s)	3.4	6.7	3.8	6.7	6.7	2.1	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.53	0.80	0.47	0.46	0.22	0.50	0.84	0.40	0.75	0.64	0.29
Control Delay	17.5	32.0	32.6	29.9	7.7	26.6	56.0	7.5	40.5	43.3	5.9
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	17.5	32.0	32.6	29.9	7.7	26.6	56.0	7.5	40.5	43.3	5.9
Queue Length 50th (m)	20.1	80.8	9.7	37.4	0.0	29.3	100.5	3.8	35.1	74.4	0.0
Queue Length 95th (m)	m37.8	#180.3	34.2	73.3	18.4	41.4	129.0	21.6	#51.7	97.9	14.9
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	442	1365	214	1273	642	364	631	667	287	638	616
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.80	0.45	0.46	0.22	0.50	0.68	0.35	0.75	0.53	0.25

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 32 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	850	170	90	545	130	170	400	215	200	315	145
Future Volume (vph)	215	850	170	90	545	130	170	400	215	200	315	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.4	6.7		3.8	6.7	6.7	2.1	6.7	6.7	2.0	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1751	3385		1735	3505	1523	1765	1881	1572	1735	1900	1527
Flt Permitted	0.32	1.00		0.12	1.00	1.00	0.35	1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)	587	3385		226	3505	1523	657	1881	1572	366	1900	1527
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	231	914	183	97	586	140	183	430	231	215	339	156
RTOR Reduction (vph)	0	13	0	0	0	89	0	0	153	0	0	113
Lane Group Flow (vph)	231	1084	0	97	586	51	183	430	78	215	339	43
Confl. Peds. (#/hr)	5		10	10		5	15		5	5		15
Heavy Vehicles (%)	3%	3%	5%	4%	3%	3%	2%	1%	1%	4%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	60.2	48.0		51.9	43.7	43.7	41.6	32.6	32.6	43.2	33.4	33.4
Effective Green, g (s)	60.8	48.0		52.3	43.7	43.7	45.4	32.6	32.6	47.2	33.4	33.4
Actuated g/C Ratio	0.51	0.40		0.44	0.36	0.36	0.38	0.27	0.27	0.39	0.28	0.28
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	424	1354		204	1276	554	349	511	427	278	528	425
v/s Ratio Prot	c0.06	c0.32		0.03	0.17		0.05	c0.23		c0.08	0.18	
v/s Ratio Perm	0.22			0.17		0.03	0.15		0.05	0.23		0.03
v/c Ratio	0.54	0.80		0.48	0.46	0.09	0.52	0.84	0.18	0.77	0.64	0.10
Uniform Delay, d1	17.7	31.8		23.0	29.1	25.1	26.7	41.3	33.5	27.7	38.0	32.2
Progression Factor	0.84	0.86		1.56	0.94	1.42	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	3.8		1.7	1.2	0.3	1.4	11.9	0.2	12.6	2.7	0.1
Delay (s)	16.0	31.0		37.5	28.5	36.0	28.1	53.2	33.7	40.3	40.7	32.3
Level of Service	B	C		D	C	D	C	D	C	D	D	C
Approach Delay (s)		28.4			30.8			42.4			38.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.3
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Queues
9: Farmstead Dr & Derry Rd

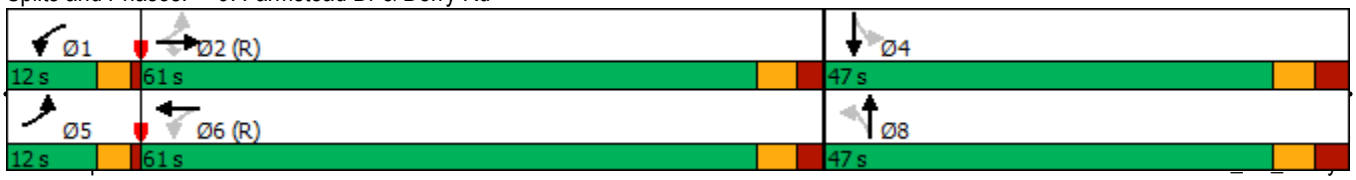
Future Total AM - 3-year

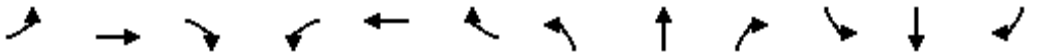
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	55	1090	60	85	710	40	45	55	50
Future Volume (vph)	55	1090	60	85	710	40	45	55	50
Lane Group Flow (vph)	57	1124	62	88	747	41	278	57	104
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	12.0	61.0	61.0	12.0	61.0	47.0	47.0	47.0	47.0
Total Split (%)	10.0%	50.8%	50.8%	10.0%	50.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.11	0.48	0.06	0.23	0.31	0.25	0.78	0.95	0.41
Control Delay	3.4	7.3	0.9	5.3	8.8	48.4	34.1	156.2	31.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.4	7.3	0.9	5.3	8.8	48.4	34.1	156.2	31.4
Queue Length 50th (m)	1.6	37.4	0.2	3.9	35.0	9.4	25.9	~15.1	13.6
Queue Length 95th (m)	m3.9	48.6	m0.2	11.0	60.2	19.1	53.0	#34.1	28.6
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	544	2340	1040	394	2395	435	660	157	599
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.48	0.06	0.22	0.31	0.09	0.42	0.36	0.17

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 62 (52%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	1090	60	85	710	15	40	45	225	55	50	50
Future Volume (vph)	55	1090	60	85	710	15	40	45	225	55	50	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1683	3505	1522	1786	3461		1797	1639		1714	1708	
Flt Permitted	0.36	1.00	1.00	0.21	1.00		0.69	1.00		0.26	1.00	
Satd. Flow (perm)	633	3505	1522	386	3461		1305	1639		472	1708	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	57	1124	62	88	732	15	41	46	232	57	52	52
RTOR Reduction (vph)	0	0	21	0	1	0	0	149	0	0	39	0
Lane Group Flow (vph)	57	1124	41	88	746	0	41	129	0	57	65	0
Confl. Peds. (#/hr)	10		10	10		10	5		5	5		5
Heavy Vehicles (%)	7%	3%	2%	1%	4%	0%	0%	0%	0%	5%	4%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	85.5	80.1	80.1	89.7	82.2		15.3	15.3		15.3	15.3	
Effective Green, g (s)	85.5	80.1	80.1	89.7	82.2		15.3	15.3		15.3	15.3	
Actuated g/C Ratio	0.71	0.67	0.67	0.75	0.69		0.13	0.13		0.13	0.13	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	498	2339	1015	376	2370		166	208		60	217	
v/s Ratio Prot	0.01	c0.32		c0.01	0.22			0.08			0.04	
v/s Ratio Perm	0.08		0.03	0.16			0.03			c0.12		
v/c Ratio	0.11	0.48	0.04	0.23	0.31		0.25	0.62		0.95	0.30	
Uniform Delay, d1	5.2	9.8	6.8	5.3	7.6		47.2	49.6		52.0	47.5	
Progression Factor	0.77	0.62	0.43	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.5	0.1	0.3	0.3		0.8	5.4		97.0	0.8	
Delay (s)	4.0	6.6	3.0	5.6	7.9		47.9	55.0		149.0	48.3	
Level of Service	A	A	A	A	A		D	D		F	D	
Approach Delay (s)		6.3			7.7			54.1			83.9	
Approach LOS		A			A			D			F	

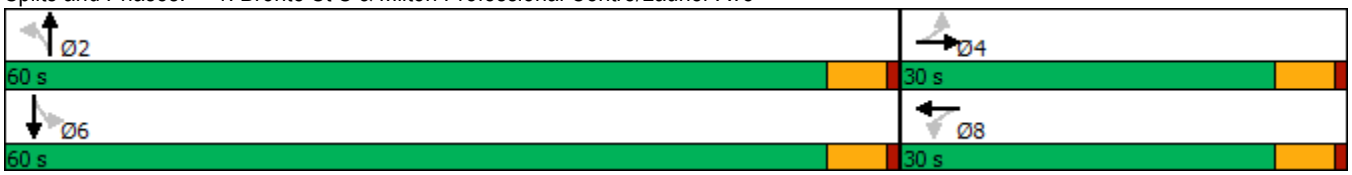
Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

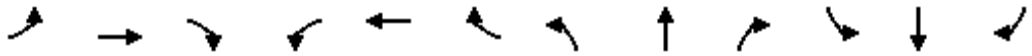
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	40	5	30	25	10	750	35	610
Future Volume (vph)	40	5	30	25	10	750	35	610
Lane Group Flow (vph)	0	62	34	124	11	877	39	719
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.22	0.12	0.30	0.03	0.70	0.15	0.58
Control Delay		19.2	20.8	10.2	4.1	10.7	5.9	8.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		19.2	20.8	10.2	4.1	10.7	5.9	8.4
Queue Length 50th (m)		3.6	2.4	2.0	0.4	51.8	1.4	36.8
Queue Length 95th (m)		15.4	10.6	15.7	1.7	93.8	4.8	65.7
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		682	703	888	563	1793	375	1754
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.09	0.05	0.14	0.02	0.49	0.10	0.41

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 49.4
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	5	10	30	25	85	10	750	30	35	610	30
Future Volume (vph)	40	5	10	30	25	85	10	750	30	35	610	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt		0.98		1.00	0.88		1.00	0.99		1.00	0.99	
Flt Protected		0.96		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1775		1796	1621		1799	1851		1752	1811	
Flt Permitted		0.71		0.72	1.00		0.31	1.00		0.21	1.00	
Satd. Flow (perm)		1302		1354	1621		580	1851		388	1811	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	45	6	11	34	28	96	11	843	34	39	685	34
RTOR Reduction (vph)	0	9	0	0	81	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	53	0	34	43	0	11	876	0	39	717	0
Confl. Peds. (#/hr)	5		5	5		5	10					10
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	2%	3%	3%	4%	4%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.1		8.1	8.1		32.3	32.3		32.3	32.3	
Effective Green, g (s)		8.1		8.1	8.1		32.3	32.3		32.3	32.3	
Actuated g/C Ratio		0.16		0.16	0.16		0.64	0.64		0.64	0.64	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		209		217	260		371	1186		248	1160	
v/s Ratio Prot					0.03			c0.47			0.40	
v/s Ratio Perm		c0.04		0.03			0.02			0.10		
v/c Ratio		0.25		0.16	0.17		0.03	0.74		0.16	0.62	
Uniform Delay, d1		18.5		18.2	18.2		3.3	6.2		3.6	5.4	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6		0.3	0.3		0.0	2.4		0.3	1.0	
Delay (s)		19.1		18.5	18.5		3.3	8.6		3.9	6.4	
Level of Service		B		B	B		A	A		A	A	
Approach Delay (s)		19.1			18.5			8.5			6.2	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	50.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

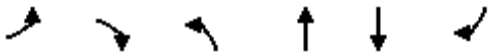
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	15	855	30	5	675
Future Volume (Veh/h)	20	15	855	30	5	675
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	22	17	950	33	6	750
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.67	0.54			0.54	
vC, conflicting volume	1738	976			993	
vC1, stage 1 conf vol	976					
vC2, stage 2 conf vol	762					
vCu, unblocked vol	1000	538			568	
tC, single (s)	6.5	6.2			4.1	
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.3			2.2	
p0 queue free %	92	94			99	
cM capacity (veh/h)	283	295			547	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	39	983	756
Volume Left	22	0	6
Volume Right	17	33	0
cSH	288	1700	547
Volume to Capacity	0.14	0.58	0.01
Queue Length 95th (m)	3.7	0.0	0.3
Control Delay (s)	19.4	0.0	0.3
Lane LOS	C		A
Approach Delay (s)	19.4	0.0	0.3
Approach LOS	C		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	5	5	865	655	25
Future Volume (Veh/h)	0	5	5	865	655	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	6	6	994	753	29
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.67	0.75	0.75			
vC, conflicting volume	1784	778	792			
vC1, stage 1 conf vol	778					
vC2, stage 2 conf vol	1006					
vCu, unblocked vol	1086	537	556			
tC, single (s)	6.4	6.6	4.7			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.7	2.7			
p0 queue free %	100	98	99			
cM capacity (veh/h)	273	355	587			

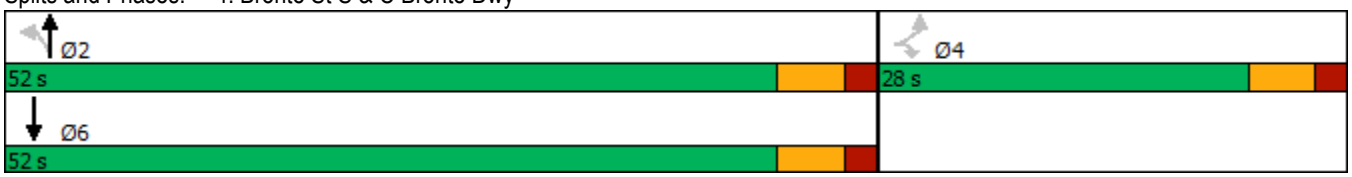
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	6	6	994	782
Volume Left	0	6	0	0
Volume Right	6	0	0	29
cSH	355	587	1700	1700
Volume to Capacity	0.02	0.01	0.58	0.46
Queue Length 95th (m)	0.4	0.2	0.0	0.0
Control Delay (s)	15.3	11.2	0.0	0.0
Lane LOS	C	B		
Approach Delay (s)	15.3	0.1		0.0
Approach LOS	C			

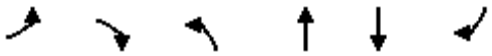
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	160	90	80	730	555
Future Volume (vph)	160	90	80	730	555
Lane Group Flow (vph)	180	101	90	820	759
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.46	0.24	0.24	0.79	0.40
Control Delay	24.9	7.2	8.5	16.7	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.9	7.2	8.5	16.7	7.1
Queue Length 50th (m)	14.9	0.0	4.0	55.7	17.7
Queue Length 95th (m)	40.9	11.0	12.5	117.9	33.8
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	722	700	563	1572	2880
Starvation Cap Reductn	0	0	0	45	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.14	0.16	0.54	0.26

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 56
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Bronte St S & C Bronte Dwy

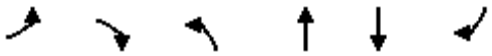




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	160	90	80	730	555	120
Future Volume (vph)	160	90	80	730	555	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1776	1574	1801	1863	3407	
Flt Permitted	0.95	1.00	0.35	1.00	1.00	
Satd. Flow (perm)	1776	1574	668	1863	3407	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	180	101	90	820	624	135
RTOR Reduction (vph)	0	78	0	0	24	0
Lane Group Flow (vph)	180	23	90	820	735	0
Confl. Peds. (#/hr)	5	5	5			5
Heavy Vehicles (%)	1%	1%	0%	2%	3%	1%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	12.4	12.4	31.1	31.1	31.1	
Effective Green, g (s)	12.4	12.4	31.1	31.1	31.1	
Actuated g/C Ratio	0.22	0.22	0.56	0.56	0.56	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	396	351	374	1043	1909	
v/s Ratio Prot				c0.44	0.22	
v/s Ratio Perm	c0.10	0.01	0.13			
v/c Ratio	0.45	0.06	0.24	0.79	0.39	
Uniform Delay, d1	18.6	17.0	6.2	9.6	6.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.8	0.1	0.3	4.0	0.1	
Delay (s)	19.5	17.1	6.5	13.6	7.0	
Level of Service	B	B	A	B	A	
Approach Delay (s)	18.6			12.9	7.0	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	55.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	45	0	805	630	15
Future Volume (Veh/h)	0	45	0	805	630	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	49	0	885	692	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.72	0.90	0.90			
vC, conflicting volume	1585	354	708			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1113	69	461			
tC, single (s)	6.8	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	94	100			
cM capacity (veh/h)	149	882	1003			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	49	885	461	247
Volume Left	0	0	0	0
Volume Right	49	0	0	16
cSH	882	1700	1700	1700
Volume to Capacity	0.06	0.52	0.27	0.15
Queue Length 95th (m)	1.4	0.0	0.0	0.0
Control Delay (s)	9.3	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.3	0.0	0.0	
Approach LOS	A			

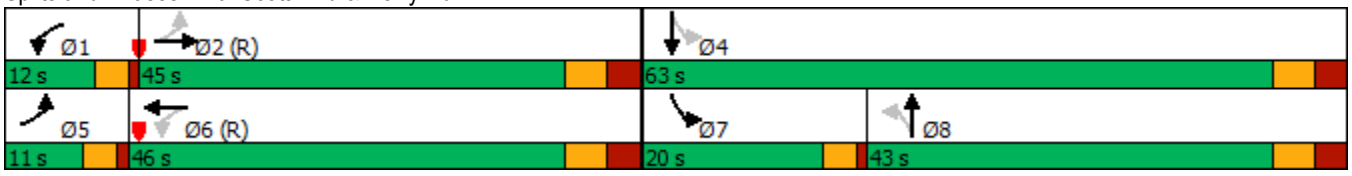
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

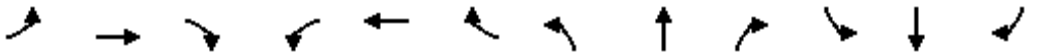
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	70	775	210	515	70	35	280	65
Future Volume (vph)	70	775	210	515	70	35	280	65
Lane Group Flow (vph)	74	877	223	724	74	404	298	165
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	45.0	12.0	46.0	43.0	43.0	20.0	63.0
Total Split (%)	9.2%	37.5%	10.0%	38.3%	35.8%	35.8%	16.7%	52.5%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.22	0.78	0.66	0.51	0.31	0.89	0.88	0.24
Control Delay	18.5	42.7	26.4	22.8	41.6	46.8	55.7	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	42.7	26.4	22.8	41.6	46.8	55.7	12.3
Queue Length 50th (m)	8.9	106.2	36.2	75.1	15.8	57.8	53.6	13.6
Queue Length 95th (m)	20.1	129.9	#93.0	102.3	26.8	87.2	#100.7	25.4
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	345	1140	340	1428	367	603	340	810
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.77	0.66	0.51	0.20	0.67	0.88	0.20

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 109 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Scott Blvd & Derry Rd

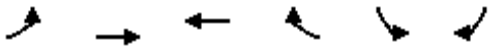




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	775	50	210	515	165	70	35	345	280	65	90
Future Volume (vph)	70	775	50	210	515	165	70	35	345	280	65	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.86		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1734	3431		1735	3330		1771	1588		1769	1640	
Flt Permitted	0.37	1.00		0.14	1.00		0.65	1.00		0.14	1.00	
Satd. Flow (perm)	669	3431		248	3330		1217	1588		270	1640	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	74	824	53	223	548	176	74	37	367	298	69	96
RTOR Reduction (vph)	0	4	0	0	22	0	0	143	0	0	49	0
Lane Group Flow (vph)	74	873	0	223	702	0	74	261	0	298	116	0
Confl. Peds. (#/hr)	5		15	15		5	10		10	10		10
Heavy Vehicles (%)	4%	4%	4%	4%	4%	3%	1%	3%	1%	2%	2%	6%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	45.3	39.0		60.1	49.8		23.6	23.6		46.1	46.1	
Effective Green, g (s)	45.3	39.0		60.1	49.8		23.6	23.6		46.1	46.1	
Actuated g/C Ratio	0.38	0.32		0.50	0.41		0.20	0.20		0.38	0.38	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	308	1115		336	1381		239	312		334	630	
v/s Ratio Prot	0.01	c0.25		c0.09	0.21			0.16		c0.14	0.07	
v/s Ratio Perm	0.08			0.24			0.06			c0.20		
v/c Ratio	0.24	0.78		0.66	0.51		0.31	0.84		0.89	0.18	
Uniform Delay, d1	24.3	36.7		21.3	26.0		41.2	46.3		32.1	24.5	
Progression Factor	1.00	1.00		0.71	0.81		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	5.5		4.6	1.3		0.7	17.4		24.4	0.1	
Delay (s)	24.7	42.2		19.8	22.5		42.0	63.7		56.5	24.6	
Level of Service	C	D		B	C		D	E		E	C	
Approach Delay (s)		40.8			21.8			60.4			45.1	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	38.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	145	1290	785	100	0	110
Future Volume (Veh/h)	145	1290	785	100	0	110
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	154	1372	835	106	0	117
Pedestrians					10	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	951				1892	480
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	650				1729	110
tC, single (s)	4.1				6.8	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	81				100	85
cM capacity (veh/h)	818				57	794

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	154	686	686	557	384	117
Volume Left	154	0	0	0	0	0
Volume Right	0	0	0	0	106	117
cSH	818	1700	1700	1700	1700	794
Volume to Capacity	0.19	0.40	0.40	0.33	0.23	0.15
Queue Length 95th (m)	5.5	0.0	0.0	0.0	0.0	4.1
Control Delay (s)	10.4	0.0	0.0	0.0	0.0	10.3
Lane LOS	B					B
Approach Delay (s)	1.1			0.0		10.3
Approach LOS						B

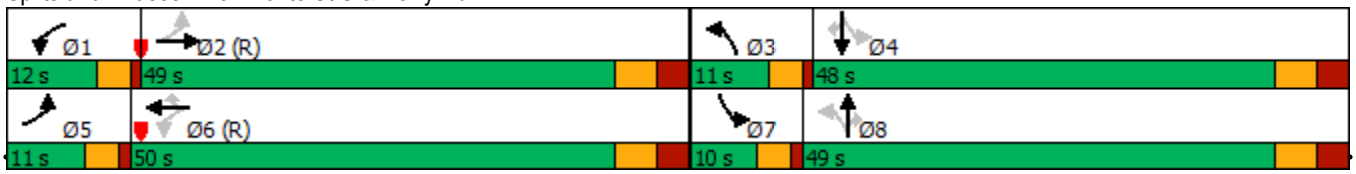
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		

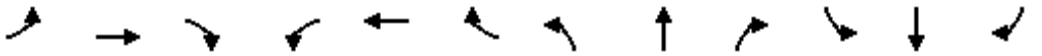
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	230	900	95	575	140	180	425	230	210	330	150
Future Volume (vph)	230	900	95	575	140	180	425	230	210	330	150
Lane Group Flow (vph)	247	1162	102	618	151	194	457	247	226	355	161
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	11.0	49.0	12.0	50.0	50.0	11.0	49.0	49.0	10.0	48.0	48.0
Total Split (%)	9.2%	40.8%	10.0%	41.7%	41.7%	9.2%	40.8%	40.8%	8.3%	40.0%	40.0%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-0.6	0.0	-0.2	0.0	0.0	-1.9	0.0	0.0	-2.0	0.0	0.0
Total Lost Time (s)	3.4	6.7	3.8	6.7	6.7	2.1	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.60	0.84	0.52	0.46	0.22	0.57	0.84	0.43	0.90	0.66	0.29
Control Delay	19.5	31.6	38.9	29.1	8.2	29.4	54.4	12.3	64.1	43.2	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Total Delay	19.5	31.6	38.9	29.1	8.2	29.4	54.4	12.3	64.1	43.5	5.7
Queue Length 50th (m)	21.3	147.1	11.2	38.0	0.0	31.0	105.5	13.8	36.9	77.2	0.0
Queue Length 95th (m)	m32.8	#197.5	37.8	82.3	22.5	43.5	135.3	33.6	#71.9	101.7	14.9
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	411	1379	200	1341	676	339	663	665	251	653	631
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	54	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.84	0.51	0.46	0.22	0.57	0.69	0.37	0.90	0.59	0.26

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 32 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	900	180	95	575	140	180	425	230	210	330	150
Future Volume (vph)	230	900	180	95	575	140	180	425	230	210	330	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.4	6.7		3.8	6.7	6.7	2.1	6.7	6.7	2.0	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1751	3385		1735	3505	1523	1766	1881	1572	1735	1900	1527
Flt Permitted	0.31	1.00		0.10	1.00	1.00	0.33	1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)	579	3385		178	3505	1523	607	1881	1572	359	1900	1527
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	247	968	194	102	618	151	194	457	247	226	355	161
RTOR Reduction (vph)	0	13	0	0	0	93	0	0	122	0	0	115
Lane Group Flow (vph)	247	1149	0	102	618	58	194	457	125	226	355	46
Confl. Peds. (#/hr)	5		10	10		5	15		5	5		15
Heavy Vehicles (%)	3%	3%	5%	4%	3%	3%	2%	1%	1%	4%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	59.2	48.4		54.2	45.9	45.9	42.3	34.6	34.6	41.5	34.2	34.2
Effective Green, g (s)	60.4	48.4		54.6	45.9	45.9	46.1	34.6	34.6	45.5	34.2	34.2
Actuated g/C Ratio	0.50	0.40		0.46	0.38	0.38	0.38	0.29	0.29	0.38	0.29	0.29
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	402	1365		191	1340	582	325	542	453	242	541	435
v/s Ratio Prot	c0.06	c0.34		0.04	0.18		c0.05	c0.24		c0.07	0.19	
v/s Ratio Perm	0.25			0.20		0.04	0.18		0.08	0.28		0.03
v/c Ratio	0.61	0.84		0.53	0.46	0.10	0.60	0.84	0.28	0.93	0.66	0.11
Uniform Delay, d1	18.1	32.3		23.1	27.8	23.8	26.7	40.1	33.0	32.4	37.7	31.6
Progression Factor	0.78	0.81		1.81	0.98	1.81	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	4.4		2.8	1.1	0.3	2.9	11.4	0.3	39.9	2.9	0.1
Delay (s)	16.0	30.5		44.6	28.3	43.4	29.6	51.6	33.3	72.3	40.6	31.7
Level of Service	B	C		D	C	D	C	D	C	E	D	C
Approach Delay (s)		28.0			32.8			41.8			48.3	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	36.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.3
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Queues
9: Farmstead Dr & Derry Rd

