



# **PROPOSED RESIDENTIAL DEVELOPMENT**

## **1840-1850 BLOOR STREET**

### **CITY OF MISSISSAUGA**

Urban Transportation Considerations Report

Prepared For: Ranee Management

February, 2020



A large, abstract graphic at the bottom of the page features a dark, textured background with several bright, glowing streaks of light in red, orange, and white. Overlaid on this graphic is the text "MOVEMENT IN URBAN ENVIRONMENTS" in a bold, white, sans-serif font. Below this main title, the website "BAGROUP.COM" is written in a smaller, white, all-caps font.

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## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	Existing Site.....	1
1.2	Proposed Development .....	1
1.3	Study Scope .....	2
<b>2.0</b>	<b>SUMMARY AND CONCLUSIONS.....</b>	<b>3</b>
<b>3.0</b>	<b>PROPOSED DEVELOPMENT .....</b>	<b>7</b>
3.1	Development Programme .....	7
3.2	Site Access and Circulation .....	7
3.3	Parking .....	7
3.4	Loading .....	8
3.5	Bicycle Parking .....	8
3.6	Pick-up / Drop-Off .....	8
3.7	Bloor Street Right-Of-Way Widening .....	8
<b>4.0</b>	<b>TRANSPORTATION CONTEXT.....</b>	<b>11</b>
4.1	Area Road Network .....	11
4.2	Transit Network.....	11
4.3	Cycling and Pedestrian Network.....	11
4.4	Existing Area Travel Characteristics .....	12
<b>5.0</b>	<b>VEHICULAR PARKING CONSIDERATIONS.....</b>	<b>15</b>
5.1	Zoning By-law Vehicular Parking Requirements .....	15
5.2	Existing Parking Demand.....	15
5.2.1	Existing Resident Parking Demand .....	15
5.2.2	Existing Visitor Parking Demand.....	17
5.3	Proposed Parking Supply Rates .....	18
5.4	Proposed Parking Supply .....	19
<b>6.0</b>	<b>LOADING CONSIDERATIONS.....</b>	<b>19</b>
6.1	Loading Requirements.....	19
6.2	Proposed Loading Supply .....	20
<b>7.0</b>	<b>BICYCLE PARKING CONSIDERATIONS.....</b>	<b>20</b>
<b>8.0</b>	<b>TRAFFIC VOLUME FORECASTING.....</b>	<b>21</b>
8.1	Existing Traffic Volumes .....	21
8.2	Future Background Traffic Volumes.....	21



8.2.1	Corridor Growth.....	21
8.2.2	Background Developments.....	21
8.3	Site Traffic Volumes .....	22
8.3.1	Existing Site Trip Generation .....	22
8.3.2	New Site Trip Generation.....	22
8.3.3	Total Site Trip Generation.....	23
8.3.4	Site Trip Distribution.....	23
8.4	Future Total Traffic Volumes .....	24
<b>9.0</b>	<b>TRAFFIC ANALYSIS .....</b>	<b>30</b>
9.1	Methodology .....	30
9.2	Input and Calibration Parameters .....	30
9.3	Intersections Operations Analysis .....	31
9.3.1	Bloor Street / Bridgewood Drive / Site Access.....	31
9.3.2	Bloor Street / Fieldgate Drive.....	32
9.3.3	Bloor Street / 1900 Bloor Street Driveway / 1855 & 1867 Bloor Street Driveway ..	33
<b>10.0</b>	<b>TRANSPORTATION DEMAND MANAGEMENT STRATEGY .....</b>	<b>35</b>



## LIST OF TABLES

Table 1	1840-1850 Bloor Street Development Statistics .....	7
Table 2	Existing Residential Modal Split in the Study Area .....	12
Table 3	Mississauga Zoning By-law 0225-2007 RA4-1 Parking Requirements .....	15
Table 4	Existing Resident Rental Records .....	16
Table 5	Existing Resident Parking Demand Surveys .....	16
Table 6	Existing Visitor Parking Demand Surveys .....	18
Table 7	Proposed Parking Supply .....	19
Table 8	City of Mississauga Zoning By-Law 0225-2007 Loading Space Requirements .....	20
Table 9	Mississauga Cycling Master Plan Bicycle Parking Requirements .....	20
Table 10	Traffic Data Information .....	21
Table 11	Background Developments.....	22
Table 12	Existing Site Trip Generation .....	22
Table 13	Proposed Development Site Trip Generation .....	23
Table 14	Total Site Trip Generation.....	23
Table 15	Residential Site Traffic Distribution .....	24
Table 16	Delay Study Synchro Calibration .....	31
Table 17	Bloor Street / Bridgewood Drive / Site Access.....	32
Table 18	Bloor Street / Fieldgate Drive Traffic Operations Summary.....	33
Table 19	Bloor Street / 1900 Bloor Street Driveway / 1855 & 1867 Bloor Street Driveway Traffic Operations Summary .....	34

## LIST OF FIGURES

Figure 1:	Site Location .....	9
Figure 2:	Site Context.....	10
Figure 3:	Existing Lane Configuration and Traffic Control .....	13
Figure 4:	Area Transit Context .....	14
Figure 5:	Existing Traffic Volumes .....	25
Figure 6:	Future Background Traffic Volumes .....	26
Figure 7:	New Site Traffic Volumes.....	27



Figure 8:	Total Site Traffic Volumes.....	28
Figure 9:	Future Total Traffic Volumes.....	29

## TABLE OF APPENDICES

- APPENDIX A: Reduced-Scale Architectural Plans
- APPENDIX B: Parking Demand Surveys
- APPENDIX C: Vehicle Manoeuvring Diagrams
- APPENDIX D: Delay Study
- APPENDIX E: Synchro Reports



## 1.0 INTRODUCTION

BA Group is retained to provide transportation consulting services related to the proposed development of lands municipally known as 1840-1850 Bloor Street in the City of Mississauga (herein referred to as “**the Site**”). The site is generally bounded by Bloor Street to the north, an apartment building to the east (Lenworth Towers, 1900 Bloor Street), industrial uses to the south (Wajax Industrial Solutions, 3280 Wharton Way) and a hydro corridor to the west.

**Figure 1** illustrates the site location while **Figure 2** illustrates the existing site context.

### 1.1 EXISTING SITE

The existing site consists of two 14-storey rental apartment buildings containing a total of 334 residential units (167 residential units in each). The two buildings, herein referred to as **Building ‘A’** and **Building ‘B’**, are located in the northwest and northeast quadrants of the site, respectively.

Access to the site is provided via one driveway connection to Bloor Street, at the signalized intersection of Bloor Street / Bridgewood Drive / Site Access.

Parking is currently provided within surface parking lots adjacent to each building, and one level of underground parking under each building. The two underground parking garages are not connected and are served by two independent garage ramps adjacent to each building. A total of 454 parking spaces are provided for the two buildings, including 418 resident spaces and 36 visitor spaces. The existing parking supply includes 280 surface parking spaces and 174 underground parking spaces. Access to the two surface parking lots as well as the two garage ramps are provided via the internal driveway.

Pick-up / drop-off facilities are provided in front of each building, including a pick-up / drop-off loop and visitor parking area in front of Building ‘A’, and a layby area in front of Building ‘B’.

One loading space is provided in each building.

### 1.2 PROPOSED DEVELOPMENT

The development proposal is for the construction of two new 18-storey apartment buildings in the southeast and southwest quadrants of the property (herein referred to as **Building ‘C’** and **Building ‘D’**, respectively), connected by a 4-storey podium. The two proposed buildings contain a total of 433 new residential units, including 218 units in Building ‘C’ and 215 residential units in Building ‘D’. The two existing residential buildings on the site will be retained.

Vehicular, pedestrian and cyclist connections to the site are proposed to be maintained and enhanced as part of the development plan.

Reduced scale architectural site plans are attached in **Appendix A**

## 1.3 STUDY SCOPE

The scope for this study has been established in consultation with the City of Mississauga and the Region of Peel. Key aspects reviewed as part of this study include the following:

- A review of existing site uses and supporting site transportation-related infrastructure;
- An overview of the proposed development programme;
- A review of the transportation elements of the proposed development (i.e. site access, loading and parking facilities);
- A description of the existing transportation context of the site considering the area road network, transit system and other non-automobile dependent travel options;
- An assessment of existing traffic activity patterns and volumes in the study area;
- A comprehensive review of vehicular traffic volume changes that may occur in the area in the future along with the construction of a number of other area development projects;
- An assessment of the trip generation potential of the proposed development;
- A Transportation Demand Management (TDM) strategy prepared based on the Region of Peel's Transportation Demand Management Implementation Plan 2018-2022. The TDM strategy will include a description of potential TDM measures to be confirmed with the Site Plan Amendment application;
- A review of the adequacy of the vehicular parking supply provisions for the proposed development; and
- A review of the adequacy of the loading space provisions for the proposed development.

A five-year study horizon has been adopted in the assessment of the site-related traffic impacts on the area road network. The traffic operations review has been completed in accordance with the Region of Peel and the City of Mississauga's *Traffic Impact Study Guidelines*. The following analysis scenarios are analyzed for the weekday morning and afternoon peak hours:

- Existing Traffic Conditions;
- Future Background Traffic Conditions with corridor growth and area background development traffic (five-year horizon); and
- Future Total Traffic Conditions with the full build-out of the site development (five-year horizon).

The study area includes the following intersections:

- Bloor Street / Fieldgate Drive (signalized);
- Bloor Street / Bridgewood Drive / Site Access (signalized); and
- Bloor Street / 1900 Bloor Street Driveway / 1855 & 1867 Bloor Street Driveway (unsignalized).

## 2.0 SUMMARY AND CONCLUSIONS

BA Group is retained to provide transportation consulting services related to the proposed development of lands municipally known as 1840-1850 Bloor Street in the City of Mississauga.

The existing site consists of two rental apartment buildings with a total of 334 residential units (167 residential units in each). Access to the site is currently provided onto Bloor Street via one driveway that forms a signalized intersection with Bridgewood Drive and Bloor Street.

### Proposed Development

1. The development proposal is for the construction of two additional apartment buildings in the southeast and southwest quadrants of the property (herein referred to as **Building 'C'** and **Building 'D'**, respectively), connected by a single podium.
2. The two proposed buildings contain a total of 433 new residential units, including 218 units in Building 'C' and 215 residential units in Building 'D'. The two existing residential buildings on the site will be retained. Vehicular, pedestrian and cyclist connections to the site are proposed to be maintained and enhanced as part of the development plan.
3. A total of four (4) loading spaces, 1,036 vehicular parking spaces and lay-by parking along an internal private loop will be provided on-site.

### Site Travel Context

4. The site is located in an area with a high level of transit accessibility with bus stops located at the north end of the property and 40 metres west of the Bloor Street / Bridgewood Drive / Site Access intersection (measured centreline-to-centreline) on both sides of Bloor Street. The bus stop serves Mississauga Transitway (MiWay)'s Bus Route No. 3 (Bloor) which operates with 10-minute headways during the weekday morning and afternoon peak hours.
5. A review of the data from the *Transportation Tomorrow Survey* confirms that a high proportion of apartment residents currently travel by non-auto means (in the order of 50% of the total site trips in each direction).

### Vehicular Parking Considerations

6. Application of the in-force City of Mississauga Zoning By-law 0225-2007 to the subject site results in the requirement for a total of 1,148 spaces for all four buildings on the site (effective rate of 1.50 spaces / unit, including visitor parking, for the 767 total units).

### Resident Parking

7. Parking rental records were obtained for the existing buildings on the site. The rental records confirm that the existing buildings are fully occupied all year-round (i.e. 100%) and reflect an overall parking demand ratio of 0.94 spaces per occupied unit.

8. In addition, BA Group has also undertaken a series of resident parking demand surveys at the existing buildings located on the site (municipally known as 1840-1850 Bloor Street). A conservative assumption of 95% building occupancy was adopted in the calculation of 'observed' parking demand, despite the rental records showing 100% occupancy. This assumption creates a buffer (i.e. more spaces than the minimum) between the observed parking demand rate and the target parking supply rate.
9. Peak resident parking demand recorded during the survey period varied between 357 occupied spaces (1.13 spaces / occupied unit) to 365 occupied spaces (1.15 spaces / occupied unit). Based on the observed parking demand at the existing buildings, the existing resident parking supply of 418 spaces (1.32 spaces / occupied unit or 1.25 spaces / unit) exceeds the parking needs of the site.
10. Based on the foregoing, a resident parking supply rate of 1.15 spaces / unit is proposed for all buildings on the site.

#### ***Visitor Parking***

11. A total of 36 visitor spaces are currently provided on the site to accommodate the visitor parking demand at the existing buildings. The effective visitor parking supply ratio is approximately 0.11 spaces per residential unit.
12. Peak visitor parking demand recorded during the survey period varied between 29 occupied spaces (0.09 spaces / occupied unit) to 32 occupied spaces (0.10 spaces / occupied unit). Based on the observed parking demand at the existing buildings, the existing visitor parking supply of 36 spaces (0.11 spaces / occupied unit or 0.11 spaces / total units) meets the parking needs of the site.
13. With the proposed redevelopment of the site, a visitor parking supply of 0.20 spaces / unit is proposed for all buildings on the site, which meets the minimum supply requirement of Zoning By-law 0225-2007. The proposed supply meets and exceeds the maximum observed visitor parking demand on the site.

#### ***Proposed Parking***

14. Application of the minimum proposed rates to the site (767 total units) yields the following requirements:
  - Resident spaces: 767 units x 1.15 spaces / unit = 883 spaces
  - Visitor spaces: 767 units x 0.20 spaces / unit = 153 spacesIn total, 1,036 spaces are required.
15. The current architectural site plans illustrate 282 surface parking spaces and 487 underground parking spaces. Furthermore, a total of 186 spaces will be located above-grade while 81 spaces will be located on the ground floor. A total of 1,036 parking spaces are proposed of which 883 are for resident parking (effective ratio of 1.15 spaces / unit) and 153 are for visitor parking (effective ratio of 0.20 spaces / unit).

## **Loading Considerations**

16. Application of the prevailing City of Mississauga Zoning By-Law 0225-2007 to the development results in a requirement for four (4) loading spaces with minimum dimensions of 3.5 metres by 9.0 metres.
17. Four (4) loading spaces are provided at the ground level. Garbage collection areas for Buildings 'B', 'C' and 'D' will be consolidated into Building 'C' while Building 'A' will have its own garbage collection area.

## **Bicycle Parking Considerations**

18. The recommended bicycle parking supply rates of the City of Mississauga Cycling Master Plan have been applied to the two new buildings proposed on the site, i.e. Buildings 'C' and 'D', which contain a total of 433 residential units. Application of these rates would result in the requirement for a total of 338 spaces (of which 303 are long-term and 35 are short-term spaces) for these two buildings.
19. A total of 368 bicycle parking spaces are proposed for Buildings 'C' and 'D', including 303 long-term spaces and 65 short-term spaces, which meet the recommended rates. The short-term spaces will be available to visitors to all four buildings on the site.

## **Traffic Volume Forecasting**

20. The site generates in the order of 120 and 140 existing two-way residential trips in the weekday morning and afternoon peak hours, respectively.
21. With the addition of two new buildings on the site, the new buildings will generate in the order of 155 and 180 new two-way trips in the weekday morning and afternoon peak hours, respectively.
22. The site will generate in the order of 275 and 320 total two-way trips in the weekday morning and afternoon peak hours, respectively.

## **Traffic Operations Analysis**

### ***Bloor Street / Bridgewood Drive / Site Access***

23. Under existing traffic operations, the intersection operates well at overall v/c of 0.47 and 0.59 during the weekday morning and afternoon peak hours, respectively.
24. Under future background traffic operations, the intersection will continue to operate well at overall v/c of 0.52 and 0.65 during the weekday morning and afternoon peak hours, respectively.
25. With the addition of site-generated traffic under future total traffic conditions, the intersection will continue to operate well at overall v/c of 0.62 and 0.77 during the weekday morning and afternoon peak hours, respectively.
26. No intersection improvements or mitigation measures are recommended at the Bloor Street / Bridgewood Drive / Site Access intersection.

***Bloor Street / Fieldgate Drive***

27. Under existing traffic conditions, the intersection operates well at overall v/c of 0.46 and 0.58 during the weekday morning and afternoon peak hours, respectively.
28. Under future background traffic operations, the intersection will continue to operate well at overall v/c of 0.52 and 0.64 during the weekday morning and afternoon peak hours, respectively.
29. With the addition of site-generated traffic under future total traffic conditions, the intersection will continue to operate well at overall v/c of 0.54 and 0.67 during the weekday morning and afternoon peak hours, respectively.
30. No intersection improvements or mitigation measures are recommended at the Bloor Street / Fieldgate Drive intersection.

***Bloor Street / 1900 Bloor Street Driveway / 1855 & 1867 Bloor Street Driveway***

31. Under existing conditions, the intersection operates at acceptable LOS D or better.
32. Under future background conditions, the intersection will continue to operate at acceptable LOS E or better.
33. With the addition of site-generated traffic under future total traffic conditions, the intersection will continue to operate at acceptable LOS E or better.
34. No intersection improvements or mitigation measures are recommended at the Bloor Street / 1900 Bloor Street Driveway / 1855 & 1867 Bloor Street Driveway intersection.

**Based on the foregoing, the proposed development can be appropriately accommodated on the area road network.**

## 3.0 PROPOSED DEVELOPMENT

### 3.1 DEVELOPMENT PROGRAMME

Development statistics are summarized in **Table 1**.

**TABLE 1 1840-1850 BLOOR STREET DEVELOPMENT STATISTICS**

Use	Existing <sup>1</sup>	Proposed New <sup>2</sup>	Total
Residential	<u>334 total units</u> 167 one-bedroom units 113 two-bedroom units 54 three-bedroom units	<u>433 total units</u> 181 one-bedroom units 209 two-bedroom units 43 three-bedroom units	<u>767 units</u> 348 one-bedroom units 322 two-bedroom units 97 three-bedroom units
Transportation Elements	Vehicular Parking Supply	<u>454 parking spaces</u> 418 residential spaces 36 visitor spaces	<u>582 parking spaces</u> 465 residential spaces 117 visitor spaces
	Loading Supply	2 loading spaces	2 loading spaces
	Pick-Up / Drop-Off Facilities	Lay-by parking along internal private loop	--
	Site Access	1 vehicular access onto Bloor Street	--

Notes:

1. Pertaining to existing (retained) Buildings 'A' and 'B'.
2. Pertaining to proposed Buildings 'C' and 'D'.
3. Site statistics are based on architectural plans provided by IBI Group dated February 10, 2020.

### 3.2 SITE ACCESS AND CIRCULATION

Vehicular, pedestrian and cyclist access to the site will continue to be provided via the existing signalized connection to Bloor Street opposite Bridgewood Drive.

The internal site driveway will be reconfigured to extend south to access new Buildings 'C' and 'D', minimize vehicular conflict, and continue to provide vehicular access to the parking, loading and pick-up / drop-off facilities of existing Buildings 'A' and 'B'.

### 3.3 PARKING

A total of 1,036 parking spaces are proposed for the entire site, of which 883 are for resident parking (effective ratio of 1.15 spaces / unit) and 153 are for visitor parking (effective ratio of 0.20 spaces / unit). The parking supply will comprise of 282 surface parking spaces, 487 underground parking spaces, 186 spaces above-grade and 81 spaces on the ground floor.

The existing 1-level parking garages beneath Buildings 'A' and 'B' will be maintained and will be accessed via the two existing ramps. A new 1-level underground parking garage and 3 levels of above-grade (podium) parking are proposed in Buildings 'C' and 'D'.

### **3.4       LOADING**

Four (4) loading spaces will be provided. Garbage collection areas for Buildings 'B', 'C' and 'D' will be consolidated into Building 'C' while Building 'A' will have its own garbage collection area.

### **3.5       BICYCLE PARKING**

A total of 368 bicycle parking spaces are proposed for Buildings 'C' and 'D', including 303 long-term spaces and 65 short-term spaces, which meet the recommended rates. The short-term spaces will be available to visitors to all four buildings on the site.

### **3.6       PICK-UP / DROP-OFF**

With the realignment of the internal site driveway, layby areas will be provided in front of Buildings 'A', 'B' and 'D' (shared by both 'C' and 'D') to accommodate pick-up / drop-off activity.

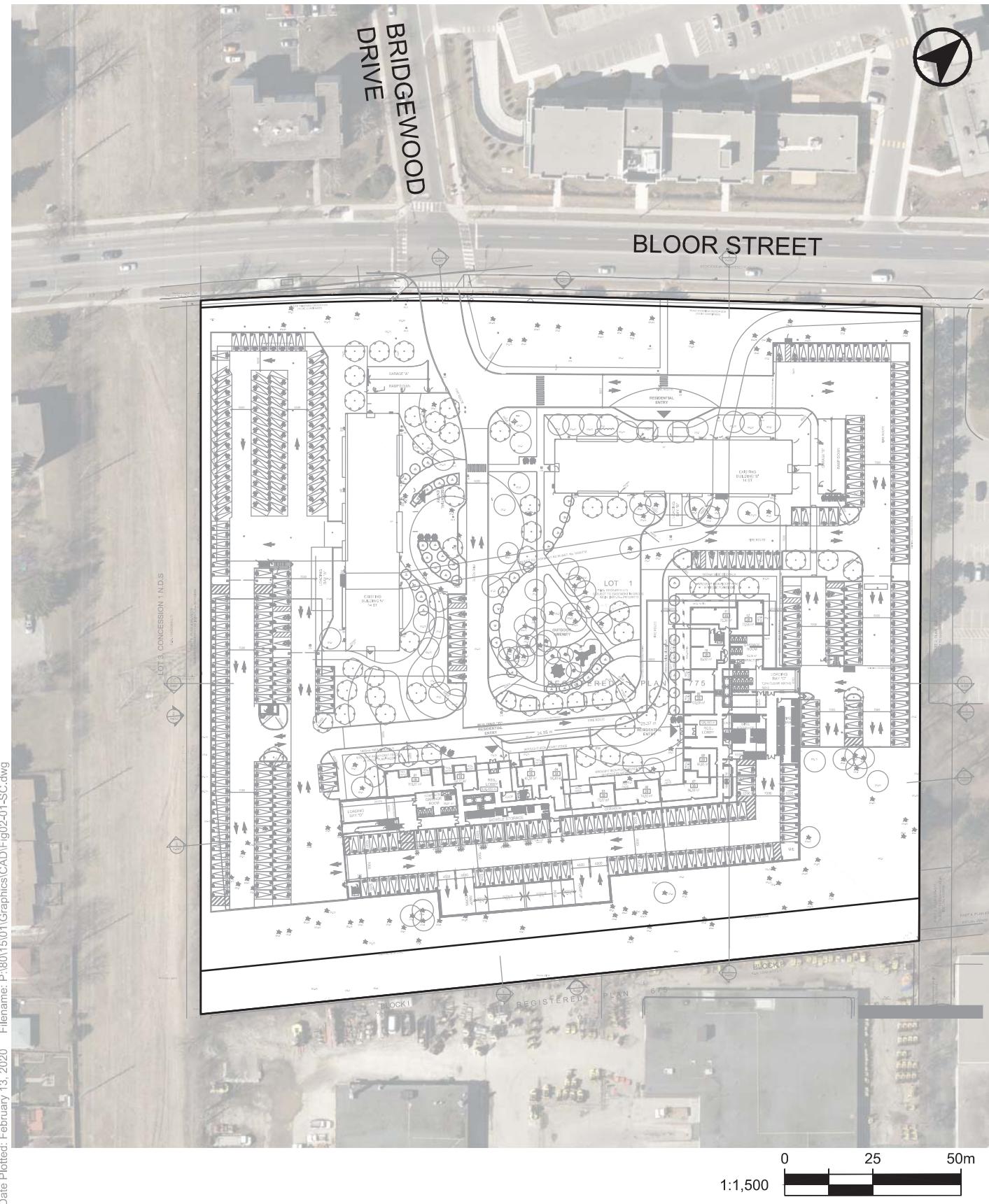
### **3.7       BLOOR STREET RIGHT-OF-WAY WIDENING**

The Mississauga Official Plan Schedule 8 illustrates the requirement for a 30.0 metre right-of-way on Bloor Street across the site frontage. Existing right-of-way widths are approximately 26.0m and 28.0m on the west and east sides of the Bloor Street / Site Access, respectively. A 2.0 metre dedication is proposed along the Bloor Street frontage of the site for the purpose of right-of-way widening.



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SITE LOCATION



## PRELIMINARY DEVELOPMENT PLAN



**BA Group**

1840-1850 Bloor Street  
8015-01   February 2020

Figure 2

## 4.0 TRANSPORTATION CONTEXT

### 4.1 AREA ROAD NETWORK

The existing road network and lane configurations within the study area are illustrated on **Figure 3**. Road links considered in the site's immediate study area are described below.

**Bloor Street** is an east-west major collector road under the jurisdiction of the City of Mississauga. The section of Bloor Street within the City of Mississauga is bounded by Central Parkway East to the west and Etobicoke Creek to the east. The section of Bloor Street beyond Etobicoke Creek to the east is under the jurisdiction of the City of Toronto. Within the study area, it has a four-lane cross section with eastbound and westbound left turn lanes at the signalized intersection with Fieldgate Drive and a posted speed limit of 50 km/h.

**Fieldgate Drive** is a north-south minor collector road under the jurisdiction of the City of Mississauga. It is bounded by a cul-de-sac to the south near Goldmar Drive and Eastgate Parkway to the north. Within the study area, it has a two-lane cross section with northbound and southbound left turn lanes at the signalized intersection with Bloor Street and a posted speed limit of 40 km/h.

**Bridgewood Drive** is a north-south local road. It is bounded by Bloor Street to the south and Ponytrail Drive to the north. It has a two-lane cross section and forms a signalized intersection with Bloor Street and the Site Access. It also has a default and unposted speed limit of 50 km/h.

### 4.2 TRANSIT NETWORK

The site is located in an area with a high level of transit accessibility with bus stops located at the north end of the property and 40 metres west of the Bloor Street / Bridgewood Drive / Site Access intersection (measured centreline-to-centreline) on both sides of Bloor Street. The bus stop serves Mississauga Transitway (MiWay)'s Bus Route No. 3 (Bloor).

