

Fernbrook Homes (Seven Oaks 2021) Ltd Block 415, Town of Oakville Traffic Brief

February 25, 2022

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Quality information

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Revision History

Revision	Revision date	Details	Authorized	Name	Position

Distribution List

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1. Introduction

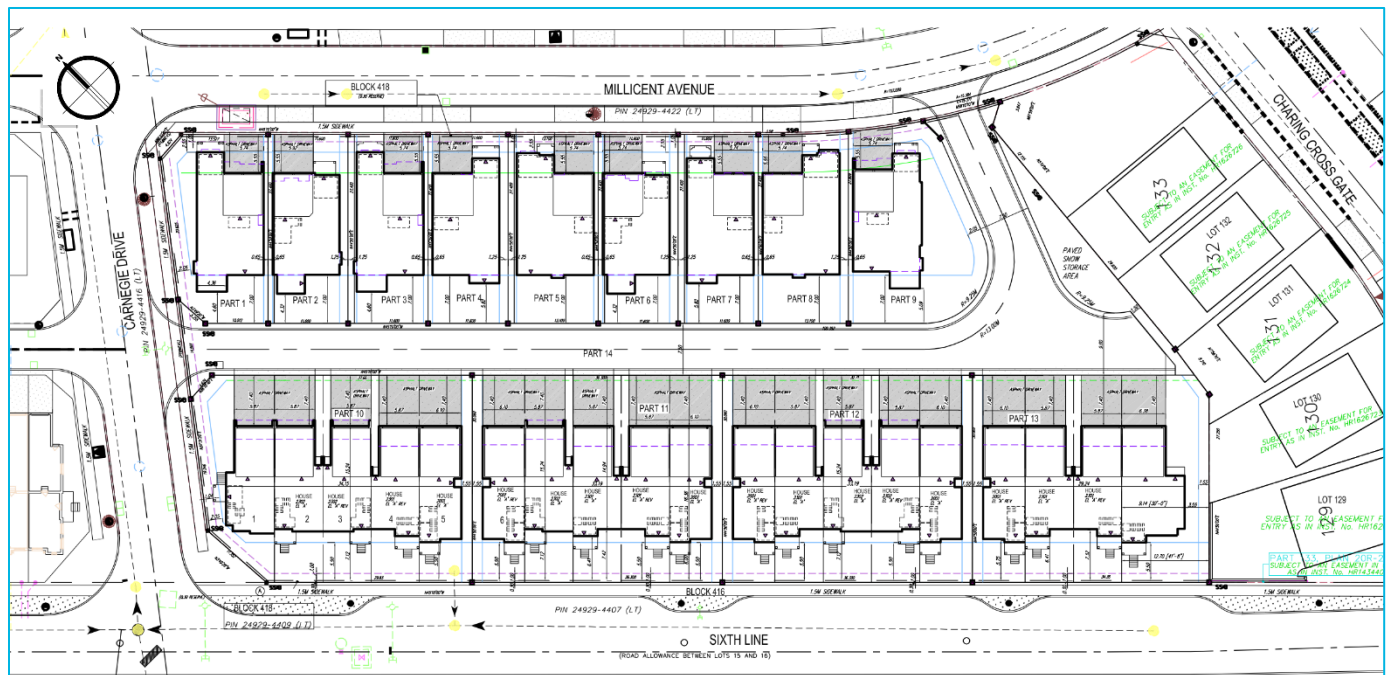
AECOM has been retained by Fernbrook Homes (Seven Oaks 2021) Ltd. to prepare a Traffic Impact Brief for a proposed residential block as part of the Sixth Line Development in the Town of Oakville (the Town). The proposed residential development block is located in the southeast quadrant of the intersection of Carnegie Drive and Sixth Line.

The Traffic Impact Brief encompasses the following:

- Description and trip generation associated with the residential block
- On-street parking plan
- Internal Functional Plan
- Swept path analysis (waste collection vehicle)

The subject site comprises nine single family detached dwelling units and 19 townhomes. The Block 415 site plan is shown in **Figure 1**.

Figure 1: Site Plan



2. Site Description and Trip Generation

As noted above, the subject site includes a total of 28 residential units: nine detached single family units and 19 townhomes. Trip generation was based on the ITE Trip Generation Manual (10th Edition) and applicable land uses: LUC 210 Single Family Detached and LUC 220 Multifamily Housing (Low-Rise) or Townhomes. **Table 1** summarizes the Trip Generation for the subject site.