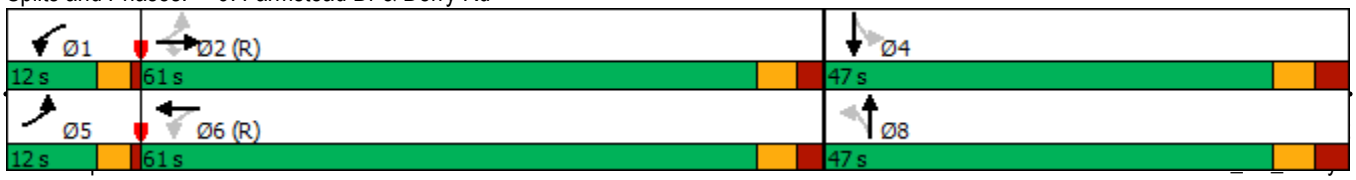
Future Total AM - 8-year

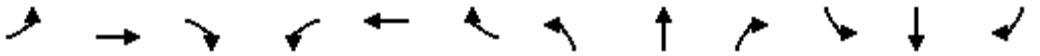
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	55	1165	60	85	755	40	45	55	50
Future Volume (vph)	55	1165	60	85	755	40	45	55	50
Lane Group Flow (vph)	57	1201	62	88	793	41	278	57	104
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	12.0	61.0	61.0	12.0	61.0	47.0	47.0	47.0	47.0
Total Split (%)	10.0%	50.8%	50.8%	10.0%	50.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.11	0.52	0.06	0.25	0.33	0.24	0.78	0.95	0.40
Control Delay	3.9	8.8	1.2	5.7	9.2	47.8	35.3	154.9	30.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.9	8.8	1.2	5.7	9.2	47.8	35.3	154.9	30.9
Queue Length 50th (m)	1.6	50.4	0.2	4.1	38.4	9.3	27.7	~14.5	13.5
Queue Length 95th (m)	m4.0	m55.4	m0.2	11.1	65.3	19.1	54.7	#34.3	28.4
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	518	2319	1031	365	2384	435	655	153	599
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.52	0.06	0.24	0.33	0.09	0.42	0.37	0.17

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 62 (52%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	1165	60	85	755	15	40	45	225	55	50	50
Future Volume (vph)	55	1165	60	85	755	15	40	45	225	55	50	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1684	3505	1522	1786	3461		1797	1639		1714	1708	
Flt Permitted	0.34	1.00	1.00	0.18	1.00		0.69	1.00		0.25	1.00	
Satd. Flow (perm)	600	3505	1522	342	3461		1305	1639		460	1708	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	57	1201	62	88	778	15	41	46	232	57	52	52
RTOR Reduction (vph)	0	0	21	0	1	0	0	143	0	0	39	0
Lane Group Flow (vph)	57	1201	41	88	792	0	41	135	0	57	65	0
Confl. Peds. (#/hr)	10		10	10		10	5		5	5		5
Heavy Vehicles (%)	7%	3%	2%	1%	4%	0%	0%	0%	0%	5%	4%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	84.8	79.4	79.4	89.6	81.8		15.7	15.7		15.7	15.7	
Effective Green, g (s)	84.8	79.4	79.4	89.6	81.8		15.7	15.7		15.7	15.7	
Actuated g/C Ratio	0.71	0.66	0.66	0.75	0.68		0.13	0.13		0.13	0.13	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	472	2319	1007	349	2359		170	214		60	223	
v/s Ratio Prot	0.01	c0.34		c0.02	0.23			0.08			0.04	
v/s Ratio Perm	0.08		0.03	0.17			0.03			c0.12		
v/c Ratio	0.12	0.52	0.04	0.25	0.34		0.24	0.63		0.95	0.29	
Uniform Delay, d1	5.4	10.4	7.1	5.8	7.9		46.8	49.4		51.8	47.1	
Progression Factor	0.85	0.71	0.60	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.5	0.0	0.4	0.4		0.7	6.0		97.0	0.7	
Delay (s)	4.6	7.9	4.3	6.2	8.3		47.5	55.4		148.8	47.8	
Level of Service	A	A	A	A	A		D	E		F	D	
Approach Delay (s)		7.6			8.1			54.4			83.6	
Approach LOS		A			A			D			F	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

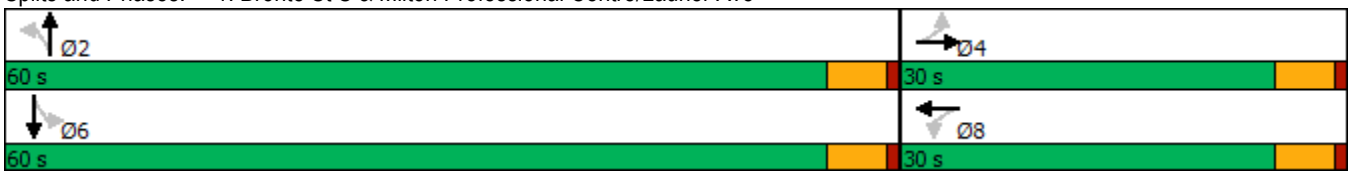
c Critical Lane Group

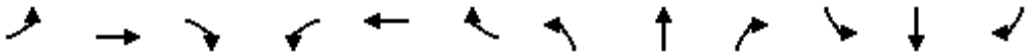
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	40	20	55	15	10	865	100	890
Future Volume (vph)	40	20	55	15	10	865	100	890
Lane Group Flow (vph)	0	90	56	126	10	909	101	944
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.29	0.17	0.31	0.04	0.68	0.36	0.71
Control Delay		20.4	24.3	10.1	4.0	9.7	9.3	10.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		20.4	24.3	10.1	4.0	9.7	9.3	10.4
Queue Length 50th (m)		5.1	4.5	1.2	0.3	54.5	4.2	58.8
Queue Length 95th (m)		21.7	17.9	16.4	1.7	101.4	13.9	110.1
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		705	788	828	333	1760	368	1756
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.13	0.07	0.15	0.03	0.52	0.27	0.54

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 54.3
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	20	30	55	15	110	10	865	35	100	890	45
Future Volume (vph)	40	20	30	55	15	110	10	865	35	100	890	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt		0.95		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected		0.98		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1755		1795	1597		1799	1887		1803	1883	
Flt Permitted		0.80		0.86	1.00		0.19	1.00		0.21	1.00	
Satd. Flow (perm)		1431		1633	1597		356	1887		394	1883	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	40	20	30	56	15	111	10	874	35	101	899	45
RTOR Reduction (vph)	0	24	0	0	95	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	66	0	56	31	0	10	908	0	101	942	0
Confl. Peds. (#/hr)	5		5	5		5	15		5	5		15
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.2		8.2	8.2		37.0	37.0		37.0	37.0	
Effective Green, g (s)		8.2		8.2	8.2		37.0	37.0		37.0	37.0	
Actuated g/C Ratio		0.15		0.15	0.15		0.67	0.67		0.67	0.67	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		212		242	237		238	1264		264	1262	
v/s Ratio Prot					0.02			0.48			c0.50	
v/s Ratio Perm		c0.05		0.03			0.03			0.26		
v/c Ratio		0.31		0.23	0.13		0.04	0.72		0.38	0.75	
Uniform Delay, d1		21.0		20.7	20.4		3.1	5.8		4.0	6.0	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8		0.5	0.3		0.1	2.0		0.9	2.5	
Delay (s)		21.8		21.2	20.7		3.2	7.8		5.0	8.5	
Level of Service		C		C	C		A	A		A	A	
Approach Delay (s)		21.8			20.8			7.7			8.1	
Approach LOS		C			C			A			A	

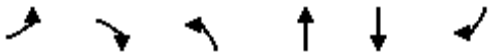
Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	55.2	Sum of lost time (s)	10.0
Intersection Capacity Utilization	102.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	25	15	970	45	25	1075
Future Volume (Veh/h)	25	15	970	45	25	1075
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	26	15	1000	46	26	1108
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.72	0.51			0.51	
vC, conflicting volume	2193	1033			1056	
vC1, stage 1 conf vol	1033					
vC2, stage 2 conf vol	1160					
vCu, unblocked vol	1156	584			629	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	87	94			95	
cM capacity (veh/h)	202	261			487	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	41	1046	1134
Volume Left	26	0	26
Volume Right	15	46	0
cSH	220	1700	487
Volume to Capacity	0.19	0.62	0.05
Queue Length 95th (m)	5.3	0.0	1.4
Control Delay (s)	25.1	0.0	2.2
Lane LOS	D		A
Approach Delay (s)	25.1	0.0	2.2
Approach LOS	D		

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	5	0	1015	1055	15
Future Volume (Veh/h)	0	5	0	1015	1055	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	5	0	1068	1111	16
Pedestrians	20					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.73	0.58	0.58			
vC, conflicting volume	2207	1139	1147			
vC1, stage 1 conf vol	1139					
vC2, stage 2 conf vol	1068					
vCu, unblocked vol	1170	876	890			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	97	100			
cM capacity (veh/h)	210	200	438			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	5	0	1068	1127
Volume Left	0	0	0	0
Volume Right	5	0	0	16
cSH	200	1700	1700	1700
Volume to Capacity	0.03	0.00	0.63	0.66
Queue Length 95th (m)	0.6	0.0	0.0	0.0
Control Delay (s)	23.5	0.0	0.0	0.0
Lane LOS	C			
Approach Delay (s)	23.5	0.0		0.0
Approach LOS	C			

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

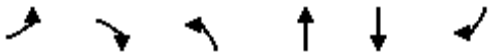
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	215	185	145	800	880
Future Volume (vph)	215	185	145	800	880
Lane Group Flow (vph)	222	191	149	825	1093
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.51	0.39	0.72	0.82	0.58
Control Delay	26.1	11.7	32.5	18.6	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	11.7	32.5	18.7	9.7
Queue Length 50th (m)	19.9	5.5	9.9	60.0	32.3
Queue Length 95th (m)	50.2	24.8	#46.7	131.4	61.8
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	742	742	322	1559	2865
Starvation Cap Reductn	0	0	0	48	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.30	0.26	0.46	0.55	0.38

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 56.9
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Bronte St S & C Bronte Dwy

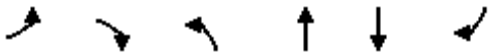




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	215	185	145	800	880	180
Future Volume (vph)	215	185	145	800	880	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	0.99	1.00	0.99	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1794	1615	1795	1900	3489	
Flt Permitted	0.95	1.00	0.21	1.00	1.00	
Satd. Flow (perm)	1794	1615	394	1900	3489	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	222	191	149	825	907	186
RTOR Reduction (vph)	0	93	0	0	23	0
Lane Group Flow (vph)	222	98	149	825	1070	0
Confl. Peds. (#/hr)	5		20			20
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	13.8	13.8	30.2	30.2	30.2	
Effective Green, g (s)	13.8	13.8	30.2	30.2	30.2	
Actuated g/C Ratio	0.25	0.25	0.54	0.54	0.54	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	442	397	212	1024	1881	
v/s Ratio Prot				c0.43	0.31	
v/s Ratio Perm	c0.12	0.06	0.38			
v/c Ratio	0.50	0.25	0.70	0.81	0.57	
Uniform Delay, d1	18.1	16.9	9.6	10.5	8.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.3	10.1	4.7	0.4	
Delay (s)	19.0	17.2	19.7	15.2	9.0	
Level of Service	B	B	B	B	A	
Approach Delay (s)	18.2			15.9	9.0	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	45	0	935	1050	15
Future Volume (Veh/h)	0	45	0	935	1050	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	45	0	944	1061	15
Pedestrians	20					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.74	0.81	0.81			
vC, conflicting volume	2032	558	1096			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1257	0	649			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	100			
cM capacity (veh/h)	121	869	754			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	45	944	707	369
Volume Left	0	0	0	0
Volume Right	45	0	0	15
cSH	869	1700	1700	1700
Volume to Capacity	0.05	0.56	0.42	0.22
Queue Length 95th (m)	1.3	0.0	0.0	0.0
Control Delay (s)	9.4	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.4	0.0	0.0	
Approach LOS	A			

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		

Queues
6: Scott Blvd & Derry Rd

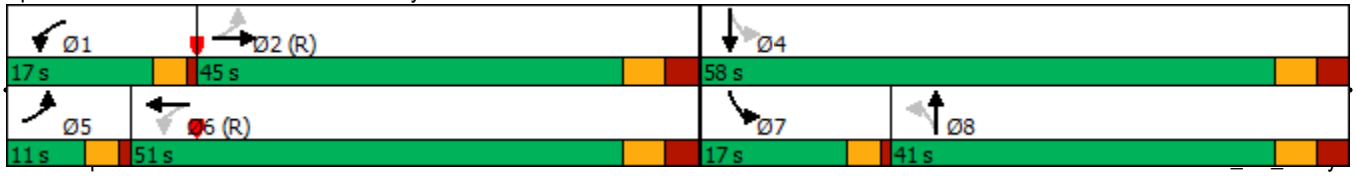
Future Total PM - 3-year

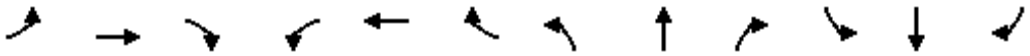
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	710	375	825	55	75	260	120
Future Volume (vph)	105	710	375	825	55	75	260	120
Lane Group Flow (vph)	108	773	387	1196	57	340	268	170
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	45.0	17.0	51.0	41.0	41.0	17.0	58.0
Total Split (%)	9.2%	37.5%	14.2%	42.5%	34.2%	34.2%	14.2%	48.3%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.47	0.75	0.75	0.77	0.27	0.84	0.92	0.28
Control Delay	21.9	43.1	32.0	21.1	43.1	44.7	66.9	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	43.1	32.0	21.1	43.1	44.7	66.9	26.2
Queue Length 50th (m)	11.0	87.1	35.5	130.0	12.4	48.9	~51.8	27.9
Queue Length 95th (m)	23.7	109.7 m	#126.3	#190.7	23.0	76.8	#93.3	40.7
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	234	1135	514	1553	345	572	292	772
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.68	0.75	0.77	0.17	0.59	0.92	0.22

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 67 (56%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Scott Blvd & Derry Rd

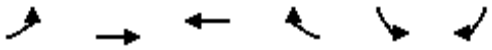




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	710	40	375	825	335	55	75	255	260	120	45
Future Volume (vph)	105	710	40	375	825	335	55	75	255	260	120	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.88		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1804	3574		1786	3394		1773	1650		1804	1787	
Flt Permitted	0.17	1.00		0.15	1.00		0.65	1.00		0.16	1.00	
Satd. Flow (perm)	326	3574		291	3394		1212	1650		304	1787	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	108	732	41	387	851	345	57	77	263	268	124	46
RTOR Reduction (vph)	0	4	0	0	32	0	0	118	0	0	13	0
Lane Group Flow (vph)	108	769	0	387	1164	0	57	222	0	268	157	0
Confl. Peds. (#/hr)	10		10	10		10	20		10	10		20
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	4%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	43.2	34.6		66.4	53.8		21.0	21.0		39.8	39.8	
Effective Green, g (s)	43.2	34.6		66.4	53.8		21.0	21.0		39.8	39.8	
Actuated g/C Ratio	0.36	0.29		0.55	0.45		0.18	0.18		0.33	0.33	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	223	1030		507	1521		212	288		285	592	
v/s Ratio Prot	0.03	0.22		c0.18	c0.34			0.13		c0.12	0.09	
v/s Ratio Perm	0.14			0.25			0.05			c0.20		
v/c Ratio	0.48	0.75		0.76	0.77		0.27	0.77		0.94	0.27	
Uniform Delay, d1	26.6	38.7		25.0	27.8		42.9	47.2		33.5	29.4	
Progression Factor	1.00	1.00		1.00	0.62		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	4.9		5.4	3.0		0.7	12.0		37.5	0.2	
Delay (s)	28.3	43.7		30.3	20.2		43.5	59.2		71.1	29.6	
Level of Service	C	D		C	C		D	E		E	C	
Approach Delay (s)		41.8			22.7			57.0			55.0	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	36.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	155	1135	1380	145	0	225
Future Volume (Veh/h)	155	1135	1380	145	0	225
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	158	1158	1408	148	0	230
Pedestrians					20	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					2	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.73				0.73	0.73
vC, conflicting volume	1576				2397	798
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1057				2177	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 %	67				100	71
cM capacity (veh/h)	480				20	786

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	158	579	579	939	617	230
Volume Left	158	0	0	0	0	0
Volume Right	0	0	0	0	148	230
cSH	480	1700	1700	1700	1700	786
Volume to Capacity	0.33	0.34	0.34	0.55	0.36	0.29
Queue Length 95th (m)	11.4	0.0	0.0	0.0	0.0	9.8
Control Delay (s)	16.1	0.0	0.0	0.0	0.0	11.5
Lane LOS	C					B
Approach Delay (s)	1.9			0.0		11.5
Approach LOS						B

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	63.5%	ICU Level of Service		B
Analysis Period (min)	15			

Queues
8: Bronte St S & Derry Rd

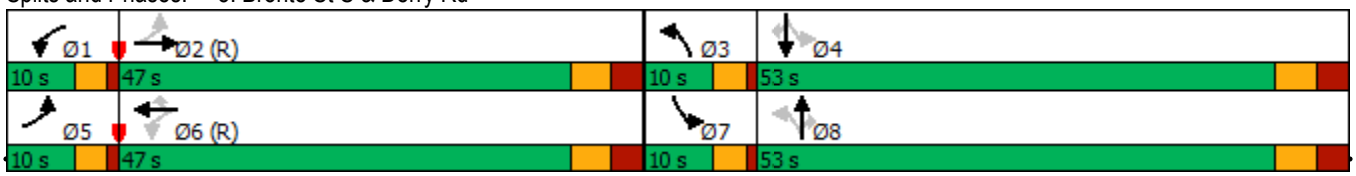
Future Total PM - 3-year

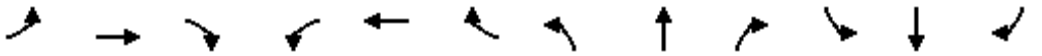
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	225	770	165	990	160	215	530	155	245	575	270
Future Volume (vph)	225	770	165	990	160	215	530	155	245	575	270
Lane Group Flow (vph)	227	919	167	1000	162	217	535	157	247	581	273
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	10.0	47.0	10.0	47.0	47.0	10.0	53.0	53.0	10.0	53.0	53.0
Total Split (%)	8.3%	39.2%	8.3%	39.2%	39.2%	8.3%	44.2%	44.2%	8.3%	44.2%	44.2%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.6	0.0	-1.4	0.0	0.0	-3.4	0.0	0.0	-2.8	0.0	0.0
Total Lost Time (s)	1.4	6.7	2.6	6.7	6.7	0.6	6.7	6.7	1.2	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.83	0.76	0.67	0.88	0.27	0.81	0.82	0.24	0.85	0.89	0.43
Control Delay	45.8	28.7	30.7	43.2	8.4	41.9	46.7	4.7	47.0	53.1	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0
Total Delay	45.8	28.7	30.7	43.2	8.4	41.9	46.7	4.7	47.0	62.1	13.8
Queue Length 50th (m)	27.6	105.3	28.3	130.4	12.2	29.9	117.5	0.0	35.2	132.2	20.2
Queue Length 95th (m)	m#89.4	m124.6	#44.5	149.0	17.3	#66.3	155.4	13.7	#71.6	173.7	42.3
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	275	1222	248	1200	624	269	733	703	292	733	687
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	124	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.75	0.67	0.83	0.26	0.81	0.73	0.22	0.85	0.95	0.40

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	770	140	165	990	160	215	530	155	245	575	270
Future Volume (vph)	225	770	140	165	990	160	215	530	155	245	575	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.4	6.7		2.6	6.7	6.7	0.6	6.7	6.7	1.2	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3497		1768	3574	1540	1803	1900	1573	1786	1900	1536
Flt Permitted	0.09	1.00		0.16	1.00	1.00	0.14	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	180	3497		296	3574	1540	266	1900	1573	344	1900	1536
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	227	778	141	167	1000	162	217	535	157	247	581	273
RTOR Reduction (vph)	0	12	0	0	0	110	0	0	103	0	0	102
Lane Group Flow (vph)	227	907	0	167	1000	52	217	535	54	247	581	171
Confl. Peds. (#/hr)	15		20	20		15	40		15	15		40
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	0%	0%	0%	1%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	52.5	41.2		46.7	38.3	38.3	48.8	41.2	41.2	49.2	41.4	41.4
Effective Green, g (s)	56.2	41.2		49.5	38.3	38.3	55.6	41.2	41.2	54.8	41.4	41.4
Actuated g/C Ratio	0.47	0.34		0.41	0.32	0.32	0.46	0.34	0.34	0.46	0.34	0.34
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	272	1200		242	1140	491	264	652	540	284	655	529
v/s Ratio Prot	c0.10	0.26		0.06	c0.28		0.08	0.28		c0.08	c0.31	
v/s Ratio Perm	0.29			0.23		0.03	0.31		0.03	0.32		0.11
v/c Ratio	0.83	0.76		0.69	0.88	0.11	0.82	0.82	0.10	0.87	0.89	0.32
Uniform Delay, d1	30.3	34.9		25.1	38.6	28.8	24.9	36.0	26.8	24.7	37.1	29.0
Progression Factor	0.93	0.73		0.87	0.91	1.72	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.6	3.2		6.7	8.0	0.3	18.3	8.2	0.1	23.5	13.7	0.4
Delay (s)	42.7	28.7		28.4	43.0	49.8	43.1	44.2	26.9	48.2	50.8	29.3
Level of Service	D	C		C	D	D	D	D	C	D	D	C
Approach Delay (s)		31.5			42.0			40.9			44.9	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	39.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.2
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

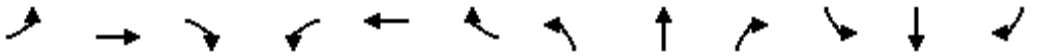
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	50	1040	65	130	1335	50	75	20	75
Future Volume (vph)	50	1040	65	130	1335	50	75	20	75
Lane Group Flow (vph)	53	1106	69	138	1473	53	287	21	139
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	12.0	61.0	61.0	12.0	61.0	47.0	47.0	47.0	47.0
Total Split (%)	10.0%	50.8%	50.8%	10.0%	50.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.21	0.49	0.07	0.37	0.62	0.29	0.80	0.34	0.46
Control Delay	5.9	14.7	5.4	7.7	14.9	46.1	44.5	56.6	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	14.7	5.4	7.7	14.9	46.1	44.5	56.6	38.0
Queue Length 50th (m)	0.9	104.4	1.5	7.9	105.6	11.8	41.9	4.7	23.9
Queue Length 95th (m)	m7.3	157.5	m10.1	18.3	165.6	22.6	68.2	12.5	40.7
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	275	2257	1006	385	2357	388	635	134	610
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.49	0.07	0.36	0.62	0.14	0.45	0.16	0.23

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81 (68%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	1040	65	130	1335	50	50	75	195	20	75	55
Future Volume (vph)	50	1040	65	130	1335	50	50	75	195	20	75	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.89		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1552	1804	3552		1798	1674		1800	1766	
Flt Permitted	0.13	1.00	1.00	0.20	1.00		0.62	1.00		0.21	1.00	
Satd. Flow (perm)	240	3574	1552	377	3552		1166	1674		403	1766	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	1106	69	138	1420	53	53	80	207	21	80	59
RTOR Reduction (vph)	0	0	25	0	1	0	0	98	0	0	28	0
Lane Group Flow (vph)	53	1106	44	138	1472	0	53	189	0	21	111	0
Confl. Peds. (#/hr)	5		10	10		5	5		5	5		5
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	81.1	75.7	75.7	87.1	78.7		18.8	18.8		18.8	18.8	
Effective Green, g (s)	81.1	75.7	75.7	87.1	78.7		18.8	18.8		18.8	18.8	
Actuated g/C Ratio	0.68	0.63	0.63	0.73	0.66		0.16	0.16		0.16	0.16	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	232	2254	979	373	2329		182	262		63	276	
v/s Ratio Prot	0.01	0.31		c0.03	c0.41			c0.11			0.06	
v/s Ratio Perm	0.14		0.03	0.24			0.05			0.05		
v/c Ratio	0.23	0.49	0.04	0.37	0.63		0.29	0.72		0.33	0.40	
Uniform Delay, d1	8.9	11.8	8.4	6.8	12.1		44.7	48.1		45.0	45.5	
Progression Factor	0.85	1.07	1.95	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.6	0.1	0.6	1.3		0.9	9.4		3.1	1.0	
Delay (s)	7.9	13.2	16.4	7.4	13.5		45.6	57.5		48.1	46.5	
Level of Service	A	B	B	A	B		D	E		D	D	
Approach Delay (s)		13.2			12.9			55.7			46.7	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	89.4%	ICU Level of Service	E
Analysis Period (min)	15		

