



Major Node Mixed Use Development

Traffic Impact Study

Shearling Heights Estates Ltd

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Executive Summary

GHD was retained to prepare an updated Traffic Impact Study (TIS) for the proposed major mixed-use node development located at the northwest corner of Chretien Street and Britannia Road in the Town of Milton.

The following report has been prepared as an update to the Traffic Impact Study previously submitted in February 2023. This updated submission reflects revisions to the proposed Site Plan for the subject property, including modifications to the building layout, parking supply and on-site circulation. The purpose of this update is to ensure that the findings and recommendations of the traffic assessment remain consistent with the latest development proposal and accurately reflect current design conditions.

This report establishes the future traffic volumes and operating conditions for the critical weekday a.m. and p.m. peak hour periods, estimates new site traffic volumes, and documents the expected site related impacts on the road network for a future 2030 horizon year.

The proposed development is a major mixed-use node residential development that consists of 71 townhouse units, one seven storey mixed-use building with a total of 152 apartment units and 808 m² of commercial GFA. Access to the development is proposed from Chretien Street via two full move accesses.

The proposed residential development is expected to generate a total of 125 two-way vehicle trips during the a.m. peak hour consisting of 40 inbound and 85 outbound trips. During the p.m. peak hour, it is expected to generate 163 new two-way vehicle trips consisting of 93 inbound and 70 outbound trips.

Under both existing and future 2030 traffic conditions, all study area intersections are projected to continue operating at satisfactory levels of service. The intersection analyses indicate no significant operational deficiencies, with delays and queueing expected to remain minimal and within acceptable limits for all movements.

Application of the proposed Town of Milton Zoning By-Law amendment 009-2025 of the existing By-Law 016-2014 parking rates to the subject site results in a minimum parking requirement of 342 parking spaces (294 resident vehicle parking spaces and 48 visitor parking spaces) including 9 barrier free spaces, 84 bicycle parking spaces (76 long-term spaces and 8 short-term spaces) and 1 loading area.

The subject site proposes a total of 351 parking spaces (296 resident vehicle parking spaces and 55 visitor parking spaces) including 9 barrier free spaces, 196 bicycle parking spaces (152 long-term bicycle spaces and 44 short-term spaces) and 2 loading areas which satisfies the By-Law.

GHD completed a detailed review of the proposed Site Plan with respect to site access design and internal geometric layout. The assessment confirmed that both accesses and the internal circulation system satisfy the Town of Milton's design requirements and are consistent with the Transportation Association of Canada's (TAC) Geometric Design Guide for Canadian Roads. The review included an evaluation of driveway alignments, turning radii, swept path analyses for design vehicles, and corner clearances to ensure safe and efficient vehicle movements throughout the site.

GHD assessed the site circulation for Emergency Vehicles, Waste Management Trucks, and passenger vehicles using AutoTurn and confirmed no issues with the site circulation.

A range of Transportation Demand Management (TDM) measures are proposed to encourage sustainable travel choices and reduce single-occupant vehicle use. These include enhanced pedestrian connections, secure and accessible bicycle parking, and improved transit accessibility. Collectively, these initiatives will support safer, more efficient site operations and align with the Town of Milton's objectives for active and sustainable transportation.

The traffic assessment confirms that the proposed development can be accommodated within the surrounding road network without the need for external improvements. The analysis indicates that the additional site-generated traffic is expected to have a minimal impact on intersection operations and overall network capacity under future total conditions, with all study area intersections continuing to operate at acceptable levels of service.

We trust that this satisfies your requirements, but do not hesitate to contact the undersigned if you have any questions

Sincerely,

GHD



Vincenzo Costantino, B.Eng
Transportation Planner



William Maria, P. Eng.
Transportation Planning Lead

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1. Introduction

1.1 Retainer and Objective

GHD was retained to prepare an updated Traffic Impact Study (TIS) for the proposed major mixed-use node development located on Chretien Street south of Bronson Terrace and north of Britannia Road in the Town of Milton. The site location is shown in **Figure 1**.



Figure 1 Site Location

The key elements of this study are:

- A summary of baseline traffic conditions for the study area and to derive the future background operating conditions for the study intersections at a future 2030 horizon.
- Apply the estimated traffic generation and distribution of the subject site to the adjacent road network and determine the future impacts in the context of all local transportation modes.
- A review of the site plan in the context of operational/geometric issues and provide recommendations on how to address any deficiencies (if any are revealed).

- An evaluation of the proposed parking and loading supply in the context of the Town's minimum parking and loading requirement for the site.
- Recommend Travel Demand Management measures for the site to reduce dependency on automobiles

1.2 Study Team

The GHD team involved in the preparation of this study are:

- William Maria, P. Eng., Transportation Planning Lead
- Vincenzo Costantino, B.Eng., Transportation Planner

2. Site Characteristics

2.1 Study Area

The following intersections were included in the study area based on the approved Terms of Reference for the study provided in **Appendix A**:

- Britannia Road at Chretien Street
- Chretien Street and Etheridge Avenue; and
- Chretien Street and both the site accesses.

2.2 Proposed Development Content

A Site Plan prepared for the proposed development is provided in **Figure 2** and in **Appendix B**. The proposed development is a major mixed-use node residential development that consists of 71 townhouse units, one twelve story mixed-use building with a total of 152 apartment units and 808 m² of commercial GFA.

Access to the development is proposed from Chretien Street via two full moves driveways.

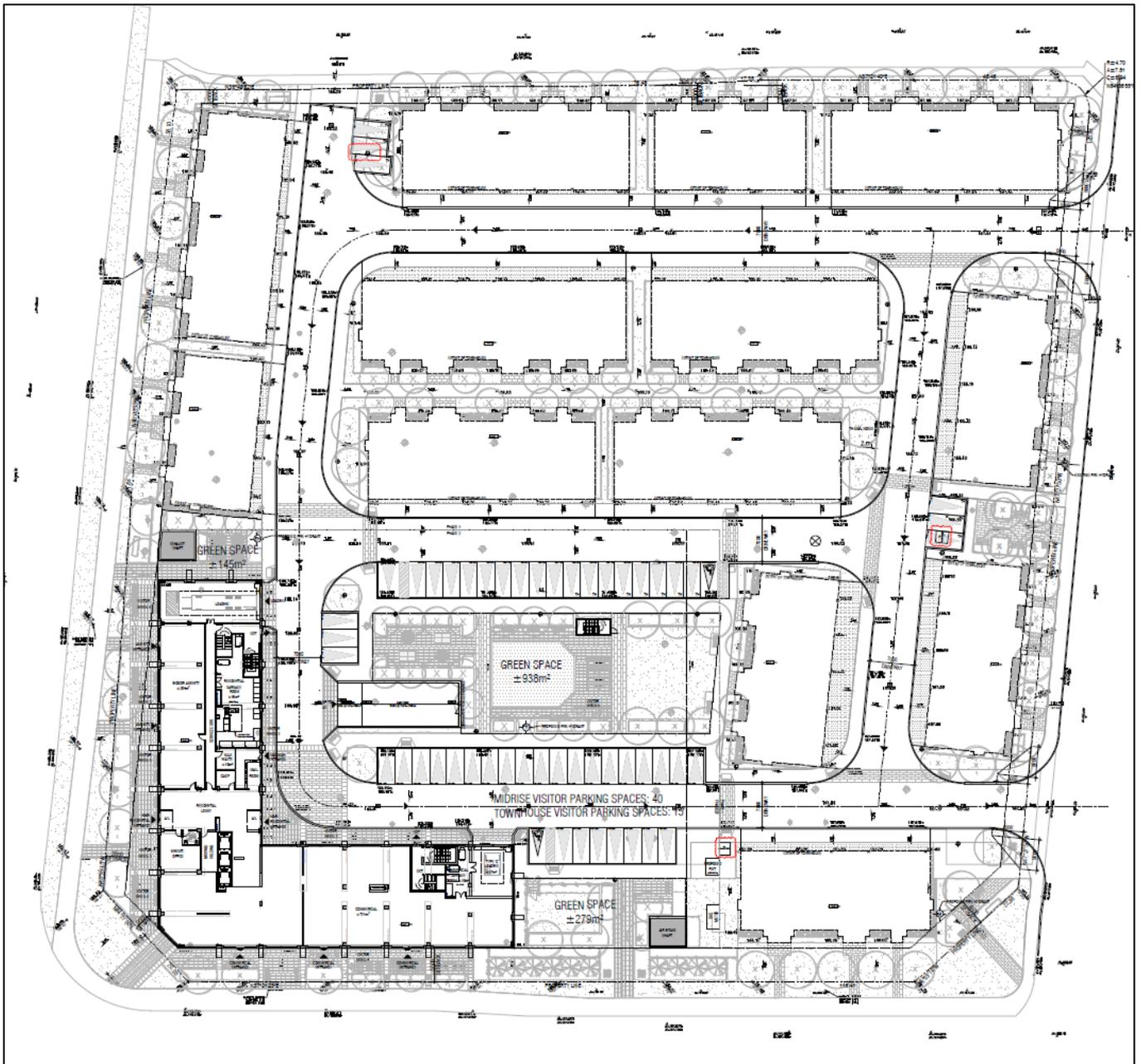


Figure 2 Proposed Site Plan

3. Existing Conditions Road Network

The following describes the existing roads within the study area:

Britannia Road is an east-west Regional arterial road under the jurisdiction of the Halton Region. The road has a six-lane cross-section. Its intersection with Chretien Street is unsignalized with stop control on the minor approach. The posted speed limit is 60 km/h.

Chretien Street is north-south collector road under the jurisdiction of the Town of Milton, with a two-lane urban cross-section and a posted speed limit of 50 km/h. Its intersection with Britannia Road is unsignalized with a right-in/out onto Britannia Road.

Etheridge Avenue is an east-west collector road under the jurisdiction of the Town of Milton with a two-lane cross-section intersecting Bronte Street South at a roundabout north of the

subject site. Its intersection with Chretien Street is unsignalized with stop control along the minor approach. The posted speed limit is 50 km/h.

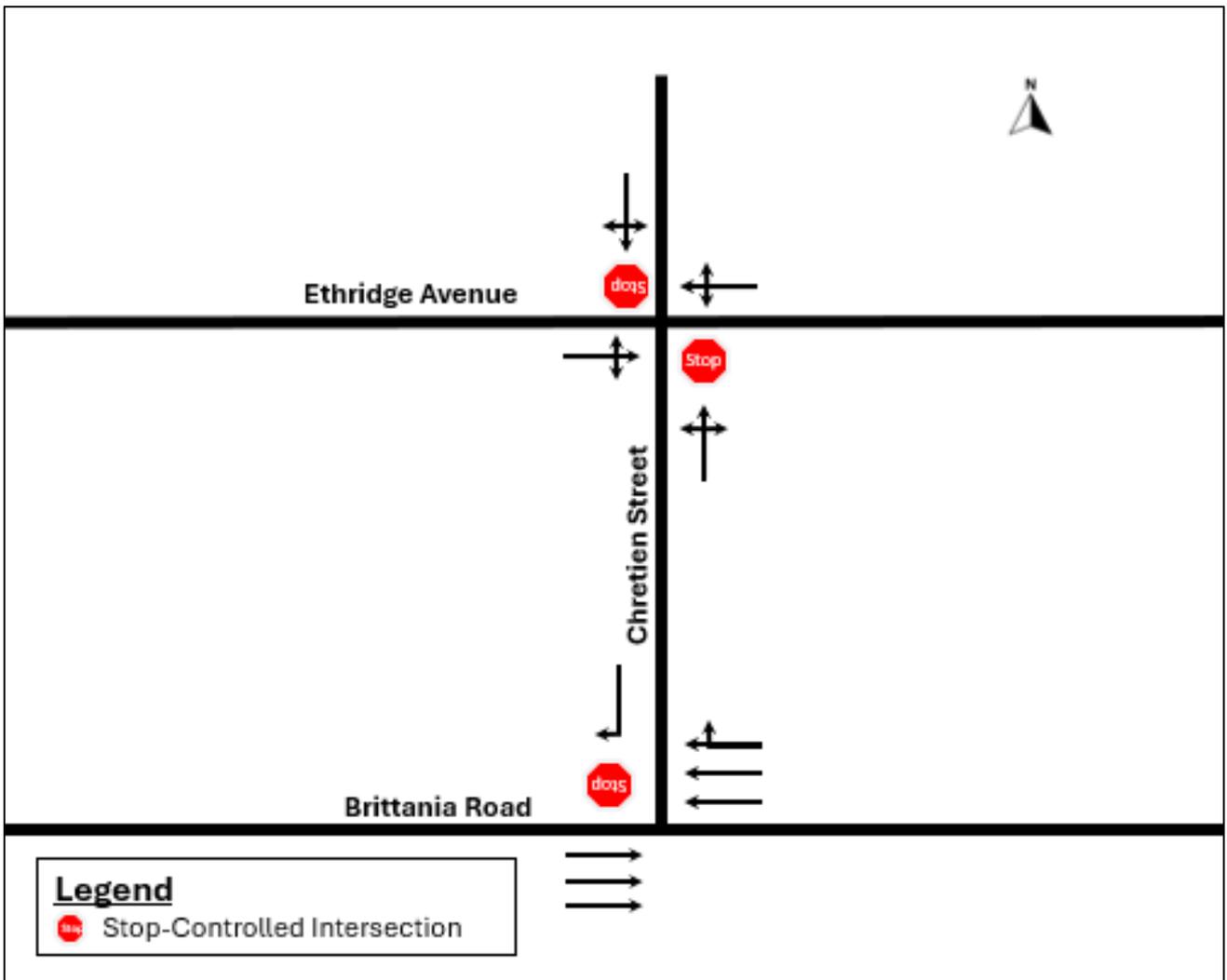


Figure 3 Existing Lane Configuration and Traffic Controls

3.1 Pedestrian and Cycling Routes

Within the study area, continuous pedestrian sidewalks are provided along both sides of Chretien Street and Ethridge Avenue, offering direct and convenient connections to the surrounding neighbourhood.

Britannia Road includes a multi-use path on both sides in addition to designated on-street bike lanes, providing a high level of accommodation for both pedestrians and cyclists. Bronte Street provides multi-use paths on both sides north of Ethridge Avenue; however, south of Ethridge Avenue, the multi-use path transitions to an on-street bike lane on the west side of Bronte Street with no adjacent sidewalk.

Ethridge Avenue also provides on-street bike lanes in both directions, further enhancing active transportation connectivity within the study area.

The existing pedestrian and cycling infrastructure are illustrated in the following figure:



Figure 4 Existing Pedestrian and Cycling Infrastructure

3.2 Transit Connections

The Milton Transit currently offers transit service along the following routes within the study area:

Route 9A operates in a general north/west direction along Regional Road 25. The route operates as a loop between the Milton GO Station and Elsie MacGill Secondary School. During both peak periods the route operates with a headway of approximately 20 minutes and 30 minutes during off peak hours during weekdays and with a headway of approximately 40 minutes during the weekend. The nearest transit stops heading northbound towards the Milton Go Station is located at Etheridge Avenue and Chretien Street (Stop ID 2416) located approximately 280 metres from the subject site and a 4-minute walk.

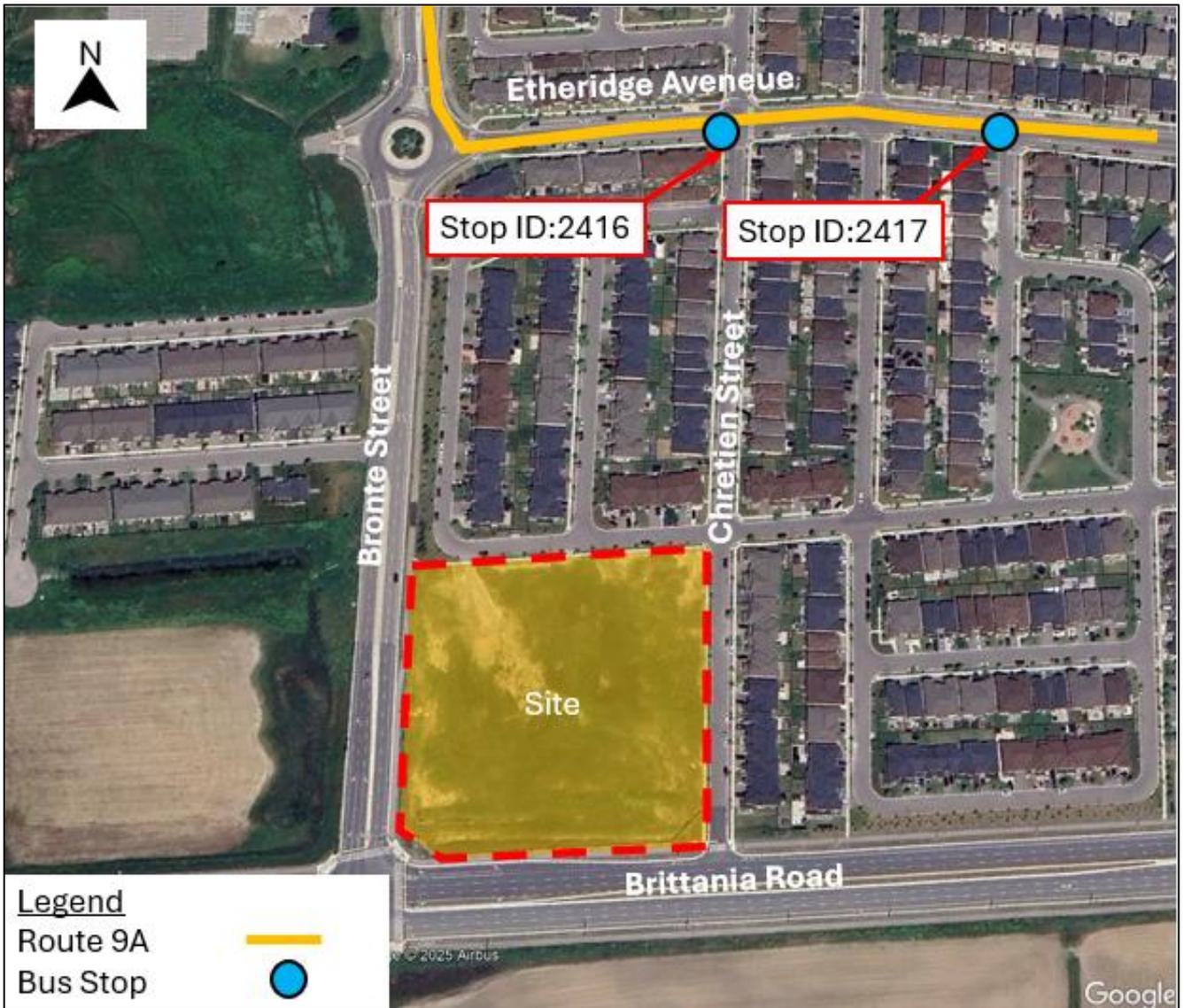


Figure 5 Existing Transit Routes

3.3 Existing Traffic Data

GHD contracted Ontario Traffic Inc. to collect updated turning movement counts at all study area intersections in September 2025. The turning movement counts were completed from 7:00-9:00 a.m. for the a.m. peak hour and from 4:00-6:00 p.m. for the p.m. peak hour, generally coinciding with the anticipated peak hours of the adjacent road network.

The existing 2025 traffic volumes are provided in **Figure 6** below and are included in **Appendix C**.

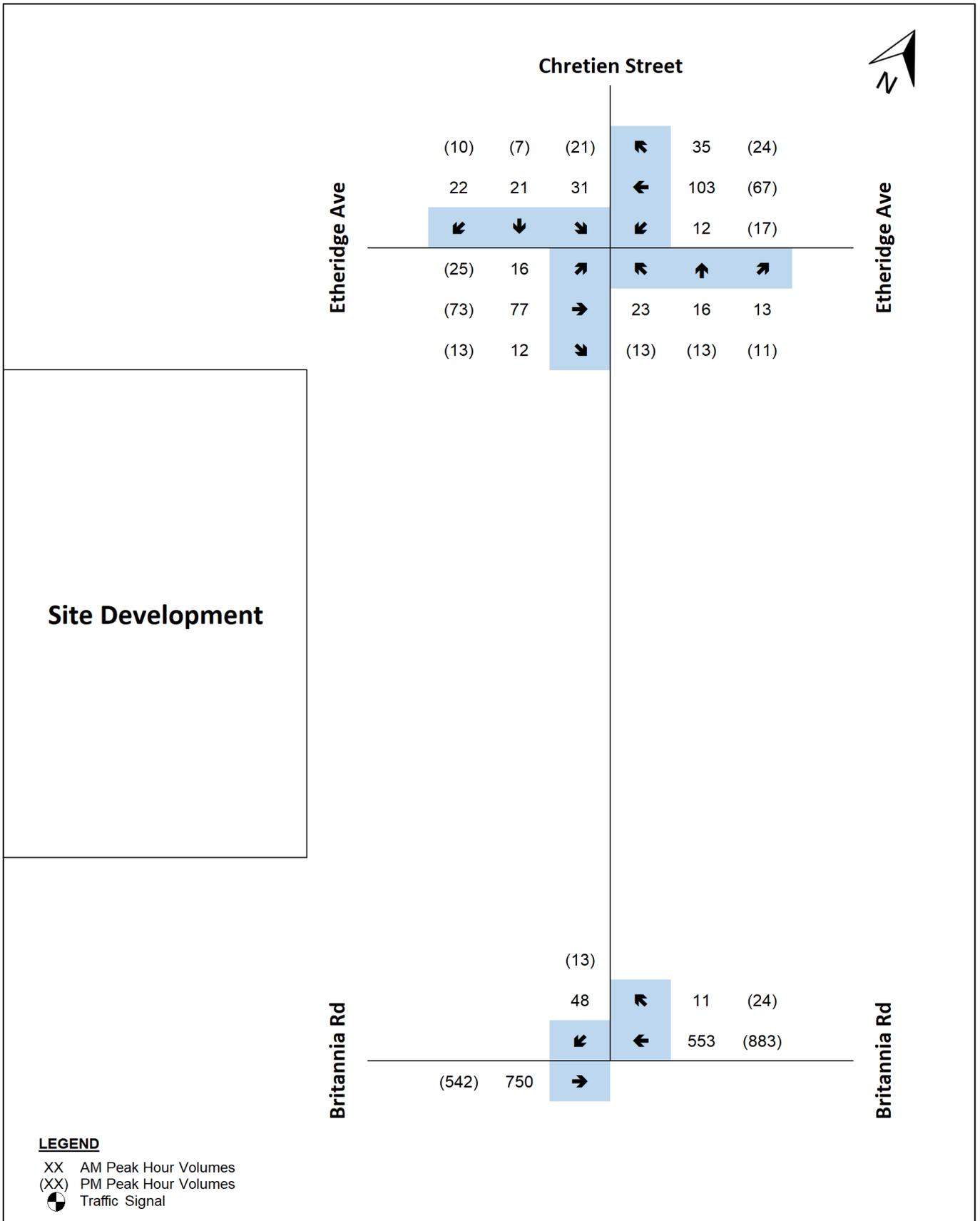


Figure 6 Existing Traffic Volumes

4. Future Background Conditions

4.1 Study Horizon Year

The future horizon year selected for analysis consists of build out in 2030, generally consistent with the Town's guidelines and with the agreed Terms of Reference.

4.2 Corridor Growth

Both Town and Region staff confirmed through the agreed terms of reference that a 2% per annum growth rate is appropriate to incorporate into the analysis to project future traffic growth.

4.3 Background Development Traffic Volumes

As agreed through the terms of reference, the following background developments were identified and included in the development of background traffic volumes:

- Shadybrook residential development located on the northwest corner of Britannia Road and Bronte Street South.

Shadybrook Residential Development

The Shadybrook Residential development consists of both townhouses and single detached homes with access along Britannia Road and Bronte Street. This development proposes an overall unit count of 116 single detached homes, 46 semi-detached homes and 205 street/back-to-back townhouse homes.

Additionally, there is a future Major Node Block which proposes the following an estimated 472 mid-rise residential units; and 72 street/back-to-back townhouse homes.

The site plan for the development is provided below with documentation of site trips attached in **Appendix D**.



Figure 7 Shady Brook Composite Plan

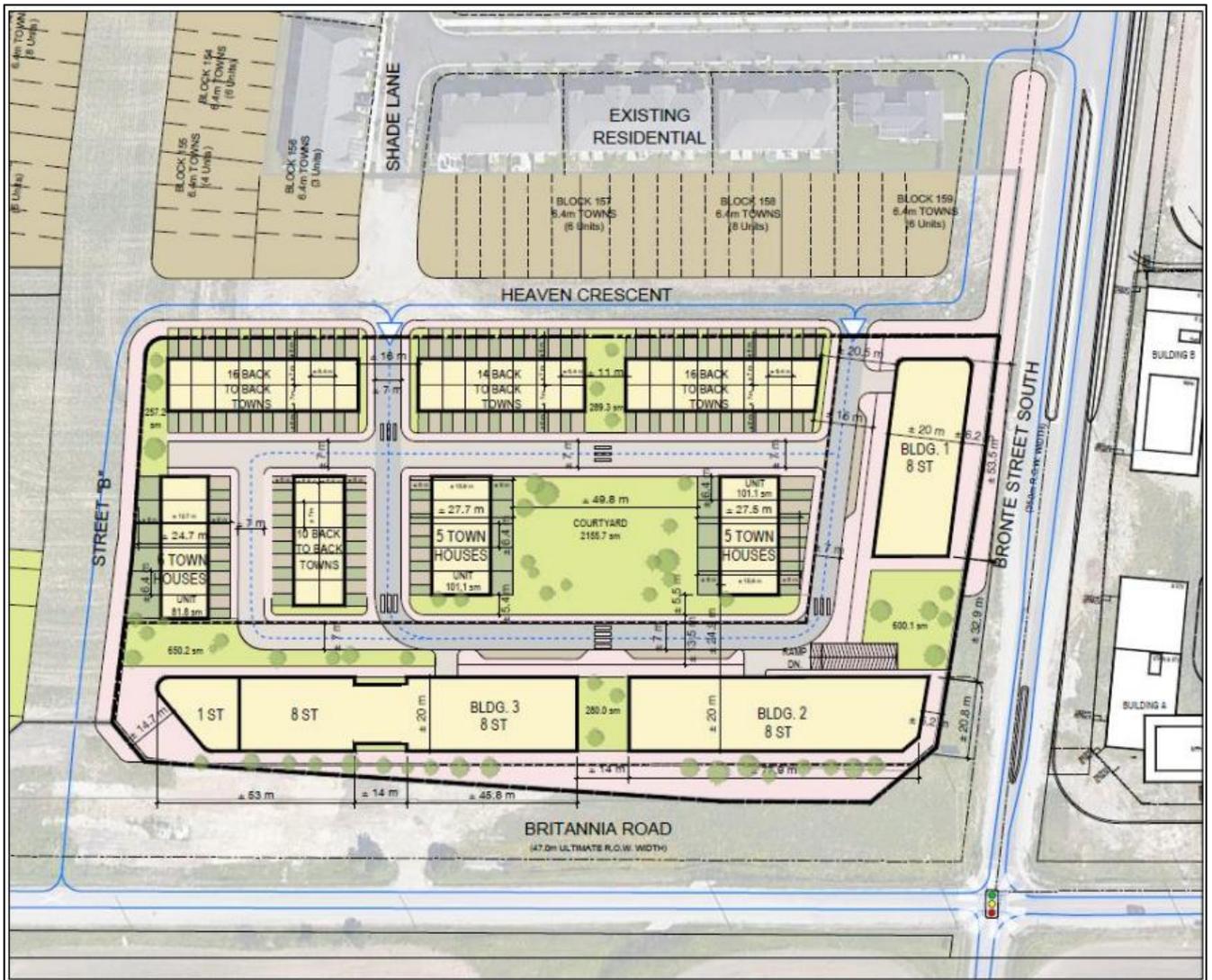


Figure 8 Shadybrook Major Node Concept Plan

The site trips for this background development generated trips based on the Transportation Engineer’s (ITE) Trip Generation Manual, 11th Edition using the land-use codes shown the table below. The table outlines the total trips generated by the development.