**Bus Route No. 3 (Bloor)** generally operates in an east-west direction between Mississauga's Square One Shopping Centre to the west and Islington Subway Station to the east. Buses operate at approximately 10-minute headways during the weekday morning and afternoon peak hours.

The area transit context is illustrated on **Figure 4**.

### 4.3 CYCLING AND PEDESTRIAN NETWORK

In 2018, the City of Mississauga published the *Cycling Master Plan* that outlines the following cycling-related aspects of the site study area:

- Fieldgate Drive is currently identified as a shared route that allows for cyclists and vehicles to traverse along the same road;
- A separated bicycle lane is proposed along Bloor Street; and

- A multi-use trail is proposed to be constructed parallel to Bridgewood Drive alongside the existing hydro corridor that bounds the west end of the site.

Sidewalks are available along both sides of Bloor Street, Bridgewood Drive and Fieldgate Drive. The nearest crosswalks are available at the intersection of Bloor Street / Bridgewood Drive / Site Access. Furthermore, the site has a “Walk Score”<sup>1</sup> of 56 out of 100 representing an area that allows for a modest walkability to retail, grocery, schools, parks, etc.

## 4.4 EXISTING AREA TRAVEL CHARACTERISTICS

The proposed development is for two new apartment buildings immediately adjacent to frequent transit along Bloor Street that supports daily travel without the use of a car.

**Table 2** summarizes 2016 Transportation of Tomorrow Survey (TTS) data as it pertains to the modal splits of peak directional person trips for apartment buildings within the site vicinity.

**TABLE 2 EXISTING RESIDENTIAL MODAL SPLIT IN THE STUDY AREA**

Mode	Inbound	Outbound	Selected
Driver	40%	40%	40%
Passenger	5%	15%	10%
<b>Auto Total</b>	<b>45%</b>	<b>55%</b>	<b>50%</b>
Transit	20%	15%	20%
Cycle	0%	0%	0%
Walk	35%	30%	30%
<b>Non-Auto Total</b>	<b>55%</b>	<b>45%</b>	<b>50%</b>

Notes:

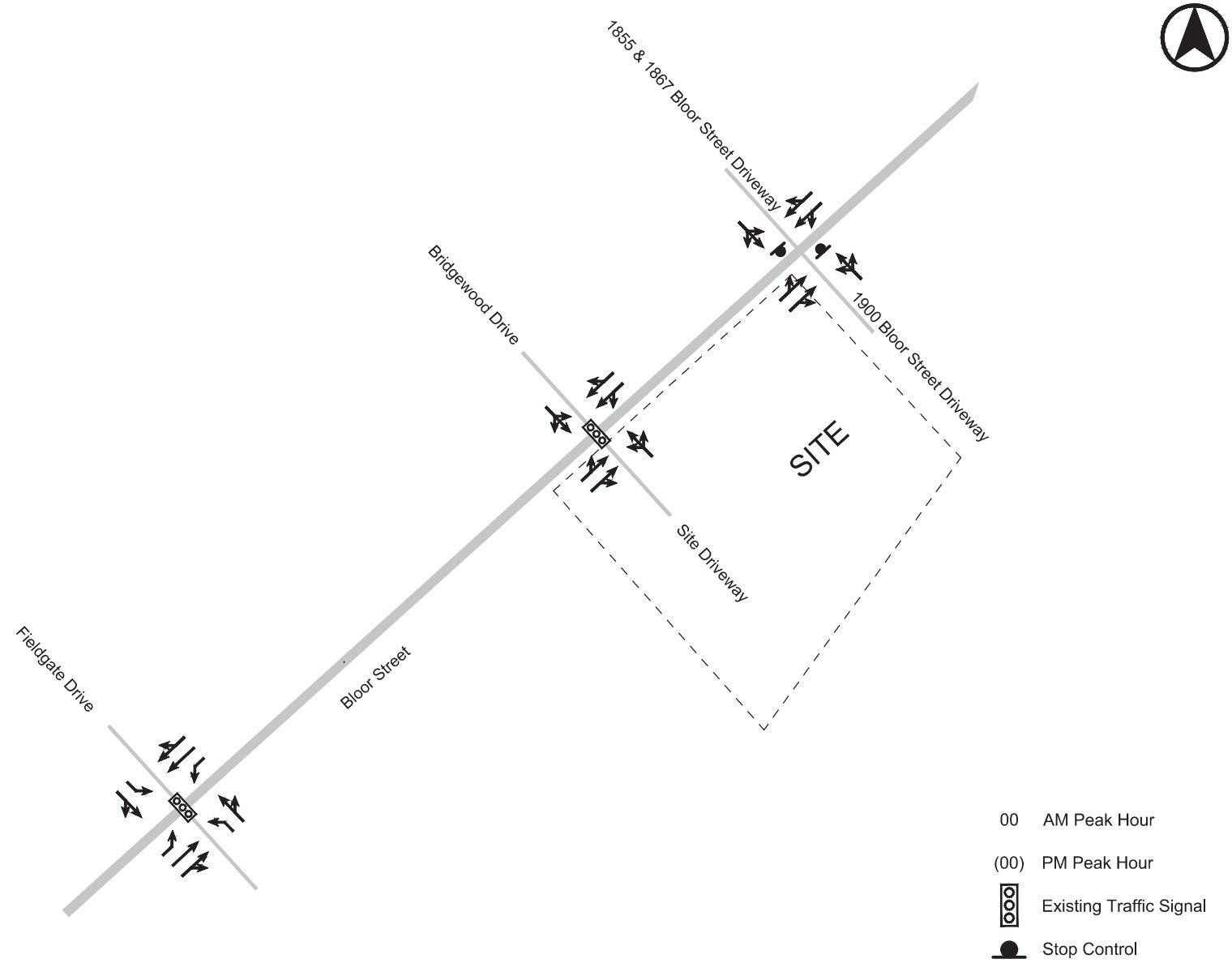
1. Survey data is based on 2006 GTA zones 3670 and 3675.

A review of the survey data confirms that a high proportion of residents travel by non-auto means (in the order of 50% of the total site trips in each direction).

With the proposed development of the site, future travel demand characteristics and substantial reliance on non-automobile based travel for residents will continue and will serve to reduce traffic-related impact and parking supply needs of the site.

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<sup>1</sup> Based on the “Walk Score” methodology. See <https://www.walkscore.com/methodology.shtml> for details.



**FIGURE 3 EXISTING LANE CONFIGURATIONS AND TRAFFIC CONTROL**

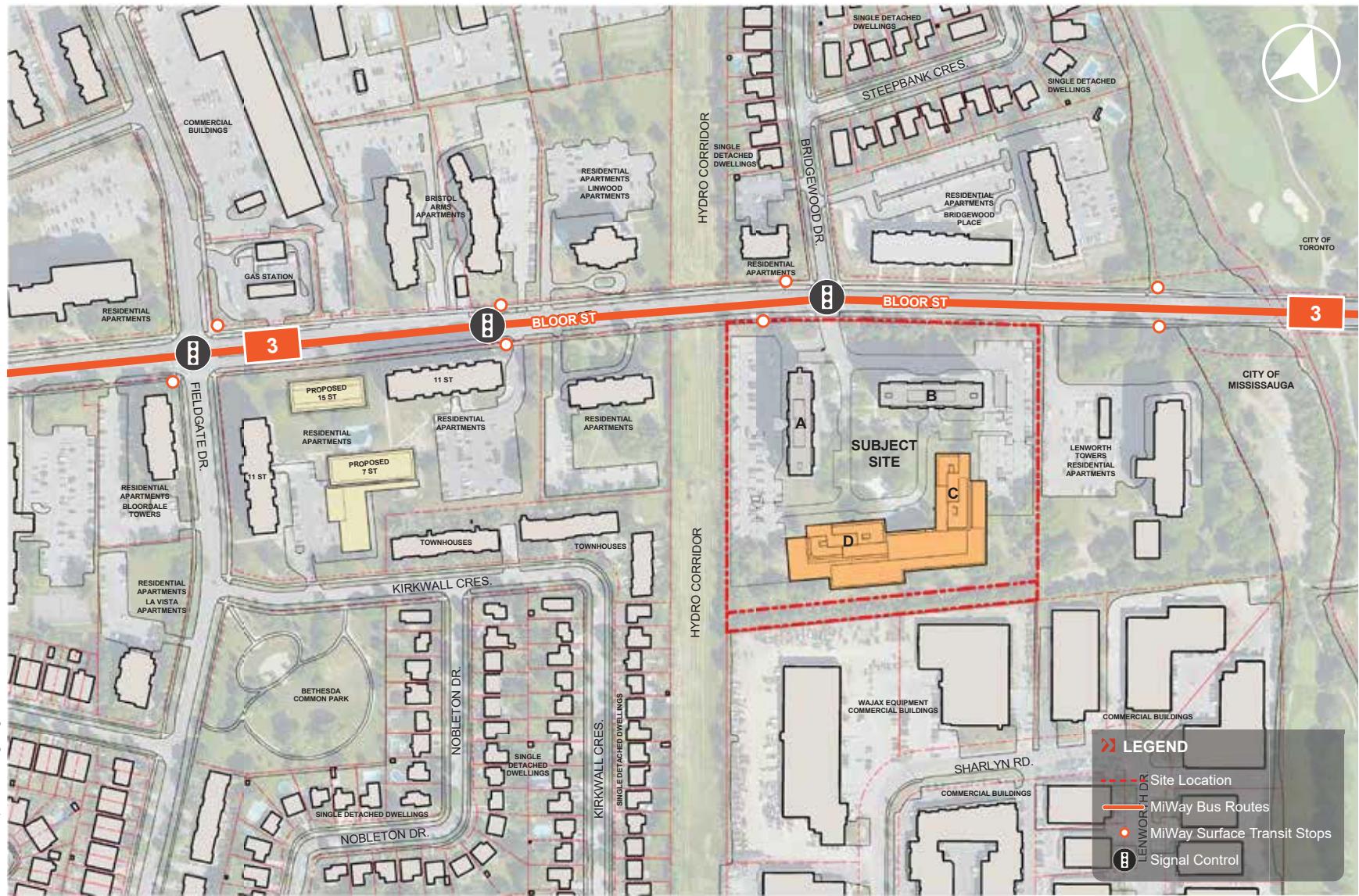


FIGURE 4 AREA TRANSIT CONTEXT

## 5.0 VEHICULAR PARKING CONSIDERATIONS

### 5.1 ZONING BY-LAW VEHICULAR PARKING REQUIREMENTS

Vehicular parking requirements are reviewed for the site including the two existing and two proposed buildings.

The site is located within the City of Mississauga and is subject to the parking requirements of the City By-law 0225-2007. The site is zoned “RA4-1”, which is classified as “Apartments”. Application of the By-law 0225-2007 results in the requirement for a total of 1,148 spaces for all four buildings on the site (effective rate of 1.50 spaces / unit, including visitor parking, for the 767 total units). The parking requirements pertaining to these standards are summarized in **Table 3**.

**TABLE 3 MISSISSAUGA ZONING BY-LAW 0225-2007 RA4-1 PARKING REQUIREMENTS**

Use	Units	Minimum Zoning By-law Requirement	Number of Parking Spaces Required
<b>Resident</b>			
Studio	0	1.00 spaces / unit	0
One-Bedroom	348	1.18 spaces / unit	411
Two-Bedroom	322	1.36 spaces / unit	438
Three-Bedroom	97	1.50 spaces / unit	146
<i>Resident Sub-Total</i>	<i>767</i>	--	<i>995</i>
<b>Non-Resident</b>			
Visitor	767	0.20 spaces / unit	153
<b>Total Spaces Required</b>			<b>1,148</b>

Notes:

1. For the calculation of the required residential parking, the appropriate resident and / or visitor rate or ratio shall be calculated for each component and then rounded. Fractions of less than 0.5 shall be rounded down to the nearest whole number. Fractions equal to or greater than 0.5 shall be rounded up to the nearest whole number.
2. Based on site statistics provided by IBI Group in the architectural site plans dated February 10, 2020.

### 5.2 EXISTING PARKING DEMAND

#### 5.2.1 Existing Resident Parking Demand

Existing parking is currently provided within surface parking lots and one level of underground parking. A total of 454 parking spaces are provided including 280 surface parking spaces and 174 underground parking spaces.

Parking space rental records were obtained for the existing buildings on the site. The data for each unit type is summarized in **Table 4**. The rental records confirm that the existing buildings are fully occupied all year-round (i.e. 100%) and reflect an overall parking demand ratio of 0.94 spaces per occupied unit.

**TABLE 4 EXISTING RESIDENT RENTAL RECORDS**

Unit Type	Existing Units	Occupancy Rate	Occupied Units	Number of Leased Parking Spaces	Parking Rate (spaces / occupied unit)
Total	334	100%	334	315	94%

Notes:

1. Occupancy data provided by Ranee Management on November 26, 2019.

In addition to the above, BA Group has also undertaken a series of resident parking demand surveys at the existing buildings located on the site (municipally known as 1840-1850 Bloor Street). Parking demand surveys were conducted on the following days:

- Tuesday, October 22, 2019, observed at 3:00 a.m.;
- Wednesday, October 23, 2019, observed at 3:00 a.m.; and
- Thursday, October 24, 2019, observed at 3:00 a.m.

The surveys were completed at a time when most residents are likely to be home (i.e. at night). A summary of the observed parking demand is provided in **Table 5**. Detailed parking demand survey results are attached in **Appendix B**. A conservative assumption of 95% building occupancy was adopted in the calculation of ‘observed’ parking demand, despite the rental records showing 100% occupancy. This assumption creates a buffer (i.e. more spaces than the minimum) between the observed parking demand rate and the target parking supply rate.

**TABLE 5 EXISTING RESIDENT PARKING DEMAND SURVEYS**

Count Date	Total Number of Resident Parking Spaces	Occupied Parking Spaces	Unoccupied Parking Spaces	Parking Rate (spaces / occupied unit)
Tuesday October 22, 2019	418	365	53	1.15
Wednesday October 23, 2019		360	58	1.14
Thursday October 24, 2019		357	61	1.13

Notes:

1. 95% of all existing dwelling units over two apartment buildings (a total of 334 units) are assumed to be occupied.  $95\% \times 334 = 317$  units.

Peak resident parking demand recorded during the survey period varied between 357 occupied spaces (1.13 spaces / occupied unit) to 365 occupied spaces (1.15 spaces / occupied unit). Based on the observed parking demand at the existing buildings, the existing resident parking supply of 418 spaces (1.32 spaces / occupied unit or 1.25 spaces / unit) exceeds the parking needs of the site.

Based on the resident parking rate of 1.15 spaces / occupied unit that was observed at the site, a buffered parking supply rate of 1.15 spaces / unit is proposed for all buildings on the site.

## **5.2.2 Existing Visitor Parking Demand**

A total of 36 visitor spaces are currently provided on the site to accommodate the visitor parking demand at the existing buildings. The effective visitor parking supply ratio is approximately 0.11 spaces per residential unit ( $36 \text{ visitor spaces} \div 334 \text{ existing residential units} = 0.11 \text{ visitor spaces / unit}$ ).

BA Group has undertaken a series of visitor parking demand surveys at the existing buildings located on the site (municipally known as 1840-1850 Bloor Street). Parking demand surveys were completed on the following days:

- Friday, October 4, 2019, observed between 4:00 p.m. and 10:00 p.m.;
- Saturday, October 5, 2019, observed between 2:00 p.m. and 10:00 p.m.;
- Sunday, October 6, 2019, observed between 2:00 p.m. and 10:00 p.m.;
- Friday, October 18, 2019, observed between 4:00 p.m. and 10:00 p.m.;
- Saturday, October 19, 2019, observed between 2:00 p.m. and 10:00 p.m.;
- Sunday, October 20, 2019, observed between 2:00 p.m. and 10:00 p.m.;
- Friday, October 25, 2019, observed between 4:00 p.m. and 10:00 p.m.;
- Saturday, October 26, 2019, observed between 2:00 p.m. and 10:00 p.m.; and
- Sunday, October 27, 2019, observed between 2:00 p.m. and 10:00 p.m.

These surveys were undertaken when visitors were most likely to park on-site (i.e. weekends and weekday evenings). A summary of the observed parking demands is provided in **Table 6**.

**TABLE 6 EXISTING VISITOR PARKING DEMAND SURVEYS**

Count Date	Total Number of Visitor Parking Spaces	Peak Time	Maximum Occupied Parking Spaces	Unoccupied Parking Spaces	Parking Rate (spaces / occupied unit)
Friday October 4, 2019	36	10:00 p.m.	29	7	0.09
Saturday October 5, 2019		6:00 p.m. 9:00 p.m.	32	4	0.10
Sunday October 6, 2019		7:00 p.m. 8:00 p.m.	32	4	0.10
Friday October 18, 2019		9:00 p.m.	31	5	0.10
Saturday October 19, 2019		10:00 p.m.	32	4	0.10
Sunday October 20, 2019		5:00 p.m.	32	4	0.10
Friday October 25, 2019		9:00 p.m. 10:00 p.m.	32	4	0.10
Saturday October 26, 2019		9:00 p.m.	32	4	0.10
Sunday October 27, 2019		3:00 p.m. 5:00 p.m.	32	4	0.10

Notes:

1. 95% of all existing dwelling units over two apartment buildings (a total of 334 units) are assumed to be occupied.  $95\% \times 334 = 317$  units.

Peak visitor parking demand recorded during the survey period varied between 29 occupied spaces (0.09 spaces / occupied unit) to 32 occupied spaces (0.10 spaces / occupied unit). Based on the observed parking demand at the existing buildings, the existing visitor parking supply of 36 spaces (0.11 spaces / occupied unit or 0.11 spaces / total units) meets the parking needs of the site.

With the proposed redevelopment of the site, a visitor parking supply of 0.20 spaces / unit is proposed for all buildings on the site, which meets the minimum supply requirement of Zoning By-law 0225-2007. The proposed supply meets and exceeds the maximum observed visitor parking demand on the site.

### 5.3 PROPOSED PARKING SUPPLY RATES

The proposed minimum parking supply rates for residents and visitors have been developed based on the review of existing parking demand. The proposed minimum rates are as follows:

- Resident parking supply rate: 1.15 spaces / unit; and
- Visitor parking supply rate: 0.20 spaces / unit (meets By-law 0225-2007 requirement).

Both the resident and visitor minimum parking supply rates are buffered by calculating the existing parking demands relative to 95% of the total number of units which were assumed to be occupied.

Application of the minimum proposed rates to the site (767 total units) yields the following requirements:

- Resident spaces: 767 units x 1.15 spaces / unit = 883 spaces
- Visitor spaces: 767 units x 0.20 spaces / unit = 153 spaces

In total, 1,036 spaces are required of which 883 spaces are for residents and 153 spaces are for visitors.

## 5.4 PROPOSED PARKING SUPPLY

The current architectural site plans dated February 10, 2020 illustrate 282 surface parking spaces and 487 underground parking spaces. Furthermore, a total of 186 spaces will be located above-grade while 81 spaces will be located on the ground floor. A total of 1,036 parking spaces are proposed of which 883 are for resident parking (effective ratio of 1.15 spaces / unit) and 153 are for visitor parking (effective ratio of 0.20 spaces / unit).

TABLE 7 PROPOSED PARKING SUPPLY

Rental Building	Units	Parking Supply		Total
		Residential	Visitor	
Existing ('A' & 'B')	334	385	66	451
Additional ('C' & 'D')	433	498	87	585
Total Site	767	883	153	1,036

The proposed parking supply will meet the proposed minimum rates based on the practical requirements of the site.

## 6.0 LOADING CONSIDERATIONS

### 6.1 LOADING REQUIREMENTS

Application of the prevailing City of Mississauga Zoning By-Law 0225-2007 to the proposed development results in a requirement for four loading spaces with minimum dimensions of 3.5 metres by 9.0 metres. Loading space requirements for the proposed development are summarized in **Table 8**.

**TABLE 8 CITY OF MISSISSAUGA ZONING BY-LAW 0225-2007 LOADING SPACE REQUIREMENTS**

Use	Rental Building	No. of Units	Minimum Zoning By-Law Requirement	Number of Parking Spaces Required
Residential	'A'	167	1 loading space for apartment dwelling containing > 30 units	1
	'B'	167		1
	'C'	218		1
	'D'	215		1
<b>Total Required Loading Spaces</b>				<b>4</b>

## 6.2 PROPOSED LOADING SUPPLY

Four (4) loading spaces are provided at the ground level with one (1) space provided at the east face of Building 'C' and one (1) space provided at the west face of Building 'D'. Garbage collection for Buildings 'B' and 'D' will be consolidated into Buildings 'A' and 'C', respectively.

The four (4) loading spaces provided meets the City's Zoning By-Law requirements. The site plan can appropriately accommodate the needs of the design vehicles. Vehicle Manoeuvering Diagrams (VMD's) illustrating the inbound and outbound manoeuvres of a Peel Region garbage collection vehicle and a Single Unit (SU) truck are attached in **Appendix C**.

## 7.0 BICYCLE PARKING CONSIDERATIONS

The recommended bicycle parking supply rates of the City of Mississauga Cycling Master Plan have been applied to the two new buildings proposed on the site, i.e. Buildings 'C' and 'D', which contain a total of 433 residential units. Application of these rates would result in the requirement for a total of 338 spaces (of which 303 are long-term and 35 are short-term spaces) for these two buildings, as summarized in **Table 9**.

**TABLE 9 MISSISSAUGA CYCLING MASTER PLAN BICYCLE PARKING REQUIREMENTS**

Use	Units	Minimum Requirement	Number of Parking Spaces Required
New Residential	433	Long-term: 0.70 spaces per unit Short-term: 0.08 spaces per unit Total: 0.78 spaces per unit	303 35 338

Notes:

1. For the calculation of the required residential parking, the appropriate resident and / or visitor rate or ratio shall be calculated for each component and then rounded. Fractions of less than 0.5 shall be rounded down to the nearest whole number. Fractions equal to or greater than 0.5 shall be rounded up to the nearest whole number.
2. Based on site statistics provided by IBI Group in the architectural site plans dated February 10, 2020.

A total of 368 bicycle parking spaces are proposed for Buildings 'C' and 'D', including 303 long-term spaces and 65 short-term spaces, which meet the recommended rates. The short-term spaces will be available to visitors to all four buildings on the site.

## **8.0 TRAFFIC VOLUME FORECASTING**

### **8.1 EXISTING TRAFFIC VOLUMES**

Base existing turning movement volumes were established for intersections within the area road network for the weekday morning and afternoon peak hours (the busiest hours of traffic between 7:30 a.m. to 9:30 a.m. and 4:00 p.m. to 6:00 p.m., respectively), and are based on recent traffic count information collected by Spectrum Traffic Inc. on behalf of BA Group.

Traffic count information adopted as the basis for the traffic operations analysis and undertaken to assess the operational impacts of the proposed development are summarized in **Table 10**.

**TABLE 10 TRAFFIC DATA INFORMATION**

Intersection	Date	Conducted By
Bloor Street / Bridgewood Drive / Site Access	Wednesday, October 23, 2019	Spectrum Traffic Data Inc.
Bloor Street / Fieldgate Drive		
Bloor Street / 1900 Bloor Street Driveway / 1855 & 1867 Bloor Street Driveway		

Existing turning movement volumes were rounded to the nearest five (5) vehicles and reviewed in detail to ensure a general consistency in the traffic volumes on links between intersections. Where necessary, minor volume adjustments were made to balance traffic volumes between intersections to provide a balanced and representative traffic volume base for the purposes of the traffic operations analyses undertaken as part of this assessment.

The existing, rounded and balanced baseline area traffic volumes for the weekday morning and afternoon peak hours are illustrated in **Figure 5**.

### **8.2 FUTURE BACKGROUND TRAFFIC VOLUMES**

The development of future background traffic volumes is discussed in the following sections. Future background traffic volumes are illustrated on **Figure 6**.

#### **8.2.1 Corridor Growth**

A corridor growth rate of 2% per annum has been conservatively assumed and applied to through traffic volumes along Bloor Street and compounded annually.

#### **8.2.2 Background Developments**

Allowances were made to account for new traffic generated by other development proposals in proximity to the proposed site that are either under construction, approved, being reviewed or for which an application is expected to be submitted to the City in the near future. A total of three (3) background developments have

been considered comprising of 658 residential units. A summary of the considered background developments are provided in **Table 11**.

Trip generation and traffic assignments adopted for each background development are based upon information contained in the traffic impact studies (TIS) prepared for each project. Where the TIS is not available, trip generation and assignment for that background development is assumed to be consistent with the methodologies presented in this report.

**TABLE 11 BACKGROUND DEVELOPMENTS**

Development Address	Development Statistics	Report Source	Trip Generation / Distribution Source
240 Markland Drive	164 residential units	BA Consulting Group	TIS Report
3480 Havenwood Drive & 1485 Williamsport Drive	202 residential units	LEA Consulting	TIS Report
1750 Bloor Street & 3315 Fieldgate Drive	292 residential units	LEA Consulting	Not Available <sup>1</sup>

Notes:

1. This background development's trip generation and assignment on the study area road network is consistent with the methodologies applied to the site.

## 8.3 SITE TRAFFIC VOLUMES

### 8.3.1 Existing Site Trip Generation

Existing residential site trip generation is calculated based on the collected turning movement data from Spectrum Traffic Inc. on Wednesday, October 23, 2019 at the site driveways. The existing site trip generation rates are summarized in **Table 12**.

There are in the order of 120 and 140 existing two-way residential trips in the weekday morning and afternoon peak hours, respectively.

**TABLE 12 EXISTING SITE TRIP GENERATION**

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Existing Site Trips <sup>1</sup> (334 existing units)	30	90	120	85	55	140
Existing Site Trip Rate (trips / unit)	0.09	0.27	0.36	0.25	0.16	0.41

Notes:

1. Existing site trips are rounded to the nearest 5.
2. Site statistics are based on architectural site plans prepared by IBI Group dated February 10, 2020.