Table 1. Trip generation Summary

Description/ITE Code	Dwelling Units	Calculation Method	Trip Generation Rates & Distributions						Total Trips		Inbound/Outbound			
			AM	PM	AM In	AM Out	PM In	PM Out	AM Peak	PM Peak	AM In	AM Out	PM In	PM Out
Single Family Detached Housing (210)	9	Fitted Curve Equation	0.54	0.77	23%	77%	63%	37%	5	7	1	4	4	3
		Average Rate	0.46	0.56					4	5	1	3	3	2
Multifamily Housing (Low-Rise) (220)	19	Fitted Curve Equation	0.96	0.88	25%	75%	63%	37%	18	17	5	14	11	6
		Average Rate	0.74	0.99					14	19	4	11	12	7
Maximum:								23	26	6	17	16	10	

ITE Trip Generation Manual, 10th Edition

A total of 23 trips are expected in the AM peak hour, while in the PM peak hour up to 26 trips are expected to be generated. This translates to six inbound and 17 outbound trips in the AM peak hour, and 16 inbound and ten outbound trips in the PM peak hour.

Access to/from the townhomes is provided via a laneway to either Carnegie Drive or Millicent Avenue. Driveways of the fully detached houses are on Millicent Avenue. The laneway is expected to carry up to 19 vehicles in the peak hour.

3. On-Street Parking

The Site was reviewed with respect to available private and on-street parking to accommodate homeowners and visitors. Each dwelling unit (single family detached and townhome) has a two-car garage and a driveway that can accommodate up to two additional vehicles. This translates to 112 private parking spaces. It should be noted that the current Town of Oakville parking-Bylaw requires a minimum of two parking spaces per single family detached dwelling unit and one space per townhome. The provided private parking for the subject site exceeds the minimum requirement.

Visitors parking is provided along the east side of Millicent Avenue as well as via layby parking on Sixth Line (east side). An on-street parking plan is provided in Appendix A. A total of 17 on-street parking spaces are provided. It should be noted that on-street parking along Millicent Drive is shared with residents on both sides of the street. A total of 18 houses (driveways) are on Millicent Drive between Carnegie Drive and Charing Cross Gate. It can be estimated that the 17 on-street parking spaces provided on Millicent Drive between Carnegie Drive and Charing Cross Gate, and layby parking on the east side of Sixth Line will accommodate a total of 37 residential units, which translates to 0.46 parking (visitors') spaces per unit.

The subject site does not have any parking deficiencies.

4. Transportation Function Design

AECOM Canada undertook a comprehensive transportation functional design of the entire Sixth Line development in 2017 as part of the original transportation study. The design was consequently approved and accepted by the Town. The Transportation Functional Design for the subject residential block builds on the previously prepared overall plan.

The original plan illustrated stop sign control on Carnegie Drive at Sixth Line and also on Millicent Avenue at Carnegie Drive. The addition of the laneway will require traffic on the laneway to be stop-controlled at Carnegie Drive and at Millicent Avenue. It should be noted that the laneway will form the fourth leg at the intersection on Carnegie Drive with a laneway on the opposite side, approximately 35 metres east of the Sixth Line. As per Site Design and Development Standards for Oakville "*street access driveway entrances should be located opposite existing or proposed municipal roadways, private laneways and other street access driveways to avoid offset intersection conditions*". The proposed design meets this requirement.