Table 1: Shadybrook Development Site Generated Trips

Land Uses	GFA (Dwelling Units)	Parameters	Peak Hour					
			Weekday AM			Weekday PM		
			In	Out	Total	In	Out	Total
Single Family Detached (LUC 210)	116 units	Gross rate	0.191	0.548	0.739	0.617	0.366	0.983
		New Trips	21	64	85	72	42	114
Single Family Attached (LUC 215)	323 units	Gross rate	0.151	0.347	0.498	0.331	0.251	0.582
		New Trips	41	121	162	112	78	190
Multifamily Housing (Mid-Rise) (LUC 221)	472 units	Gross rate	0.093	0.322	0.415	0.237	0.153	0.390
		New Trips	45	151	196	112	72	184
Total New Trips			107	336	443	296	192	488

The proposed subdivision is expected to generate a total of 443 new two-way trips consisting of 107 inbound and 336 outbound trips during weekday a.m. peak hour and 488 new two-way trips consisting of 296 inbound and 192 outbound trips during the weekday p.m. peak hour.

Figure 9 below illustrates the site volumes for this background development assigned to the study area intersections.

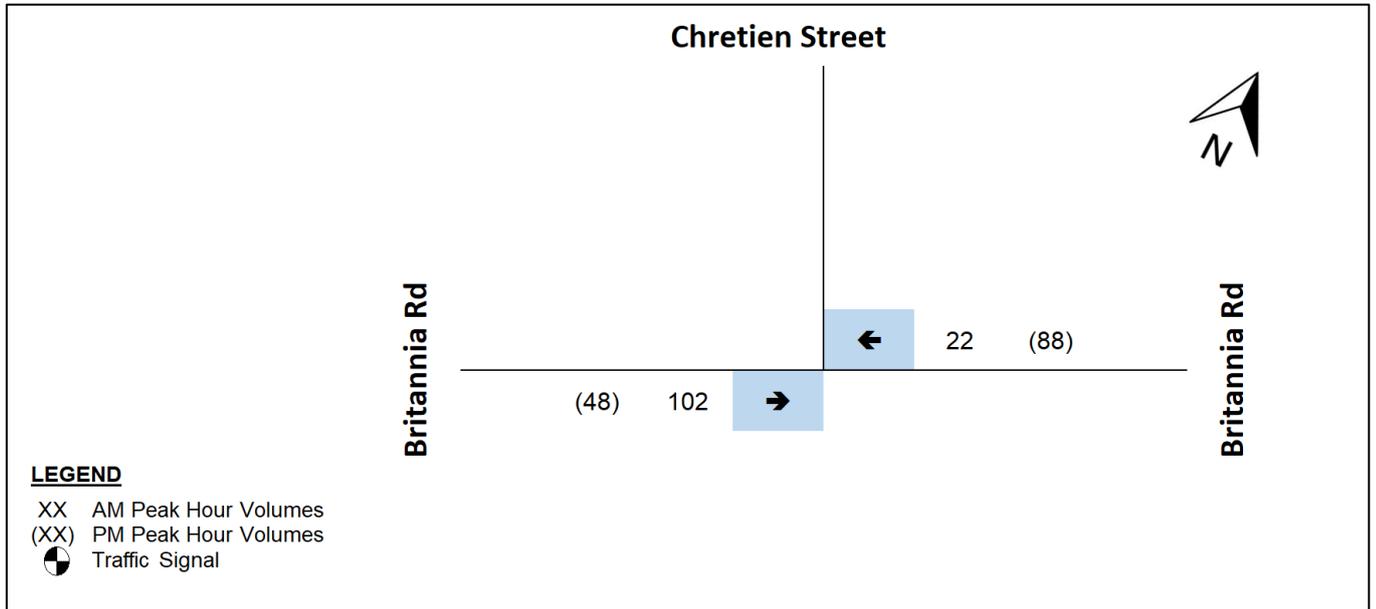


Figure 9 Shadybrook Residential Development Background Volumes

4.4 Future Background Traffic Volumes

The background traffic volumes for the 2030 horizon year were derived by applying the adopted growth rates to the existing traffic for each study intersection and adding the projected site traffic generated from the Shadybrook residential development.

The resulting 2030 future background traffic volumes are summarized in **Figure 10**.

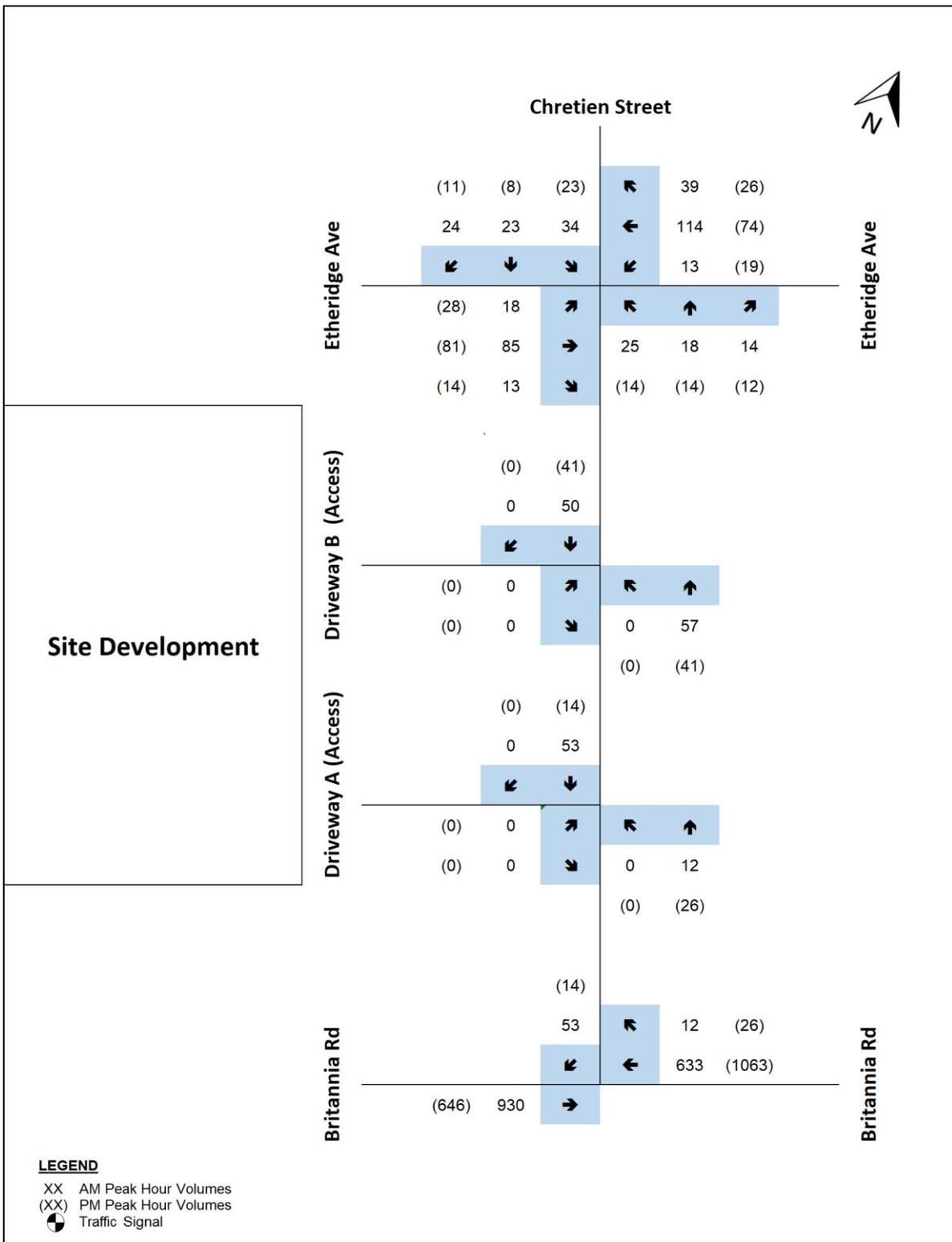


Figure 10 Estimated 2030 Future Background Traffic Volumes

5. Site Generated Traffic

Site generated trips by the proposed development for the weekday a.m. and p.m. peak hours was estimated by applying the trip rates published by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 12th Edition.

Trip generation for the 7-storey residential component used Land Use Code 221 (Multi-Family Housing Mid-Rise) and the Townhouses used Land Use Code 215 (Single-Family Attached Housing).

Trip generation for the Commercial component used Land Use Code 822 (Strip Retail Plaza (<40k)) as it closely aligns with the proposed commercial uses expected within the ground floor. **Table 2** summarizes the trip generation calculations.

The greater number of trip generation between the average rate and fitted curve equation was selected and applied as a conservative estimate of the generated traffic for this new development.

Table 2 ITE Trip Generation Rates (12th Edition)

Land Use (Land Use Code)	Dwelling Units/GFA	Parameters	Peak Hour Trip Generation					
			Weekday AM			Weekday PM		
			In	Out	Total	In	Out	Total
High-Rise Multi-Family Housing (LUC 222)	152 Units	Trip Rate	23%	77%	100%	64%	36%	100%
		Trip Ratio	0.086	0.296	0.382	0.243	0.139	0.382
		Total New Trips	13	45	58	37	21	58
Single-Family Attached Housing (LUC 215)	71 Units	Trip Rate	25%	75%	100%	57%	43%	100%
		Trip Ratio	0.125	0.347	0.472	0.292	0.222	0.514
		Total New Trips	8	25	33	21	15	36
Strip Retail Plaza <40k (LUC 822)	808 m ²	Trip Rate	55%	45%	100%	48%	52%	100%
		Trip Ratio	2.139	1.738	3.877	3.877	4.544	8.421
		Total New Trips	19	15	34	35	34	69
		Total	40	85	125	93	70	163

The proposed residential development is expected to generate a total of 125 two-way vehicle trips during the a.m. peak hour consisting of 40 inbound and 85 outbound trips. During the p.m. peak hour, it is expected to generate 163 new two-way vehicle trips consisting of 93 inbound and 70 outbound trips.

5.1 Site Trip Distribution and Assignment

Site-generated trips were assigned to the surrounding road network based on engineering judgment and informed by data from the 2016 Transportation Tomorrow Survey (TTS) consistent with the previous report. Relevant TTS data excerpts are provided in **Appendix H** for reference. The trip distribution percentages applied to site-generated traffic are summarized in **Table 3** below.

Given that the intersection of Britannia Road and Chretien Street operates as a right-in/right-out only, site-generated traffic destined to or originating from the east is expected to travel via Ethridge Avenue. Similarly, vehicles destined to or originating from the west cannot complete a

left turn at the Britannia Road/Chretien Street intersection and are therefore also expected to access or egress the site through Etheridge Avenue.

Table 3 Trip Distribution Table

Trip Orientation	AM Peak Hour		PM Peak Hour	
	In	Out	In	Out
North on Chretien Street	5%	10%	5%	10%
West on Etheridge Avenue	30%	35%	30%	35%
East on Etheridge Avenue	30%	35%	30%	35%
West on Britannia Road	0%	20%	0%	20%
East on Britannia Road	35%	0%	35%	0%

The site trip distributions for the weekday a.m. and p.m. peak hours at the study area intersections are shown in **Figure 11**.



Figure 11 Development Distribution Percentages

The total site traffic volumes for the weekday a.m. and p.m. peak hours assigned to the study area intersections are illustrated in **Figure 12**.

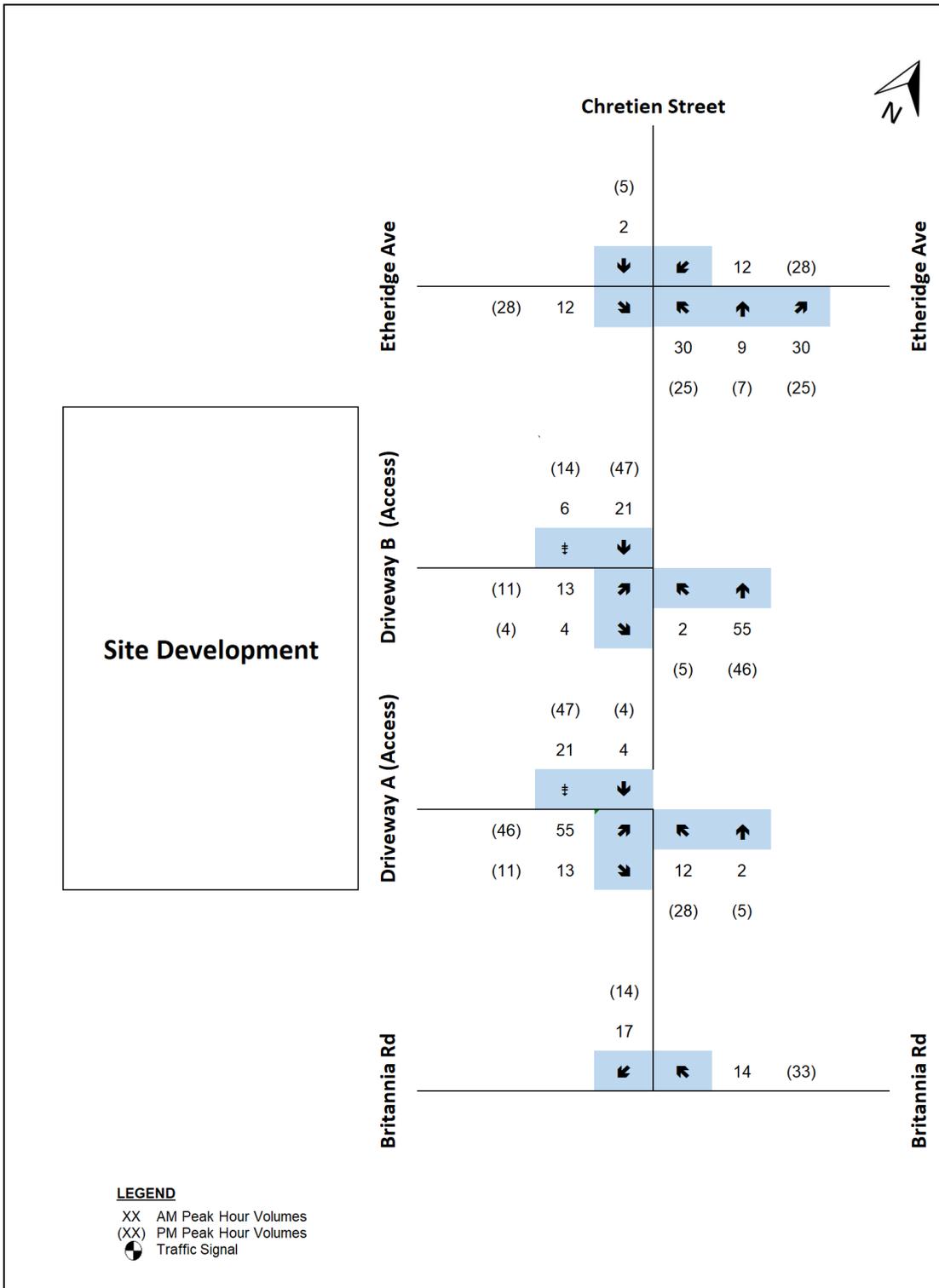


Figure 12 Site Trip Assignment

6. Future Total Traffic

The future total traffic conditions in the weekday a.m. and p.m. peak study hours for the 2030 planning horizon was derived by combining the future background traffic volumes with the corresponding estimates of site trips generated by the proposed development.

The 2030 future total traffic volumes for the weekday a.m. and p.m. peak hours at the study area intersections are summarized in **Figure 13**.

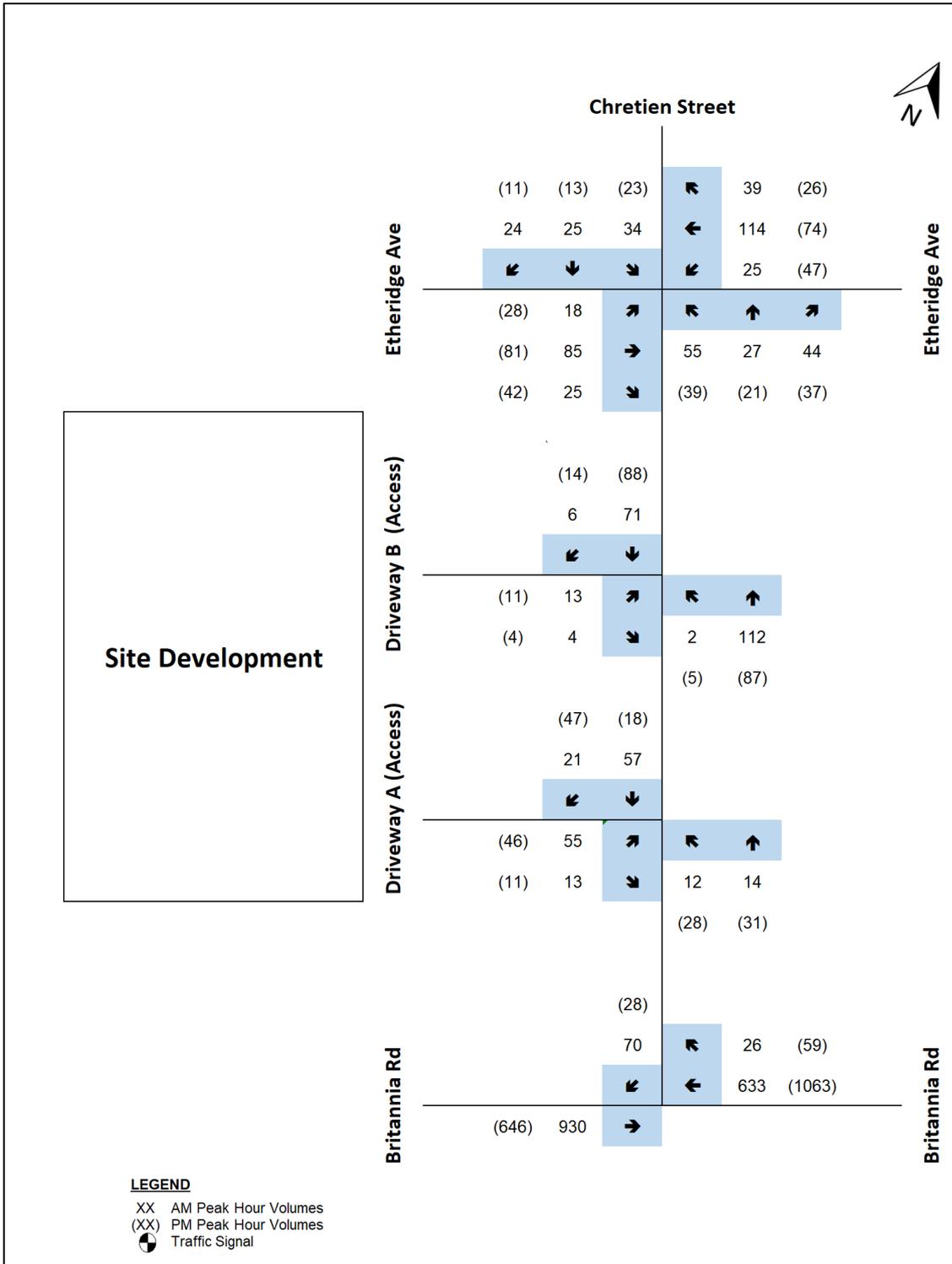


Figure 13 Future Total 2030 Traffic Volumes

7. Capacity Analysis

The capacity analysis identifies how well an intersection is operating. The analysis contained within this report utilized the Highway Capacity Manual (HCM) 2000 techniques within the Synchro Version 12 Software package. The reported intersection volume-to-capacity ratios

(V/C) are a measure of the saturation volume for each turning movement, while the levels-of-service (LOS) are a measure of the average delay for each turning movement. Queueing characteristics are reported as the predicted 95th percentile queue for each turning movement.

The analysis includes the identification of movements for unsignalized intersections where:

- Level of Service (LOS), based on average delay per vehicle, on individual movements, exceeds LOS “D”; or,
- The estimated 95th queue length for an individual movement exceeds the available queue storage.

The following tables summarize the capacity results for the study intersections during the weekday a.m. and p.m. peak hours under existing (2025), future background (2030) and future total (2030) traffic conditions. The detailed calculations sheets are provided in **Appendix E**.

7.1 Britannia Road and Chretien Street

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the existing, future background and future total traffic conditions are summarized in the following table.

Table 4 Capacity at Britannia Road and Chretien Street

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Existing 2025	EBT = 0.48 (A) 0 WBTR = 0.36 (A) 0 SBR = 0.10 (B) 13	0 0 5	EBT = 0.35 (A) 0 WBTR = 0.58 (A) 0 SBR = 0.05 (C) 17	0 0 5
Future Background 2030	EBT = 0.59 (A) 0 WBTR = 0.41 (A) 0 SBR = 0.13 (B) 14	0 0 5	EBT = 0.41 (A) 0 WBTR = 0.70 (A) 0 SBR = 0.06 (C) 21	0 0 5
Future Total 2030	EBT = 0.59 (A) 0 WBTR = 0.42 (A) 0 SBR = 0.17 (B) 15	0 0 5	EBT = 0.41 (A) 0 WBTR = 0.72 (A) 0 SBR = 0.13 (C) 23	0 0 5

During the existing 2025 condition the maximum delay during the a.m. peak hour is reported in the southbound right direction with a 13 second delay, v/c of 0.10 LOS B and a 5 metre queue. During the p.m. peak hour, the maximum delay is reported in the southbound right movement with a delay of 17 seconds, v/c of 0.05 LOS C and a 5 metre queue. The remaining movements operate under LOS A with acceptable queues and delays.

During the future background 2030 condition the v/c reports slight increases where the maximum delay during the a.m. peak hour is reported in the southbound right direction with a 14 second delay, v/c of 0.13 LOS B and a 5 metre queue. During the p.m. peak hour, the maximum delay is reported in the southbound right movement with a delay of 21 seconds, v/c of 0.06 LOS C and a 5 metre queue. The remaining movements operate under LOS A with acceptable queues and delays.

Under the future total 2030 condition with the addition of site traffic operate similar to the future background 2030 condition with a maximum delay of 15 seconds is reported in the southbound right direction with a v/c of 0.17 LOS B and a 5 metre queue. During the p.m. peak hour, the maximum delay is reported in the southbound right movement with a delay of 23 seconds, v/c of 0.13 LOS B and a 5 metre queue. The remaining movements operate under LOS A with acceptable queues and delays.

Overall, the intersection under the future horizon year of 2030 report to operate with acceptable v/c, delays and queues and as a result no improvements are recommended as a result of the addition of the proposed site.

7.2 Chretien Street and Etheridge Avenue

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the existing, future background and future total traffic conditions are summarized in the following table.

Table 5 Capacity at Chretien Street and Etheridge Avenue

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Existing 2025	EBTLR = 0.01 (A) 1 WBTLR = 0.00 (A) 1 NBTLR = 0.09 (B) 11 SBTLR = 0.12 (B) 11	5 5 5 5	EBTLR = 0.02 (A) 2 WBTLR = 0.01 (A) 1 NBTLR = 0.06 (B) 10 SBTLR = 0.06 (B) 11	5 5 5 5
Future Background 2030	EBTLR = 0.01 (A) 1 WBTLR = 0.00 (A) 1 NBTLR = 0.10 (B) 11 SBTLR = 0.14 (B) 11	5 5 5 5	EBTLR = 0.02 (A) 2 WBTLR = 0.01 (A) 1 NBTLR = 0.06 (B) 11 SBTLR = 0.07 (B) 11	5 5 5 5
Future Total 2030	EBTLR = 0.01 (A) 1 WBTLR = 0.02 (A) 1 NBTLR = 0.22 (B) 12 SBTLR = 0.15 (B) 12	5 5 10 5	EBTLR = 0.02 (A) 2 WBTLR = 0.04 (A) 3 NBTLR = 0.18 (B) 12 SBTLR = 0.09 (B) 12	5 5 5 5

During the existing 2025 condition the maximum delay during the a.m. peak hour is reported in the southbound and northbound direction with an 11 second delay, v/c of 0.09 LOS B and 0.12 LOS B respectively and a 5 metre queue. During the p.m. peak hour, the maximum delay is reported in the southbound right movement with a delay of 11 seconds, v/c of 0.06 LOS B and a 5 metre queue. The remaining movements operate under LOS A with acceptable queues and delays.

During the future background 2030 condition the v/c reports slight increases where the maximum delay during the a.m. peak hour is reported in the southbound and northbound direction with an 11 second delay, v/c of 0.10 and 0.14 respectively, LOS B and a 5 metre queue. During the p.m. peak hour, the maximum delay is in the southbound and northbound direction with an 11 second delay, v/c of 0.06 and 0.07 respectively, LOS B and a 5 metre queue. The remaining movements operate under LOS A with acceptable queues and delays.

Under the future total 2030 condition with the addition of site traffic operate similar to the future background 2030 condition with a maximum delay of 12 seconds is reported in the southbound and northbound direction, v/c of 0.22 and 0.15 respectively, LOS B and a 10 and 5 metre queue respectively. During the p.m. peak hour, the maximum delay is in the southbound and northbound direction with a 12 second delay, v/c of 0.18 and 0.09 respectively, LOS B and a 5 metre queue. The remaining movements operate under LOS A with acceptable queues and delays.

