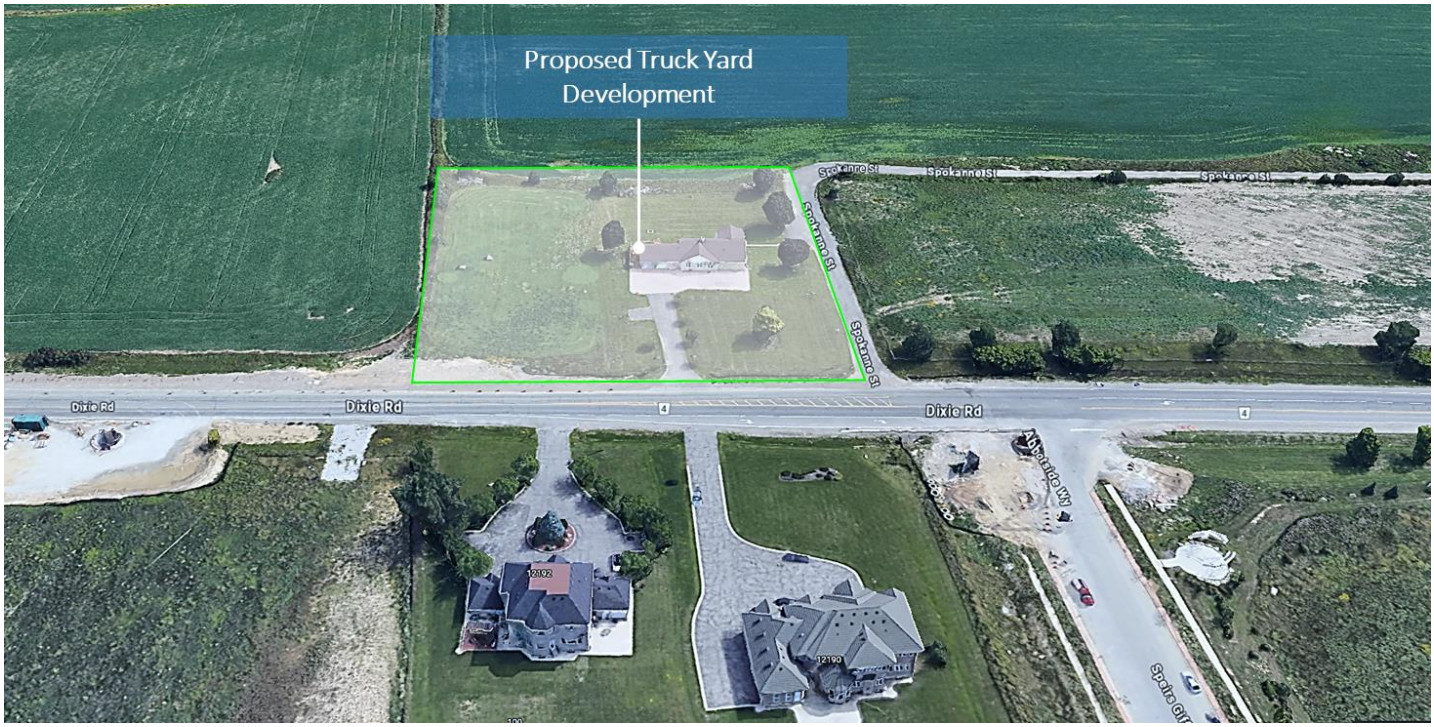
Traffic+ Engineering Ltd.



Traffic Impact Brief and Swept Path Assessment
Proposed Truck Yard

12189 Dixie Road and 0 Dixie Road, Caledon

Prepared by: Traffic+ Engineering Ltd.

Prepared for: 2572934 Ontario Ltd.

July 15, 2025

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Report

Date
July 15, 2025

Our Reference:
20250005

Client
King Consultants Inc.

Client Contact

Mr. Gursewak Singh, Provisional Member MCIP, RPP
Director, Planner
Unit 2, 177 Zenway Blvd Vaughan ONÐ4H 3H9

Re: Traffic Impact Study and Swept Path Assessments
Proposed Industrial Development – Truck Yard
12189 Dixie Road and 0 Dixie Road, Town of Caledon

Content

Traffic+ Engineering Ltd. is pleased to submit this Traffic Impact Brief and AutoTURN Swept Path Assessments in support of Temporary Use Zoning By-Law Amendment Application for a period of three years for the proposed truck yard that is located at 12189 Dixie Road and 0 Dixie Road in the Town of Caledon. The truck yard will operate in already existing building that has been remodeled for office uses. The yard around the existing building will be designed to accommodate for trucks to park.

Currently the site can be accessed via an existing single full movement driveway located along Dixie Road. The proposed truck yard will consist of an existing single storey building that has been remodeled for office use. The total Gross Floor Area (GFA) of the building is approximately 261.09 m² (2,810.35 ft²), and the total site area is 7,727.80 m² (83,181.35 ft²).

Study

The purpose of this study is to estimate the future trip generation of the proposed development on the surrounding road network and assess the future traffic operations at the access driveway. Additionally, the study will assess the swept paths for dumb trucks and articulated trucks (WB-20), as well as personal vehicles and their maneuverability around the site.

Conclusions

The findings and conclusions of our study are as follows:

- Based on the site plan prepared by King Consultant Inc. dated Sept. 2025, the proposed development consists of an existing single storey dwelling renovated for office use with an empty yard that will be designed for truck parking / yard;

- The site will be accessed via an existing full movement driveway located along Dixie Road;

- Total expected trips generated by the proposed development and estimated using the findings from the *Traffic Brief for 12434 Dixie Road.* AM Peak and PM Peak hours are summaries in the following table:

	GFA (ha)	AM - Average Rate	Total Trip	IN	OUT	IN Trips	OUT Trips
Truck Yard (Based on Traffic Brief for 12434 Dixie Road)	0.77	0.86	1	0.8	0.2	1	0

	GFA (ha)	PM - Average Rate	Total Trip	IN	OUT	IN Trips	OUT Trips
Truck Yard (Based on Traffic Brief for 12434 Dixie Road)	0.77	1.9	1	0.4	0.6	0	1

- Dixie Road and Access Driveway is the subject intersection to be assessed in this Traffic Brief. The intersection is operating under a stop control at the egress approach;

- Given that the intersection of Dixie Road and Access Driveway is expecting to operate at a very low traffic volumes during AM and PM peak hours, the traffic impacts expected from the proposed Truck Yard will have imperceptible traffic impacts along Dixie Road;

- The site layout can easily accommodate the manoeuvring of a typical dump truck and an articulated trucks (WB-20) around the site and in and out of the access driveway, and the typical passenger vehicle can maneuver around the site and park in the designated parking stalls without any issues;

- Proposed parking for office use are as follows:

Parking Supply Study (Town of Caledon Zoning bylaw Section 5)	GFA (m^2)	Parking Rate (per Zoning Bylaw)	Minimum Parking Required	Total Vehicular Parking Provided	Parking Surplus
Transportation Depot (Truck Yard)	261.09	1 parking space per $90m^2$	3	20	17

Based on the results summarised in the table above, there is a **surplus in parking equal to 17 parking spaces**;

In summary, the proposed development is projected to have an imperceptible impact on traffic operations within the study area. Additionally, the site is adequately designed to accommodated WB-20 and Dump Trucks around the designated truck yard area.

A surplus in parking supply is proposed for personal vehicles to accommodate employees and visitors.

We trust the enclosed sufficiently addresses your needs. Should you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

Mr. Nabil Ghariani, P.Eng., PTOE, M.S.C.E.
President and CEO

Traffic+ Engineering Ltd.

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Appendix 2: Traffic Brief: "*Proposed Transport Truck / Trailer Parking Facility at 12434 Dixie Road, Town of Caledon*", dated December 7, 2021

Appendix 3: Future Total Traffic Operations Assessments – Synchro Output

Appendix 4: Full Site Plan for the Warehouse just East of the Subject Site

1.0 Introduction

1.1 Study Overview

Traffic+ Engineering Ltd. was retained by King Consultants Inc. to undertake a Traffic Impact Brief as well as a comprehensive vehicle swept path assessments around the site and at the access driveway for different types of trucks (dumb trucks and articulated trucks [WB-20]) and for personal vehicles.

This study is submitted in support of Temporary Use Zoning By-Law Amendment Application for a period of three years for the proposed truck yard that is located at 12189 Dixie Road and 0 Dixie Road in the Town of Caledon

The subject property is comprised of an existing dwelling renovated for office use with an empty yard that will be designed for truck parking / yard. The site is located at 12189 Dixie Road, just 550 metres north of the of Mayfield Road in the Town of Caledon. The site will be accessed via an existing full movement driveway located along Dixie Road.

1.2 Study Area and Proposed Site Plan

The approximate location of the subject site is illustrated in **Figure 1**. The community surrounding the subject site is comprised of low-density industrial buildings.

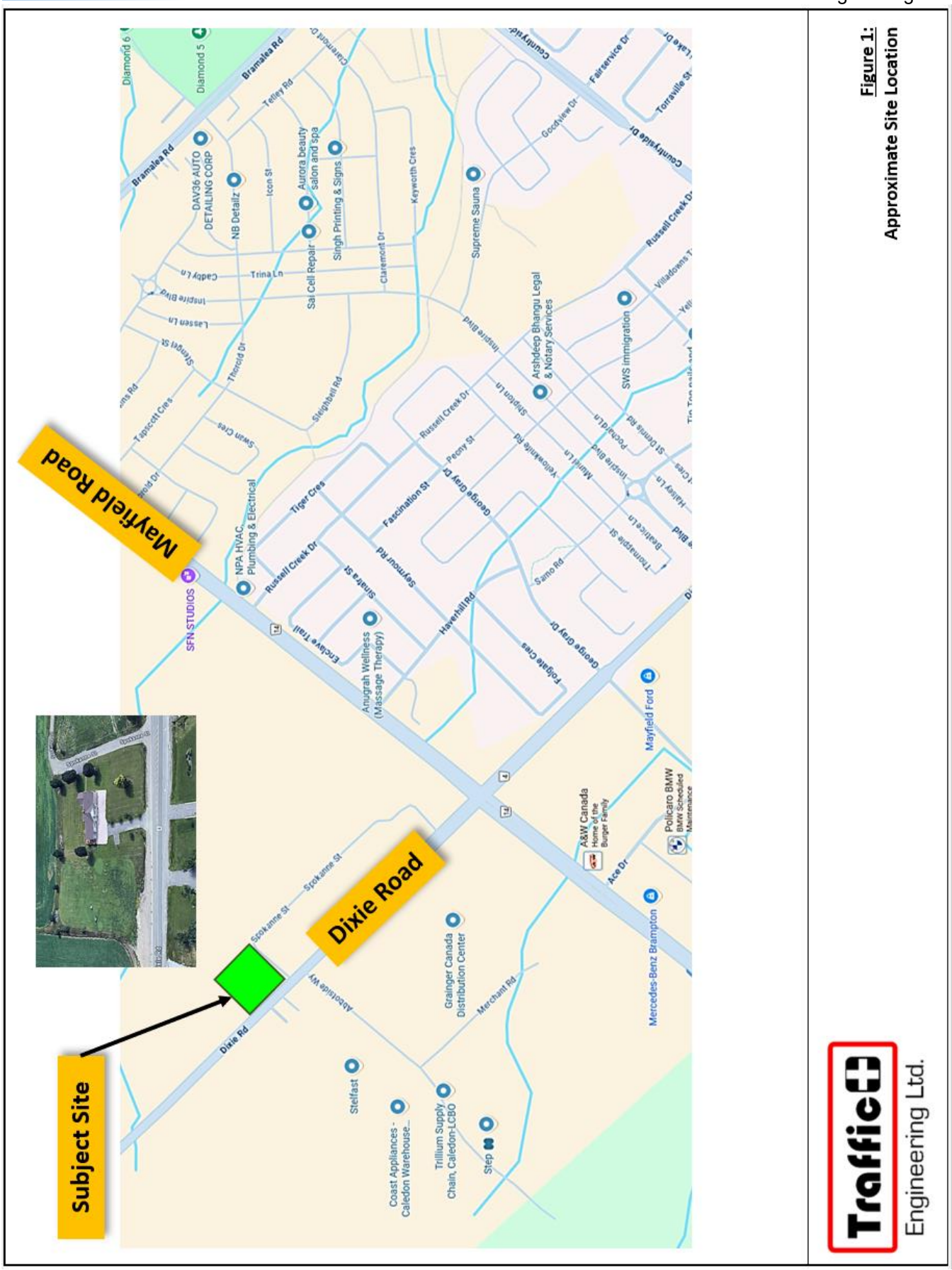


Figure 1:
Approximate Site Location

Traffic Engineering Ltd.

2.0 Existing Conditions

The subject property is comprised of an existing dwelling renovated for office use with an empty yard that will be design for truck parking / yard. The site is located at 12189 Dixie Road and 0 Dixie Road, just 550 metres north of the of Mayfield Road in the Town of Caledon. The site will be accessed via an existing full movement driveway located along Dixie Road.

2.1 Existing Road Network

The existing road network where the site is located is described below:

- **Dixie Road:** is a north-south regional road based on Peel Region Road Classification which is comprised of two (2) lanes. There are no pedestrian sidewalks on both sides of the corridor and on-street parking is not permitted at all time. Posted speed limit in the vicinity of the proposed development is 70 km/h.

- **Mayfield Road:** is an east-west regional road based on Peel Region Road Classification and is comprised of six (6) lanes in the vicinity of the development. There are pedestrian sidewalks on both sides of the corridor, on-street parking is not permitted at all time. Posted speed limit is 80 km/h in the vicinity of the proposed development.

Figure 2 shows the road classification map for Peel Region

3.0 Proposed Development

Based on the site plan prepared by King Consultant Inc. dated Sept. 2025, **Figure 3**, the proposed development consists of an existing single storey dwelling renovated for office use with an empty yard that will be designed for truck parking / yard. The site will be accessed via an existing full movement driveway located along Dixie Road.

Appendix 1 includes the full site plan drawing.

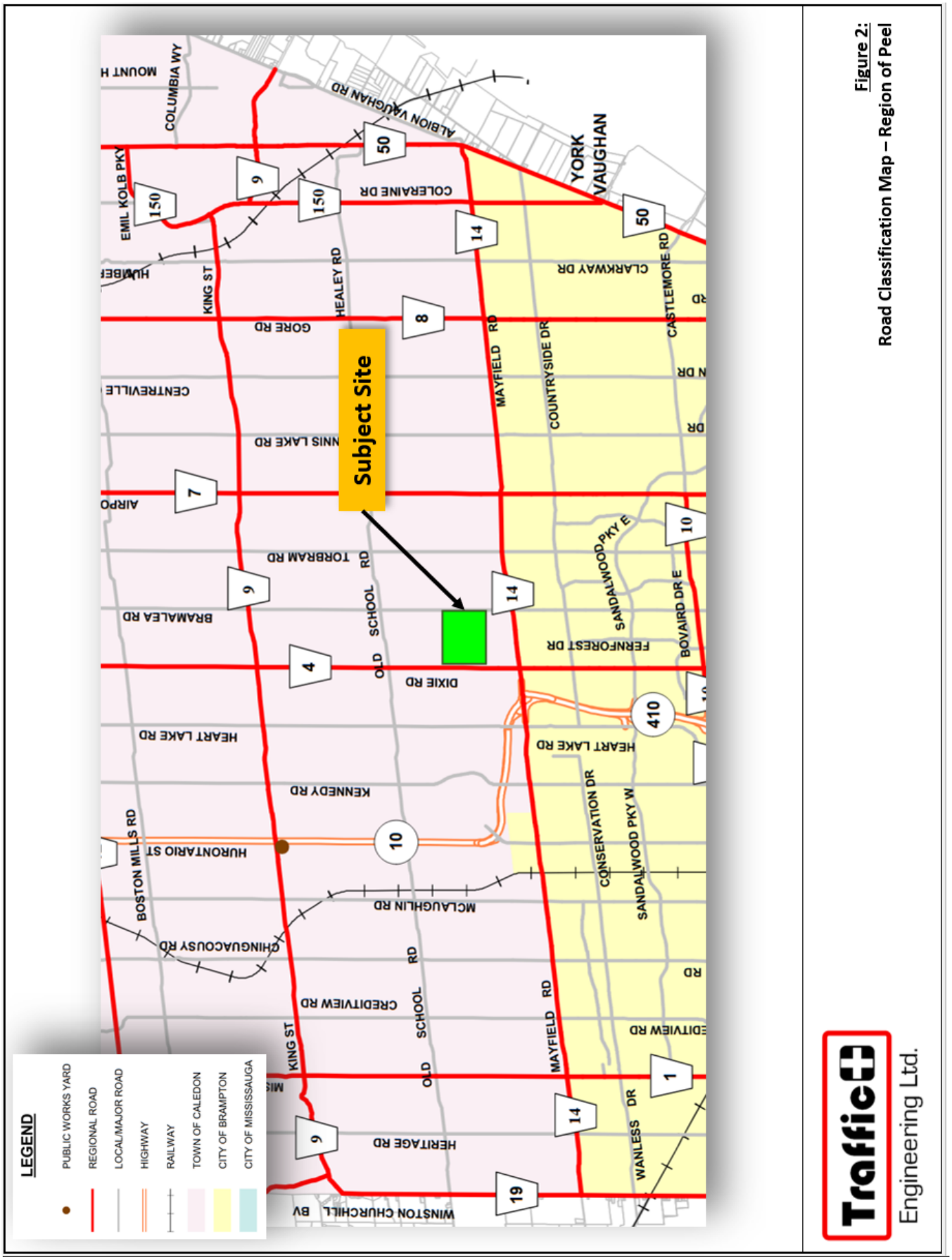


Figure 2:
Road Classification Map – Region of Peel

Traffic Engineering Ltd.