### 8.3.2 New Site Trip Generation

The trip generation potential of the proposed development is calculated based on the existing site trip rates. The proposed development's site trip generation is summarized in **Table 13**. New site trips are illustrated on **Figure 7**.

The site development is expected to generate in the order of 155 and 180 new two-way trips in the weekday morning and afternoon peak hours, respectively.

**TABLE 13 PROPOSED DEVELOPMENT SITE TRIP GENERATION**

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Existing Site Trip Rate (trips / unit)	0.09	0.27	0.36	0.25	0.16	0.41
<b>Proposed Development Site Trips (433 new units)</b>	<b>40</b>	<b>115</b>	<b>155</b>	<b>110</b>	<b>70</b>	<b>180</b>

Notes:

1. Site trips are rounded to the nearest 5.
2. Site statistics are based on architectural site plans prepared by IBI Group dated February 10, 2020.

### 8.3.3 Total Site Trip Generation

The site is expected to generate in the order of 275 and 320 total two-way trips in the weekday morning and afternoon peak hours, respectively. The site's total trip generation potential is summarized in **Table 14**. Total site trips are illustrated on **Figure 8**.

**TABLE 14 TOTAL SITE TRIP GENERATION**

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Existing Site Trips (334 existing units)	30	90	120	85	55	140
Proposed Development Site Trips (433 new units)	40	115	155	110	70	180
<b>Total Site Trips</b>	<b>70</b>	<b>205</b>	<b>275</b>	<b>195</b>	<b>125</b>	<b>320</b>

Notes:

1. Site trips are rounded to the nearest 5.

### 8.3.4 Site Trip Distribution

New residential site traffic has been assigned onto the area road network based upon existing site travel patterns and a review of travel information provided by the 2016 Transportation for Tomorrow Survey (TTS) for home-based trips in the site environs. The residential site traffic distribution is summarized in **Table 15**.

**TABLE 15 RESIDENTIAL SITE TRAFFIC DISTRIBUTION**

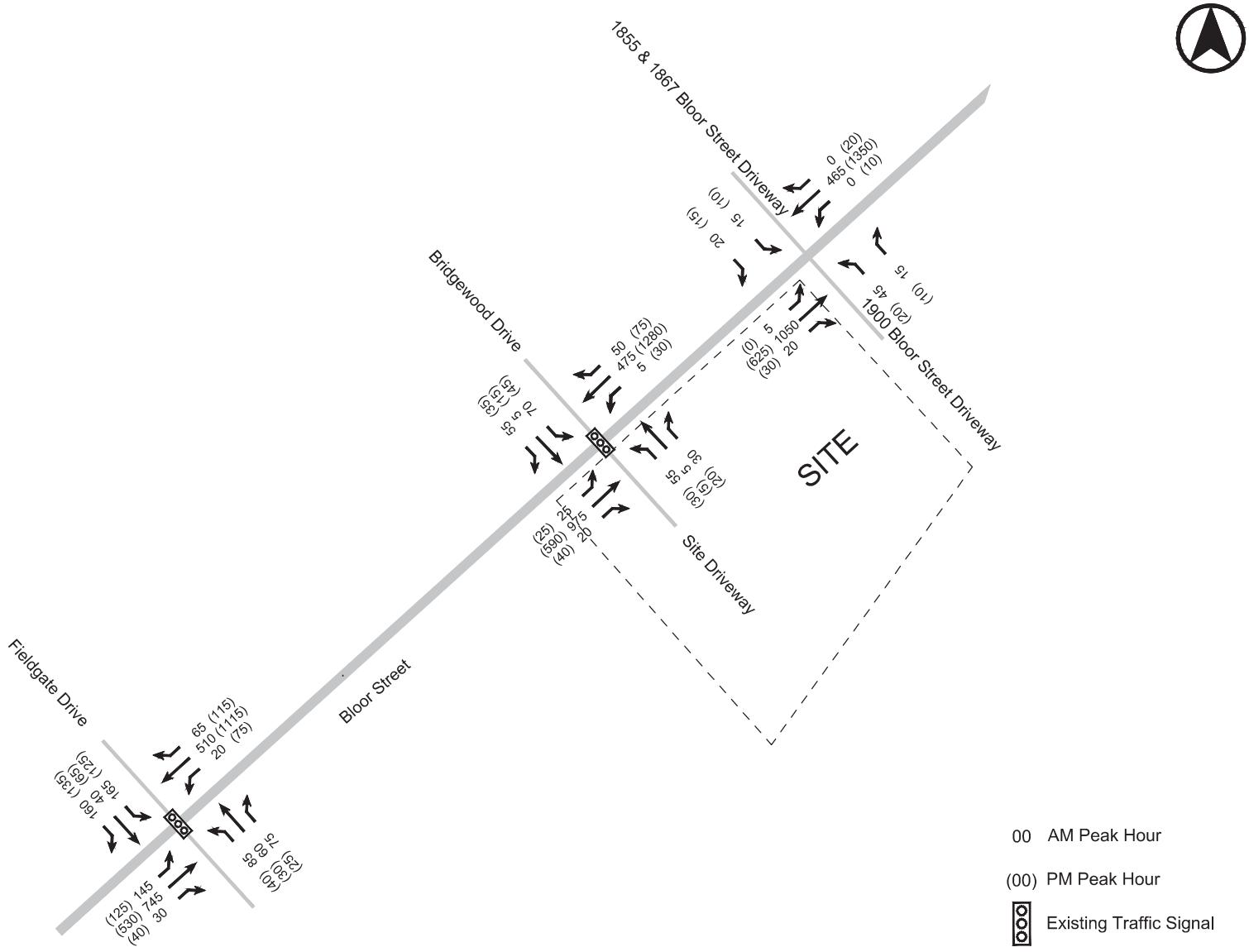
To / From	Corridor	Inbound Distribution	Outbound Distribution
East	Bloor Street	20%	35%
West	Bloor Street	45%	40%
North	Fieldgate Drive	25%	20%
South	Fieldgate Drive	10%	5%
<b>Total</b>		<b>100%</b>	<b>100%</b>

Notes:

1. 2006 TTS zones considered include 3670 and 3675.
2. Inbound and outbound distributions are based on collected data from the weekday afternoon and morning peak hours, respectively.

## 8.4 FUTURE TOTAL TRAFFIC VOLUMES

Future total traffic volumes established by adding the new site traffic volumes to future background traffic volumes are illustrated on **Figure 9**.



## FIGURE 5 EXISTING TRAFFIC VOLUMES

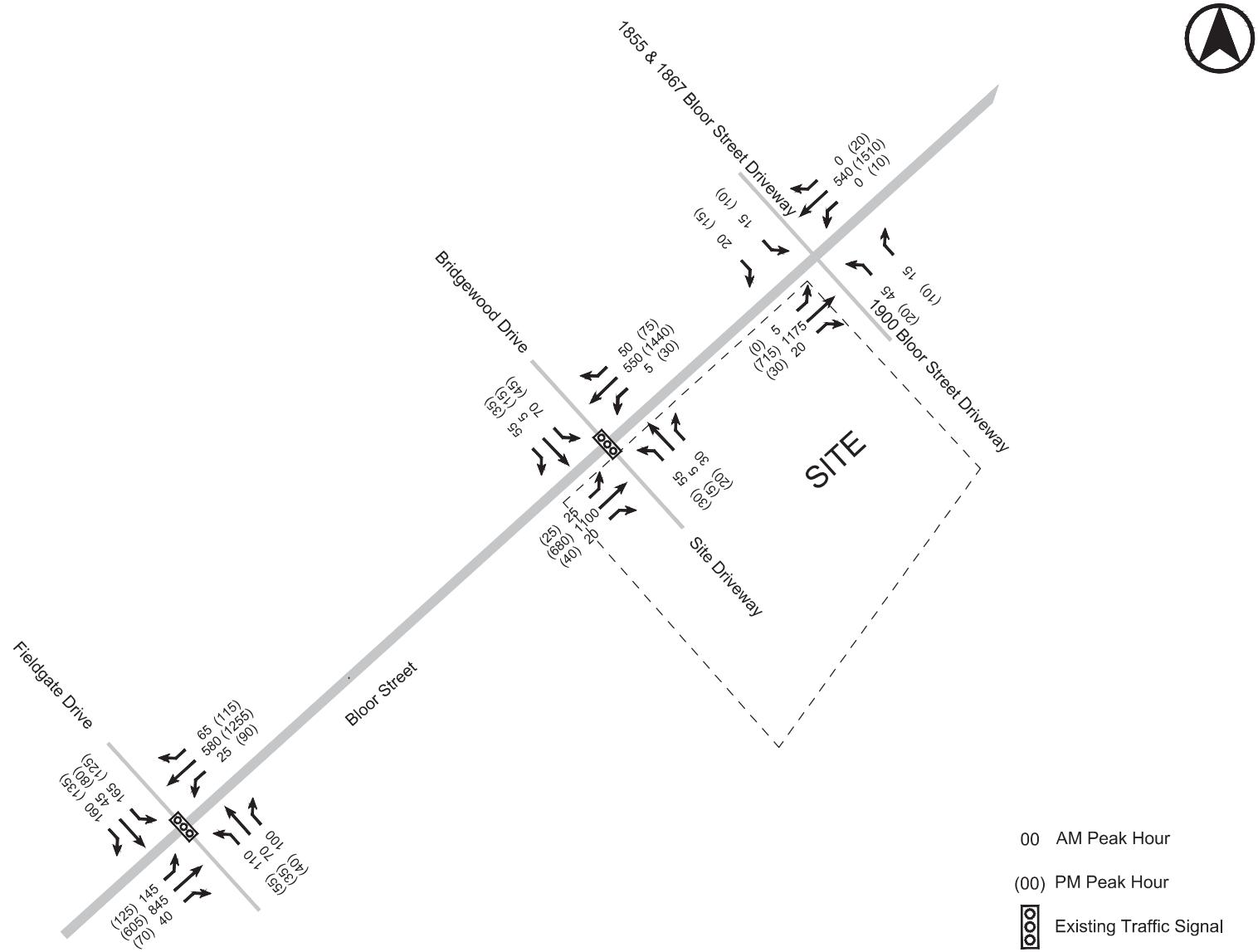


FIGURE 6 FUTURE BACKGROUND TRAFFIC VOLUMES

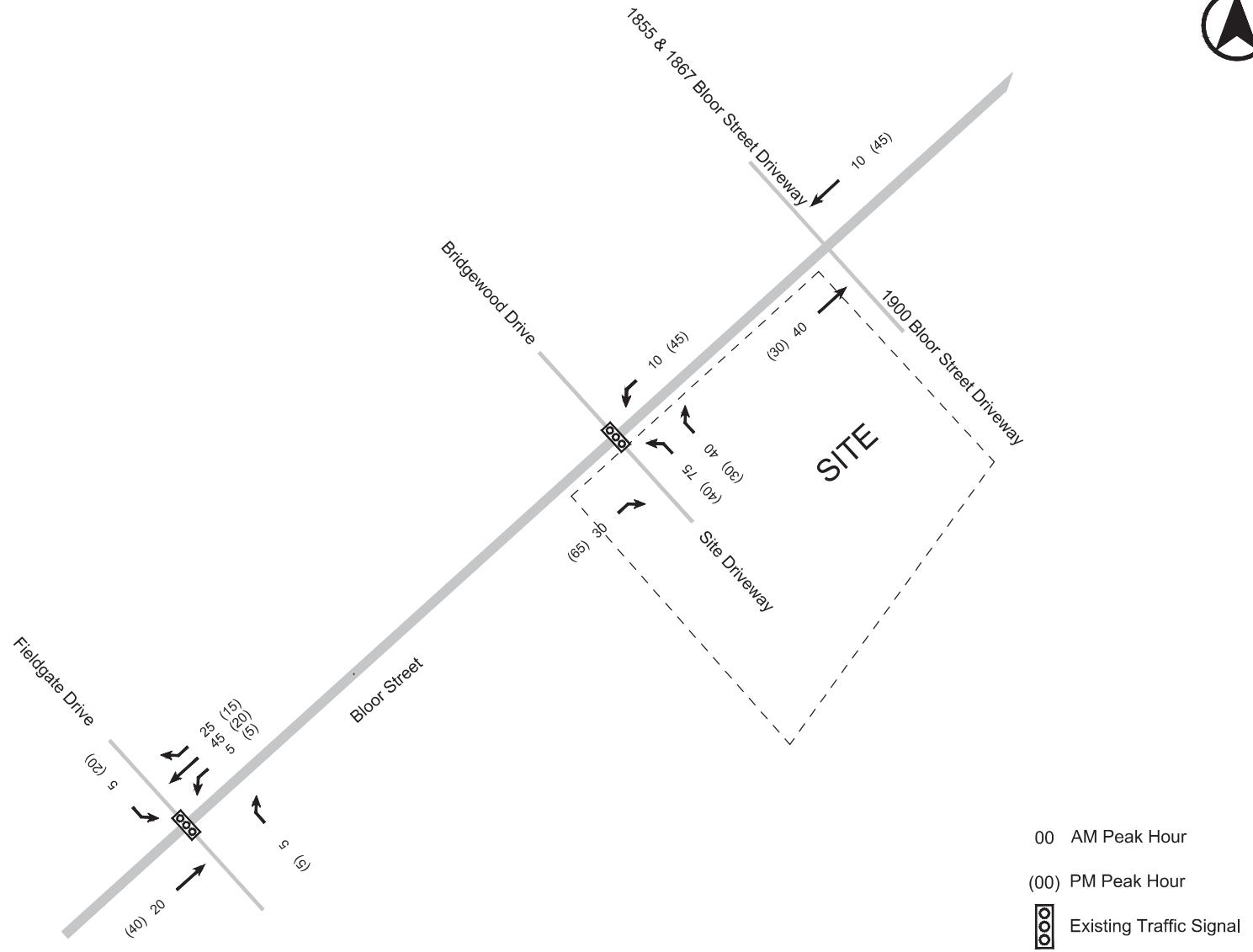


FIGURE 7 NEW RESIDENTIAL SITE TRAFFIC VOLUMES

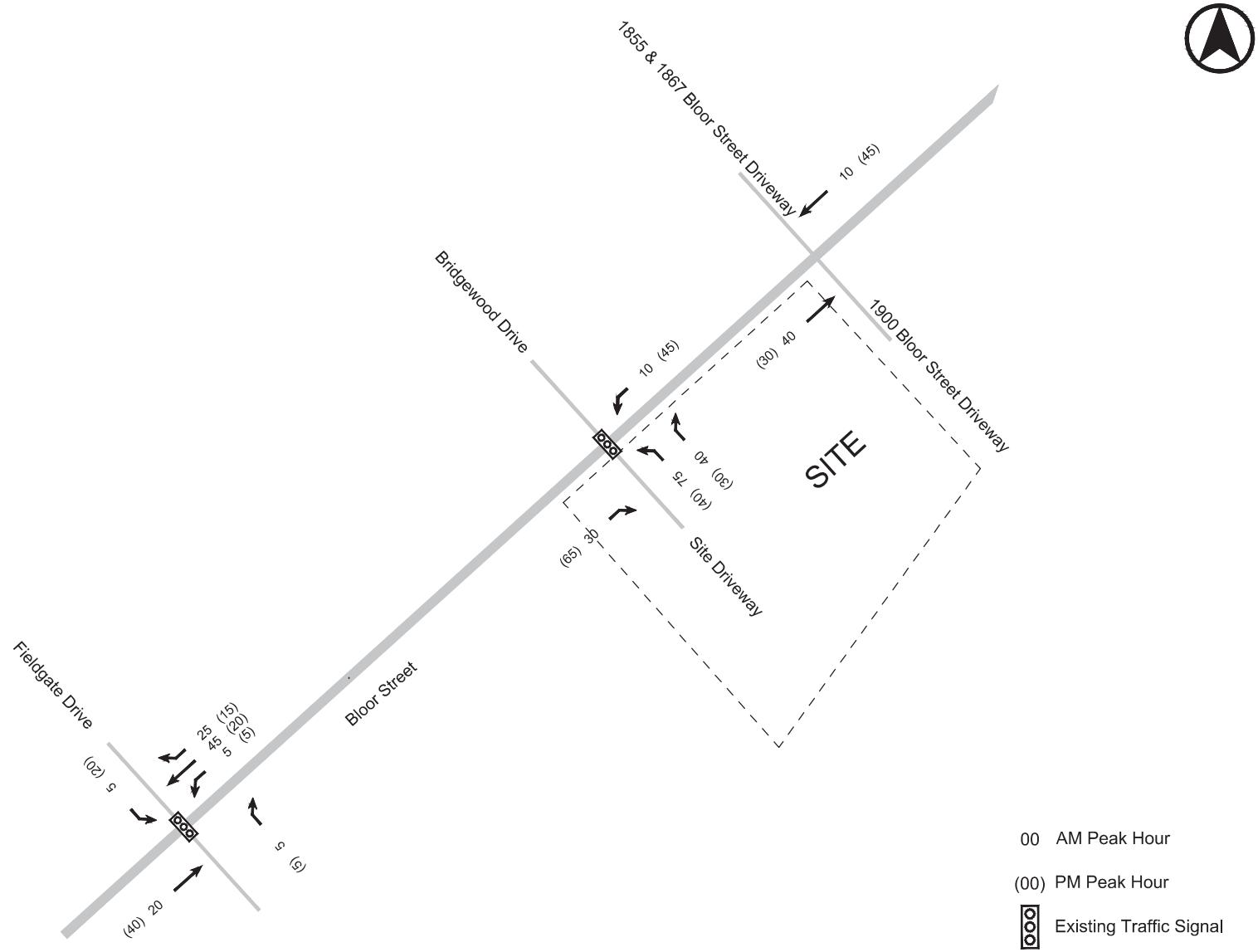


FIGURE 8 TOTAL RESIDENTIAL SITE TRAFFIC VOLUMES

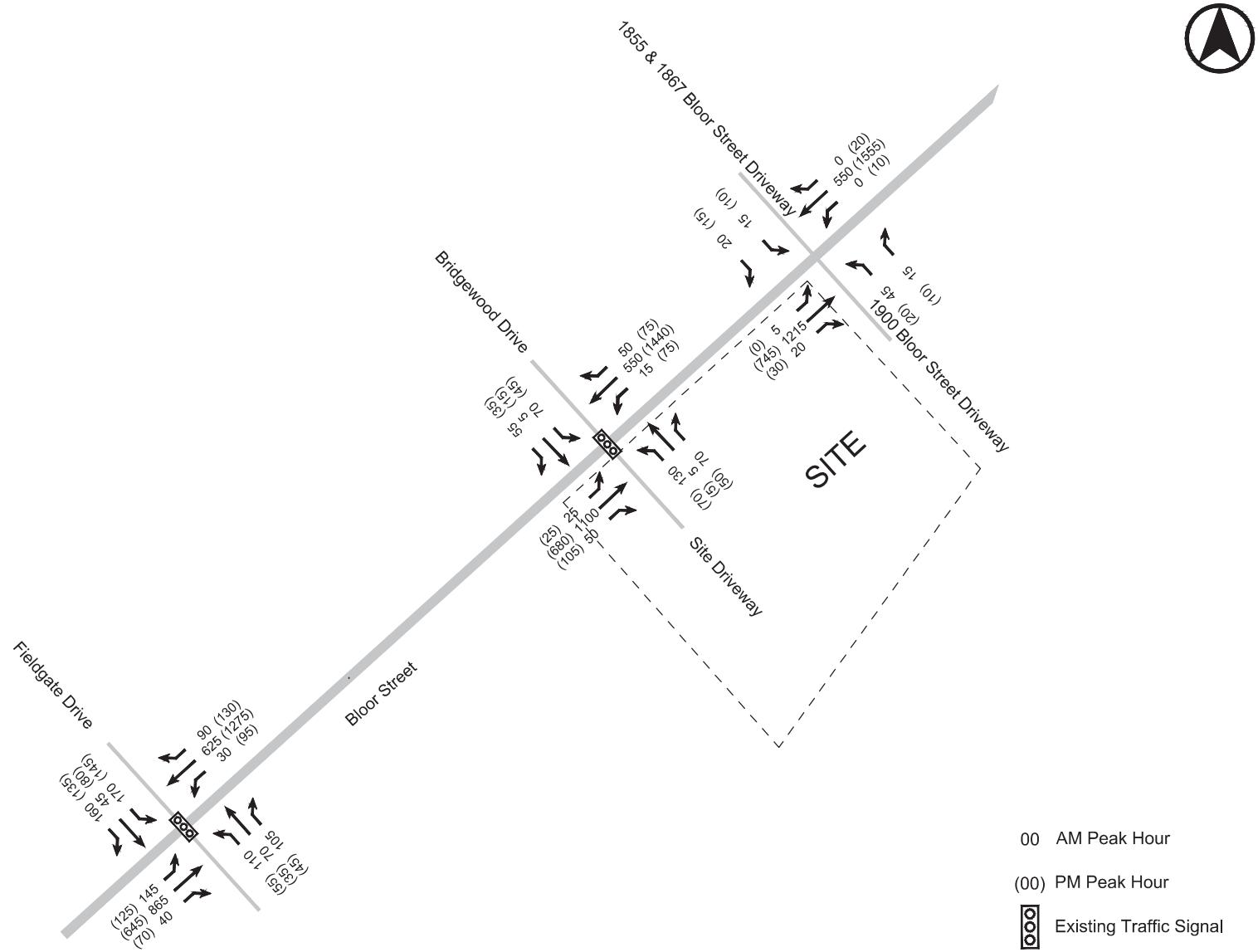


FIGURE 9 FUTURE TOTAL TRAFFIC VOLUMES

## 9.0 TRAFFIC ANALYSIS

The following section provides a summary of traffic operations analysis undertaken for existing, future background and future total traffic conditions.

### 9.1 METHODOLOGY

Intersection capacity analysis has been completed using Synchro Version 9.2 and the Highway Capacity Manual (HCM) methodology.

For signalized intersections, the volume-to-capacity ratio (v/c) is an indicator of the capacity utilization for the key movements in the intersection. A v/c of 1.0 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 reflect average (control) delays in the range of 35 to 80 seconds.

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

### 9.2 INPUT AND CALIBRATION PARAMETERS

Key parameters used in the analysis include:

- Existing lane configurations are assumed for all scenarios;
- Existing signal timings as provided by the City of Mississauga and confirmed by observations in the field;
- Heavy vehicle percentages, peak hour factors and pedestrian and bicycle crossings as derived from existing traffic counts;
- Delay studies were undertaken at the unsignalized intersection of Bloor Street / 1900 Bloor Street Driveway / 1855 & 1867 Bloor Street Driveway during both the weekday morning and afternoon peak hours. The results of these studies were used to calibrate the Synchro analysis for these intersections to better reflect existing conditions. The results of the delay studies are attached in **Appendix D**.  
Synchro calibration parameters are summarized in **Table 16**; and
- Synchro defaults for all other parameters.

**TABLE 16 DELAY STUDY SYNCHRO CALIBRATION**

Movement	Observed Delay <sup>1, 2</sup>	Delay Used to Calibrate Synchro Control Delay <sup>2</sup>	Default Values				Calibrated Values			
			Critical Gap	Follow up time	Control Delay <sup>3</sup>	LOS	Critical Gap	Follow up time	Control Delay <sup>3</sup>	LOS
NBL	14 (17)	19 (22)	7.6 (7.5)	3.6 (3.5)	46.2 (43.2)	E (E)	5.6 (5.9)	2.8 (3.0)	19.0 (21.8)	C (C)
NBR			6.9 (6.9)	3.3 (3.3)			5.0 (5.5)	2.5 (2.8)		
SBL	12 (28)	17 (33)	7.5 (7.5)	3.5 (3.5)	15.9 (59.0)	C (F)	7.8 (6.4)	3.7 (3.2)	17.0 (33.0)	C (D)
SBR			6.9 (6.9)	3.3 (3.3)			7.0 (6.0)	3.5 (3.2)		

Notes:

1. Average observed delay in the weekday morning and afternoon peak hours.
2. 5 seconds was added to the observed delay to determine the 'Control Delay' used to calibrate the HCM 2000 model in Synchro to account for the method in which HCM calculates delay.
3. Synchro control delay (HCM 2000 methodology).
4. 00 (00): Weekday Morning Peak Hour (Weekday Afternoon Peak Hour).

## 9.3 INTERSECTIONS OPERATIONS ANALYSIS

The following sections discuss the operations of the study area intersections. Synchro reports are attached in **Appendix E**.

### 9.3.1 Bloor Street / Bridgewood Drive / Site Access

The intersection of Bloor Street / Bridgewood Drive / Site Access currently operates with cycle lengths of 120 seconds during both the weekday morning and afternoon peak hours. The results of the traffic analysis for this intersection are summarized in **Table 17**.

Under existing traffic operations, the intersection operates well at overall v/c of 0.47 and 0.59 during the weekday morning and afternoon peak hours, respectively.

Under future background traffic operations, the intersection will continue to operate well at overall v/c of 0.52 and 0.65 during the weekday morning and afternoon peak hours, respectively.

With the addition of site-generated traffic under future total traffic conditions, the intersection will continue to operate well at overall v/c of 0.62 and 0.77 during the weekday morning and afternoon peak hours, respectively.

**No intersection improvements or mitigation measures are recommended at the Bloor Street / Bridgewood Drive / Site Access intersection.**

**TABLE 17 BLOOR STREET / BRIDGEWOOD DRIVE / SITE ACCESS**

Movement	Existing Traffic Conditions		Future Background Traffic Conditions		Future Total Traffic Conditions	
	V/C	LOS	V/C	LOS	V/C	LOS
EBLTR	0.44 (0.32)	A (A)	0.50 (0.36)	A (A)	0.63 (0.40)	B (A)
WBLTR	0.23 (0.61)	A (A)	0.26 (0.68)	A (A)	0.34 (0.79)	B (B)
NBLTR	0.46 (0.24)	D (D)	0.46 (0.24)	D (D)	0.59 (0.68)	D (E)
SBLTR	0.63 (0.43)	D (D)	0.63 (0.43)	D (D)	0.35 (0.48)	C (D)
<b>Overall</b>	<b>0.47 (0.59)</b>	<b>B (A)</b>	<b>0.52 (0.65)</b>	<b>B (B)</b>	<b>0.62 (0.77)</b>	<b>B (B)</b>

Notes:

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

### 9.3.2 Bloor Street / Fieldgate Drive

The intersection of Bloor Street / Fieldgate Drive currently operates with cycle lengths of 120 seconds during both the weekday morning and afternoon peak hours. The results of the traffic analysis for this intersection are summarized in **Table 18**.