Overall, the intersection under the future horizon year of 2030 report to operate with acceptable v/c, delays and queues and as a result no improvements are recommended as a result of the addition of the proposed site.

7.3 Chretien Street and Driveway Access A

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic conditions are summarized in the following table.

Table 6 Capacity at Chretien Street and Driveway Access A

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2030	EBLR = 0.08 (A) 9	5	EBLR = 0.07 (A) 10	5
	NBTL = 0.00 (A) 4	5	NBTL = 0.02 (A) 4	5
	SBTR = 0.05 (A) 0	0	SBTR = 0.04 (A) 0	0

The capacity analysis of the proposed site access A on Chretien Street under 2030 future total traffic conditions indicates that the intersection is expected to operate well within acceptable performance thresholds during both peak periods. All movements are forecasted to operate at LOS A, with minimal delays and short queue lengths.

The proposed site access is projected to accommodate site-generated traffic with no issues. The short queues and low delays suggest that the driveway will function efficiently under the future horizon traffic conditions.

7.4 Chretien Street and Driveway Access B

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the future total traffic conditions are summarized in the following table.

Table 7 Capacity at Chretien Street and Driveway Access B

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95 th % Que.	V/C (LOS) seconds	95 th % Que
Future Total 2030	EBLR = 0.02 (A) 10	5	EBLR = 0.02 (A) 10	5
	NBTL = 0.00 (A) 0	0	NBTL = 0.00 (A) 0	5
	SBTR = 0.05 (A) 0	0	SBTR = 0.07 (A) 0	0

The capacity analysis of the proposed site access B on Chretien Street under 2030 future total traffic conditions indicates that the intersection is expected to operate well within acceptable performance thresholds during both peak periods. All movements are forecasted to operate at LOS A, with minimal delays and short queue lengths.

The proposed site access is projected to accommodate site-generated traffic with no issues. The short queues and low delays suggest that the driveway will function efficiently under the future horizon traffic conditions.

8. Parking Review

GHD reviewed the Town’s current Zoning By-Law for parking and loading requirements for the proposed site.

8.1 Town of Milton Zoning By-Law 016-2014 and Zoning By-Law Amendment 009-2025

8.1.1 Vehicular Parking

As per the Town of Milton Zoning By-law Amendment 009-2025 to the existing By-law 016-2014, Sections 5.8.1 and 5.8.2, the following outlines the minimum off-street parking requirements applicable to the proposed development.

For the 7-storey residential building component, the provisions for mixed-use buildings (MU) have been reviewed and approved by the Town on December 8 2025 and the updated requirements are provided below.

For the townhouse component, parking has been calculated based on the “All Other Dwelling Types” category, as a specific parking rate for townhouse uses is not currently identified under Table 5E of Section 5.8.1 of the existing by-law.

All Other Dwellings Unit

- 2 parking spaces per unit plus 0.20 parking spaces per unit for visitors on a lot with four or more dwelling units.

Mixed-Use Building

- 1.00 parking spaces per dwelling unit plus the greater of 0.20 parking spaces per residential dwelling unit for visitor parking or 1 parking space per 25 m² or gross floor area for the non-residential component in a mixed-use building

The minimum number of parking spaces required for the subject site is as follows:

All Other Dwellings Unit

- Residential parking
 - 2 parking spaces per unit x 71 units = 142 parking spaces
- Visitor Parking
 - 0.20 parking spaces per unit for visitors x 71 units = 15 visitor spaces

Mixed-Use Building

- Residential parking
 - 1.00 parking spaces per dwelling unit x 152 unit = 152 parking spaces.
- Visitor Parking
 - 0.20 parking spaces per unit for visitors x 152 units = 31 visitors parking spaces
 - 1 parking space per 25 m² or gross floor area = 1 x 808/25 = 33 visitor parking spaces.

In total, a minimum of 294 resident vehicle parking spaces (152 resident spaces for the 7-storey building and 142 resident spaces for the townhouses) and 48 visitor parking spaces (33

visitor spaces for 7-storey building and 15 visitor parking spaces) are required under the Town's proposed By-Law.

8.1.2 Accessible Parking

The minimum requirement for accessible parking spaces can be found in the same Town of Milton Zoning By-Law. The minimum By-Law requirement extracted from Table 5H, the accessible parking for the subject site is based on the total number of required parking spaces in all parking areas on a lot or use and is as follows:

Number of parking spaces provided:

- 1 to 12 spaces: 1 Type A parking space
- 13 to 100 spaces: 4% of the total number of parking spaces in the parking area
- 101 to 200 spaces: 1 accessible parking spaces plus 3% of the total number of parking
- 201 to 1000 spaces: 2 accessible parking spaces plus 2% of the total number of parking
- More than 1000 spaces: 11 accessible parking spaces plus 1% of the total number of parking spaces

The minimum number of accessible parking spaces required for the subject site is as follows:

7-storey mid-rise building

- Residential = $2 + 2\% \times 152 = 6$ accessible parking spaces
- Commercial + Mid Rise Visitor Parking = $4\% \times 33 = 2$ accessible parking spaces

Townhouses

- Townhouse Visitor parking = $4\% \times 15 = 1$ accessible parking space

The proposed residential development is required to provide a minimum of 9 accessible parking spaces (8 for the 7-storey mid-rise building and 1 for the townhouses).

8.1.3 Bicycle Parking

The Town of Milton Zoning By-Law 016-2014 table 5I, the following minimum bicycle parking requirement for the proposed development is as follows:

Apartment Building and Mixed-Use Building

- 0.5 long term bicycle parking space/unit plus 0.05 short term bicycle parking/unit

The minimum number of bicycle parking spaces required for the subject site is as follows:

- Long Term
 - $0.5 \text{ long term bicycle parking space/unit} \times 152 \text{ units} = 76 \text{ long-term bicycle parking spaces.}$
- Short Term
 - $0.05 \text{ short term bicycle parking/unit} \times 152 \text{ units} = 8 \text{ short-term bicycle parking spaces}$

The proposed residential development is required to provide a minimum of 84 bicycle parking spaces (76 long-term bicycle parking spaces and 8 short-term bicycle parking spaces)

8.1.4 Loading Space and Loading Area Requirement

The minimum requirement for loading spaces and loading areas can be found in the same Town of Milton Zoning By-Law. The minimum By-Law requirement extracted from Table 5J. the total number of required loading spaces and loading areas in all parking areas on a lot are as follows:

Number of gross floor area provided:

- 280 m² of GFA or less: 0 loading spaces, 0 loading area
- 281 m² to 930 m² of GFA: 0 loading space, 1 loading area
- 931 m² to 2325 m² of GFA: 0 loading space, 1 loading area
- 2326 m² to 7440 m² of GFA: 2 loading spaces, 0 loading area
- 7440 m² GFA or greater: 2 loading spaces, 0 loading area

As per the above provisions, the 808 m² GFA commercial component of the mid-rise development requires the provision of 1 loading area.

8.2 Proposed Site Parking

The following table summarizes the minimum By-law requirements and the proposed parking and loading supply for the proposed site.

Table 8 Parking Requirements and Provisions

Type	Site Statistics	By-Law 016-2014 and Zoning By-Law Amendment 009-2025	Provided
Vehicle Parking	152 mid-rise dwelling units 71 townhouse units 808 m ² of commercial GFA	294 resident vehicle parking spaces (152 for the 7-storey building and 142 resident spaces for townhouses) 48 visitor parking spaces (33 for 7-storey building and 15 for townhouses)	296 resident vehicle parking spaces 55 visitor parking spaces
Accessible Parking		9 accessible parking spaces (8 for 7-storey mid-rise building and 1 townhouses)	9 accessible parking spaces

Bicycle Parking		84 bicycle parking spaces (76 long-term bicycle parking spaces and 8 short-term bicycle parking spaces)	196 bicycle parking spaces (152 long-term bicycle parking spaces and 44 short-term bicycle parking spaces)
Loading Spaces		1 loading area	2 loading areas

The subject site satisfies the Town’s Zoning By-Law requirement for vehicle parking, barrier free, bicycle parking and loading spaces.

9. Site Plan Layout Review

GHD completed a review of the proposed site plan with respect to its geometric layout ensuring that it meets the necessary requirements of the Town of Milton with consideration for guidelines in the Transportation Association of Canada’s (TAC) Geometric Design Guide for Canadian Roads. The results of the review are as follows:

- The proposed tangent spacing between the northerly site access and Bronson Terrace is approximately 17 metres and meets the TAC minimum access spacing guidelines of 2 metre minimum spacing between a driveway and a street corner (TAC 2017, Page 52, Figure 8.9.2)
- The proposed tangent spacing between the northerly site access and the southerly site access on Chretien Street is approximately 69 metres and meets the TAC minimum access spacing guidelines of 1 metre minimum spacing between two adjacent driveways (TAC 2017, Page 52, Figure 8.9.2)
- The proposed tangent spacing between the southerly site access and the right in-right out on Britannia Road is approximately 33 metres (measured from curb extension to curb extension) and meets the TAC minimum access spacing guidelines of 25 metre minimum spacing as per figure 8.8.2 in the TAC manual. (TAC 2017, Page 44, Figure 8.8.2)
- The proposed site access has a width of approximately 9 meters (northerly driveway) and 10 meters (south driveway) for the two-way site driveways respectively which meets the Town of Milton Engineering Standard E-43 for “Light Industrial, Condo, Commercial and Apartment” land uses.
- The site has a curb radius of 7.7 – 7.8 meters for the northerly access and 9.3 meters for southerly access which meets the Town of Milton Engineering Standard E-43 requirement of 6 meters minimum for “Light Industrial, Condo, Commercial and Apartment” land use.

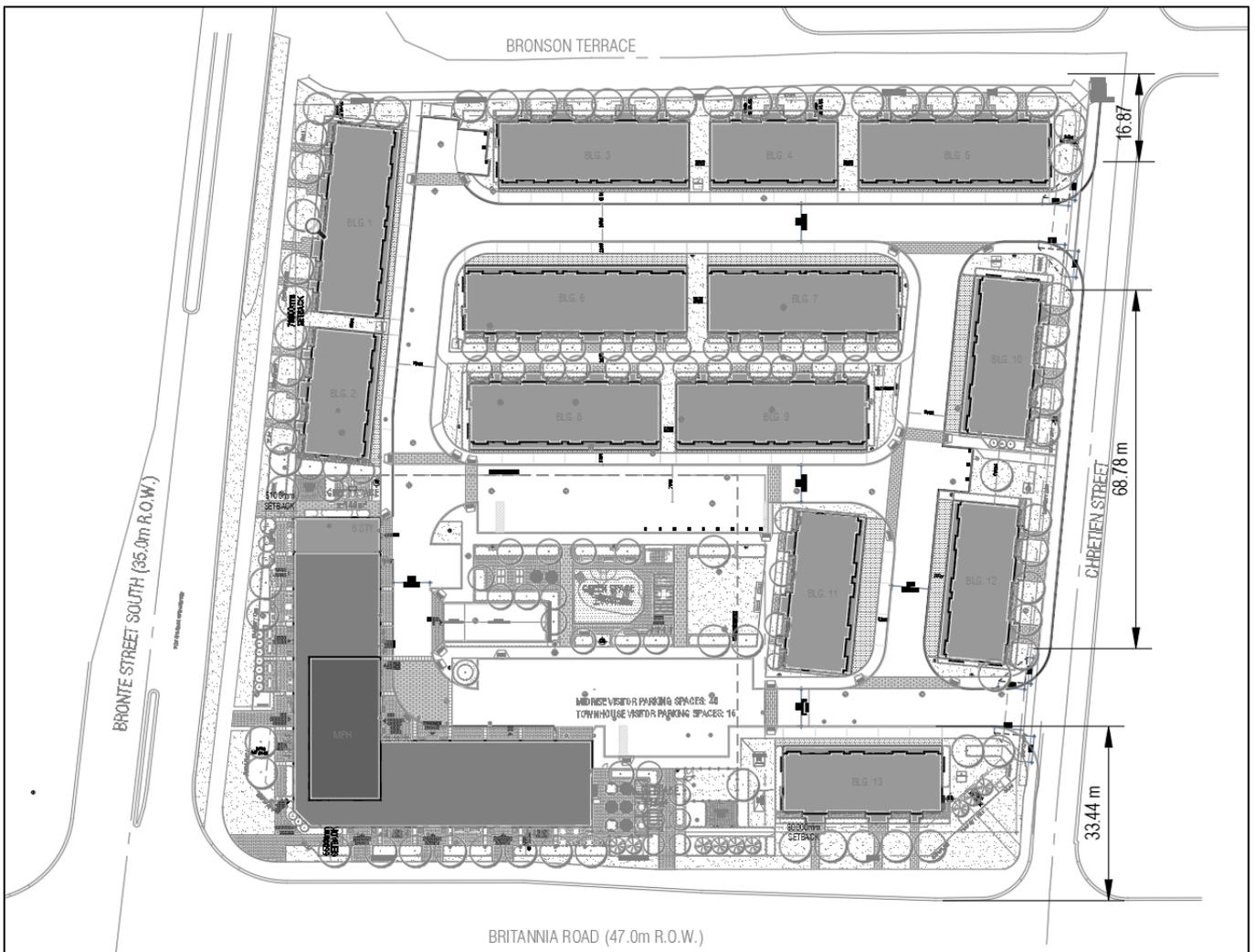


Figure 14 Intersection Spacing Diagram

10. Vehicle Swept Path Analysis

GHD undertook a vehicle swept path analysis to assess the site plan circulation for emergency vehicles along the fire route, waste collection truck circulating to the loading area, and passenger vehicles circulating through the site.

The results of the analysis, which are provided in **Appendix F** illustrate that the site can sufficiently accommodate the aforementioned design vehicles with no issues.

11. Pavement Marking and Signage Plan

GHD prepared a pavement marking and signage plan for the proposed site with the recommended signage and pavement markings within the subject site. The pavement marking and signage plan is provided in **Appendix G**.

12. Travel Demand Management Measures

Travel Demand Management (TDM) refers to a variety of strategies to reduce congestion, minimize the number of single-occupant vehicles, encourage non-auto modes of travel, and

reduce vehicle dependency to create a sustainable transportation system. TDM strategies have multiple benefits including the following:

- Reduced auto-related emissions to improve air quality;
- Decreased traffic congestion to reduce travel time;
- Increased travel options for businesses and commuters;
- Reduced personal transportation costs and energy consumptions; and
- Support Provincial smart growth objectives.

The combined benefits listed above will assist in creating a more active and livable community through improvements to overall active transportation standards for the local businesses and surrounding community.

12.1 Suggested TDM Measures

Table 9 Suggested TDM Measures

TDM Measure	Responsibility	Cost	Note
Hard Measures			
Pedestrian connections	Applicant	Integrated into the overall development cost	Site plan includes a walkway system providing a connection to the existing municipal right-of-way
Public Transit Access	Applicant	Integrated into the overall development cost	The subject site is located within walking distance of transit stops located along Ethridge Avenue.
Bicycle Parking	Applicant	Integrated into the overall development cost.	The development proposes to include bicycle parking
Soft Measures			
Information packages	Applicant	Nominal cost.	Provide information package to residents on alternatives such as cycling, transit schedules and available nearby amenities within walking distance

13. Conclusion

The proposed development is a major mixed-use node residential development that consists of 71 townhouse units, one seven storey mixed-use building with a total of 152 apartment units and 808 m² of commercial GFA. Access to the development is proposed from Chretien Street via two full move accesses

Based on the ITE Trip Generation rates the proposed residential development is expected to generate a total of 125 two-way vehicle trips during the a.m. peak hour consisting of 40 inbound and 85 outbound trips. During the p.m. peak hour, it is expected to generate 163 new two-way vehicle trips consisting of 93 inbound and 70 outbound trips.

Under both existing and future 2030 traffic conditions, all study area intersections are projected to continue operating at satisfactory levels of service. The intersection analyses indicate no significant operational deficiencies, with delays and queueing expected to remain minimal and within acceptable limits for all movements.

Application of the proposed Town of Milton Zoning By-Law amendment 009-2025 of the existing By-Law 016-2014 parking rates to the subject site results in a minimum parking requirement of 342 parking spaces (294 resident vehicle parking spaces and 48 visitor parking spaces) including 9 barrier free spaces, 84 bicycle parking spaces (76 long-term spaces and 8 short-term spaces) and 1 loading area.

The subject site proposes a total of 351 parking spaces (296 resident vehicle parking spaces and 55 visitor parking spaces) including 9 barrier-free spaces, 196 bicycle parking spaces (152 long-term bicycle spaces and 44 short-term spaces) and 2 loading areas which satisfy the By-Law.

GHD completed a review of the proposed site plan with respect to its geometric layout ensuring that it meets the necessary requirements of the Town of Milton with consideration for guidelines in the Transportation Association of Canada's (TAC) Geometric Design Guide for Canadian Roads and both accesses satisfy the requirements.

GHD assessed the site circulation for Emergency Vehicles, Waste Management Trucks, and passenger vehicles using Auto Turn and confirmed no issues with the site circulation.

A range of Transportation Demand Management (TDM) measures are suggested for the development that are designed to promote safer, more efficient traffic flow and encourage alternative travel modes such as the addition of bicycle parking spaces, pedestrian infrastructure and transit accessibility.

The traffic study confirms that the proposed development can be accommodated on the adjacent road network and is expected to have a minimal impact on the future capacity of the existing or planned road network.

Appendix A

Terms of Reference

FW: Shearling Heights Update

From Will Maria <William.Maria@ghd.com>
Date Mon 10/6/2025 10:36 AM
To Vincenzo Costantino <Vincenzo.Costantino@ghd.com>

Will

William C. Maria, P.Eng.
Transportation Planning Lead

GHD Ltd.

T: 905 814 4397 | C: 647 229 8541 | F: 905 890 8499 | E: will.maria@ghd.com

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Please consider our environment before printing this email

From: Loro, Darren <Darren.Loro@halton.ca>
Sent: Tuesday, April 1, 2025 7:49 PM
To: Will Maria <William.Maria@ghd.com>
Cc: Chris.Toews@milton.ca
Subject: RE: Shearling Heights Update

Hi Will,

Thank you for circulating the proposed TIS Update Terms of Reference following our correspondence. Halton Region's comments are provided below in [blue](#).

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

Cheers,
Darren

From: Will Maria <William.Maria@ghd.com>
Sent: Tuesday, April 1, 2025 12:22 PM
To: Loro, Darren <Darren.Loro@halton.ca>; Chris.Toews@milton.ca
Subject: RE: Shearling Heights Update

GHD is going to update the previous traffic study based on the comments received from the Region and Town and as a result of an new Site Plan.

For the updated study we will generally following the same Terms of Reference as the original report including:

Study Intersections: [Acceptable](#)

- Britannia Road and Chretien Street
- Chretien Street and Etheridge

- Both side driveways

Traffic Data: New 2025 traffic counts to be undertaken at all study intersections except for the site access. [Acceptable](#)

Study Peak Hours: Weekday a.m. and p.m. peak hours. [Acceptable](#)

Trip Generation: Based on latest edition of ITE 11th edition. [Acceptable, as long as all trip generation assumptions are clearly documented in the TIS with supporting data appended.](#)

Transportation Modes: No transit modal split to be applied, in consideration of assumptions already incorporated in the trip generation data from the 11th Edition of the Trip Generation Manual. [Acceptable](#)

Trip Distribution: To be consistent with the original study. [Acceptable, as long as all trip distribution assumptions are clearly documented in the TIS with supporting data appended.](#)

Study Horizon Year: Existing and five years (2030) as per Halton TIS guidelines. [Acceptable.](#)

Corridor Growth: 2% per annum to be applied to existing traffic counts to project to 2030. [Acceptable.](#)

Background Development Traffic: Future Shadybrook residential development located at the northwest corner of Bronte and Britannia [Acceptable, as long as all assumptions, methodologies and calculations are clearly documented in the TIS.](#)

Transportation Network: All planned construction has been completed, no other improvements are planned within the study horizon. [Acceptable](#)

Analysis: Site access operations/design and internal circulation (AutoTurn, parking layout, safety and operations) to be updated based on new Site Plan. [Acceptable. Please compare the proposed corner clearance availability on Chretien Street between Britannia Road and the southerly site access to the minimum corner clearance requirements per the Transportation Association of Canada \(TAC\) Geometric Design Guide for Canadian Roads \(GDGCR\).](#)

Additional comments:

- The TIS must conform to Halton Region's Transportation Impact Study Guidelines (2015). The Region's TIS Guidelines are available online at: <https://www.halton.ca/Repository/Transportation-Impact-Study-Guidelines>
- All traffic operations analysis must conform to the Region's TIS Guidelines. This includes documenting all analysis methodologies, and highlighting or bolding all critical volume-to-capacity ratios or 95th percentile queue lengths results that exceed the thresholds outlined in the TIS Guidelines.
- The TIS must confirm that the ultimate intersection geometrics that have been constructed at the Britannia Road intersections can accommodate site generated traffic under 2030 future total conditions.
- If traffic operations issues are identified under future background or total conditions, then the TIS will need to recommend mitigation measures to address these issues (even if not necessarily triggered by the proposed development) or at the very least, rationalize the traffic operations issues if there are no feasible mitigation measures. The TIS should identify who is responsible for each recommended mitigation measure, if required.
- The TIS must document existing and development-specific Transportation Demand Management (TDM) opportunities for the proposed development to reduce single-occupant vehicle (SOV) trips and promote non-auto transportation.

Please confirm this approach is acceptable and captures everything the Region and Town needs to clear all comments.

Will

William C. Maria, P.Eng.
Transportation Planning Lead

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Please consider our environment before printing this email

From: Loro, Darren <Darren.Loro@halton.ca>

Sent: Tuesday, April 1, 2025 11:58 AM

To: Will Maria <William.Maria@ghd.com>

Subject: RE: Shearling Heights Update

Hi Will,

I saw your e-mail yesterday but wasn't able to respond – my apologies! Also, my desk phone is currently not working (our IT is working on it) but even if it was, I would still recommend that inquiries to me go through e-mail as we have a hybrid home/office work system and I'm not at my desk every day of the week.

I can set up a discussion between us and Chris at our earliest availability this week if you'd like. However, from the Region's perspective, this is a very comparable (almost identical) scenario to the 8671 Britannia Road site for the reasons why we need a new TIS and what we would be looking for in the TIS Update (e.g. same Regional study intersections as the previous subdivision TIS, updated traffic counts, estimate remaining subdivision build-out site traffic, 2% growth rate compounded annually, ITE Trip Gen 11th edition, and documenting any modelling assumptions).

If that answers your questions, I would recommend sending us your proposed TIS Terms of Reference so we can review and provide feedback. I'm still happy to set up a discussion if you'd like – just let me know 😊

Cheers,
Darren

From: Will Maria <William.Maria@ghd.com>

Sent: Tuesday, April 1, 2025 11:22 AM

To: Loro, Darren <Darren.Loro@halton.ca>

Subject: RE: Shearling Heights Update

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe. If you are unsure or need assistance please contact the IT Service Desk.

Hi Darren, following up again on this email.

Tried calling you but your extension is not working and hangs up the phone each time.

Let me know your schedule.

I am hoping to discuss whether an updated TIS is required for the resubmission of this report.

Unit count changes but only slightly.

But like the other site, will you guys need an update which include new traffic data for the study intersections.

Thanks,

Will

William C. Maria, P.Eng.

Transportation Planning Lead

GHD Ltd.

T: 905 814 4397 | C: 647 229 8541 | F: 905 890 8499 | E: will.maria@ghd.com

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Please consider our environment before printing this email

From: Will Maria <william.maria@ghd.com>

Sent: Monday, March 31, 2025 11:04 AM

To: Loro, Darren <Darren.Loro@halton.ca>

Subject: Shearling Heights Update

Hi Darren, do you have a few minutes to discuss what the Region will be looking for in an update to our TIS for the Shearling Heights site?

I am available anytime today.

Thanks,

Will

William C. Maria, P.Eng.
Transportation Planning Lead

GHD Ltd.

T: 905 814 4397 | C: 647 229 8541 | F: 905 890 8499 | E: will.maria@ghd.com

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Please consider our environment before printing this email

From: Loro, Darren <Darren.Loro@halton.ca>

Sent: Tuesday, March 18, 2025 2:30 PM

To: Will Maria <william.maria@ghd.com>

Cc: chris.toews@milton.ca

Subject: 8671-8751 Britannia Road TIS Update Scope - Discussion

Hi Will,

Following our discussion, please send Chris and I your proposed TIS Update Terms of Reference for our formal review and approval that incorporates the elements we talked about (i.e. Britannia/Kennedy and Britannia/Thompson, new counts, estimate remaining subdivision build-out site traffic, 2% growth rate compounded annually, ITE Trip Gen 11th edition, and documenting any modelling assumptions).

Thanks again for making the time earlier – it was a very productive discussion!

Cheers,
Darren

Darren Loro, C.E.T.