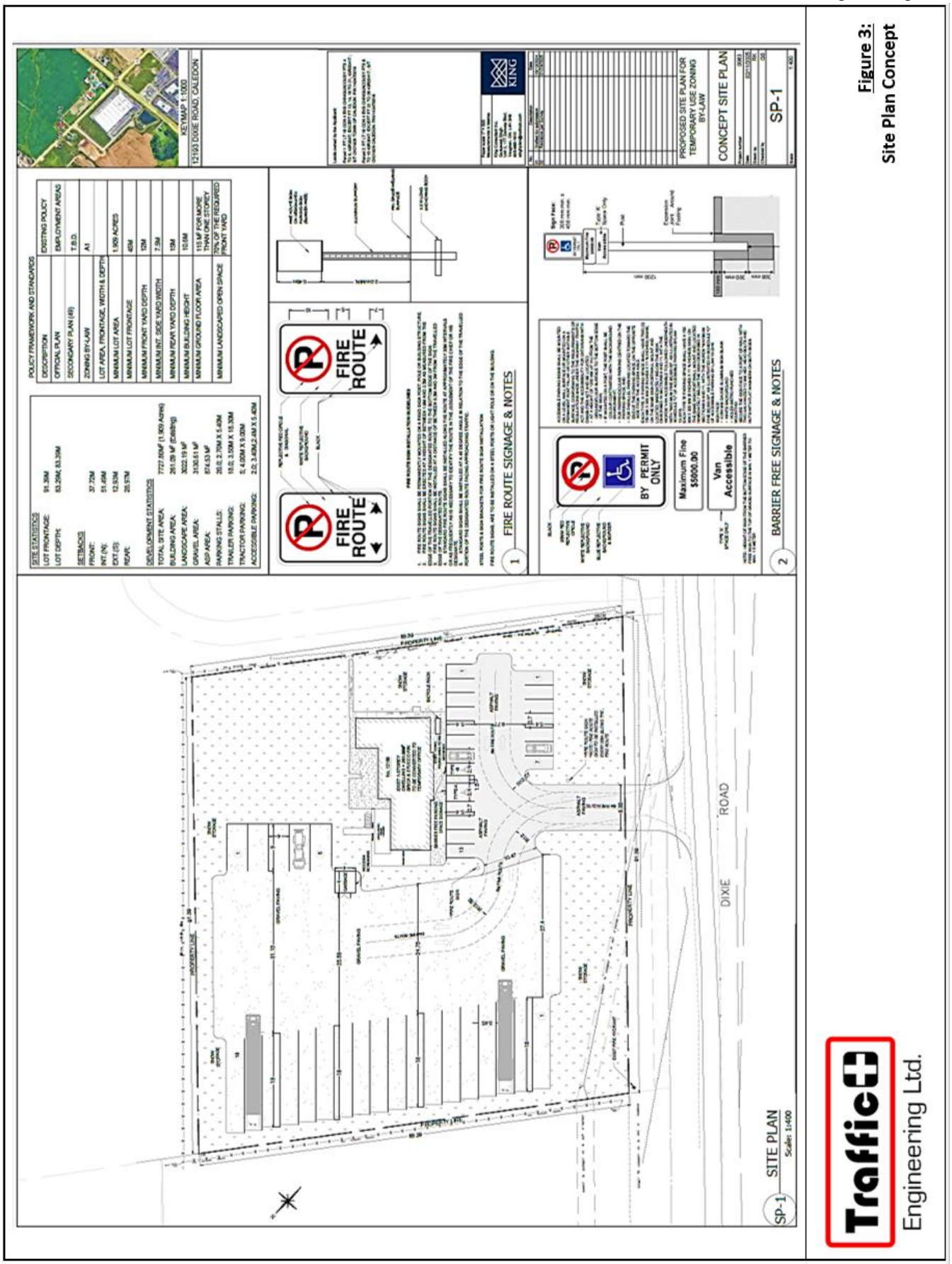


Figure 3:
Site Plan Concept

4.0 Traffic Assessments

4.1 Existing Traffic Conditions

Based on traffic counts undertaken by Traffic+ Engineering Ltd. on May 14, 2025, at the site's proposed truck yard access driveway. Given that the truck yard is currently not in operation, there were no vehicles counted entering and exiting the site.

Based on the traffic counts, summarized and illustrated in **Figure 4**, traffic volumes during AM Peak hour were equal **304** and **583** northbound and southbound respectively. During PM Peak hour, traffic volumes were equal to **497** and **609** northbound and southbound respectively.

During the traffic counts, it was observed that the traffic flow was fluid on both directions (northbound and southbound), and no operational issues were noticed.

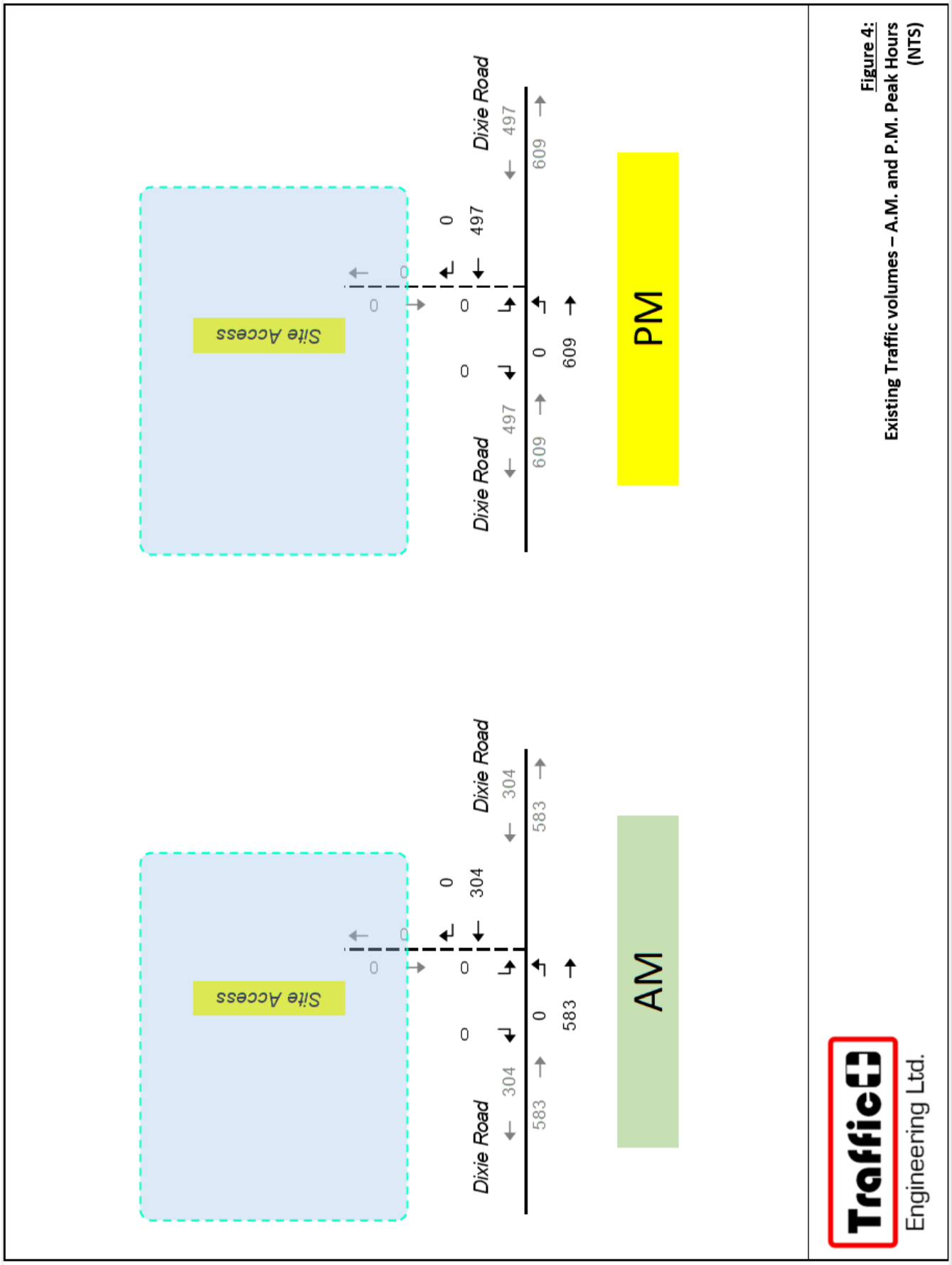


Figure 4:
Existing Traffic volumes – A.M. and P.M. Peak Hours (NTS)

4.2 Future Background Traffic Conditions

For the proposed truck yard, a 5-year horizon, corresponding to year 2030, was considered and approved by the Region of Peel staff for the future background traffic operations assessments.

For consistency, the growth rate along Dixie Road used to forecast traffic volumes during AM and PM peak hours is equal to 5% as used in the Traffic Brief study undertaken by NexTrans for a similar development along Dixie Road, 12434 Dixie Road, Town of Caledon, entitled "*Engineering Service – Traffic Brief Proposed Transport Truck / Trailer Parking Facility at 12434 Dixie Road, Town of Caledon*", dated December 7, 2021.

Figure 5 illustrates the Future Background traffic volumes during AM and PM peak hours for the horizon year 2030.

Appendix 2 includes the full report of the Traffic Brief: *Proposed Transport Truck / Trailer Parking Facility at 12434 Dixie Road, Town of Caledon*", dated December 7, 2021

Traffic Engineering Ltd.

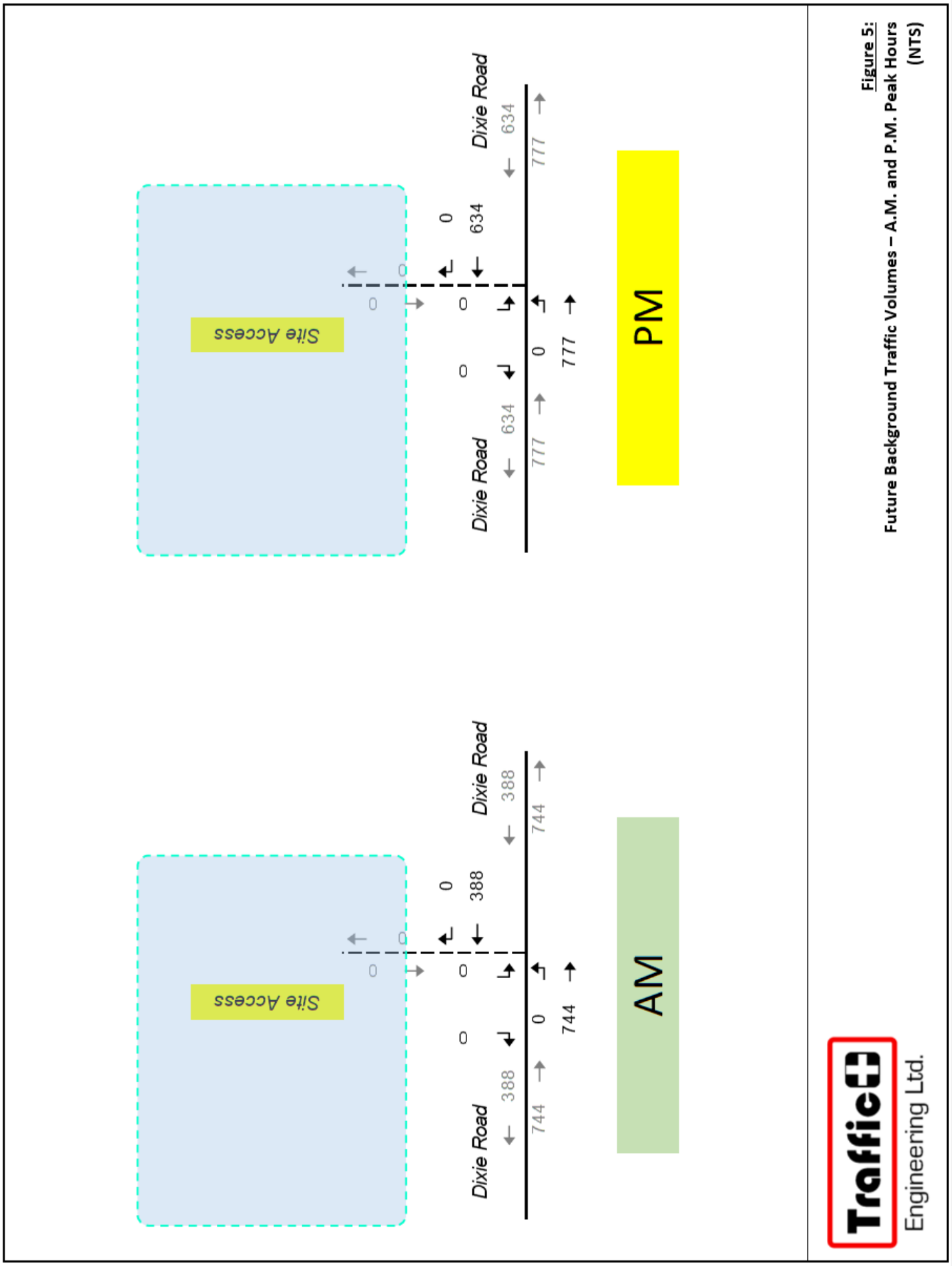


Figure 5: Future Background Traffic Volumes – A.M. and P.M. Peak Hours (NTS)

4.3 Trip Generation

As noted above, the proposed truck yard will consist of an existing single one storey building with a parking area for different types of truck to park. The site is located along Dixie Road with a total Gross Floor Area (GFA) of the building is approximately 261.09 m² (2,810.35 ft²), and the total site area is 7,727.80 m² (83,181.35 ft²).

To estimate a trip generation of any development, traffic engineers refer to the ITE Trip Generation manuals. However, given the exceptional nature of this type of development being a truck yard / truck parking study, the ITE Trip Generation Manual has no trip generation estimates for these types of developments.

Based on previous Traffic Brief study undertaken by NexTrans for a similar development along Dixie Road, 12434 Dixie Road, Town of Caledon, entitled "*Engineering Service – Traffic Brief Proposed Transport Truck / Trailer Parking Facility at 12434 Dixie Road, Town of Caledon*", dated December 7, 2021. The consultant had undertaken a proxy site survey to estimate the trip generation.

The findings of the trip generation in the Traffic Brief are being used in this study given it is for a similar development that is located just 750 metres north of the subject site, and was approved by the Town of Caledon and Peel Region transportation engineering staff.

4.4 Trip Generation Estimations

The proposed truck yard will employ 5 employees with the following position:

- 3 employees
- 1 administrative assistant
- 1 security guard

The NexTrans Traffic Brief concluded that the trip generation rates for a Transport Truck / Trailer Parking Facility based on proxy site surveys during AM Peak and PM Peak hours were the following:

AM Peak hour: **0.86 trips / ha**

PM Peak hour: **1.90 trips / ha**

Table 1 provides the trip generation for the proposed Truck Yard during AM Peak and PM Peak

Table 1: Estimated Trip Generation – Based on the *Traffic Brief for 12434 Dixie Road*

	GFA (ha)	AM - Average Rate	Total Trip	IN	OUT	IN Trips	OUT Trips
Truck Yard (Based on Traffic Brief for 12434 Dixie Road)	0.77	0.86	1	0.8	0.2	1	0

	GFA (ha)	PM - Average Rate	Total Trip	IN	OUT	IN Trips	OUT Trips
Truck Yard (Based on Traffic Brief for 12434 Dixie Road)	0.77	1.9	1	0.4	0.6	0	1

From **Table 1**, the estimated trip generation from the site is equal to 1 trip during AM and PM peak hours. However, given that the expected total number of employees is five (5), the estimated trip generation will not capture the employees' arrival.

Additionally, it should be noted that most parked trucks will be pickup by their owners early in the morning before the AM Peak hour and return to the truck yard late at night after the PM Peak hour.

Given the above factors, the total area of the subject site was increased to 5 ha, more than five times its current site in order to get a higher trip generation that will closely reflect the expected trips during AM Peak and PM Peak hours.

Table 2 provides the increased trip generation for the proposed Truck Yard during AM Peak and PM Peak

Table 2: Estimated Trip Generation – After Increase in Total Area

	GFA (ha)	AM - Average Rate	Total Trip	IN	OUT	IN Trips	OUT Trips
Truck Yard	5.00	0.86	4	0.8	0.2	3	1

	GFA (ha)	PM - Average Rate	Total Trip	IN	OUT	IN Trips	OUT Trips
Truck Yard	5.00	1.9	10	0.4	0.6	4	6

4.5 Trip Distribution and Traffic Assignment

Based on the numerous observations undertaken in the vicinity of the subject site, it was concluded that around 90% of trips from and to different industrial sites along Dixie Road were heading south.

For this study, it is assumed that 100% of trips will travel south to Mayfield Road.

Table 3 shows the trip distribution to and from subject site.

Table 3: Site Trip Distribution

Origin / Destination	Percentages
South to / from Mayfield Road	100%
Total	**100%**

Figure 6 illustrate the traffic assignment at the site's access driveway

Traffic Engineering Ltd.

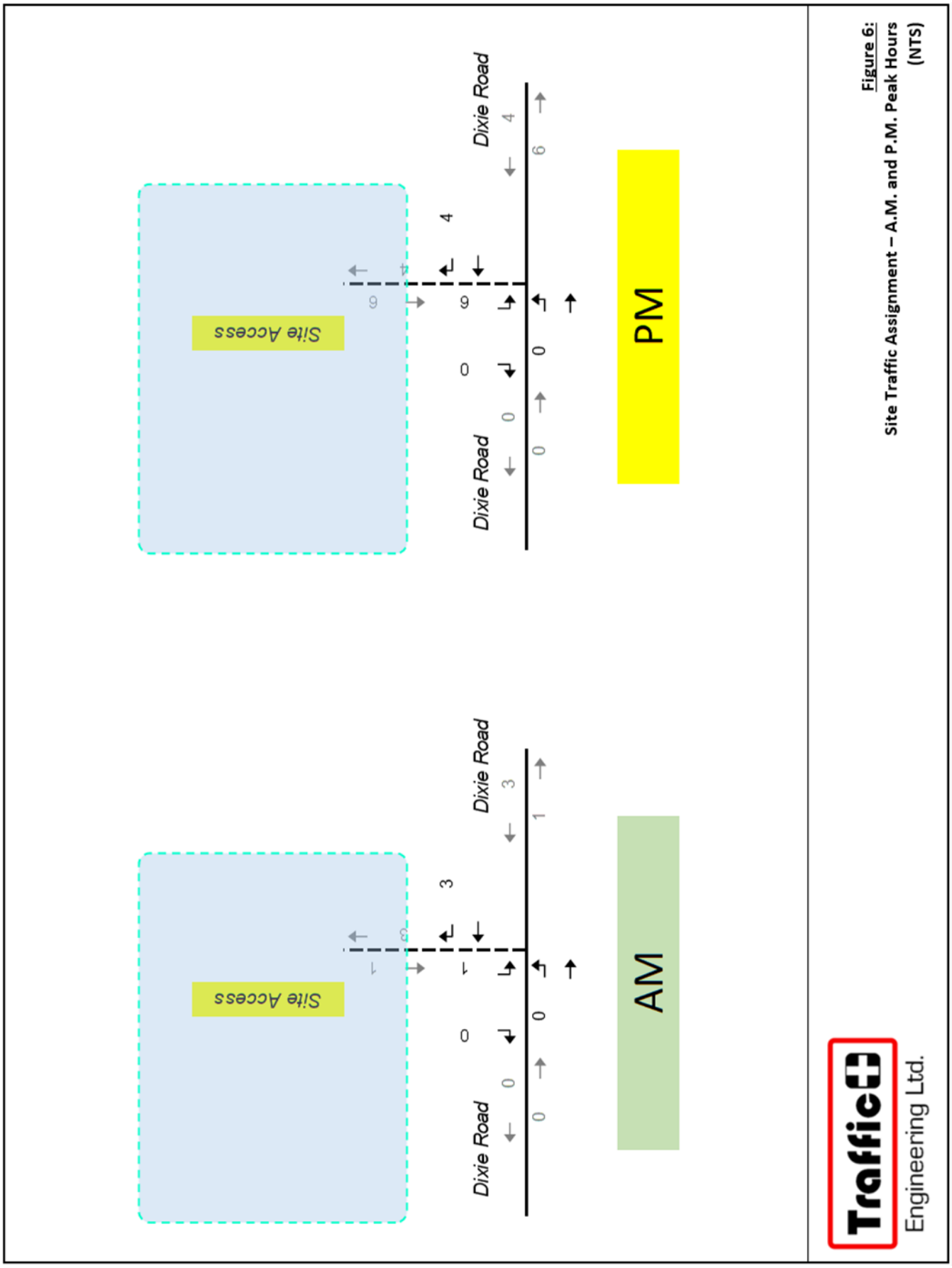


Figure 6:
Site Traffic Assignment – A.M. and P.M. Peak Hours (NTS)

Traffic Engineering Ltd.