Under existing traffic conditions, the intersection operates well at overall v/c of 0.46 and 0.58 during the weekday morning and afternoon peak hours, respectively.

Under future background traffic operations, the intersection will continue to operate well at overall v/c of 0.52 and 0.64 during the weekday morning and afternoon peak hours, respectively.

With the addition of site-generated traffic under future total traffic conditions, the intersection will continue to operate well at overall v/c of 0.54 and 0.67 during the weekday morning and afternoon peak hours, respectively.

**No intersection improvements or mitigation measures are recommended at the Bloor Street / Fieldgate Drive intersection.**

**TABLE 18 BLOOR STREET / FIELDGATE DRIVE TRAFFIC OPERATIONS SUMMARY**

Movement	Existing Traffic Conditions		Future Background Traffic Conditions		Future Total Traffic Conditions	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.33 (0.55)	A (B)	0.35 (0.65)	A (C)	0.38 (0.68)	A (C)
EBTR	0.37 (0.26)	B (A)	0.43 (0.31)	B (A)	0.44 (0.33)	B (A)
WBL	0.07 (0.18)	B (B)	0.09 (0.24)	B (B)	0.11 (0.26)	B (B)
WBTR	0.32 (0.64)	B (C)	0.36 (0.72)	B (C)	0.40 (0.74)	B (C)
NBL	0.42 (0.19)	D (D)	0.55 (0.27)	D (D)	0.55 (0.27)	D (D)
NBTR	0.27 (0.09)	D (D)	0.35 (0.12)	D (D)	0.36 (0.12)	D (D)
SBL	0.65 (0.43)	D (D)	0.73 (0.44)	D (D)	0.75 (0.51)	D (D)
SBTR	0.24 (0.37)	D (D)	0.29 (0.44)	D (D)	0.29 (0.44)	D (D)
<b>Overall</b>	<b>0.46 (0.58)</b>	<b>B (C)</b>	<b>0.52 (0.64)</b>	<b>B (C)</b>	<b>0.54 (0.67)</b>	<b>C (C)</b>

Notes:

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

### 9.3.3 Bloor Street / 1900 Bloor Street Driveway / 1855 & 1867 Bloor Street Driveway

The intersection of Bloor Street / 1900 Bloor Street Driveway / 1855 & 1867 Bloor Street Driveway currently operates under unsignalized “STOP” control on the minor streets. The results of the traffic analysis for this intersection are summarized in **Table 19**.

Under existing conditions, the intersection operates at acceptable LOS D or better.

Under future background conditions, the intersection will continue to operate at acceptable LOS E or better.

With the addition of site-generated traffic under future total traffic conditions, the intersection will continue to operate at acceptable LOS E or better.

**No intersection improvements or mitigation measures are recommended at the Bloor Street / 1900 Bloor Street Driveway / 1855 & 1867 Bloor Street Driveway intersection.**

**TABLE 19 BLOOR STREET / 1900 BLOOR STREET DRIVEWAY / 1855 & 1867 BLOOR STREET  
DRIVEWAY TRAFFIC OPERATIONS SUMMARY**

Movement	Existing Traffic Conditions		Future Background Traffic Conditions		Future Total Traffic Conditions	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
EBLT	0.1 (0.0)	-- (--)	0.2 (0.0)	-- (--)	0.2 (0.0)	-- (--)
WBLT	0.0 (0.3)	A (A)	0.0 (0.4)	A (A)	0.0 (0.4)	A (A)
NBLTR	19.0 (21.8)	C (C)	22.8 (26.8)	C (D)	21.6 (28.8)	C (D)
SBLTR	17.0 (33.0)	C (D)	19.4 (44.7)	C (E)	17.1 (49.4)	C (E)

Notes:

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

## **10.0 TRANSPORTATION DEMAND MANAGEMENT STRATEGY**

This section discusses Transportation Demand Management (TDM) strategies that can be implemented to help decrease automobile usage on-site. TDM plans are developed with a focus on reducing single-occupant vehicle trips and supporting alternative modes of transportation including walking, cycling and transit.

The following initiatives will be considered as part of the TDM plan:

### **Vehicular Travel Management**

Intent: Reduced parking standards within the proposed development avoids an over-supply of parking which may incentivise higher car ownership or usage.

Implementation: Residential parking is proposed to be supplied at a reduced minimum rate of 1.15 spaces / unit, which is less than the minimum standards of the in-force City of Mississauga Zoning By-Law 0225-2007. The zoning bylaw overstates the parking needs of a residential apartment in this location. The site is an excellent candidate for a reduced resident parking standard relative to the bylaw.

### **Transit Incentives**

Intent: Support for and the promotion of the use of area transit services for both short and long-distance travel by residents, visitors, and employees will reduce the overall use of a vehicle and the need to own one.

Implementation: The site is conveniently located adjacent to bus stops at the north end of the property and 40 metres west of the Bloor Street / Bridgewood Drive / Site Access intersection (measured centreline-to-centreline) on both sides of Bloor Street.

### **Bicycle Parking and Services**

Intent: Provide cycling infrastructure that supports and promotes cycling as a convenient and viable travel alternative to the personal automobile.

Implementation: The site is located adjacent to shared bicycle route on Fieldgate Drive. In addition, a separated bicycle lane is proposed along Bloor Street, while a multi-use trail is proposed parallel to Bridgewood Drive.

A total of 368 new bicycle parking spaces are proposed for Buildings 'C' and 'D', which meets and exceeds the recommended standards of City of Mississauga Cycling Master Plan. The new short-term spaces on the site will be accessible to visitors of both the existing and future buildings.

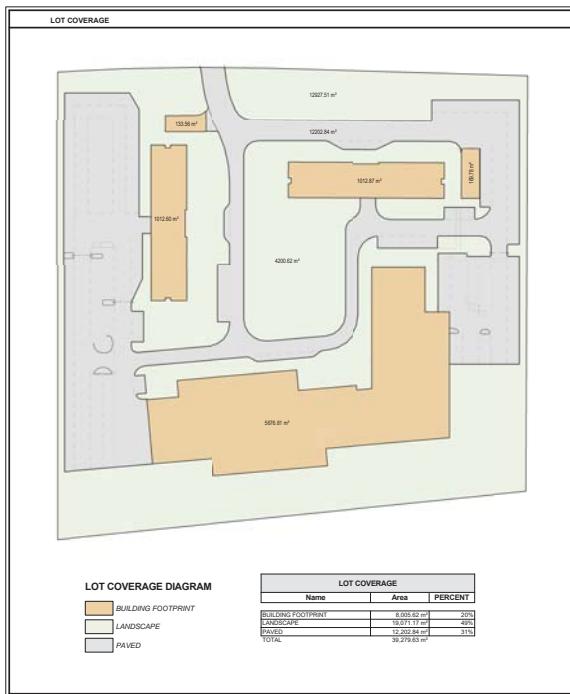
## **APPENDIX A:** **Reduced-Scale Architectural Plans**







ISSUE: NO. DESCRIPTION: DATE:  
1 ISSUED FOR RE-ZONING 2020/01/14



### PROPOSED UNIT MIX BY FLOOR LEVEL

Gross Floor Area (GFA)		GFA Zoning Deductions				GFA Amenity				GFA Zoning Residential			
Level	Area SF	Area m <sup>2</sup>	Area SF	Area m <sup>2</sup>	Area SF	Area m <sup>2</sup>	Area SF	Area m <sup>2</sup>	Area SF	Area m <sup>2</sup>	Area SF	Area m <sup>2</sup>	
MAIN ROOF - MPH	11,700 SF	1,087.84 m <sup>2</sup>	1,088 SF	1,087.84 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 19	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 18	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 17	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 16	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 15	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 14	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 13	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 12	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 11	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 10	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 09	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 08	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 07	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 06	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 05	21,028 SF	1,953.80 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 04	30,354 SF	2,819.60 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	771,697 SF	70,276.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 03	30,354 SF	2,819.60 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	771,697 SF	70,276.00 m <sup>2</sup>	123 SF	123.00 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 02	54,812 SF	5,259.49 m <sup>2</sup>	3,681 SF	3,680.99 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	16,991 SF	1,576.85 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
LEVEL 01 GROUND FLOOR	59,580 SF	5,336.00 m <sup>2</sup>	4,023 SF	4,022.86 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	16,288 SF	1,513.65 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	0 SF	0 m <sup>2</sup>	
<b>TOTAL AREA ABOVE GRADE</b>	<b>502,274 SF</b>	<b>47,313.11 m<sup>2</sup></b>	<b>34,511 SF</b>	<b>32,250.40 m<sup>2</sup></b>	<b>0 SF</b>	<b>0 m<sup>2</sup></b>	<b>771,697 SF</b>	<b>70,276.00 m<sup>2</sup></b>	<b>0 SF</b>	<b>0 m<sup>2</sup></b>	<b>0 SF</b>	<b>0 m<sup>2</sup></b>	

**GROSS FLOOR AREA / ZONING: MISSISSAUGA**  
Gross Floor Area (GFA) - Apartment Zone  
means the sum of the areas of each story of a building above or below established grade, measured from the exterior of outside walls of the building occupied by interior spaces.

**but excluding any parts of the building used for:**

- mechanical floor area,
- motor vehicle parking,
- storage tanks,
- storage racks,
- any enclosed area used for the collection or storage of disposable or recyclable waste
- common facilities for the use of residents of the building, e.g. day care and amenity areas.

**GROSS FLOOR AREA (GFA) -**  
means the sum of the areas of each storey of a building above or below established grade, measured from the exterior of outside walls, or from the midpoint of common walls.

**\*Interior Escalator Exclusions (deductions) measured from the midpoint of common walls**

### AMENITY PROVIDED

Indoor Amenity		Outdoor Amenity		
(Zoning Deductions)				
Level	Area m <sup>2</sup>	Area m <sup>2</sup>	Area m <sup>2</sup>	
MAIN ROOF - MPH	0.00 m <sup>2</sup>	0.00 m <sup>2</sup>	0.00 m <sup>2</sup>	
LEVEL 19	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 18	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 17	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 16	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 15	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 14	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 13	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 12	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 11	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 10	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 09	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 08	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 07	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 06	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 05	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 04	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 03	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 02	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
LEVEL 01 GROUND FLOOR	19,705 SF	1,860.00 m <sup>2</sup>	19,705 SF	1,860.00 m <sup>2</sup>
<b>TOTAL AMENITY - TOTAL</b>	<b>771,697 SF</b>	<b>70,276.00 m<sup>2</sup></b>	<b>0 SF</b>	<b>0 m<sup>2</sup></b>

**AMENITY - TOTAL** **4,295.23 m<sup>2</sup>**

**REQUIRED AMENITY:**

**EXISTING REPLACEMENT** **324 UNITS (AMENITY @ 1.5 SM / UNIT)** **= 1,870 SM**  
**NEW BUILDINGS 'C' AND 'D'** **433 UNITS (AMENITY @ 1.5 SM / UNIT)** **= 2,425 SM**  
**TOTAL** **767 UNITS (AMENITY @ 1.5 SM / UNIT)** **= 4,255 SM**

### PROPOSED UNIT MIX BY FLOOR LEVEL

Gross Floor Area (GFA)		GFA Zoning Deductions				GFA Amenity				GFA Zoning Residential			
Level	Area SF	Area m <sup>2</sup>	Area SF	Area m <sup>2</sup>	Area SF	Area m <sup>2</sup>	Area SF	Area m <sup>2</sup>	Area SF	Area m <sup>2</sup>	Area SF	Area m <sup>2</sup>	
<b>LEVEL 1 GROUND FLOOR</b>	<b>121,144 SF</b>	<b>10,894.62 m<sup>2</sup></b>	<b>121,144 SF</b>	<b>10,894.62 m<sup>2</sup></b>	<b>0 SF</b>	<b>0 m<sup>2</sup></b>	<b>0 SF</b>	<b>0 m<sup>2</sup></b>	<b>0 SF</b>	<b>0 m<sup>2</sup></b>	<b>0 SF</b>	<b>0 m<sup>2</sup></b>	
<b>TOTAL AREA BELOW GRADE</b>	<b>117,154 SF</b>	<b>10,894.00 m<sup>2</sup></b>	<b>117,154 SF</b>	<b>10,894.00 m<sup>2</sup></b>	<b>0 SF</b>	<b>0 m<sup>2</sup></b>	<b>0 SF</b>	<b>0 m<sup>2</sup></b>	<b>0 SF</b>	<b>0 m<sup>2</sup></b>	<b>0 SF</b>	<b>0 m<sup>2</sup></b>	
<b>GROSS FLOOR AREA (GFA) TOTAL</b>	<b>526,438 SF</b>	<b>58,198.02 m<sup>2</sup></b>	<b>271,207 SF</b>	<b>25,195.94 m<sup>2</sup></b>	<b>8,306 SF</b>	<b>7,716.69 m<sup>2</sup></b>	<b>346,925 SF</b>	<b>32,230.40 m<sup>2</sup></b>	<b>0 SF</b>	<b>0 m<sup>2</sup></b>	<b>0 SF</b>	<b>0 m<sup>2</sup></b>	

**AREA CHART REPRESENTS AREAS FOR BUILDING C AND D AS ONE BUILDING.**

### EXISTING UNIT MIX BY BUILDING

BUILDING	1 BEDROOM	2 BEDROOM	3 BEDROOM	TOTAL
1840 BLOOR ST.	84 UNITS - 50%	57 UNITS - 34%	26 UNITS - 16%	167 UNITS
1850 BLOOR ST.	81 UNITS - 50%	56 UNITS - 34%	28 UNITS - 18%	167 UNITS
<b>TOTAL:</b>	<b>167 UNITS - 50%</b>	<b>113 UNITS - 34%</b>	<b>54 UNITS - 16%</b>	<b>334 UNITS</b>
<b>TOTAL EXISTING:</b>	<b>334 UNITS (AMENITY REQUIRED @ 5.6 SM / UNIT = 1,871 SM)</b>			

**SITE TOTAL UNITS**

BUILDING	1 BEDROOM	2 BEDROOM	3 BEDROOM	TOTAL
1840 BLOOR ST.	84 UNITS - 50%	57 UNITS - 34%	26 UNITS - 16%	167 UNITS
1850 BLOOR ST.	83 UNITS - 50%	56 UNITS - 34%	28 UNITS - 18%	165 UNITS
<b>NEWBUILDING:</b>	<b>181 UNITS - 41.8%</b>	<b>200 UNITS - 48.2%</b>	<b>43 UNITS - 9.9%</b>	<b>424 UNITS</b>
<b>TOTAL:</b>	<b>348 UNITS - 45.4%</b>	<b>322 UNITS - 42.0%</b>	<b>97 UNITS - 12.6%</b>	<b>767 UNITS</b>
<b>TOTAL EXISTING + NEW:</b>	<b>767 UNITS (AMENITY @ 5.6 SM / UNIT = 4,255 SM)</b>			

### PROPOSED PARKING

PROPOSED PARKING BUILDING A	PROPOSED PARKING BUILDING B	PROPOSED PARKING BUILDING C	PROPOSED PARKING BUILDING D				
Level	Count	Level	Count	Level	Count	Level	Count
BUILD-A - LEVEL P1 EXISTING	75	BUILD-B - LEVEL P1 EXISTING	99	BUILD-C - LEVEL P1 EXISTING	155	BUILD-D - LEVEL P1 EXISTING	41
LEVEL GROUND FLOOR	78	LEVEL GROUND FLOOR	42	LEVEL GROUND FLOOR	51	LEVEL GROUND FLOOR	49
<b>A-R</b>	<b>192</b>	<b>B-R</b>	<b>192</b>	<b>C-R</b>	<b>251</b>	<b>D-R</b>	<b>248</b>
GRADE	33	GRADE	33	GRADE	44	GRADE	43
A-V	33	B-V	33	C-V	44	D-V	43
<b>TOTAL:</b>	<b>225</b>	<b>TOTAL:</b>	<b>225</b>	<b>TOTAL:</b>	<b>296</b>	<b>TOTAL:</b>	<b>291</b>

**BUILDING A (167 UNITS) :**  
192 RESIDENTIAL @ PROPOSED RATIO: 1.15 / UNIT  
33 VISITORS @ PROPOSED RATIO: 0.2 / UNIT

**BUILDING B (167 UNITS) :**  
192 RESIDENTIAL @ PROPOSED RATIO: 1.15 / UNIT  
33 VISITORS @ PROPOSED RATIO: 0.2 / UNIT

**BUILDING C (218 UNITS) :**  
251 RESIDENTIAL @ PROPOSED RATIO: 1.15 / UNIT  
44 VISITORS @ PROPOSED RATIO: 0.2 / UNIT

**BUILDING D (215 UNITS) :**  
247 RESIDENTIAL @ PROPOSED RATIO: 1.15 / UNIT  
43 VISITORS @ PROPOSED RATIO: 0.2 / UNIT

**PROPOSED TOTAL BY LEVEL**

Level	Count
LEVEL 03	90
LEVEL 02	91
LEVEL 01 GROUND FLOOR	61
BUILD-A - LEVEL P1 EXISTING	81
BUILD-B - LEVEL P1 EXISTING	79
BUILD-C - LEVEL P1 EXISTING	90
BUILD-D - LEVEL P1 EXISTING	31
<b>TOTAL:</b>	<b>426</b>

**DESIGNATION TAB ABBREVIATIONS**

- R = DENOTES RESIDENTIAL
- V = DENOTES VISITOR
- ABCD = DENOTES BUILDING ABCD

**NOTES:**

1. GARAGE ROOM FOR EXISTING BUILDING A AND B AS PER EXISTING CONDITION
2. GARAGE BINS FOR BUILDING A AT LOADING AREA A
3. GARAGE BINS FOR BUILDING B, C AND D AT LOADING AREA B
4. GARAGE BINS WILL BE TRANSPORTED TO LOADING AREA C ON PICKUP DAY
5. BUILDING A AND B WILL MOUNTAIN CHUTE AND COMPACTOR SYSTEM
6. BUILDING C TO HAVE DUAL CHUTE FOR SOLID WASTE COMPACTION AND RECYCLING
7. BUILDING D TO HAVE DUAL CHUTE FOR SOLID WASTE COMPACTION AND RECYCLING

**EXISTING PARKING SPACES - SURFACE PARKING TO BE ADJUSTED AS PER PROPOSED**

BUILDING	TOTAL OUTDOOR	TOTAL INDOOR	TOTAL PARKING EXISTING
A - 1840 BLOOR ST.	120 SPACES	75 SPACES	225 SPACES
B - 1850 BLOOR ST.	120 SPACES	90 SPACES	220 SPACES
<b>TOTAL:</b>	<b>240 SPACES</b>	<b>165 SPACES</b>	<b>454 SPACES</b>

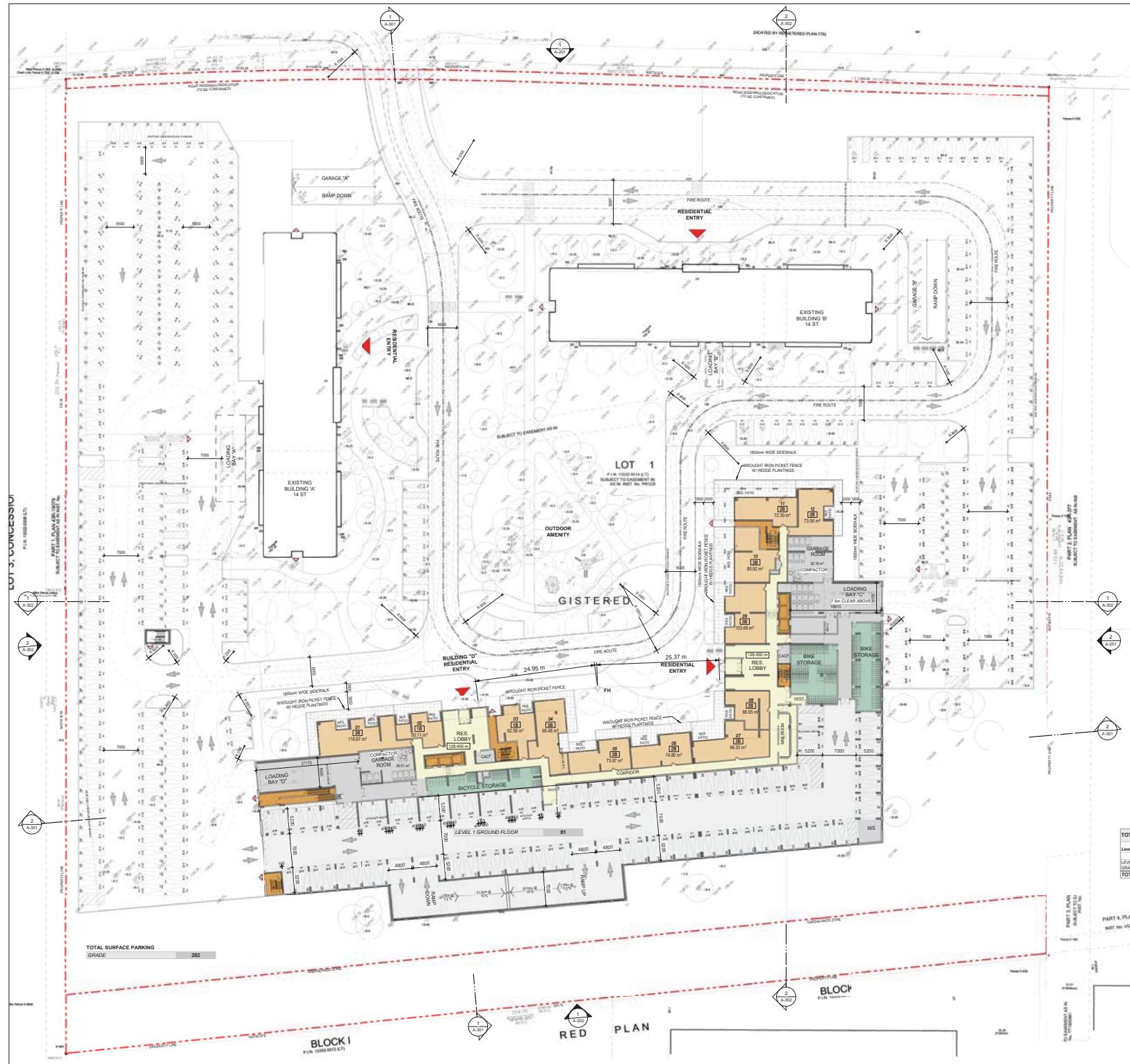
**NOTES:**

1. GARAGE ROOM FOR EXISTING BUILDING A AND B AS PER EXISTING CONDITION
2. GARAGE BINS FOR BUILDING A AT LOADING AREA A
3. GARAGE BINS FOR BUILDING B, C AND D AT LOADING AREA B
4. GARAGE BINS WILL BE TRANSPORTED TO LOADING AREA C ON PICKUP DAY
5. BUILDING A AND B WILL MOUNTAIN CHUTE AND COMPACTOR SYSTEM
6. BUILDING C TO HAVE DUAL CHUTE FOR SOLID WASTE COMPACTION AND RECYCLING
7. BUILDING D TO HAVE DUAL CHUTE FOR SOLID WASTE COMPACTION AND RECYCLING

**PROPOSED WASTE MANAGEMENT**

Resident Waste Management Area	Bin Type	Bin / Unit	Units	Total Bin	Hours	Bin / Bin *	Total
Resident Waste Management Area A	Residential	180 L	187	3,371	5.1	6.0	1,944
Resident Waste Management Area B	Residential	180 L	187	3,371	5.1	6.0	1,944
Resident Waste Management Area C	Residential	180 L	187	3,371	5.1	6.0	1,944
Resident Waste Management Area D	Residential	180 L	187	3,371	5.1	6.0	1,944
Resident Waste Management Area B+D	Residential	360 L	187	6,742	5.1	6.0	3,872
Resident Waste Management Area C+D	Residential	360 L	187	6,742	5.1	6.0	3,872
Resident Waste Management Area A+B+C	Residential	540 L	187	9,513	5.1	6.0	5,716
Resident Waste Management Area A+B+C+D	Residential	720 L	187	12,284	5.1	6.0	7,432
Resident Waste Management Area B+C+D	Residential	540 L	187	9,513	5.1	6.0	5,716
Resident Waste Management Area A+B+C+D	Residential	720 L	187	12,284			





PROPOSED PARKING BUILDING A	
Level	Count
BUILD A - LEVEL P1 EXISTING	75
LEVEL 1 GROUND FLOOR	59
GRADE	78
A-R	192
GRADE	33
A-V	33
<b>TOTAL</b>	<b>225</b>
<b>BUILDING A (167 UNITS) :</b>	
192 RESIDENTIAL @ PROPOSED RATIO .115 / UNIT	
33 VISITORS @ PROPOSED RATIO .02 / UNIT	

**RANEE  
MANAGEMENT**

4122 Bathurst St., Toronto, ON M3J 2P2  
TEL: 416-566-5962

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ISSUES		
No.	DESCRIPTION	DATE
1	ISSUED FOR RE-ZONING	2025/0

1

1

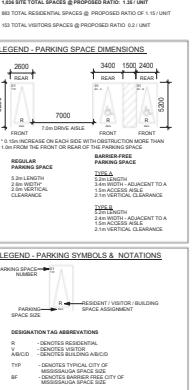
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10

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1



TOTAL RESIDENTIAL BIKE SPACES		RES LT	RES ST
Level	Total Bike Spaces	Long Term RESIDENTIAL	Short Term RESIDENTIAL
LEVEL 1 GROUND FLOOR	303	303	0
GRADE	65	0	65
<b>TOTAL BIKE SPACES</b>	<b>368</b>	<b>303</b>	<b>65</b>