Project Manager I – Transportation Development Review

Development Services

Public Works

Halton Region

905-825-6000, ext. 2694 | 1-866-442-5866

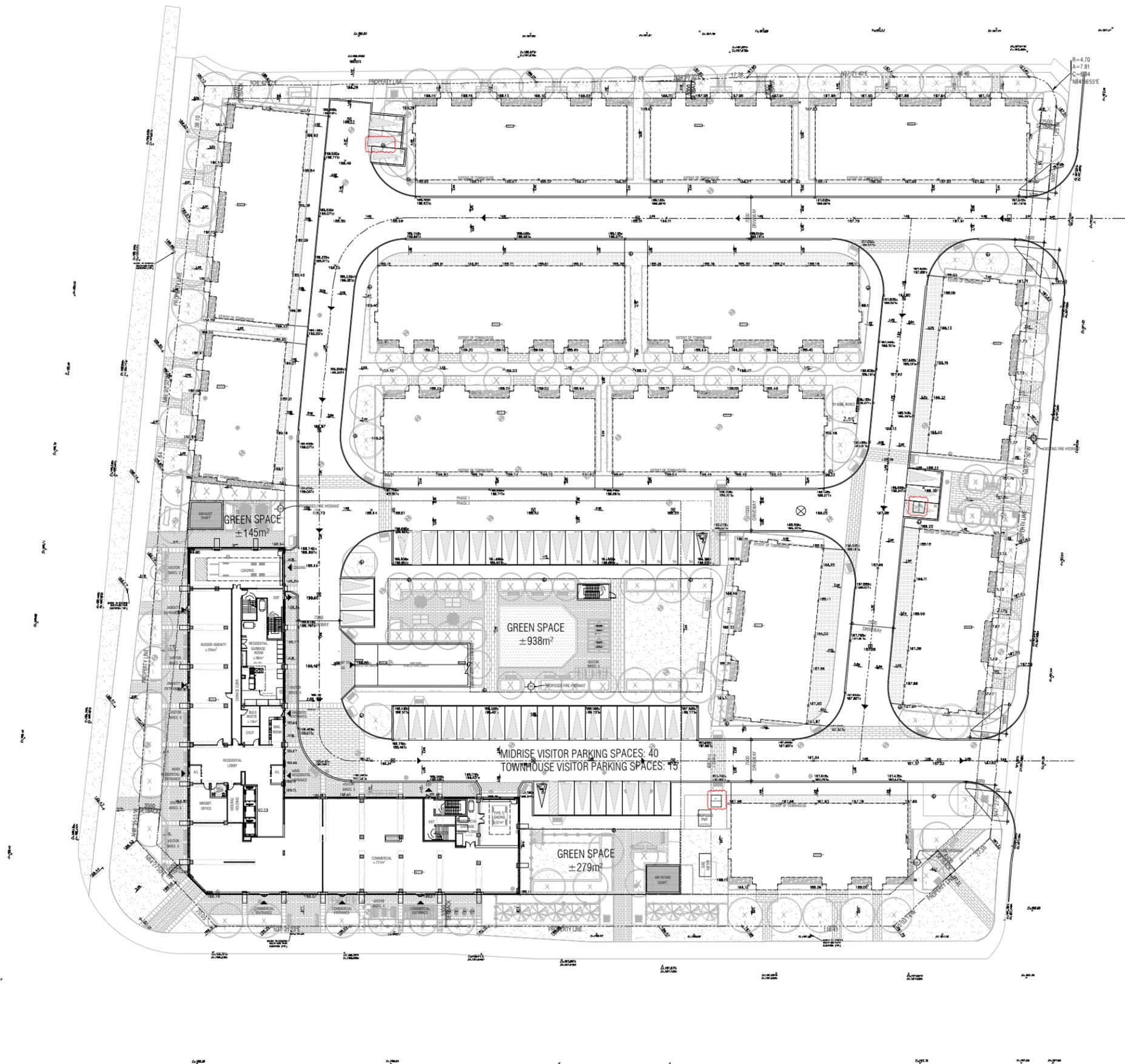
    
on
Region
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Appendix B

Site Plan



OVERALL GROUND PLAN

• Trinity Point • Shearling Heights • 2268.24 • Jan. 6, 2026

Appendix C

Traffic Data



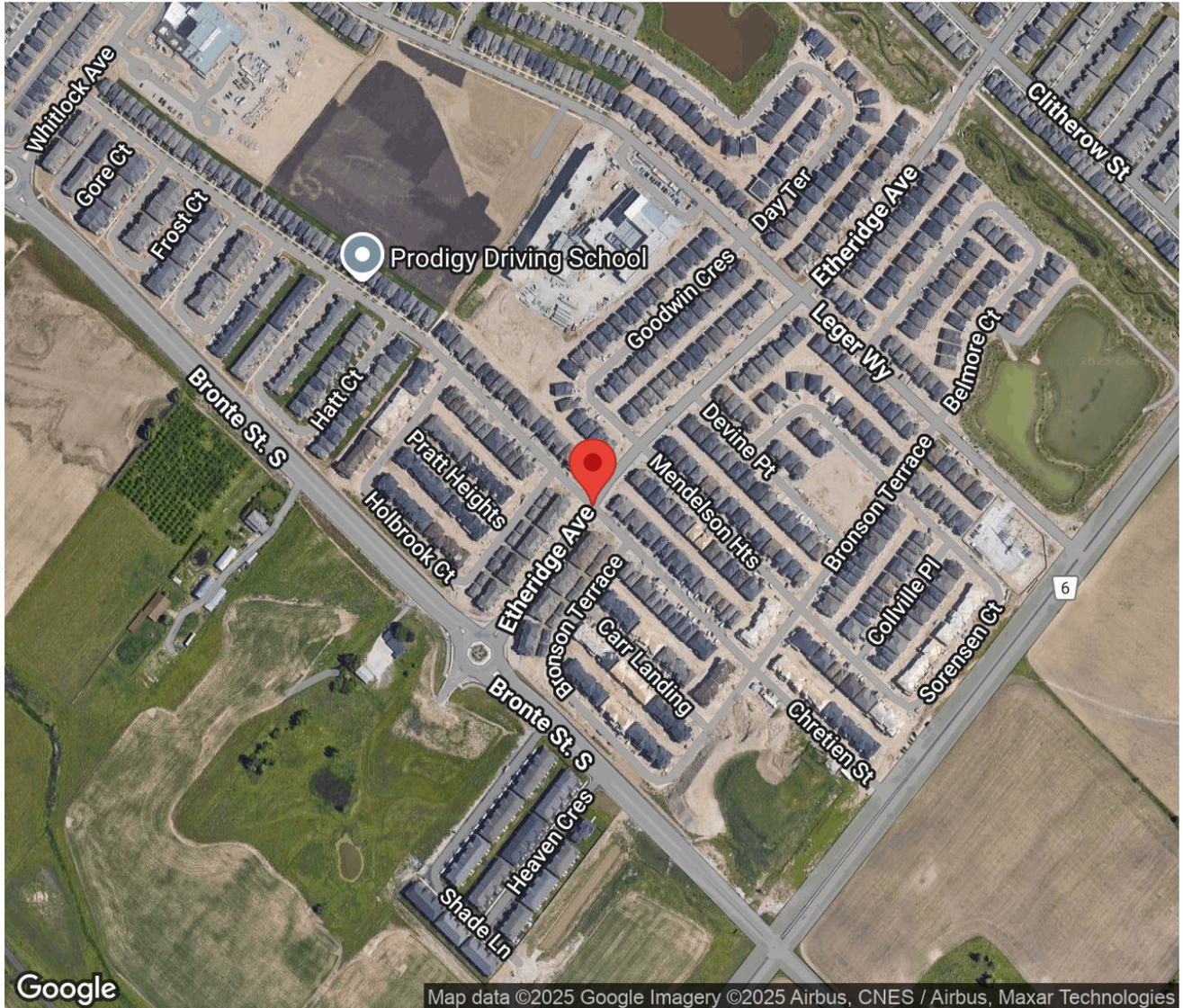
Project #25-283 - GHD

Intersection Count Report

Intersection: Etheridge Ave & Chretien St
Municipality: Milton
Count Date: Tuesday, Sep 16, 2025
Site Code: 2528300001
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-09:00, 16:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection: Etheridge Ave & Chretien St
Site Code: 2528300001
Municipality: Milton
Count Date: Sep 16, 2025



Traffic Count Summary

Intersection: Etheridge Ave & Chretien St
 Site Code: 2528300001
 Municipality: Milton
 Count Date: Sep 16, 2025

Chretien St - Traffic Summary

Hour	North Approach Totals						South Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	29	7	12	0	48	3	7	6	8	0	21	3	69
08:00 - 09:00	31	21	22	0	74	16	23	16	13	0	52	31	126
BREAK													
16:00 - 17:00	13	3	3	0	19	4	10	9	5	0	24	0	43
17:00 - 18:00	21	7	10	0	38	1	13	13	11	0	37	1	75
GRAND TOTAL	94	38	47	0	179	24	53	44	37	0	134	35	313



Traffic Count Summary

Intersection: Etheridge Ave & Chretien St
 Site Code: 2528300001
 Municipality: Milton
 Count Date: Sep 16, 2025

Etheridge Ave - Traffic Summary

Hour	East Approach Totals						West Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	2	40	7	0	49	2	3	30	5	0	38	2	87
08:00 - 09:00	12	103	35	0	150	18	16	77	12	0	105	6	255
BREAK													
16:00 - 17:00	7	56	19	0	82	3	14	66	11	0	91	4	173
17:00 - 18:00	17	67	23	1	108	9	25	73	13	0	111	2	219
GRAND TOTAL	38	266	84	1	389	32	58	246	41	0	345	14	734



Traffic Count Data

Intersection: Etheridge Ave & Chretien St
 Site Code: 2528300001
 Municipality: Milton
 Count Date: Sep 16, 2025

North Approach - Chretien St

Start Time	Cars					Trucks					Bicycles					Total Peds	
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total		
07:00	8	2	0	0	10	0	0	0	0	0	0	0	0	0	0	0	1
07:15	4	1	4	0	9	1	0	0	0	1	0	0	0	0	0	0	1
07:30	8	1	4	0	13	0	0	0	0	0	0	0	0	0	0	0	1
07:45	8	3	4	0	15	0	0	0	0	0	0	0	0	0	0	0	0
08:00	3	2	6	0	11	0	0	1	0	1	0	0	0	0	0	0	2
08:15	8	5	3	0	16	0	0	0	0	0	0	0	0	0	0	0	3
08:30	10	12	6	0	28	0	0	0	0	0	0	0	0	0	0	0	9
08:45	10	2	6	0	18	0	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	59	28	33	0	120	1	0	1	0	2	0	0	0	0	0	0	19



Traffic Count Data

Intersection: Etheridge Ave & Chretien St
 Site Code: 2528300001
 Municipality: Milton
 Count Date: Sep 16, 2025

North Approach - Chretien St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	2	2	0	0	4	1	0	0	0	1	0	0	0	0	0	1
16:15	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	2
16:30	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0
16:45	4	1	1	0	6	0	0	0	0	0	0	0	0	0	0	1
17:00	5	1	2	0	8	0	0	0	0	0	0	0	0	0	0	1
17:15	8	3	1	0	12	0	0	0	0	0	0	0	0	0	0	0
17:30	5	1	4	0	10	0	0	0	0	0	0	0	0	0	0	0
17:45	3	1	2	0	6	0	0	0	0	0	0	1	1	0	2	0
SUBTOTAL	33	9	12	0	54	1	0	0	0	1	0	1	1	0	2	5
GRAND TOTAL	92	37	45	0	174	2	0	1	0	3	0	1	1	0	2	24



Traffic Count Data

Intersection: Etheridge Ave & Chretien St
 Site Code: 2528300001
 Municipality: Milton
 Count Date: Sep 16, 2025

South Approach - Chretien St

Start Time	Cars					Trucks					Bicycles					Total Peds	
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total		
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15	5	1	2	0	8	0	1	0	0	1	0	0	0	0	0	0	0
07:30	0	0	3	0	3	0	1	0	0	1	0	0	0	0	0	0	0
07:45	2	2	3	0	7	0	1	0	0	1	0	0	0	0	0	0	2
08:00	6	1	5	0	12	0	0	0	0	0	1	0	0	0	1	1	1
08:15	10	6	7	0	23	0	0	0	0	0	0	0	0	0	0	0	4
08:30	2	6	1	0	9	0	0	0	0	0	1	0	0	0	1	1	23
08:45	3	3	0	0	6	0	0	0	0	0	0	0	0	0	0	0	3
SUBTOTAL	28	19	21	0	68	0	3	0	0	3	2	0	0	0	2	2	34



Traffic Count Data

Intersection: Etheridge Ave & Chretien St
 Site Code: 2528300001
 Municipality: Milton
 Count Date: Sep 16, 2025

South Approach - Chretien St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	2	2	2	0	6	1	0	0	0	1	0	0	0	0	0	0
16:15	2	4	1	0	7	0	0	0	0	0	1	0	0	0	1	0
16:30	0	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0
16:45	4	1	0	0	5	0	0	0	0	0	0	0	0	0	0	0
17:00	4	3	3	0	10	0	0	0	0	0	0	0	0	0	0	0
17:15	5	6	4	0	15	0	0	0	0	0	0	0	0	0	0	1
17:30	2	2	3	0	7	0	0	0	0	0	0	0	0	0	0	0
17:45	2	2	1	0	5	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	21	22	16	0	59	1	0	0	0	1	1	0	0	0	1	1
GRAND TOTAL	49	41	37	0	127	1	3	0	0	4	3	0	0	0	3	35



Traffic Count Data

Intersection: Etheridge Ave & Chretien St
 Site Code: 2528300001
 Municipality: Milton
 Count Date: Sep 16, 2025

East Approach - Etheridge Ave

Start Time	Cars					Trucks					Bicycles					Total Peds	
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total		
07:00	0	7	1	0	8	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	11	1	0	12	0	0	0	0	0	0	0	0	0	0	0	0
07:30	1	8	0	0	9	0	0	2	0	2	0	1	0	0	1	0	2
07:45	1	12	3	0	16	0	0	0	0	0	0	1	0	0	1	0	0
08:00	2	24	0	0	26	0	0	0	0	0	0	0	0	0	0	0	3
08:15	4	23	11	0	38	0	0	0	0	0	0	0	0	0	0	0	7
08:30	1	33	8	0	42	2	0	1	0	3	0	1	0	0	1	0	6
08:45	3	22	15	0	40	0	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	12	140	39	0	191	2	0	3	0	5	0	3	0	0	3	0	20



Traffic Count Data

Intersection: Etheridge Ave & Chretien St
 Site Code: 2528300001
 Municipality: Milton
 Count Date: Sep 16, 2025

East Approach - Etheridge Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	0	11	4	0	15	0	1	0	0	1	0	0	0	0	0	1
16:15	4	10	2	0	16	0	0	0	0	0	0	0	0	0	0	1
16:30	1	17	5	0	23	0	0	0	0	0	0	0	0	0	0	0
16:45	2	16	7	0	25	0	1	0	0	1	0	0	1	0	1	1
17:00	3	14	3	0	20	0	0	0	0	0	0	1	0	0	1	2
17:15	8	14	8	0	30	0	0	0	0	0	1	0	0	0	1	3
17:30	2	18	5	0	25	0	0	0	0	0	0	0	0	0	0	2
17:45	3	20	7	1	31	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	23	120	41	1	185	0	2	0	0	2	1	1	1	0	3	12
GRAND TOTAL	35	260	80	1	376	2	2	3	0	7	1	4	1	0	6	32



Traffic Count Data

Intersection: Etheridge Ave & Chretien St
 Site Code: 2528300001
 Municipality: Milton
 Count Date: Sep 16, 2025

West Approach - Etheridge Ave

Start Time	Cars					Trucks					Bicycles					Total Peds	
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total		
07:00	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0
07:15	1	7	2	0	10	0	0	0	0	0	0	0	0	0	0	0	0
07:30	2	5	1	0	8	0	2	0	0	2	0	0	0	0	0	0	0
07:45	0	10	2	0	12	0	0	0	0	0	0	0	0	0	0	0	2
08:00	1	7	2	0	10	0	3	0	0	3	0	0	0	0	0	0	1
08:15	5	15	1	0	21	0	2	1	0	3	0	0	0	0	0	0	1
08:30	7	21	7	0	35	0	2	0	0	2	0	0	0	0	0	0	3
08:45	2	26	1	0	29	1	1	0	0	2	0	0	0	0	0	0	1
SUBTOTAL	18	97	16	0	131	1	10	1	0	12	0	0	0	0	0	0	8



Traffic Count Data

Intersection: Etheridge Ave & Chretien St
 Site Code: 2528300001
 Municipality: Milton
 Count Date: Sep 16, 2025

West Approach - Etheridge Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	3	16	1	0	20	1	0	0	0	1	0	0	0	0	0	2
16:15	1	17	4	0	22	0	1	0	0	1	0	1	0	0	1	1
16:30	3	19	0	0	22	0	0	0	0	0	0	1	1	0	2	1
16:45	6	11	5	0	22	0	0	0	0	0	0	0	0	0	0	0
17:00	4	15	2	0	21	0	1	0	0	1	0	0	0	0	0	0
17:15	10	16	4	0	30	0	0	0	0	0	0	0	0	0	0	0
17:30	5	16	2	0	23	0	0	0	0	0	0	1	0	0	1	1
17:45	6	24	4	0	34	0	0	0	0	0	0	0	1	0	1	1
SUBTOTAL	38	134	22	0	194	1	2	0	0	3	0	3	2	0	5	6
GRAND TOTAL	56	231	38	0	325	2	12	1	0	15	0	3	2	0	5	14

Peak Hour Diagram

Specified Period

From: 07:00:00
To: 09:00:00

One Hour Peak

From: 08:00:00
To: 09:00:00

Intersection: Etheridge Ave & Chretien St
Site Code: 2528300001
Count Date: Sep 16, 2025

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Etheridge Ave runs E/W

North Approach

	Out	In	Total
	73	65	138
	1	2	3
	0	0	0
Totals	74	67	141

Chretien St

	0	0	0	0
	1	0	0	0
	21	21	31	0
Totals	22	21	31	0

East Approach

	Out	In	Total
	146	113	259
	3	8	11
	1	0	1
Totals	150	121	271

Etheridge Ave

				Totals
	0	0	0	0
	0	1	15	16
	0	8	69	77
	0	1	11	12

Peds: 16

Peds: 6



Peds: 18

Etheridge Ave

Totals			
0	0	0	0
35	34	1	0
103	102	0	1
12	10	2	0

Peds: 31

West Approach

	Out	In	Total
	95	144	239
	10	1	11
	0	3	3
Totals	105	148	253

Totals				
23	16	13	0	
	21	16	13	0
	0	0	0	0
	2	0	0	0

Chretien St

South Approach

	Out	In	Total
	50	42	92
	0	3	3
	2	0	2
Totals	52	45	97

- Cars

- Trucks

- Bicycles

Comments



Peak Hour Summary

Intersection: Etheridge Ave & Chretien St
 Site Code: 2528300001
 Count Date: Sep 16, 2025
 Period: 07:00 - 09:00

Peak Hour Data (08:00 - 09:00)

Start Time	North Approach Chretien St						South Approach Chretien St						East Approach Etheridge Ave						West Approach Etheridge Ave						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
08:00	3	2	7	0	2	12	7	1	5	0	1	13	2	24	0	0	3	26	1	10	2	0	1	13	64
08:15	8	5	3	0	3	16	10	6	7	0	4	23	4	23	11	0	7	38	5	17	2	0	1	24	101
08:30	10	12	6	0	9	28	3	6	1	0	23	10	3	34	9	0	6	46	7	23	7	0	3	37	121
08:45	10	2	6	0	2	18	3	3	0	0	3	6	3	22	15	0	2	40	3	27	1	0	1	31	95
Grand Total	31	21	22	0	16	74	23	16	13	0	31	52	12	103	35	0	18	150	16	77	12	0	6	105	381
Approach %	41.9	28.4	29.7	0	-	-	44.2	30.8	25	0	-	-	8	68.7	23.3	0	-	-	15.2	73.3	11.4	0	-	-	-
Totals %	8.1	5.5	5.8	0	19.4	13.6	6	4.2	3.4	0	13.6	39.4	3.1	27	9.2	0	39.4	27.6	4.2	20.2	3.1	0	27.6	27.6	27.6
PHF	0.78	0.44	0.79	0	0.66	0.57	0.58	0.67	0.46	0	0.57	0.82	0.75	0.76	0.58	0	0.82	0.71	0.57	0.71	0.43	0	0.71	0.79	0.79
Cars	31	21	21	0	73	50	21	16	13	0	50	146	10	102	34	0	146	95	15	69	11	0	95	364	364
% Cars	100	100	95.5	0	98.6	96.2	91.3	100	100	0	96.2	83.3	99	97.1	0	97.3	93.8	89.6	91.7	0	90.5	90.5	95.5	95.5	
Trucks	0	0	1	0	1	0	0	0	0	0	0	3	2	0	1	0	3	10	1	8	1	0	10	14	14
% Trucks	0	0	4.5	0	1.4	0	0	0	0	0	0	2	16.7	0	2.9	0	2	6.3	10.4	8.3	0	9.5	9.5	3.7	3.7
Bicycles	0	0	0	0	0	2	2	0	0	0	2	1	0	1	0	0	1	0	0	0	0	0	0	3	3
% Bicycles	0	0	0	0	0	8.7	8.7	0	0	0	3.8	0.7	0	1	0	0	0.7	0	0	0	0	0	0	0.8	0.8
Peds					16	-					31	-					18	-					6	-	71
% Peds					22.5	-					43.7	-					25.4	-					8.5	-	27.6

Peak Hour Diagram

Specified Period

From: 16:00:00
To: 18:00:00

One Hour Peak

From: 17:00:00
To: 18:00:00

Intersection: Etheridge Ave & Chretien St
Site Code: 2528300001
Count Date: Sep 16, 2025

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Etheridge Ave runs E/W

North Approach

	Out	In	Total
	36	61	97
	0	0	0
	2	0	2
Totals	38	61	99

Chretien St

	1	1	0	0
	0	0	0	0
	9	6	21	0
Totals	10	7	21	0

East Approach

	Out	In	Total
	106	104	210
	0	1	1
	2	1	3
Totals	108	106	214

Etheridge Ave

			Totals	
0	0	0	0	
0	0	25	25	
1	1	71	73	
1	0	12	13	

Peds: 1

Peds: 2



Peds: 9

Peds: 1

Etheridge Ave

Totals			
1	1	0	0
23	23	0	0
67	66	0	1
17	16	0	1

West Approach

	Out	In	Total
	108	88	196
	1	0	1
	2	2	4
Totals	111	90	201

Totals				
13	13	11	0	
0	0	0	0	
0	0	0	0	

Chretien St

South Approach

Out	In	Total
37	34	71
0	0	0
0	3	3
37	37	74

- Cars

- Trucks

- Bicycles

Comments



Peak Hour Summary

Intersection: Etheridge Ave & Chretien St
 Site Code: 2528300001
 Count Date: Sep 16, 2025
 Period: 16:00 - 18:00

Peak Hour Data (17:00 - 18:00)

Start Time	North Approach Chretien St						South Approach Chretien St						East Approach Etheridge Ave						West Approach Etheridge Ave						Total Vehic es
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
17:00	5	1	2	0	1	8	4	3	3	0	0	10	3	15	3	0	2	21	4	16	2	0	0	22	61
17:15	8	3	1	0	0	12	5	6	4	0	1	15	9	14	8	0	3	31	10	16	4	0	0	30	88
17:30	5	1	4	0	0	10	2	2	3	0	0	7	2	18	5	0	2	25	5	17	2	0	1	24	66
17:45	3	2	3	0	0	8	2	2	1	0	0	5	3	20	7	1	2	31	6	24	5	0	1	35	79
Grand Total	21	7	10	0	1	38	13	13	11	0	1	37	17	67	23	1	9	108	25	73	13	0	2	111	294
Approach %	55.3	18.4	26.3	0	-	-	35.1	35.1	29.7	0	-	-	15.7	62	21.3	0.9	-	-	22.5	65.8	11.7	0	-	-	
Totals %	7.1	2.4	3.4	0	12.9	12.9	4.4	4.4	3.7	0	12.6	12.6	5.8	22.8	7.8	0.3	36.7	36.7	8.5	24.8	4.4	0	37.8	37.8	
PHF	0.66	0.58	0.63	0	0.79	0.79	0.65	0.54	0.69	0	0.62	0.62	0.47	0.84	0.72	0.25	0.87	0.87	0.63	0.76	0.65	0	0.79	0.84	0.84
Cars	21	6	9	0	36	36	13	13	11	0	37	37	16	66	23	1	106	106	25	71	12	0	108	108	287
% Cars	100	85.7	90	0	94.7	94.7	100	100	100	0	100	100	94.1	98.5	100	100	98.1	98.1	100	97.3	92.3	0	97.3	97.3	97.6
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4	0	0	0.9	0.9	0.3
Bicycles	0	1	1	0	2	2	0	0	0	0	0	0	1	1	0	0	2	2	0	1	1	0	2	2	6
% Bicycles	0	14.3	10	0	5.3	5.3	0	0	0	0	0	0	5.9	1.5	0	0	1.9	1.9	0	1.4	7.7	0	1.8	1.8	2
Peds					1	-					1	-					9	-					2	-	13
% Peds					7.7	-					7.7	-					69.2	-					15.4	-	



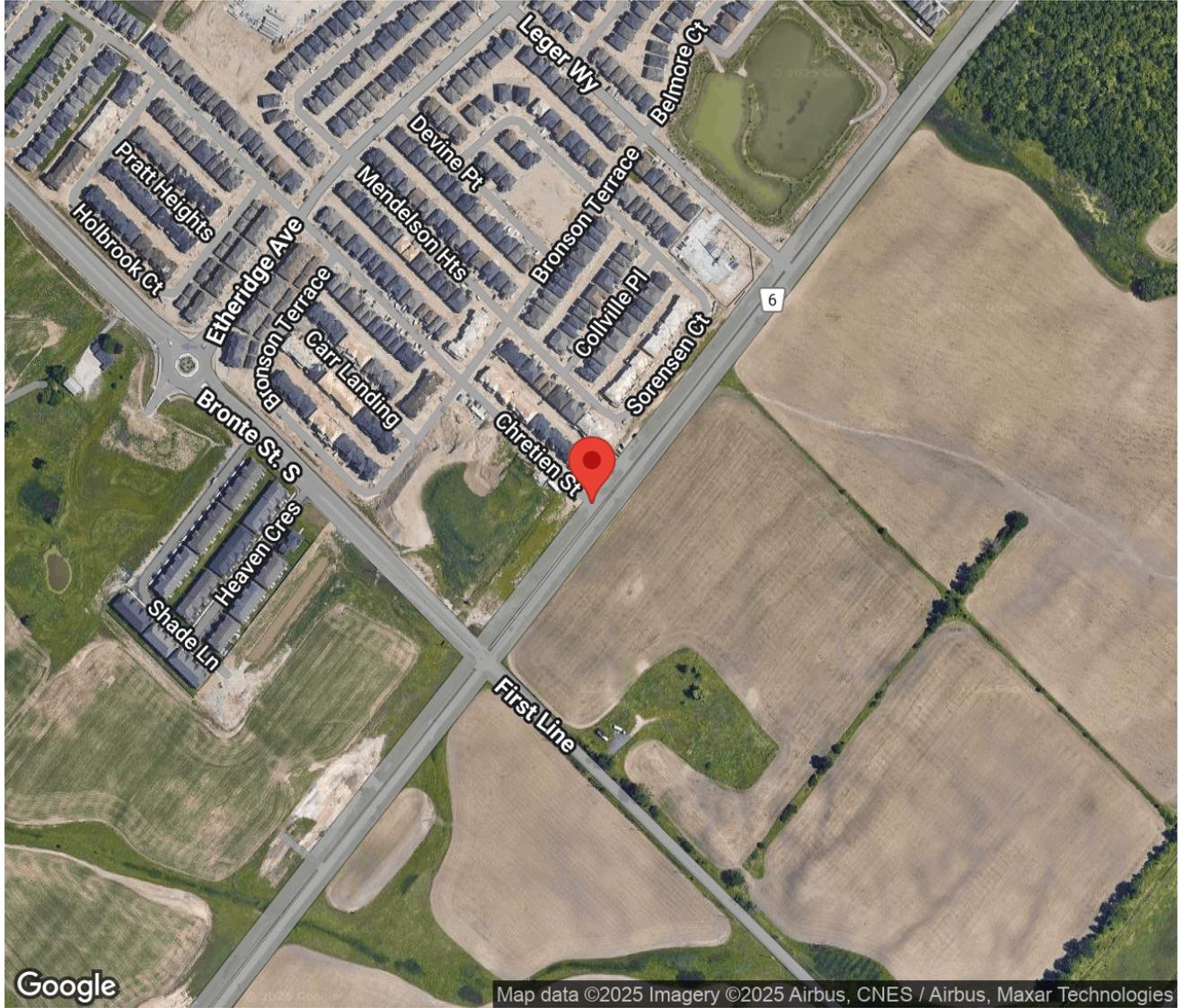
Project #25-283 - GHD

Intersection Count Report

Intersection: Britannia Rd & Chretien St
Municipality: Milton
Count Date: Tuesday, Sep 16, 2025
Site Code: 2528300002
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-09:00, 16:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection: Britannia Rd & Chretien St
Site Code: 2528300002
Municipality: Milton
Count Date: Sep 16, 2025