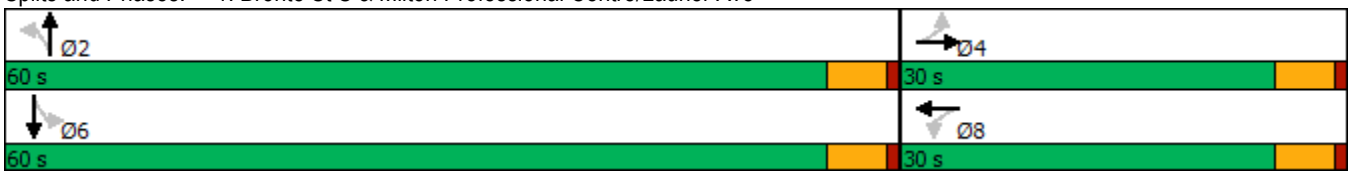
c Critical Lane Group

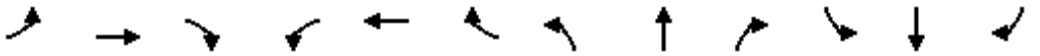
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	40	20	55	15	10	920	100	950
Future Volume (vph)	40	20	55	15	10	920	100	950
Lane Group Flow (vph)	0	90	56	126	10	964	101	1005
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.32	0.20	0.34	0.04	0.68	0.35	0.71
Control Delay		24.1	29.0	11.4	3.6	9.1	8.5	9.9
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		24.1	29.0	11.4	3.6	9.1	8.5	9.9
Queue Length 50th (m)		7.0	6.3	1.6	0.3	61.0	4.3	66.9
Queue Length 95th (m)		21.7	18.0	16.4	1.7	115.2	14.4	128.0
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		632	674	751	293	1622	328	1617
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.14	0.08	0.17	0.03	0.59	0.31	0.62

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 61.5
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	20	30	55	15	110	10	920	35	100	950	45
Future Volume (vph)	40	20	30	55	15	110	10	920	35	100	950	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt		0.95		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected		0.98		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1754		1794	1596		1799	1888		1803	1884	
Flt Permitted		0.80		0.83	1.00		0.18	1.00		0.20	1.00	
Satd. Flow (perm)		1430		1566	1596		341	1888		382	1884	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	40	20	30	56	15	111	10	929	35	101	960	45
RTOR Reduction (vph)	0	24	0	0	97	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	66	0	56	29	0	10	963	0	101	1004	0
Confl. Peds. (#/hr)	5		5	5		5	15		5	5		15
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.0		8.0	8.0		44.5	44.5		44.5	44.5	
Effective Green, g (s)		8.0		8.0	8.0		44.5	44.5		44.5	44.5	
Actuated g/C Ratio		0.13		0.13	0.13		0.71	0.71		0.71	0.71	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		183		200	204		242	1344		271	1341	
v/s Ratio Prot					0.02			0.51			c0.53	
v/s Ratio Perm		c0.05		0.04			0.03			0.26		
v/c Ratio		0.36		0.28	0.14		0.04	0.72		0.37	0.75	
Uniform Delay, d1		24.9		24.6	24.2		2.7	5.3		3.5	5.5	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.2		0.8	0.3		0.1	1.8		0.9	2.3	
Delay (s)		26.1		25.4	24.5		2.7	7.1		4.4	7.9	
Level of Service		C		C	C		A	A		A	A	
Approach Delay (s)		26.1			24.8			7.1			7.6	
Approach LOS		C			C			A			A	

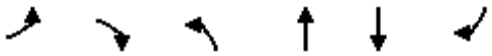
Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	62.5	Sum of lost time (s)	10.0
Intersection Capacity Utilization	105.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	25	15	1025	45	25	1135
Future Volume (Veh/h)	25	15	1025	45	25	1135
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	26	15	1057	46	26	1170
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.70	0.47			0.47	
vC, conflicting volume	2312	1090			1113	
vC1, stage 1 conf vol	1090					
vC2, stage 2 conf vol	1222					
vCu, unblocked vol	1197	628			677	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	85	93			94	
cM capacity (veh/h)	175	227			431	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	41	1103	1196
Volume Left	26	0	26
Volume Right	15	46	0
cSH	191	1700	431
Volume to Capacity	0.21	0.65	0.06
Queue Length 95th (m)	6.3	0.0	1.5
Control Delay (s)	28.9	0.0	2.9
Lane LOS	D		A
Approach Delay (s)	28.9	0.0	2.9
Approach LOS	D		

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	5	0	1070	1115	15
Future Volume (Veh/h)	0	5	0	1070	1115	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	5	0	1126	1174	16
Pedestrians	20					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.71	0.54	0.54			
vC, conflicting volume	2328	1202	1210			
vC1, stage 1 conf vol	1202					
vC2, stage 2 conf vol	1126					
vCu, unblocked vol	1219	951	966			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	97	100			
cM capacity (veh/h)	185	170	385			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	5	0	1126	1190
Volume Left	0	0	0	0
Volume Right	5	0	0	16
cSH	170	1700	1700	1700
Volume to Capacity	0.03	0.00	0.66	0.70
Queue Length 95th (m)	0.7	0.0	0.0	0.0
Control Delay (s)	26.9	0.0	0.0	0.0
Lane LOS	D			
Approach Delay (s)	26.9	0.0		0.0
Approach LOS	D			

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

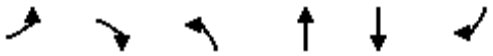
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	215	185	145	855	940
Future Volume (vph)	215	185	145	855	940
Lane Group Flow (vph)	222	191	149	881	1155
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.53	0.42	0.74	0.84	0.59
Control Delay	28.1	14.3	36.5	19.6	9.7
Queue Delay	0.0	0.0	0.0	0.1	0.0
Total Delay	28.1	14.3	36.5	19.7	9.7
Queue Length 50th (m)	23.0	8.1	10.9	70.6	37.0
Queue Length 95th (m)	50.2	27.4	#49.6	149.5	67.1
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	698	695	285	1495	2755
Starvation Cap Reductn	0	0	0	74	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.32	0.27	0.52	0.62	0.42

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 60.1
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Bronte St S & C Bronte Dwy

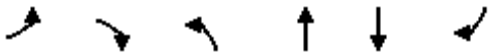




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	215	185	145	855	940	180
Future Volume (vph)	215	185	145	855	940	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	0.99	1.00	0.99	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1793	1615	1796	1900	3494	
Flt Permitted	0.95	1.00	0.19	1.00	1.00	
Satd. Flow (perm)	1793	1615	363	1900	3494	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	222	191	149	881	969	186
RTOR Reduction (vph)	0	82	0	0	21	0
Lane Group Flow (vph)	222	109	149	881	1134	0
Confl. Peds. (#/hr)	5		20			20
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	14.0	14.0	33.3	33.3	33.3	
Effective Green, g (s)	14.0	14.0	33.3	33.3	33.3	
Actuated g/C Ratio	0.24	0.24	0.56	0.56	0.56	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	423	381	203	1066	1962	
v/s Ratio Prot				c0.46	0.32	
v/s Ratio Perm	c0.12	0.07	0.41			
v/c Ratio	0.52	0.29	0.73	0.83	0.58	
Uniform Delay, d1	19.7	18.6	9.7	10.6	8.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.2	0.4	12.9	5.4	0.4	
Delay (s)	20.9	19.0	22.6	16.0	8.9	
Level of Service	C	B	C	B	A	
Approach Delay (s)	20.0			16.9	8.9	
Approach LOS	C			B	A	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	59.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	45	0	990	1110	15
Future Volume (Veh/h)	0	45	0	990	1110	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	45	0	1000	1121	15
Pedestrians	20					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.71	0.80	0.80			
vC, conflicting volume	2148	588	1156			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1361	0	697			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	100			
cM capacity (veh/h)	100	859	715			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	45	1000	747	389
Volume Left	0	0	0	0
Volume Right	45	0	0	15
cSH	859	1700	1700	1700
Volume to Capacity	0.05	0.59	0.44	0.23
Queue Length 95th (m)	1.3	0.0	0.0	0.0
Control Delay (s)	9.4	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.4	0.0	0.0	
Approach LOS	A			

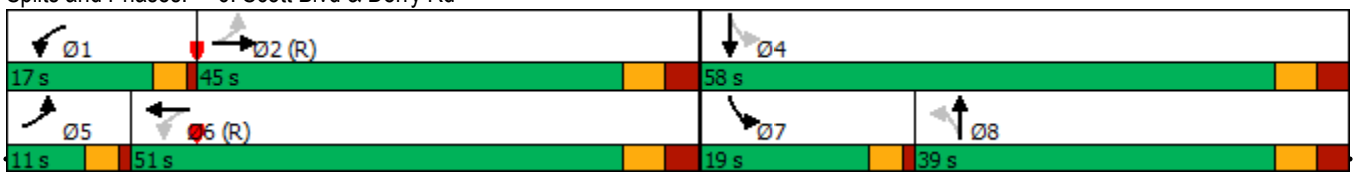
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		

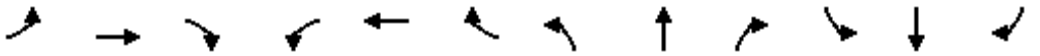
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	775	375	910	55	75	260	120
Future Volume (vph)	105	775	375	910	55	75	260	120
Lane Group Flow (vph)	108	840	387	1283	57	340	268	170
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	45.0	17.0	51.0	39.0	39.0	19.0	58.0
Total Split (%)	9.2%	37.5%	14.2%	42.5%	32.5%	32.5%	15.8%	48.3%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.54	0.75	0.84	0.83	0.27	0.84	0.91	0.28
Control Delay	25.9	41.5	40.1	23.3	42.9	45.1	62.8	25.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	41.5	40.1	23.3	42.9	45.1	62.8	25.5
Queue Length 50th (m)	11.5	97.1	41.8	150.3	12.3	49.6	49.7	27.1
Queue Length 95th (m)	24.7	121.2 m	#124.8 m	#211.9	23.0	77.6	#85.3	39.4
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	203	1135	462	1553	325	545	296	772
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.74	0.84	0.83	0.18	0.62	0.91	0.22

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 70 (58%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Scott Blvd & Derry Rd

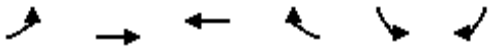




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	775	40	375	910	335	55	75	255	260	120	45
Future Volume (vph)	105	775	40	375	910	335	55	75	255	260	120	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.88		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3577		1787	3406		1773	1650		1804	1787	
Flt Permitted	0.12	1.00		0.14	1.00		0.65	1.00		0.16	1.00	
Satd. Flow (perm)	229	3577		271	3406		1212	1650		303	1787	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	108	799	41	387	938	345	57	77	263	268	124	46
RTOR Reduction (vph)	0	3	0	0	28	0	0	115	0	0	13	0
Lane Group Flow (vph)	108	837	0	387	1255	0	57	225	0	268	157	0
Confl. Peds. (#/hr)	10		10	10		10	20		10	10		20
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	4%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	45.9	37.7		66.0	53.8		21.1	21.1		40.2	40.2	
Effective Green, g (s)	45.9	37.7		66.0	53.8		21.1	21.1		40.2	40.2	
Actuated g/C Ratio	0.38	0.31		0.55	0.45		0.18	0.18		0.34	0.34	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	195	1123		456	1527		213	290		290	598	
v/s Ratio Prot	0.04	0.23		c0.17	0.37			0.14		c0.12	0.09	
v/s Ratio Perm	0.17			c0.29			0.05			c0.19		
v/c Ratio	0.55	0.75		0.85	0.82		0.27	0.77		0.92	0.26	
Uniform Delay, d1	25.9	36.9		27.9	28.9		42.8	47.2		33.2	29.1	
Progression Factor	1.00	1.00		1.08	0.63		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.4	4.5		10.3	3.8		0.7	12.1		33.4	0.2	
Delay (s)	29.3	41.4		40.6	21.8		43.4	59.3		66.6	29.3	
Level of Service	C	D		D	C		D	E		E	C	
Approach Delay (s)		40.0			26.2			57.0			52.1	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	155	1200	1465	145	0	225
Future Volume (Veh/h)	155	1200	1465	145	0	225
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	158	1224	1495	148	0	230
Pedestrians					20	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					2	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.71				0.71	0.71
vC, conflicting volume	1663				2517	842
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1120				2321	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 %	64				100	70
cM capacity (veh/h)	441				15	763

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	158	612	612	997	646	230
Volume Left	158	0	0	0	0	0
Volume Right	0	0	0	0	148	230
cSH	441	1700	1700	1700	1700	763
Volume to Capacity	0.36	0.36	0.36	0.59	0.38	0.30
Queue Length 95th (m)	12.8	0.0	0.0	0.0	0.0	10.2
Control Delay (s)	17.6	0.0	0.0	0.0	0.0	11.7
Lane LOS	C					B
Approach Delay (s)	2.0			0.0		11.7
Approach LOS						B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

Queues
8: Bronte St S & Derry Rd

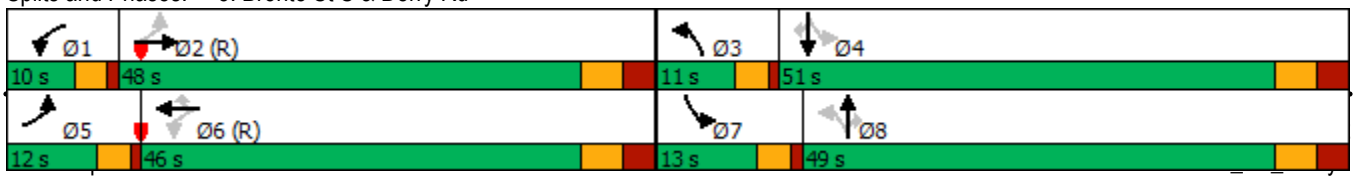
Future Total PM - 8-year

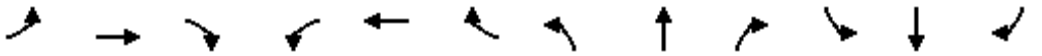
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	240	815	175	1045	170	230	560	165	260	605	285
Future Volume (vph)	240	815	175	1045	170	230	560	165	260	605	285
Lane Group Flow (vph)	242	969	177	1056	172	232	566	167	263	611	288
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	12.0	48.0	10.0	46.0	46.0	11.0	49.0	49.0	13.0	51.0	51.0
Total Split (%)	10.0%	40.0%	8.3%	38.3%	38.3%	9.2%	40.8%	40.8%	10.8%	42.5%	42.5%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.6	0.0	-1.4	0.0	0.0	-3.4	0.0	0.0	-2.8	0.0	0.0
Total Lost Time (s)	1.4	6.7	2.6	6.7	6.7	0.6	6.7	6.7	1.2	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.92	0.80	0.80	0.93	0.29	0.91	0.90	0.27	0.93	0.92	0.46
Control Delay	57.4	29.5	43.5	47.8	9.3	62.0	56.2	6.8	61.9	58.3	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.4	0.0
Total Delay	57.4	29.5	43.5	47.8	9.3	62.0	56.2	6.8	61.9	91.6	15.9
Queue Length 50th (m)	~44.4	112.4	30.5	140.4	15.1	34.1	128.5	2.8	38.9	139.5	24.1
Queue Length 95th (m)	m#85.2	m134.4	#60.9	#176.6	23.1	#85.1	#189.4	17.9	#93.0	#206.5	49.2
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	264	1215	220	1170	611	255	669	651	284	701	661
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	124	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.80	0.80	0.90	0.28	0.91	0.85	0.26	0.93	1.06	0.44

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 8 (7%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	240	815	145	175	1045	170	230	560	165	260	605	285
Future Volume (vph)	240	815	145	175	1045	170	230	560	165	260	605	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.4	6.7		2.6	6.7	6.7	0.6	6.7	6.7	1.2	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3499		1769	3574	1540	1804	1900	1573	1787	1900	1536
Flt Permitted	0.09	1.00		0.14	1.00	1.00	0.12	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	180	3499		252	3574	1540	223	1900	1573	245	1900	1536
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	242	823	146	177	1056	172	232	566	167	263	611	288
RTOR Reduction (vph)	0	12	0	0	0	109	0	0	100	0	0	97
Lane Group Flow (vph)	242	957	0	177	1056	63	232	566	67	263	611	191
Confl. Peds. (#/hr)	15		20	20		15	40		15	15		40
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	0%	0%	0%	1%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	51.7	41.2		45.9	38.3	38.3	47.9	39.9	39.9	51.7	41.8	41.8
Effective Green, g (s)	55.4	41.2		48.7	38.3	38.3	54.7	39.9	39.9	56.6	41.8	41.8
Actuated g/C Ratio	0.46	0.34		0.41	0.32	0.32	0.46	0.33	0.33	0.47	0.35	0.35
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	260	1201		216	1140	491	251	631	523	278	661	535
v/s Ratio Prot	c0.10	0.27		0.06	c0.30		0.09	0.30		c0.10	0.32	
v/s Ratio Perm	0.33			0.27		0.04	c0.33		0.04	0.35		0.12
v/c Ratio	0.93	0.80		0.82	0.93	0.13	0.92	0.90	0.13	0.95	0.92	0.36
Uniform Delay, d1	32.9	35.6		26.4	39.5	29.0	27.3	38.1	27.9	27.4	37.6	29.1
Progression Factor	0.95	0.73		0.92	0.91	1.51	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	29.0	3.8		17.0	11.5	0.4	36.7	15.4	0.1	39.2	18.7	0.4
Delay (s)	60.1	29.7		41.2	47.6	44.1	64.0	53.5	28.0	66.6	56.3	29.5
Level of Service	E	C		D	D	D	E	D	C	E	E	C
Approach Delay (s)		35.8			46.3			51.6			52.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	46.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.2
Intersection Capacity Utilization	104.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

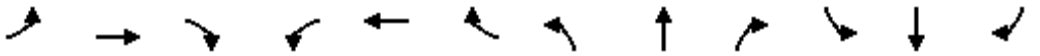
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	50	1110	65	130	1410	50	75	20	75
Future Volume (vph)	50	1110	65	130	1410	50	75	20	75
Lane Group Flow (vph)	53	1181	69	138	1553	53	287	21	139
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	12.0	61.0	61.0	12.0	61.0	47.0	47.0	47.0	47.0
Total Split (%)	10.0%	50.8%	50.8%	10.0%	50.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.23	0.53	0.07	0.39	0.66	0.29	0.80	0.34	0.46
Control Delay	6.0	15.2	4.9	8.1	15.7	46.1	44.5	56.6	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.0	15.2	4.9	8.1	15.7	46.1	44.5	56.6	38.0
Queue Length 50th (m)	0.9	118.0	2.1	7.9	115.9	11.8	41.9	4.7	23.9
Queue Length 95th (m)	m5.3	m171.4	m7.9	18.3	181.3	22.6	68.2	12.5	40.7
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	255	2243	1001	363	2357	388	635	134	610
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.53	0.07	0.38	0.66	0.14	0.45	0.16	0.23

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 79 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	1110	65	130	1410	50	50	75	195	20	75	55
Future Volume (vph)	50	1110	65	130	1410	50	50	75	195	20	75	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.89		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1552	1804	3554		1798	1674		1800	1766	
Flt Permitted	0.11	1.00	1.00	0.18	1.00		0.62	1.00		0.21	1.00	
Satd. Flow (perm)	209	3574	1552	334	3554		1166	1674		403	1766	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	1181	69	138	1500	53	53	80	207	21	80	59
RTOR Reduction (vph)	0	0	26	0	1	0	0	98	0	0	28	0
Lane Group Flow (vph)	53	1181	43	138	1552	0	53	189	0	21	111	0
Confl. Peds. (#/hr)	5		10	10		5	5		5	5		5
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	80.7	75.3	75.3	87.5	78.7		18.8	18.8		18.8	18.8	
Effective Green, g (s)	80.7	75.3	75.3	87.5	78.7		18.8	18.8		18.8	18.8	
Actuated g/C Ratio	0.67	0.63	0.63	0.73	0.66		0.16	0.16		0.16	0.16	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	212	2242	973	351	2330		182	262		63	276	
v/s Ratio Prot	0.01	0.33		c0.03	c0.44			c0.11			0.06	
v/s Ratio Perm	0.16		0.03	0.26			0.05			0.05		
v/c Ratio	0.25	0.53	0.04	0.39	0.67		0.29	0.72		0.33	0.40	
Uniform Delay, d1	9.7	12.4	8.6	7.4	12.6		44.7	48.1		45.0	45.5	
Progression Factor	0.80	1.04	1.70	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.6	0.1	0.7	1.5		0.9	9.4		3.1	1.0	
Delay (s)	8.2	13.6	14.7	8.1	14.1		45.6	57.5		48.1	46.5	
Level of Service	A	B	B	A	B		D	E		D	D	
Approach Delay (s)		13.4			13.6			55.7			46.7	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		

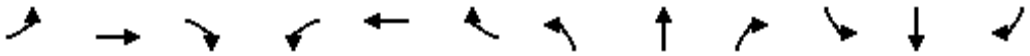
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	25	10	45	10	5	755	70	790
Future Volume (vph)	25	10	45	10	5	755	70	790
Lane Group Flow (vph)	0	61	51	107	6	887	79	910
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.20	0.18	0.27	0.02	0.68	0.28	0.70
Control Delay		17.1	22.6	9.2	4.0	9.9	7.9	10.6
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		17.1	22.6	9.2	4.0	9.9	7.9	10.6
Queue Length 50th (m)		3.0	3.9	0.8	0.2	51.9	3.1	55.0
Queue Length 95th (m)		14.2	15.1	13.3	1.2	91.2	9.6	97.7
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		719	683	850	363	1809	387	1796
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.08	0.07	0.13	0.02	0.49	0.20	0.51

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 51.1
Natural Cycle: 70
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	10	20	45	10	85	5	755	35	70	790	20
Future Volume (vph)	25	10	20	45	10	85	5	755	35	70	790	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt		0.95		1.00	0.87		1.00	0.99		1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1715		1795	1592		1795	1884		1798	1870	
Flt Permitted		0.80		0.72	1.00		0.20	1.00		0.21	1.00	
Satd. Flow (perm)		1405		1355	1592		375	1884		401	1870	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	28	11	22	51	11	96	6	848	39	79	888	22
RTOR Reduction (vph)	0	19	0	0	81	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	42	0	51	26	0	6	885	0	79	909	0
Confl. Peds. (#/hr)	5		5	5		5	25		15	15		25
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	4%	0%	0%	0%	0%	1%	0%	0%	0%	0%	1%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.0		8.0	8.0		34.0	34.0		34.0	34.0	
Effective Green, g (s)		8.0		8.0	8.0		34.0	34.0		34.0	34.0	
Actuated g/C Ratio		0.15		0.15	0.15		0.65	0.65		0.65	0.65	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		216		208	244		245	1231		262	1222	
v/s Ratio Prot					0.02			0.47			c0.49	
v/s Ratio Perm		0.03		c0.04			0.02			0.20		
v/c Ratio		0.20		0.25	0.11		0.02	0.72		0.30	0.74	
Uniform Delay, d1		19.2		19.3	18.9		3.2	5.9		3.9	6.1	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4		0.6	0.2		0.0	2.0		0.7	2.5	
Delay (s)		19.6		20.0	19.1		3.2	7.9		4.5	8.6	
Level of Service		B		B	B		A	A		A	A	
Approach Delay (s)		19.6			19.4			7.9			8.2	
Approach LOS		B			B			A			A	

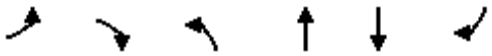
Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	52.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	25	15	845	35	10	880
Future Volume (Veh/h)	25	15	845	35	10	880
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	28	17	949	39	11	989
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.79	0.58			0.58	
vC, conflicting volume	1990	978			998	
vC1, stage 1 conf vol	978					
vC2, stage 2 conf vol	1011					
vCu, unblocked vol	930	599			633	
tC, single (s)	6.5	6.2			4.1	
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.3			2.2	
p0 queue free %	89	94			98	
cM capacity (veh/h)	264	290			551	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	45	988	1000
Volume Left	28	0	11
Volume Right	17	39	0
cSH	274	1700	551
Volume to Capacity	0.16	0.58	0.02
Queue Length 95th (m)	4.6	0.0	0.5
Control Delay (s)	20.7	0.0	0.7
Lane LOS	C		A
Approach Delay (s)	20.7	0.0	0.7
Approach LOS	C		