4.6 Future Total Traffic

Future Total Traffic is the future background traffic volumes added to it the estimated trip generation from the proposed development.

Figure 7 shows the AM and PM Peak future total traffic.

Traffic Engineering Ltd.

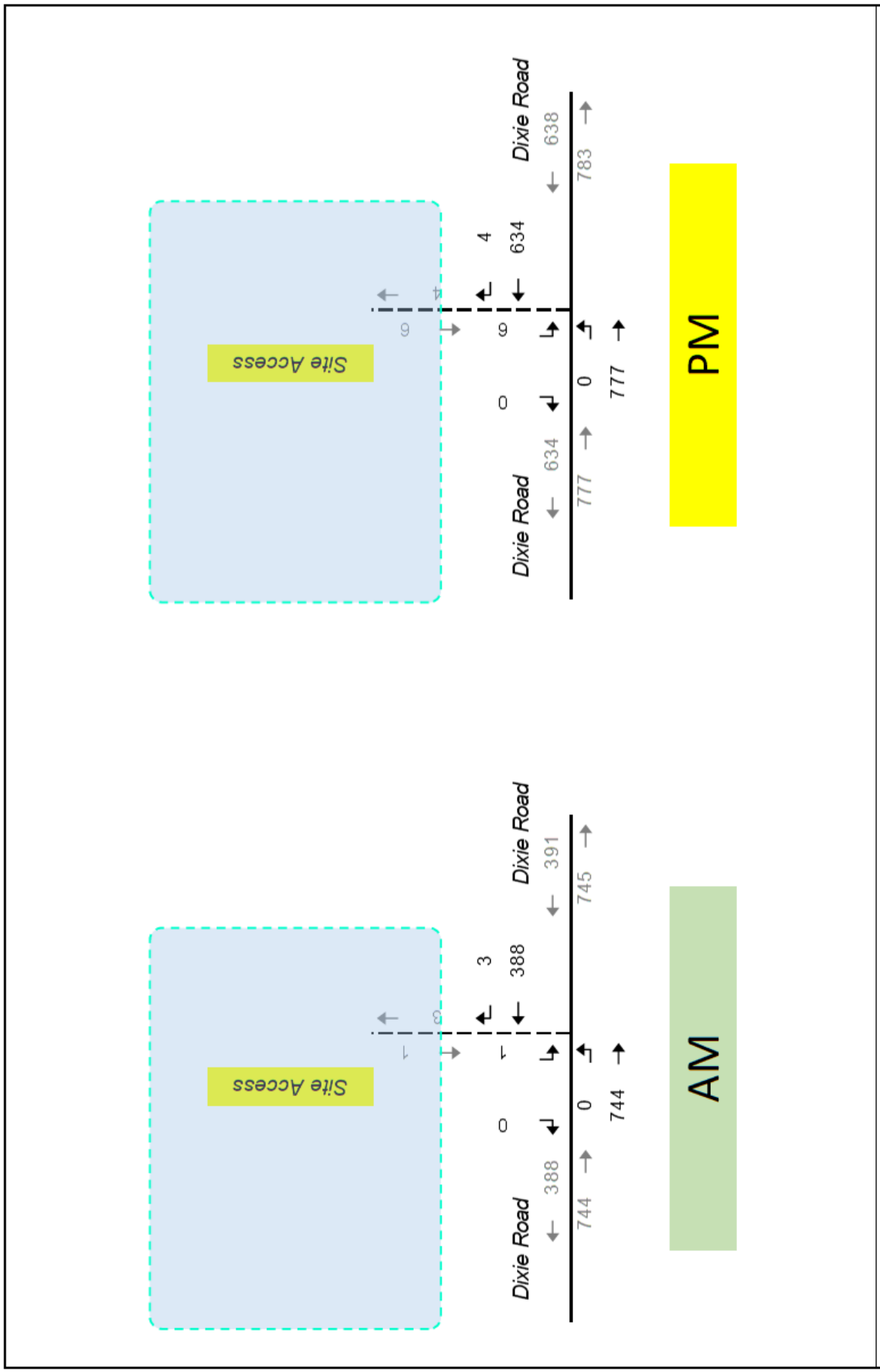


Figure 7: Future Total Traffic Volumes – A.M. and P.M. Peak Hours (NTS)

Traffic Engineering Ltd.

The future total traffic operations of the study area intersections were analyzed using the horizon 2030 future total traffic forecasts. **Table 4** summarizes the resulting traffic operations.

Detailed Synchro 12 output is provided in **Appendix 3**.

Table 4: Future Total Peak Hour Traffic Operations – 2030 Horizon Year

Analysis Period	Intersection	Control Type	MOE	Directions / Movements / Approaches																	
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Dixie Rd. / Access Driveway	Unsignalized	LOS					C		--	C		A	A	A	--	A		A	A
			Delay					23.5		--	23.5		0.0	0.0	0.0	--	0.0		0.0	0.0
			V/C					0.01		--			0.25	0.25		--	0.0			0.25
			95th Queue					0.1		--			0.0	0.0		--	0.0			
PM Peak Hour	Dixie Rd. / Access Driveway	Unsignalized	LOS					D		--	D		A	A	A	--	A		A	A
			Delay					34.8		--	34.8		0.0	0.0	0.0	--	0.0		0.0	0.2
			V/C					0.05		--			0.41	0.41		--	0.0			0.41
			95th Queue					1.3		--			0.0	0.0		--	0.0			

As summarized in **Table 4**, the unsignalized intersection of Dixie Road and the Access Driveway is expected to operate at a very good levels of service corresponding to an LOS A during both A.M. and P.M. peak hours on the basis of the projected future total traffic volumes.

Regarding the individual turning movements the following is noted:

A.M. peak:

Under future total traffic conditions, traffic operations during A.M. peak at the unsignalised intersection is expected to operate with no critical movements or capacity constraints where levels of service on each movement at this intersection will range from excellent, LOS A, to very good, LOS C, and the volume over capacity ratios are well below capacity.

P.M. peak:

Under future total traffic conditions, traffic operations during P.M. peak at the unsignalised intersection is also expected to continue to operate with no critical movements or capacity constraints where levels of service on each movement at this intersection will range from excellent, LOS A, to good, LOS D, and the volume over capacity ratios are well below capacity.

In summary, the proposed development is anticipated to have a very minimal impact on traffic operations within the study area.

5.0 Site Circulation Assessments

Based on the proposed site layout, the swept path assessments will focus on three types of vehicles which are articulated truck (WB-20), dump truck, and personal vehicle. From the site plan, the truck yard is separate from personal vehicle parking where the trucks will park in a dedicated area located north of the office building. For personal vehicles, their parking is located in front of the office building.

The assessment will consist of undertaking numerous swept paths at the proposed truck parking area and by the personal vehicle parking to ensure that trucks and vehicles can easily maneuver and exit the site without any difficulties.
The dimensions and turning movement radii specifications for these three different types of vehicles were replicated using AutoTurn software.

5.1 Swept Path Assessments

The vehicles circulation assessments, comprising of trucks and personal vehicles, at the access driveway, parking area, and around the truck yard were completed using AutoTurn 11 software package using the typical vehicles dimensions.

Based on the comprehensive AutoTurn assessments, it can be determined that the proposed site layout around the development and at the parking area can accommodate WB-20 and dump trucks, as well as personal vehicle at the access driveway and around the site.

Detailed AutoTurn assessments in different locations around the proposed development are illustrated in **Figures 8 – 26**.