Traffic Count Summary

Intersection: Britannia Rd & Chretien St
 Site Code: 2528300002
 Municipality: Milton
 Count Date: Sep 16, 2025

Chretien St - Traffic Summary

Hour	North Approach Totals						South Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	0	0	21	0	21	10	0	0	0	0	0	0	21
08:00 - 09:00	0	0	46	0	46	10	0	0	0	0	0	0	46
BREAK													
16:00 - 17:00	0	0	6	0	6	4	0	0	0	0	0	2	6
17:00 - 18:00	0	0	12	0	12	14	0	0	0	0	0	0	12
GRAND TOTAL	0	0	85	0	85	38	0	0	0	0	0	2	85

Traffic Count Summary

Intersection: Britannia Rd & Chretien St
 Site Code: 2528300002
 Municipality: Milton
 Count Date: Sep 16, 2025

Britannia Rd - Traffic Summary

Hour	East Approach Totals						West Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	0	348	6	0	354	1	0	579	0	0	579	0	933
08:00 - 09:00	0	539	10	0	549	0	0	677	0	0	677	0	1226
BREAK													
16:00 - 17:00	0	863	17	0	880	0	0	455	0	0	455	0	1335
17:00 - 18:00	0	785	23	0	808	0	0	530	0	0	530	0	1338
GRAND TOTAL	0	2535	56	0	2591	1	0	2241	0	0	2241	0	4832



Traffic Count Data

Intersection: Britannia Rd & Chretien St
 Site Code: 2528300002
 Municipality: Milton
 Count Date: Sep 16, 2025

North Approach - Chretien St

Start Time	Cars					Trucks					Bicycles					Total Peds	
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total		
07:00	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	1
07:15	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	4
07:30	0	0	3	0	3	0	0	1	0	1	0	0	0	0	0	0	3
07:45	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	2
08:00	0	0	11	0	11	0	0	1	0	1	0	0	0	0	0	0	1
08:15	0	0	11	0	11	0	0	1	0	1	0	0	0	0	0	0	4
08:30	0	0	11	0	11	0	0	4	0	4	0	0	0	0	0	0	3
08:45	0	0	4	0	4	0	0	3	0	3	0	0	0	0	0	0	2
SUBTOTAL	0	0	57	0	57	0	0	10	0	10	0	0	0	0	0	0	20



Traffic Count Data

Intersection: Britannia Rd & Chretien St
 Site Code: 2528300002
 Municipality: Milton
 Count Date: Sep 16, 2025

North Approach - Chretien St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
16:45	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	2
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	2
17:30	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	6
17:45	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	5
SUBTOTAL	0	0	17	0	17	0	0	1	0	1	0	0	0	0	0	18
GRAND TOTAL	0	0	74	0	74	0	0	11	0	11	0	0	0	0	0	38



Traffic Count Data

Intersection: Britannia Rd & Chretien St
 Site Code: 2528300002
 Municipality: Milton
 Count Date: Sep 16, 2025

East Approach - Britannia Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	0	59	0	0	59	0	0	0	0	0	0	1	0	0	1	0
07:15	0	62	2	0	64	0	2	0	0	2	0	0	0	0	0	0
07:30	0	104	0	0	104	0	3	1	0	4	0	0	0	0	0	0
07:45	0	113	3	0	116	0	4	0	0	4	0	0	0	0	0	1
08:00	0	150	0	0	150	0	4	1	0	5	0	0	0	0	0	0
08:15	0	133	2	0	135	0	6	0	0	6	0	0	0	0	0	0
08:30	0	141	1	0	142	0	2	4	0	6	0	0	0	0	0	0
08:45	0	100	0	0	100	0	3	2	0	5	0	0	0	0	0	0
SUBTOTAL	0	862	8	0	870	0	24	8	0	32	0	1	0	0	1	1



Traffic Count Data

Intersection: Britannia Rd & Chretien St
 Site Code: 2528300002
 Municipality: Milton
 Count Date: Sep 16, 2025

East Approach - Britannia Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	0	201	3	0	204	0	4	1	0	5	0	1	0	0	1	0
16:15	0	212	7	0	219	0	6	0	0	6	0	0	0	0	0	0
16:30	0	193	1	0	194	0	1	0	0	1	0	0	0	0	0	0
16:45	0	243	5	0	248	0	2	0	0	2	0	0	0	0	0	0
17:00	0	201	5	0	206	0	4	0	0	4	0	2	0	0	2	0
17:15	0	222	8	0	230	0	3	0	0	3	0	2	0	0	2	0
17:30	0	201	6	0	207	0	1	0	0	1	0	2	0	0	2	0
17:45	0	147	4	0	151	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	1620	39	0	1659	0	21	1	0	22	0	7	0	0	7	0
GRAND TOTAL	0	2482	47	0	2529	0	45	9	0	54	0	8	0	0	8	1



Traffic Count Data

Intersection: Britannia Rd & Chretien St
 Site Code: 2528300002
 Municipality: Milton
 Count Date: Sep 16, 2025

West Approach - Britannia Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	0	90	0	0	90	0	4	0	0	4	0	0	0	0	0	0
07:15	0	133	0	0	133	0	8	0	0	8	0	0	0	0	0	0
07:30	0	161	0	0	161	0	11	0	0	11	0	0	0	0	0	0
07:45	0	161	0	0	161	0	10	0	0	10	0	1	0	0	1	0
08:00	0	188	0	0	188	0	18	0	0	18	0	0	0	0	0	0
08:15	0	179	0	0	179	0	9	0	0	9	0	0	0	0	0	0
08:30	0	177	0	0	177	0	7	0	0	7	0	0	0	0	0	0
08:45	0	94	0	0	94	0	5	0	0	5	0	0	0	0	0	0
SUBTOTAL	0	1183	0	0	1183	0	72	0	0	72	0	1	0	0	1	0



Traffic Count Data

Intersection: Britannia Rd & Chretien St
 Site Code: 2528300002
 Municipality: Milton
 Count Date: Sep 16, 2025

West Approach - Britannia Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	0	90	0	0	90	0	7	0	0	7	0	0	0	0	0	0
16:15	0	117	0	0	117	0	6	0	0	6	0	0	0	0	0	0
16:30	0	111	0	0	111	0	1	0	0	1	0	0	0	0	0	0
16:45	0	123	0	0	123	0	0	0	0	0	0	0	0	0	0	0
17:00	0	149	0	0	149	0	0	0	0	0	0	0	0	0	0	0
17:15	0	128	0	0	128	0	0	0	0	0	0	0	0	0	0	0
17:30	0	141	0	0	141	0	1	0	0	1	0	0	0	0	0	0
17:45	0	111	0	0	111	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	970	0	0	970	0	15	0	0	15	0	0	0	0	0	0
GRAND TOTAL	0	2153	0	0	2153	0	87	0	0	87	0	1	0	0	1	0

Peak Hour Diagram

Specified Period

From: 07:00:00
To: 09:00:00

One Hour Peak

From: 07:45:00
To: 08:45:00

Intersection: Britannia Rd & Chretien St
Site Code: 2528300002
Count Date: Sep 16, 2025

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Britannia Rd runs E/W

North Approach

	Out	In	Total
	42	6	48
	6	5	11
	0	0	0
Totals	48	11	59

Chretien St

	0	0	0
	6	0	0
	42	0	0
Totals	48	0	0

East Approach

	Out	In	Total
	543	705	1248
	21	44	65
	0	1	1
Totals	564	750	1314

Britannia Rd

				Totals
←	0	0	0	0
↑	0	0	0	0
→	1	44	705	750

Peds: 10

Peds: 0



Peds: 1

Peds: 0

Britannia Rd

Totals			
←	0	0	0
↑	11	6	5
→	553	537	16

West Approach

	Out	In	Total
	705	579	1284
	44	22	66
	1	0	1
Totals	750	601	1351

 - Cars

 - Trucks

 - Bicycles

Comments



Peak Hour Summary

Intersection: Britannia Rd & Chretien St
 Site Code: 2528300002
 Count Date: Sep 16, 2025
 Period: 07:00 - 09:00

Peak Hour Data (07:45 - 08:45)

Start Time	North Approach Chretien St						South Approach						East Approach Britannia Rd						West Approach Britannia Rd						Total Vehicles	
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total		
07:45	0		9	0	2	9					0			117	3	0	1	120	0	172			0	0	172	301
08:00	0		12	0	1	12					0			154	1	0	0	155	0	206			0	0	206	373
08:15	0		12	0	4	12					0			139	2	0	0	141	0	188			0	0	188	341
08:30	0		15	0	3	15					0			143	5	0	0	148	0	184			0	0	184	347
Grand Total	0		48	0	10	48					0	0		553	11	0	1	564	0	750			0	0	750	1362
Approach %	0		100	0	-	-					-	-		98	2	0	-	-	0	100			0	-	-	
Totals %	0		3.5	0	3.5	-					0	-		40.6	0.8	0	41.4	-	0	55.1			0	55.1	-	
PHF	0		0.8	0	0.8	-					0	-		0.9	0.55	0	0.91	-	0	0.91			0	0.91	0.91	
Cars	0		42	0	42	-					0	-		537	6	0	543	-	0	705			0	705	1290	
% Cars	0		87.5	0	87.5	-					0	-		97.1	54.5	0	96.3	-	0	94			0	94	94.7	
Trucks	0		6	0	6	-					0	-		16	5	0	21	-	0	44			0	44	71	
% Trucks	0		12.5	0	12.5	-					0	-		2.9	45.5	0	3.7	-	0	5.9			0	5.9	5.2	
Bicycles	0		0	0	0	-					0	-		0	0	0	0	-	0	1			0	1	1	
% Bicycles	0		0	0	0	-					0	-		0	0	0	0	-	0	0.1			0	0.1	0.1	
Peds					10	-					0	-					1	-					0	-	11	
% Peds					90.9	-					0	-					9.1	-					0	-		

Peak Hour Diagram

Specified Period

From: 16:00:00
To: 18:00:00

One Hour Peak

From: 16:45:00
To: 17:45:00

Intersection: Britannia Rd & Chretien St
Site Code: 2528300002
Count Date: Sep 16, 2025

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Britannia Rd runs E/W

North Approach

	Out	In	Total
	13	24	37
	0	0	0
	0	0	0
Totals	13	24	37

Chretien St

	0	0	0
	0	0	0
	13	0	0
Totals	13	0	0

East Approach

	Out	In	Total
	891	541	1432
	10	1	11
	6	0	6
Totals	907	542	1449

Britannia Rd

				Totals
	0	0	0	0
	0	0	0	0
	0	1	541	542

Peds: 11

Peds: 0



Peds: 0

Peds: 0

Britannia Rd

Totals			
0	0	0	0
24	24	0	0
883	867	10	6

West Approach

	Out	In	Total
	541	880	1421
	1	10	11
	0	6	6
Totals	542	896	1438

 - Cars

 - Trucks

 - Bicycles

Comments



Peak Hour Summary

Intersection: Britannia Rd & Chretien St
 Site Code: 2528300002
 Count Date: Sep 16, 2025
 Period: 16:00 - 18:00

Peak Hour Data (16:45 - 17:45)

Start Time	North Approach Chretien St						South Approach						East Approach Britannia Rd						West Approach Britannia Rd						Total Vehic es	
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total		
16:45	0		3	0	2	3					0			245	5	0	0	250	0	123			0	0	123	376
17:00	0		0	0	1	0					0			207	5	0	0	212	0	149			0	0	149	361
17:15	0		4	0	2	4					0			227	8	0	0	235	0	128			0	0	128	367
17:30	0		6	0	6	6					0			204	6	0	0	210	0	142			0	0	142	358
Grand Total	0		13	0	11	13					0	0		883	24	0	0	907	0	542			0	0	542	1462
Approach %	0		100	0	-	-					-	-		97.4	2.6	0	-	-	0	100			0	-	-	
Totals %	0		0.9	0	0.9	-					0	-		60.4	1.6	0	-	62	0	37.1			0	-	37.1	
PHF	0		0.54	0	0.54	-					0	-		0.9	0.75	0	-	0.91	0	0.91			0	-	0.91	0.97
Cars	0		13	0	13	-					0	-		867	24	0	-	891	0	541			0	-	541	1445
% Cars	0		100	0	100	-					0	-		98.2	100	0	-	98.2	0	99.8			0	-	99.8	98.8
Trucks	0		0	0	0	-					0	-		10	0	0	-	10	0	1			0	-	1	11
% Trucks	0		0	0	0	-					0	-		1.1	0	0	-	1.1	0	0.2			0	-	0.2	0.8
Bicycles	0		0	0	0	-					0	-		6	0	0	-	6	0	0			0	-	0	6
% Bicycles	0		0	0	0	-					0	-		0.7	0	0	-	0.7	0	0			0	-	0	0.4
Peds					11	-					0	-						0	-				0	-	11	
% Peds					100	-					0	-						0	-				0	-		

Appendix D

Background Developments

5. Site Generated Traffic

5.1 Site Traffic Generation

The proposed Shadybrook residential development and existing residential development consists of the following:

- 116 single detached/semi-detached homes
- 323 townhouses/single family attached homes
- 472 Mid-rise residential units.

The existing 82 residential units on the west side of Bronte Street South have access to via Tasker Court and Heaven Crescent. These connections will be closed with buildout of the Subject Site. The trips generated by the 82 units will be redistributed to the new connection of Streets and B to Bronte Street South and Britannia Road. **Table 2** details the estimated trips generated by these existing units and then distributed using the same method as the subject site. As these units already have trips in the existing network, there will be some degree of double counted trips, this is expected and will still provide a conservative measure of the study area traffic and showcase that the study intersections have ample capacity.

43 of the townhouse units are future development townhouse units requiring coordination with the adjacent Pure Subdivision.

The development generated traffic was estimated using the rates provided in the Institute of Transportation Engineer’s (ITE) Trip Generation Manual, 11th Edition using Land Use Code (LUC) 210 (Single-Family Detached Housing) for the Single Detached units, LUC 215 (Single-Family Attached Housing) for the Townhouse units, and Land Use Code (LUC) 221 (Multifamily Housing (Mid-Rise)) for the mid-rise residential units. Both the average trip rate and trip generation equation was assessed for all LUCs, the higher of the two was used to produce a more conservative estimate of traffic generation. The relevant excerpts from the ITE trip generation manual are provided in **Appendix D**.

At the request of Town of Milton, no modal split/TDM reductions were applied to the residential trip generation.

Table 3 summarizes the estimated trip generation for the subject site.

Table 2 *Estimated Existing Trips*

Land Uses	GFA (Dwelling Units)	Parameters	Peak Hour					
			Weekday AM			Weekday PM		
			In	Out	Total	In	Out	Total
Single Family Detached (LUC 210)	1 unit	Gross rate	0	1	1	1	0	1
		New Trips	0	1	1	1	0	1
Single Family Attached (LUC 215)	81 units	Gross rate	0.136	0.346	0.481	0.321	0.247	0.568
		New Trips	11	28	39	26	20	46
Total New Trips			11	29	40	27	20	47

Table 3 *Estimated Site Trips*

Land Uses	GFA (Dwelling Units)	Parameters	Peak Hour					
			Weekday AM			Weekday PM		
			In	Out	Total	In	Out	Total
Single Family Detached (LUC 210)	116 units	Gross rate	0.191	0.548	0.739	0.617	0.366	0.983
		New Trips	21	64	85	72	42	114
Single Family Attached (LUC 215)	323 units	Gross rate	0.151	0.347	0.498	0.331	0.251	0.582
		New Trips	41	121	162	112	78	190
Multifamily Housing (Mid- Rise) (LUC 221)	472 units	Gross rate	0.093	0.322	0.415	0.237	0.153	0.390
		New Trips	45	151	196	112	72	184
Total New Trips			107	336	443	296	192	488

The proposed subdivision is expected to generate a total of 443 new two-way trips consisting of 107 inbound and 336 outbound trips during weekday a.m. peak hour and 488 new two-way trips consisting of 296 inbound and 192 outbound trips during the weekday p.m. peak hour.

5.2 Site Traffic Distribution and Assignment

The proposed trip distribution for the Subject Site was completed using information extracted from the 2016 Transportation Tomorrow Survey and first principles based on the assumed route choice available under the 2027 road network. The following 2006 GTA Zones were utilized to project an accurate distribution model: 4102,4103,4104, and 4105.

The percentage breakdown of overall directional distribution from the subject site is summarized in **Table 4**.

Table 4 Proposed Site Trip Distribution

Origin/Destination	AM Peak Hour		PM Peak Hour	
	Percentage of Inbound Trips	Percentage of Outbound Trips	Percentage of Inbound Trips	Percentage of Outbound Trips
North	60%	40%	30%	40%
South	10%	25%	30%	20%
East	20%	30%	30%	25%
West	10%	5%	10%	15%
Total	100%	100%	100%	100%

Using the distribution outlined in the table above, the subject site trips were assigned to the study area intersections using the distribution percentages summarized in **Figure 10**.

The existing units within the site will have trips assigned to the study area road network for the a.m. and p.m. peak hour as per **Figure 11**.

The subject site trips assigned to the study area road network for the a.m. and p.m. peak hour is summarized in **Figure 12**.

As requested by Town and Region staff, the intersection of Street “A”/Street “E” and Street “B” was included in the assessment of future traffic conditions. The estimated turning volumes at the intersection were established by dividing the proposed subdivision into four zones (northeast, northwest, southeast, and southwest quadrants). Based on those four zones, a majority of the site trips would be generated by the Major Node in the southwest quadrant as 544 of the 911 proposed units are located within that area. It was then assumed that each of the remaining three quadrants would each generate 10% of the proposed subdivision’s site traffic.

Based on the distribution of units throughout the subdivision, the 70% of the proposed subdivision’s site traffic would not travel through the intersection of Street “A”/Street “E” and Street “B” as shorter routes are available to access the external road network. The remaining 30% of site traffic was carried back from the assigned volumes at the intersections along Britannia Road and Bronte Street based on whether or not those site trips would travel through the intersection.

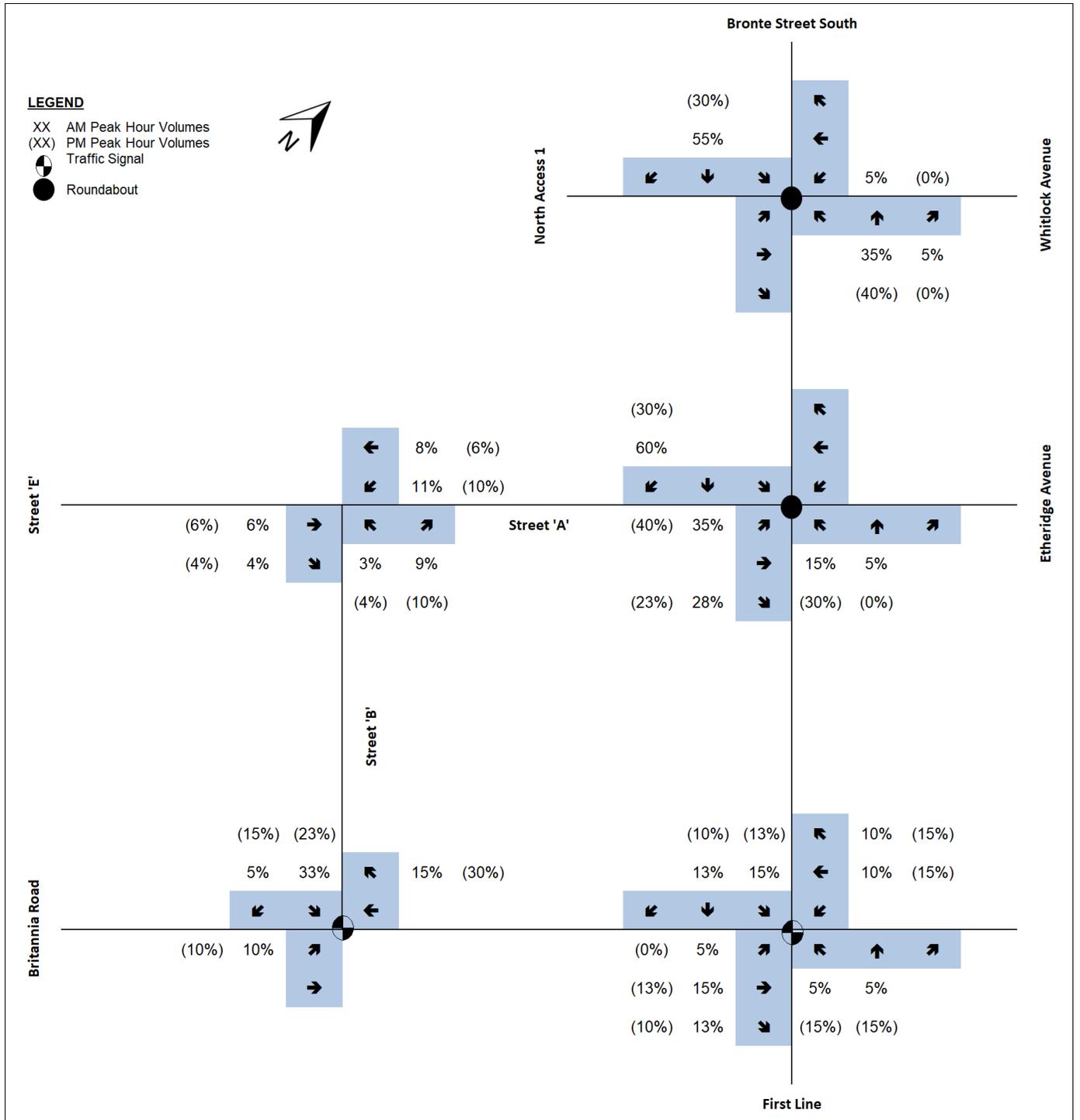


Figure 10 Site Trip Distribution

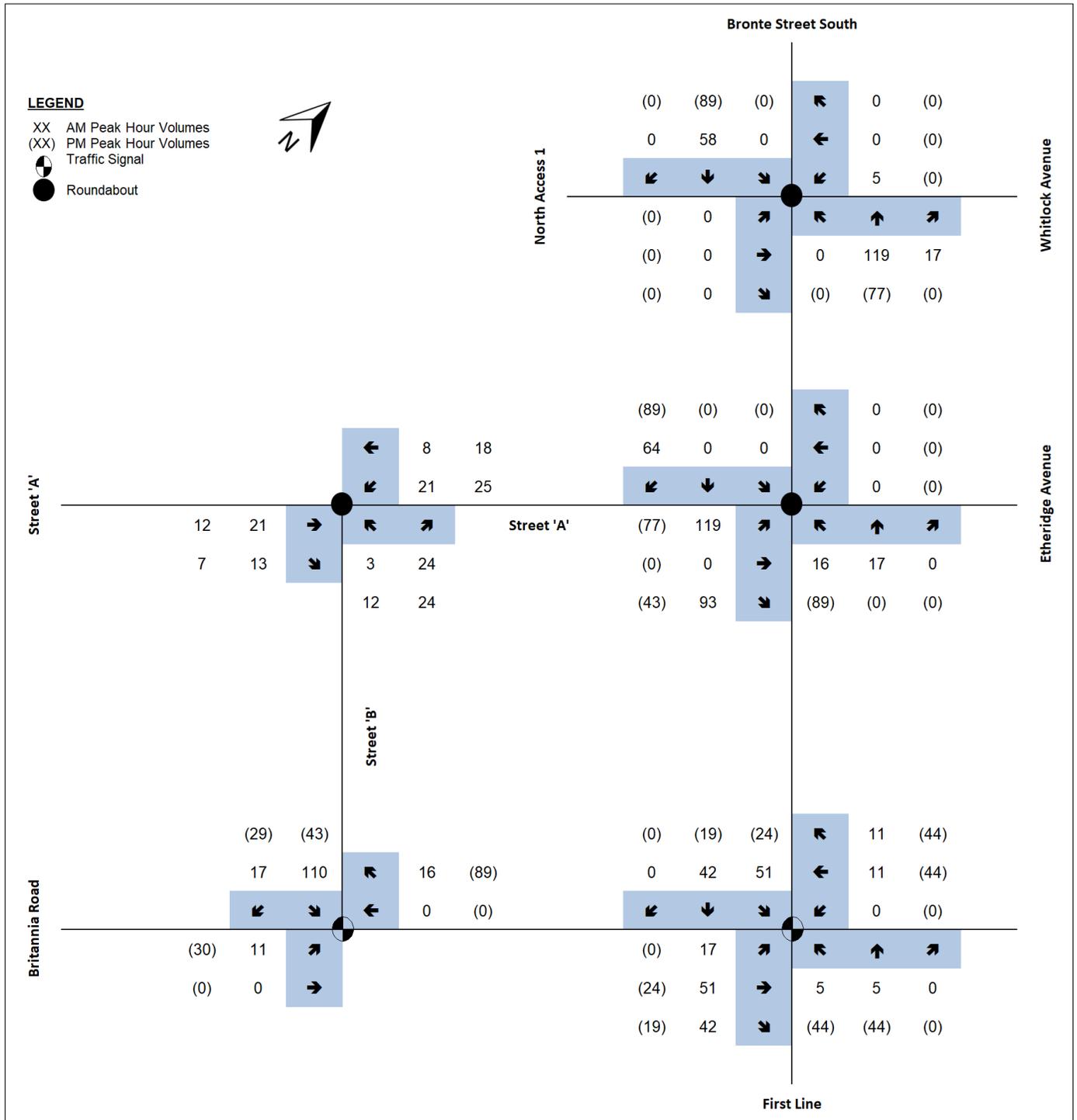


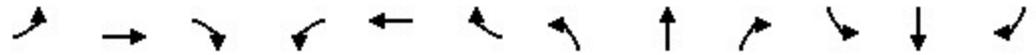
Figure 12 Proposed Site Trip Assignment

Appendix E

Synchro Outputs

Lanes, Volumes, Timings
1: Chretien St & Etheridge Ave

01/29/2026



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	16	77	12	12	103	35	23	16	13	31	21	22
Future Volume (vph)	16	77	12	12	103	35	23	16	13	31	21	22
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.969			0.966			0.960	
Flt Protected		0.993			0.996			0.978			0.979	
Satd. Flow (prot)	0	1842	0	0	1818	0	0	1779	0	0	1770	0
Flt Permitted		0.993			0.996			0.978			0.979	
Satd. Flow (perm)	0	1842	0	0	1818	0	0	1779	0	0	1770	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		68.5			96.3			409.7			59.1	
Travel Time (s)		5.1			7.2			30.7			4.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	84	13	13	112	38	25	17	14	34	23	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	114	0	0	163	0	0	56	0	0	81	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			4.9			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

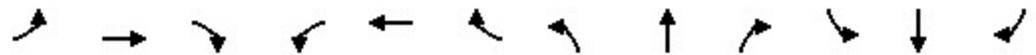
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.4%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

1: Chretien St & Etheridge Ave

01/29/2026

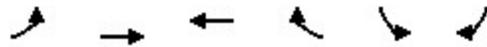


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	16	77	12	12	103	35	23	16	13	31	21	22
Future Volume (Veh/h)	16	77	12	12	103	35	23	16	13	31	21	22
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	84	13	13	112	38	25	17	14	34	23	24
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	150			97			317	301	91	304	288	131
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	150			97			317	301	91	304	288	131
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			96	97	99	94	96	97
cM capacity (veh/h)	1431			1496			592	599	967	615	609	919
Direction, Lane #												
	EB 1	WB 1	NB 1	SB 1								
Volume Total	114	163	56	81								
Volume Left	17	13	25	34								
Volume Right	13	38	14	24								
cSH	1431	1496	658	680								
Volume to Capacity	0.01	0.00*	0.09	0.12								
Queue Length 95th (m)	0.3	0.2	2.1	3.1								
Control Delay (s/veh)	1.2	0.7	11.0	11.0								
Lane LOS	A	A	B	B								
Approach Delay (s/veh)	1.2	0.7	11.0	11.0								
Approach LOS			B	B								
Intersection Summary												
Average Delay			4.2									
Intersection Capacity Utilization			21.4%	ICU Level of Service		A						
Analysis Period (min)			15									

* Value less than 0.01.