Intersection Summary			
Average Delay		0.8	
Intersection Capacity Utilization		64.3%	ICU Level of Service C
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	10	0	885	890	15
Future Volume (Veh/h)	5	10	0	885	890	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	11	0	983	989	17
Pedestrians	40					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	3					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.78	0.57	0.57			
vC, conflicting volume	2020	1038	1046			
vC1, stage 1 conf vol	1038					
vC2, stage 2 conf vol	983					
vCu, unblocked vol	970	693	708			
tC, single (s)	6.4	6.5	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.5	2.2			
p0 queue free %	98	95	100			
cM capacity (veh/h)	259	225	499			

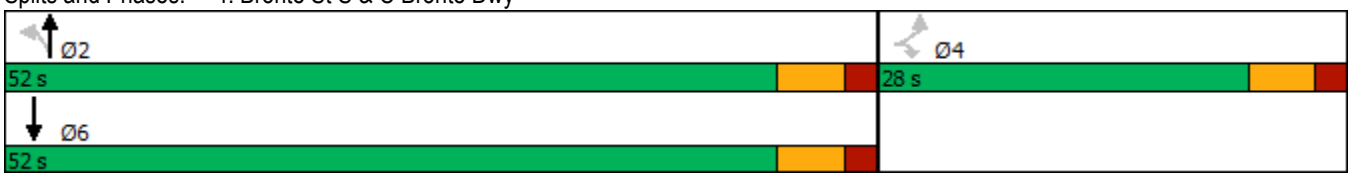
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	17	0	983	1006
Volume Left	6	0	0	0
Volume Right	11	0	0	17
cSH	236	1700	1700	1700
Volume to Capacity	0.07	0.00	0.58	0.59
Queue Length 95th (m)	1.8	0.0	0.0	0.0
Control Delay (s)	21.4	0.0	0.0	0.0
Lane LOS	C			
Approach Delay (s)	21.4	0.0		0.0
Approach LOS	C			

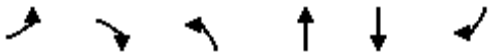
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	245	180	130	640	720
Future Volume (vph)	245	180	130	640	720
Lane Group Flow (vph)	258	189	137	674	947
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.54	0.33	0.59	0.74	0.56
Control Delay	22.8	5.7	22.1	16.2	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.8	5.7	22.1	16.2	9.9
Queue Length 50th (m)	19.4	0.3	7.8	42.8	25.5
Queue Length 95th (m)	55.0	14.7	30.0	98.9	53.2
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	821	841	423	1670	3036
Starvation Cap Reductn	0	0	0	46	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.22	0.32	0.42	0.31

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 51.3
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

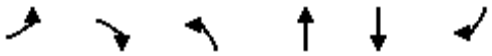
Splits and Phases: 4: Bronte St S & C Bronte Dwy





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	245	180	130	640	720	180
Future Volume (vph)	245	180	130	640	720	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1795	1615	1799	1900	3449	
Flt Permitted	0.95	1.00	0.26	1.00	1.00	
Satd. Flow (perm)	1795	1615	483	1900	3449	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	258	189	137	674	758	189
RTOR Reduction (vph)	0	135	0	0	33	0
Lane Group Flow (vph)	258	54	137	674	914	0
Confl. Peds. (#/hr)	5		10			10
Confl. Bikes (#/hr)						5
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	13.7	13.7	24.7	24.7	24.7	
Effective Green, g (s)	13.7	13.7	24.7	24.7	24.7	
Actuated g/C Ratio	0.27	0.27	0.49	0.49	0.49	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	487	438	236	931	1690	
v/s Ratio Prot				c0.35	0.26	
v/s Ratio Perm	c0.14	0.03	0.28			
v/c Ratio	0.53	0.12	0.58	0.72	0.54	
Uniform Delay, d1	15.6	13.8	9.2	10.2	8.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	0.1	3.6	2.8	0.4	
Delay (s)	16.7	14.0	12.8	13.0	9.3	
Level of Service	B	B	B	B	A	
Approach Delay (s)	15.5			12.9	9.3	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	50.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	65	0	770	880	20
Future Volume (Veh/h)	0	65	0	770	880	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	68	0	802	917	21
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.82	0.84	0.84			
vC, conflicting volume	1740	479	948			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1043	0	547			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	92	100			
cM capacity (veh/h)	185	905	856			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	68	802	611	327
Volume Left	0	0	0	0
Volume Right	68	0	0	21
cSH	905	1700	1700	1700
Volume to Capacity	0.08	0.47	0.36	0.19
Queue Length 95th (m)	1.9	0.0	0.0	0.0
Control Delay (s)	9.3	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.3	0.0	0.0	
Approach LOS	A			

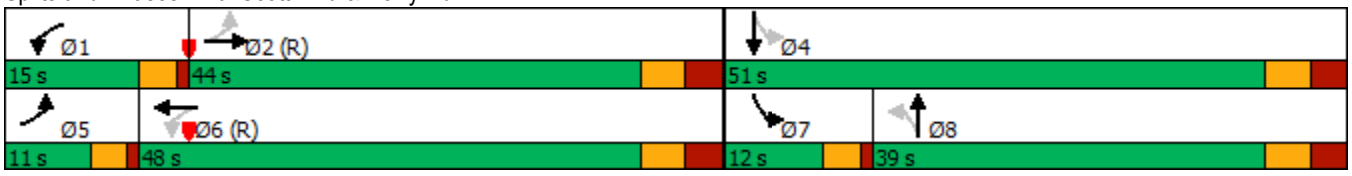
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

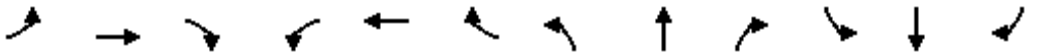
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	60	585	370	635	55	40	215	90
Future Volume (vph)	60	585	370	635	55	40	215	90
Lane Group Flow (vph)	63	630	385	864	57	334	224	151
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	44.0	15.0	48.0	39.0	39.0	12.0	51.0
Total Split (%)	10.0%	40.0%	13.6%	43.6%	35.5%	35.5%	10.9%	46.4%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.19	0.56	0.69	0.52	0.36	0.80	0.66	0.27
Control Delay	14.6	34.8	14.4	16.2	48.0	29.3	36.6	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.6	34.8	14.4	16.2	48.0	29.3	36.6	21.8
Queue Length 50th (m)	5.8	64.6	17.2	79.5	12.2	22.0	37.4	19.3
Queue Length 95th (m)	13.4	84.1	#80.3	104.1	22.9	51.2	54.4	33.4
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	337	1253	562	1658	354	640	340	721
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.50	0.69	0.52	0.16	0.52	0.66	0.21

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 93 (85%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Scott Blvd & Derry Rd

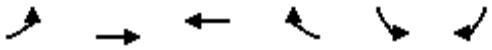




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	585	20	370	635	195	55	40	280	215	90	55
Future Volume (vph)	60	585	20	370	635	195	55	40	280	215	90	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.87		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1803	3553		1784	3428		1740	1626		1804	1747	
Flt Permitted	0.33	1.00		0.26	1.00		0.66	1.00		0.22	1.00	
Satd. Flow (perm)	622	3553		492	3428		1211	1626		411	1747	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	62	609	21	385	661	203	57	42	292	224	94	57
RTOR Reduction (vph)	0	2	0	0	22	0	0	202	0	0	23	0
Lane Group Flow (vph)	63	628	0	385	842	0	57	132	0	224	128	0
Confl. Peds. (#/hr)	10		15	15		10	20		5	5		20
Heavy Vehicles (%)	0%	1%	0%	1%	1%	0%	2%	0%	0%	0%	1%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	40.6	34.5		61.8	51.7		14.5	14.5		34.4	34.4	
Effective Green, g (s)	40.6	34.5		61.8	51.7		14.5	14.5		34.4	34.4	
Actuated g/C Ratio	0.37	0.31		0.56	0.47		0.13	0.13		0.31	0.31	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	295	1114		550	1611		159	214		329	546	
v/s Ratio Prot	0.01	0.18		c0.15	0.25			0.08		c0.10	0.07	
v/s Ratio Perm	0.07			c0.24			0.05			c0.11		
v/c Ratio	0.21	0.56		0.70	0.52		0.36	0.62		0.68	0.24	
Uniform Delay, d1	22.7	31.5		15.2	20.5		43.5	45.1		30.7	28.0	
Progression Factor	1.00	1.00		0.57	0.72		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	2.1		3.6	1.1		1.4	5.2		5.7	0.2	
Delay (s)	23.0	33.5		12.2	15.8		44.9	50.3		36.4	28.3	
Level of Service	C	C		B	B		D	D		D	C	
Approach Delay (s)		32.6			14.7			49.5			33.2	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	145	950	990	145	0	230
Future Volume (Veh/h)	145	950	990	145	0	230
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	149	979	1021	149	0	237
Pedestrians					15	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	1185				1898	600
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	809				1670	103
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	78				100	69
cM capacity (veh/h)	670				56	765

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	149	490	490	681	489	237
Volume Left	149	0	0	0	0	0
Volume Right	0	0	0	0	149	237
cSH	670	1700	1700	1700	1700	765
Volume to Capacity	0.22	0.29	0.29	0.40	0.29	0.31
Queue Length 95th (m)	6.8	0.0	0.0	0.0	0.0	10.6
Control Delay (s)	11.9	0.0	0.0	0.0	0.0	11.8
Lane LOS	B					B
Approach Delay (s)	1.6			0.0		11.8
Approach LOS						B

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

Queues
8: Bronte St S & Derry Rd

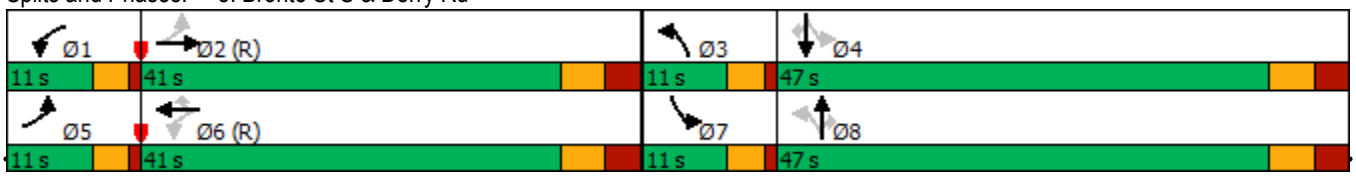
Future Total SAT - 3-year

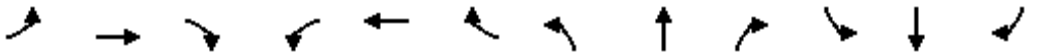
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	160	635	110	715	210	165	400	160	250	450	245
Future Volume (vph)	160	635	110	715	210	165	400	160	250	450	245
Lane Group Flow (vph)	165	768	113	737	216	170	412	165	258	464	253
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	11.0	41.0	11.0	41.0	41.0	11.0	47.0	47.0	11.0	47.0	47.0
Total Split (%)	10.0%	37.3%	10.0%	37.3%	37.3%	10.0%	42.7%	42.7%	10.0%	42.7%	42.7%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-0.5	0.0	-0.4	0.0	0.0	-1.0	0.0	0.0	-1.4	0.0	0.0
Total Lost Time (s)	3.5	6.7	3.6	6.7	6.7	3.0	6.7	6.7	2.6	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.51	0.63	0.38	0.61	0.32	0.58	0.77	0.29	0.73	0.83	0.41
Control Delay	21.9	26.8	23.4	32.4	7.9	26.0	45.7	5.2	33.5	49.1	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Total Delay	21.9	26.8	23.4	32.4	7.9	26.0	45.7	5.2	33.5	49.5	6.8
Queue Length 50th (m)	13.7	88.5	11.8	50.3	0.0	21.4	85.7	0.0	34.0	96.7	4.2
Queue Length 95th (m)	m25.5	94.8	32.1	88.3	25.9	33.8	107.6	13.8	#64.2	124.7	21.1
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	325	1236	302	1244	682	294	696	684	353	689	716
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	37	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.62	0.37	0.59	0.32	0.58	0.59	0.24	0.73	0.71	0.35

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 22 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	635	110	110	715	210	165	400	160	250	450	245
Future Volume (vph)	160	635	110	110	715	210	165	400	160	250	450	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.7		3.6	6.7	6.7	3.0	6.7	6.7	2.6	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1803	3472		1785	3574	1556	1785	1900	1582	1786	1881	1562
Flt Permitted	0.24	1.00		0.23	1.00	1.00	0.21	1.00	1.00	0.24	1.00	1.00
Satd. Flow (perm)	448	3472		438	3574	1556	392	1900	1582	447	1881	1562
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	165	655	113	113	737	216	170	412	165	258	464	253
RTOR Reduction (vph)	0	12	0	0	0	143	0	0	119	0	0	160
Lane Group Flow (vph)	165	756	0	113	737	73	170	412	46	258	464	93
Confl. Peds. (#/hr)	10		15	15		10	20		10	10		20
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	1%	0%	0%	1%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	47.2	38.1		45.6	37.3	37.3	40.5	30.9	30.9	43.9	32.6	32.6
Effective Green, g (s)	48.2	38.1		46.4	37.3	37.3	42.5	30.9	30.9	46.7	32.6	32.6
Actuated g/C Ratio	0.44	0.35		0.42	0.34	0.34	0.39	0.28	0.28	0.42	0.30	0.30
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	314	1202		291	1211	527	285	533	444	344	557	462
v/s Ratio Prot	c0.05	c0.22		0.03	0.21		0.06	0.22		c0.09	c0.25	
v/s Ratio Perm	0.18			0.13		0.05	0.17		0.03	0.23		0.06
v/c Ratio	0.53	0.63		0.39	0.61	0.14	0.60	0.77	0.10	0.75	0.83	0.20
Uniform Delay, d1	20.3	30.0		20.6	30.3	25.2	24.8	36.3	29.3	23.4	36.2	29.0
Progression Factor	0.92	0.80		1.15	0.95	1.68	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	2.1		0.8	2.2	0.5	3.3	6.9	0.1	8.9	10.3	0.2
Delay (s)	20.1	26.1		24.6	31.0	42.8	28.1	43.2	29.4	32.3	46.5	29.2
Level of Service	C	C		C	C	D	C	D	C	C	D	C
Approach Delay (s)		25.0			32.7			36.7			38.2	
Approach LOS		C			C			D			D	

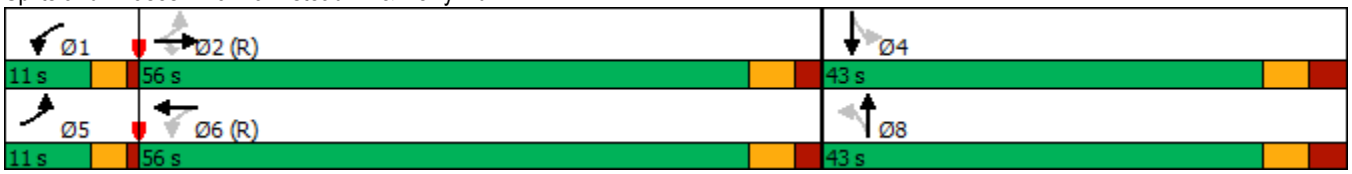
Intersection Summary			
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

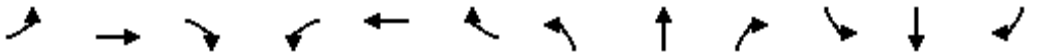
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	30	980	60	105	960	55	40	35	55
Future Volume (vph)	30	980	60	105	960	55	40	35	55
Lane Group Flow (vph)	31	1010	62	108	1016	57	252	36	109
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	11.0	56.0	56.0	11.0	56.0	43.0	43.0	43.0	43.0
Total Split (%)	10.0%	50.9%	50.9%	10.0%	50.9%	39.1%	39.1%	39.1%	39.1%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.07	0.43	0.06	0.25	0.41	0.37	0.72	0.53	0.45
Control Delay	2.9	7.3	1.3	4.8	8.4	49.9	26.7	70.8	32.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.9	7.3	1.3	4.8	8.4	49.9	26.7	70.8	32.5
Queue Length 50th (m)	0.9	31.4	0.3	4.1	46.4	12.3	16.0	7.9	14.0
Queue Length 95th (m)	m2.5	47.7	m0.4	11.5	78.5	23.5	41.0	18.1	29.1
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	453	2334	1013	436	2508	423	645	187	584
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.43	0.06	0.25	0.41	0.13	0.39	0.19	0.19

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 51 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	980	60	105	960	25	55	40	205	35	55	50
Future Volume (vph)	30	980	60	105	960	25	55	40	205	35	55	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1803	3574	1510	1785	3557		1790	1606		1800	1696	
Flt Permitted	0.27	1.00	1.00	0.23	1.00		0.69	1.00		0.30	1.00	
Satd. Flow (perm)	504	3574	1510	436	3557		1294	1606		574	1696	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	31	1010	62	108	990	26	57	41	211	36	57	52
RTOR Reduction (vph)	0	0	21	0	1	0	0	157	0	0	39	0
Lane Group Flow (vph)	31	1010	41	108	1015	0	57	95	0	36	70	0
Confl. Peds. (#/hr)	15		15	15		15	10		5	5		10
Heavy Vehicles (%)	0%	1%	2%	1%	1%	0%	0%	2%	2%	0%	2%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	75.6	71.9	71.9	83.7	76.0		13.2	13.2		13.2	13.2	
Effective Green, g (s)	75.6	71.9	71.9	83.7	76.0		13.2	13.2		13.2	13.2	
Actuated g/C Ratio	0.69	0.65	0.65	0.76	0.69		0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	390	2336	986	427	2457		155	192		68	203	
v/s Ratio Prot	0.00	c0.28		c0.02	0.29			0.06			0.04	
v/s Ratio Perm	0.05		0.03	0.17			0.04			c0.06		
v/c Ratio	0.08	0.43	0.04	0.25	0.41		0.37	0.50		0.53	0.35	
Uniform Delay, d1	5.6	9.2	6.8	4.4	7.4		44.6	45.3		45.5	44.4	
Progression Factor	0.70	0.67	0.74	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.5	0.1	0.3	0.5		1.5	2.0		7.3	1.0	
Delay (s)	4.0	6.6	5.1	4.8	7.9		46.0	47.3		52.7	45.5	
Level of Service	A	A	A	A	A		D	D		D	D	
Approach Delay (s)		6.5			7.6			47.1			47.3	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		

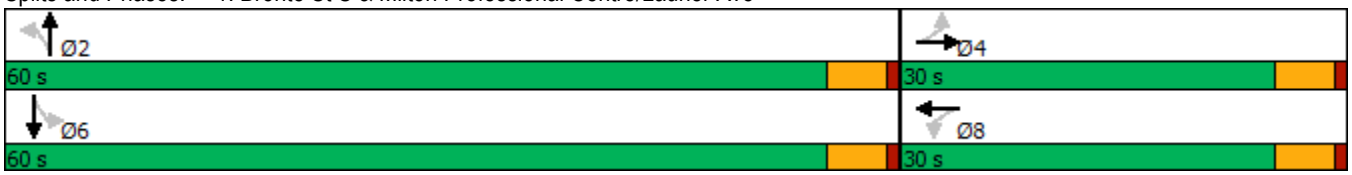
c Critical Lane Group

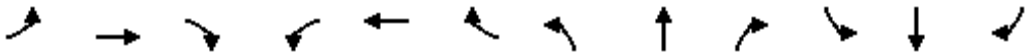
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	25	10	45	10	5	800	70	845
Future Volume (vph)	25	10	45	10	5	800	70	845
Lane Group Flow (vph)	0	61	51	107	6	938	79	971
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
v/c Ratio		0.21	0.20	0.28	0.02	0.69	0.29	0.72
Control Delay		19.7	26.2	10.3	3.6	9.6	7.5	10.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		19.7	26.2	10.3	3.6	9.6	7.5	10.4
Queue Length 50th (m)		3.4	4.5	0.9	0.2	57.9	3.1	62.8
Queue Length 95th (m)		15.7	16.7	14.4	1.1	99.6	9.5	109.2
Internal Link Dist (m)		117.2		105.5		151.9		126.8
Turn Bay Length (m)			25.0		50.0		30.0	
Base Capacity (vph)		670	635	796	320	1744	351	1731
Starvation Cap Reductn		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0
Reduced v/c Ratio		0.09	0.08	0.13	0.02	0.54	0.23	0.56

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 55.7
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Bronte St S & Milton Professional Centre/Laurier Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	10	20	45	10	85	5	800	35	70	845	20
Future Volume (vph)	25	10	20	45	10	85	5	800	35	70	845	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt		0.95		1.00	0.87		1.00	0.99		1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1714		1794	1591		1795	1885		1799	1871	
Flt Permitted		0.80		0.72	1.00		0.18	1.00		0.20	1.00	
Satd. Flow (perm)		1405		1355	1591		344	1885		378	1871	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	28	11	22	51	11	96	6	899	39	79	949	22
RTOR Reduction (vph)	0	19	0	0	83	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	42	0	51	24	0	6	937	0	79	970	0
Confl. Peds. (#/hr)	5		5	5		5	25		15	15		25
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	4%	0%	0%	0%	0%	1%	0%	0%	0%	0%	1%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.9		7.9	7.9		38.7	38.7		38.7	38.7	
Effective Green, g (s)		7.9		7.9	7.9		38.7	38.7		38.7	38.7	
Actuated g/C Ratio		0.14		0.14	0.14		0.68	0.68		0.68	0.68	
Clearance Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		196		189	222		235	1288		258	1279	
v/s Ratio Prot					0.02			0.50			c0.52	
v/s Ratio Perm		0.03		c0.04			0.02			0.21		
v/c Ratio		0.21		0.27	0.11		0.03	0.73		0.31	0.76	
Uniform Delay, d1		21.6		21.8	21.3		2.9	5.6		3.6	5.9	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6		0.8	0.2		0.0	2.1		0.7	2.6	
Delay (s)		22.1		22.5	21.5		2.9	7.7		4.3	8.5	
Level of Service		C		C	C		A	A		A	A	
Approach Delay (s)		22.1			21.8			7.7			8.2	
Approach LOS		C			C			A			A	

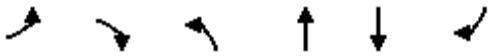
Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	56.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	25	15	890	35	10	935
Future Volume (Veh/h)	25	15	890	35	10	935
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	28	17	1000	39	11	1051
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)			131			176
pX, platoon unblocked	0.76	0.55			0.55	
vC, conflicting volume	2102	1030			1049	
vC1, stage 1 conf vol	1030					
vC2, stage 2 conf vol	1073					
vCu, unblocked vol	959	645			680	
tC, single (s)	6.5	6.2			4.1	
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.3			2.2	
p0 queue free %	88	93			98	
cM capacity (veh/h)	236	260			503	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	45	1039	1062
Volume Left	28	0	11
Volume Right	17	39	0
cSH	245	1700	503
Volume to Capacity	0.18	0.61	0.02
Queue Length 95th (m)	5.3	0.0	0.5
Control Delay (s)	23.0	0.0	0.8
Lane LOS	C		A
Approach Delay (s)	23.0	0.0	0.8
Approach LOS	C		

Intersection Summary			
Average Delay		0.9	
Intersection Capacity Utilization		67.2%	ICU Level of Service C
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	10	0	930	945	15
Future Volume (Veh/h)	5	10	0	930	945	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	11	0	1033	1050	17
Pedestrians	40					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	3					
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (m)				55	252	
pX, platoon unblocked	0.74	0.52	0.52			
vC, conflicting volume	2132	1098	1107			
vC1, stage 1 conf vol	1098					
vC2, stage 2 conf vol	1033					
vCu, unblocked vol	1015	727	743			
tC, single (s)	6.4	6.5	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.5	2.2			
p0 queue free %	97	94	100			
cM capacity (veh/h)	228	195	438			

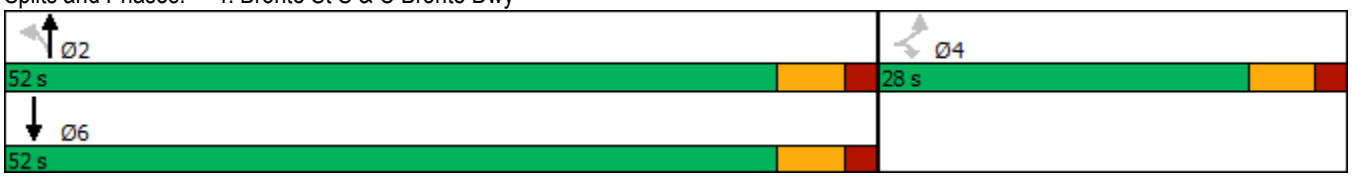
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	17	0	1033	1067
Volume Left	6	0	0	0
Volume Right	11	0	0	17
cSH	206	1700	1700	1700
Volume to Capacity	0.08	0.00	0.61	0.63
Queue Length 95th (m)	2.1	0.0	0.0	0.0
Control Delay (s)	24.1	0.0	0.0	0.0
Lane LOS	C			
Approach Delay (s)	24.1	0.0		0.0
Approach LOS	C			