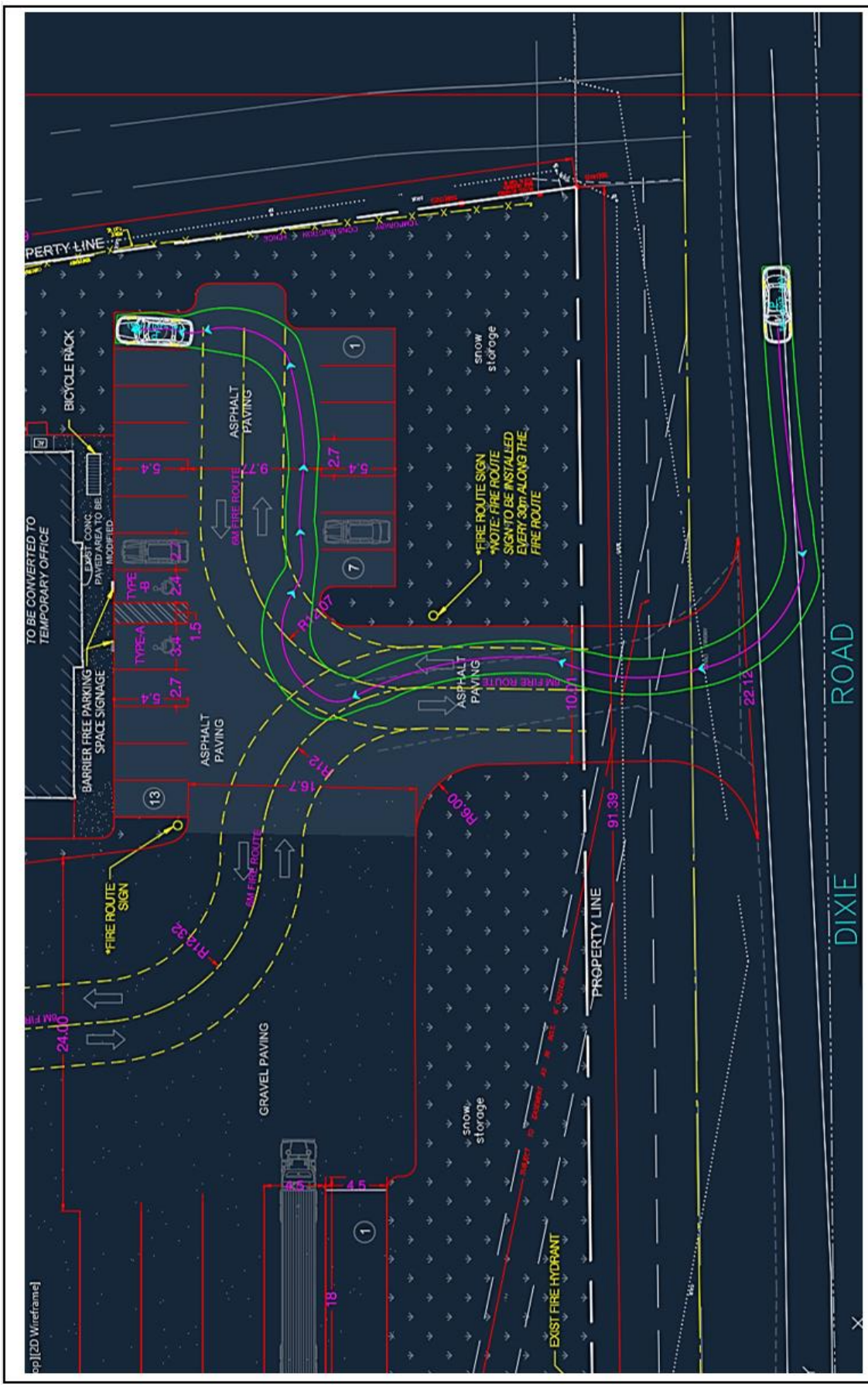


Figure 8:
Passenger Vehicle AutoTURN Assessment

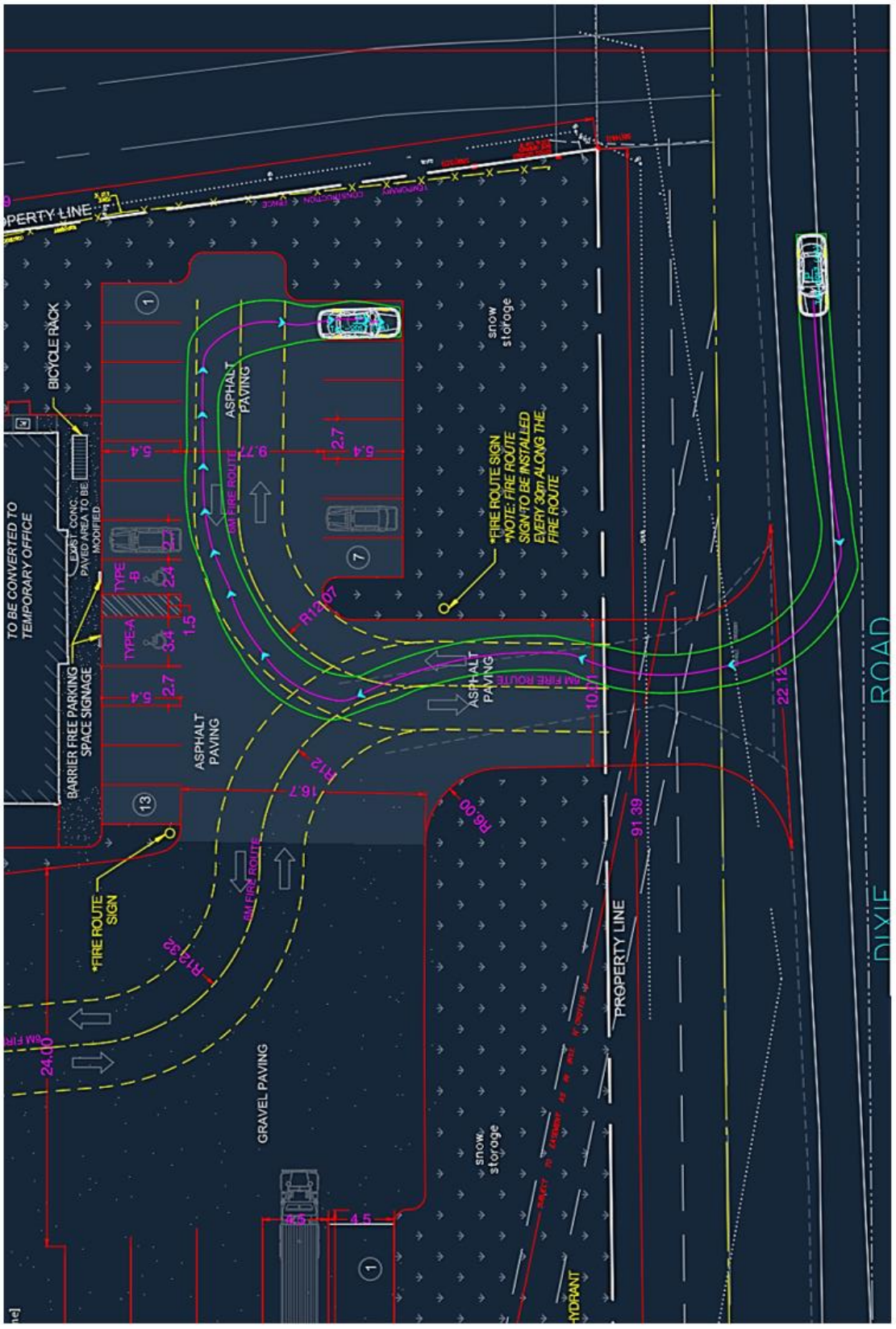


Figure 9:
Passenger Vehicle AutoTURN Assessment

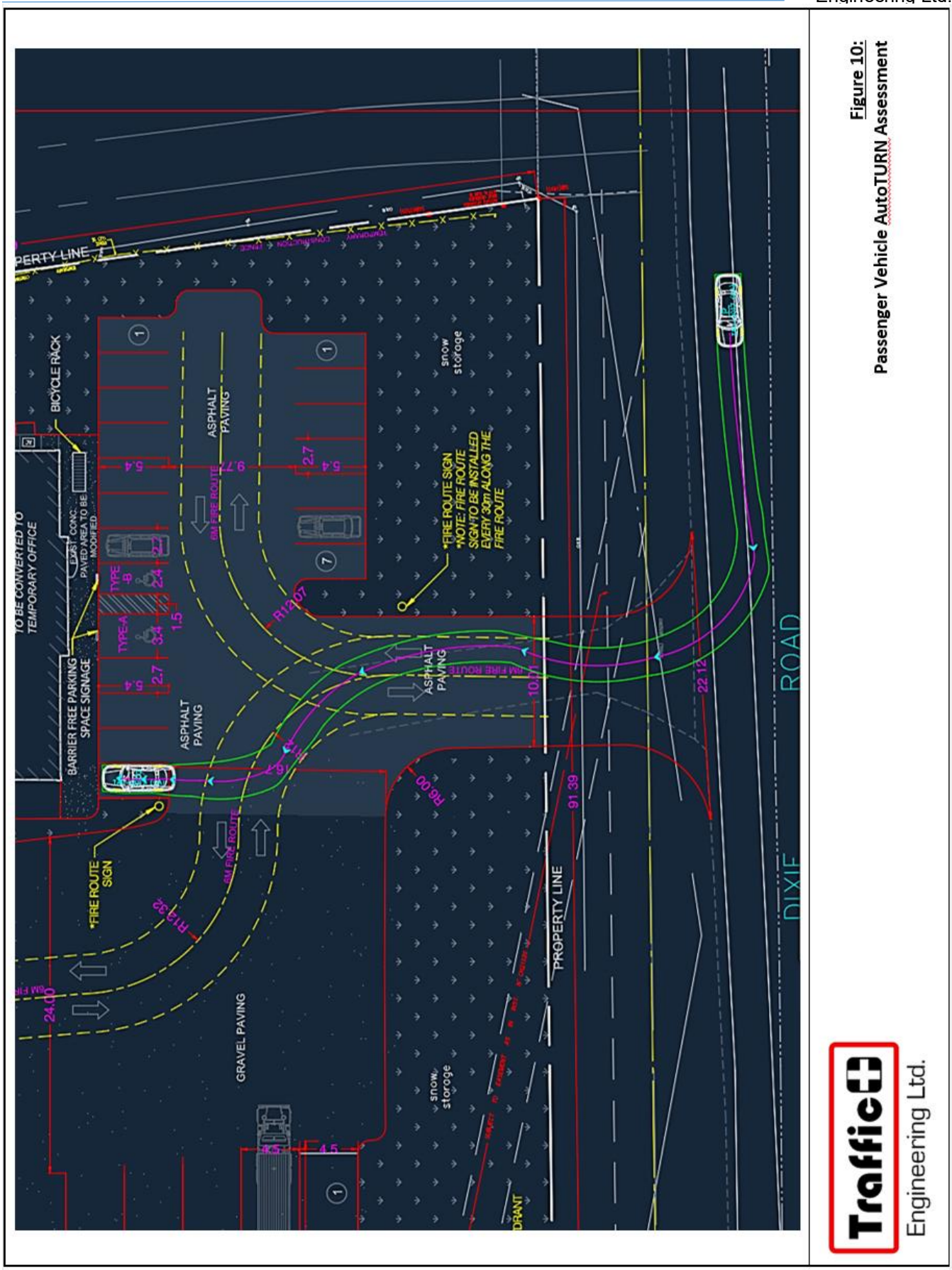


Figure 10:
Passenger Vehicle AutoTURN Assessment

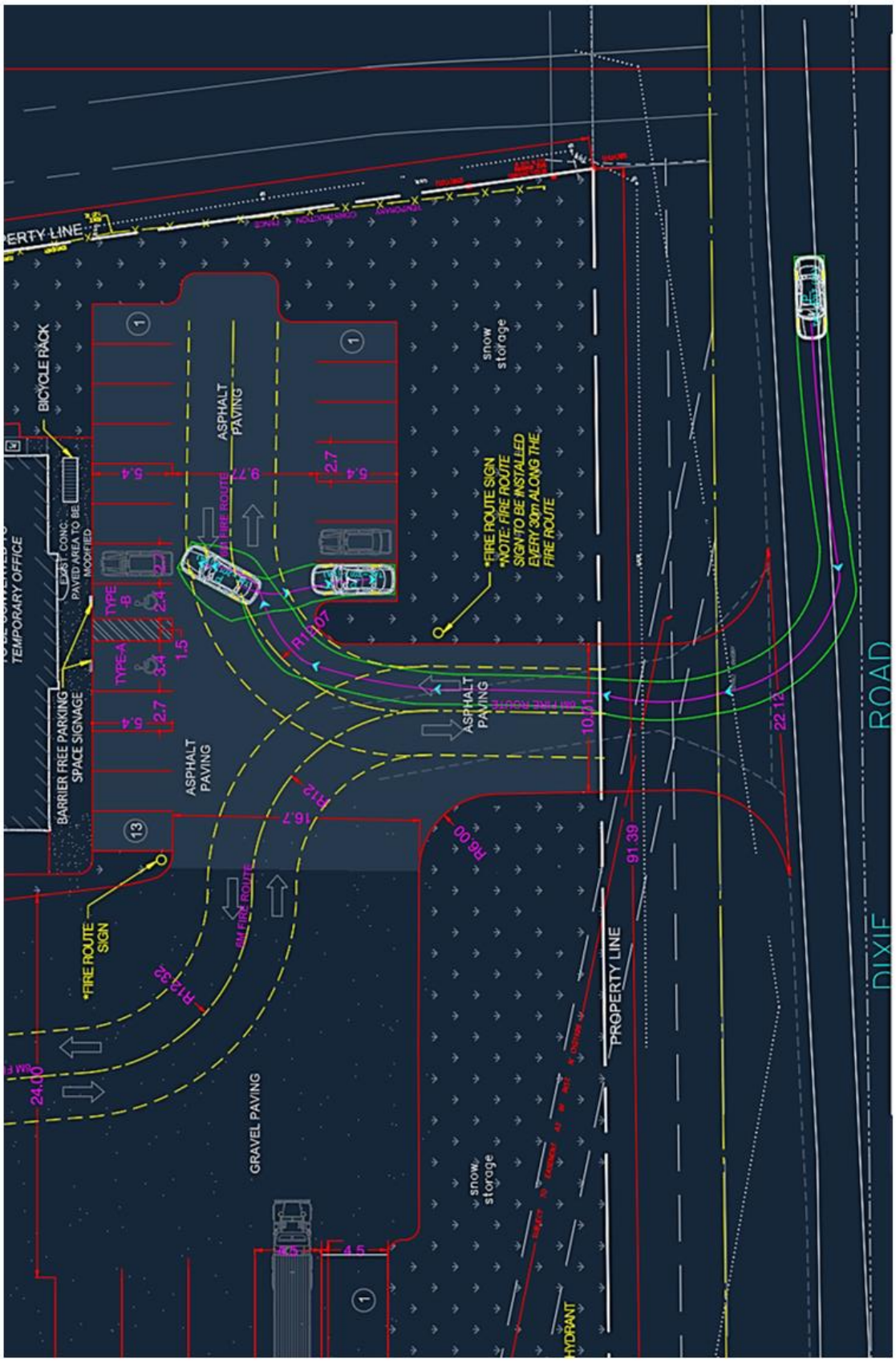


Figure 11:
Passenger Vehicle AutoTURN Assessment

Traffic Engineering Ltd.

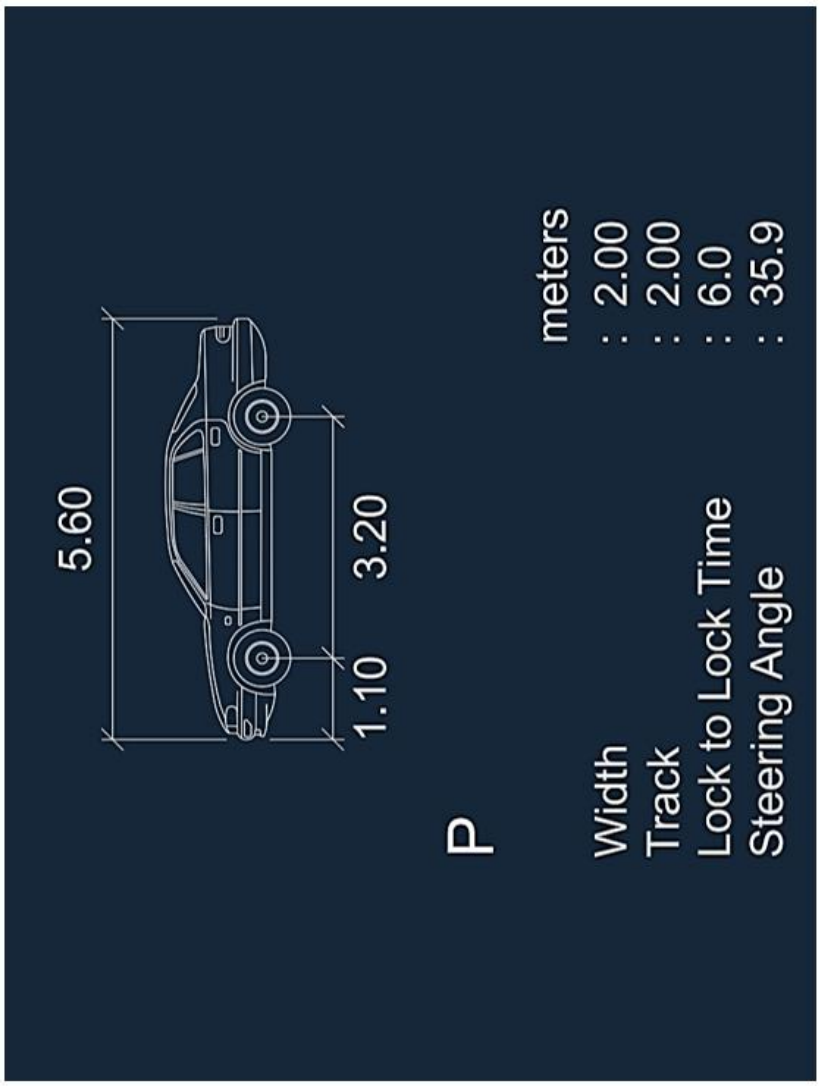


Figure 12:
Passenger Vehicle AutoTURN Assessment

Traffic Engineering Ltd.

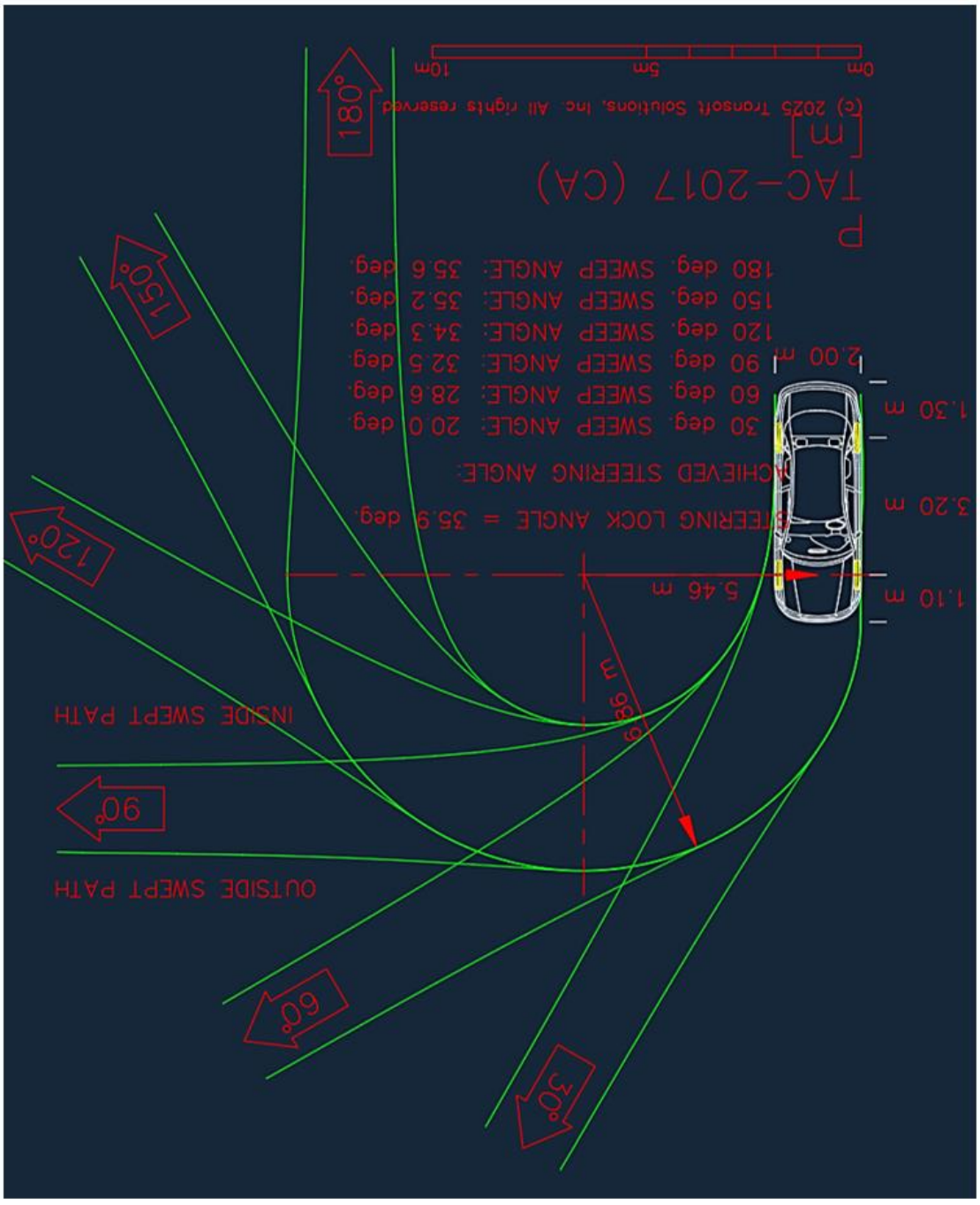


Figure 13:
Passenger Vehicle AutoTURN Assessment

Traffic Engineering Ltd.

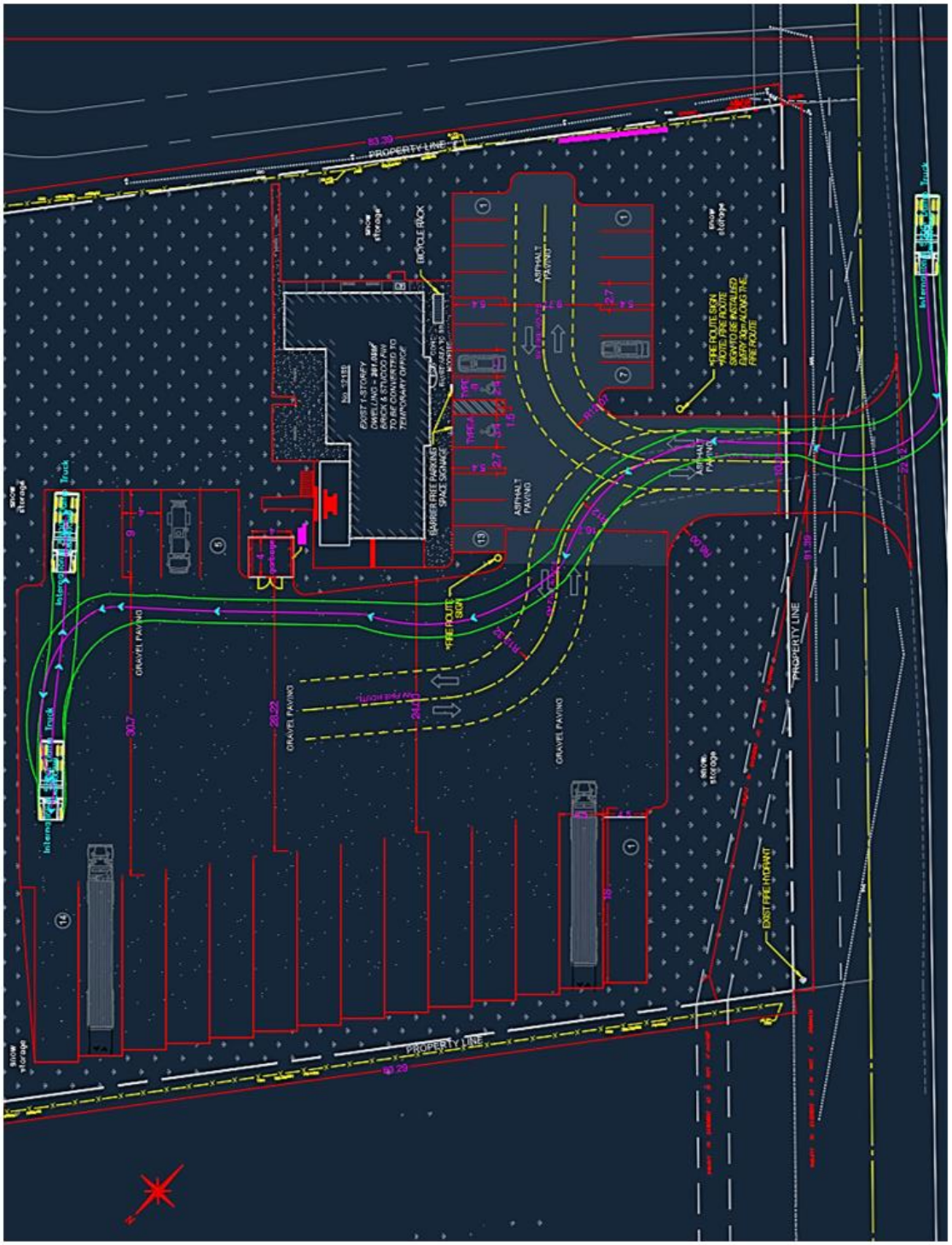


Figure 14:
Dump Truck AutoTURN Assessment

Traffic Engineering Ltd.