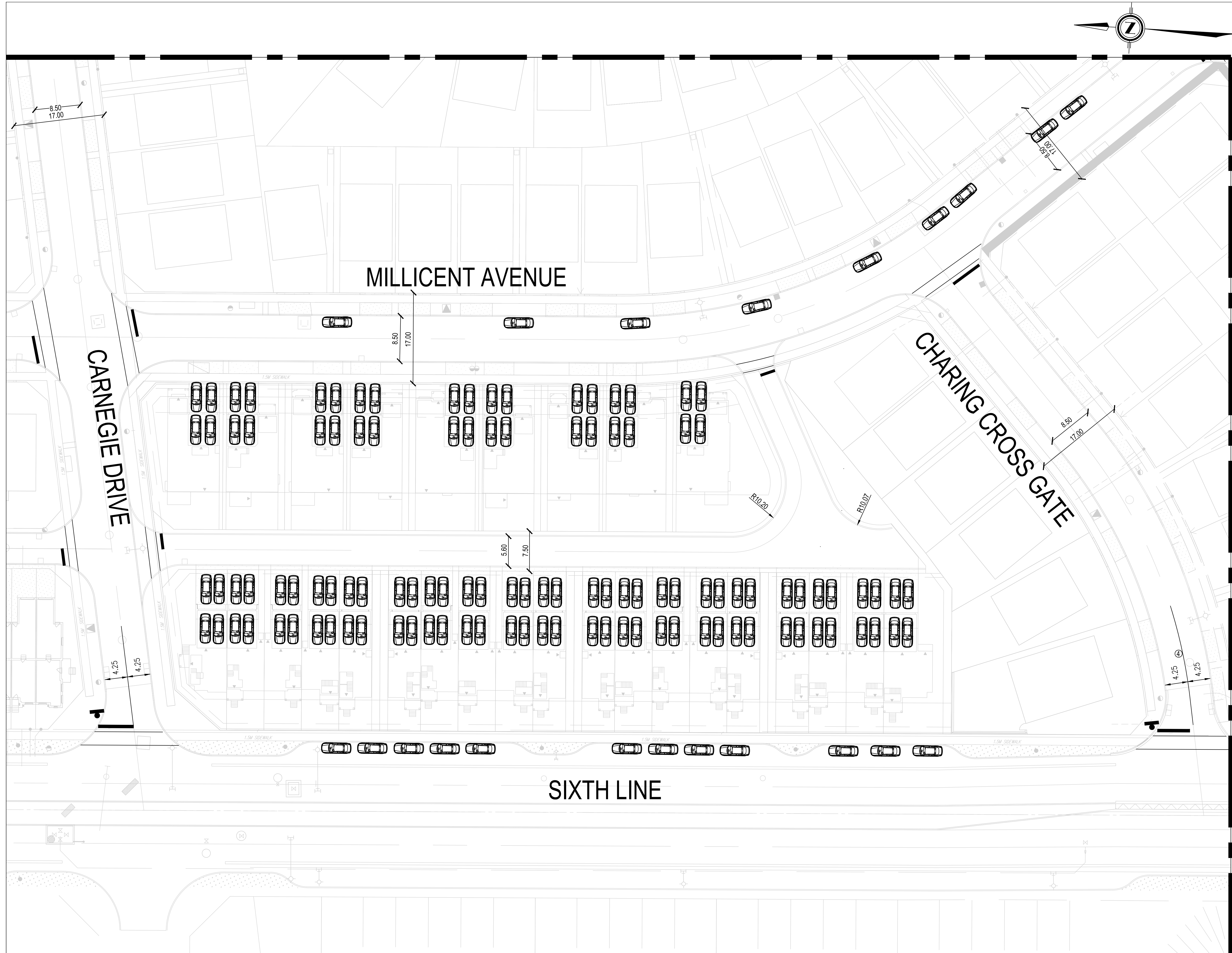
On-street parking is prohibited on the west side of Millicent Drive and on both sides along the laneway. The laneway ROW width is 7.5 metres and the pavement width is 5.6 metres. There are no sidewalks along the laneway.

5. Swept Path Analysis

A swept path analysis of a waste collection vehicle was performed for the laneway. A front-loader waste collection design vehicle was used in the analysis. The analysis was undertaken using the AutoTURN software package. The laneway alignment is such that it has a horizontal bend (street elbow) to provide a connection between Carnegie Drive with Millicent Avenue. In order to improve the radius of this bend in the road, a hammerhead design for the laneway is proposed to accommodate access to the two south most residential units. As such, the waste collection vehicle is expected to have to back up for a short distance once collected waste from the last two units. Although backing up of a waste collection vehicle is typically not desirable, given the trade-off, the short back up is deemed to be acceptable. It should be noted that the proposed lane was designed in consultation with Town and Region staff, including considerations for snow clearance and waste collection truck maneuvering.

Fire truck route is via Sixth Line for the townhomes and Millicent Avenue for the single family detached units. There are no fire hydrants on the laneway and fire trucks are not expected to use the laneway.

Appendix A: On-Street Parking Plan



Note: All dimensions in metres, unless otherwise noted.