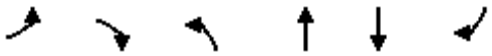
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	245	180	130	685	775
Future Volume (vph)	245	180	130	685	775
Lane Group Flow (vph)	258	189	137	721	1005
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	4	2		
Detector Phase	4	4	2	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0
Minimum Split (s)	28.0	28.0	25.0	25.0	25.0
Total Split (s)	28.0	28.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
v/c Ratio	0.55	0.35	0.63	0.76	0.58
Control Delay	24.5	7.7	24.6	16.9	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	7.7	24.6	17.0	10.1
Queue Length 50th (m)	20.7	2.0	8.3	48.5	28.6
Queue Length 95th (m)	58.1	18.6	32.5	109.9	58.2
Internal Link Dist (m)	46.7			59.2	30.7
Turn Bay Length (m)			50.0		
Base Capacity (vph)	786	799	376	1621	2954
Starvation Cap Reductn	0	0	0	54	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.24	0.36	0.46	0.34

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 53.8
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

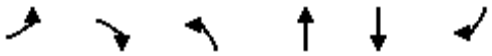
Splits and Phases: 4: Bronte St S & C Bronte Dwy





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	245	180	130	685	775	180
Future Volume (vph)	245	180	130	685	775	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1794	1615	1800	1900	3456	
Flt Permitted	0.95	1.00	0.23	1.00	1.00	
Satd. Flow (perm)	1794	1615	442	1900	3456	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	258	189	137	721	816	189
RTOR Reduction (vph)	0	118	0	0	29	0
Lane Group Flow (vph)	258	71	137	721	976	0
Confl. Peds. (#/hr)	5		10			10
Confl. Bikes (#/hr)						5
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	14.1	14.1	26.8	26.8	26.8	
Effective Green, g (s)	14.1	14.1	26.8	26.8	26.8	
Actuated g/C Ratio	0.27	0.27	0.51	0.51	0.51	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	478	430	223	962	1750	
v/s Ratio Prot				c0.38	0.28	
v/s Ratio Perm	c0.14	0.04	0.31			
v/c Ratio	0.54	0.16	0.61	0.75	0.56	
Uniform Delay, d1	16.6	14.9	9.3	10.4	9.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.2	0.2	5.0	3.2	0.4	
Delay (s)	17.8	15.1	14.3	13.6	9.4	
Level of Service	B	B	B	B	A	
Approach Delay (s)	16.6			13.7	9.4	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	52.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	65	0	815	935	20
Future Volume (Veh/h)	0	65	0	815	935	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	68	0	849	974	21
Pedestrians	10					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				84	83	
pX, platoon unblocked	0.81	0.82	0.82			
vC, conflicting volume	1844	508	1005			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1105	0	576			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	92	100			
cM capacity (veh/h)	167	890	822			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	68	849	649	346
Volume Left	0	0	0	0
Volume Right	68	0	0	21
cSH	890	1700	1700	1700
Volume to Capacity	0.08	0.50	0.38	0.20
Queue Length 95th (m)	2.0	0.0	0.0	0.0
Control Delay (s)	9.4	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.4	0.0	0.0	
Approach LOS	A			

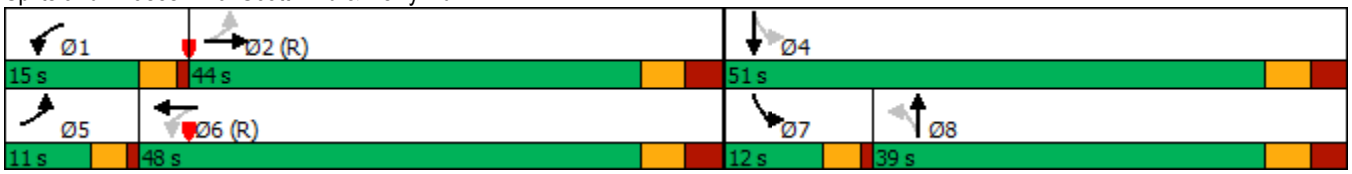
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

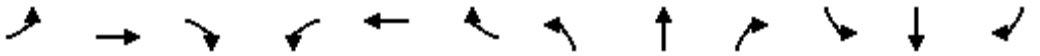
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	60	640	370	700	55	40	215	90
Future Volume (vph)	60	640	370	700	55	40	215	90
Lane Group Flow (vph)	63	688	385	932	57	334	224	151
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	44.0	15.0	48.0	39.0	39.0	12.0	51.0
Total Split (%)	10.0%	40.0%	13.6%	43.6%	35.5%	35.5%	10.9%	46.4%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.20	0.64	0.69	0.56	0.35	0.81	0.69	0.27
Control Delay	14.5	36.9	15.1	16.0	46.7	31.4	40.1	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	36.9	15.1	16.0	46.7	31.4	40.1	22.3
Queue Length 50th (m)	6.0	73.6	17.1	89.6	12.1	25.3	36.9	19.1
Queue Length 95th (m)	12.9	89.7	#93.3	113.5	22.6	54.0	#59.4	34.3
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	315	1203	556	1674	354	631	324	721
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.57	0.69	0.56	0.16	0.53	0.69	0.21

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 93 (85%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Scott Blvd & Derry Rd

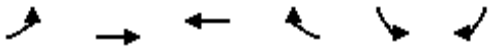




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	640	20	370	700	195	55	40	280	215	90	55
Future Volume (vph)	60	640	20	370	700	195	55	40	280	215	90	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	0.87		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1803	3554		1785	3439		1740	1626		1804	1747	
Flt Permitted	0.31	1.00		0.22	1.00		0.66	1.00		0.21	1.00	
Satd. Flow (perm)	582	3554		408	3439		1211	1626		400	1747	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	62	667	21	385	729	203	57	42	292	224	94	57
RTOR Reduction (vph)	0	2	0	0	19	0	0	190	0	0	23	0
Lane Group Flow (vph)	63	686	0	385	913	0	57	144	0	224	128	0
Confl. Peds. (#/hr)	10		15	15		10	20		5	5		20
Heavy Vehicles (%)	0%	1%	0%	1%	1%	0%	2%	0%	0%	0%	1%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	39.1	33.0		62.2	52.1		15.0	15.0		34.0	34.0	
Effective Green, g (s)	39.1	33.0		62.2	52.1		15.0	15.0		34.0	34.0	
Actuated g/C Ratio	0.36	0.30		0.57	0.47		0.14	0.14		0.31	0.31	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	274	1066		546	1628		165	221		315	539	
v/s Ratio Prot	0.01	0.19		c0.16	0.27			0.09		c0.10	0.07	
v/s Ratio Perm	0.07			c0.24			0.05			c0.12		
v/c Ratio	0.23	0.64		0.71	0.56		0.35	0.65		0.71	0.24	
Uniform Delay, d1	23.7	33.4		15.8	20.7		43.1	45.0		31.1	28.3	
Progression Factor	1.00	1.00		0.50	0.69		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	3.0		3.7	1.3		1.3	6.7		7.4	0.2	
Delay (s)	24.1	36.4		11.6	15.7		44.3	51.7		38.5	28.6	
Level of Service	C	D		B	B		D	D		D	C	
Approach Delay (s)		35.4			14.5			50.7			34.5	
Approach LOS		D			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	145	1005	1055	145	0	230
Future Volume (Veh/h)	145	1005	1055	145	0	230
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	149	1036	1088	149	0	237
Pedestrians					15	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.81				0.81	0.81
vC, conflicting volume	1252				1994	634
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	850				1762	90
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	77				100	69
cM capacity (veh/h)	634				47	766

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	149	518	518	725	512	237
Volume Left	149	0	0	0	0	0
Volume Right	0	0	0	0	149	237
cSH	634	1700	1700	1700	1700	766
Volume to Capacity	0.23	0.30	0.30	0.43	0.30	0.31
Queue Length 95th (m)	7.3	0.0	0.0	0.0	0.0	10.5
Control Delay (s)	12.4	0.0	0.0	0.0	0.0	11.8
Lane LOS	B					B
Approach Delay (s)	1.6			0.0		11.8
Approach LOS						B

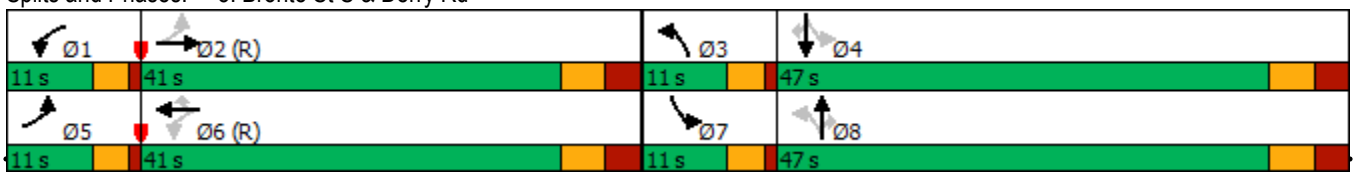
Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

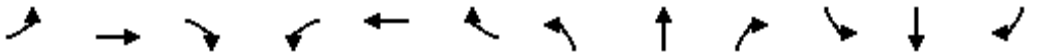
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	170	675	115	755	225	175	420	170	265	475	260
Future Volume (vph)	170	675	115	755	225	175	420	170	265	475	260
Lane Group Flow (vph)	175	815	119	778	232	180	433	175	273	490	268
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	11.0	41.0	11.0	41.0	41.0	11.0	47.0	47.0	11.0	47.0	47.0
Total Split (%)	10.0%	37.3%	10.0%	37.3%	37.3%	10.0%	42.7%	42.7%	10.0%	42.7%	42.7%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-0.5	0.0	-0.4	0.0	0.0	-1.0	0.0	0.0	-1.4	0.0	0.0
Total Lost Time (s)	3.5	6.7	3.6	6.7	6.7	3.0	6.7	6.7	2.6	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.58	0.68	0.43	0.66	0.35	0.64	0.77	0.30	0.79	0.85	0.43
Control Delay	27.0	26.8	27.3	36.0	9.7	29.0	44.6	5.0	39.2	49.7	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0
Total Delay	27.0	26.8	27.3	36.0	9.7	29.0	44.6	5.0	39.2	50.4	8.4
Queue Length 50th (m)	14.2	96.5	13.7	56.5	0.0	22.0	86.2	0.0	35.2	101.9	8.3
Queue Length 95th (m)	m#35.0	96.9	38.3	106.1	34.6	#36.6	114.1	14.2	#73.1	133.5	26.9
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	304	1212	276	1213	681	282	696	690	344	689	709
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	48	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.67	0.43	0.64	0.34	0.64	0.62	0.25	0.79	0.76	0.38

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 22 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	675	115	115	755	225	175	420	170	265	475	260
Future Volume (vph)	170	675	115	115	755	225	175	420	170	265	475	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.7		3.6	6.7	6.7	3.0	6.7	6.7	2.6	6.7	6.7
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1804	3473		1785	3574	1556	1785	1900	1582	1786	1881	1562
Flt Permitted	0.20	1.00		0.20	1.00	1.00	0.19	1.00	1.00	0.23	1.00	1.00
Satd. Flow (perm)	388	3473		385	3574	1556	353	1900	1582	438	1881	1562
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	175	696	119	119	778	232	180	433	175	273	490	268
RTOR Reduction (vph)	0	12	0	0	0	156	0	0	123	0	0	150
Lane Group Flow (vph)	175	803	0	119	778	76	180	433	52	273	490	118
Confl. Peds. (#/hr)	10		15	15		10	20		10	10		20
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	1%	0%	0%	1%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	46.7	37.4		44.3	36.2	36.2	41.8	32.5	32.5	44.4	33.8	33.8
Effective Green, g (s)	47.7	37.4		45.1	36.2	36.2	43.8	32.5	32.5	47.2	33.8	33.8
Actuated g/C Ratio	0.43	0.34		0.41	0.33	0.33	0.40	0.30	0.30	0.43	0.31	0.31
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	294	1180		266	1176	512	274	561	467	334	577	479
v/s Ratio Prot	c0.05	c0.23		0.03	0.22		0.06	0.23		c0.09	0.26	
v/s Ratio Perm	0.21			0.15		0.05	0.20		0.03	c0.26		0.08
v/c Ratio	0.60	0.68		0.45	0.66	0.15	0.66	0.77	0.11	0.82	0.85	0.25
Uniform Delay, d1	21.2	31.2		21.7	31.6	26.0	24.5	35.4	28.2	23.5	35.7	28.6
Progression Factor	1.05	0.76		1.28	1.01	2.18	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	2.6		1.1	2.7	0.6	5.6	6.5	0.1	14.3	11.2	0.3
Delay (s)	24.8	26.3		28.9	34.8	57.4	30.1	41.9	28.3	37.8	46.9	28.8
Level of Service	C	C		C	C	E	C	D	C	D	D	C
Approach Delay (s)		26.0			38.8			36.2			39.8	
Approach LOS		C			D			D			D	

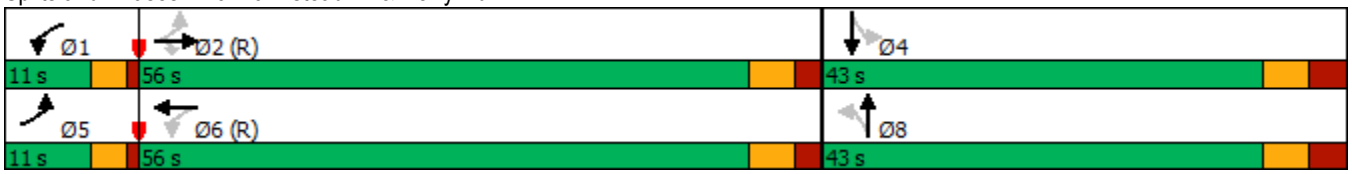
Intersection Summary			
HCM 2000 Control Delay	35.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

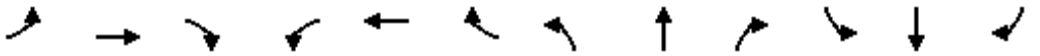
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	30	1045	60	105	1020	55	40	35	55
Future Volume (vph)	30	1045	60	105	1020	55	40	35	55
Lane Group Flow (vph)	31	1077	62	108	1078	57	252	36	109
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	11.0	56.0	56.0	11.0	56.0	43.0	43.0	43.0	43.0
Total Split (%)	10.0%	50.9%	50.9%	10.0%	50.9%	39.1%	39.1%	39.1%	39.1%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.08	0.47	0.06	0.27	0.43	0.36	0.73	0.52	0.44
Control Delay	3.2	7.4	1.2	5.1	8.9	49.1	28.2	70.1	31.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.2	7.4	1.2	5.1	8.9	49.1	28.2	70.1	31.9
Queue Length 50th (m)	0.9	34.0	0.2	4.3	51.6	12.2	17.7	7.9	13.9
Queue Length 95th (m)	m2.5	53.8	m0.4	11.7	86.3	23.4	42.8	18.1	28.9
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	424	2316	1006	410	2497	423	639	183	584
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.47	0.06	0.26	0.43	0.13	0.39	0.20	0.19

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 51 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1045	60	105	1020	25	55	40	205	35	55	50
Future Volume (vph)	30	1045	60	105	1020	25	55	40	205	35	55	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1803	3574	1510	1786	3558		1790	1606		1800	1696	
Flt Permitted	0.24	1.00	1.00	0.21	1.00		0.69	1.00		0.30	1.00	
Satd. Flow (perm)	465	3574	1510	395	3558		1294	1606		561	1696	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	31	1077	62	108	1052	26	57	41	211	36	57	52
RTOR Reduction (vph)	0	0	22	0	1	0	0	149	0	0	39	0
Lane Group Flow (vph)	31	1077	40	108	1077	0	57	103	0	36	70	0
Confl. Peds. (#/hr)	15		15	15		15	10		5	5		10
Heavy Vehicles (%)	0%	1%	2%	1%	1%	0%	0%	2%	2%	0%	2%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	75.1	71.3	71.3	83.4	75.6		13.5	13.5		13.5	13.5	
Effective Green, g (s)	75.1	71.3	71.3	83.4	75.6		13.5	13.5		13.5	13.5	
Actuated g/C Ratio	0.68	0.65	0.65	0.76	0.69		0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	363	2316	978	401	2445		158	197		68	208	
v/s Ratio Prot	0.00	c0.30		c0.02	0.30			0.06			0.04	
v/s Ratio Perm	0.06		0.03	0.18			0.04			c0.06		
v/c Ratio	0.09	0.47	0.04	0.27	0.44		0.36	0.52		0.53	0.34	
Uniform Delay, d1	5.8	9.7	7.0	4.9	7.7		44.3	45.2		45.3	44.2	
Progression Factor	0.76	0.64	0.68	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.5	0.1	0.4	0.6		1.4	2.5		7.3	1.0	
Delay (s)	4.5	6.8	4.8	5.2	8.3		45.7	47.7		52.5	45.1	
Level of Service	A	A	A	A	A		D	D		D	D	
Approach Delay (s)		6.6			8.0			47.3			47.0	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

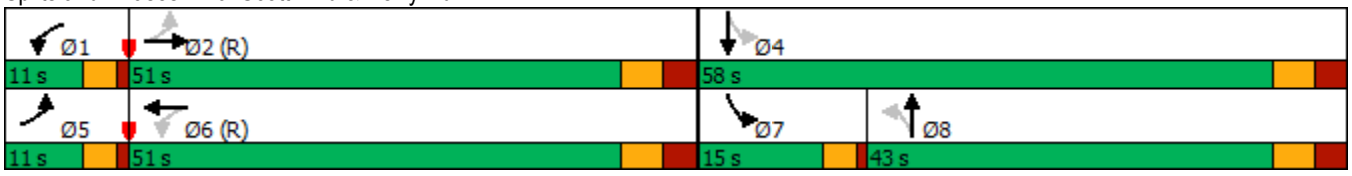
c Critical Lane Group

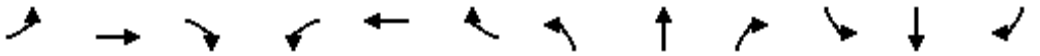
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	70	890	200	585	70	35	275	65
Future Volume (vph)	70	890	200	585	70	35	275	65
Lane Group Flow (vph)	74	1000	213	792	74	399	293	165
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	51.0	11.0	51.0	43.0	43.0	15.0	58.0
Total Split (%)	9.2%	42.5%	9.2%	42.5%	35.8%	35.8%	12.5%	48.3%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.24	0.64	0.74	0.43	0.29	0.88	0.73	0.22
Control Delay	21.6	38.2	31.3	18.1	40.4	48.0	37.7	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	38.2	31.3	18.1	40.4	48.0	37.7	11.0
Queue Length 50th (m)	10.6	86.9	28.2	58.2	15.6	61.2	45.3	12.4
Queue Length 95th (m)	20.7	93.6	#86.1	71.5	26.7	90.5	#92.0	25.4
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	318	1902	288	2021	367	588	402	788
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.53	0.74	0.39	0.20	0.68	0.73	0.21

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Scott Blvd & Derry Rd

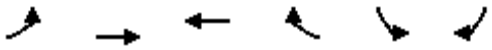




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	890	50	200	585	160	70	35	340	275	65	90
Future Volume (vph)	70	890	50	200	585	160	70	35	340	275	65	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.86		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1734	4936		1735	4808		1771	1588		1769	1640	
Flt Permitted	0.33	1.00		0.16	1.00		0.65	1.00		0.14	1.00	
Satd. Flow (perm)	599	4936		288	4808		1217	1588		259	1640	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	74	947	53	213	622	170	74	37	362	293	69	96
RTOR Reduction (vph)	0	5	0	0	41	0	0	125	0	0	42	0
Lane Group Flow (vph)	74	995	0	213	751	0	74	274	0	293	123	0
Confl. Peds. (#/hr)	5		15	15		5	10		10	10		10
Heavy Vehicles (%)	4%	4%	4%	4%	4%	3%	1%	3%	1%	2%	2%	6%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	44.5	38.1		54.7	44.3		24.8	24.8		51.5	51.5	
Effective Green, g (s)	44.5	38.1		54.7	44.3		24.8	24.8		51.5	51.5	
Actuated g/C Ratio	0.37	0.32		0.46	0.37		0.21	0.21		0.43	0.43	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	1567		283	1774		251	328		396	703	
v/s Ratio Prot	0.01	0.20		c0.08	0.16			c0.17		c0.14	0.08	
v/s Ratio Perm	0.08			c0.26			0.06			0.18		
v/c Ratio	0.26	0.63		0.75	0.42		0.29	0.84		0.74	0.18	
Uniform Delay, d1	24.8	35.0		22.6	28.3		40.2	45.7		28.7	21.1	
Progression Factor	1.00	1.00		0.53	0.63		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	2.0		10.3	0.7		0.7	16.7		7.1	0.1	
Delay (s)	25.3	37.0		22.3	18.5		40.9	62.3		35.8	21.3	
Level of Service	C	D		C	B		D	E		D	C	
Approach Delay (s)		36.2			19.3			59.0			30.6	
Approach LOS		D			B			E			C	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	115	1425	870	75	0	80
Future Volume (Veh/h)	115	1425	870	75	0	80
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	122	1516	926	80	0	85
Pedestrians					10	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.90				0.90	0.90
vC, conflicting volume	1016				1725	359
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	647				1431	0
tC, single (s)	4.1				6.8	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	86				100	91
cM capacity (veh/h)	850				98	969

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	SB 1
Volume Total	122	505	505	505	370	370	265	85
Volume Left	122	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	80	85
cSH	850	1700	1700	1700	1700	1700	1700	969
Volume to Capacity	0.14	0.30	0.30	0.30	0.22	0.22	0.16	0.09
Queue Length 95th (m)	4.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Control Delay (s)	9.9	0.0	0.0	0.0	0.0	0.0	0.0	9.1
Lane LOS	A							A
Approach Delay (s)	0.7				0.0			9.1
Approach LOS								A

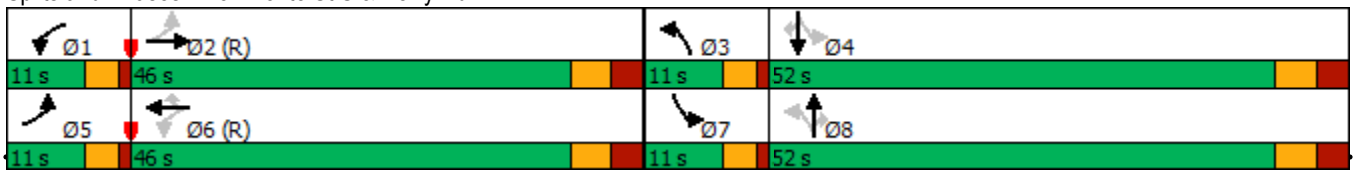
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

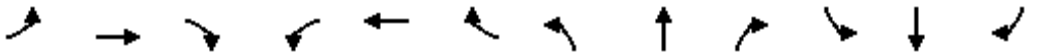
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	230	1035	95	640	140	175	400	230	200	315	150
Future Volume (vph)	230	1035	95	640	140	175	400	230	200	315	150
Lane Group Flow (vph)	247	1307	102	688	151	188	430	247	215	339	161
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	11.0	46.0	11.0	46.0	46.0	11.0	52.0	52.0	11.0	52.0	52.0
Total Split (%)	9.2%	38.3%	9.2%	38.3%	38.3%	9.2%	43.3%	43.3%	9.2%	43.3%	43.3%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-0.6	0.0	-0.2	0.0	0.0	-1.9	0.0	0.0	-2.0	0.0	0.0
Total Lost Time (s)	3.4	6.7	3.8	6.7	6.7	2.1	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.59	0.69	0.48	0.39	0.24	0.49	0.82	0.44	0.70	0.63	0.29
Control Delay	18.0	25.6	35.7	27.9	5.5	25.4	53.3	12.0	36.4	42.1	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	25.6	35.7	27.9	5.5	25.4	53.3	12.0	36.4	42.1	5.6
Queue Length 50th (m)	16.7	107.5	10.9	33.6	0.0	27.5	99.8	13.1	32.0	74.0	0.0
Queue Length 95th (m)	m#32.2	130.8	38.1	49.7	13.0	41.4	124.9	32.3	#55.7	94.9	14.6
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	417	1885	215	1785	637	382	710	703	306	717	676
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.69	0.47	0.39	0.24	0.49	0.61	0.35	0.70	0.47	0.24