Lanes, Volumes, Timings
 4: Britannia Rd & Chretien St

01/29/2026



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↔			↗
Traffic Volume (vph)	0	750	553	11	0	48
Future Volume (vph)	0	750	553	11	0	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.997			0.865
Flt Protected						
Satd. Flow (prot)	0	1883	1878	0	0	1629
Flt Permitted						
Satd. Flow (perm)	0	1883	1878	0	0	1629
Link Speed (k/h)		48	48		48	
Link Distance (m)		98.1	97.1		409.7	
Travel Time (s)		7.4	7.3		30.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	815	601	12	0	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	815	613	0	0	52
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

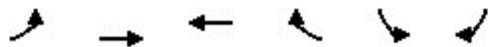
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.8%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

4: Britannia Rd & Chretien St

01/29/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	←			↓
Traffic Volume (veh/h)	0	750	553	11	0	48
Future Volume (Veh/h)	0	750	553	11	0	48
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	815	601	12	0	52
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	613				1422	607
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	613				1422	607
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	90
cM capacity (veh/h)	966				150	496
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	815	613	52			
Volume Left	0	0	0			
Volume Right	0	12	52			
cSH	1700	1700	496			
Volume to Capacity	0.48	0.36	0.10			
Queue Length 95th (m)	0.0	0.0	2.7			
Control Delay (s/veh)	0.0	0.0	13.1			
Lane LOS			B			
Approach Delay (s/veh)	0.0	0.0	13.1			
Approach LOS			B			
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			42.8%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
1: Chretien St & Etheridge Ave

01/29/2026



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	25	73	13	17	67	24	13	13	11	21	7	10
Future Volume (vph)	25	73	13	17	67	24	13	13	11	21	7	10
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.984			0.970			0.959			0.965	
Flt Protected		0.989			0.992			0.983			0.973	
Satd. Flow (prot)	0	1833	0	0	1812	0	0	1776	0	0	1768	0
Flt Permitted		0.989			0.992			0.983			0.973	
Satd. Flow (perm)	0	1833	0	0	1812	0	0	1776	0	0	1768	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		68.5			96.3			409.7			59.1	
Travel Time (s)		5.1			7.2			30.7			4.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	79	14	18	73	26	14	14	12	23	8	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	120	0	0	117	0	0	40	0	0	42	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			4.9			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

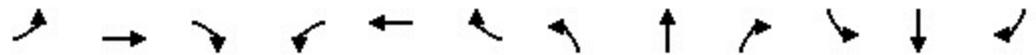
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.3%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

1: Chretien St & Etheridge Ave

01/29/2026



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	25	73	13	17	67	24	13	13	11	21	7	10
Future Volume (Veh/h)	25	73	13	17	67	24	13	13	11	21	7	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	79	14	18	73	26	14	14	12	23	8	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	99			93			277	275	86	281	269	86
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	99			93			277	275	86	281	269	86
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			98	98	99	96	99	99
cM capacity (veh/h)	1494			1501			646	613	973	637	618	973
Direction, Lane #												
	EB 1	WB 1	NB 1	SB 1								
Volume Total	120	117	40	42								
Volume Left	27	18	14	23								
Volume Right	14	26	12	11								
cSH	1494	1501	704	696								
Volume to Capacity	0.02	0.01	0.06	0.06								
Queue Length 95th (m)	0.4	0.3	1.4	1.5								
Control Delay (s/veh)	1.8	1.2	10.4	10.5								
Lane LOS	A	A	B	B								
Approach Delay (s/veh)	1.8	1.2	10.4	10.5								
Approach LOS			B	B								
Intersection Summary												
Average Delay			3.8									
Intersection Capacity Utilization			19.3%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings
4: Britannia Rd & Chretien St

01/29/2026



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↔			↗
Traffic Volume (vph)	0	542	883	24	0	13
Future Volume (vph)	0	542	883	24	0	13
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.996			0.865
Flt Protected						
Satd. Flow (prot)	0	1883	1876	0	0	1629
Flt Permitted						
Satd. Flow (perm)	0	1883	1876	0	0	1629
Link Speed (k/h)		48	48		48	
Link Distance (m)		98.1	97.1		409.7	
Travel Time (s)		7.4	7.3		30.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	589	960	26	0	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	589	986	0	0	14
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

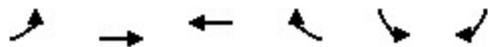
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	57.9%
Analysis Period (min)	15
	ICU Level of Service B

HCM Unsignalized Intersection Capacity Analysis

4: Britannia Rd & Chretien St

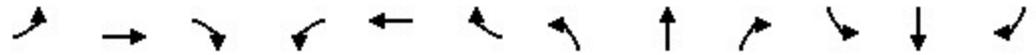
01/29/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Volume (veh/h)	0	542	883	24	0	13
Future Volume (Veh/h)	0	542	883	24	0	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	589	960	26	0	14
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	986				1562	973
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	986				1562	973
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	95
cM capacity (veh/h)	701				123	306
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	589	986	14			
Volume Left	0	0	0			
Volume Right	0	26	14			
cSH	1700	1700	306			
Volume to Capacity	0.35	0.58	0.05			
Queue Length 95th (m)	0.0	0.0	1.1			
Control Delay (s/veh)	0.0	0.0	17.3			
Lane LOS			C			
Approach Delay (s/veh)	0.0	0.0	17.3			
Approach LOS			C			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			57.9%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 1: Chretien St & Etheridge Ave

01/29/2026



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	18	85	13	13	114	39	25	18	14	34	23	24
Future Volume (vph)	18	85	13	13	114	39	25	18	14	34	23	24
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.968			0.967			0.960	
Flt Protected		0.992			0.996			0.979			0.979	
Satd. Flow (prot)	0	1840	0	0	1816	0	0	1783	0	0	1770	0
Flt Permitted		0.992			0.996			0.979			0.979	
Satd. Flow (perm)	0	1840	0	0	1816	0	0	1783	0	0	1770	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		68.5			96.3			140.2			59.1	
Travel Time (s)		5.1			7.2			10.5			4.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	92	14	14	124	42	27	20	15	37	25	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	126	0	0	180	0	0	62	0	0	88	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			4.9			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

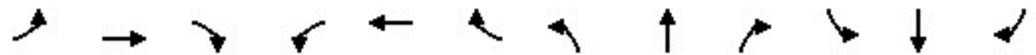
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.9%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

1: Chretien St & Etheridge Ave

01/29/2026



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	18	85	13	13	114	39	25	18	14	34	23	24
Future Volume (Veh/h)	18	85	13	13	114	39	25	18	14	34	23	24
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	92	14	14	124	42	27	20	15	37	25	26
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	166			106			351	333	99	337	319	145
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	166			106			351	333	99	337	319	145
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			95	97	98	94	96	97
cM capacity (veh/h)	1412			1485			558	573	957	580	584	902
Direction, Lane #												
	EB 1	WB 1	NB 1	SB 1								
Volume Total	126	180	62	88								
Volume Left	20	14	27	37								
Volume Right	14	42	15	26								
cSH	1412	1485	626	650								
Volume to Capacity	0.01	0.00*	0.10	0.14								
Queue Length 95th (m)	0.3	0.2	2.5	3.5								
Control Delay (s/veh)	1.3	0.7	11.4	11.4								
Lane LOS	A	A	B	B								
Approach Delay (s/veh)	1.3	0.7	11.4	11.4								
Approach LOS			B	B								
Intersection Summary												
Average Delay			4.4									
Intersection Capacity Utilization			22.9%	ICU Level of Service	A							
Analysis Period (min)			15									

* Value less than 0.01.

Lanes, Volumes, Timings
2: Chretien St & Access B

01/29/2026



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	57	50	0
Future Volume (vph)	0	0	0	57	50	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	87.9			129.2	140.2	
Travel Time (s)	6.6			9.7	10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	62	54	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	62	54	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	6.7%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

2: Chretien St & Access B

01/29/2026



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			T	T	
Traffic Volume (veh/h)	0	0	0	57	50	0
Future Volume (Veh/h)	0	0	0	57	50	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	62	54	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	116	54	54			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	116	54	54			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	880	1013	1551			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	62	54			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.04	0.03			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s/veh)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s/veh)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	6.7%			ICU Level of Service	A	
Analysis Period (min)	15					

Lanes, Volumes, Timings
3: Chretien St & Access A

01/29/2026



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	12	53	0
Future Volume (vph)	0	0	0	12	53	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	87.6			140.4	129.2	
Travel Time (s)	6.6			10.5	9.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	13	58	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	13	58	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	6.7%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

3: Chretien St & Access A

01/29/2026

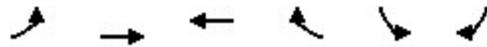


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			T	T	
Traffic Volume (veh/h)	0	0	0	12	53	0
Future Volume (Veh/h)	0	0	0	12	53	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	13	58	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	71	58	58			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	71	58	58			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	933	1008	1546			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	13	58			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.00*	0.03			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s/veh)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s/veh)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	6.7%			ICU Level of Service	A	
Analysis Period (min)	15					

* Value less than 0.01.

Lanes, Volumes, Timings
 4: Britannia Rd & Chretien St

01/29/2026



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↶			↷
Traffic Volume (vph)	0	930	633	12	0	53
Future Volume (vph)	0	930	633	12	0	53
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.997			0.865
Fl _t Protected						
Satd. Flow (prot)	0	1883	1878	0	0	1629
Fl _t Permitted						
Satd. Flow (perm)	0	1883	1878	0	0	1629
Link Speed (k/h)		48	48		48	
Link Distance (m)		98.1	97.1		140.4	
Travel Time (s)		7.4	7.3		10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1011	688	13	0	58
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1011	701	0	0	58
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

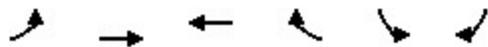
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.3%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

4: Britannia Rd & Chretien St

01/29/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	←			↓
Traffic Volume (veh/h)	0	930	633	12	0	53
Future Volume (Veh/h)	0	930	633	12	0	53
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1011	688	13	0	58
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	701				1706	695
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	701				1706	695
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	87
cM capacity (veh/h)	896				100	442
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	1011	701	58			
Volume Left	0	0	0			
Volume Right	0	13	58			
cSH	1700	1700	442			
Volume to Capacity	0.59	0.41	0.13			
Queue Length 95th (m)	0.0	0.0	3.4			
Control Delay (s/veh)	0.0	0.0	14.4			
Lane LOS			B			
Approach Delay (s/veh)	0.0	0.0	14.4			
Approach LOS			B			
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			52.3%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 1: Chretien St & Etheridge Ave

01/29/2026



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	28	81	14	19	74	26	14	14	12	23	8	11
Future Volume (vph)	28	81	14	19	74	26	14	14	12	23	8	11
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.971			0.959			0.965	
Flt Protected		0.989			0.992			0.983			0.974	
Satd. Flow (prot)	0	1835	0	0	1814	0	0	1776	0	0	1770	0
Flt Permitted		0.989			0.992			0.983			0.974	
Satd. Flow (perm)	0	1835	0	0	1814	0	0	1776	0	0	1770	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		68.5			96.3			140.2			59.1	
Travel Time (s)		5.1			7.2			10.5			4.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	88	15	21	80	28	15	15	13	25	9	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	129	0	0	43	0	0	46	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			4.9			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.7%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

1: Chretien St & Etheridge Ave

01/29/2026



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	28	81	14	19	74	26	14	14	12	23	8	11
Future Volume (Veh/h)	28	81	14	19	74	26	14	14	12	23	8	11
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	88	15	21	80	28	15	15	13	25	9	12
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	108			103			308	306	96	312	299	94
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	108			103			308	306	96	312	299	94
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			98	97	99	96	98	99
cM capacity (veh/h)	1483			1489			613	587	961	604	592	963
Direction, Lane #												
	EB 1	WB 1	NB 1	SB 1								
Volume Total	133	129	43	46								
Volume Left	30	21	15	25								
Volume Right	15	28	13	12								
cSH	1483	1489	677	666								
Volume to Capacity	0.02	0.01	0.06	0.07								
Queue Length 95th (m)	0.5	0.3	1.5	1.7								
Control Delay (s/veh)	1.8	1.3	10.7	10.8								
Lane LOS	A	A	B	B								
Approach Delay (s/veh)	1.8	1.3	10.7	10.8								
Approach LOS			B	B								
Intersection Summary												
Average Delay			3.9									
Intersection Capacity Utilization			20.7%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings
2: Chretien St & Access B

01/29/2026



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	41	41	0
Future Volume (vph)	0	0	0	41	41	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	87.9			129.2	140.2	
Travel Time (s)	6.6			9.7	10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	45	45	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	45	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	6.7%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

2: Chretien St & Access B

01/29/2026



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	41	41	0
Future Volume (Veh/h)	0	0	0	41	41	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	45	45	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	90	45	45			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	90	45	45			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	910	1025	1563			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	45	45			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.03	0.03			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s/veh)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s/veh)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	6.7%			ICU Level of Service	A	
Analysis Period (min)	15					

Lanes, Volumes, Timings
3: Chretien St & Access A

01/29/2026



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	26	14	0
Future Volume (vph)	0	0	0	26	14	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	87.6			140.4	129.2	
Travel Time (s)	6.6			10.5	9.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	28	15	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	28	15	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	6.7%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

3: Chretien St & Access A

01/29/2026

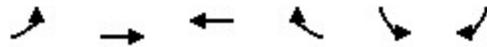


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↵			↑	↑	
Traffic Volume (veh/h)	0	0	0	26	14	0
Future Volume (Veh/h)	0	0	0	26	14	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	28	15	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	43	15	15			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	43	15	15			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	968	1065	1603			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	28	15			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.02	0.00*			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s/veh)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s/veh)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	6.7%			ICU Level of Service	A	
Analysis Period (min)	15					

* Value less than 0.01.

Lanes, Volumes, Timings
 4: Britannia Rd & Chretien St

01/29/2026



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↔			↗
Traffic Volume (vph)	0	646	1063	26	0	14
Future Volume (vph)	0	646	1063	26	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.997			0.865
Flt Protected						
Satd. Flow (prot)	0	1883	1878	0	0	1629
Flt Permitted						
Satd. Flow (perm)	0	1883	1878	0	0	1629
Link Speed (k/h)		48	48		48	
Link Distance (m)		98.1	97.1		140.4	
Travel Time (s)		7.4	7.3		10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	702	1155	28	0	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	702	1183	0	0	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	67.5%
Analysis Period (min)	15
	ICU Level of Service C

HCM Unsignalized Intersection Capacity Analysis

4: Britannia Rd & Chretien St

01/29/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Volume (veh/h)	0	646	1063	26	0	14
Future Volume (Veh/h)	0	646	1063	26	0	14
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	702	1155	28	0	15
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1183				1871	1169
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1183				1871	1169
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	94
cM capacity (veh/h)	590				79	235
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	702	1183	15			
Volume Left	0	0	0			
Volume Right	0	28	15			
cSH	1700	1700	235			
Volume to Capacity	0.41	0.70	0.06			
Queue Length 95th (m)	0.0	0.0	1.5			
Control Delay (s/veh)	0.0	0.0	21.3			
Lane LOS			C			
Approach Delay (s/veh)	0.0	0.0	21.3			
Approach LOS			C			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			67.5%	ICU Level of Service	C	
Analysis Period (min)			15			

Lanes, Volumes, Timings
1: Chretien St & Etheridge Ave

01/29/2026



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	18	85	25	25	114	39	55	27	44	34	25	24
Future Volume (vph)	18	85	25	25	114	39	55	27	44	34	25	24
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.971			0.953			0.961	
Flt Protected		0.993			0.993			0.979			0.980	
Satd. Flow (prot)	0	1822	0	0	1816	0	0	1757	0	0	1774	0
Flt Permitted		0.993			0.993			0.979			0.980	
Satd. Flow (perm)	0	1822	0	0	1816	0	0	1757	0	0	1774	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		68.5			96.3			140.2			59.1	
Travel Time (s)		5.1			7.2			10.5			4.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	92	27	27	124	42	60	29	48	37	27	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	193	0	0	137	0	0	90	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			4.9			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	29.1%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

1: Chretien St & Etheridge Ave

01/29/2026



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	18	85	25	25	114	39	55	27	44	34	25	24
Future Volume (Veh/h)	18	85	25	25	114	39	55	27	44	34	25	24
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	92	27	27	124	42	60	29	48	37	27	26
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	166			119			384	366	106	407	358	145
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	166			119			384	366	106	407	358	145
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			89	95	95	92	95	97
cM capacity (veh/h)	1412			1469			524	545	949	493	550	902
Direction, Lane #												
	EB 1	WB 1	NB 1	SB 1								
Volume Total	139	193	137	90								
Volume Left	20	27	60	37								
Volume Right	27	42	48	26								
cSH	1412	1469	627	588								
Volume to Capacity	0.01	0.02	0.22	0.15								
Queue Length 95th (m)	0.3	0.4	6.3	4.1								
Control Delay (s/veh)	1.2	1.2	12.3	12.2								
Lane LOS	A	A	B	B								
Approach Delay (s/veh)	1.2	1.2	12.3	12.2								
Approach LOS			B	B								
Intersection Summary												
Average Delay			5.7									
Intersection Capacity Utilization			29.1%	ICU Level of Service						A		
Analysis Period (min)			15									

Lanes, Volumes, Timings
2: Chretien St & Access B

01/29/2026



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	4	2	112	71	6
Future Volume (vph)	13	4	2	112	71	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.970			0.989		
Flt Protected	0.963			0.999		
Satd. Flow (prot)	1759	0	0	1882	1863	0
Flt Permitted	0.963			0.999		
Satd. Flow (perm)	1759	0	0	1882	1863	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	87.9			129.2	140.2	
Travel Time (s)	6.6			9.7	10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	4	2	122	77	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	0	124	84	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	17.5% ICU Level of Service A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

2: Chretien St & Access B

01/29/2026



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	4	2	112	71	6
Future Volume (Veh/h)	13	4	2	112	71	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	4	2	122	77	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	207	81	84			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	207	81	84			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	100			
cM capacity (veh/h)	781	980	1513			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	18	124	84			
Volume Left	14	2	0			
Volume Right	4	0	7			
cSH	818	1513	1700			
Volume to Capacity	0.02	0.00*	0.05			
Queue Length 95th (m)	0.5	0.0	0.0			
Control Delay (s/veh)	9.5	0.1	0.0			
Lane LOS	A	A				
Approach Delay (s/veh)	9.5	0.1	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			17.5%	ICU Level of Service	A	
Analysis Period (min)			15			

* Value less than 0.01.

Lanes, Volumes, Timings
3: Chretien St & Access A

01/29/2026



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	13	12	14	57	21
Future Volume (vph)	55	13	12	14	57	21
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.974			0.963		
Flt Protected	0.961			0.977		
Satd. Flow (prot)	1763	0	0	1840	1814	0
Flt Permitted	0.961			0.977		
Satd. Flow (perm)	1763	0	0	1840	1814	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	87.6			140.4	129.2	
Travel Time (s)	6.6			10.5	9.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	14	13	15	62	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	74	0	0	28	85	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.6%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

3: Chretien St & Access A

01/29/2026

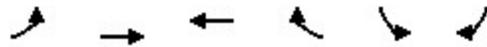


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	13	12	14	57	21
Future Volume (Veh/h)	55	13	12	14	57	21
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	60	14	13	15	62	23
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	115	74	85			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	115	74	85			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	93	99	99			
cM capacity (veh/h)	874	988	1512			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	74	28	85			
Volume Left	60	13	0			
Volume Right	14	0	23			
cSH	894	1512	1700			
Volume to Capacity	0.08	0.00*	0.05			
Queue Length 95th (m)	2.1	0.2	0.0			
Control Delay (s/veh)	9.4	3.5	0.0			
Lane LOS	A	A				
Approach Delay (s/veh)	9.4	3.5	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			4.2			
Intersection Capacity Utilization			18.6%	ICU Level of Service	A	
Analysis Period (min)			15			

* Value less than 0.01.

Lanes, Volumes, Timings
4: Britannia Rd & Chretien St

01/29/2026



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↔			↗
Traffic Volume (vph)	0	930	633	26	0	70
Future Volume (vph)	0	930	633	26	0	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.995			0.865
Fl _t Protected						
Satd. Flow (prot)	0	1883	1874	0	0	1629
Fl _t Permitted						
Satd. Flow (perm)	0	1883	1874	0	0	1629
Link Speed (k/h)		48	48		48	
Link Distance (m)		98.1	97.1		140.4	
Travel Time (s)		7.4	7.3		10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1011	688	28	0	76
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1011	716	0	0	76
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

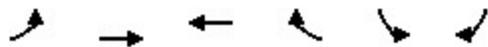
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.3%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

4: Britannia Rd & Chretien St

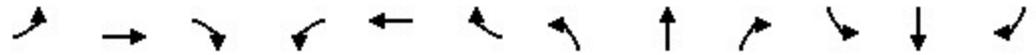
01/29/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Volume (veh/h)	0	930	633	26	0	70
Future Volume (Veh/h)	0	930	633	26	0	70
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1011	688	28	0	76
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	716				1713	702
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	716				1713	702
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	83
cM capacity (veh/h)	885				99	438
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	1011	716	76			
Volume Left	0	0	0			
Volume Right	0	28	76			
cSH	1700	1700	438			
Volume to Capacity	0.59	0.42	0.17			
Queue Length 95th (m)	0.0	0.0	4.7			
Control Delay (s/veh)	0.0	0.0	14.9			
Lane LOS			B			
Approach Delay (s/veh)	0.0	0.0	14.9			
Approach LOS			B			
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			52.3%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
1: Chretien St & Etheridge Ave

01/29/2026



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	28	81	42	47	74	26	39	21	37	23	13	11
Future Volume (vph)	28	81	42	47	74	26	39	21	37	23	13	11
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.962			0.976			0.949			0.968	
Flt Protected		0.991			0.984			0.980			0.976	
Satd. Flow (prot)	0	1796	0	0	1809	0	0	1752	0	0	1779	0
Flt Permitted		0.991			0.984			0.980			0.976	
Satd. Flow (perm)	0	1796	0	0	1809	0	0	1752	0	0	1779	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		68.5			96.3			140.2			59.1	
Travel Time (s)		5.1			7.2			10.5			4.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	88	46	51	80	28	42	23	40	25	14	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	164	0	0	159	0	0	105	0	0	51	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right									
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			4.9			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	26.8%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

1: Chretien St & Etheridge Ave

01/29/2026



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	28	81	42	47	74	26	39	21	37	23	13	11
Future Volume (Veh/h)	28	81	42	47	74	26	39	21	37	23	13	11
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	88	46	51	80	28	42	23	40	25	14	12
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	108			134			386	381	111	419	390	94
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	108			134			386	381	111	419	390	94
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			96			92	96	96	95	97	99
cM capacity (veh/h)	1483			1451			531	522	942	483	515	963
Direction, Lane #												
	EB 1	WB 1	NB 1	SB 1								
Volume Total	164	159	105	51								
Volume Left	30	51	42	25								
Volume Right	46	28	40	12								
cSH	1483	1451	634	558								
Volume to Capacity	0.02	0.04	0.17	0.09								
Queue Length 95th (m)	0.5	0.8	4.5	2.3								
Control Delay (s/veh)	1.5	2.6	11.8	12.1								
Lane LOS	A	A	B	B								
Approach Delay (s/veh)	1.5	2.6	11.8	12.1								
Approach LOS			B	B								
Intersection Summary												
Average Delay			5.3									
Intersection Capacity Utilization			26.8%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings
2: Chretien St & Access B

01/29/2026



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	11	4	5	87	88	14
Future Volume (vph)	11	4	5	87	88	14
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.966				0.982	
Flt Protected	0.964			0.998		
Satd. Flow (prot)	1754	0	0	1880	1850	0
Flt Permitted	0.964			0.998		
Satd. Flow (perm)	1754	0	0	1880	1850	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	87.9			129.2	140.2	
Travel Time (s)	6.6			9.7	10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	4	5	95	96	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	0	100	111	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.7%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

2: Chretien St & Access B

01/29/2026



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	11	4	5	87	88	14
Future Volume (Veh/h)	11	4	5	87	88	14
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	4	5	95	96	15
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	209	104	111			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	209	104	111			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	100			
cM capacity (veh/h)	777	951	1479			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	16	100	111			
Volume Left	12	5	0			
Volume Right	4	0	15			
cSH	814	1479	1700			
Volume to Capacity	0.02	0.00*	0.07			
Queue Length 95th (m)	0.5	0.1	0.0			
Control Delay (s/veh)	9.5	0.4	0.0			
Lane LOS	A	A				
Approach Delay (s/veh)	9.5	0.4	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			18.7%	ICU Level of Service	A	
Analysis Period (min)			15			

* Value less than 0.01.