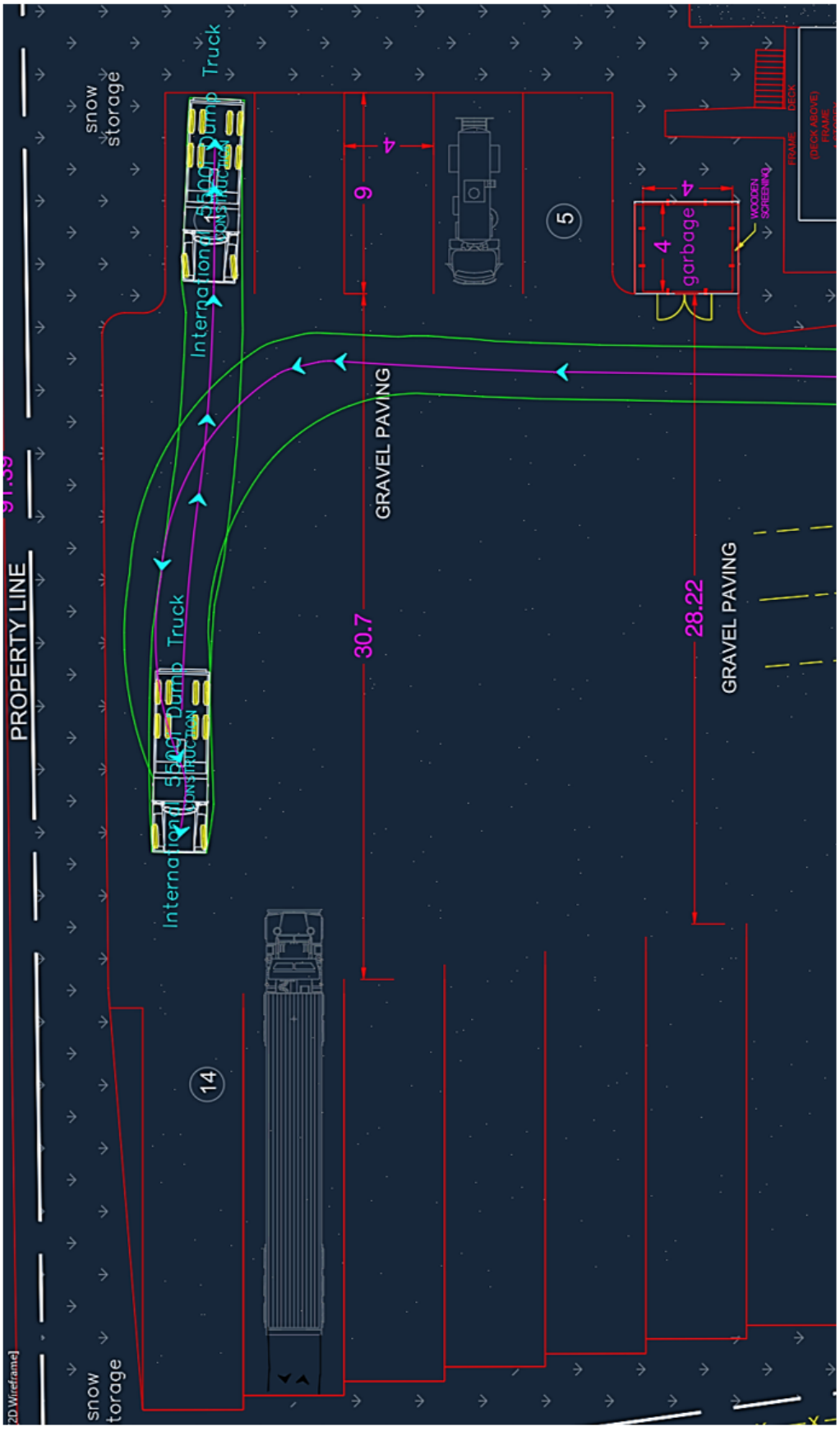


Figure 15:
Dump Truck AutoTURN Assessment

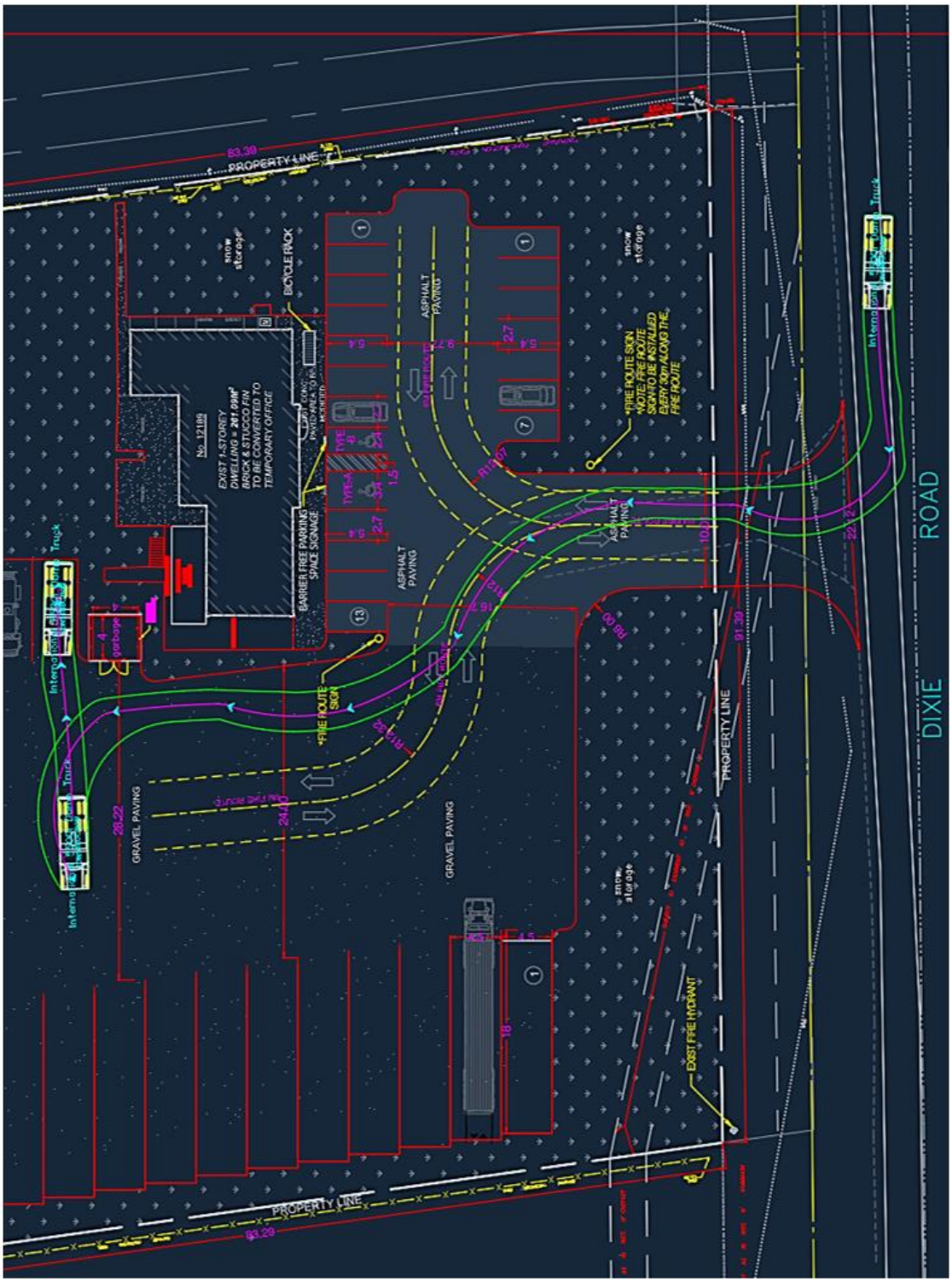


Figure 16:
Dump Truck AutoTURN Assessment

Traffic Engineering Ltd.

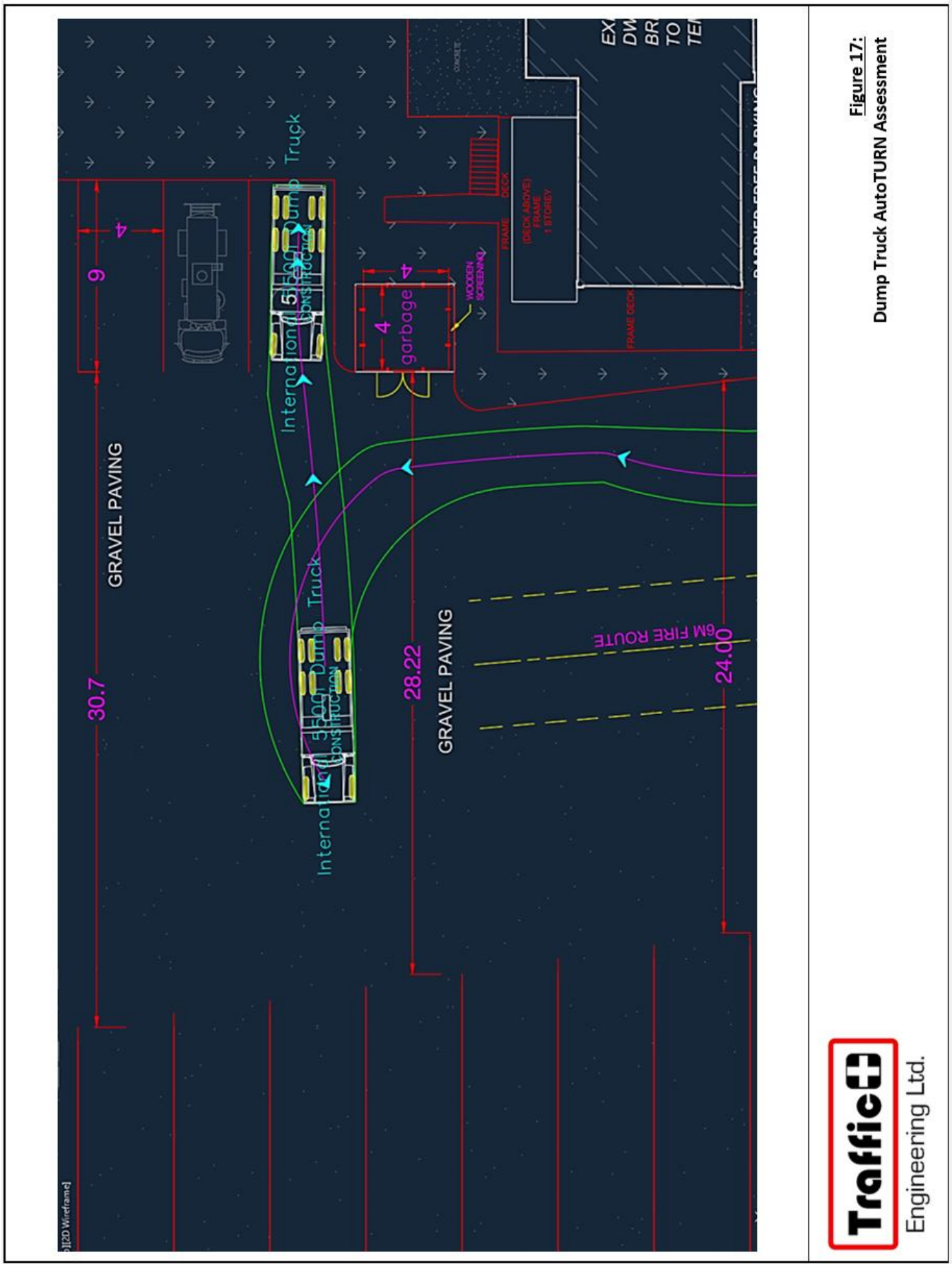


Figure 17:
Dump Truck AutoTURN Assessment

Figure 18:
Dump Truck AutoTURN Assessment

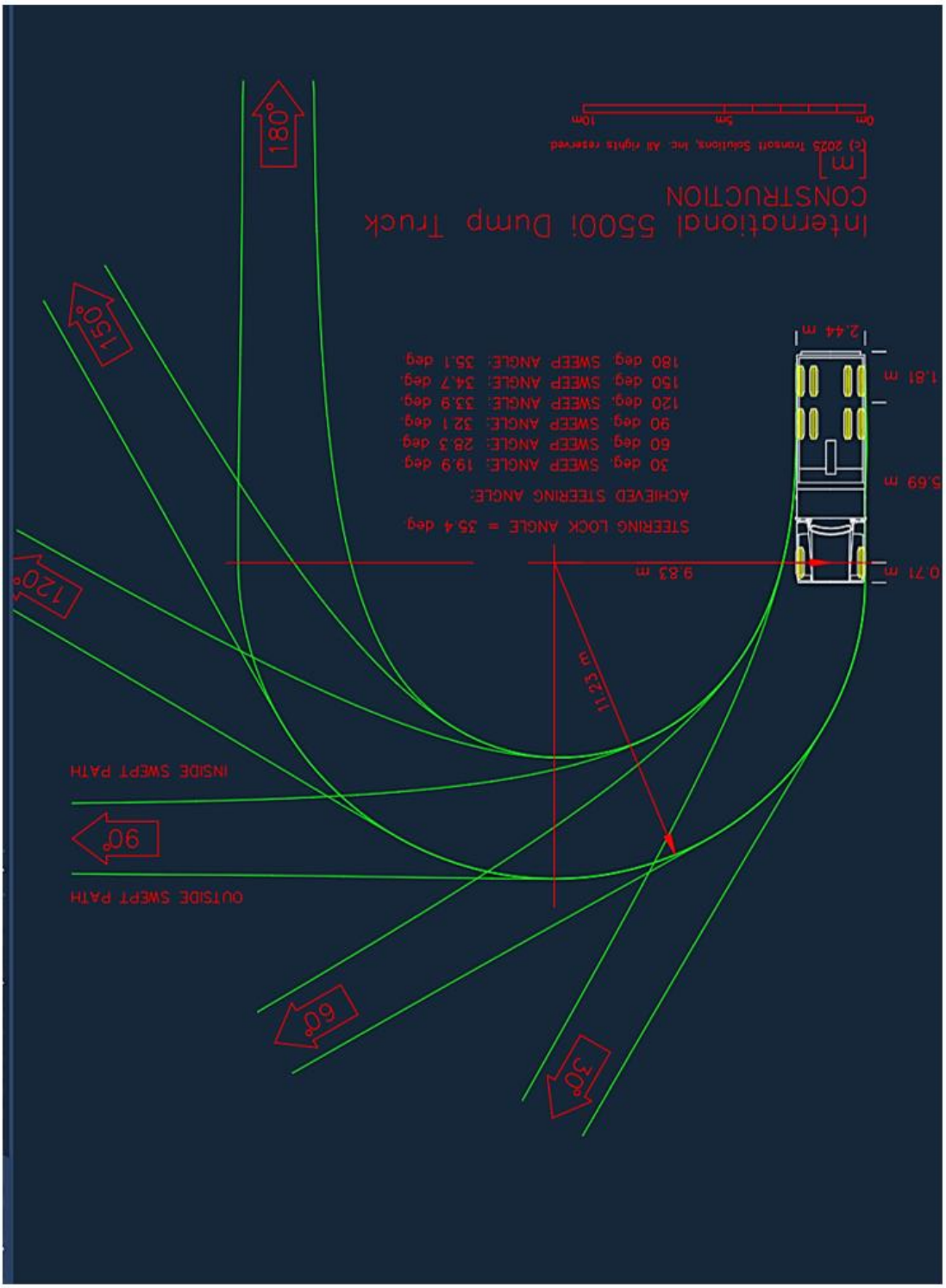


Figure 19:
Dump Truck AutoTURN Assessment

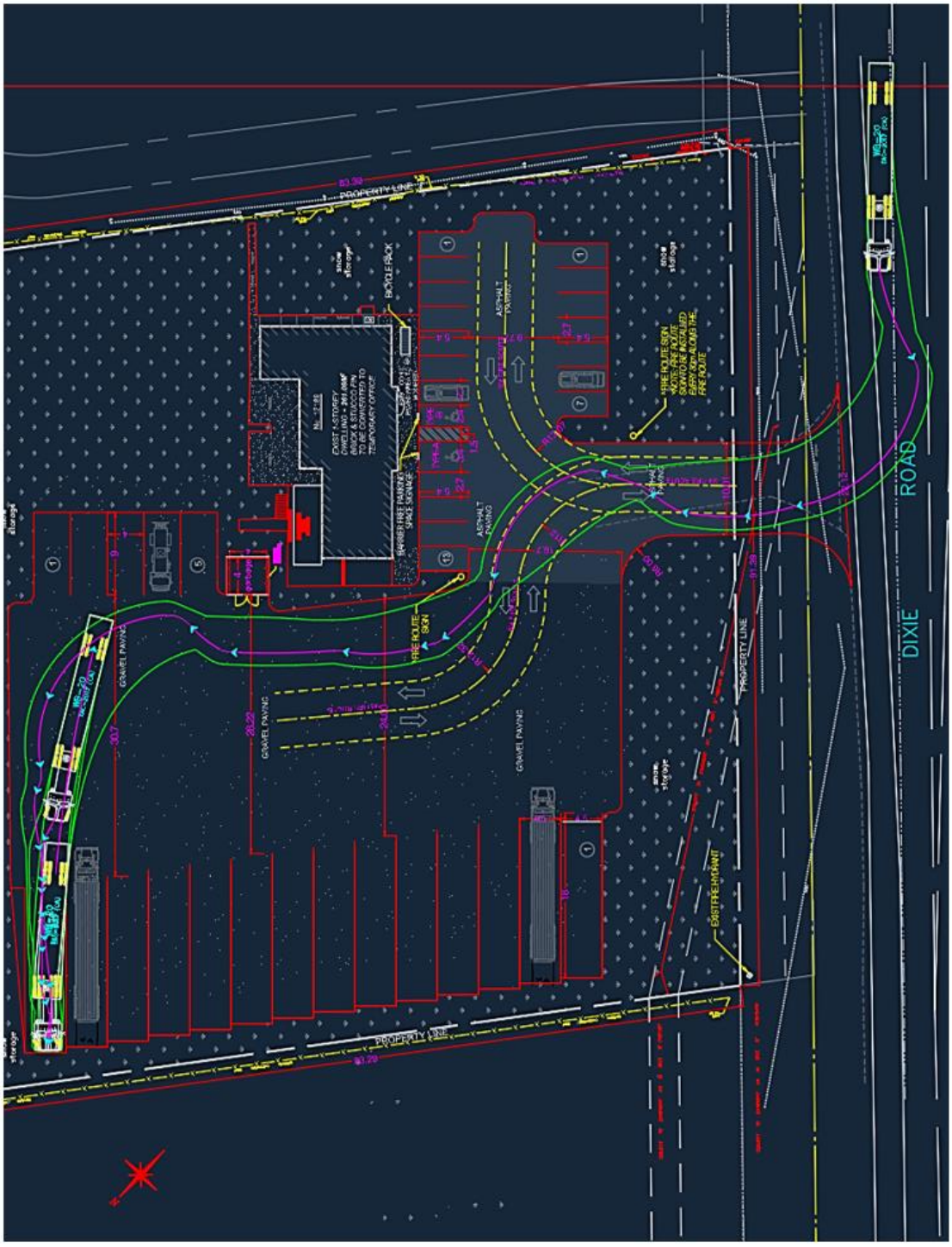


Figure 20:
WB-20 Truck AutoTURN Assessment

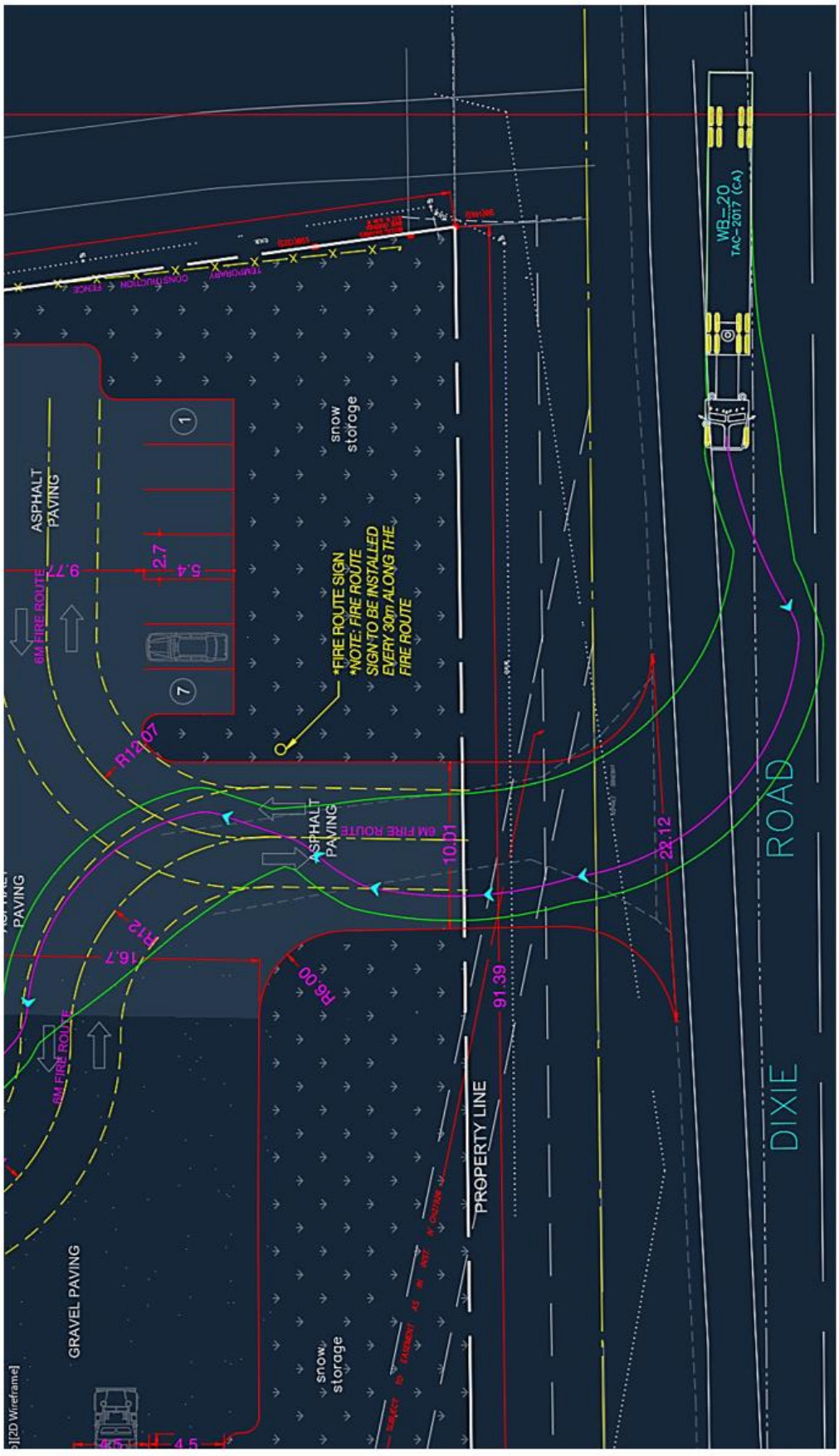


Figure 21:
WB-20 Truck AutoTURN Assessment

Traffic Engineering Ltd.