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 33 (28%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	1035	180	95	640	140	175	400	230	200	315	150
Future Volume (vph)	230	1035	180	95	640	140	175	400	230	200	315	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.4	6.7		3.8	6.7	6.7	2.1	6.7	6.7	2.0	6.7	6.7
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1751	4882		1735	5036	1523	1765	1881	1572	1735	1900	1527
Flt Permitted	0.30	1.00		0.12	1.00	1.00	0.36	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)	554	4882		224	5036	1523	667	1881	1572	387	1900	1527
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	247	1113	194	102	688	151	188	430	247	215	339	161
RTOR Reduction (vph)	0	19	0	0	0	98	0	0	128	0	0	115
Lane Group Flow (vph)	247	1288	0	102	688	53	188	430	119	215	339	46
Confl. Peds. (#/hr)	5		10	10		5	15		5	5		15
Heavy Vehicles (%)	3%	3%	5%	4%	3%	3%	2%	1%	1%	4%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	58.7	45.9		50.6	41.8	41.8	43.2	33.4	33.4	44.6	34.1	34.1
Effective Green, g (s)	59.3	45.9		51.0	41.8	41.8	47.0	33.4	33.4	48.6	34.1	34.1
Actuated g/C Ratio	0.49	0.38		0.42	0.35	0.35	0.39	0.28	0.28	0.41	0.28	0.28
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	408	1867		208	1754	530	368	523	437	297	539	433
v/s Ratio Prot	c0.07	c0.26		0.04	0.14		0.05	c0.23		c0.08	0.18	
v/s Ratio Perm	0.23			0.17		0.03	0.15		0.08	0.22		0.03
v/c Ratio	0.61	0.69		0.49	0.39	0.10	0.51	0.82	0.27	0.72	0.63	0.11
Uniform Delay, d1	18.4	31.1		22.6	29.5	26.4	25.7	40.5	33.8	26.7	37.4	31.7
Progression Factor	0.66	0.75		1.66	0.89	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1	1.8		1.8	0.6	0.4	1.2	10.1	0.3	8.5	2.3	0.1
Delay (s)	14.4	25.2		39.2	27.0	27.0	26.8	50.6	34.2	35.1	39.7	31.8
Level of Service	B	C		D	C	C	C	D	C	D	D	C
Approach Delay (s)		23.5			28.3			40.7			36.6	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.3
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Queues
9: Farmstead Dr & Derry Rd

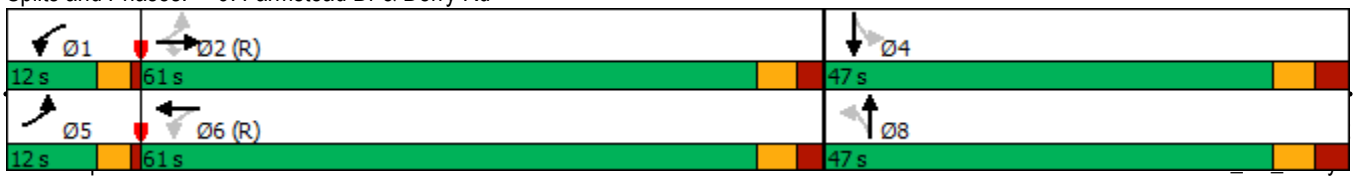
Future Background AM - 8-year Sensitivity

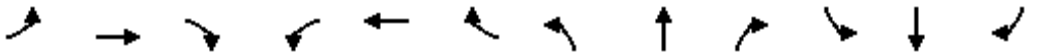
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	55	1295	55	85	825	35	45	55	50
Future Volume (vph)	55	1295	55	85	825	35	45	55	50
Lane Group Flow (vph)	57	1335	57	88	866	36	278	57	104
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	12.0	61.0	61.0	12.0	61.0	47.0	47.0	47.0	47.0
Total Split (%)	10.0%	50.8%	50.8%	10.0%	50.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.12	0.40	0.06	0.26	0.25	0.21	0.78	0.95	0.39
Control Delay	3.1	6.0	0.3	6.0	8.5	46.2	36.6	155.7	30.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.1	6.0	0.3	6.0	8.5	46.2	36.6	155.7	30.3
Queue Length 50th (m)	1.9	28.4	0.0	4.2	27.9	8.1	29.7	~14.4	13.4
Queue Length 95th (m)	m4.0	35.2	m0.2	11.4	45.7	17.1	56.6	#34.4	28.3
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	487	3301	1022	345	3402	435	650	148	599
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.40	0.06	0.26	0.25	0.08	0.43	0.39	0.17

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 68 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	1295	55	85	825	15	35	45	225	55	50	50
Future Volume (vph)	55	1295	55	85	825	15	35	45	225	55	50	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1684	5036	1522	1787	4974		1797	1639		1714	1708	
Flt Permitted	0.32	1.00	1.00	0.16	1.00		0.69	1.00		0.25	1.00	
Satd. Flow (perm)	559	5036	1522	309	4974		1305	1639		446	1708	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	57	1335	57	88	851	15	36	46	232	57	52	52
RTOR Reduction (vph)	0	0	20	0	1	0	0	135	0	0	39	0
Lane Group Flow (vph)	57	1335	37	88	865	0	36	143	0	57	65	0
Confl. Peds. (#/hr)	10		10	10		10	5		5	5		5
Heavy Vehicles (%)	7%	3%	2%	1%	4%	0%	0%	0%	0%	5%	4%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	84.0	78.6	78.6	89.4	81.3		16.2	16.2		16.2	16.2	
Effective Green, g (s)	84.0	78.6	78.6	89.4	81.3		16.2	16.2		16.2	16.2	
Actuated g/C Ratio	0.70	0.65	0.65	0.75	0.68		0.13	0.13		0.13	0.13	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	441	3298	996	329	3369		176	221		60	230	
v/s Ratio Prot	0.01	c0.27		c0.02	0.17			0.09			0.04	
v/s Ratio Perm	0.08		0.02	0.18			0.03			c0.13		
v/c Ratio	0.13	0.40	0.04	0.27	0.26		0.20	0.65		0.95	0.28	
Uniform Delay, d1	5.6	9.7	7.3	4.9	7.6		46.2	49.2		51.5	46.7	
Progression Factor	0.62	0.54	0.14	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.3	0.1	0.4	0.2		0.6	6.4		97.0	0.7	
Delay (s)	3.6	5.5	1.1	5.3	7.7		46.7	55.6		148.5	47.4	
Level of Service	A	A	A	A	A		D	E		F	D	
Approach Delay (s)		5.2			7.5			54.6			83.2	
Approach LOS		A			A			D			F	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

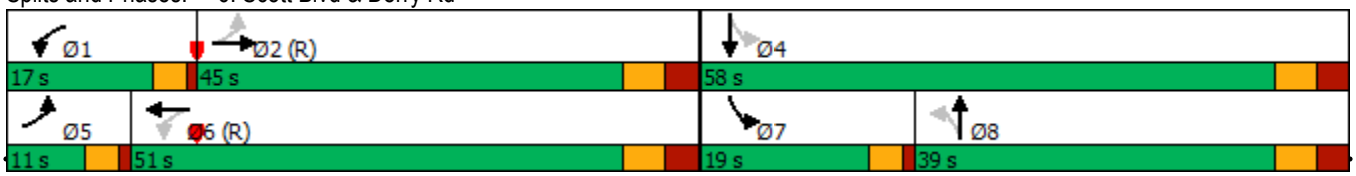
c Critical Lane Group

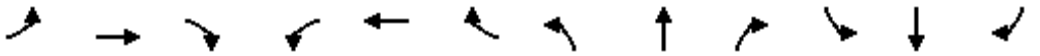
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	865	345	1025	55	75	250	120
Future Volume (vph)	105	865	345	1025	55	75	250	120
Lane Group Flow (vph)	108	933	356	1392	57	330	258	170
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	45.0	17.0	51.0	39.0	39.0	19.0	58.0
Total Split (%)	9.2%	37.5%	14.2%	42.5%	32.5%	32.5%	15.8%	48.3%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.48	0.63	0.75	0.65	0.27	0.83	0.75	0.26
Control Delay	24.0	39.1	27.4	17.1	43.5	45.3	41.8	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	39.1	27.4	17.1	43.5	45.3	41.8	23.8
Queue Length 50th (m)	13.4	78.7	17.9	111.5	12.4	48.3	42.6	24.4
Queue Length 95th (m)	24.4	84.7 m	#113.3	129.0	23.1	76.3	#79.5	39.8
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	225	1645	475	2129	325	542	343	772
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.57	0.75	0.65	0.18	0.61	0.75	0.22

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 69 (58%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Scott Blvd & Derry Rd

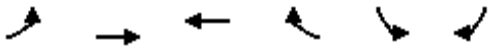




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	865	40	345	1025	325	55	75	245	250	120	45
Future Volume (vph)	105	865	40	345	1025	325	55	75	245	250	120	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.89		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	5145		1786	4919		1773	1652		1804	1787	
Flt Permitted	0.16	1.00		0.16	1.00		0.65	1.00		0.16	1.00	
Satd. Flow (perm)	305	5145		309	4919		1212	1652		308	1787	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	108	892	41	356	1057	335	57	77	253	258	124	46
RTOR Reduction (vph)	0	4	0	0	43	0	0	112	0	0	12	0
Lane Group Flow (vph)	108	929	0	356	1349	0	57	218	0	258	158	0
Confl. Peds. (#/hr)	10		10	10		10	20		10	10		20
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	4%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	43.1	34.6		63.4	50.9		20.7	20.7		42.8	42.8	
Effective Green, g (s)	43.1	34.6		63.4	50.9		20.7	20.7		42.8	42.8	
Actuated g/C Ratio	0.36	0.29		0.53	0.42		0.17	0.17		0.36	0.36	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	215	1483		468	2086		209	284		335	637	
v/s Ratio Prot	0.04	0.18		c0.16	0.27			0.13		c0.12	0.09	
v/s Ratio Perm	0.14			c0.24			0.05			c0.16		
v/c Ratio	0.50	0.63		0.76	0.65		0.27	0.77		0.77	0.25	
Uniform Delay, d1	26.3	37.1		22.9	27.4		43.1	47.4		30.9	27.2	
Progression Factor	1.00	1.00		0.80	0.58		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	2.0		5.6	1.2		0.7	11.8		10.4	0.2	
Delay (s)	28.2	39.1		23.8	17.0		43.8	59.2		41.3	27.4	
Level of Service	C	D		C	B		D	E		D	C	
Approach Delay (s)		38.0			18.4			56.9			35.8	
Approach LOS		D			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	103.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	1340	1630	80	0	135
Future Volume (Veh/h)	85	1340	1630	80	0	135
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	87	1367	1663	82	0	138
Pedestrians					20	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					2	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.79				0.79	0.79
vC, conflicting volume	1765				2354	615
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1032				1779	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 %	84				100	84
cM capacity (veh/h)	528				49	846

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	SB 1
Volume Total	87	456	456	456	665	665	415	138
Volume Left	87	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	82	138
cSH	528	1700	1700	1700	1700	1700	1700	846
Volume to Capacity	0.16	0.27	0.27	0.27	0.39	0.39	0.24	0.16
Queue Length 95th (m)	4.7	0.0	0.0	0.0	0.0	0.0	0.0	4.6
Control Delay (s)	13.2	0.0	0.0	0.0	0.0	0.0	0.0	10.1
Lane LOS	B							B
Approach Delay (s)	0.8				0.0			10.1
Approach LOS								B

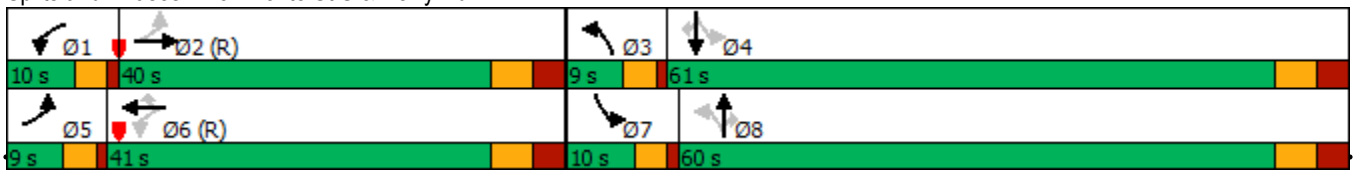
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

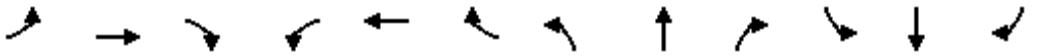
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	240	955	175	1150	170	225	510	165	225	565	285
Future Volume (vph)	240	955	175	1150	170	225	510	165	225	565	285
Lane Group Flow (vph)	242	1111	177	1162	172	227	515	167	227	571	288
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	9.0	40.0	10.0	41.0	41.0	9.0	60.0	60.0	10.0	61.0	61.0
Total Split (%)	7.5%	33.3%	8.3%	34.2%	34.2%	7.5%	50.0%	50.0%	8.3%	50.8%	50.8%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.6	0.0	-1.4	0.0	0.0	-3.4	0.0	0.0	-2.8	0.0	0.0
Total Lost Time (s)	1.4	6.7	2.6	6.7	6.7	0.6	6.7	6.7	1.2	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.70	0.74	0.61	0.84	0.32	0.80	0.76	0.25	0.72	0.83	0.44
Control Delay	34.6	31.3	28.3	45.0	13.4	40.4	41.5	5.0	31.2	45.8	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0
Total Delay	34.6	31.3	28.3	45.0	13.4	40.4	41.5	5.0	31.2	47.7	14.5
Queue Length 50th (m)	20.8	91.8	30.4	107.2	13.1	31.9	112.0	1.6	32.3	127.6	24.5
Queue Length 95th (m)	m#101.5	117.4	#59.4	116.5	36.7	#53.2	135.2	14.4	41.4	152.8	42.9
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	348	1507	292	1468	563	283	843	785	316	859	776
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	152	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.74	0.61	0.79	0.31	0.80	0.61	0.21	0.72	0.81	0.37

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	240	955	145	175	1150	170	225	510	165	225	565	285
Future Volume (vph)	240	955	145	175	1150	170	225	510	165	225	565	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.4	6.7		2.6	6.7	6.7	0.6	6.7	6.7	1.2	6.7	6.7
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	5048		1769	5136	1540	1802	1900	1573	1786	1900	1536
Flt Permitted	0.11	1.00		0.14	1.00	1.00	0.17	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	209	5048		253	5136	1540	329	1900	1573	410	1900	1536
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	242	965	146	177	1162	172	227	515	167	227	571	288
RTOR Reduction (vph)	0	16	0	0	0	126	0	0	101	0	0	95
Lane Group Flow (vph)	242	1095	0	177	1162	46	227	515	66	227	571	193
Confl. Peds. (#/hr)	15		20	20		15	40		15	15		40
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	0%	0%	0%	1%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	51.6	35.4		45.6	32.4	32.4	49.4	42.7	42.7	50.6	43.3	43.3
Effective Green, g (s)	55.2	35.4		48.4	32.4	32.4	56.2	42.7	42.7	56.2	43.3	43.3
Actuated g/C Ratio	0.46	0.29		0.40	0.27	0.27	0.47	0.36	0.36	0.47	0.36	0.36
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	346	1489		286	1386	415	278	676	559	307	685	554
v/s Ratio Prot	c0.11	0.22		0.08	c0.23		c0.07	0.27		c0.06	c0.30	
v/s Ratio Perm	0.21			0.17		0.03	0.31		0.04	0.28		0.13
v/c Ratio	0.70	0.74		0.62	0.84	0.11	0.82	0.76	0.12	0.74	0.83	0.35
Uniform Delay, d1	27.0	38.1		25.3	41.3	33.0	24.0	34.2	26.0	22.9	35.1	28.0
Progression Factor	0.88	0.76		0.85	0.96	2.45	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.0	2.7		3.5	5.6	0.5	16.7	5.1	0.1	9.0	8.6	0.4
Delay (s)	28.8	31.5		25.1	45.2	81.2	40.6	39.2	26.1	31.9	43.7	28.4
Level of Service	C	C		C	D	F	D	D	C	C	D	C
Approach Delay (s)		31.0			47.0			37.2			37.2	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	38.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.2
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

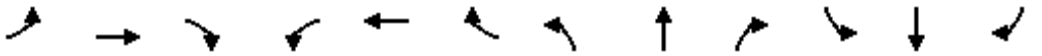
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	50	1225	55	130	1525	40	75	20	75
Future Volume (vph)	50	1225	55	130	1525	40	75	20	75
Lane Group Flow (vph)	53	1303	59	138	1675	43	287	21	139
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	12.0	61.0	61.0	12.0	61.0	47.0	47.0	47.0	47.0
Total Split (%)	10.0%	50.8%	50.8%	10.0%	50.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.22	0.41	0.06	0.39	0.49	0.24	0.80	0.34	0.46
Control Delay	6.8	12.2	5.1	8.2	12.1	44.5	44.5	56.6	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	12.2	5.1	8.2	12.1	44.5	44.5	56.6	38.0
Queue Length 50th (m)	0.8	82.9	0.4	7.9	72.8	9.5	41.9	4.7	23.9
Queue Length 95th (m)	m6.4	126.6	m10.7	18.3	109.1	19.1	68.2	12.5	40.7
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	259	3186	990	356	3387	388	635	134	610
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.41	0.06	0.39	0.49	0.11	0.45	0.16	0.23

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 83 (69%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	1225	55	130	1525	50	40	75	195	20	75	55
Future Volume (vph)	50	1225	55	130	1525	50	40	75	195	20	75	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.89		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	5136	1552	1804	5108		1798	1674		1800	1766	
Flt Permitted	0.11	1.00	1.00	0.16	1.00		0.62	1.00		0.21	1.00	
Satd. Flow (perm)	218	5136	1552	310	5108		1166	1674		403	1766	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	1303	59	138	1622	53	43	80	207	21	80	59
RTOR Reduction (vph)	0	0	22	0	2	0	0	98	0	0	28	0
Lane Group Flow (vph)	53	1303	37	138	1673	0	43	189	0	21	111	0
Confl. Peds. (#/hr)	5		10	10		5	5		5	5		5
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	79.8	74.4	74.4	88.1	78.7		18.8	18.8		18.8	18.8	
Effective Green, g (s)	79.8	74.4	74.4	88.1	78.7		18.8	18.8		18.8	18.8	
Actuated g/C Ratio	0.66	0.62	0.62	0.73	0.66		0.16	0.16		0.16	0.16	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	216	3184	962	348	3349		182	262		63	276	
v/s Ratio Prot	0.01	0.25		c0.03	c0.33			c0.11			0.06	
v/s Ratio Perm	0.15		0.02	0.26			0.04			0.05		
v/c Ratio	0.25	0.41	0.04	0.40	0.50		0.24	0.72		0.33	0.40	
Uniform Delay, d1	7.6	11.6	8.9	5.9	10.6		44.3	48.1		45.0	45.5	
Progression Factor	0.93	0.93	2.21	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.3	0.1	0.7	0.5		0.7	9.4		3.1	1.0	
Delay (s)	7.5	11.1	19.7	6.7	11.1		45.0	57.5		48.1	46.5	
Level of Service	A	B	B	A	B		D	E		D	D	
Approach Delay (s)		11.3			10.8			55.9			46.7	
Approach LOS		B			B			E			D	

Intersection Summary					
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B		
HCM 2000 Volume to Capacity ratio	0.54				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.1		
Intersection Capacity Utilization	81.5%	ICU Level of Service	D		
Analysis Period (min)	15				

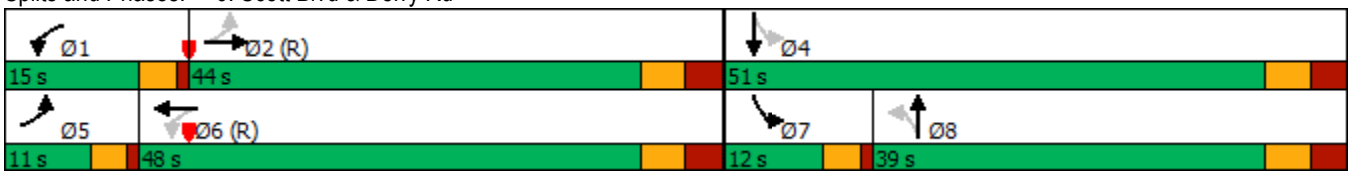
c Critical Lane Group

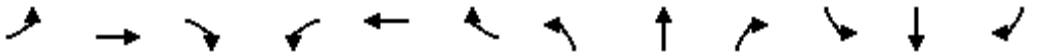
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	60	700	330	770	55	40	205	90
Future Volume (vph)	60	700	330	770	55	40	205	90
Lane Group Flow (vph)	63	750	344	995	57	323	214	151
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	44.0	15.0	48.0	39.0	39.0	12.0	51.0
Total Split (%)	10.0%	40.0%	13.6%	43.6%	35.5%	35.5%	10.9%	46.4%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.20	0.44	0.67	0.43	0.35	0.81	0.60	0.26
Control Delay	15.8	31.4	17.3	11.1	47.4	31.7	32.2	20.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	31.4	17.3	11.1	47.4	31.7	32.2	20.4
Queue Length 50th (m)	5.8	49.1	15.4	16.7	12.1	24.8	35.6	19.3
Queue Length 95th (m)	15.0	69.1	37.1	73.1	22.8	53.3	47.5	30.6
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	316	1934	517	2372	354	625	358	726
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.39	0.67	0.42	0.16	0.52	0.60	0.21

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 82 (75%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 6: Scott Blvd & Derry Rd

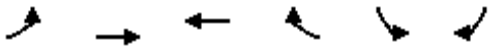




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	700	20	330	770	185	55	40	270	205	90	55
Future Volume (vph)	60	700	20	330	770	185	55	40	270	205	90	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	0.87		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1803	5109		1784	4962		1740	1628		1804	1747	
Flt Permitted	0.28	1.00		0.27	1.00		0.66	1.00		0.21	1.00	
Satd. Flow (perm)	523	5109		501	4962		1211	1628		406	1747	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	62	729	21	344	802	193	57	42	281	214	94	57
RTOR Reduction (vph)	0	3	0	0	32	0	0	183	0	0	22	0
Lane Group Flow (vph)	63	747	0	344	963	0	57	140	0	214	129	0
Confl. Peds. (#/hr)	10		15	15		10	20		5	5		20
Heavy Vehicles (%)	0%	1%	0%	1%	1%	0%	2%	0%	0%	0%	1%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	43.1	36.9		60.5	50.3		14.7	14.7		35.7	35.7	
Effective Green, g (s)	43.1	36.9		60.5	50.3		14.7	14.7		35.7	35.7	
Actuated g/C Ratio	0.39	0.34		0.55	0.46		0.13	0.13		0.32	0.32	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	277	1713		504	2268		161	217		347	566	
v/s Ratio Prot	0.01	0.15		c0.12	0.19			0.09		c0.10	0.07	
v/s Ratio Perm	0.08			c0.25			0.05			c0.10		
v/c Ratio	0.23	0.44		0.68	0.42		0.35	0.65		0.62	0.23	
Uniform Delay, d1	21.1	28.5		14.8	20.1		43.3	45.2		29.6	27.1	
Progression Factor	1.00	1.00		0.78	0.51		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.8		3.5	0.5		1.3	6.5		3.2	0.2	
Delay (s)	21.5	29.3		15.0	10.8		44.7	51.6		32.8	27.3	
Level of Service	C	C		B	B		D	D		C	C	
Approach Delay (s)		28.7			11.9			50.6			30.5	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	1115	1175	75	0	130
Future Volume (Veh/h)	75	1115	1175	75	0	130
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	77	1149	1211	77	0	134
Pedestrians					15	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	1303				1802	457
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	843				1413	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 %	89				100	86
cM capacity (veh/h)	687				101	939

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	SB 1
Volume Total	77	383	383	383	484	484	319	134
Volume Left	77	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	77	134
cSH	687	1700	1700	1700	1700	1700	1700	939
Volume to Capacity	0.11	0.23	0.23	0.23	0.28	0.28	0.19	0.14
Queue Length 95th (m)	3.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
Control Delay (s)	10.9	0.0	0.0	0.0	0.0	0.0	0.0	9.5
Lane LOS	B							A
Approach Delay (s)	0.7				0.0			9.5
Approach LOS								A

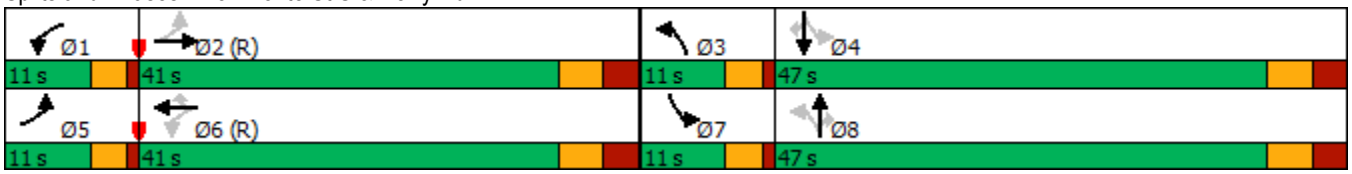
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		