Lanes, Volumes, Timings
3: Chretien St & Access A

01/29/2026



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	46	11	28	31	18	47
Future Volume (vph)	46	11	28	31	18	47
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.974			0.903		
Flt Protected	0.961			0.977		
Satd. Flow (prot)	1763	0	0	1840	1701	0
Flt Permitted	0.961			0.977		
Satd. Flow (perm)	1763	0	0	1840	1701	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	87.6			140.4	129.2	
Travel Time (s)	6.6			10.5	9.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	12	30	34	20	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	62	0	0	64	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.8%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

3: Chretien St & Access A

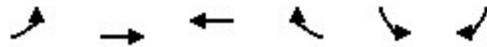
01/29/2026



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	46	11	28	31	18	47
Future Volume (Veh/h)	46	11	28	31	18	47
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	50	12	30	34	20	51
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	140	46	71			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	140	46	71			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	99	98			
cM capacity (veh/h)	837	1024	1529			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	62	64	71			
Volume Left	50	30	0			
Volume Right	12	0	51			
cSH	868	1529	1700			
Volume to Capacity	0.07	0.02	0.04			
Queue Length 95th (m)	1.8	0.5	0.0			
Control Delay (s/veh)	9.5	3.5	0.0			
Lane LOS	A	A				
Approach Delay (s/veh)	9.5	3.5	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			4.1			
Intersection Capacity Utilization			19.8%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Britannia Rd & Chretien St

01/29/2026



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↔			↗
Traffic Volume (vph)	0	646	1063	59	0	28
Future Volume (vph)	0	646	1063	59	0	28
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.993			0.865
Flt Protected						
Satd. Flow (prot)	0	1883	1870	0	0	1629
Flt Permitted						
Satd. Flow (perm)	0	1883	1870	0	0	1629
Link Speed (k/h)		48	48		48	
Link Distance (m)		98.1	97.1		140.4	
Travel Time (s)		7.4	7.3		10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	702	1155	64	0	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	702	1219	0	0	30
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

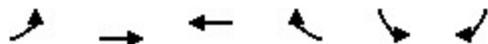
Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	69.5%
Analysis Period (min)	15
	ICU Level of Service C

HCM Unsignalized Intersection Capacity Analysis

4: Britannia Rd & Chretien St

01/29/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Volume (veh/h)	0	646	1063	59	0	28
Future Volume (Veh/h)	0	646	1063	59	0	28
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	702	1155	64	0	30
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1219				1889	1187
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1219				1889	1187
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	87
cM capacity (veh/h)	572				77	230
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	702	1219	30			
Volume Left	0	0	0			
Volume Right	0	64	30			
cSH	1700	1700	230			
Volume to Capacity	0.41	0.72	0.13			
Queue Length 95th (m)	0.0	0.0	3.4			
Control Delay (s/veh)	0.0	0.0	23.0			
Lane LOS			C			
Approach Delay (s/veh)	0.0	0.0	23.0			
Approach LOS			C			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			69.5%	ICU Level of Service	C	
Analysis Period (min)			15			

Appendix F

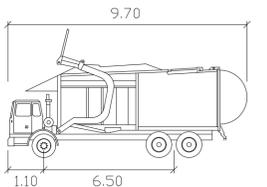
Vehicle Swept Path Analysis



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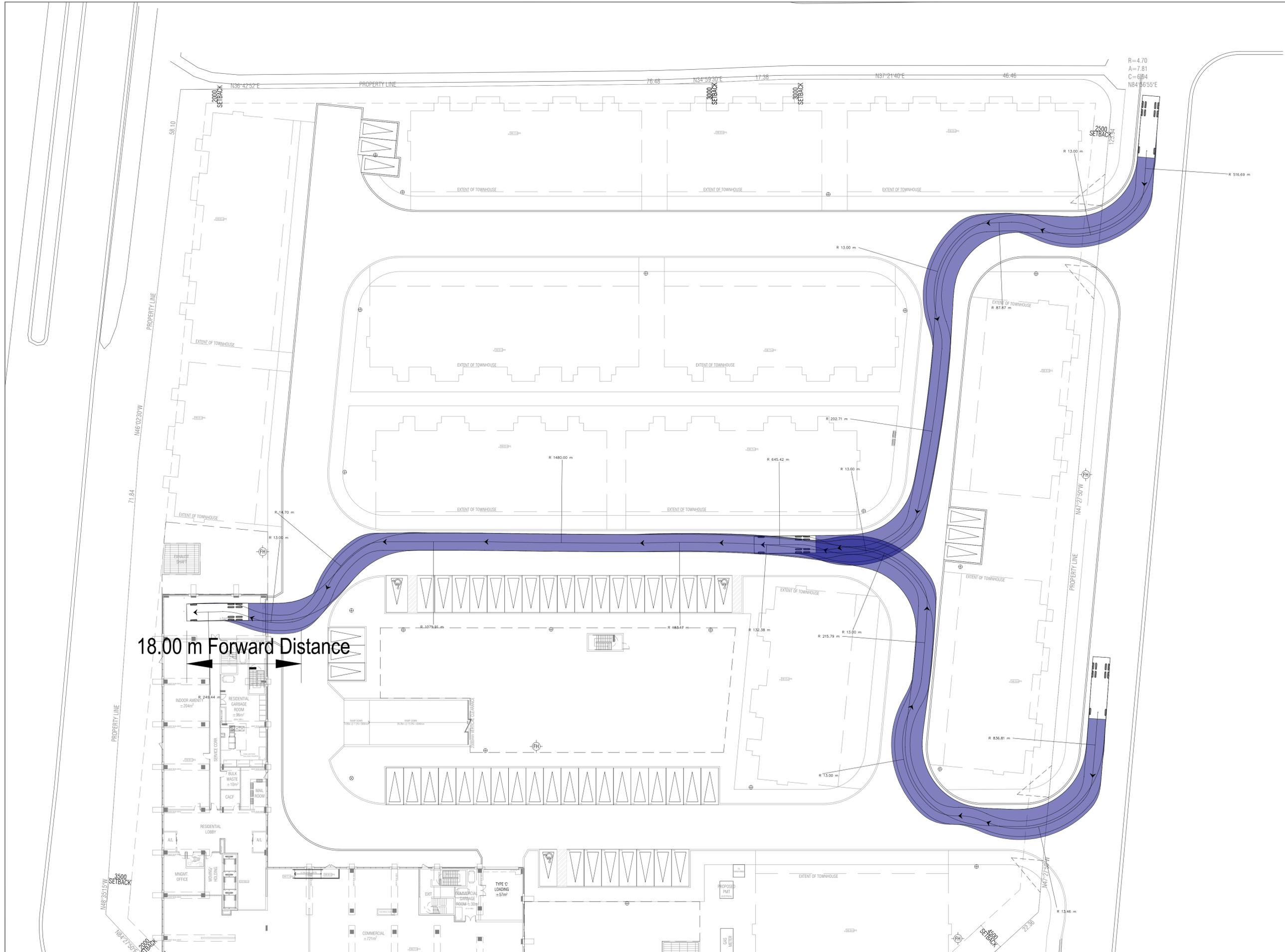


Halton-Front-End
meters
Width : 2.70
Track : 2.70
Lock to Lock Time : 6.0
Steering Angle : 30.0

1	First Submission	W.M	W.M	2/23/26
No.	Issue	Checked	Approved	Date
Author	V.C	Designer	V.C	
Drafting Check	W.M	Design Check	W.M	
Project Manager	W.M	Project Director	W.M	
Client	-			
Project	SHEARLING HEIGHTS			
Date	February 23, 2026	Scale	NTS	
Project No.	-			

Title
VEHICLE MOVING DIAGRAM - WASTE COLLECTION (INBOUND)

AT-101



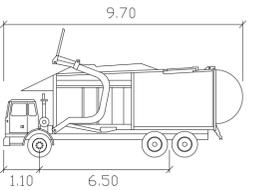
18.00 m Forward Distance



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Halton-Front-End
meters
Width : 2.70
Track : 2.70
Lock to Lock Time : 6.0
Steering Angle : 30.0

1	First Submission	W.M	W.M	2/23/26
No.	Issue	Checked	Approved	Date

Author V.C Designer V.C

Drafting Check W.M Design Check W.M

Project Manager W.M Project Director W.M

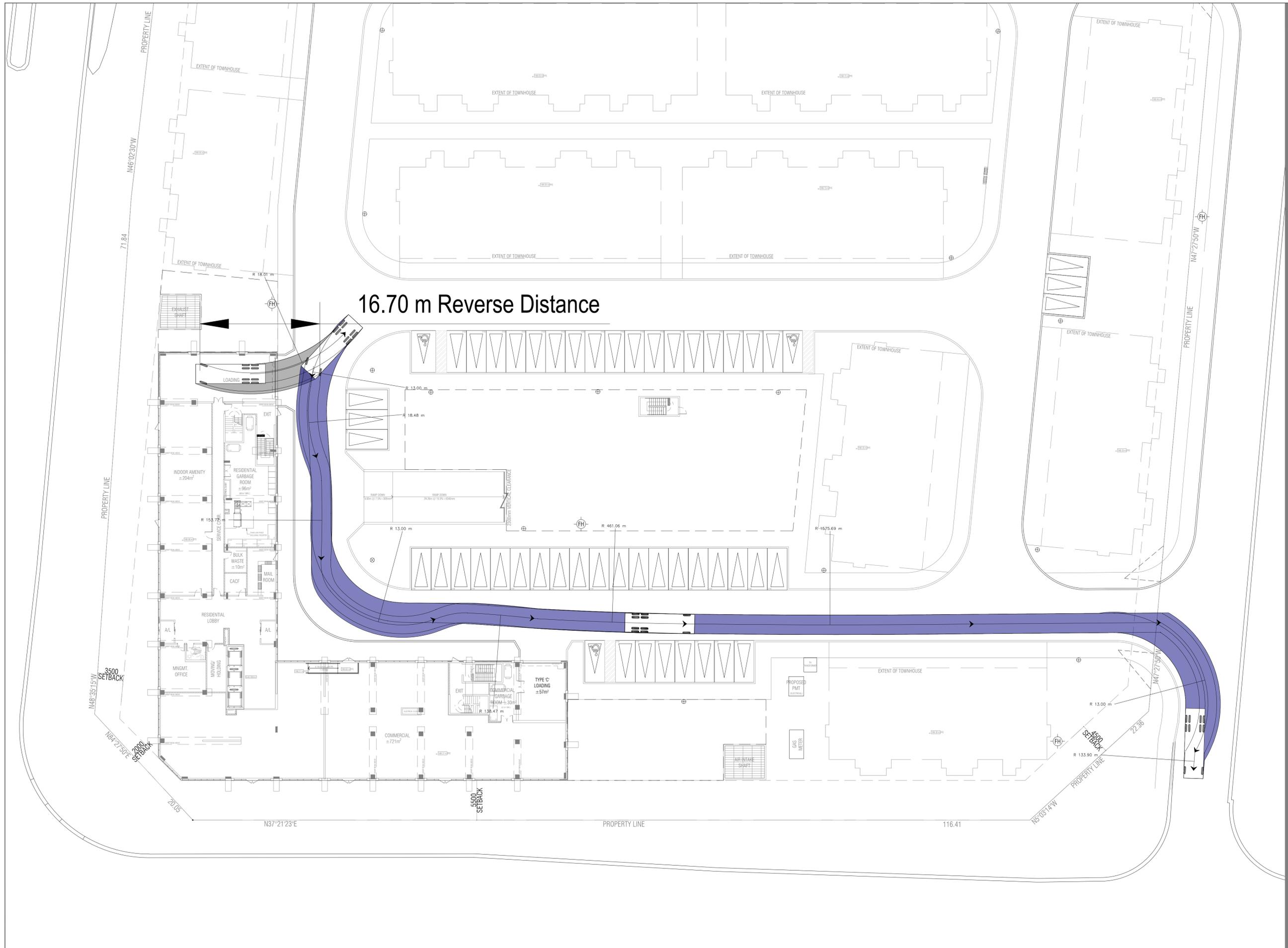
Client -

Project
SHEARLING HEIGHTS

Date February 23, 2026 Scale NTS

Project No. -

Title
**VEHICLE MOVING
DIAGRAM - WASTE
COLLECTION
(OUTBOUND)**



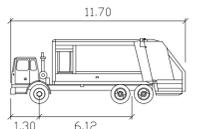
16.70 m Reverse Distance



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White Goods Waste Vehicle

Width : 2.40 meters
Track : 2.30
Lock to Lock Time : 6.0
Steering Angle : 27.2

No.	Issue	Checked	W.M	W.M	2/23/26	Approved	Date
1	First Submission						

Author V.C Designer V.C

Drafting Check W.M Design Check W.M

Project Manager W.M Project Director W.M

Client

Project

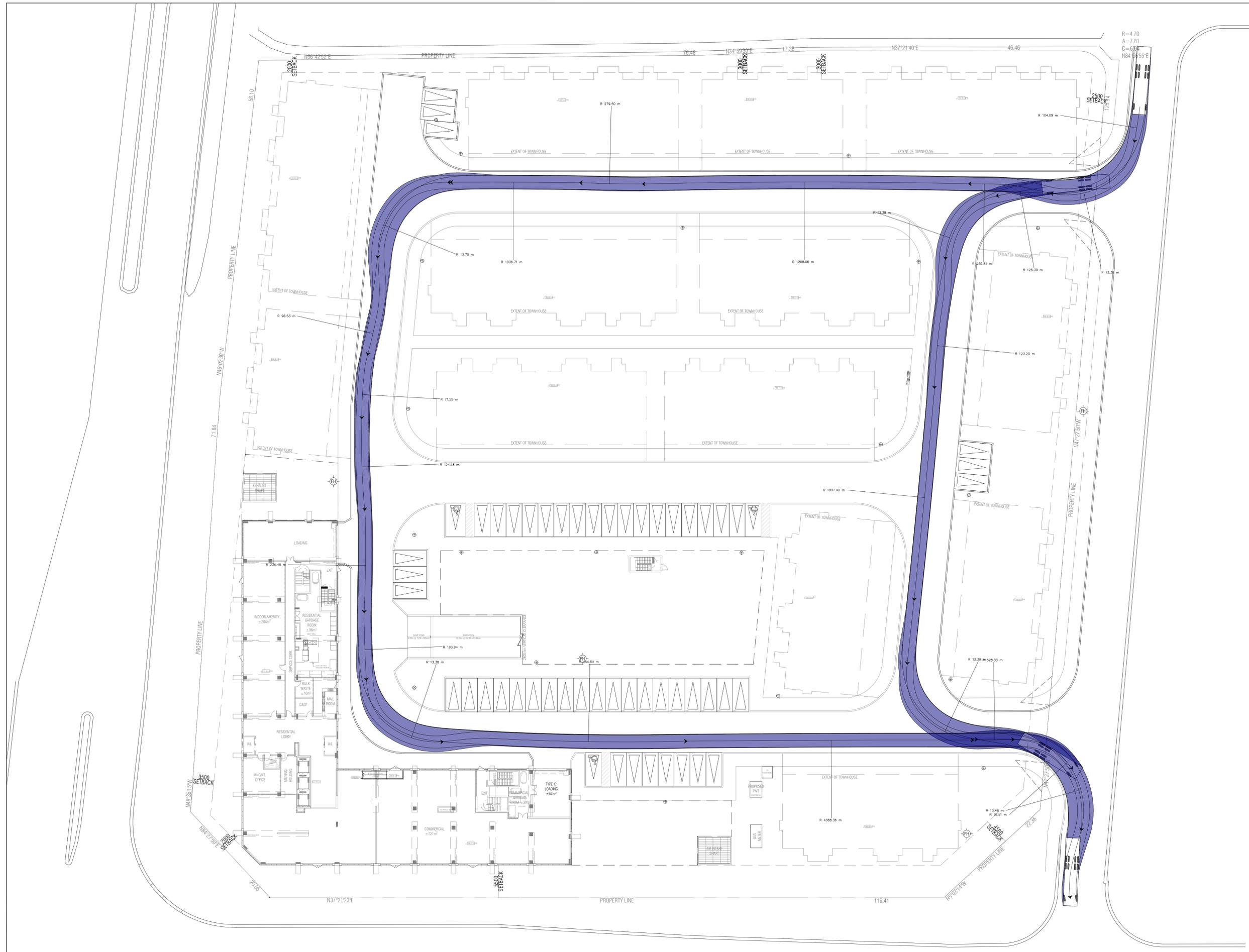
SHEARLING HEIGHTS

Date February 23, 2026 Scale NTS

Project No.

Title

VEHICLE MOVING
DIAGRAM - SIDE LOAD
WASTE COLLECTION

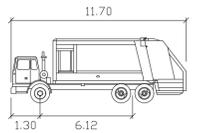




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White Goods Waste Vehicle

	units
Width	2.40 meters
Track	2.30
Lock to Lock Time	6.0
Steering Angle	27.2

No.	Issue	W.M	W.M	2/23/26
1	First Submission	Checked	Approved	Date

Author V.C Designer V.C

Drafting Check W.M Design Check W.M

Project Manager W.M Project Director W.M

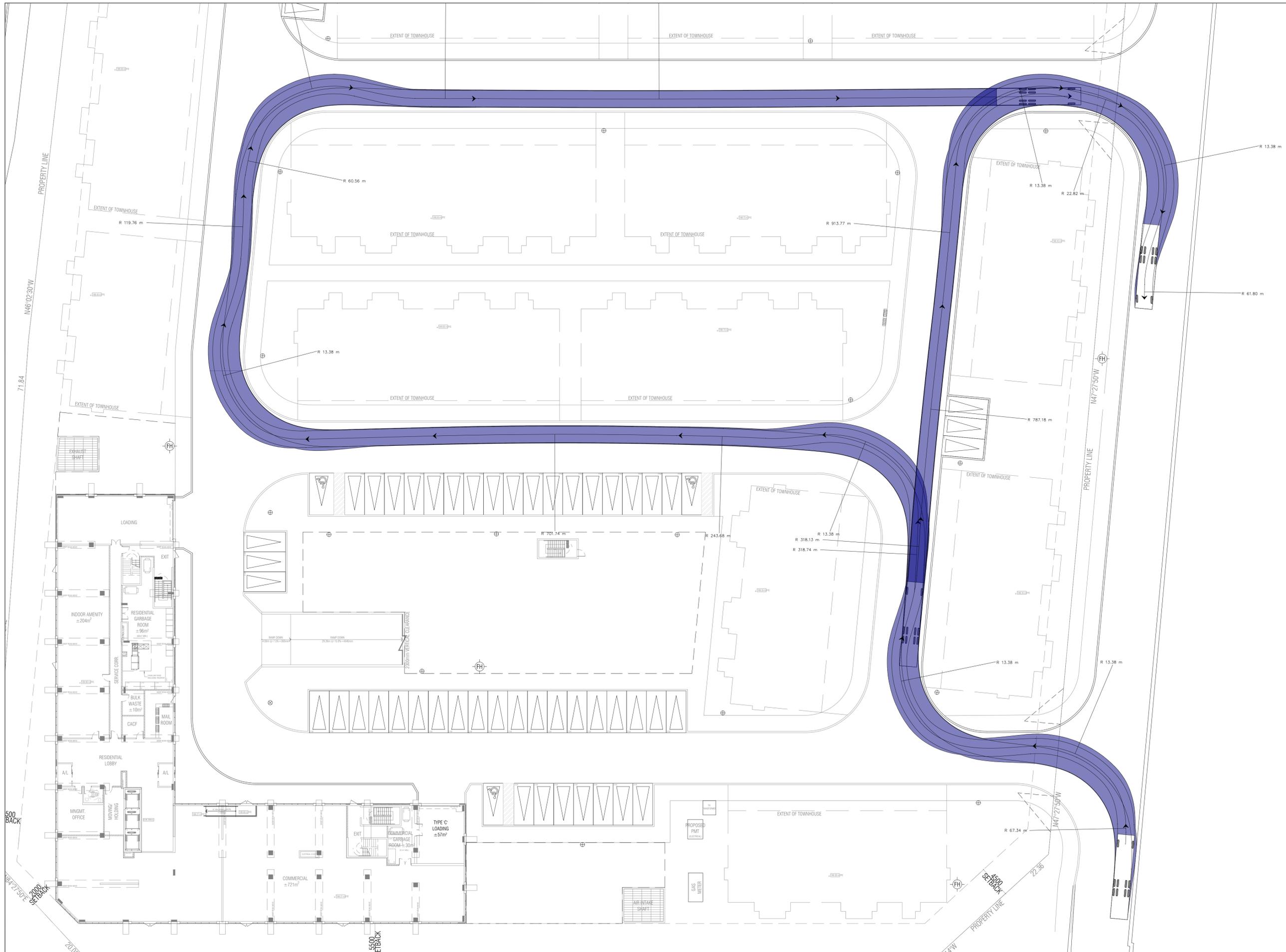
Client -

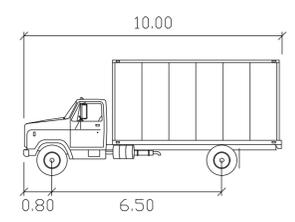
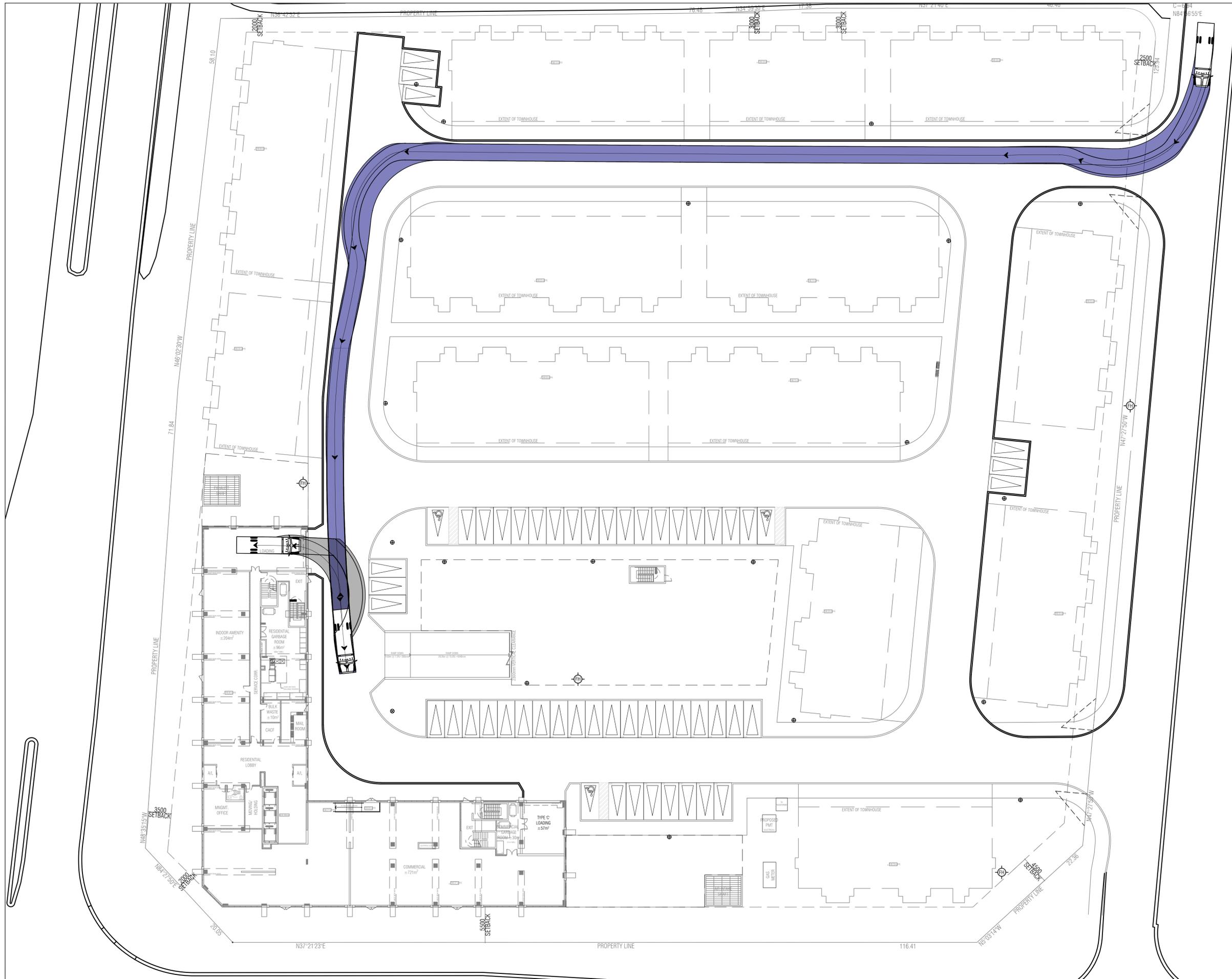
Project SHEARLING HEIGHTS