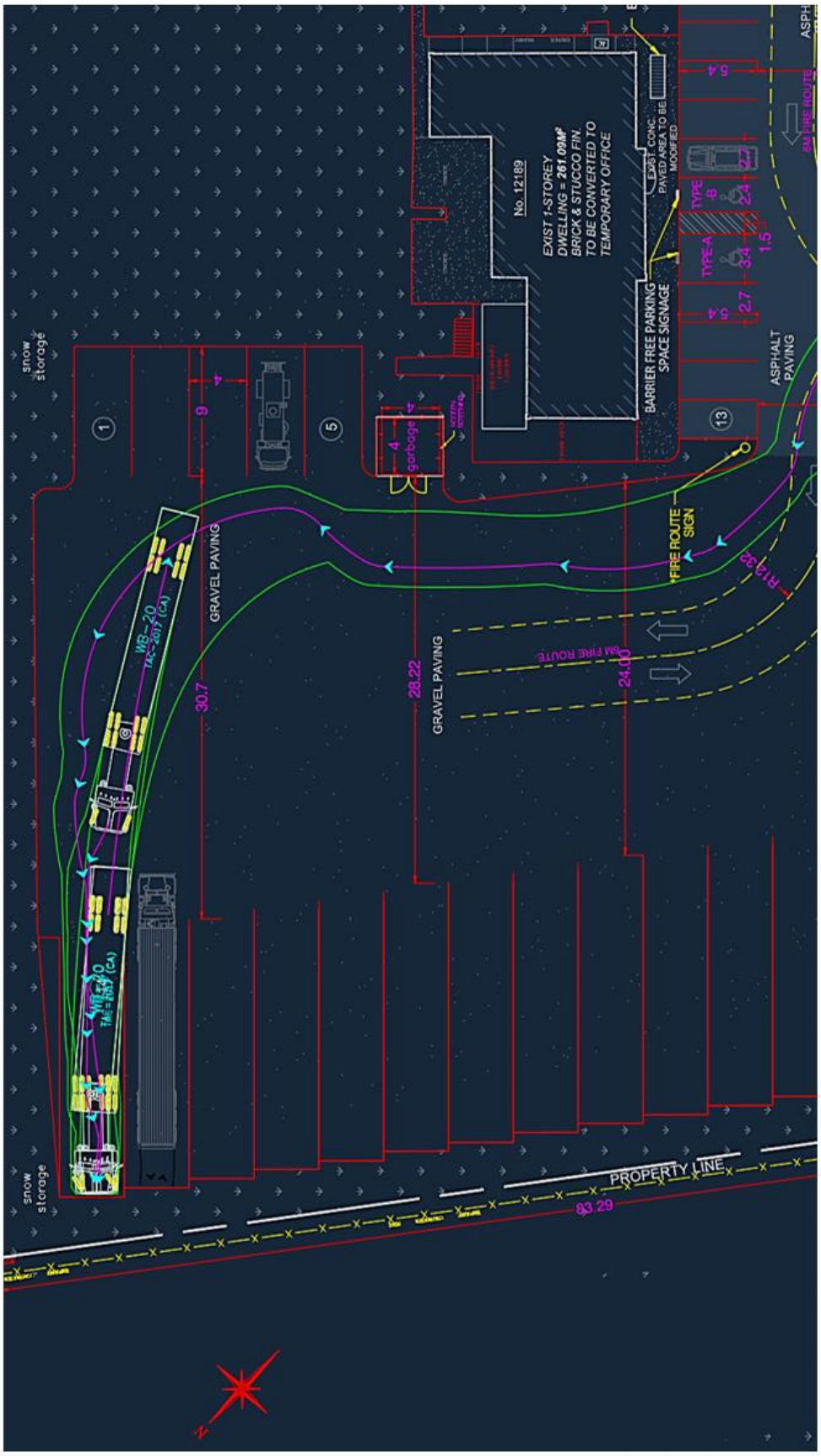


Figure 22:
WB-20 Truck AutoTURN Assessment

Traffic Engineering Ltd.

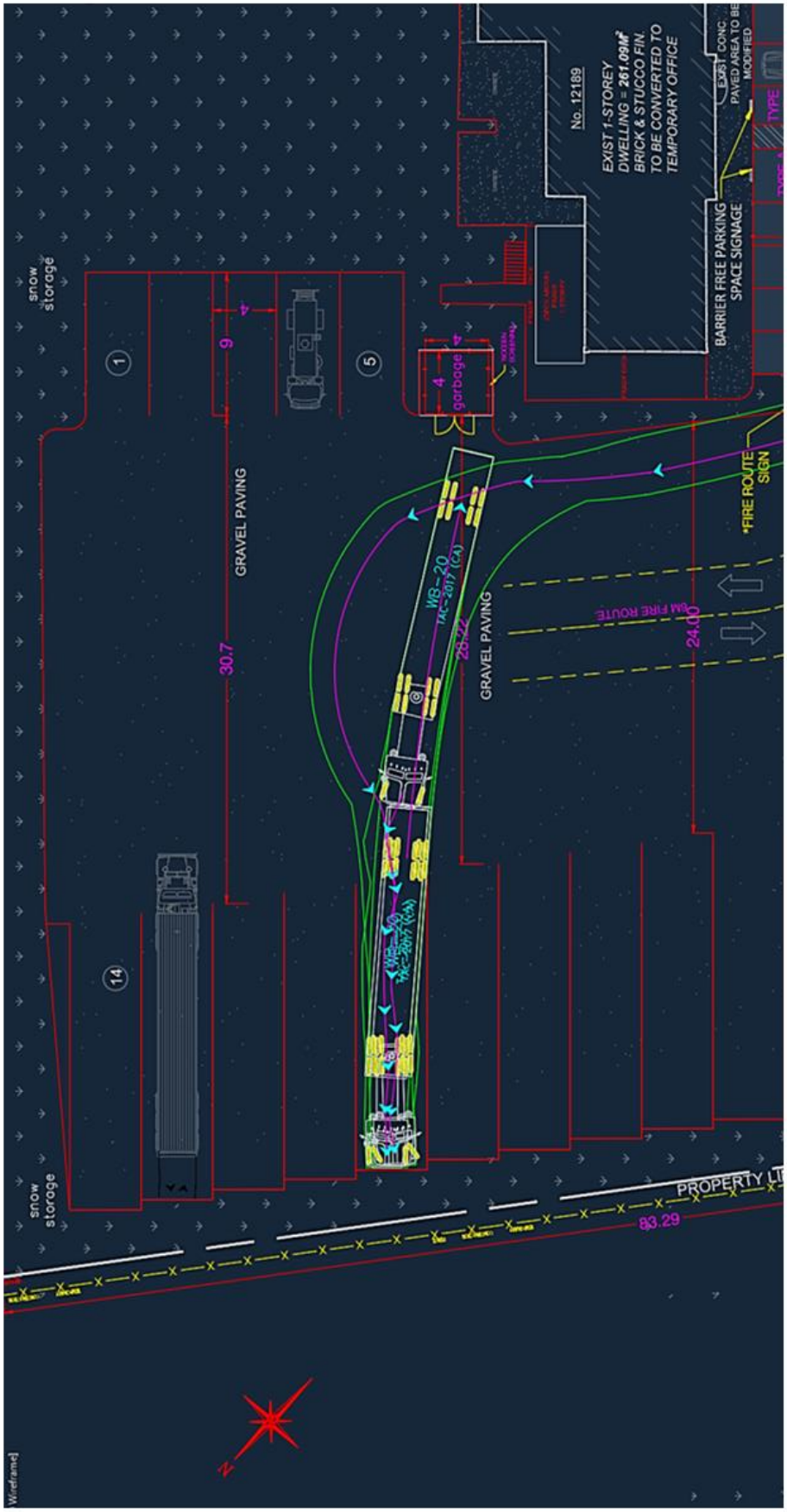


Figure 23:
WB-20 Truck AutoTURN Assessment

Traffic Engineering Ltd.

Traffic Engineering Ltd.

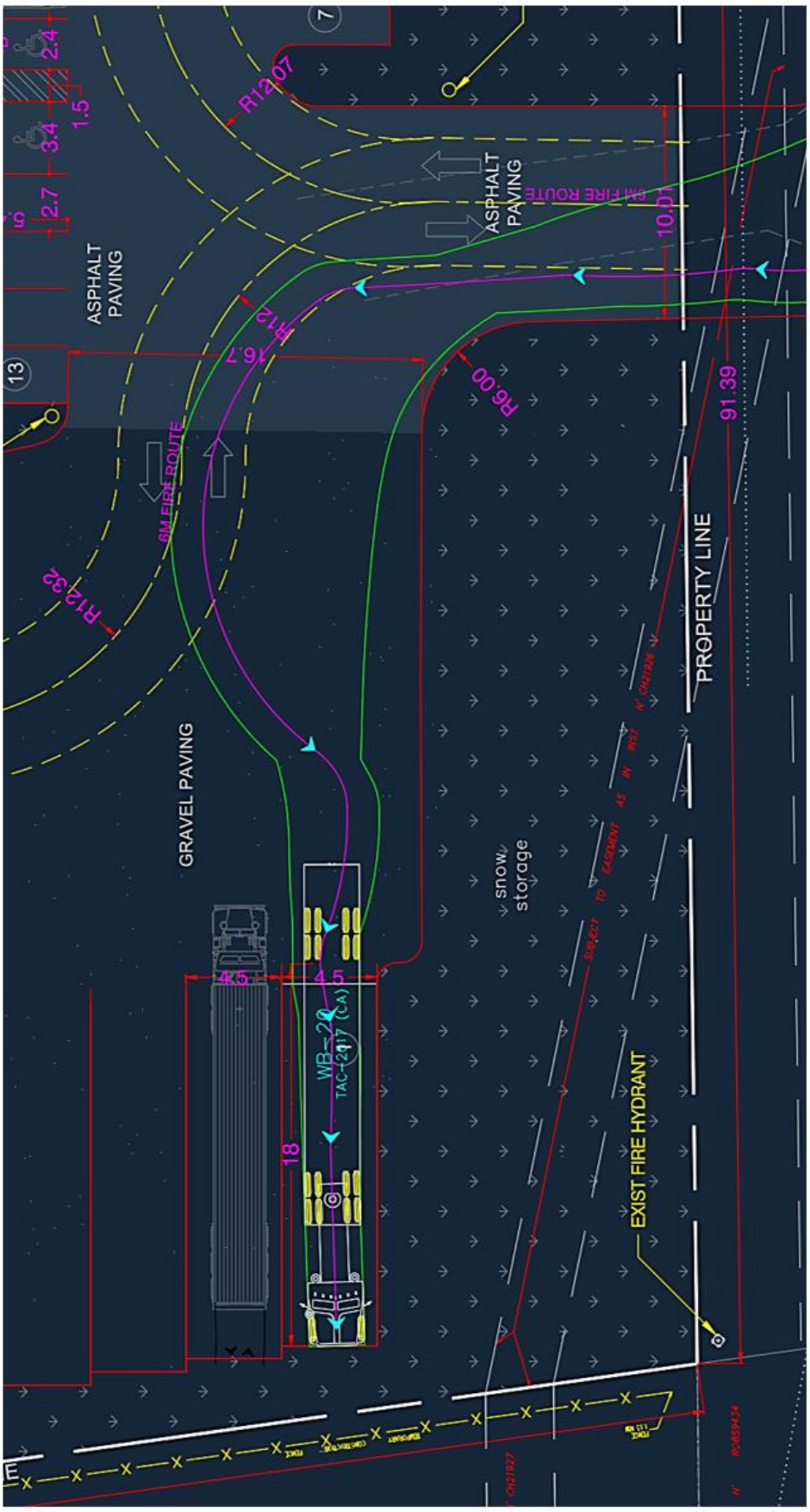


Figure 24:
WB-20 Truck AutoTURN Assessment

Traffic Engineering Ltd.