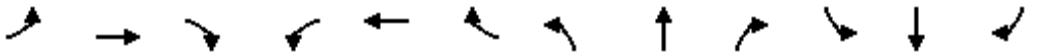
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	170	785	115	810	225	170	365	170	230	425	260
Future Volume (vph)	170	785	115	810	225	170	365	170	230	425	260
Lane Group Flow (vph)	175	928	119	835	232	175	376	175	237	438	268
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	11.0	41.0	11.0	41.0	41.0	11.0	47.0	47.0	11.0	47.0	47.0
Total Split (%)	10.0%	37.3%	10.0%	37.3%	37.3%	10.0%	42.7%	42.7%	10.0%	42.7%	42.7%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-0.5	0.0	-0.4	0.0	0.0	-1.0	0.0	0.0	-1.4	0.0	0.0
Total Lost Time (s)	3.5	6.7	3.6	6.7	6.7	3.0	6.7	6.7	2.6	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.52	0.54	0.41	0.49	0.35	0.54	0.72	0.31	0.60	0.81	0.45
Control Delay	16.1	22.6	24.0	25.8	2.9	23.1	43.5	5.3	24.2	48.4	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	16.1	22.6	24.0	25.8	2.9	23.1	43.5	5.3	24.2	48.6	8.8
Queue Length 50th (m)	8.6	65.4	13.0	36.0	0.0	22.5	77.2	0.0	31.4	91.4	8.4
Queue Length 95th (m)	#16.3	85.6	28.1	41.0	7.6	32.5	96.7	14.2	43.3	116.4	26.7
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	337	1802	295	1802	696	327	696	690	395	689	710
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	30	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.51	0.40	0.46	0.33	0.54	0.54	0.25	0.60	0.66	0.38

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 24 (22%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	785	115	115	810	225	170	365	170	230	425	260
Future Volume (vph)	170	785	115	115	810	225	170	365	170	230	425	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.7		3.6	6.7	6.7	3.0	6.7	6.7	2.6	6.7	6.7
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1803	5008		1785	5136	1556	1785	1900	1582	1785	1881	1562
Flt Permitted	0.24	1.00		0.22	1.00	1.00	0.23	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)	462	5008		420	5136	1556	427	1900	1582	530	1881	1562
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	175	809	119	119	835	232	175	376	175	237	438	268
RTOR Reduction (vph)	0	17	0	0	0	155	0	0	127	0	0	155
Lane Group Flow (vph)	175	911	0	119	835	77	175	376	48	237	438	113
Confl. Peds. (#/hr)	10		15	15		10	20		10	10		20
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	1%	0%	0%	1%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	47.2	37.5		44.8	36.3	36.3	41.3	30.2	30.2	43.9	31.5	31.5
Effective Green, g (s)	48.2	37.5		45.6	36.3	36.3	43.3	30.2	30.2	46.7	31.5	31.5
Actuated g/C Ratio	0.44	0.34		0.41	0.33	0.33	0.39	0.27	0.27	0.42	0.29	0.29
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	326	1707		284	1694	513	317	521	434	382	538	447
v/s Ratio Prot	c0.05	0.18		0.03	0.16		0.06	0.20		c0.08	c0.23	
v/s Ratio Perm	c0.19			0.14		0.05	0.16		0.03	0.19		0.07
v/c Ratio	0.54	0.53		0.42	0.49	0.15	0.55	0.72	0.11	0.62	0.81	0.25
Uniform Delay, d1	19.8	29.2		20.7	29.5	26.0	24.1	36.1	29.9	22.5	36.5	30.2
Progression Factor	0.55	0.72		1.09	0.80	0.36	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.5	1.1		1.0	1.0	0.6	2.1	4.9	0.1	3.1	9.2	0.3
Delay (s)	12.4	22.0		23.5	24.4	10.0	26.2	41.0	30.0	25.6	45.7	30.5
Level of Service	B	C		C	C	B	C	D	C	C	D	C
Approach Delay (s)		20.5			21.5			34.8			36.3	
Approach LOS		C			C			C			D	

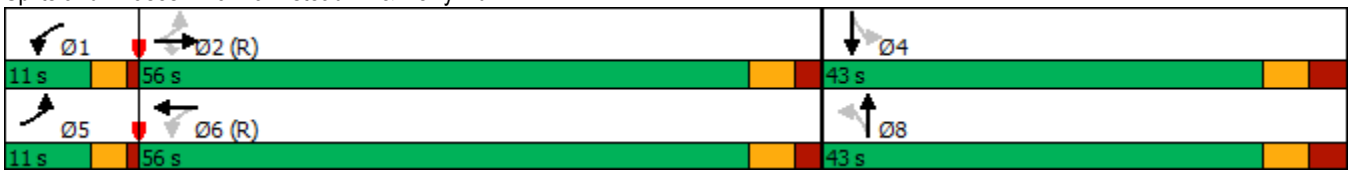
Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

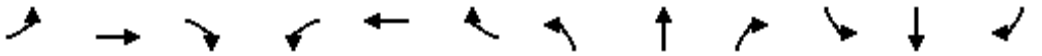
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	30	1130	50	105	1085	45	40	35	55
Future Volume (vph)	30	1130	50	105	1085	45	40	35	55
Lane Group Flow (vph)	31	1165	52	108	1145	46	252	36	109
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	11.0	56.0	56.0	11.0	56.0	43.0	43.0	43.0	43.0
Total Split (%)	10.0%	50.9%	50.9%	10.0%	50.9%	39.1%	39.1%	39.1%	39.1%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.08	0.35	0.05	0.27	0.32	0.28	0.73	0.52	0.43
Control Delay	4.7	10.6	2.6	5.4	7.8	46.1	29.8	69.9	31.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.7	10.6	2.6	5.4	7.8	46.1	29.8	69.9	31.3
Queue Length 50th (m)	1.0	28.8	0.1	4.4	35.0	9.7	19.7	7.9	13.8
Queue Length 95th (m)	m3.5	51.7	m2.2	12.0	56.1	19.7	44.7	18.0	28.7
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	409	3296	997	401	3574	423	633	178	584
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.35	0.05	0.27	0.32	0.11	0.40	0.20	0.19

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 45 (41%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1130	50	105	1085	25	45	40	205	35	55	50
Future Volume (vph)	30	1130	50	105	1085	25	45	40	205	35	55	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1803	5136	1510	1786	5114		1790	1606		1800	1696	
Flt Permitted	0.24	1.00	1.00	0.20	1.00		0.69	1.00		0.29	1.00	
Satd. Flow (perm)	448	5136	1510	375	5114		1294	1606		545	1696	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	31	1165	52	108	1119	26	46	41	211	36	57	52
RTOR Reduction (vph)	0	0	19	0	1	0	0	141	0	0	38	0
Lane Group Flow (vph)	31	1165	33	108	1144	0	46	111	0	36	71	0
Confl. Peds. (#/hr)	15		15	15		15	10		5	5		10
Heavy Vehicles (%)	0%	1%	2%	1%	1%	0%	0%	2%	2%	0%	2%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	74.4	70.6	70.6	83.0	75.2		13.9	13.9		13.9	13.9	
Effective Green, g (s)	74.4	70.6	70.6	83.0	75.2		13.9	13.9		13.9	13.9	
Actuated g/C Ratio	0.68	0.64	0.64	0.75	0.68		0.13	0.13		0.13	0.13	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	349	3296	969	390	3496		163	202		68	214	
v/s Ratio Prot	0.00	c0.23		c0.02	0.22			c0.07			0.04	
v/s Ratio Perm	0.06		0.02	0.19			0.04			0.07		
v/c Ratio	0.09	0.35	0.03	0.28	0.33		0.28	0.55		0.53	0.33	
Uniform Delay, d1	5.9	9.1	7.2	4.1	7.1		43.5	45.1		45.0	43.8	
Progression Factor	1.07	1.03	2.14	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.3	0.1	0.4	0.3		1.0	3.2		7.3	0.9	
Delay (s)	6.4	9.7	15.5	4.5	7.3		44.5	48.4		52.2	44.7	
Level of Service	A	A	B	A	A		D	D		D	D	
Approach Delay (s)		9.8			7.1			47.8			46.6	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

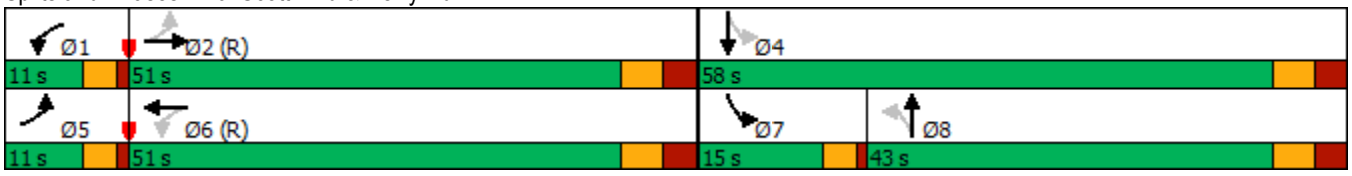
c Critical Lane Group

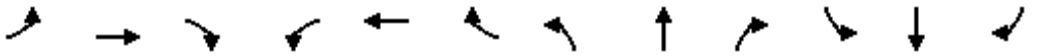
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	70	910	210	600	70	35	280	65
Future Volume (vph)	70	910	210	600	70	35	280	65
Lane Group Flow (vph)	74	1021	223	814	74	404	298	165
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	51.0	11.0	51.0	43.0	43.0	15.0	58.0
Total Split (%)	9.2%	42.5%	9.2%	42.5%	35.8%	35.8%	12.5%	48.3%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.24	0.67	0.77	0.44	0.29	0.89	0.74	0.22
Control Delay	21.6	39.4	34.5	18.7	39.9	48.8	39.1	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	39.4	34.5	18.7	39.9	48.8	39.1	11.1
Queue Length 50th (m)	10.5	89.0	25.4	59.7	15.5	63.2	47.6	12.5
Queue Length 95th (m)	20.6	95.2	#96.3	73.5	26.7	93.4	#98.4	25.6
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	309	1868	289	1992	367	586	400	782
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.55	0.77	0.41	0.20	0.69	0.74	0.21

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Scott Blvd & Derry Rd

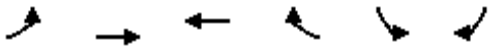




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	910	50	210	600	165	70	35	345	280	65	90
Future Volume (vph)	70	910	50	210	600	165	70	35	345	280	65	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.86		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1734	4937		1735	4807		1771	1588		1769	1640	
Flt Permitted	0.32	1.00		0.15	1.00		0.65	1.00		0.14	1.00	
Satd. Flow (perm)	591	4937		265	4807		1217	1588		254	1640	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	74	968	53	223	638	176	74	37	367	298	69	96
RTOR Reduction (vph)	0	6	0	0	42	0	0	122	0	0	41	0
Lane Group Flow (vph)	74	1015	0	223	772	0	74	282	0	298	124	0
Confl. Peds. (#/hr)	5		15	15		5	10		10	10		10
Heavy Vehicles (%)	4%	4%	4%	4%	4%	3%	1%	3%	1%	2%	2%	6%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	43.3	36.9		54.4	44.0		25.3	25.3		51.8	51.8	
Effective Green, g (s)	43.3	36.9		54.4	44.0		25.3	25.3		51.8	51.8	
Actuated g/C Ratio	0.36	0.31		0.45	0.37		0.21	0.21		0.43	0.43	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	274	1518		285	1762		256	334		393	707	
v/s Ratio Prot	0.01	0.21		c0.09	0.16			c0.18		c0.14	0.08	
v/s Ratio Perm	0.08			c0.27			0.06			0.18		
v/c Ratio	0.27	0.67		0.78	0.44		0.29	0.85		0.76	0.17	
Uniform Delay, d1	25.6	36.2		23.3	28.7		39.8	45.5		29.4	21.0	
Progression Factor	1.00	1.00		0.55	0.64		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	2.4		12.5	0.8		0.6	17.5		8.2	0.1	
Delay (s)	26.1	38.6		25.4	19.2		40.4	63.0		37.5	21.1	
Level of Service	C	D		C	B		D	E		D	C	
Approach Delay (s)		37.7			20.6			59.5			31.7	
Approach LOS		D			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	145	1425	870	100	0	110
Future Volume (Veh/h)	145	1425	870	100	0	110
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	154	1516	926	106	0	117
Pedestrians					10	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.90				0.90	0.90
vC, conflicting volume	1042				1802	372
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	652				1498	0
tC, single (s)	4.1				6.8	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	82				100	88
cM capacity (veh/h)	841				84	963

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	SB 1
Volume Total	154	505	505	505	370	370	291	117
Volume Left	154	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	106	117
cSH	841	1700	1700	1700	1700	1700	1700	963
Volume to Capacity	0.18	0.30	0.30	0.30	0.22	0.22	0.17	0.12
Queue Length 95th (m)	5.3	0.0	0.0	0.0	0.0	0.0	0.0	3.3
Control Delay (s)	10.2	0.0	0.0	0.0	0.0	0.0	0.0	9.3
Lane LOS	B							A
Approach Delay (s)	0.9				0.0			9.3
Approach LOS								A

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	33.8%	ICU Level of Service	A
Analysis Period (min)	15		

Queues
8: Bronte St S & Derry Rd

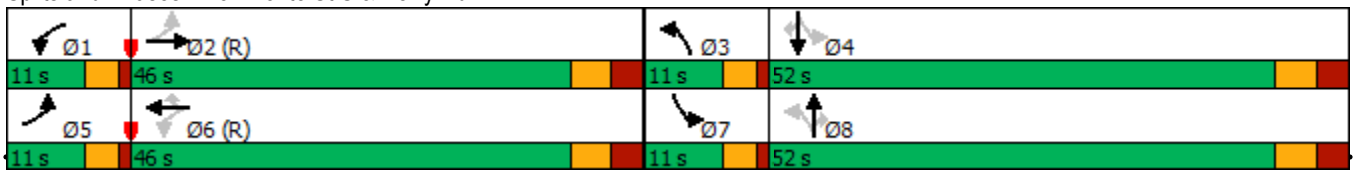
Future Total AM - 8-year Sensitivity

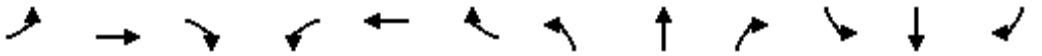
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	230	1035	95	660	140	180	425	230	210	330	150
Future Volume (vph)	230	1035	95	660	140	180	425	230	210	330	150
Lane Group Flow (vph)	247	1307	102	710	151	194	457	247	226	355	161
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	11.0	46.0	11.0	46.0	46.0	11.0	52.0	52.0	11.0	52.0	52.0
Total Split (%)	9.2%	38.3%	9.2%	38.3%	38.3%	9.2%	43.3%	43.3%	9.2%	43.3%	43.3%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-0.6	0.0	-0.2	0.0	0.0	-1.9	0.0	0.0	-2.0	0.0	0.0
Total Lost Time (s)	3.4	6.7	3.8	6.7	6.7	2.1	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.63	0.71	0.51	0.42	0.25	0.50	0.83	0.42	0.75	0.62	0.28
Control Delay	21.3	26.6	39.8	28.9	5.9	24.5	52.0	11.8	39.0	40.3	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Total Delay	21.3	26.6	39.8	28.9	5.9	24.5	52.0	11.8	39.0	40.6	5.3
Queue Length 50th (m)	16.8	109.1	12.1	34.4	0.0	27.9	105.0	13.5	33.1	75.9	0.0
Queue Length 95th (m)	m#60.5	131.3	38.9	52.7	14.0	40.9	130.6	32.0	#60.9	96.9	14.2
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	391	1828	203	1748	627	387	710	701	302	717	676
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	80	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.71	0.50	0.41	0.24	0.50	0.64	0.35	0.75	0.56	0.24

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 33 (28%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	1035	180	95	660	140	180	425	230	210	330	150
Future Volume (vph)	230	1035	180	95	660	140	180	425	230	210	330	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.4	6.7		3.8	6.7	6.7	2.1	6.7	6.7	2.0	6.7	6.7
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1751	4882		1735	5036	1523	1766	1881	1572	1735	1900	1527
Flt Permitted	0.29	1.00		0.12	1.00	1.00	0.36	1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)	528	4882		214	5036	1523	660	1881	1572	363	1900	1527
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	247	1113	194	102	710	151	194	457	247	226	355	161
RTOR Reduction (vph)	0	19	0	0	0	100	0	0	122	0	0	113
Lane Group Flow (vph)	247	1288	0	102	710	51	194	457	125	226	355	48
Confl. Peds. (#/hr)	5		10	10		5	15		5	5		15
Heavy Vehicles (%)	3%	3%	5%	4%	3%	3%	2%	1%	1%	4%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	56.8	44.5		49.0	40.6	40.6	44.9	35.3	35.3	46.5	36.1	36.1
Effective Green, g (s)	57.5	44.5		49.4	40.6	40.6	48.7	35.3	35.3	50.5	36.1	36.1
Actuated g/C Ratio	0.48	0.37		0.41	0.34	0.34	0.41	0.29	0.29	0.42	0.30	0.30
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	384	1810		197	1703	515	373	553	462	294	571	459
v/s Ratio Prot	c0.07	c0.26		0.04	0.14		0.05	c0.24		c0.08	0.19	
v/s Ratio Perm	0.24			0.18		0.03	0.16		0.08	0.24		0.03
v/c Ratio	0.64	0.71		0.52	0.42	0.10	0.52	0.83	0.27	0.77	0.62	0.11
Uniform Delay, d1	19.6	32.3		23.7	30.6	27.2	24.7	39.5	32.5	26.1	36.1	30.3
Progression Factor	0.67	0.75		1.72	0.90	1.08	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.0	2.0		2.2	0.7	0.4	1.3	9.8	0.3	11.4	2.1	0.1
Delay (s)	16.1	26.2		43.0	28.2	29.6	26.0	49.3	32.8	37.5	38.2	30.4
Level of Service	B	C		D	C	C	C	D	C	D	D	C
Approach Delay (s)		24.6			30.0			39.7			36.3	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.3
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

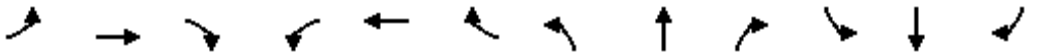
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	55	1300	60	85	840	40	45	55	50
Future Volume (vph)	55	1300	60	85	840	40	45	55	50
Lane Group Flow (vph)	57	1340	62	88	881	41	278	57	104
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	12.0	61.0	61.0	12.0	61.0	47.0	47.0	47.0	47.0
Total Split (%)	10.0%	50.8%	50.8%	10.0%	50.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.12	0.41	0.06	0.27	0.26	0.23	0.78	0.95	0.39
Control Delay	3.2	6.1	0.5	6.1	8.6	46.9	36.8	154.6	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.2	6.1	0.5	6.1	8.6	46.9	36.8	154.6	30.2
Queue Length 50th (m)	2.0	29.8	0.1	4.2	28.5	9.3	30.0	14.3	13.4
Queue Length 95th (m)	m3.9	35.7	m0.3	11.4	46.7	18.9	56.8	#34.3	28.2
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	481	3300	1022	343	3400	435	649	148	599
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.41	0.06	0.26	0.26	0.09	0.43	0.39	0.17

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 68 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	1300	60	85	840	15	40	45	225	55	50	50
Future Volume (vph)	55	1300	60	85	840	15	40	45	225	55	50	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1684	5036	1522	1787	4975		1797	1639		1714	1708	
Flt Permitted	0.31	1.00	1.00	0.16	1.00		0.69	1.00		0.25	1.00	
Satd. Flow (perm)	550	5036	1522	308	4975		1305	1639		446	1708	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	57	1340	62	88	866	15	41	46	232	57	52	52
RTOR Reduction (vph)	0	0	21	0	1	0	0	134	0	0	39	0
Lane Group Flow (vph)	57	1340	41	88	880	0	41	144	0	57	65	0
Confl. Peds. (#/hr)	10		10	10		10	5		5	5		5
Heavy Vehicles (%)	7%	3%	2%	1%	4%	0%	0%	0%	0%	5%	4%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	84.1	78.7	78.7	89.3	81.3		16.2	16.2		16.2	16.2	
Effective Green, g (s)	84.1	78.7	78.7	89.3	81.3		16.2	16.2		16.2	16.2	
Actuated g/C Ratio	0.70	0.66	0.66	0.74	0.68		0.13	0.13		0.13	0.13	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	436	3302	998	327	3370		176	221		60	230	
v/s Ratio Prot	0.01	c0.27		c0.02	0.18			0.09			0.04	
v/s Ratio Perm	0.09		0.03	0.18			0.03			c0.13		
v/c Ratio	0.13	0.41	0.04	0.27	0.26		0.23	0.65		0.95	0.28	
Uniform Delay, d1	5.6	9.7	7.3	4.9	7.6		46.4	49.2		51.5	46.7	
Progression Factor	0.63	0.54	0.19	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.3	0.1	0.4	0.2		0.7	6.7		97.0	0.7	
Delay (s)	3.6	5.6	1.5	5.4	7.8		47.0	55.9		148.5	47.4	
Level of Service	A	A	A	A	A		D	E		F	D	
Approach Delay (s)		5.3			7.6			54.8			83.2	
Approach LOS		A			A			D			F	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

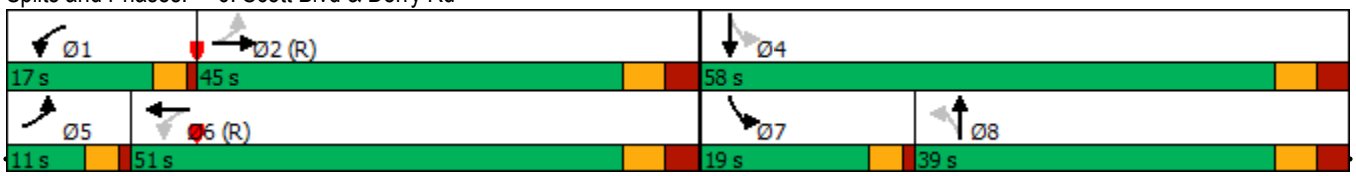
c Critical Lane Group

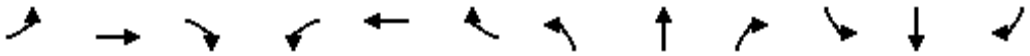
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	900	375	1060	55	75	260	120
Future Volume (vph)	105	900	375	1060	55	75	260	120
Lane Group Flow (vph)	108	969	387	1438	57	340	268	170
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	45.0	17.0	51.0	39.0	39.0	19.0	58.0
Total Split (%)	9.2%	37.5%	14.2%	42.5%	32.5%	32.5%	15.8%	48.3%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.51	0.72	0.78	0.68	0.27	0.84	0.79	0.26
Control Delay	25.6	43.2	30.9	18.1	42.9	45.1	44.8	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	43.2	30.9	18.1	42.9	45.1	44.8	23.7
Queue Length 50th (m)	13.5	80.8	30.2	114.9	12.3	49.6	44.2	24.2
Queue Length 95th (m)	24.7	88.4 m	#140.6	135.1	23.0	77.6	#85.3	39.4
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	215	1634	494	2120	325	545	340	772
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.59	0.78	0.68	0.18	0.62	0.79	0.22

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 69 (58%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Scott Blvd & Derry Rd

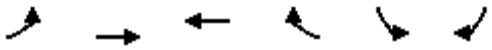




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	900	40	375	1060	335	55	75	255	260	120	45
Future Volume (vph)	105	900	40	375	1060	335	55	75	255	260	120	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.88		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	5146		1787	4920		1773	1650		1804	1787	
Flt Permitted	0.16	1.00		0.13	1.00		0.65	1.00		0.16	1.00	
Satd. Flow (perm)	306	5146		248	4920		1212	1650		303	1787	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	108	928	41	387	1093	345	57	77	263	268	124	46
RTOR Reduction (vph)	0	4	0	0	43	0	0	115	0	0	12	0
Lane Group Flow (vph)	108	965	0	387	1395	0	57	225	0	268	158	0
Confl. Peds. (#/hr)	10		10	10		10	20		10	10		20
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	4%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	39.6	31.2		63.1	50.7		21.1	21.1		43.1	43.1	
Effective Green, g (s)	39.6	31.2		63.1	50.7		21.1	21.1		43.1	43.1	
Actuated g/C Ratio	0.33	0.26		0.53	0.42		0.18	0.18		0.36	0.36	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	205	1337		488	2078		213	290		333	641	
v/s Ratio Prot	0.04	0.19		c0.18	0.28			0.14		c0.12	0.09	
v/s Ratio Perm	0.14			c0.23			0.05			c0.17		
v/c Ratio	0.53	0.72		0.79	0.67		0.27	0.77		0.80	0.25	
Uniform Delay, d1	28.7	40.4		28.7	27.9		42.8	47.2		31.0	27.0	
Progression Factor	1.00	1.00		0.64	0.60		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	3.4		6.8	1.3		0.7	12.1		13.2	0.2	
Delay (s)	31.1	43.8		25.2	18.0		43.4	59.3		44.2	27.2	
Level of Service	C	D		C	B		D	E		D	C	
Approach Delay (s)		42.6			19.5			57.0			37.6	
Approach LOS		D			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	155	1325	1615	145	0	225
Future Volume (Veh/h)	155	1325	1615	145	0	225
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	158	1352	1648	148	0	230
Pedestrians					20	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					2	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.78				0.78	0.78
vC, conflicting volume	1816				2509	643
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1055				1944	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 %	69				100	72
cM capacity (veh/h)	511				31	836