**IBI GROUP**  
55 St. Clair Avenue West, 7th Floor,  
Toronto, ON M4V 2Y7, Canada  
tel 416 596-1200 fax 416 596-0644  
<http://www.ibi.ca>

**GROUND FLOOR - UNIT MIX**

6

SHEET TITLE  
LEVEL 1 GROUND FLOOR

## LEVEL I GROUND FLOOR PLAN

SHEET NUMBER ISSU

Proper North





## **APPENDIX B:**

### **Parking Demand Surveys**



Project: 1840 - 1850 Bloor St  
Project No: 8015-01  
Location: 1840 - 1850 Bloor St  
Date: Tuesday October 22, 2019

#### 3AM Parking Summary

Building		1840 Bloor St			1850 Bloor St					
Area	UG Res	Surface Res	Total Res	Visitor	Combined	UG Res	Surface Res	Total Res	Visitor	Combined
Supply	75	139	214	20	234	99	105	204	16	220
3AM	65	126	191	18	209	87	87	174	16	190

**Project:** 1840 - 1850 Bloor St  
**Project No:** 8015-01  
**Location:** 1840 - 1850 Bloor St  
**Date:** Wednesday October 23, 2019

3AM Parking Summary

Building		1840 Bloor St				1850 Bloor St				
Area	UG Res	Surface Res	Total Res	Visitor	Combined	UG Res	Surface Res	Total Res	Visitor	Combined
Supply	75	139	214	20	234	99	105	204	16	220
3AM	63	124	187	13	200	85	88	173	16	189

Project: 1840 - 1850 Bloor St  
Project No: 8015-01  
Location: 1840 - 1850 Bloor St  
Date: Thursday October 24, 2019

#### 3AM Parking Summary

Building		1840 Bloor St			1850 Bloor St					
Area	UG Res	Surface Res	Total Res	Visitor	Combined	UG Res	Surface Res	Total Res	Visitor	Combined
Supply	75	139	214	20	234	99	105	204	16	220
3AM	60	123	183	17	200	85	89	174	15	189

**Project:** 1840 - 1850 Bloor St  
**Project No:** 8015-01  
**Location:** 1840 - 1850 Bloor St  
**Date:** Friday October 4, 2019

**Visitor Parking Study**

Time	1840 Bloor	1850 Bloor
Supply	13	19
16:00	6	13
17:00	7	13
18:00	7	14
19:00	11	16
20:00	10	18
21:00	10	17
22:00	10	19

**Project:** 1840 - 1850 Bloor St  
**Project No:** 8015-01  
**Location:** 1840 - 1850 Bloor St  
**Date:** Saturday October 5, 2019

**Visitor Parking Study**

Time	1840 Bloor	1850 Bloor
Supply	13	19
14:00	6	16
15:00	9	19
16:00	9	18
17:00	11	19
18:00	13	19
19:00	13	18
20:00	13	17
21:00	13	19
22:00	13	18

**Project:** 1840 - 1850 Bloor St  
**Project No:** 8015-01  
**Location:** 1840 - 1850 Bloor St  
**Date:** Sunday October 6, 2019

**Visitor Parking Study**

Time	1840 Bloor	1850 Bloor
Supply	13	19
14:00	11	18
15:00	11	14
16:00	13	17
17:00	11	19
18:00	11	16
19:00	13	19
20:00	13	19
21:00	12	17
22:00	11	18

**Project:** 1840 - 1850 Bloor St  
**Project No:** 8015-01  
**Location:** 1840 - 1850 Bloor St  
**Date:** Friday October 18, 2019

**Visitor Parking Study**

Time	1840 Bloor	1850 Bloor
Supply	13	19
16:00	9	15
17:00	8	14
18:00	9	16
19:00	10	19
20:00	10	18
21:00	13	18
22:00	13	15

**Project:** 1840 - 1850 Bloor St  
**Project No:** 8015-01  
**Location:** 1840 - 1850 Bloor St  
**Date:** Saturday October 19, 2019

**Visitor Parking Study**

Time	1840 Bloor	1850 Bloor
Supply	13	19
14:00	7	16
15:00	9	19
16:00	12	18
17:00	10	18
18:00	9	19
19:00	10	19
20:00	9	19
21:00	11	19
22:00	13	19

**Project:** 1840 - 1850 Bloor St  
**Project No:** 8015-01  
**Location:** 1840 - 1850 Bloor St  
**Date:** Sunday October 20, 2019

**Visitor Parking Study**

Time	1840 Bloor	1850 Bloor
Supply	13	19
14:00	8	18
15:00	9	17
16:00	13	18
17:00	13	19
18:00	13	18
19:00	12	19
20:00	9	19
21:00	9	19
22:00	10	19

**Project:** 1840 - 1850 Bloor St  
**Project No:** 8015-01  
**Location:** 1840 - 1850 Bloor St  
**Date:** Friday October 25, 2019

**Visitor Parking Study**

Time	1840 Bloor	1850 Bloor
Supply	13	19
16:00	10	9
17:00	12	15
18:00	9	13
19:00	7	16
20:00	9	19
21:00	13	19
22:00	13	19

**Project:** 1840 - 1850 Bloor St  
**Project No:** 8015-01  
**Location:** 1840 - 1850 Bloor St  
**Date:** Saturday October 26, 2019

**Visitor Parking Study**

Time	1840 Bloor	1850 Bloor
Supply	13	19
14:00	7	17
15:00	7	19
16:00	7	19
17:00	11	17
18:00	12	17
19:00	10	18
20:00	12	18
21:00	13	19
22:00	13	18

**Project:** 1840 - 1850 Bloor St  
**Project No:** 8015-01  
**Location:** 1840 - 1850 Bloor St  
**Date:** Sunday October 27, 2019

**Visitor Parking Study**

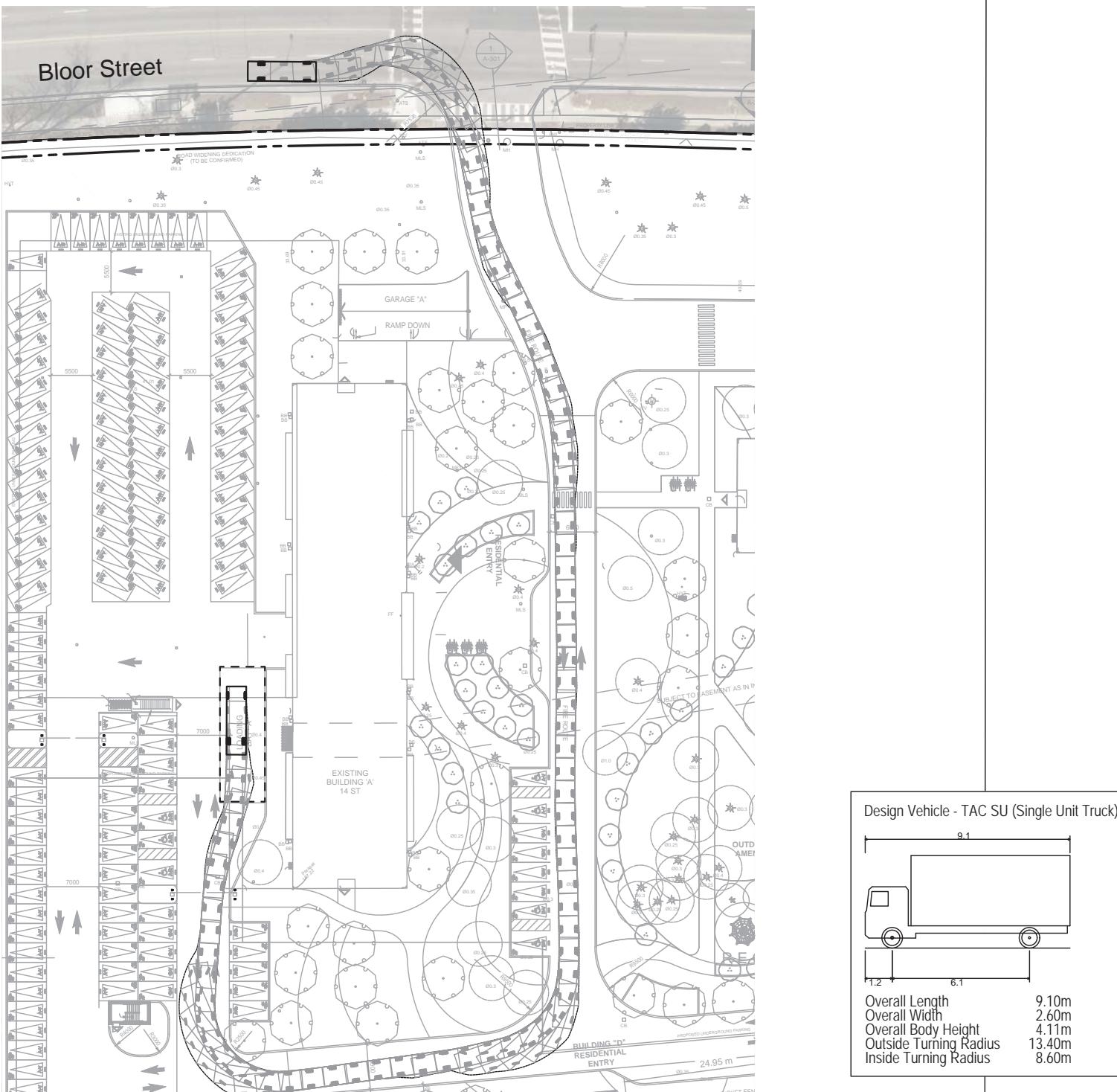
Time	1840 Bloor	1850 Bloor
Supply	13	19
14:00	11	19
15:00	13	19
16:00	13	18
17:00	13	19
18:00	11	19
19:00	11	17
20:00	12	16
21:00	11	17
22:00	9	16

## **APPENDIX C:**

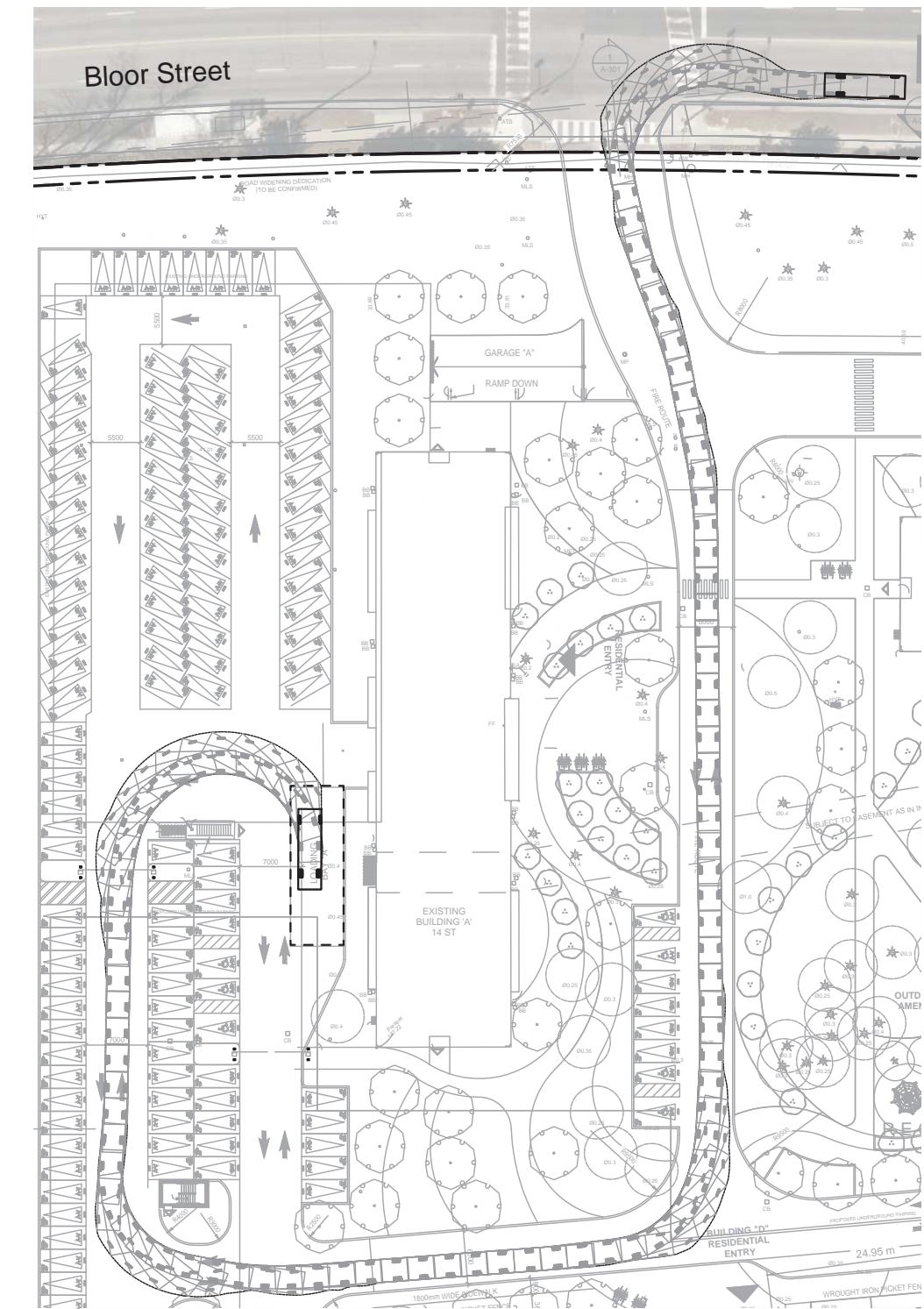
### **Vehicle Manoeuvring Diagrams**



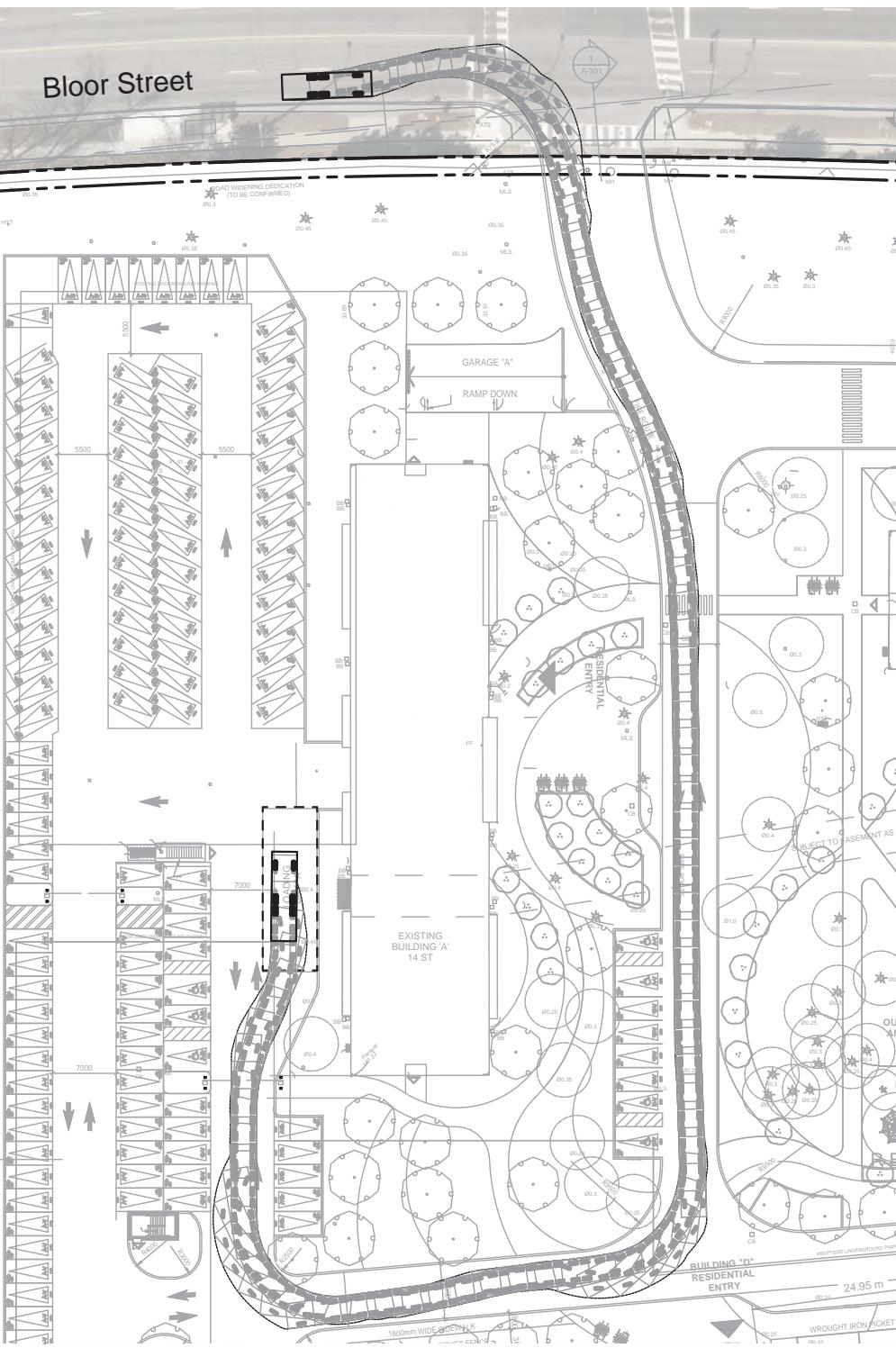
Inbound



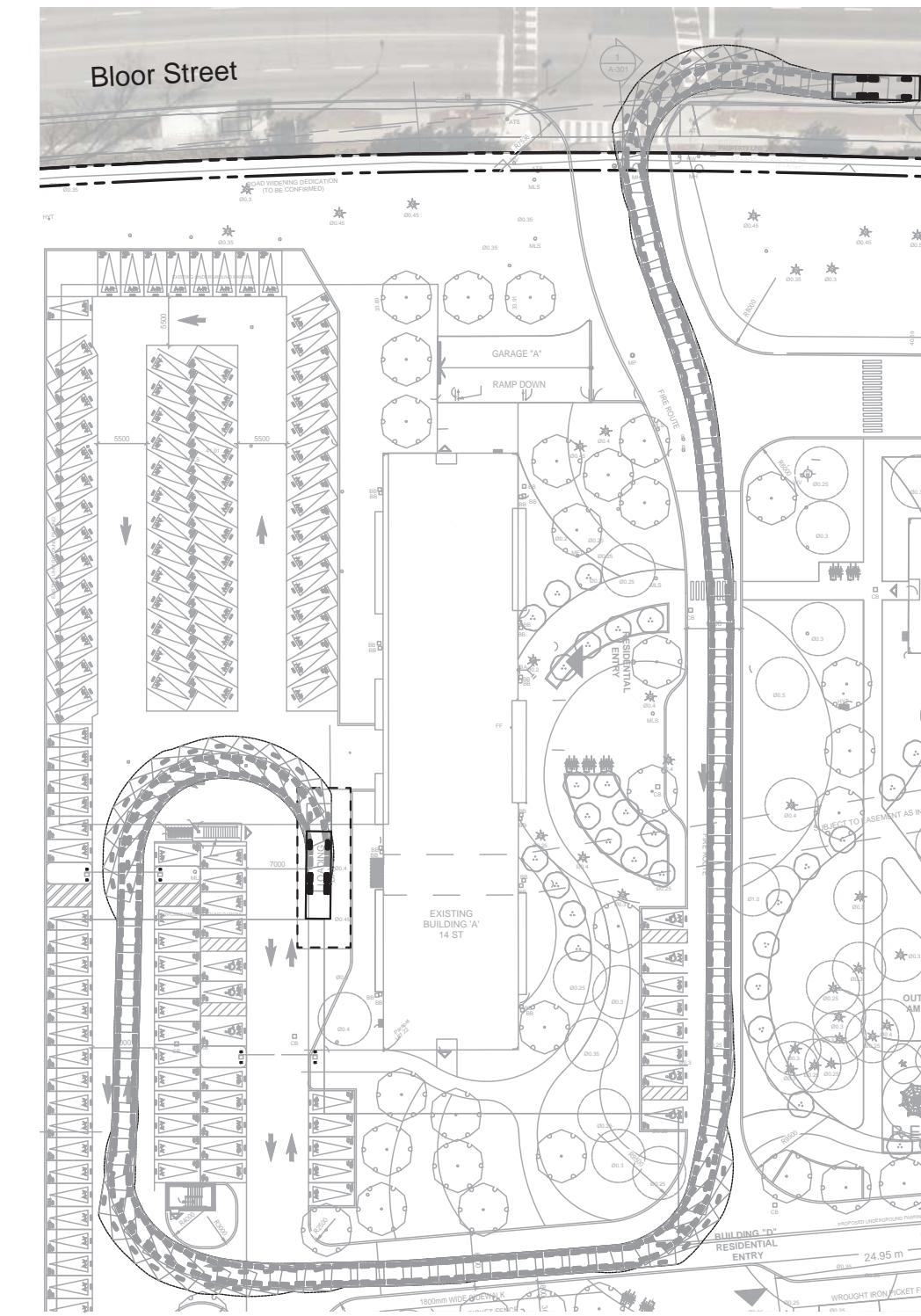
Outbound



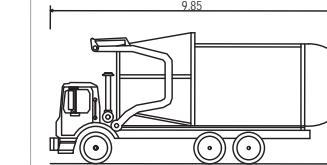
Inbound



Outbound



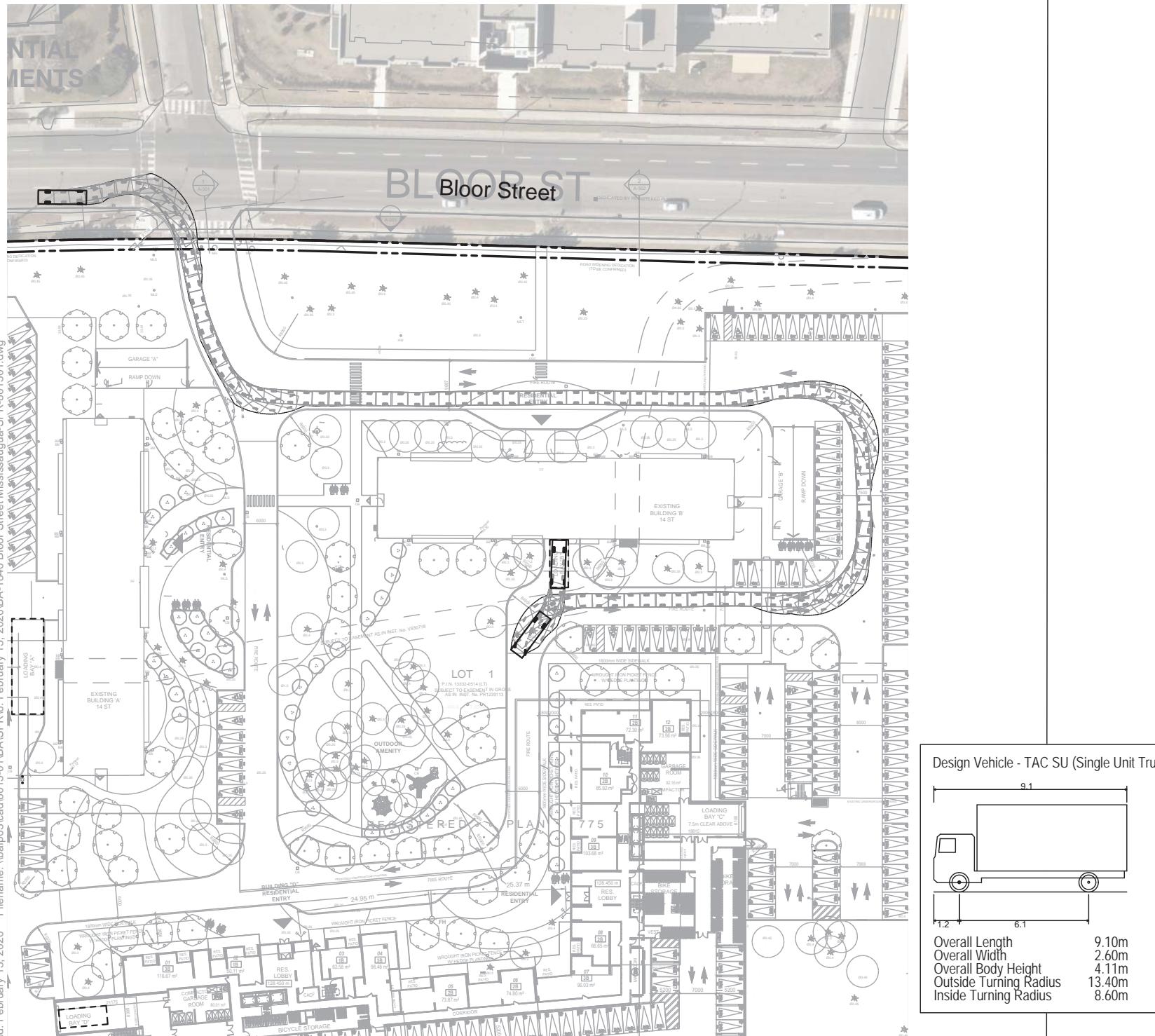
Design Vehicle -  
PEEL REGION GARBAGE - FRONT LOADER