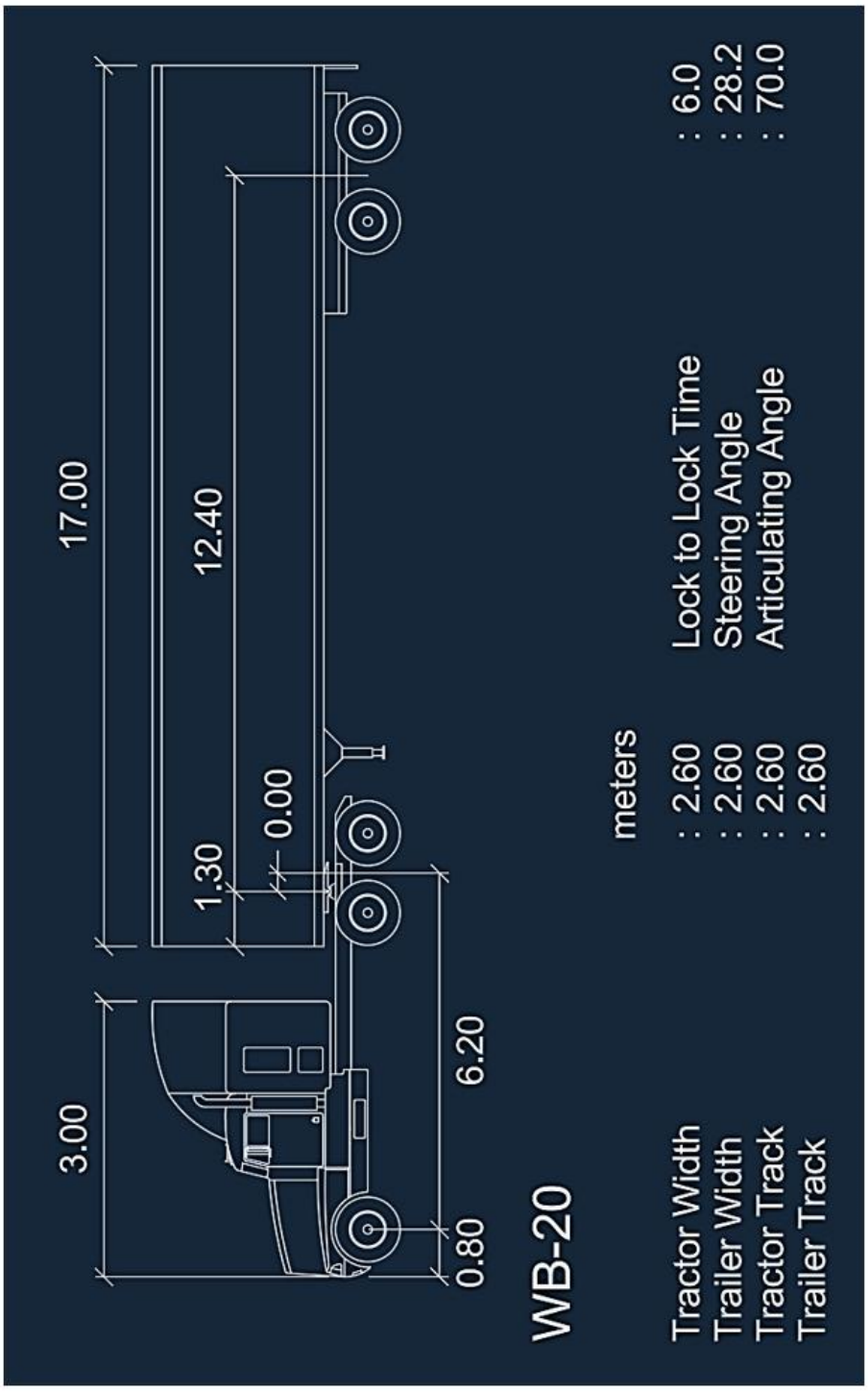


Figure 25:
WB-20 Truck AutoTURN Assessment

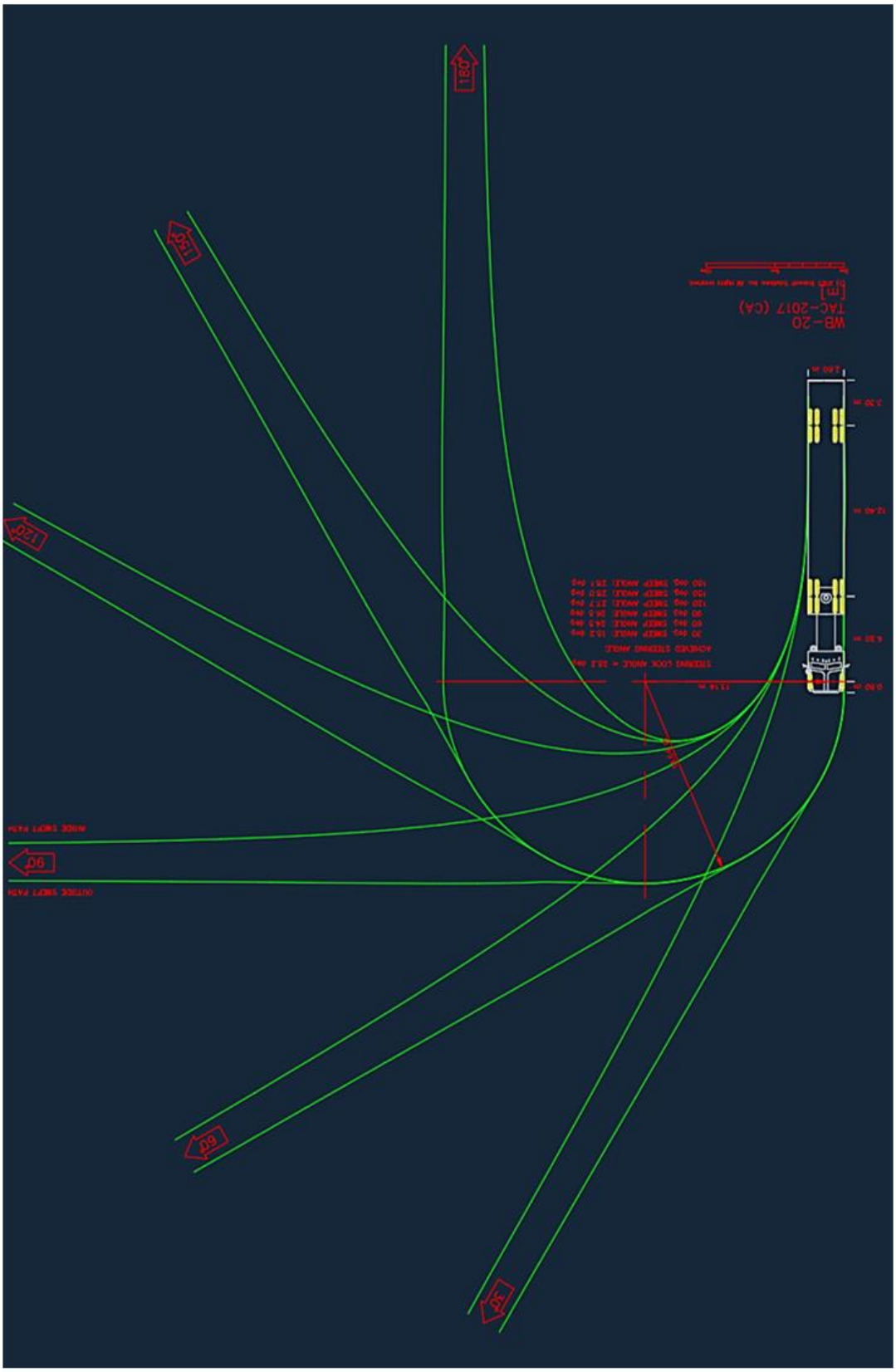


Figure 26:
WB-20 Truck AutoTURN Assessment

6.0 Parking Supply

The proposed parking supply for the truck yard exceeds the minimum required parking stalls for personal vehicles.

Table 5 summarizes the parking supply and the minimum required parking for personal vehicles

Table 5 Summary of Parking Supply

Parking Supply Study (Town of Caledon Zoning bylaw Section 5)	GFA (m^2)	Parking Rate (per Zoning Bylaw)	Minimum Parking Required	Total Vehicular Parking Provided	Parking Surplus
Transportation Depot (Truck Yard)	261.09	1 parking space per $90m^2$	3	20	17

From **Table 5**, the site is oversupplying vehicular parking by 17 additional parking spaces from the minimum of 3 parking spaces required by the Town of Caledon Zoning Bylaw.

The oversupply will provide parking spaces for truck drivers to park their personal vehicles during the day (not to be used overnight) while out with their trucks for delivery. Additionally, the additional parking will be used for visitors and potential clients.

7.0 Access Driveway Location

The existing full movement driveway located along Dixie Road will be serve as the main driveway. Based on discussions with Regional Peel staff, it was agreed that the existing driveway can be used for the proposed Truck Yard until a new full movement access driveway will be built and to connect with Spokanne Street that will lead to the new warehouse, currently under construction, just east of the Truck Yard.

Appendix 4 includes the full site plan.

Site plan of the proposed development is provided in **Figure 27** and **Figure 28**.

Based on the previously approved by the Region of Peel staff, the traffic brief submitted for the truck yard located at 12434 Dixie Road, which is currently fully operational, does not meet the minimum access locations set by the Region of Peel.

Traffic Engineering Ltd.

Figure 26:
Truck Yard location at 12434 Dixie Road in reference to the Subject Site

Traffic Engineering Ltd.

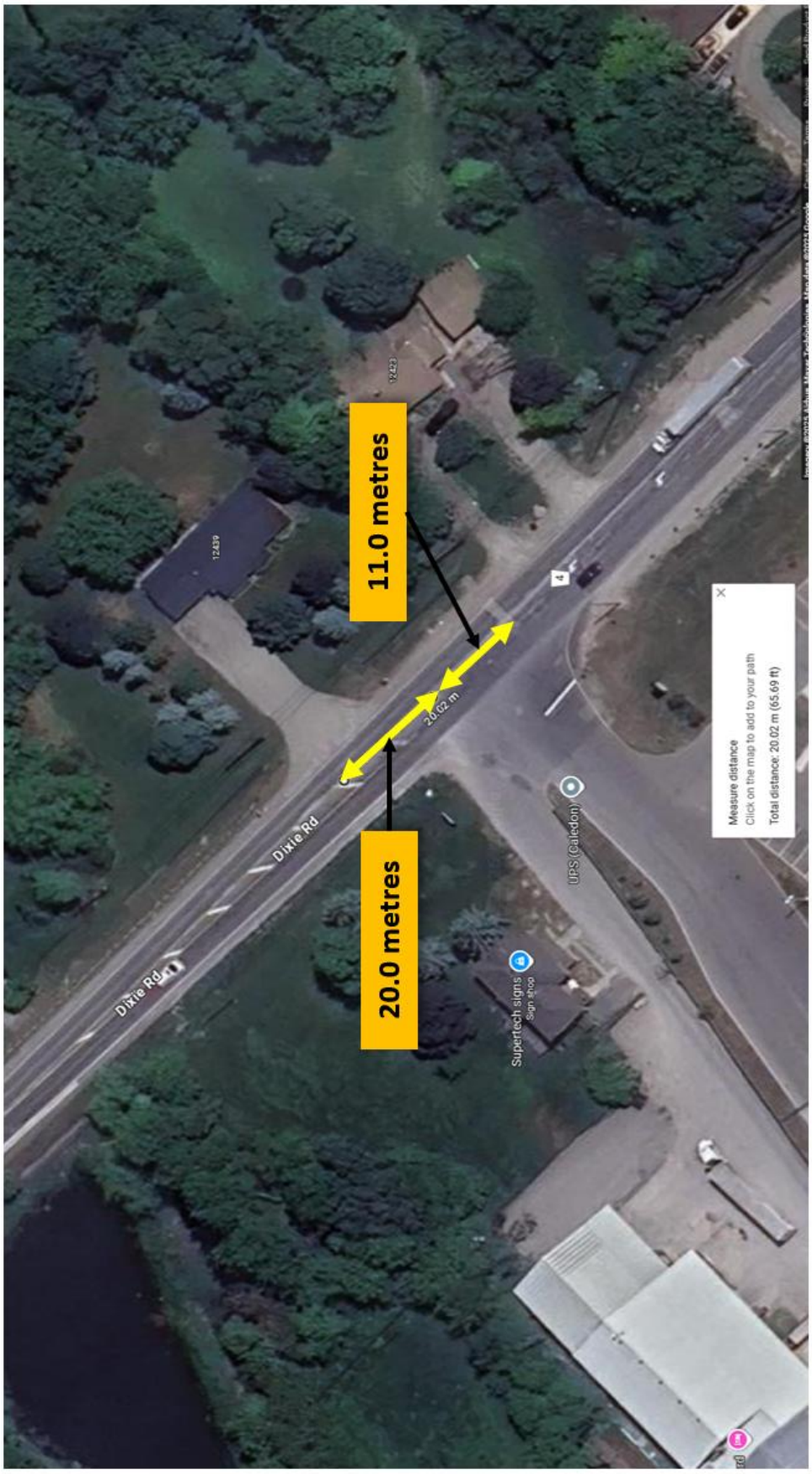


Figure 27:
Truck Yard at 12434 Dixie Road Access Driveway Distances from Nearby Properties

8.0 Findings and Conclusions

The findings and conclusions of our study are as follows:

- Based on the site plan prepared by King Consultant Inc. dated Sept. 2025, the proposed development consists of an existing single storey dwelling renovated for office use with an empty yard that will be designed for truck parking / yard;
- The site will be accessed via an existing full movement driveway located along Dixie Road;
- Total expected trips generated by the proposed development and estimated using the findings from the *Traffic Brief for 12434 Dixie Road.* AM Peak and PM Peak hours are summaries in the following table:

	GFA (ha)	AM - Average Rate	Total Trip	IN	OUT	IN Trips	OUT Trips
Truck Yard (Based on Traffic Brief for 12434 Dixie Road)	0.77	0.86	1	0.8	0.2	1	0

	GFA (ha)	PM - Average Rate	Total Trip	IN	OUT	IN Trips	OUT Trips
Truck Yard (Based on Traffic Brief for 12434 Dixie Road)	0.77	1.9	1	0.4	0.6	0	1

- Dixie Road and Access Driveway is the subject intersection to be assessed in this Traffic Brief. The intersection is operating under a stop control at the egress approach;
- Given that the intersection of Dixie Road and Access Driveway is expecting to operate at a very low traffic volumes during AM and PM peak hours, the traffic impacts expected from the proposed Truck Yard will have imperceptible traffic impacts along Dixie Road;
- The site layout can easily accommodate the manoeuvring of a typical dump truck and an articulated trucks (WB-20) around the site and in and out of the access driveway, and the typical passenger vehicle can maneuver around the site and park in the designated parking stalls without any issues;
- Proposed parking for office use are as follows:

Parking Supply Study (Town of Caledon Zoning bylaw Section 5)	GFA (m^2)	Parking Rate (per Zoning Bylaw)	Minimum Parking Required	Total Vehicular Parking Provided	Parking Surplus
Transportation Depot (Truck Yard)	261.09	1 parking space per $90m^2$	3	20	17

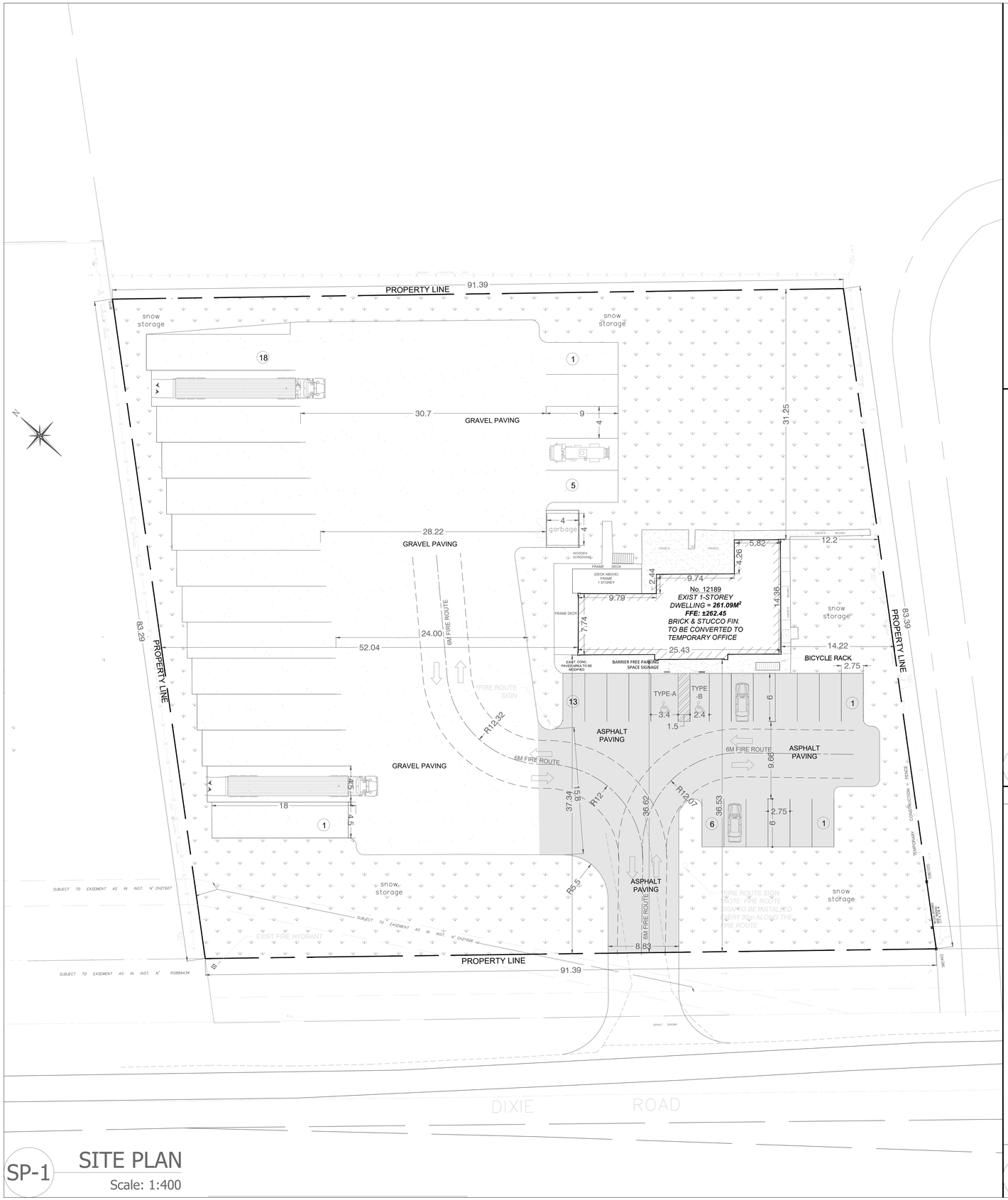
Based on the results summarised in the table above, there is a **surplus in parking equal to 17 parking spaces**;

In summary, the proposed development is projected to have an imperceptible impact on traffic operations within the study area. Additionally, the site is adequately designed to accommodated WB-20 and Dump Trucks around the designated truck yard area.

A surplus in parking supply is proposed for personal vehicles to accommodate employees and visitors.

APPENDIX 1

Full Site Plan



SP-1

SITE PLAN

Scale: 1:400

SITE STATISTICS	
LOT FRONTAGE:	91.39M
LOT DEPTH:	83.29M; 83.39M
SETBACKS	
FRONT:	36.53M
INT.(N):	52.04M
INT.(S):	12.24M
REAR:	31.25M
DEVELOPMENT STATISTICS	
TOTAL SITE AREA:	7727.80M^2 (1.909 Acres)
BUILDING AREA:	261.09 M^2 (Existing)
LANDSCAPE AREA:	2959.27 M^2
GRAVEL AREA:	3112.26 M^2
ASP AREA:	1395.36 M^2
PARKING STALLS:	19.0; 2.75M X 6.00M
TRAILER PARKING:	18.0; 4.50M X 18.30M
TRACTOR PARKING:	5; 4.00M X 9.00M
ACCESSIBLE PARKING:	2.0; 3.40M,2.4M X 5.40M

POLICY FRAMEWORK AND STANDARDS

DESCRIPTION	EXISTING POLICY
OFFICIAL PLAN	EMPLOYMENT AREAS
SECONDARY PLAN	T.B.D.
ZONING BY-LAW	A1
LOT AREA, FRONTAGE, WIDTH & DEPTH	
MINIMUM LOT AREA	1.909 ACRES
MINIMUM LOT FRONTAGE	120M
MINIMUM FRONT YARD DEPTH	18M
MINIMUM INT. SIDE YARD WIDTH	3.0M
MINIMUM REAR YARD DEPTH	10M
MINIMUM BUILDING HEIGHT	10.6M
DRIVEWAY SETBACK (MINIMUM)	3M
MINIMUM LANDSCAPED OPEN SPACE	10% MINIMUM

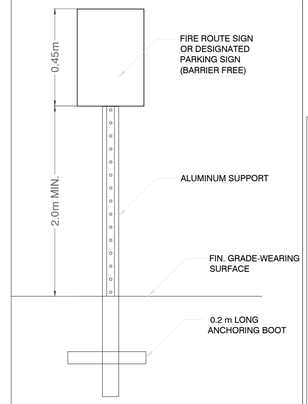
FIRE ROUTE SIGN INSTALLATION GUIDELINES

1. FIRE ROUTE SIGNS SHALL BE PERMANENTLY MOUNTED ON A RIGID SIGN POST, POLE OR BUILDING STRUCTURE.
2. FIRE ROUTE SIGNS SHALL BE ERECTED AT A HEIGHT OF BETWEEN 1.9M AND 2.5M AS MEASURED FROM THE EDGE OF THE TRAVELLED PORTION OF THE DESIGNATED ROUTE, TO THE BOTTOM EDGE OF THE SIGN.
3. FIRE ROUTE SIGNS SHALL BE INSTALLED AT A DISTANCE OF BETWEEN 0.3M AND 3M FROM THE TRAVELLED EDGE OF THE DESIGNATED ROUTE.
4. STANDARD FIRE ROUTE SIGNS SHALL BE INSTALLED ALONG THE ROUTE AT APPROXIMATELY 30M INTERVALS OR AS FREQUENTLY AS IS NECESSARY TO IDENTIFY THE ROUTE IN THE JUDGEMENT OF THE FIRE CHIEF OR HIS DESIGNATE.
5. STANDARD SIGNS SHALL BE INSTALLED AT A 45 DEGREE ANGLE IN RELATION TO THE EDGE OF THE TRAVELLED PORTION OF THE DESIGNATED ROUTE FACING APPROACHING TRAFFIC.

STEEL POSTS & SIGN BRACKETS FOR FIRE ROUTE SIGN INSTALLATION

FIRE ROUTE SIGNS, ARE TO BE INSTALLED ON A STEEL POSTS OR LIGHT POLE OR ON THE BUILDING.