No.	DESCRIPTION	DATE	BY	TOWN APP.
1.	First Submission	Feb 2022		

REVISIONS

**FERNBROOK HOMES
(SEVEN OAKS 2021) LIMITED**

On-Street Parking Plan

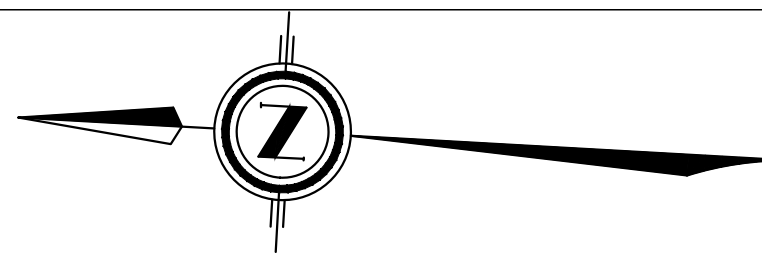
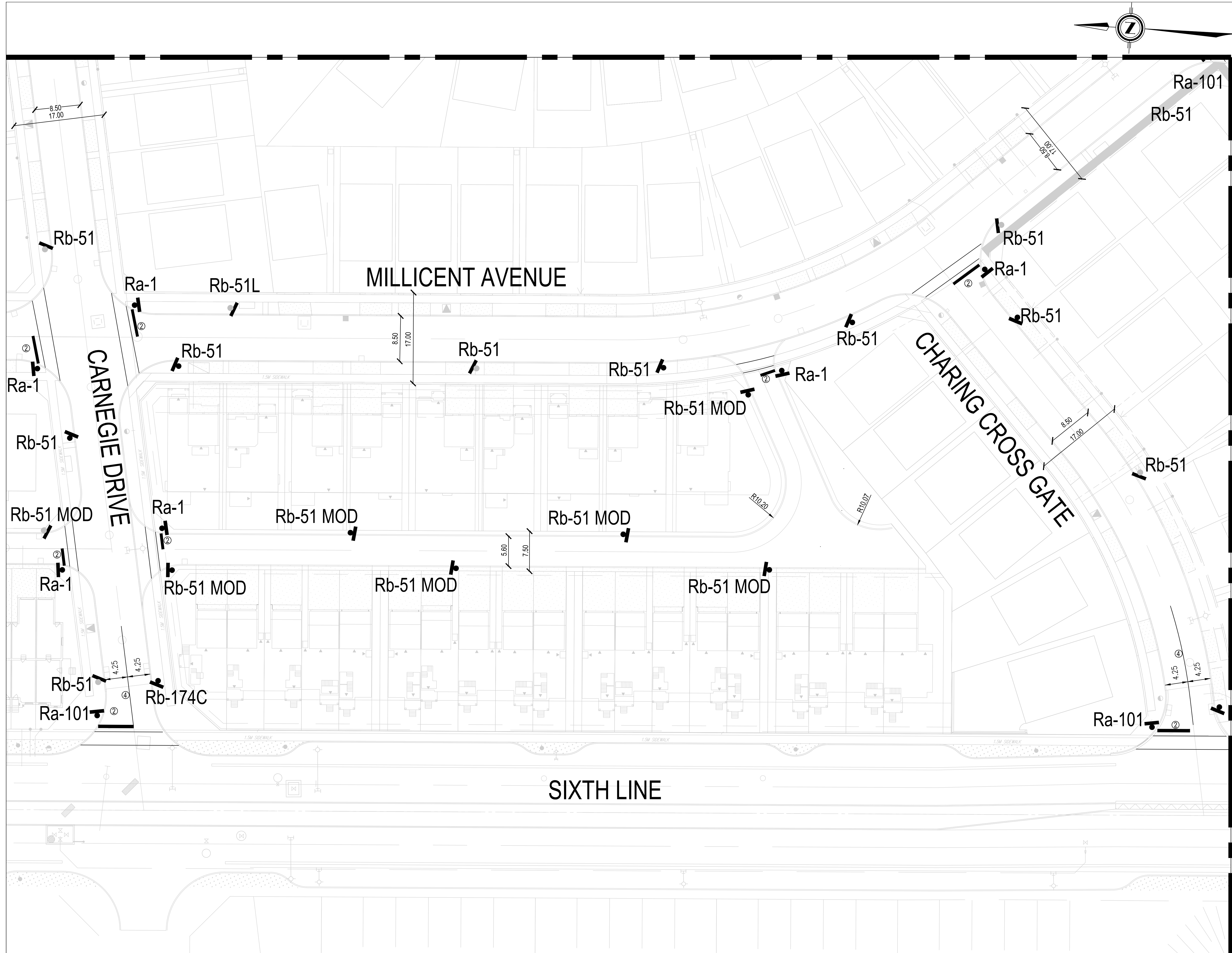
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<small>Note: As to lane marking and traffic control devices</small>	<small>Note: As to lane marking and traffic control devices</small>
DESIGN BY: D.R.	CHECKED BY: I.S.
DRAWN BY: D.R.	CHECKED BY: I.S.
SCALE: 1:300	DATE: February 2022

Approved as to form in reliance upon the professional skill and ability of AECOM Canada Inc. Consulting Engineers as to design and specification.