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	SB 1
Volume Total	158	451	451	451	659	659	478	230
Volume Left	158	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	148	230
cSH	511	1700	1700	1700	1700	1700	1700	836
Volume to Capacity	0.31	0.27	0.27	0.27	0.39	0.39	0.28	0.28
Queue Length 95th (m)	10.4	0.0	0.0	0.0	0.0	0.0	0.0	9.0
Control Delay (s)	15.2	0.0	0.0	0.0	0.0	0.0	0.0	10.9
Lane LOS	C							B
Approach Delay (s)	1.6				0.0			10.9
Approach LOS								B

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

Queues
8: Bronte St S & Derry Rd

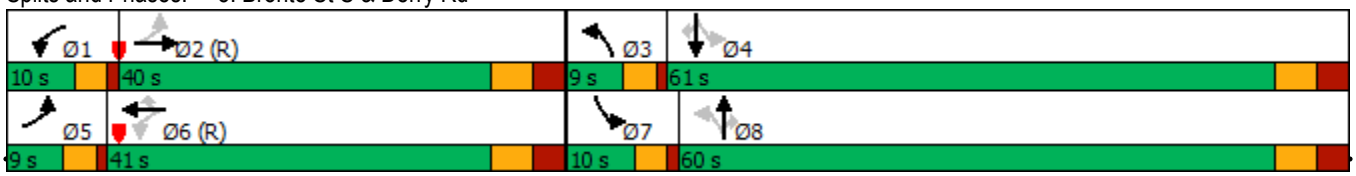
Future Total PM - 8-year Sensitivity

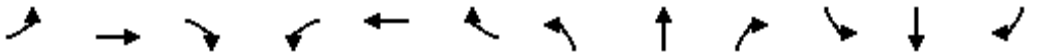
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	240	940	175	1195	170	230	560	165	260	605	285
Future Volume (vph)	240	940	175	1195	170	230	560	165	260	605	285
Lane Group Flow (vph)	242	1095	177	1207	172	232	566	167	263	611	288
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	9.0	40.0	10.0	41.0	41.0	9.0	60.0	60.0	10.0	61.0	61.0
Total Split (%)	7.5%	33.3%	8.3%	34.2%	34.2%	7.5%	50.0%	50.0%	8.3%	50.8%	50.8%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-2.6	0.0	-1.4	0.0	0.0	-3.4	0.0	0.0	-2.8	0.0	0.0
Total Lost Time (s)	1.4	6.7	2.6	6.7	6.7	0.6	6.7	6.7	1.2	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.77	0.74	0.65	0.85	0.31	0.87	0.81	0.25	0.90	0.85	0.43
Control Delay	41.6	29.7	31.6	45.4	12.6	48.3	42.8	5.5	52.8	45.7	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0
Total Delay	41.6	29.7	31.6	45.4	12.6	48.3	42.8	5.5	52.8	49.5	14.1
Queue Length 50th (m)	22.6	91.0	30.9	111.0	13.1	31.3	123.5	3.0	36.6	136.0	24.4
Queue Length 95th (m)	m#106.6	115.7	#65.7	122.1	36.3	#57.9	150.2	15.5	#67.1	164.8	42.7
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	313	1481	274	1468	563	268	843	780	292	859	773
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	168	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.74	0.65	0.82	0.31	0.87	0.67	0.21	0.90	0.88	0.37

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	240	940	145	175	1195	170	230	560	165	260	605	285
Future Volume (vph)	240	940	145	175	1195	170	230	560	165	260	605	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.4	6.7		2.6	6.7	6.7	0.6	6.7	6.7	1.2	6.7	6.7
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	5046		1769	5136	1540	1803	1900	1573	1786	1900	1536
Flt Permitted	0.11	1.00		0.13	1.00	1.00	0.16	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	205	5046		248	5136	1540	295	1900	1573	339	1900	1536
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	242	949	146	177	1207	172	232	566	167	263	611	288
RTOR Reduction (vph)	0	17	0	0	0	125	0	0	93	0	0	90
Lane Group Flow (vph)	242	1078	0	177	1207	47	232	566	74	263	611	198
Confl. Peds. (#/hr)	15		20	20		15	40		15	15		40
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	0%	0%	0%	1%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	48.7	34.8		45.1	33.0	33.0	50.7	44.4	44.4	52.7	45.4	45.4
Effective Green, g (s)	53.5	34.8		47.9	33.0	33.0	57.5	44.4	44.4	58.3	45.4	45.4
Actuated g/C Ratio	0.45	0.29		0.40	0.28	0.28	0.48	0.37	0.37	0.49	0.38	0.38
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	311	1463		270	1412	423	263	703	582	286	718	581
v/s Ratio Prot	c0.11	0.21		0.07	c0.24		0.07	0.30		c0.08	c0.32	
v/s Ratio Perm	0.24			0.19		0.03	0.35		0.05	0.37		0.13
v/c Ratio	0.78	0.74		0.66	0.85	0.11	0.88	0.81	0.13	0.92	0.85	0.34
Uniform Delay, d1	28.8	38.5		25.8	41.2	32.5	24.1	33.9	25.0	24.8	34.2	26.6
Progression Factor	0.90	0.71		0.84	0.95	2.29	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.4	2.7		5.0	6.1	0.5	27.3	6.7	0.1	32.5	9.5	0.4
Delay (s)	35.2	29.9		26.6	45.5	75.1	51.4	40.6	25.1	57.3	43.7	27.0
Level of Service	D	C		C	D	E	D	D	C	E	D	C
Approach Delay (s)		30.8			46.6			40.5			42.6	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	40.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.2
Intersection Capacity Utilization	103.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

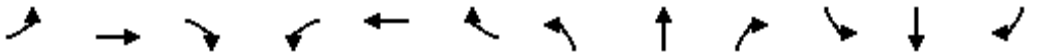
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	50	1235	65	130	1560	50	75	20	75
Future Volume (vph)	50	1235	65	130	1560	50	75	20	75
Lane Group Flow (vph)	53	1314	69	138	1713	53	287	21	139
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	12.0	61.0	61.0	12.0	61.0	47.0	47.0	47.0	47.0
Total Split (%)	10.0%	50.8%	50.8%	10.0%	50.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.23	0.41	0.07	0.40	0.51	0.29	0.80	0.34	0.46
Control Delay	6.9	12.4	5.4	8.3	12.3	46.1	44.5	56.6	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	12.4	5.4	8.3	12.3	46.1	44.5	56.6	38.0
Queue Length 50th (m)	0.8	80.7	0.5	7.9	75.3	11.8	41.9	4.7	23.9
Queue Length 95th (m)	m6.9	m127.2	m12.0	18.3	112.9	22.6	68.2	12.5	40.7
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	252	3188	991	353	3387	388	635	134	610
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.41	0.07	0.39	0.51	0.14	0.45	0.16	0.23

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 83 (69%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	1235	65	130	1560	50	50	75	195	20	75	55
Future Volume (vph)	50	1235	65	130	1560	50	50	75	195	20	75	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.89		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	5136	1552	1804	5109		1798	1674		1800	1766	
Flt Permitted	0.11	1.00	1.00	0.16	1.00		0.62	1.00		0.21	1.00	
Satd. Flow (perm)	206	5136	1552	306	5109		1166	1674		403	1766	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	1314	69	138	1660	53	53	80	207	21	80	59
RTOR Reduction (vph)	0	0	26	0	2	0	0	98	0	0	28	0
Lane Group Flow (vph)	53	1314	43	138	1711	0	53	189	0	21	111	0
Confl. Peds. (#/hr)	5		10	10		5	5		5	5		5
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	79.9	74.5	74.5	88.1	78.7		18.8	18.8		18.8	18.8	
Effective Green, g (s)	79.9	74.5	74.5	88.1	78.7		18.8	18.8		18.8	18.8	
Actuated g/C Ratio	0.67	0.62	0.62	0.73	0.66		0.16	0.16		0.16	0.16	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	209	3188	963	344	3350		182	262		63	276	
v/s Ratio Prot	0.01	0.26		c0.03	c0.33			c0.11			0.06	
v/s Ratio Perm	0.16		0.03	0.26			0.05			0.05		
v/c Ratio	0.25	0.41	0.04	0.40	0.51		0.29	0.72		0.33	0.40	
Uniform Delay, d1	7.6	11.6	8.9	6.0	10.7		44.7	48.1		45.0	45.5	
Progression Factor	0.94	0.94	1.85	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.3	0.1	0.8	0.6		0.9	9.4		3.1	1.0	
Delay (s)	7.6	11.2	16.5	6.7	11.2		45.6	57.5		48.1	46.5	
Level of Service	A	B	B	A	B		D	E		D	D	
Approach Delay (s)		11.4			10.9			55.7			46.7	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

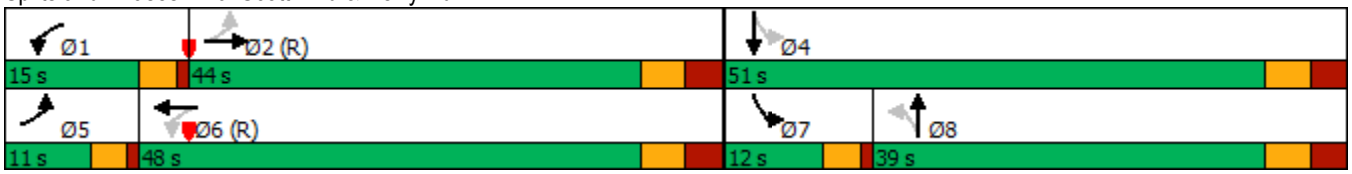
c Critical Lane Group

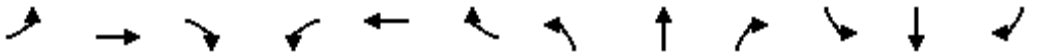
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	60	740	370	805	55	40	215	90
Future Volume (vph)	60	740	370	805	55	40	215	90
Lane Group Flow (vph)	63	792	385	1042	57	334	224	151
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	pm+pt	NA
Protected Phases	5	2	1	6		8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	20.0	5.0	20.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.0	44.0	9.0	44.0	38.8	38.8	9.0	38.8
Total Split (s)	11.0	44.0	15.0	48.0	39.0	39.0	12.0	51.0
Total Split (%)	10.0%	40.0%	13.6%	43.6%	35.5%	35.5%	10.9%	46.4%
Yellow Time (s)	3.0	3.7	3.0	3.7	3.7	3.7	3.0	3.7
All-Red Time (s)	1.0	3.3	1.0	3.3	3.1	3.1	1.0	3.1
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	7.0	4.0	7.0	6.8	6.8	4.0	6.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.23	0.55	0.71	0.46	0.33	0.83	0.63	0.25
Control Delay	17.1	36.3	20.8	12.3	45.2	34.6	32.5	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	36.3	20.8	12.3	45.2	34.6	32.5	19.8
Queue Length 50th (m)	6.2	57.9	19.9	20.6	11.9	30.0	36.2	18.7
Queue Length 95th (m)	14.9	71.4	#108.0	78.4	22.4	58.3	50.0	30.8
Internal Link Dist (m)		138.8		507.1		101.2		116.0
Turn Bay Length (m)	55.0		90.0		35.0		35.0	
Base Capacity (vph)	280	1738	543	2332	354	618	358	725
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.46	0.71	0.45	0.16	0.54	0.63	0.21

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 82 (75%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Scott Blvd & Derry Rd

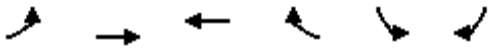




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	740	20	370	805	195	55	40	280	215	90	55
Future Volume (vph)	60	740	20	370	805	195	55	40	280	215	90	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	0.87		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1804	5111		1785	4962		1740	1626		1804	1747	
Flt Permitted	0.26	1.00		0.22	1.00		0.66	1.00		0.20	1.00	
Satd. Flow (perm)	499	5111		415	4962		1211	1626		386	1747	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	62	771	21	385	839	203	57	42	292	224	94	57
RTOR Reduction (vph)	0	3	0	0	33	0	0	172	0	0	22	0
Lane Group Flow (vph)	63	789	0	385	1009	0	57	162	0	224	129	0
Confl. Peds. (#/hr)	10		15	15		10	20		5	5		20
Heavy Vehicles (%)	0%	1%	0%	1%	1%	0%	2%	0%	0%	0%	1%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	37.1	30.8		59.5	49.2		15.7	15.7		36.7	36.7	
Effective Green, g (s)	37.1	30.8		59.5	49.2		15.7	15.7		36.7	36.7	
Actuated g/C Ratio	0.34	0.28		0.54	0.45		0.14	0.14		0.33	0.33	
Clearance Time (s)	4.0	7.0		4.0	7.0		6.8	6.8		4.0	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	243	1431		532	2219		172	232		347	582	
v/s Ratio Prot	0.01	0.15		c0.16	0.20			0.10		c0.10	0.07	
v/s Ratio Perm	0.07			c0.23			0.05			c0.12		
v/c Ratio	0.26	0.55		0.72	0.45		0.33	0.70		0.65	0.22	
Uniform Delay, d1	25.0	33.7		16.5	21.1		42.4	44.9		29.2	26.4	
Progression Factor	1.00	1.00		0.74	0.54		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	1.5		4.5	0.6		1.1	8.8		4.1	0.2	
Delay (s)	25.6	35.3		16.7	12.0		43.6	53.7		33.2	26.6	
Level of Service	C	D		B	B		D	D		C	C	
Approach Delay (s)		34.5			13.3			52.2			30.6	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	26.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	145	1105	1160	145	0	230
Future Volume (Veh/h)	145	1105	1160	145	0	230
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	149	1139	1196	149	0	237
Pedestrians					15	
Lane Width (m)					3.6	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			123			
pX, platoon unblocked	0.86				0.86	0.86
vC, conflicting volume	1360				1963	488
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	854				1554	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 %	78				100	74
cM capacity (veh/h)	670				70	925

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	SB 1
Volume Total	149	380	380	380	478	478	388	237
Volume Left	149	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	149	237
cSH	670	1700	1700	1700	1700	1700	1700	925
Volume to Capacity	0.22	0.22	0.22	0.22	0.28	0.28	0.23	0.26
Queue Length 95th (m)	6.8	0.0	0.0	0.0	0.0	0.0	0.0	8.2
Control Delay (s)	11.9	0.0	0.0	0.0	0.0	0.0	0.0	10.2
Lane LOS	B							B
Approach Delay (s)	1.4				0.0			10.2
Approach LOS								B

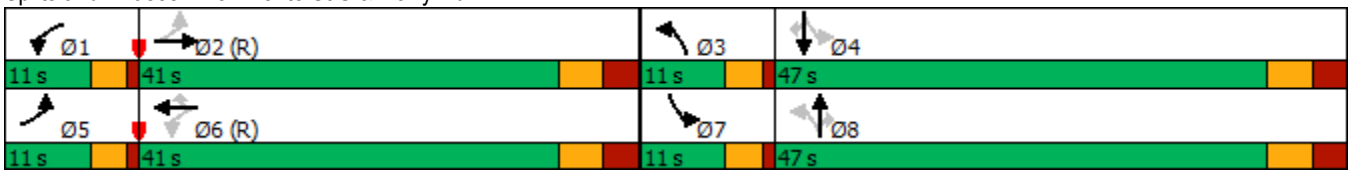
Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

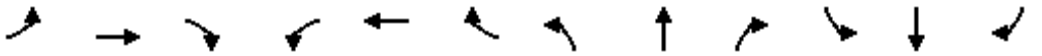
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	170	775	115	860	225	175	420	170	265	475	260
Future Volume (vph)	170	775	115	860	225	175	420	170	265	475	260
Lane Group Flow (vph)	175	918	119	887	232	180	433	175	273	490	268
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases	2		6		6	8		8	4		4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	39.7	9.0	39.7	39.7	9.0	44.7	44.7	9.0	44.7	44.7
Total Split (s)	11.0	41.0	11.0	41.0	41.0	11.0	47.0	47.0	11.0	47.0	47.0
Total Split (%)	10.0%	37.3%	10.0%	37.3%	37.3%	10.0%	42.7%	42.7%	10.0%	42.7%	42.7%
Yellow Time (s)	3.0	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	3.0	1.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	-0.5	0.0	-0.4	0.0	0.0	-1.0	0.0	0.0	-1.4	0.0	0.0
Total Lost Time (s)	3.5	6.7	3.6	6.7	6.7	3.0	6.7	6.7	2.6	6.7	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.58	0.56	0.42	0.55	0.36	0.59	0.79	0.30	0.74	0.85	0.43
Control Delay	19.7	21.4	25.4	27.1	3.1	24.1	46.2	5.1	31.2	49.8	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0
Total Delay	19.7	21.4	25.4	27.1	3.1	24.1	46.2	5.1	31.2	50.5	9.2
Queue Length 50th (m)	9.0	66.3	12.9	47.8	0.0	22.0	90.6	0.0	35.1	101.9	9.8
Queue Length 95th (m)	#24.1	86.1	29.1	44.3	7.6	33.6	114.1	14.2	#59.7	133.5	28.7
Internal Link Dist (m)		99.1		466.7			167.0			59.7	
Turn Bay Length (m)	95.0		110.0		85.0	120.0			65.0		
Base Capacity (vph)	304	1747	281	1746	681	307	696	690	371	689	703
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	48	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.53	0.42	0.51	0.34	0.59	0.62	0.25	0.74	0.76	0.38

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 24 (22%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Bronte St S & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	775	115	115	860	225	175	420	170	265	475	260
Future Volume (vph)	170	775	115	115	860	225	175	420	170	265	475	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.7		3.6	6.7	6.7	3.0	6.7	6.7	2.6	6.7	6.7
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1804	5007		1785	5136	1556	1785	1900	1582	1786	1881	1562
Flt Permitted	0.22	1.00		0.22	1.00	1.00	0.19	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	409	5007		414	5136	1556	357	1900	1582	414	1881	1562
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	175	799	119	119	887	232	180	433	175	273	490	268
RTOR Reduction (vph)	0	18	0	0	0	159	0	0	124	0	0	144
Lane Group Flow (vph)	175	900	0	119	887	73	180	433	51	273	490	124
Confl. Peds. (#/hr)	10		15	15		10	20		10	10		20
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	1%	0%	0%	1%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	45.1	35.9		42.9	34.8	34.8	42.7	31.8	31.8	46.5	33.7	33.7
Effective Green, g (s)	46.1	35.9		43.7	34.8	34.8	44.7	31.8	31.8	49.3	33.7	33.7
Actuated g/C Ratio	0.42	0.33		0.40	0.32	0.32	0.41	0.29	0.29	0.45	0.31	0.31
Clearance Time (s)	4.0	6.7		4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.7	6.7
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	294	1634		270	1624	492	299	549	457	362	576	478
v/s Ratio Prot	c0.05	0.18		0.03	0.17		0.06	0.23		c0.10	c0.26	
v/s Ratio Perm	c0.20			0.14		0.05	0.18		0.03	0.24		0.08
v/c Ratio	0.60	0.55		0.44	0.55	0.15	0.60	0.79	0.11	0.75	0.85	0.26
Uniform Delay, d1	21.3	30.4		21.9	31.1	27.0	23.8	36.0	28.7	22.3	35.8	28.8
Progression Factor	0.58	0.65		1.09	0.80	0.38	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	1.2		1.1	1.3	0.6	3.4	7.4	0.1	8.6	11.5	0.3
Delay (s)	15.3	21.0		24.9	26.1	10.9	27.2	43.4	28.8	30.9	47.3	29.0
Level of Service	B	C		C	C	B	C	D	C	C	D	C
Approach Delay (s)		20.1			23.1			36.5			38.2	
Approach LOS		C			C			D			D	

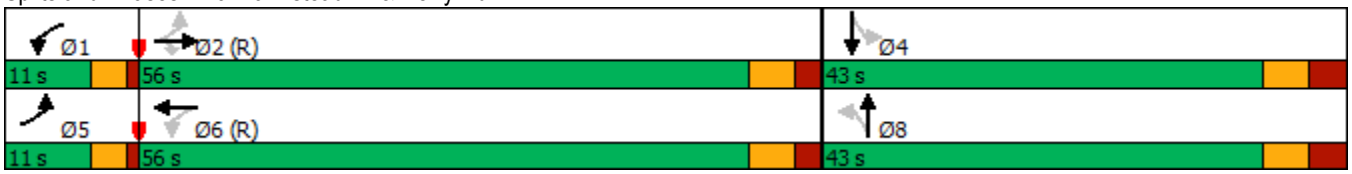
Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

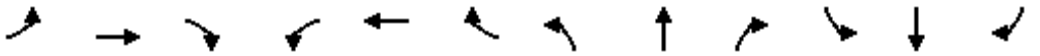
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	30	1145	60	105	1125	55	40	35	55
Future Volume (vph)	30	1145	60	105	1125	55	40	35	55
Lane Group Flow (vph)	31	1180	62	108	1186	57	252	36	109
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	37.1	37.1	9.0	37.1	42.0	42.0	42.0	42.0
Total Split (s)	11.0	56.0	56.0	11.0	56.0	43.0	43.0	43.0	43.0
Total Split (%)	10.0%	50.9%	50.9%	10.0%	50.9%	39.1%	39.1%	39.1%	39.1%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	3.3	3.3	3.3	3.3
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	6.1	6.1	4.0	6.1	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.08	0.36	0.06	0.28	0.33	0.35	0.73	0.52	0.43
Control Delay	4.1	10.0	2.6	5.4	7.9	48.1	30.0	69.8	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.1	10.0	2.6	5.4	7.9	48.1	30.0	69.8	31.2
Queue Length 50th (m)	1.0	30.7	0.2	4.5	36.8	12.1	19.9	7.9	13.8
Queue Length 95th (m)	m2.9	47.8	m1.0	12.1	58.9	23.2	45.0	18.0	28.7
Internal Link Dist (m)		466.7			137.6		121.2		113.5
Turn Bay Length (m)	70.0		45.0	55.0		50.0		35.0	
Base Capacity (vph)	395	3297	997	394	3572	423	632	178	584
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.36	0.06	0.27	0.33	0.13	0.40	0.20	0.19

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 45 (41%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Farmstead Dr & Derry Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1145	60	105	1125	25	55	40	205	35	55	50
Future Volume (vph)	30	1145	60	105	1125	25	55	40	205	35	55	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1803	5136	1510	1786	5115		1790	1606		1800	1696	
Flt Permitted	0.22	1.00	1.00	0.20	1.00		0.69	1.00		0.29	1.00	
Satd. Flow (perm)	426	5136	1510	368	5115		1294	1606		545	1696	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	31	1180	62	108	1160	26	57	41	211	36	57	52
RTOR Reduction (vph)	0	0	22	0	1	0	0	140	0	0	38	0
Lane Group Flow (vph)	31	1180	40	108	1185	0	57	112	0	36	71	0
Confl. Peds. (#/hr)	15		15	15		15	10		5	5		10
Heavy Vehicles (%)	0%	1%	2%	1%	1%	0%	0%	2%	2%	0%	2%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	74.5	70.7	70.7	83.0	75.2		13.9	13.9		13.9	13.9	
Effective Green, g (s)	74.5	70.7	70.7	83.0	75.2		13.9	13.9		13.9	13.9	
Actuated g/C Ratio	0.68	0.64	0.64	0.75	0.68		0.13	0.13		0.13	0.13	
Clearance Time (s)	4.0	6.1	6.1	4.0	6.1		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	336	3301	970	384	3496		163	202		68	214	
v/s Ratio Prot	0.00	c0.23		c0.02	0.23			c0.07			0.04	
v/s Ratio Perm	0.06		0.03	0.19			0.04			0.07		
v/c Ratio	0.09	0.36	0.04	0.28	0.34		0.35	0.56		0.53	0.33	
Uniform Delay, d1	5.8	9.1	7.2	4.2	7.2		43.9	45.1		45.0	43.8	
Progression Factor	0.92	0.98	1.42	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.3	0.1	0.4	0.3		1.3	3.3		7.3	0.9	
Delay (s)	5.5	9.2	10.3	4.6	7.4		45.2	48.4		52.2	44.7	
Level of Service	A	A	B	A	A		D	D		D	D	
Approach Delay (s)		9.1			7.2			47.8			46.6	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group