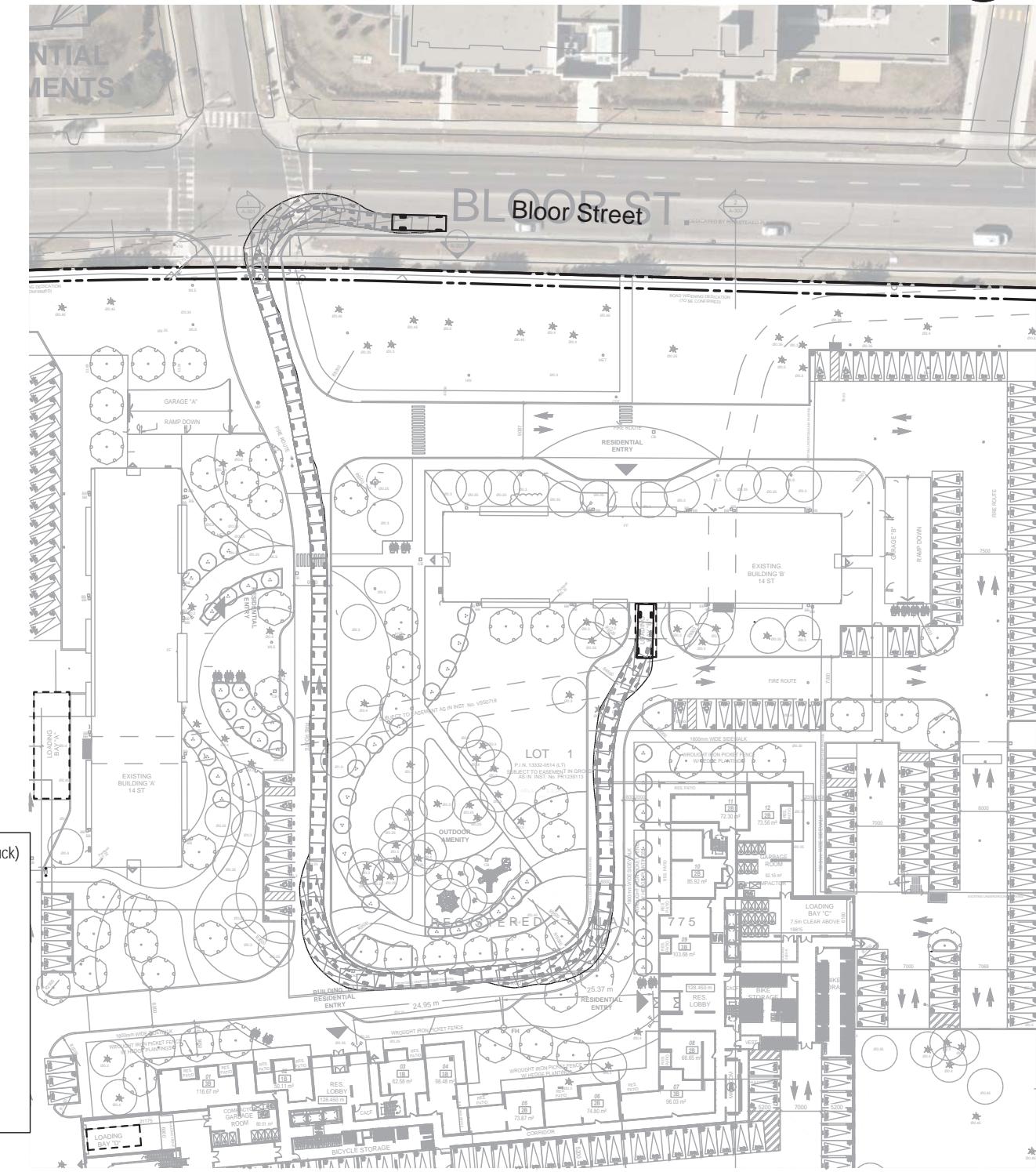
Overall Length  
Overall Width  
Overall Body Height  
Centrelne Turning Radius  
Outside Turning Radius

9.850m  
2.770m  
4.310m  
11.50m  
13.46m

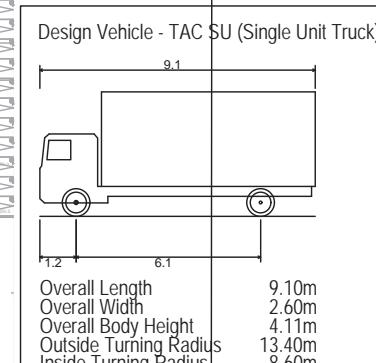
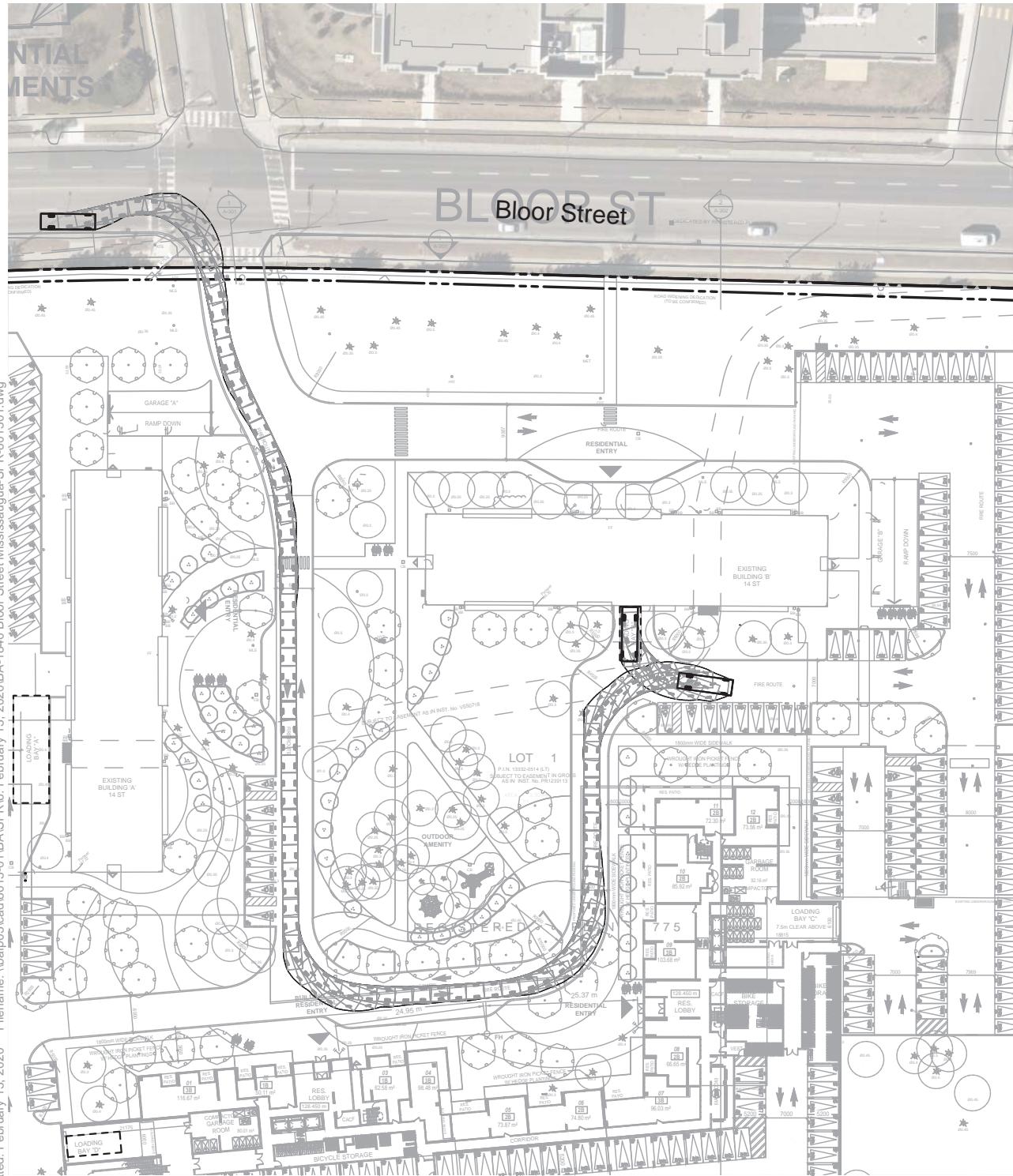
### Inbound



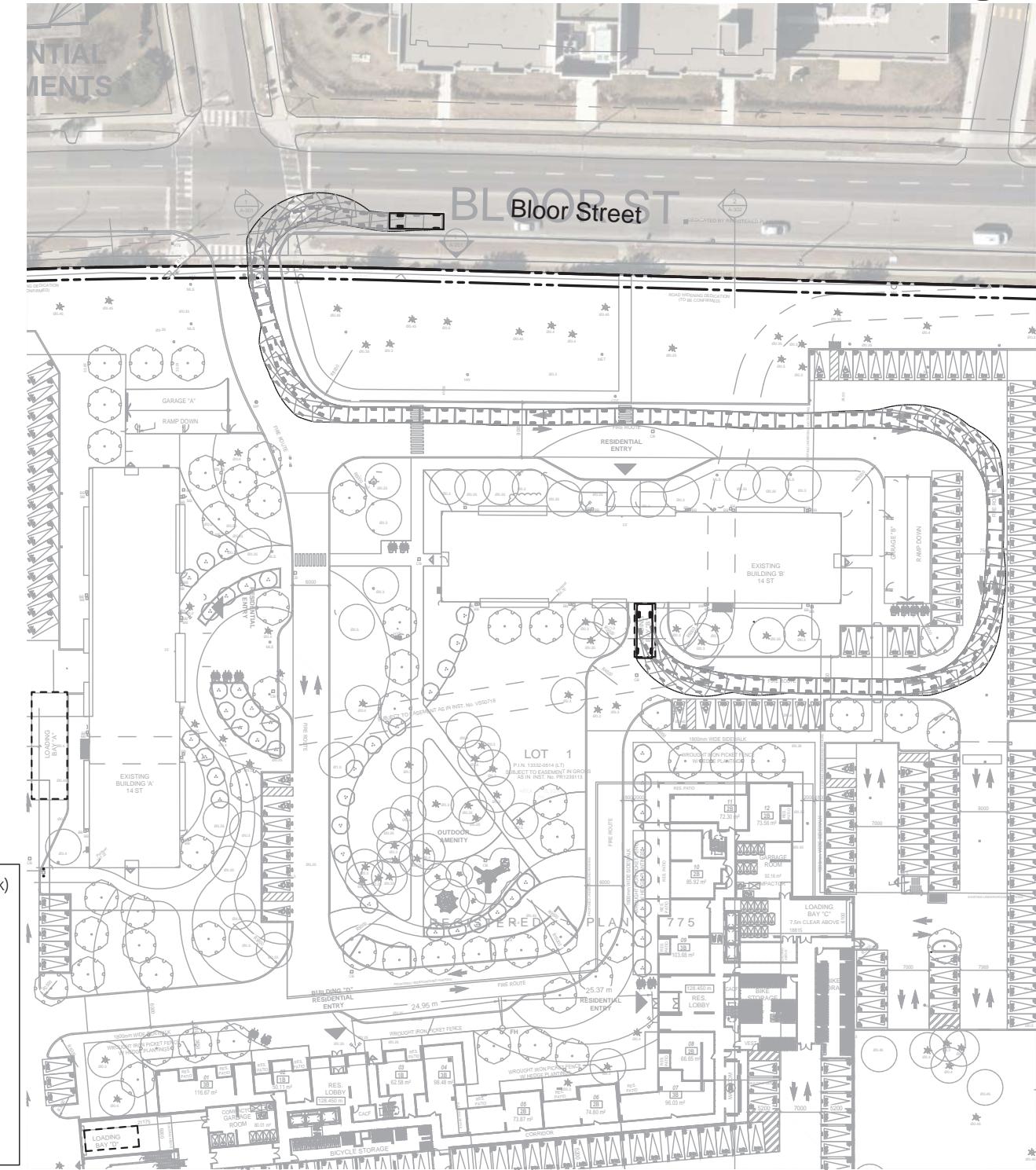
### Outbound



Date Plotted: February 13, 2020  
File Name: \bafp03\cad8015-01\BAISPR6.February 13, 2020\BA-1840 Bloor Street Mississauga\SPR801501.dwg

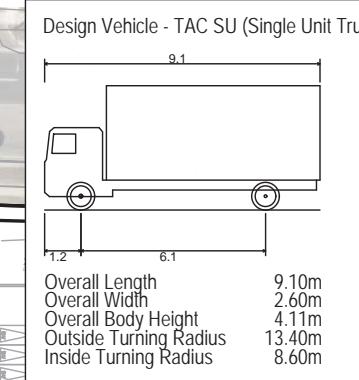
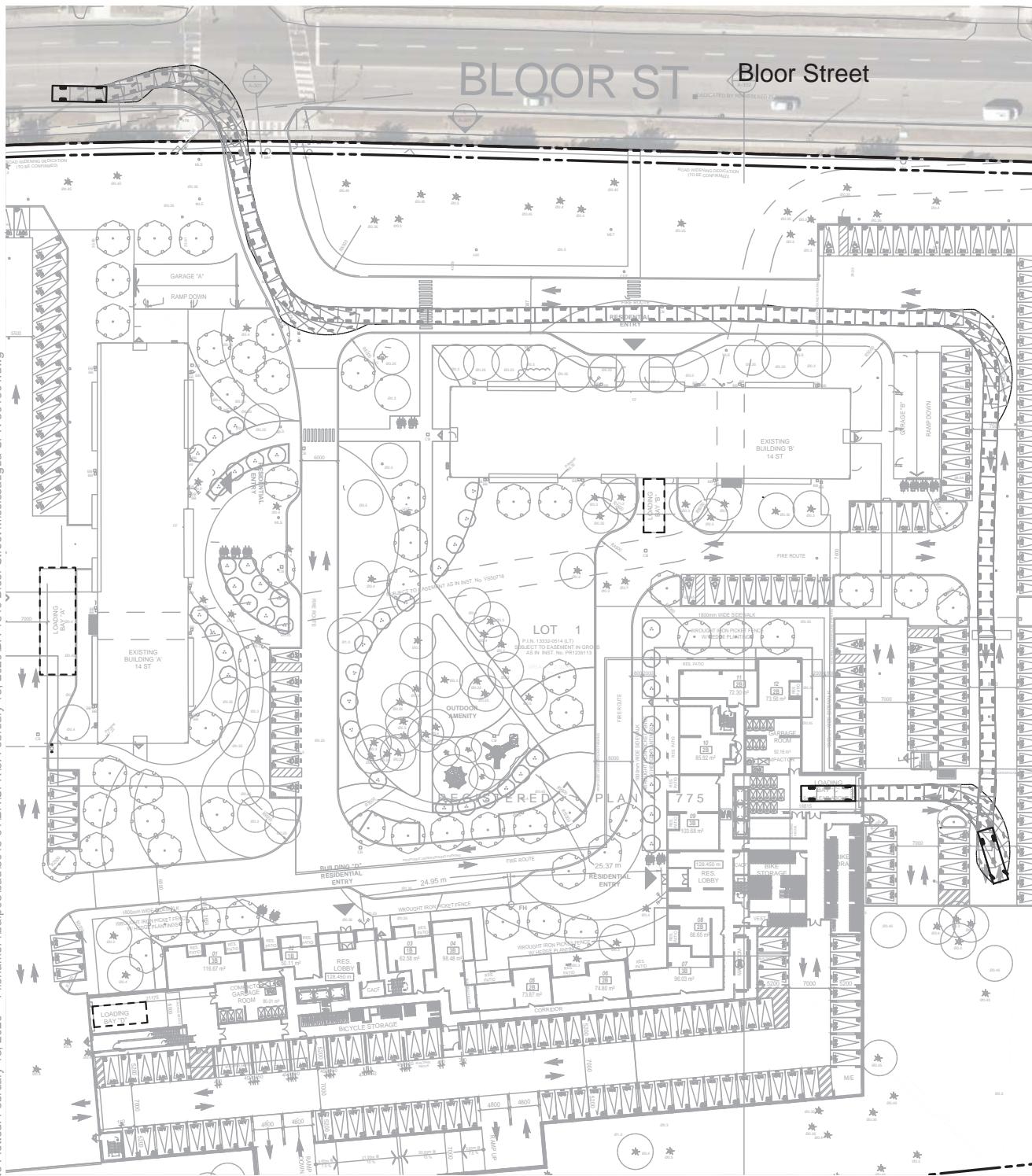


Inbound

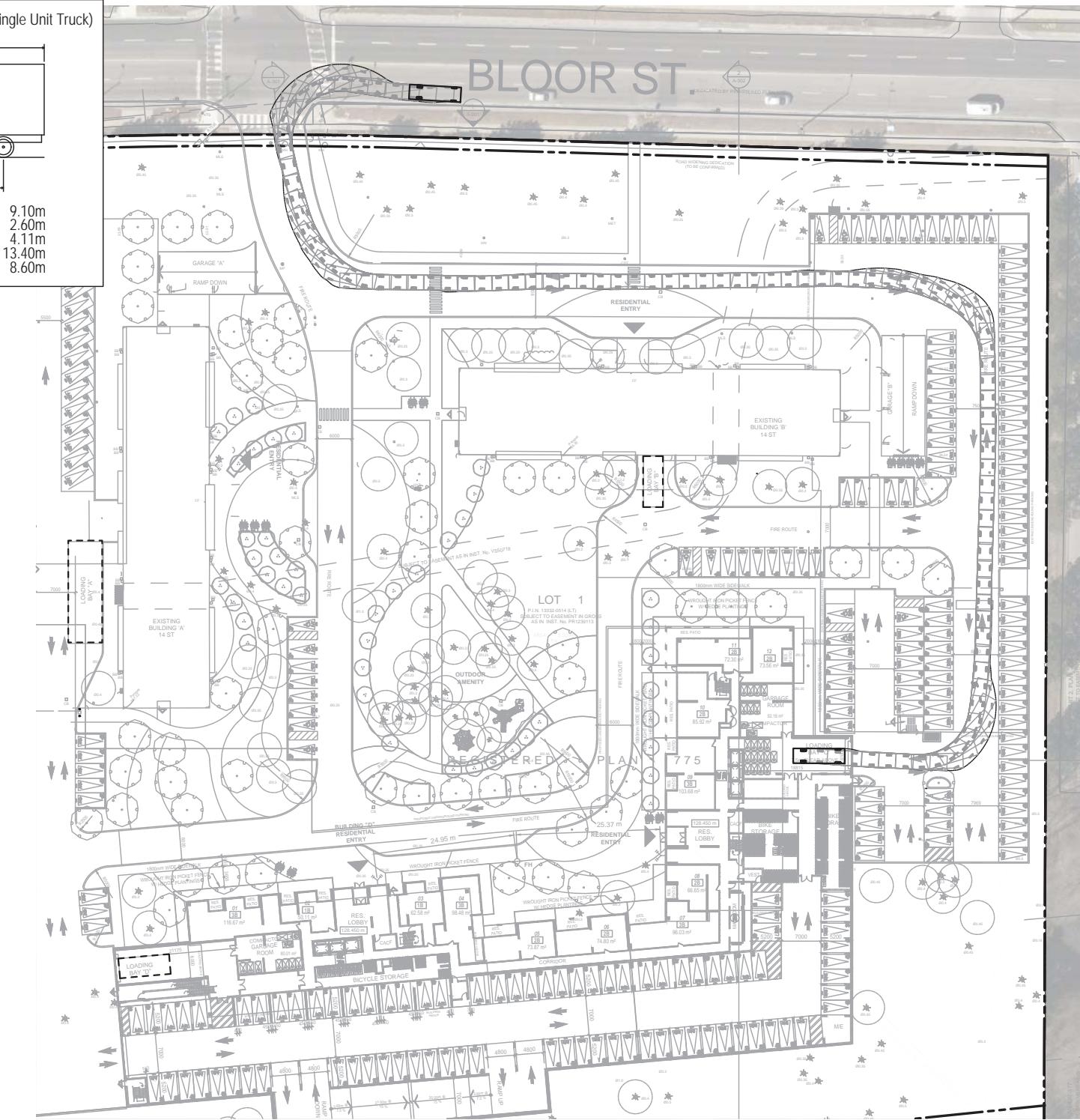




Inbound



Outbound



Date Plotted: February 13, 2020 File Name: \bafp03cad\8015-01\BAISPR\dwg\February 13, 2020\BA-1840 Bloor Street Mississauga-SPR-801501.dwg



**1840-1850 Bloor Street  
Vehicle Manoeuvring Diagram  
Building C  
TAC SU (Single Unit Truck)**

Project: 1840-1850 Bloor St.  
Project No. 8015-01  
Date: February 07, 2020  
Revised: --

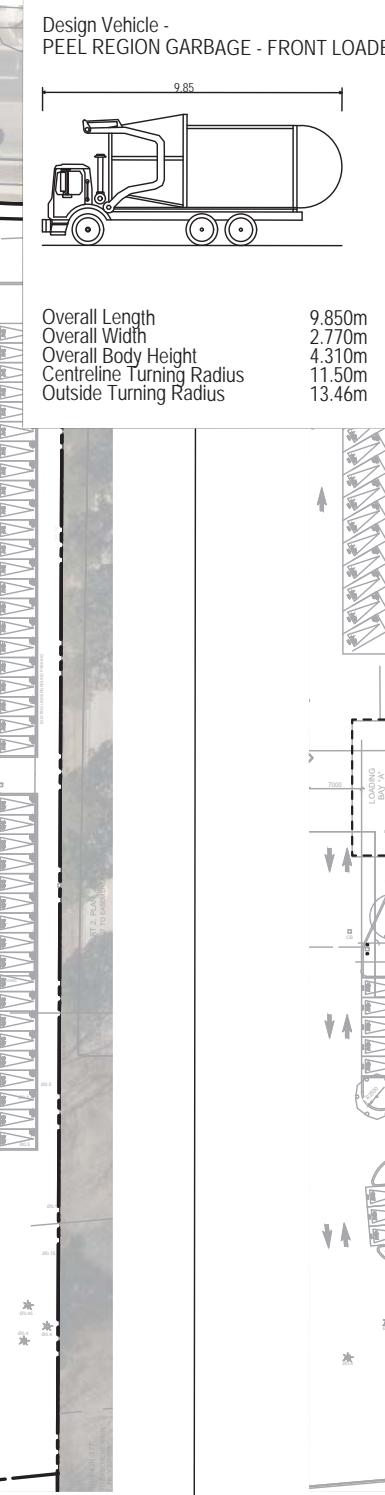
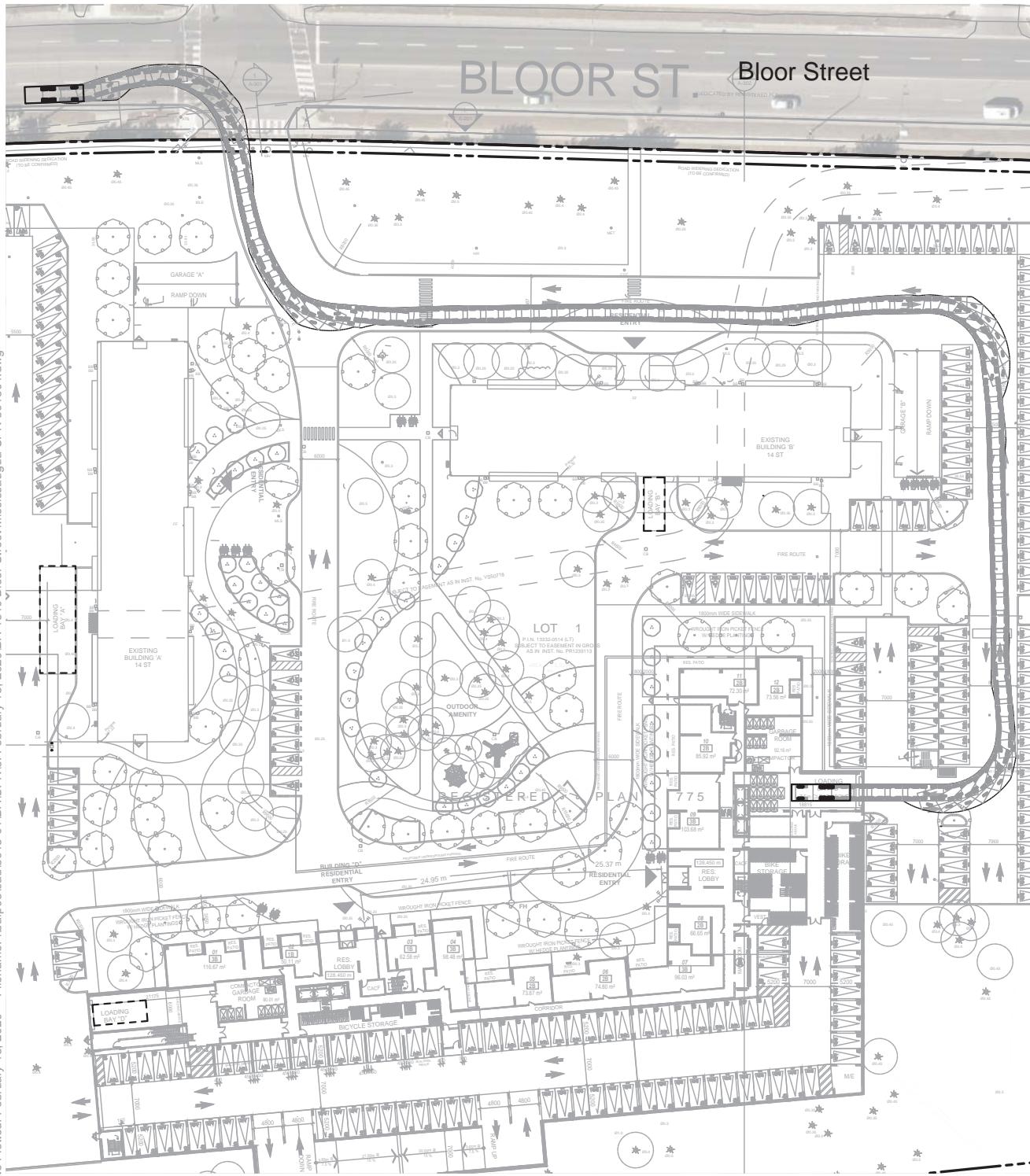
Scale 0 10 20 30 40 50m  
1:1,000

Drawing No.