Town of Oakville	Date
The Regional Municipality of Halton	Date
MUNICIPAL FILE No.	REGIONAL FILE No.
PROJECT No. 60672905	DRAWING No. TFP - 1

Appendix B: Transportation Functional Plan



Legend

	Stop (Ra-1)		All Way (Ra-1t)
	No Parking (Rb-51)		Begins Tab (Rb-84t)
	No Parking (Rb-51R)		Max. Speed (40km/hr) (Rb-1A)
	No Parking (Rb-51L)		No Parking in Laneway (Rb-51 MOD)
	No Parking in Laneway (Rb-51 MOD)		Parking Enforcement (Rb-174C) (Town of Oakville)
	Sign Post		Sign on Light Standard
	3m x 3m White Wide Dashed line		60cm Solid White Wide Stop Bar
	10cm Solid White Line		10cm Solid Yellow Line
	10cm Solid Yellow Line Spaced 10 cm from the 3m x 3m Yellow Wide Dashed line		10cm Solid Yellow Double Line Spaced 10cm Apart

Note: All dimensions in metres, unless otherwise noted.

No.	DESCRIPTION	DATE	BY	TOWN APP.
1.	First Submission	Dec 2021		
2.	Revision #1	Feb 2022		

REVISIONS

No.	DESCRIPTION	DATE	BY	TOWN APP.
1.	First Submission	Dec 2021		
2.	Revision #1	Feb 2022		