Date February 23, 2026 Scale NTS

Project No. -

Title VEHICLE MOVING DIAGRAM - SIDE LOAD WASTE COLLECTION





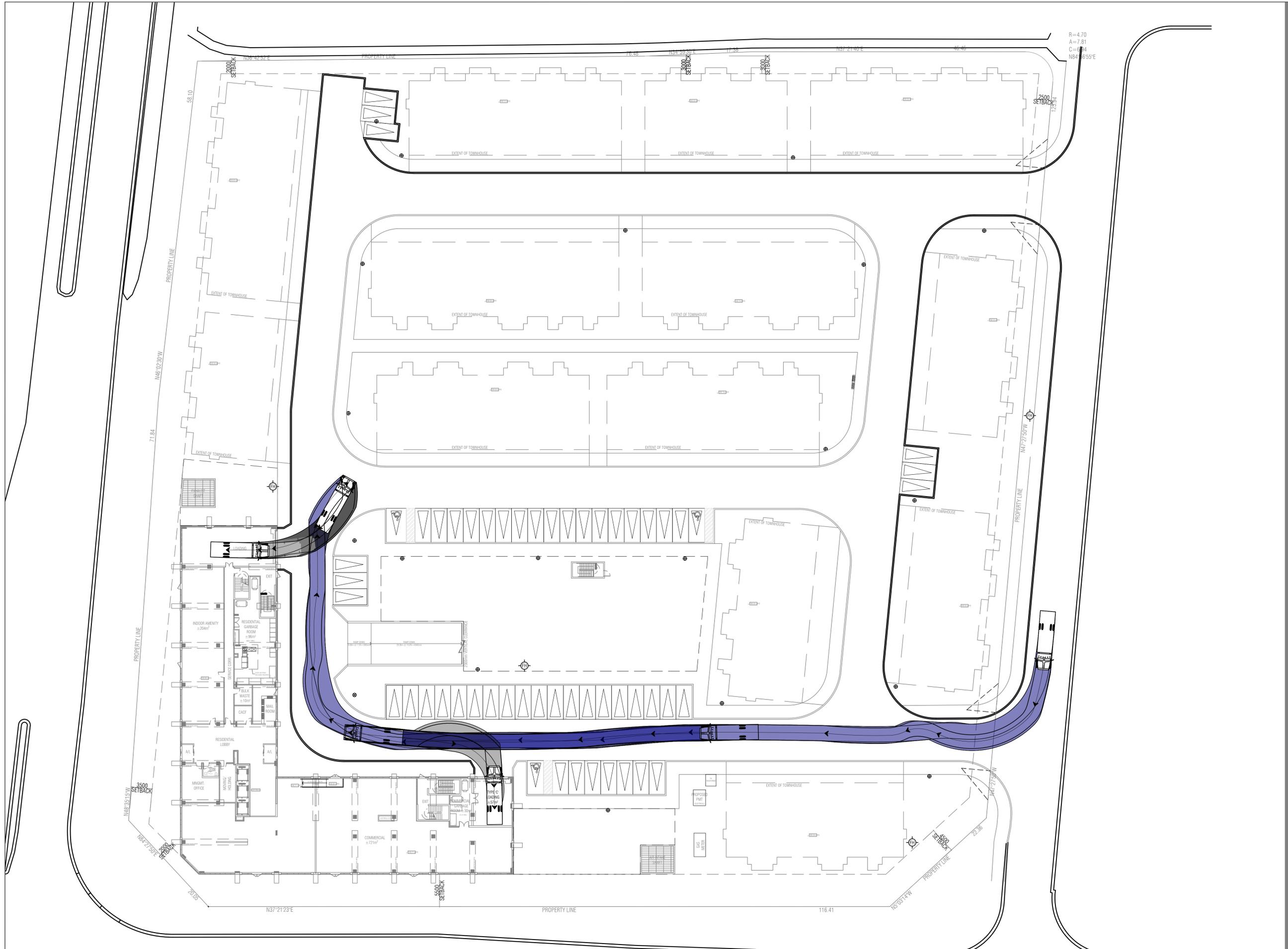
MSU meters

Width : 10.00
 Track : 6.50
 Lock to Lock Time : 6.0
 Steering Angle : 40.2

1	First Submission	W.M	W.M	2/23/26
No.	Issue	Checked	Approved	Date
Author	V.C	Designer	V.C	
Drafting Check	W.M	Design Check	W.M	
Project Manager	W.M	Project Director	W.M	
Client	-			
Project	SHEARLING HEIGHTS			
Date	February 23, 2026	Scale	NTS	
Project No.	-			

Title

VEHICLE MOVING DIAGRAM - MSU (INBOUND)



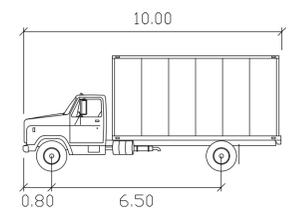
R=4.70
A=7.81
C=6.04
N84°16'55"E




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MSU meters

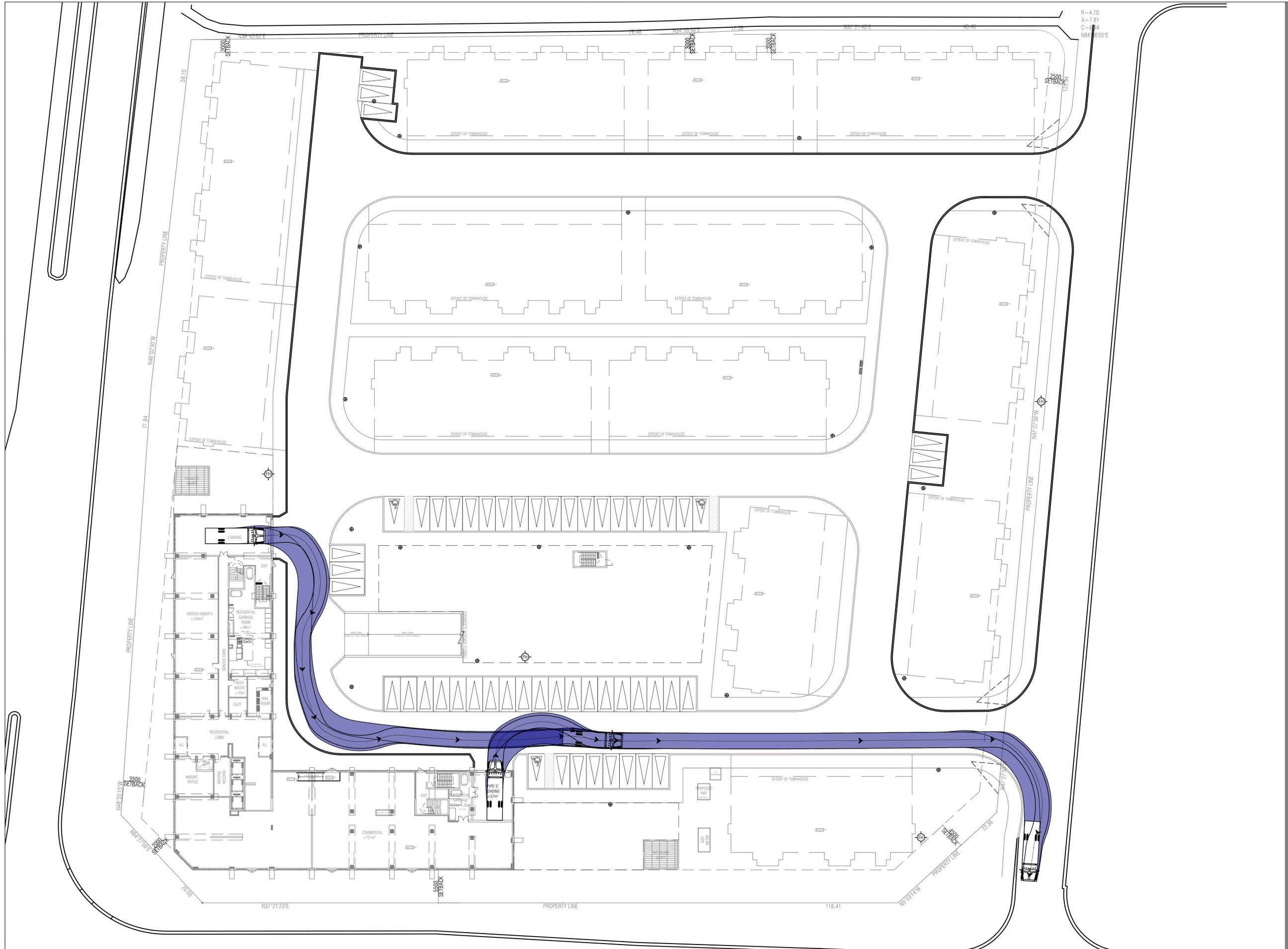
Width : 2.60
Track : 2.60
Lock to Lock Time : 6.0
Steering Angle : 40.2

No.	Issue	Checked	W.M	W.M	2/23/26	Date
1	First Submission					

Author	V.C	Designer	V.C
Drafting Check	W.M	Design Check	W.M
Project Manager	W.M	Project Director	W.M
Client	-		
Project	SHEARLING HEIGHTS		
Date	February 23, 2026	Scale	NTS
Project No.	-		

Title

**VEHICLE MOVING
DIAGRAM - MSU
(INBOUND)**



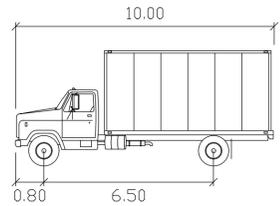
R=4.70
A=7.81
C=6.14
NB4°16'55"E



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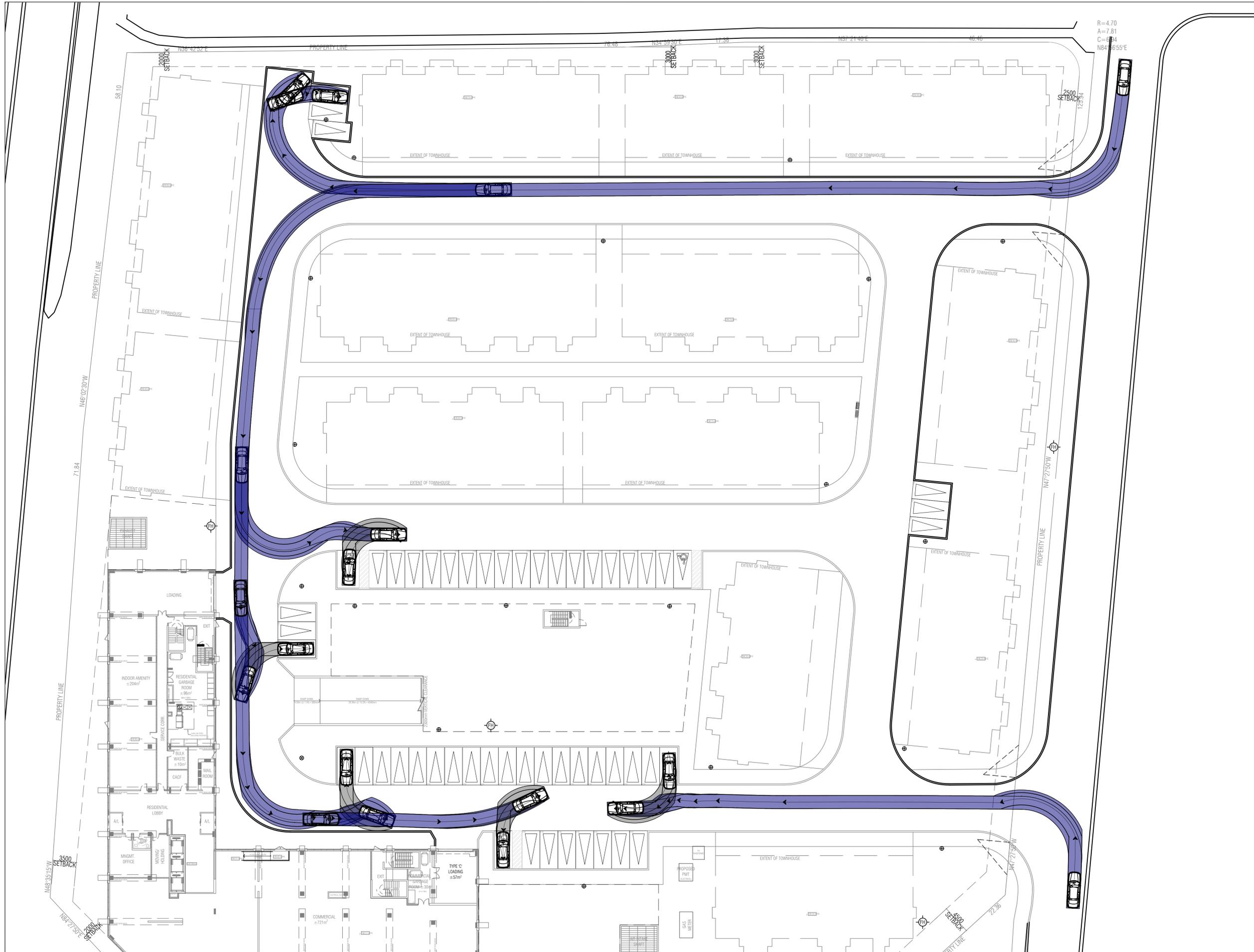
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MSU meters
Width : 2.60
Track : 2.60
Lock to Lock Time : 6.0
Steering Angle : 40.2

1 First Submission		W.M	W.M	2/23/26
No.	Issue	Checked	Approved	Date
Author	V.C	Designer	V.C	
Drafting Check	W.M	Design Check	W.M	
Project Manager	W.M	Project Director	W.M	
Client	-			
Project	SHEARLING HEIGHTS			
Date	February 23, 2026	Scale	NTS	
Project No.	-			

Title
VEHICLE MOVING DIAGRAM - MSU (OUTBOUND)

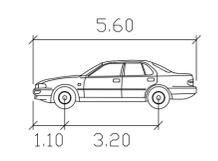


R=4.70
A=7.81
C=6.04
N84°16'55"E



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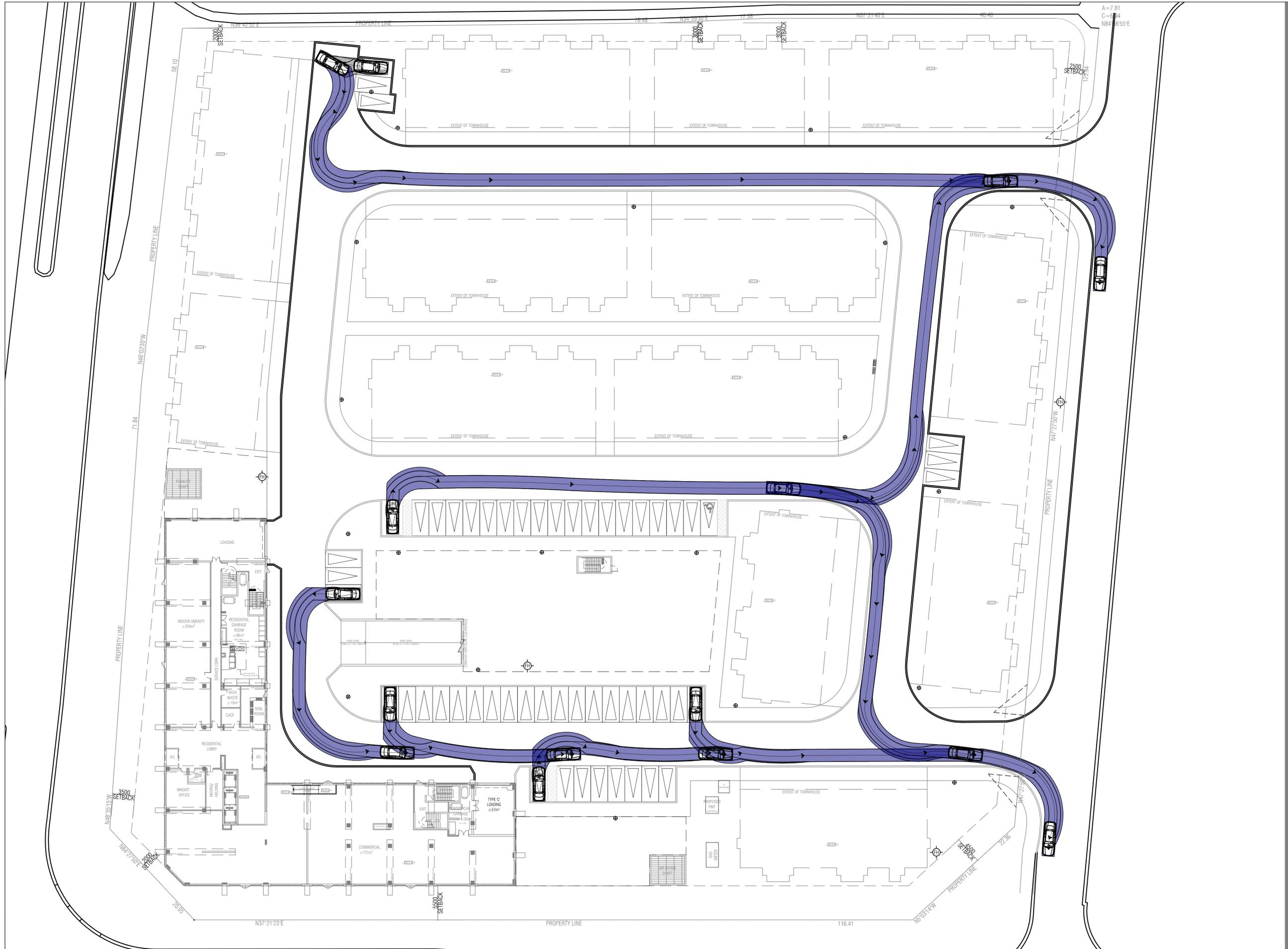
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P
Width : 2.00 meters
Track : 2.00
Lock to Lock Time : 6.0
Steering Angle : 35.9

1 First Submission		W.M	W.M	2/23/26
No.	Issue	Checked	Approved	Date
Author	V.C	Designer	V.C	
Drafting Check	W.M	Design Check	W.M	
Project Manager	W.M	Project Director	W.M	
Client	-			
Project	SHEARLING HEIGHTS			
Date	February 23, 2026	Scale	NTS	
Project No.	-			

Title
VEHICLE MOVING DIAGRAM - PASSENGER VEHICLE (INBOUND)

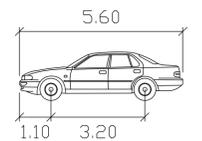


A=7.81
C=6.04
N84°6'55"E



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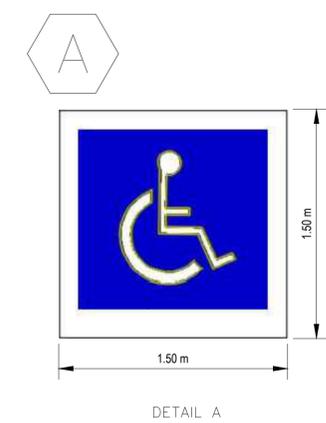
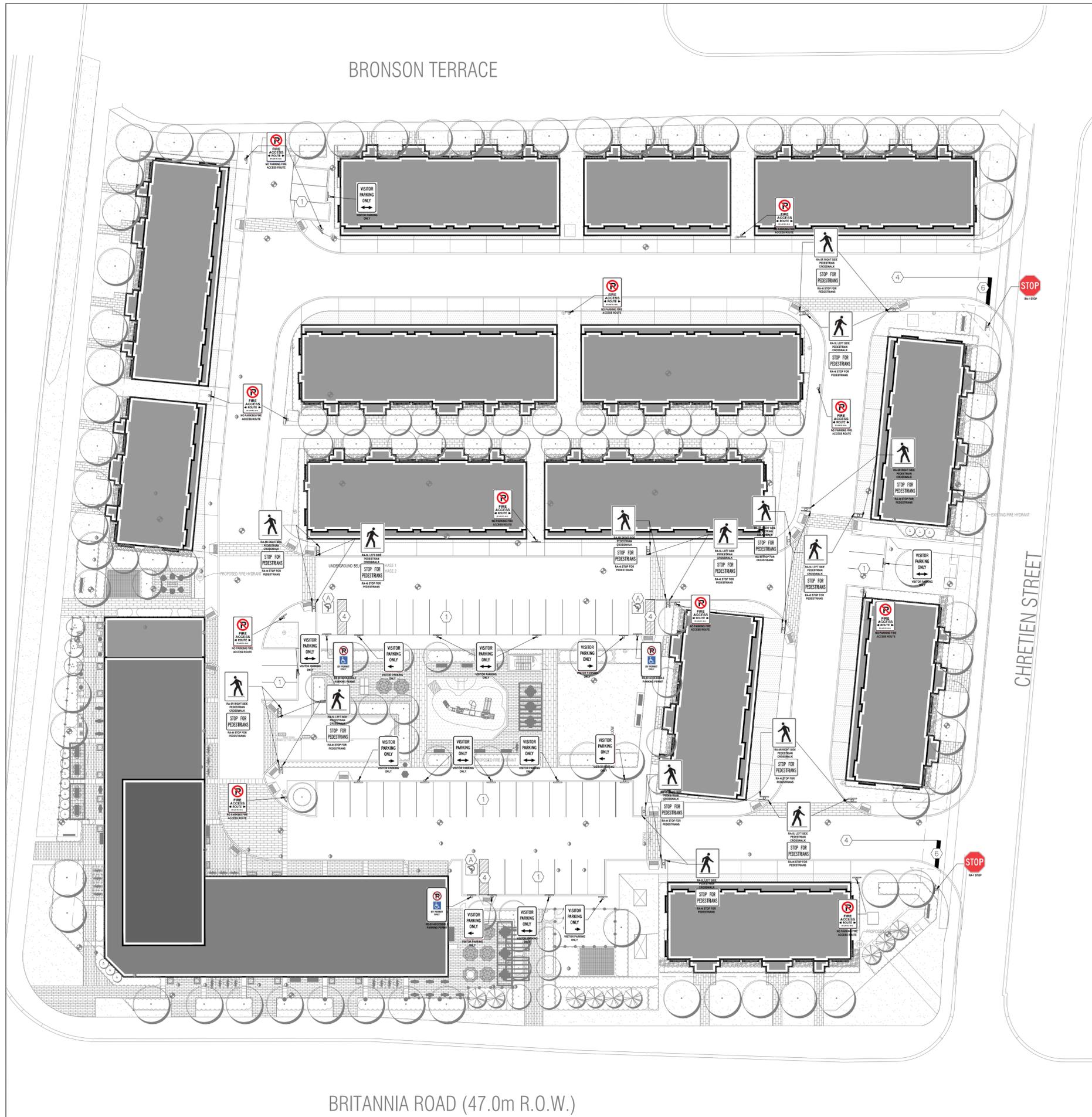
P
Width : 2.00 meters
Track : 2.00
Lock to Lock Time : 6.0
Steering Angle : 35.9

No.	Issue	Checked	W.M	W.M	2/23/26	Approved	Date
1	First Submission						
Author	V.C		Designer	V.C			
Drafting Check	W.M		Design Check	W.M			
Project Manager	W.M		Project Director	W.M			
Client	-						
Project	SHEARLING HEIGHTS						
Date	February 23, 2026		Scale	NTS			
Project No.	-						

Title
VEHICLE MOVING DIAGRAM - PASSENGER VEHICLE (OUTBOUND)

Appendix G

Pavement Marking and Signage Plan



PAVEMENT MARKING LEGEND			
IDENTIFICATION	TYPE	COLOUR	WIDTH (cm)
1	SOLID	WHITE	10
2	1-1-1 BROKEN	YELLOW	10
3	3-3-3 BROKEN	YELLOW	10
4	SOLID	YELLOW	10
5	3-6-3 BROKEN	YELLOW	10
6	SOLID	WHITE	60
7	0.4-0.4-0.4 BROKEN	WHITE	40

- PAVEMENT MARKING LEGEND TABLE NOTES
- 3-3-3, 3-6-3, 3-9-3, DENOTES PAVEMENT MARKING SPACING (I.E., 3m LINE, 3m GAP, 3m LINE)
 - USE TO DENOTE PAVEMENT MARKING

TRAFFIC SIGN SCHEDULE			
SIGN NUMBER	SIGN NAME	QUANTITY	COMMENTS
Ra-1	STOP	2	
Ra-4t	STOP FOR PEDESTRIANS	32	
Ra-5R	RIGHT SIDE PEDESTRIAN CROSSWALK	16	
Ra-5L	LEFT SIDE PEDESTRIAN CROSSWALK	16	
RB-93	ACCESSIBLE PARKING PERMIT	3	
CUSTOM	FIRE ACCESS ROUTE	12	
CUSTOM	VISITOR PARKING ONLY	9	BOTH ARROWS
CUSTOM	VISITOR PARKING ONLY	3	LEFT ARROWS
CUSTOM	VISITOR PARKING ONLY	3	RIGHT ARROWS
TOTAL		96	



1	First Submission	W.M	W.M	2/25/26
No.	Issue	Checked	Approved	Date
Author	V.C	Designer	V.C	
Drafting Check	W.M	Design Check	W.M	
Project Manager	W.M	Project Director	W.M	
Client				

Project
SHEARLING HEIGHTS

Date February 25, 2026 Scale NTS

Title
PAVEMENT MARKING AND SIGNAGE PLAN

Appendix H

TTS Outputs



Hello Dhaval Harpal

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TTS Cross Tabulation

Cross Tabulation Query Form - Trip - 2016 v1.1

Filter Variables

Planning district of desti... 2006 GTA zone of origin (Optional) Table Attribute

Group Attributes

Row Grouping (4102,4103,4104,4105) Table Grouping Grouping file: Choose File No file chosen

Filter Selection +

Filter selection form with checkboxes for Trip purpose of origin, Start time of trip, and Primary travel mode of trip.

Add Delete

Output

Output format options: Comma-delimited table, Column format, Expansion Factor On, Click to Select Load, Load

Execute Query Select All Save As

Mon Nov 08 2021 14:36:55 GMT-0500 (Eastern Standard Time) - Run Time: 3380ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of destination - pd_dest Column: 2006 GTA zone of origin - gta06_orig

RowG: ColG: (4102,4103,4104,4105) TblG:

Filters: (Trip purpose of origin - purp_orig In H, and Start time of trip - start_time In 600-900 and Primary travel mode of trip - mode_prime In D, P, M, T,)

Trip 2016 Table:

Table output showing counts for various planning districts (e.g., PD 1 of Toronto, 56).

Instructions

Group attributes on the by:

- Entering the values of ea

Example

- (1) (4-6,8) (9-14) Group 1: 1 Group 2: 4,5,6,8 Group 3: 9,10,11,12,13,14

Open current page in new tab

2006 GTA Zone of Origin

Table with 2 columns: Code, Description. Lists various GTA zones and their descriptions.

PD 16 of Toronto,13
 Whitby,14
 Richmond Hill,29
 Markham,90
 Vaughan,177
 Brampton,342
 Mississauga,1985
 Halton Hills,93
 Milton,3223
 Oakville,444
 Burlington,354
 Dundas,46
 Hamilton,149
 Waterloo,20
 Kitchener,45
 Cambridge,29
 City of Guelph,90
 Barrie,22
 Brantford,19

Instructions

Group attributes on the by:

- Entering the values of ea

Example

- (1) (4-6,8) (9-14)
- Group 1: 1
- Group 2: 4,5,6,8
- Group 3: 9,10,11,12,13,14

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2006 GTA Zone of Or

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Code	Description
1 - 625	Toronto
1001 - 1334	Durham
2001 - 2877	York
3001 - 3879	Peel
4001 - 4197	Halton
5001 - 5253	Hamilton
6001 - 6366	Niagara
7001 - 7576	Waterloo
8001 - 8207	Guelph
8301 - 8380	Wellington
8401 - 8405	Orangeville
8411 - 8417	Dufferin
8501 - 8532	Barrie
8551 - 8667	Simcoe
8681 - 8685	Orillia
8701 - 8717	Kawartha Lake
8801 - 8825	City of Peterbor
8851 - 8855	Peterborough
8901 - 8949	Brantford
8950 - 8960	Brant
9001 - 9016	Northumberland
9017 - 9068	External
9800, 9998	External Unde
9999	Unknown/Refu