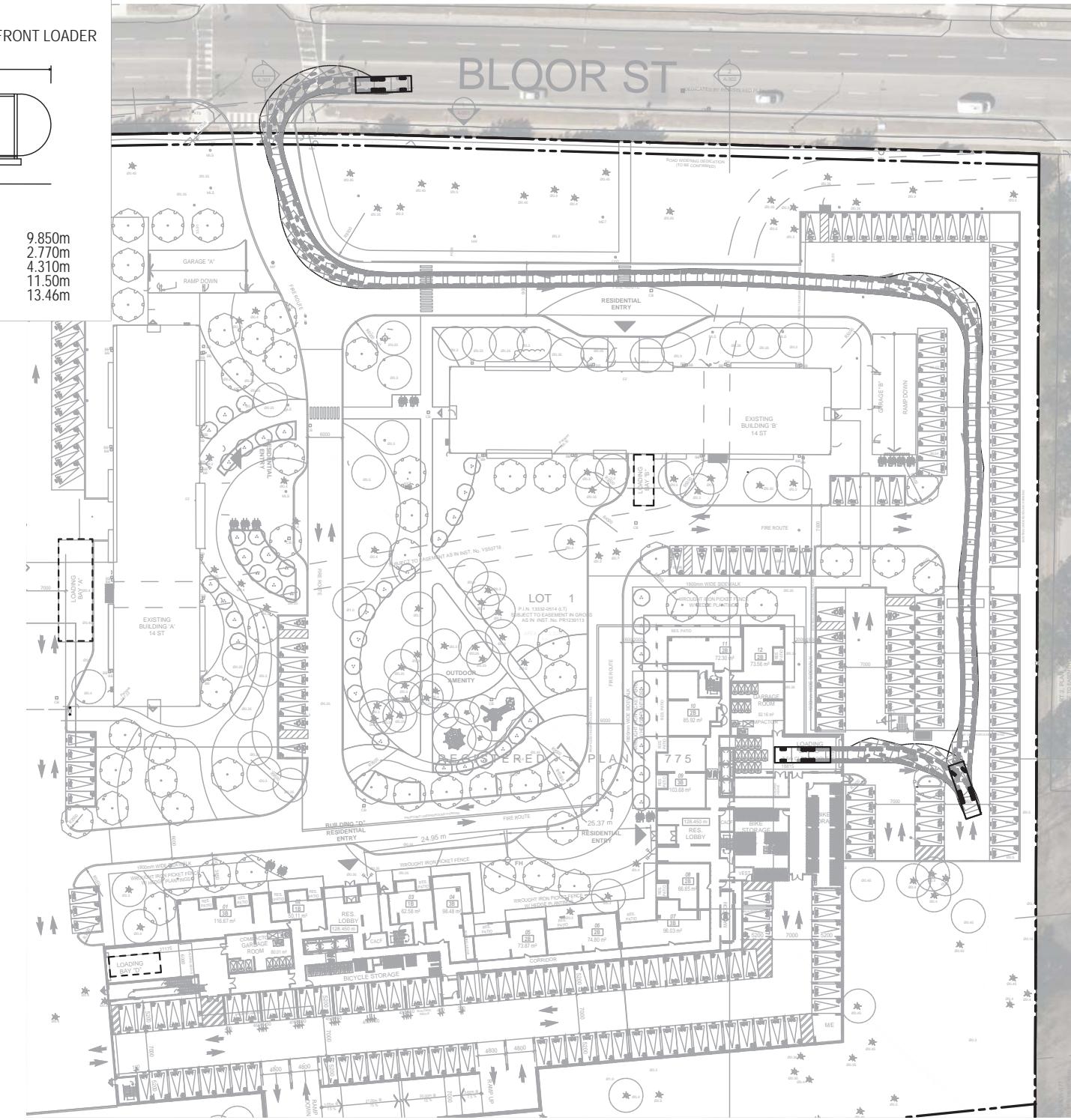
**VMD-05**

Date Plotted: February 13, 2020 File Name: \bafp03cad\8015-01\BAISPR6\February 13, 2020\BA-1840 Bloor Street Mississauga-SPR-801501.dwg

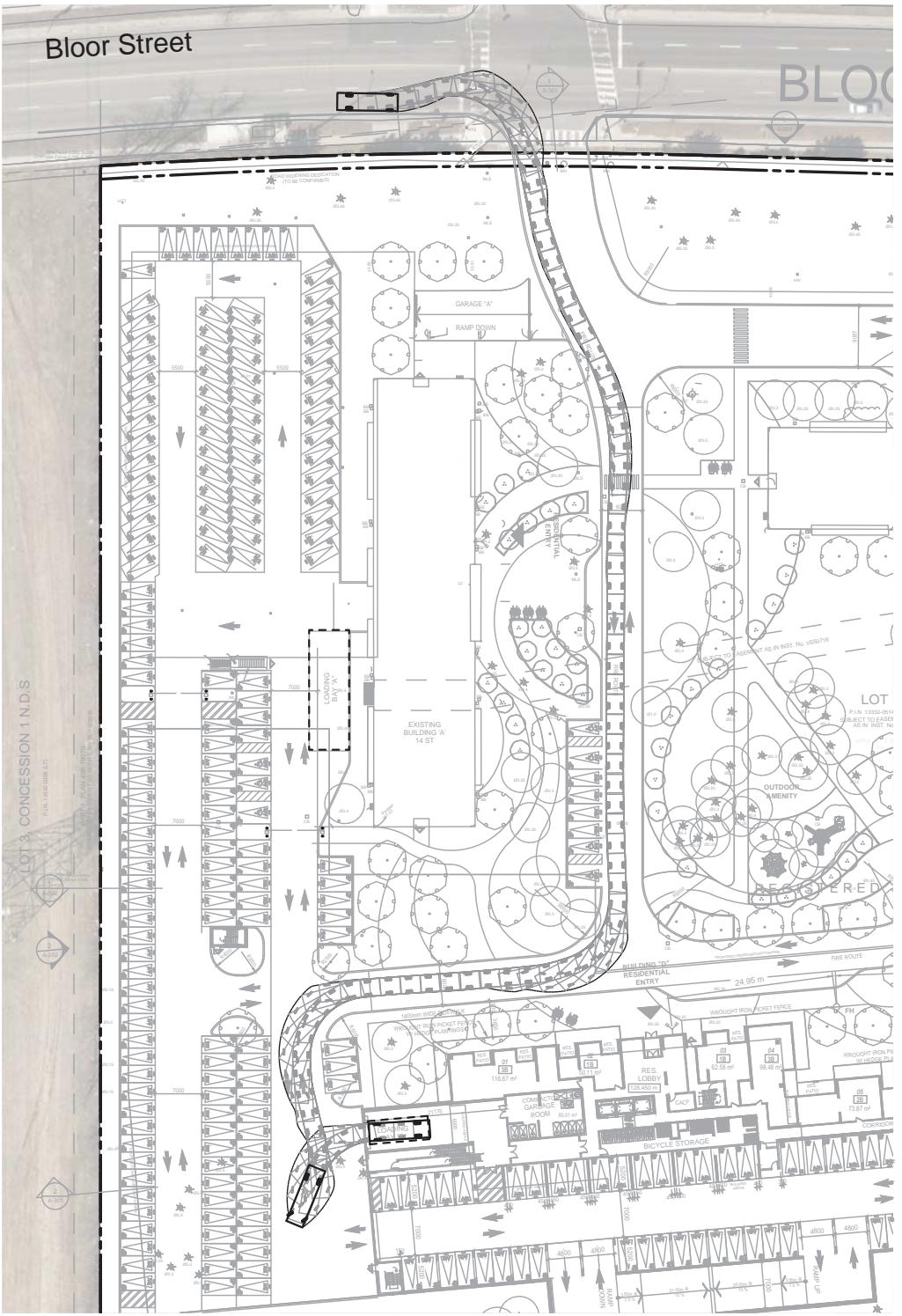
### Inbound



### Outbound



Inbound



## **APPENDIX D:**

### **Delay Study**



**Project No:** 8015-01  
**Project:** 1840 - 1850 Bloor Street  
**Study Location:** 1900 Bloor St  
**Municipality:** Mississauga  
**Study Date:** Wednesday October 23, 2019  
**Study Time:** 7:30-9:30 & 16:00-18:00

#### Delay Study

	Overall Delay (sec)	Left Turn Delay (sec)	Through Delay (sec)	Right Turn Delay (sec)
<b>2-HR Period 07:30-09:30</b>				
Minimum Delay	0	0	-	0
Average Delay	17	19	-	10
85th Percentile	36	39	-	23
95th Percentile	44	45	-	37
Maximum Delay	64	64	-	49
Total Vehicles Measured	99	74	0	25
Total from Traffic Count	99	74	0	25
Sample	100%	100%	#DIV/0!	100%
<b>AM Peak Hour</b>				
Minimum Delay	0	0	-	0
Average Delay	14	17	-	5
85th Percentile	32	39	-	11
95th Percentile	41	42	-	18
Maximum Delay	43	43	-	23
Total Vehicles Measured	62	46	0	16
Total from Traffic Count	62	46	0	16
Sample	100%	100%	#DIV/0!	100%
<b>2-HR Period 16:00-18:00</b>				
Minimum Delay	0	0	-	0
Average Delay	17	21	-	5
85th Percentile	31	34	-	12
95th Percentile	54	57	-	25
Maximum Delay	61	61	-	30
Total Vehicles Measured	49	37	0	12
Total from Traffic Count	50	38	0	12
Sample	98%	97%	#DIV/0!	100%
<b>PM Peak Hour</b>				
Minimum Delay	0	0	-	0
Average Delay	17	22	-	5
85th Percentile	30	38	-	7
95th Percentile	56	59	-	22
Maximum Delay	61	61	-	30
Total Vehicles Measured	28	20	0	8
Total from Traffic Count	29	21	0	8
Sample	97%	95%	#DIV/0!	100%

**Project No:** 8015-01  
**Project:** 1840 Bloor St  
**Study Location:** 1867 & 1855 Bloor Street Outbound to Bloor  
**Municipality:** Mississauga  
**Study Date:** Wednesday October 23, 2019  
**Study Time:** 7:30-9:30 & 16:00-18:00

#### Delay Study

	Overall Delay (sec)	Left Turn Delay (sec)	Through Delay (sec)	Right Turn Delay (sec)
<b>2-HR Period 07:30-09:30</b>				
Minimum Delay	0	0	17	0
Average Delay	11	14	17	7
85th Percentile	21	27	17	14
95th Percentile	40	52	17	34
Maximum Delay	71	71	17	39
Total Vehicles Measured	54	28	1	25
Total from Traffic Count	54	27	1	26
Sample	100%	104%	100%	96%
<b>AM Peak Hour</b>				
Minimum Delay	0	0	-	0
Average Delay	12	11	-	4
85th Percentile	23	22	-	9
95th Percentile	44	28	-	14
Maximum Delay	71	29	-	16
Total Vehicles Measured	37	17	1	19
Total from Traffic Count	36	16	1	19
Sample	103%	106%	100%	100%
<b>2-HR Period 16:00-18:00</b>				
Minimum Delay	0	0	-	4
Average Delay	29	36	-	19
85th Percentile	53	75	-	31
95th Percentile	81	84	-	48
Maximum Delay	107	107	-	51
Total Vehicles Measured	35	21	0	14
Total from Traffic Count	34	20	0	14
Sample	103%	105%	#DIV/0!	100%
<b>PM Peak Hour</b>				
Minimum Delay	0	0	-	4
Average Delay	28	39	-	19
85th Percentile	52	76	-	31
95th Percentile	78	92	-	48
Maximum Delay	107	107	-	51
Total Vehicles Measured	26	12	0	14
Total from Traffic Count	25	11	0	14
Sample	104%	109%	#DIV/0!	100%

## **APPENDIX E:** **Synchro Reports**



HCM Signalized Intersection Capacity Analysis  
1: Fieldgate Drive & Bloor Street

HCM Signalized Intersection Capacity Analysis  
2: Site Access/Bridgewood Drive & Bloor Street

Existing AM Model  
11-21-2019

Movement	E BL	E BT	E BR	W BL	W BT	W BR	N BL	N BT	N BR	S BL	S BT	S BR
Lane Configurations												
Traffic Volume (vph)	145	745	30	20	510	65	85	60	75	165	40	160
Future Volume (vph)	145	745	30	20	510	65	85	60	75	165	40	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Losttime (s)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Fpb, pbfikes	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95
Fpb, pbfikes	0.99	1.00	0.95	1.00	0.97	1.00	0.93	1.00	0.95	1.00	0.95	1.00
Fit	1.00	0.99	1.00	0.98	1.00	0.92	1.00	0.88	1.00	0.95	1.00	0.94
Fit Protected	0.96	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.97	0.97
Satd. Flow (prot)	1700	3486	1638	3384	1652	1612	1653	1505				
Fit Permitted	0.37	1.00	0.34	1.00	0.51	1.00	0.64	1.00				
Satd. Flow (perm)	664	3486	583	3384	888	1612	1116	1505				
Peak-hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.94	0.94
Adj. Flow (vph)	156	801	32	22	548	70	91	65	81	177	43	172
RTO/R Reduction (vph)	0	2	0	0	8	0	0	39	0	0	125	0
Lane Group Flow (vph)	156	831	0	22	610	0	91	107	0	177	90	0
Confil. Peds. (#/hr)	40	65	65	40	40	75	75	75	75	75	40	40
Heavy Vehicles (%)	5%	2%	10%	5%	4%	0%	6%	2%	3%	11%	5%	60
Turn Type	pm-pi-pi	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	5	2	6	6	4	4	4	8	8	8	2	4
Permitted Phases	2											
Actuated Green, G (s)	77.2	77.2	68.1	68.1	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3
Effective Green, g (s)	77.2	77.2	68.1	68.1	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3
Actuated g/C Ratio	0.64	0.64	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Clearance Time (s)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	479	2242	330	1920	216	393	272	367				
v/s Ratio Prot	0.02	0.24	0.18	0.18	0.07	0.07	0.06					
v/s Ratio Perm	0.19	0.04	0.10	0.10	0.016							
v/c Ratio	0.33	0.37	0.07	0.32	0.42	0.27	0.65	0.24	0.44	0.23	0.46	0.63
Uniform Delay, d1	8.7	10.0	11.7	13.7	38.2	36.7	40.8	36.4	5.6	4.5	4.66	47.9
Progression Factor	1.00	1.00	0.84	0.82	1.00	1.00	1.00	1.00	0.79	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.5	0.4	0.4	1.3	0.4	5.5	0.3	0.5	0.2	1.9	6.6
Delay (s)	9.1	10.5	10.2	11.6	39.5	37.1	46.2	36.8	5.0	4.7	48.5	54.5
Level of Service	A	B	B	B	D	D	D	D	A	A	D	D
Approach Delay (s)	10.3	B	115	B	380	41.1	D	D	5.0	4.7	48.5	54.5
Approach LOS	B	B	B	B	D	D	D	D	A	A	D	D
Intersection Summary												
HCM 2000 Control Delay	18.9											
HCM 2000 Volume to Capacity ratio	0.46											
Actuated Cycle Length (s)	120.0											
Intersection Capacity Utilization	86.2%											
Analysis Period (min)	15											
C Critical Lane Group												

Existing AM Model  
11-21-2019

Movement	E BL	E BT	E BR	W BL	W BT	W BR	N BL	N BT	N BR	S BL	S BT	S BR
Lane Configurations												
Traffic Volume (vph)	145	745	30	20	510	65	85	60	75	165	40	160
Future Volume (vph)	145	745	30	20	510	65	85	60	75	165	40	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Losttime (s)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Fpb, pbfikes	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95
Fpb, pbfikes	0.99	1.00	0.95	1.00	0.97	1.00	0.93	1.00	0.95	1.00	0.95	0.97
Fit	1.00	0.99	1.00	0.98	1.00	0.92	1.00	0.88	1.00	0.95	1.00	0.94
Fit Protected	0.96	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.97	0.97
Satd. Flow (prot)	1700	3486	1638	3384	1652	1612	1653	1505				
Fit Permitted	0.37	1.00	0.34	1.00	0.51	1.00	0.64	1.00				
Satd. Flow (perm)	664	3486	583	3384	888	1612	1116	1505				
Peak-hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.94	0.94
Adj. Flow (vph)	156	801	32	22	548	70	91	65	81	177	43	172
RTO/R Reduction (vph)	0	2	0	0	8	0	0	39	0	0	125	0
Lane Group Flow (vph)	156	831	0	22	610	0	91	107	0	177	90	0
Confil. Peds. (#/hr)	40	65	65	40	40	75	75	75	75	75	40	40
Heavy Vehicles (%)	5%	2%	10%	5%	4%	0%	6%	2%	3%	11%	5%	60
Turn Type	pm-pi-pi	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	5	2	6	6	4	4	4	8	8	8	2	4
Permitted Phases	2											
Actuated Green, G (s)	77.2	77.2	68.1	68.1	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3
Effective Green, g (s)	77.2	77.2	68.1	68.1	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3
Actuated g/C Ratio	0.64	0.64	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Clearance Time (s)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	479	2242	330	1920	216	393	272	367				
v/s Ratio Prot	0.02	0.24	0.18	0.18	0.07	0.07	0.06					
v/s Ratio Perm	0.19	0.04	0.10	0.10	0.016							
v/c Ratio	0.33	0.37	0.07	0.32	0.42	0.27	0.65	0.24	0.44	0.23	0.46	0.63
Uniform Delay, d1	8.7	10.0	11.7	13.7	38.2	36.7	40.8	36.4	5.6	4.5	4.66	47.9
Progression Factor	1.00	1.00	0.84	0.82	1.00	1.00	1.00	1.00	0.79	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.5	0.4	0.4	1.3	0.4	5.5	0.3	0.5	0.2	1.9	6.6
Delay (s)	9.1	10.5	10.2	11.6	39.5	37.1	46.2	36.8	5.0	4.7	48.5	54.5
Level of Service	A	B	B	B	D	D	D	D	A	A	D	D
Approach Delay (s)	10.3	B	115	B	380	41.1	D	D	5.0	4.7	48.5	54.5
Approach LOS	B	B	B	B	D	D	D	D	A	A	D	D
Intersection Summary												
HCM 2000 Control Delay	18.9											
HCM 2000 Volume to Capacity ratio	0.46											
Actuated Cycle Length (s)	120.0											
Intersection Capacity Utilization	86.2%											
Analysis Period (min)	15											
C Critical Lane Group												

Existing AM Model  
11-21-2019

Movement	E BL	E BT	E BR	W BL	W BT	W BR	N BL	N BT	N BR	S BL	S BT	S BR
Lane Configurations												
Traffic Volume (vph)	145	745	30	20	510	65	85	60	75	165	40	160
Future Volume (vph)	145	745	30	20	510	65	85	60	75	165	40	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Losttime (s)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Fpb, pbfikes	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95
Fpb, pbfikes	0.99	1.00	0.95	1.00	0.97	1.00	0.93	1.00	0.95	1.00	0.95	0.97
Fit	1.00	0.99	1.00	0.98	1.00	0.92	1.00	0.88	1.00	0.95	1.00	0.94
Fit Protected	0.96	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.97	0.97
Satd. Flow (prot)	1700	3486	1638	3384	1652	1612	1653	1505				
Fit Permitted	0.37	1.00	0.34	1.00	0.51	1.00	0.64	1.00				
Satd. Flow (perm)	664	3486	583	3384								

HCM Unsigned Intersection Capacity Analysis 3: 1900 Bloor Street/1855 & 1867 Bloor Street & Bloor Street										Existing AM Model 11-21-2019															
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	
Lane Configurations													Lane Configurations												
Traffic Volume (veh/h)	5	1050	20	0	465	0	45	0	15	15	0	20	Traffic Volume (vph)	125	530	40	75	1115	115	40	30	25	125	65	135
Future Volume (Veh/h)	5	1050	20	0	465	0	45	0	15	15	0	20	Future Volume (vph)	125	530	40	75	1115	115	40	30	25	125	65	135
Sign Control	Free												Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade	0%												Total Lost time (s)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	Lane Util Factor	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	5	1071	20	0	474	0	46	0	15	15	0	20	Fpb. ped/bikes	1.00	0.99	1.00	0.99	1.00	0.97	1.00	0.97	1.00	0.97	1.00	0.97
Pedestrians													Fpb. ped/bikes	1.00	1.00	0.96	1.00	0.98	1.00	0.94	1.00	0.94	1.00	0.94	1.00
Lane Width (m)													Fit	1.00	0.99	1.00	0.99	1.00	0.93	1.00	0.90	1.00	0.90	1.00	0.90
Walking Speed (m/s)													Fit Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Percent Blockage													Sad. Flow (prot)	1805	3515	1742	3473	1771	1716	1705	1640				
Right turn flare (veh)													Fit Permitted	0.13	1.00	0.43	1.00	0.51	1.00	0.72	1.00				
Median type	None												Sad. Flow (perm)	251	3515	779	3473	958	1716	1291	1640				
Median storage veh													Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
Upstream signal (m)	149												Adj. Flow (vph)	132	558	42	79	1174	121	42	32	26	132	68	142
pX, platoon/unlocked													RTO/R Reduction (vph)	0	4	0	0	6	0	0	0	0	0	0	0
vc1, stage 1 conf vol	499												Lane Group Flow (vph)	132	596	0	79	1289	0	42	38	0	132	144	0
vc2, stage 2 conf vol													Conf1 Pers. (vph)	55	35	35	35	55	25	55	55	55	55	55	25
vc3, unlockd vol													Heavy Vehicles (%)	0%	1%	0%	1%	2%	0%	0%	0%	0%	0%	0%	2%
IC, single (s)	4.4												Turn Type	pm+pl	NA	pm	NA	perm	NA	perm	NA	perm	NA	perm	NA
IC, 2 stage (s)													Protected Phases	5	2	6	6	4	4	4	8				
If (S)	2.3												Permitted Phases	2		6	6								
p0 queue free %	99												Actuated Green, G (s)	78.1	78.1	69.1	69.1	28.4	28.4	28.4	28.4				
cM capacity (veh/h)	961												Effective Green, g (s)	78.1	78.1	69.1	69.1	28.4	28.4	28.4	28.4				
Direction, Lane #		EB1	EB2	WB1	WB2	NB1	SB1						Actuated g/C Ratio	0.65	0.65	0.58	0.58	0.24	0.24	0.24	0.24				
Volume Total	540	556	237	61	35								Clearance Time (s)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0				
Volume Left	5	0	0	0	46	15							Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0				
Volume Right	0	20	0	0	15	20							Lane Gap Cap (vph)	241	2287	448	1999	226	406	305	388				
cSH	961	1700	679	1700	317	336							vS Ratio Prot	c0.03	0.17	c0.37	c0.37	0.02	0.02	0.09					
Volume to Capacity	0.01	0.33	0.00	0.14	0.19	0.10							vS Ratio Perm	0.33		0.10		0.04		0.10					
Queue Length 95th (m)	0.1	0.0	0.0	0.0	5.6	2.8							vC Ratio	0.55	0.26	0.18	0.64	0.19	0.09	0.43	0.37				
Control Delay (s)	0.1	0.0	0.0	0.0	19.0	17.0							Uniform Delay, d1	126	8.8	12.0	17.2	36.6	35.8	39.0	38.3				
Lane LOS	A	0.1	0.0	0.0	19.0	17.0							Progression Factor	1.00	1.00	1.35	1.23	1.00	1.00	1.00	1.00				
Approach Delay (s)		0.1	0.0	0.0	19.0	17.0							Incremental Delay, d2	2.5	0.3	0.7	1.3	0.4	0.1	1.0	1.0				
Approach LOS					C	C							Delay (s)	15.1	9.1	16.9	22.4	37.0	35.9	39.9	38.9				
Intersection Summary													Level of Service	B	A	B	C	D	D	D	D				
Average Delay													Approach LOS	10.2	22.0	36.3	3.0	3.0	3.0	3.0	3.0				
Intersection Capacity Utilization													Approach LOS	B	C	C	D	D	D	D	D				
Analysis Period (min)																									
* User Entered Value																									

Baseline  
NHY - BA Group

Synchro 9 Report  
Page 3

HCM Signalized Intersection Capacity Analysis 1: Fieldgate Drive & Bloor Street										Existing PM Model 11-21-2019															
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	
Lane Configurations													Lane Configurations												
Traffic Volume (veh/h)	5	1050	20	0	465	0	45	0	15	15	0	20	Traffic Volume (vph)	125	530	40	75	1115	115	40	30	25	125	65	135
Future Volume (Veh/h)	5	1050	20	0	465	0	45	0	15	15	0	20	Future Volume (vph)	125	530	40	75	1115	115	40	30	25	125	65	135
Sign Control	Free												Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade	0%												Total Lost time (s)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	Lane Util Factor	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	5	1071	20	0	474	0	46	0	15	15	0	20	Fpb. ped/bikes	1.00	0.99	1.00	0.99	1.00	0.97	1.00	0.97	1.00	0.97	1.00	0.97
Pedestrians													Fpb. ped/bikes	1.00	1.00	0.96	1.00	0.98	1.00	0.94	1.00	0.94	1.00	0.94	1.00
Lane Width (m)													Fit	1.00	0.99	1.00	0.99	1.00	0.93	1.00	0.90	1.00	0.90	1.00	0.90
Walking Speed (m/s)													Fit Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Percent Blockage													Sad. Flow (prot)	1805	3515	1742	3473	1771	1716	1291	1640				
Right turn flare (veh)													Fit Permitted	0.13	1.00	0.43	1.00	0.51	1.00	0.72	1.00				
Median type	None												Sad. Flow (perm)	251	3515	779	3473	958	1716	1291	1640				
Median storage veh													Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
Upstream signal (m)	149												Adj. Flow (vph)	132	558	42	79	1174	121	42	32	26	132	68	142
pX, platoon/unlocked													RTO/R Reduction (vph)	0	4	0	0	6	0	0	0	0	0	0	0
vc1, stage 1 conf vol	499												Lane Group Flow (vph)	132	596	0	79	1289	0	42	38	0	132	144	0
vc2, stage 2 conf vol													Conf1 Pers. (vph)	55	35	35	35	55	25	55	55	55	55	55	25