FERNBROOK HOMES (SEVEN OAKS 2021) LIMITED

Transportation Functional Plan

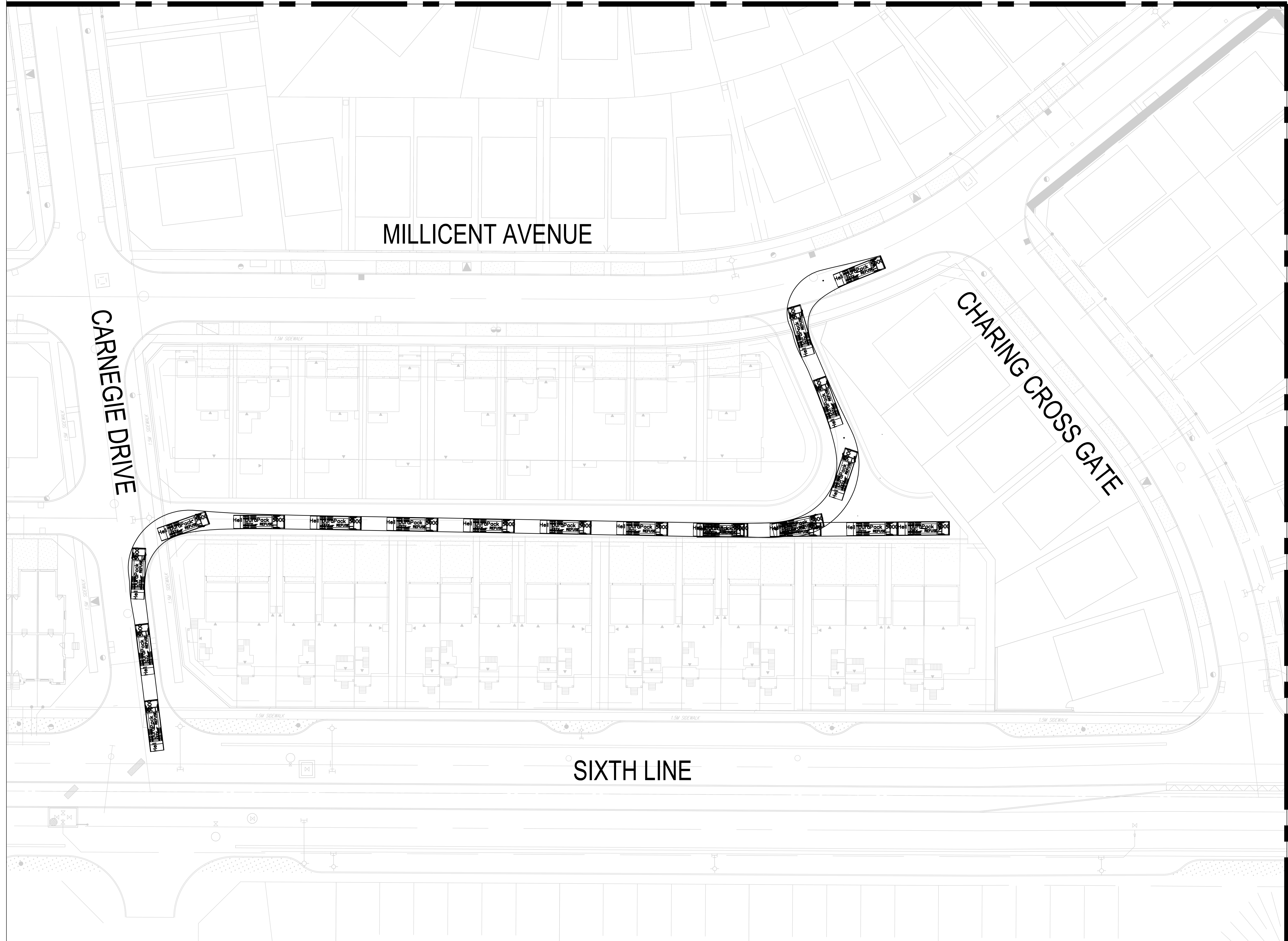
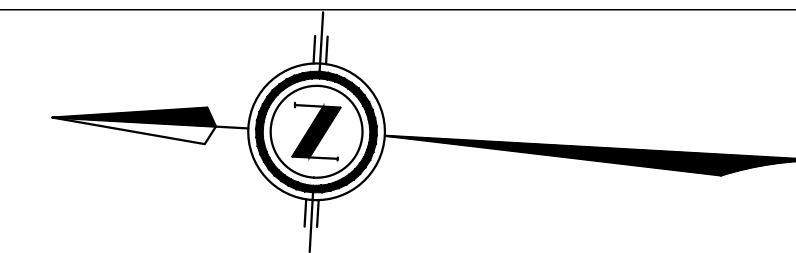
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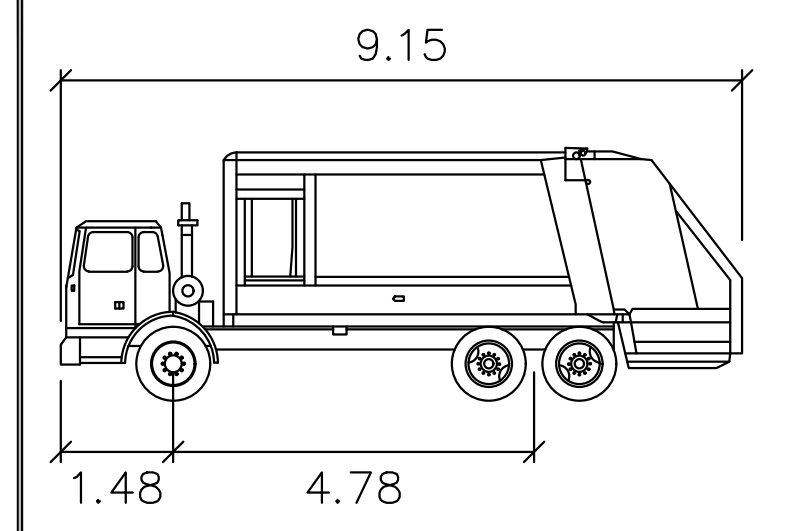
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Appendix C: Swept Path Analysis (Waste Collection)



Legend



Heil DuraPack 5000
 meters
 Width : 2.44
 Track : 2.44
 Lock to Lock Time : 6.0
 Steering Angle : 45.0

Note: All dimensions in metres, unless otherwise noted.

No.	DESCRIPTION	DATE	BY	TOWN APP.
1.	First Submission	Feb 2022		

REVISIONS

FERNBROOK HOMES (SEVEN OAKS 2021) LIMITED

Truck Turning Plan

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Note: As to lane marking and traffic control devices	DESIGN BY: D.R.	Checked BY: I.S.
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