HCM Signalized Intersection Capacity Analysis										Existing PM Model															
2: Site Access/Bridgewood Drive & Bloor Street										3: 1900 Bloor Street/1855 & 1867 Bloor Street & Bloor Street															
Movement	E BL	E BT	E BR	W BL	W BT	W BR	N BL	N BT	N BR	S BL	S BT	S BR	Movement	E BL	E BT	E BR	W BL	W BT	W BR	N BL	N BT	N BR	S BL	S BT	
Lane Configurations													Lane Configurations												
Traffic Volume (vph)	25	590	40	30	1280	75	30	5	20	45	15	35	Traffic Volume (veh/h)	0	625	30	10	1350	20	20	0	10	10	0	15
Future Volume (vph)	25	590	40	30	1280	75	30	5	20	45	15	35	Future Volume (veh/h)	0	625	30	10	1350	20	20	0	10	10	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	Sign Control	Free	Free	Free	Free	Free	Free	Yield	Yield	Yield	Yield	Yield	
Total Losttime (s)	6.0												Grade												
Lane Util. Factor	0.95												Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Firb, peftiles	0.99												Hourly flow rate (vph)	0	665	32	11	1436	21	21	0	11	11	0	16
Fijo, pedftiles	1.00												Pedestrians												
Fit	0.99												Lane Width (m)												
Fit Protected	1.00												Walking Speed (m/s)												
Satd. Flow (prot)	3518												Percent Blockage	2											
Fit Permitted	0.84												Right turn flare (veh)												
Satd. Flow (perm)	2946												Median type (veh)												
Peak-hour Factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	Upstream signal (m)	149											
Adj. Flow (vph)	27	648	44	33	1407	82	33	5	22	49	16	38	PX, platoon unblocked												
R/TOR Adjustment (vph)	0	4	0	0	3	0	0	0	17	0	0	0	vC, conflicting volume	1492											
Lane Group Flow (vph)	0	715	0	0	1519	0	0	0	43	0	0	0	vC1, stage 1 conf vol												
Conf. Ped. (#/hr)	40		20	20	40	15	10	10	10	10	10	15	vC2, stage 2 conf vol												
Heavy Vehicles (%)	0%	1%	0%	7%	1%	0%	0%	0%	5%	0%	0%	0%	ICU, unblocked vol	1492											
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	NA	NA	IC, single (s)	4.1											
Protected Phases	2		2	2	4	4	4	4	4	4	4	4	IC, 2 stage (s)												
Permitted Phases													If (s)	2.2											
Actuated Green, G (s)	91.9		91.9	91.9	91.9	16.1							PD queue free %	100	99										
Effective Green, g (s)	0.77		0.77	0.77	0.77	16.1							CM capacity (veh/h)	443											
Actuated g/C Ratio													Direction Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Clearance Time (s)	6.0												Volume / Total	332	364	729	739	32	27						
Vehicle Extension (s)	3.0												Volume Left	0											
Lane Grp Cap (vph)	2256		2473		179		199						Volume Right	0	32	0	21	21	11						
v/S Ratio Prod													cSH	443	1700	910	1700	246	155						
v/S Ratio Perm	0.24		0.47		0.03		0.06						Volume to Capacity	0.0	0.21	0.01	0.43	0.13	0.17						
vc Ratio	0.32		0.61		0.24		0.43						Queue Length 95th (m)	0.0	0.0	0.3	0.0	0.35	0.49						
Uniform Delay, d1	4.3		6.2		46.5		47.7						Control Delay (s)	0.0	0.0	0.3	0.0	21.8	33.0						
Progression Factor	0.94		1.00		1.00		1.00						Lane LOS	A				C	D						
Incremental Delay, d2	0.4		1.2		0.7		1.5						Approach Delay (s)	0.0	0.2			21.8	33.0						
Delay (s)	4.5		7.4		47.2		49.2						Approach LOS	C	D			C	D						
Level of Service	A		A	D	D								Intersection Summary												
Approach Delay (s)	4.5		7.4		47.2		49.2						Average Delay												
Approach LOS	A		A	D	D								Intersection Capacity Utilization	0.8											
Intersection Summary													Analysis Period (min)	15											
HCM 2000 Control Delay	9.3		HCM 2000 Level of Service	A									ICU Level of Service	B											
HCM 2000 Volume to Capacity ratio	0.59		120.0	Sum of lost time (s)	120.0		ICU Level of Service	D																	
Actuated Cycle Length (s)																									
Intersection Capacity Utilization																									
Analysis Period (min)																									
C Critical Lane Group																									

HCM Unsignalized Intersection Capacity Analysis										Existing PM Model															
3: 1900 Bloor Street/1855 & 1867 Bloor Street & Bloor Street										11-21-2019															
Movement	E BL	E BT	E BR	W BL	W BT	W BR	N BL	N BT	N BR	S BL	S BT	S BR	Movement	E BL	E BT	E BR	W BL	W BT	W BR	N BL	N BT	N BR	S BL	S BT	
Lane Configurations													Lane Configurations												
Traffic Volume (vph)	25	590	40	30	1280	75	30	5	20	45	15	35	Traffic Volume (veh/h)	0	625	30	10	1350	20	20	0	10	10	0	15
Future Volume (vph)	25	590	40	30	1280	75	30	5	20	45	15	35	Future Volume (veh/h)	0	625	30	10	1350	20	20	0	10	10	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	Sign Control	Free	Free	Free	Free	Free	Free	Yield	Yield	Yield	Yield	Yield	
Total Losttime (s)	6.0												Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Lane Util. Factor	0.95												Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Firb, peftiles	0.99												Hourly flow rate (vph)	0	665	32	11	1436	21	21	0	11	11	0	16
Fijo, pedftiles	1.00												Pedestrians												
Fit	0.99												Lane Width (m)												
Fit Protected	1.00												Walking Speed (m/s)												
Satd. Flow (prot)	3518												Percent Blockage	2											
Fit Permitted	0.84												Right turn flare (veh)												
Satd. Flow (perm)	2946												Median type (veh)												
Peak-hour Factor, PHF	0.91												Upstream signal (m)	149											
Adj. Flow (vph)	27	648	44	33	1407	82	33	5	22	49	16	38	PX, platoon unblocked												
Lane Group Flow (vph)	0	715	0	0	1519	0	0	0	43	0	0	0	vC, conflicting volume	1492											
Conf. Ped. (#/hr)	40		20	20	40	15	10	10	10	10	10	15	vC1, stage 1 conf vol												
Heavy Vehicles (%)	0%	1%	0%	7%	1%	0%	0%	0%	5%	0%	0%	0%	vC2, stage 2 conf vol												
Protected Phases	2		2	2	4	4	4	4	4	4	4	4	ICU, unblocked vol	1492											
Actuated Green, G (s)	91.9																								

HCM Signalized Intersection Capacity Analysis												
1: Fieldgate Drive & Bloor Street						Future Background AM Model						
Movement	EBL	EBC	EBR	WBL	WBT	NBL	WBR	NBT	NBR	SBL	SBR	
Lane Configurations	145	845	40	25	580	65	110	70	100	165	45	
Traffic Volume (vph)	145	845	40	25	580	65	110	70	100	165	45	
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Ideal Flow (vphpl)	0.99	1.00	0.96	1.00	0.97	1.00	0.94	1.00	0.91	1.00	0.88	
Total Losttime (s)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	6.0	
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	
Fpb, pedit/bikes	1.00	0.99	1.00	0.99	1.00	0.95	1.00	0.96	1.00	0.99	0.94	
Fpb, pedit/bikes	0.99	1.00	0.96	1.00	0.97	1.00	0.94	1.00	0.91	1.00	0.97	
Fit	1.00	0.99	1.00	0.98	1.00	1.00	0.95	1.00	0.91	1.00	0.94	
Fit Protected	0.96	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.97	
Satd. Flow (prot)	1704	3476	1652	3394	1653	1596	1663	1510	1510	1510	1515	
Fit Permitted	0.33	1.00	0.30	1.00	0.50	1.00	0.57	1.00	0.57	1.00	0.79	
Satd. Flow (perm)	600	3476	515	3394	874	1596	999	1510	1510	1510	1230	
Peak-hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.94	
Adj. Flow (vph)	156	909	43	27	624	70	118	75	108	177	48	
RTOR Reduction (vph)	0	3	0	0	7	0	0	45	0	112	0	
Lane Group Flow (vph)	156	949	0	27	688	0	118	138	0	177	108	
Confil. Peds. (#/hr)	40	65	65	40	40	40	75	75	75	40	40	
Heavy Vehicles (%)	5%	2%	10%	5%	4%	0%	6%	2%	3%	11%	5%	
Turn Type	pm+pl	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	NA	
Protected Phases	5	2	6	6	4	4	8	8	2	2	4	
Permitted Phases	2	2	6	6	4	4	8	8	2	2	4	
Actuated Green, G (s)	77.1	77.1	68.0	68.0	29.4	29.4	29.4	29.4	29.4	29.4	180	
Effective Green, g (s)	77.1	77.1	68.0	68.0	29.4	29.4	29.4	29.4	29.4	29.4	180	
Actuated g/C Ratio	0.64	0.64	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24	0.15	
Clearance Time (s)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	441	2233	291	1923	214	391	244	369	2445	2436	184	
v/s Ratio Prot	0.02	0.27	0.20	0.20	0.09	0.09	0.07	0.07	0.07	0.07	0.09	
V/s Ratio Perm	0.21	0.05	0.14	0.14	c0.18	c0.18	c0.18	c0.18	c0.18	c0.18	c0.18	
v/c Ratio	0.35	0.43	0.09	0.36	0.55	0.35	0.73	0.29	0.50	0.26	0.63	
Uniform Delay, d1	9.0	10.6	11.9	14.1	39.5	37.4	41.6	36.9	6.0	4.7	47.9	
Progression Factor	1.00	1.00	0.87	0.83	1.00	1.00	1.00	1.00	0.86	1.00	1.00	
Incremental Delay, d2	0.5	0.6	0.6	0.5	3.1	0.5	10.2	0.4	0.7	0.3	6.6	
Delay (s)	9.4	11.1	10.9	12.2	42.6	38.0	51.8	37.3	5.8	4.9	48.5	
Level of Service	A	B	B	B	D	D	D	D	A	A	D	
Approach Delay (s)	10.9	B	12.2	B	39.8	43.8	D	D	5.8	4.9	48.5	
Approach LOS	B	B	B	B	D	D	D	D	A	A	D	
Intersection Summary												
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service				B	HCM 2000 Level of Service					
HCM 2000 Volume to Capacity ratio	0.52	HCM 2000 Volume to Capacity ratio				0.52	HCM 2000 Volume to Capacity ratio					
Actuated Cycle Length (s)	120.0	Sum of lost time (s)				16.5	Sum of lost time (s)					
Intersection Capacity Utilization	89.4%	ICU Level of Service				E	ICU Level of Service					
Analysis Period (min)	15	Analysis Period (min)				15	Analysis Period (min)					
C Critical Lane Group		C Critical Lane Group					C Critical Lane Group					

HCM Signalized Intersection Capacity Analysis												
2: Site Access/Bridgewood Drive & Bloor Street						Future Background AM Model						
Movement	EBL	EBC	EBR	WBL	WBT	NBL	WBR	NBT	NBR	SBL	SBR	
Lane Configurations	145	845	40	25	580	65	110	70	100	165	45	
Traffic Volume (vph)	145	845	40	25	580	65	110	70	100	165	45	
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Ideal Flow (vphpl)	0.99	1.00	0.96	1.00	0.97	1.00	0.94	1.00	0.91	1.00	0.88	
Total Losttime (s)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	6.0	
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	
Fpb, pedit/bikes	1.00	0.99	1.00	0.99	1.00	0.95	1.00	0.96	1.00	0.99	0.94	
Fpb, pedit/bikes	0.99	1.00	0.96	1.00	0.97	1.00	0.94	1.00	0.91	1.00	0.97	
Fit	1.00	0.99	1.00	0.98	1.00	1.00	0.95	1.00	0.91	1.00	0.94	
Fit Protected	0.96	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.97	
Satd. Flow (prot)	1704	3476	1652	3394	1653	1596	1663	1510	1510	1510	1515	
Fit Permitted	0.33	1.00	0.30	1.00	0.50	1.00	0.57	1.00	0.57	1.00	0.79	
Satd. Flow (perm)	600	3476	515	3394	874	1596	999	1510	1510	1510	1230	
Peak-hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.94	
Adj. Flow (vph)	156	909	43	27	624	70	118	75	108	177	48	
RTOR Reduction (vph)	0	3	0	0	7	0	0	45	0	112	0	
Lane Group Flow (vph)	156	949	0	27	688	0	118	138	0	177	108	
Confil. Peds. (#/hr)	40	65	65	65	40	40	75	75	75	40	40	
Heavy Vehicles (%)	5%	2%	10%	5%	4%	0%	6%	2%	3%	11%	5%	
Turn Type	pm+pl	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	NA	
Protected Phases	2	2	6	6	4	4	8	8	2	2	4	
Permitted Phases	2	2	6	6	4	4	8	8	2	2	4	
Actuated Green, G (s)	77.1	77.1	68.0	68.0	29.4	29.4	29.4	29.4	29.4	29.4	180	
Effective Green, g (s)	77.1	77.1	68.0	68.0	29.4	29.4	29.4	29.4	29.4	29.4	180	
Actuated g/C Ratio	0.64	0.64	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24	0.15	
Clearance Time (s)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	441	2233	291	1923	214	391	244	369	2445	2436	184	
v/s Ratio Prot	0.02	0.27	0.20	0.20	0.09	0.09	0.07	0.07	0.07	0.07	0.09	
V/s Ratio Perm	0.21	0.05	0.14	0.14	c0.18	c0.18	c0.18	c0.18	c0.18	c0.18	c0.18	
v/c Ratio	0.35	0.43	0.09	0.36	0.55	0.35	0.73	0.29	0.50	0.26	0.63	
Uniform Delay, d1	9.0	10.6	11.9	14.1	39.5	37.4	41.6	36.9	6.0	4.7	47.9	
Progression Factor	1.00	1.00	0.87	0.83	1.00	1.00	1.00	1.00	0.86	1.00	1.00	
Incremental Delay, d2	0.5	0.6	0.6	0.5	3.1	0.5	10.2	0.4	0.7	0.3	6.6	
Delay (s)	9.4	11.1	10.9	12.2	42.6	38.0	51.8	37.3	5.8	4.9	48.5	
Level of Service	A	B	B	B	D	D	D	D	A	A	D	
Approach Delay (s)	10.9	B	12.2	B	39.8	43.8	D	D	5.8	4.9	48.5	
Approach LOS	B	B	B	B	D	D	D	D	A	A	D	
Intersection Summary												
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service				B	HCM 2000 Level of Service					
HCM 2000 Volume to Capacity ratio	0.52	HCM 2000 Volume to Capacity ratio				0.52	HCM 2000 Volume to Capacity ratio					
Actuated Cycle Length (s)	120.0	Sum of lost time (s)				16.5	Sum of lost time (s)					
Intersection Capacity Utilization	89.4%	ICU Level of Service				E	ICU Level of Service					
Analysis Period (min)	15	Analysis Period (min)				15	Analysis Period (min)					
C Critical Lane Group		C Critical Lane Group					C Critical Lane Group					

HCM Unsigneded Intersection Capacity Analysis								Future Background AM Model															
3: 1900 Bloor Street/1855 & 1867 Bloor Street & Bloor Street								Future Background PM Model															
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations																							
Traffic Volume (veh/h)	5	1175	20	0	540	0	45	0	15	15	0	20											
Future Volume (Veh/h)	5	1175	20	0	540	0	45	0	15	15	0	20											
Sign Control	Free												Yield										
Grade	0%												0%										
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98											
Hourly flow rate (vph)	5	1199	20	0	551	0	46	0	15	15	0	20											
Pedestrians													20										
Lane Width (m)													3.6										
Walking Speed (m/s)													1.2										
Percent Blockage													2										
Right Turn Lane (veh)																							
Median type	None												None										
Median storage veh																							
Upstream signal (m)	149												0.87										
pX, platoon/unlocked													0.87										
vc, conflicting volume	576												1534										
vc1, stage 1 conf vol													129										
vc2, stage 2 conf vol																							
vcU, unlocked conf vol																							
IC, single (s)	4.4												4.1										
IC, 2 stage (s)																							
If (s)	2.3												2.2										
p0 queue free %	99												100										
cM capacity(veh/h)	896												612										
Direction, Lane #		EB1	EB2	WB1	WB2	NB1	SB1																
Volume Total	604	620	276	276	61	35																	
Volume Left	5	0	0	0	46	15																	
Volume Right	0	20	0	0	15	20																	
cSH	896	1700	612	1700	263	285																	
Volume to Capacity	0.01	0.36	0.00	0.16	0.23	0.12							0.23										
Queue Length 95th (m)	0.1	0.0	0.0	0.0	0.0	0.0							3.3										
Control Delay (s)	0.2	0.0	0.0	0.0	0.0	0.0							22.8										
Lane LOS	A	0.1	0.0	0.0	0.0	0.0							22.8										
Approach Delay (s)																							
Approach LOS													C										
Intersection Summary																							
Average Delay													1.2										
Intersection Capacity Utilization													49.0%										
Analysis Period (min)													15										
* User Entered Value																							

HCM Signalized Intersection Capacity Analysis												Future Background PM Model											
1: Fieldgate Drive & Bloor Street												02-19-2020											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations																							
Traffic Volume (veh/h)	5	1175	20	0	540	0	45	0	15	15	0	20											
Future Volume (veh/h)	5	1175	20	0	540	0	45	0	15	15	0	20											
Sign Control	Free												Yield										
Grade	0%												0%										
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98											
Hourly flow rate (vph)	5	1199	20	0	551	0	46	0	15	15	0	20											
Pedestrians													20										
Lane Width (m)													3.6										
Walking Speed (m/s)													1.2										
Percent Blockage													2										
Right Turn Lane (veh)																							
Median type	None												None										
Median storage veh																							
Upstream signal (m)	149												0.87										
pX, platoon/unlocked													1534										
vc, conflicting volume	576												1815										
vc1, stage 1 conf vol													132										
vc2, stage 2 conf vol																							
vcU, unlocked conf vol																							
IC, single (s)																							
IC, 2 stage (s)																							
If (s)																							
p0 queue free %																							
cM capacity(veh/h)																							
Direction, Lane #		EB1	EB2	WB1	WB2	NB1	SB1																
Volume Total	604	620	276	276	61	35																	
Volume Left	5	0	0	0	46	15																	
Volume Right	0	20	0	0	15	20																	
cSH	896	1700	612	1700	263	285																	
Volume to Capacity	0.01	0.36	0.00	0.16	0.23	0.12							0.23										
Queue Length 95th (m)	0.1	0.0	0.0	0.0	0.0	0.0							3.3										
Control Delay (s)	0.2	0.0	0.0	0.0	0.0	0.0							22.8										
Lane LOS	A	0.1	0.0	0.0	0.0	0.0							19.4										
Approach Delay (s)																							
Approach LOS													C										
Intersection Summary																							
Average Delay																							
Intersection Capacity Utilization													49.0%										
Analysis Period (min)																							



### HCM Signalized Intersection Capacity Analysis

1: Fieldgate Drive & Bloor Street

Future Total AM Model

2: Site Access/Bridgewood Drive & Bloor Street

Future Total AM Model

02-19-2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	145	845	40	30	625	90	110	70	105	170	45	160
Traffic Volume (vph)	145	845	40	30	625	90	110	70	105	170	45	160
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Total Losttime (s)	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, peds/bikes	1.00	0.99	1.00	0.99	1.00	0.94	1.00	0.96	1.00	0.97	0.99	0.94
Fibp, peds/bikes	0.99	1.00	0.96	1.00	0.97	1.00	0.94	1.00	0.96	1.00	0.99	0.98
Fit	1.00	0.99	1.00	0.98	1.00	0.91	1.00	0.88	1.00	0.95	0.99	0.94
Fit Protected	0.96	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.97	0.97
Satd. Flow (prot)	1708	3478	1654	3374	1653	1592	1664	1510	1664	1510	1531	1531
Fit Permitted	0.30	1.00	0.29	1.00	0.50	1.00	0.56	1.00	0.50	1.00	0.73	0.75
Satd. Flow (perm)	541	3478	501	3374	876	1592	986	1510	876	1592	1187	1172
Peak-hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.94	0.94
Adj. Flow (vph)	156	930	43	32	672	97	118	75	113	183	48	172
RTO/R Reduction (vph)	0	3	0	0	9	0	0	47	0	111	0	0
Lane Group Flow (vph)	156	970	0	32	760	0	118	141	0	183	109	0
Confil. Peds. (#/hr)	40	65	65	40	40	40	75	75	40	109	0	0
Heavy Vehicles (%)	5%	2%	10%	5%	4%	0%	6%	2%	3%	11%	5%	0%
Turn Type	pm+pl	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	5	2	6	6	4	4	4	8	8	2	2	4
Permitted Phases	2	2	6	6	4	4	8	8	2	2	2	4
Actuated Green, G (s)	76.9	76.9	67.8	67.8	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6
Effective Green, g (s)	76.9	76.9	67.8	67.8	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6
Actuated g/C Ratio	0.64	0.64	0.56	0.56	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Clearance Time (s)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	406	2228	283	1906	216	392	243	372	243	372	1881	344
v/s Ratio Prot	0.02	0.28	0.23	0.23	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07
v/s Ratio Perm	0.23	0.06	0.13	0.13	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07
vc Ratio	0.38	0.44	0.11	0.40	0.55	0.36	0.75	0.29	0.63	0.34	0.59	0.35
Uniform Delay, d1	9.3	10.7	12.1	14.7	39.4	37.4	41.8	36.7	15.1	11.8	36.1	33.3
Progression Factor	1.00	1.00	1.32	1.18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.6	0.8	0.6	2.8	0.6	12.4	0.4	1.4	0.5	2.5	0.6
Delay (s)	9.9	11.4	16.8	17.9	42.2	37.9	54.2	37.1	19.1	12.3	38.6	33.9
Level of Service	A	B	B	B	D	D	D	D	B	B	D	C
Approach Delay (s)	11.2	17.8	17.8	17.8	39.6	44.9	44.9	44.9	19.1	12.3	38.6	33.9
Approach LOS	B	B	B	B	D	D	D	D	B	B	D	C
Intersection Summary												
HCM 2000 Control Delay	216	HCM 2000 Level of Service		C					19.9	HCM 2000 Level of Service		
HCM 2000 Volume to Capacity ratio	0.54			0.62					0.62			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		16.5					120.0	Sum of lost time (s)		
Intersection Capacity Utilization	90.3%	ICU Level of Service		E					15	ICU Level of Service		
Analysis Period (min)	15								15			
C Critical Lane Group												

### HCM Signalized Intersection Capacity Analysis

1: Fieldgate Drive & Bloor Street

Future Total AM Model

2: Site Access/Bridgewood Drive & Bloor Street

Future Total AM Model

02-19-2020

Movement	E BL	E T	E R	W BL	W T	W R	N BL	N T	N R	S BL	S T	S R
Lane Configurations	145	845	40	30	625	90	110	70	105	170	45	160
Traffic Volume (vph)	145	845	40	30	625	90	110	70	105	170	45	160
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Total Losttime (s)	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp, peds/bikes	1.00	0.99	1.00	0.99	1.00	0.94	1.00	0.96	1.00	0.97	0.99	0.94
Fibp, peds/bikes	0.99	1.00	0.96	1.00	0.97	1.00	0.94	1.00	0.96	1.00	0.99	0.94
Fit	1.00	0.99	1.00	0.98	1.00	1.00	0.91	1.00	0.88	1.00	0.95	0.94
Fit Protected	0.96	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.97	0.97
Satd. Flow (prot)	1708	3478	1654	3374	1653	1592	1664	1510	1664	1510	1531	1531
Fit Permitted	0.30	1.00	0.29	1.00	0.50	1.00	0.56	1.00	0.50	1.00	0.73	0.75
Satd. Flow (perm)	541	3478	501	3374	876	1592	986	1510	876	1592	1187	1172
Peak-hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.94	0.94
Adj. Flow (vph)	156	930	43	32	672	97	118	75	113	183	48	172
RTO/R Reduction (vph)	0	3	0	0	9	0	0	47	0	111	0	0
Lane Group Flow (vph)	156	970	0	32	760	0	118	141	0	183	109	0
Confil. Peds. (#/hr)	40	65	65	40	40	40	75	75	40	109	0	0
Heavy Vehicles (%)	5%	2%	10%	5%	4%	0%	6%	2%	3%	11%	5%	0%
Turn Type	pm+pl	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	2	2	6	6	4	4	4	8	8	2	2	4
Permitted Phases	2	2	6	6	4	4	8	8	2	2	2	4
Actuated Green, G (s)	76.9	76.9	67.8	67.8	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6
Effective Green, g (s)	76.9	76.9	67.8	67.8	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6
Actuated g/C Ratio	0.64	0.64	0.56	0.56	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Clearance Time (s)	3.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	406	2228	283	1906	216	392	243	372	243	372	1881	344
v/s Ratio Prot	0.02	0.28	0.23	0.23	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07
v/s Ratio Perm	0.23	0.06	0.13	0.13	0.09	0.09	0.07	0.07	0.07	0.07	0.07	0.07
vc Ratio	0.38	0.44	0.11	0.40	0.55	0.36	0.75	0.29	0.63	0.34	0.59	0.35
Uniform Delay, d1	9.3	10.7	12.1	14.7	39.4	37.4	41.8	36.7	15.1	11.8	36.1	33.3
Progression Factor	1.00	1.00	1.32	1.18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.6	0.8	0.6	2.8	0.6	12.4	0.4	1.4	0.5	2.5	0.6
Delay (s)	9.9	11.4	16.8	17.9	42.2	37.9	54.2	37.1	19.1	12.3	38.6	33.9
Level of Service	A	B	B	B	D	D	D	D	B	B	D	C
Approach Delay (s)	11.2	17.8	17.8	17.8	39.6	44.9	44.9	44.9	19.1	12.3	38.6	33.9
Approach LOS	B	B	B	B	D	D	D	D	B	B	D	C
Intersection Summary												
HCM 2000 Control Delay	216	HCM 2000 Level of Service		C					19.9	HCM 2000 Level of Service		
HCM 2000 Volume to Capacity ratio	0.54			0.62					0.62			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		16.5					120.0	Sum of lost time (s)		
Intersection Capacity Utilization	90.3%	ICU Level of Service		E					76.6%	ICU Level of Service		
Analysis Period (min)	15			15					15			
C Critical Lane Group												

# HCM Signalized Intersection Capacity Analysis

## 1: Fieldgate Drive & Bloor Street

Future Total PM Model  
02.10.2020

M Model  
02-19-2020

Synchro 9 Report  
Page 1

chro 9 Report  
Page 1