1 FIRE ROUTE SIGNAGE & NOTES



NOTE:- HEIGHT OF SIGN FROM THE BOTTOM EDGE OF THE BARRIER FREE SIGN TO THE TOP OF GRADE/ SURFACE IS MIN. 1 METER TO MAX. 1.5 METER

ACCESSIBLE PARKING SIGNS SHALL BE MOUNTED ON A LEVEL WALL SURFACE OR MOUNTED ON A PERMANENT POST PILLAR OR OTHER SUITABLE SURFACE, CONFORMING TO THE REQUIREMENTS OR REGULATIONS MADE UNDER THE HIGHWAY TRAFFIC ACT AND THE ACCESSIBILITY FOR ONTARIANS WITH DISABILITIES ACT AND BE LOCATED

- AT A HEIGHT OF 1200 MM (47 IN.) FROM THE GROUND/FLOOR SURFACE TO THE BOTTOM EDGE OF THE SIGN;
- IF MOUNTED ON A POST, THE POST SHALL BE COLOUR CONTRASTED WITH THE BACKGROUND ENVIRONMENT;
- FOR PERPENDICULAR PARKING CENTRED ON THE PARKING SPACE; AND
- FOR PARALLEL PARKING LOCATED TOWARD THE END OF THE PARKING SPACE, ON THE OPPOSITE SIDE FROM THE ACCESS AISLE.

EACH TYPE 'A' PARKING SPACE SHALL HAVE TWO (2) 150 MM X 300 MM (6 INCHES X 11 ⅞ INCHES) SIGNS, ON THE SAME SIGN POST/WALL MOUNT AND LOCATED IMMEDIATELY BELOW THE SIGN DESCRIBED IN SECTIONS 9 AND 11, WITH THE WORDS 'VAN ACCESSIBLE' FOLLOWED UNDERNEATH WITH "MAXIMUM FINE $5,000.00". AS ILLUSTRATED IN SCHEDULE "C" OF ACCESSIBLE PARKING BYLAW 10-2016.

EACH TYPE 'B' PARKING SPACE SHALL HAVE A 150 MM X 300 MM (6 INCHES X 11 ⅞ INCHES) SIGN, ON THE SAME SIGN POST/WALL MOUNT AND LOCATED IMMEDIATELY BELOW THE SIGN DESCRIBED IN SECTIONS 9 AND 11, WITH THE WORDS "MAXIMUM FINE $5,000.00", AS ILLUSTRATED IN SCHEDULE "C" OF ACCESSIBLE PARKING BY-LAW 10-2016.

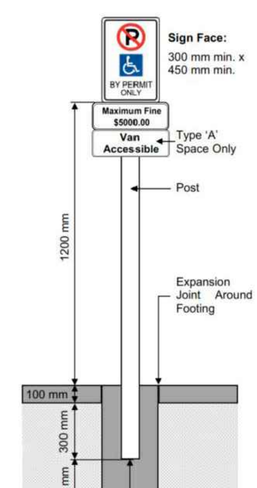
SIGN FACE:

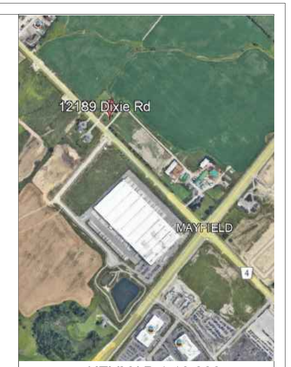
- 0.064 MM GAUGE ALUMINUM SIGN BLANK
- WHITE BACKGROUND
- HOLES-METRO PUNCHED

MOUNTING:

SECURE THE SIGN FACE TO A POST OR WALL WITH TWO GALVANIZED 12 MM HEX. HEAD BOLTS AND NUTS WITH FLAT WASHERS ON BOTH SIDES.

2 BARRIER FREE SIGNAGE & NOTES





KEYMAP 1:10,000

12189 DIXIE ROAD, CALEDON

Lands owned by the Applicant:

Parcel 1: PT LT 18 CON 4 EHS CHINGUACOUSY PTS 4 TO 6, 43R3047; EXCEPT PT 13, 14, 16 TO 21, 43R20417 ; S/T CH21926 TOWN OF CALEDON. PIN:143470019

Parcel 2: PT LT 18 CON 4 EHS CHINGUACOUSY PTS 8 TO 10 43R3047; EXCEPT PT 22 TO 26 43R20417 ; S/T CH21926 CALEDON. PIN:143470018

Paper scale 1" = 400
Measurements in Metres

King Consultant Inc.
Gursewak Singh
Unit 2, 177 Zenway Blvd,
Vaughan. ON. L4H 3H9
905-965-1610
singhplan@outlook.com

No.	Description	Date
01	Drafted for submission	10/10/2024
02	Revisions per Survey	01/29/2025
03	Revisions per Consultants	03/15/2025
02	Revisions per Consultants	08/29/2025

PROPOSED SITE PLAN FOR TEMPORARY USE ZONING BY-LAW

CONCEPT SITE PLAN

Project number	0063
Date	09/09/2025
Drawn by	RK
Checked by	GS
Scale	1:400

SP-1

APPENDIX 2

"Traffic Brief Proposed Transport Truck / Trailer Parking Facility at 12434 Dixie Road, Town of Caledon" dated December 7, 2021

520 Industrial Parkway South, Suite 201
Aurora, ON, L4G6W8

Phone: 905-503-2563

www.nextrans.ca

nexTrans
CONSULTING ENGINEERS

NextEng Consulting Group Inc.

December 7, 2021

Nishan Transport Inc.
C/o: Rohan Sovig
160 Avenue Labrosse
Pointe-Claire, QC H9R 1A1

Attention: Mr. Raj Chahal

Re: Engineering Service – Traffic Brief
Proposed Transport Truck / Trailer Parking Facility
12434 Dixie Road, Town of Caledon
Our Project No. NT-20-105

1.0 INTRODUCTION

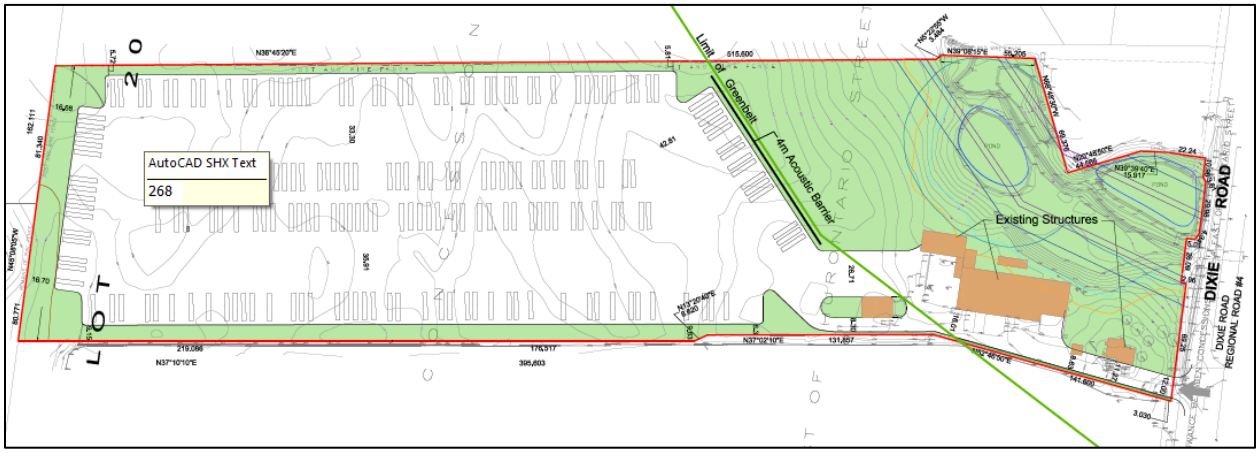
NexTrans Consulting Engineers (A Division of NextEng Consulting Group Ltd.) was retained through Raj Chahal (the 'Owner') to undertake a Traffic Brief in support of a temporary Zoning By-law Amendment for a proposed transport truck/ trailer parking facility. The subject property is located west of Dixie Road between Old School Road to the northwest and Spokanne Street to the southeast, and is municipally known as 12434 Dixie Road, in the Town of Caledon. This Traffic Brief conforms to the Peel Region guidelines, see **Appendix A** for the terms of reference that was sent to the Region for review. Since the Region has not provided comments on the Terms of Reference in a timely manner, the Traffic Brief has been prepared in accordance to the **Appendix A**. The location of the proposed development is illustrated in **Figure 1-1**.

Figure 1-1 – Site Location

The subject property is currently occupied by an existing building and existing residential building with GFA's of approximately 1,000 ft^2 (92.9 m^2) and 2,500 ft^2 (232.3 m^2), respectively. Based on the proposed site plan, the development proposal is to develop a transport truck/trailer parking facility on the 10.7 Ha site. Vehicular access to the subject site is proposed through one (1) full movement entrance onto Dixie Road, and will also require road widening at the location of the entrance. The proposed site plan is provided in **Figure 1-2**, while **Appendix B** also provides a larger scale version of the proposed site plan.

Given the nature of the development proposal, the analysis will include the weekday morning and afternoon peak periods for traffic assessment purposes.

Figure 1-2 – Proposed Site Plan



2.0 EXISTING TRAFFIC CONDITIONS

2.1. Existing Road Network

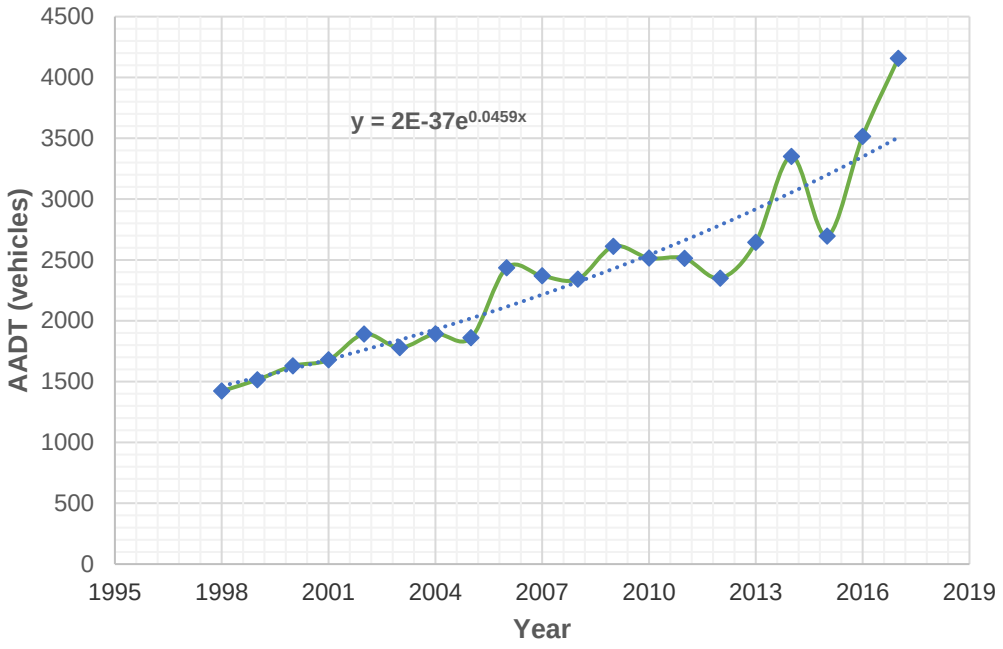
The existing subject lands are located west of Dixie Road between Old School Road and Spokanne Street, in the Town of Caledon. The existing road network is described as follows:

Dixie Road/ Regional Road 4: is a north-south regional road under the jurisdiction of Peel Region within the Town of Caledon and is a classified as a Major Arterial road. Dixie Road near the study area has an existing two-lane cross section (one lane per direction) and a posted speed limit of 80 km/h.

2.2. Existing Traffic Volumes

As such, historic traffic volumes at the Dixie Road and Mayfield Road Intersection were obtained from Spectrum on Thursday, October 3, 2019 during the morning (7:00 a.m. to 9:00 a.m.) and afternoon (3:00 p.m. to 6:00 p.m.) peak periods. Detailed traffic data sheets are provided in **Appendix C**. For the purposes of this assessment, a five-year horizon (2025) was selected to analyze the future background traffic volumes. The AADT data for years 1996 – 2017, shown in **Figure 2-1**, were provided by Peel Region and indicates a growth rate of 4.6%. As such, a conservative 5% growth rate per annum is taken for the north-south through traffic on Dixie Road.

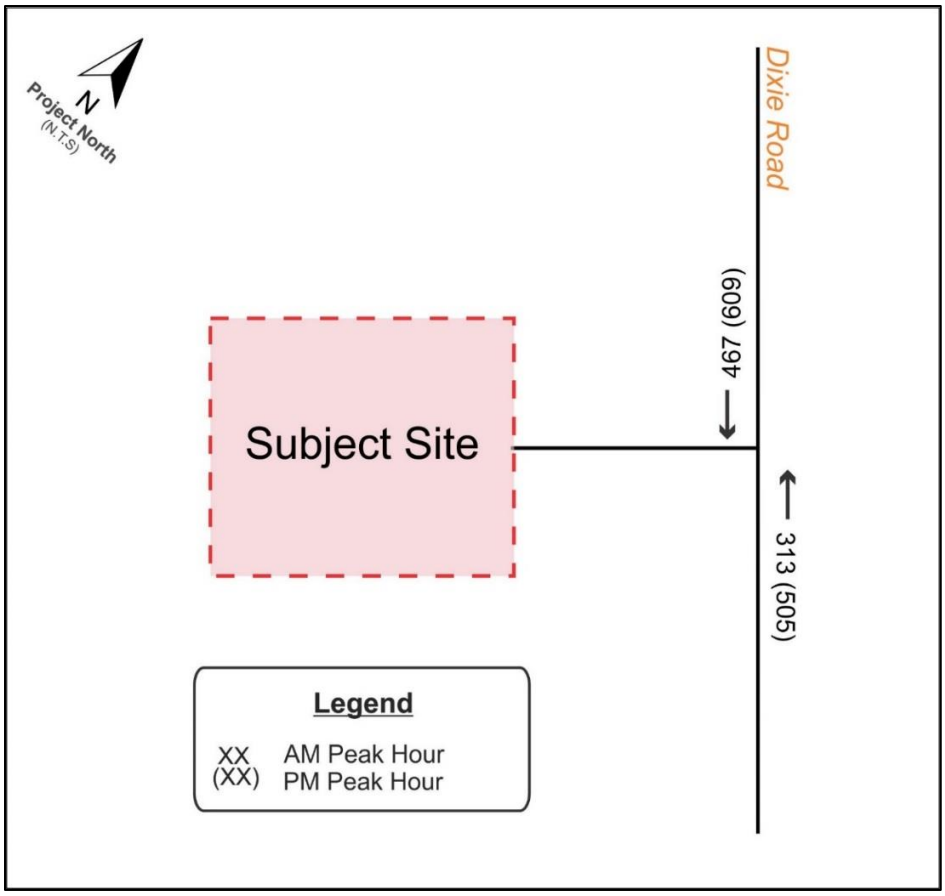
Figure 2-1 – AADT on Dixie Road Near Subject Site



2.3. Existing Traffic Volumes

The historic volumes with applied growth rates are illustrated in **Figure 2-2**.

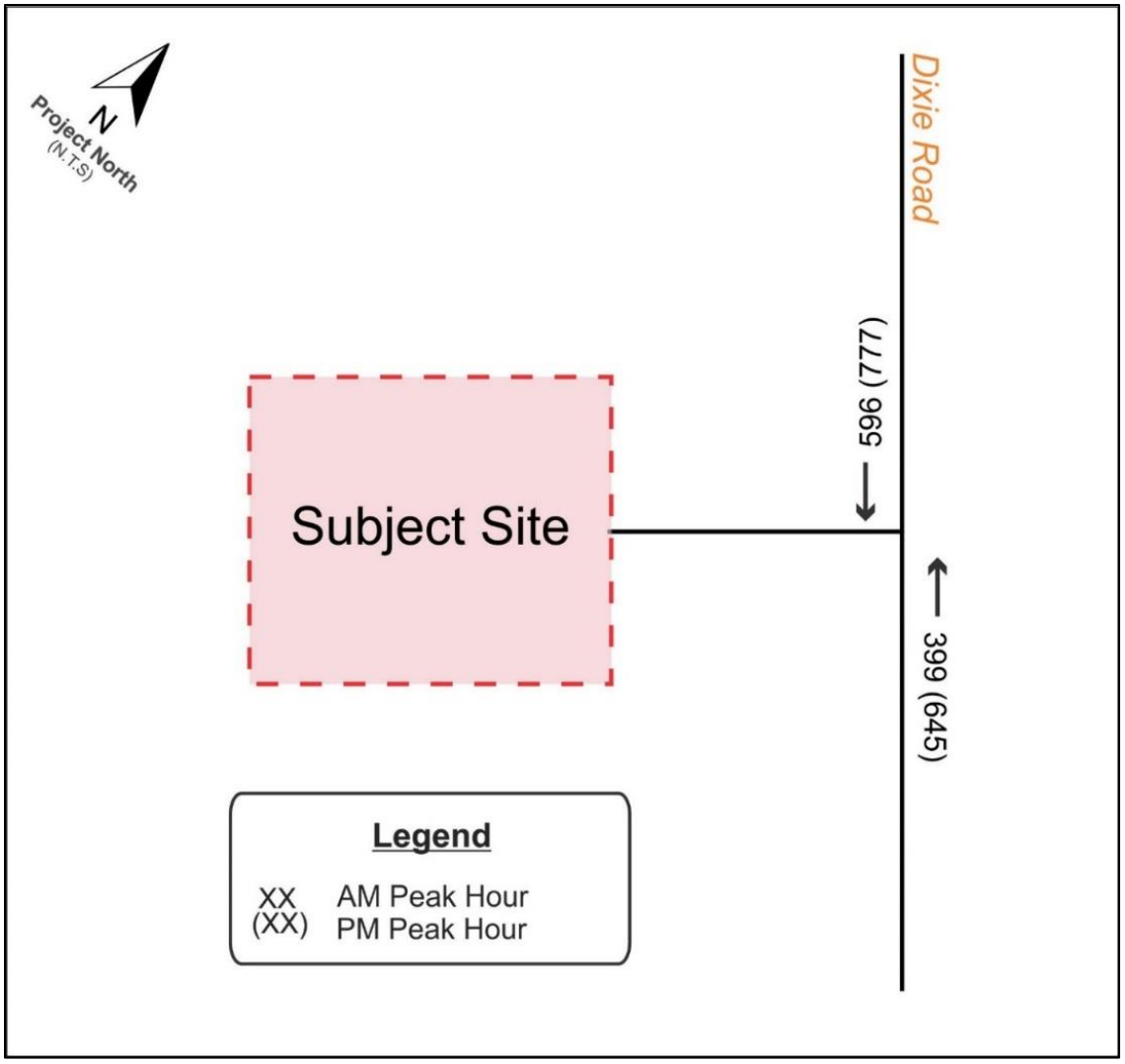
Figure 2-2 – Existing Traffic Volumes



3.0 FUTURE BACKGROUND CONDITIONS

As previously mentioned, a 5% growth rate was applied to the northbound and southbound through volumes along Dixie Road near the subject site. The future (2025) background traffic volumes are provided in **Figure 3-1**.

Figure 3-1 – Future Background Traffic Volumes



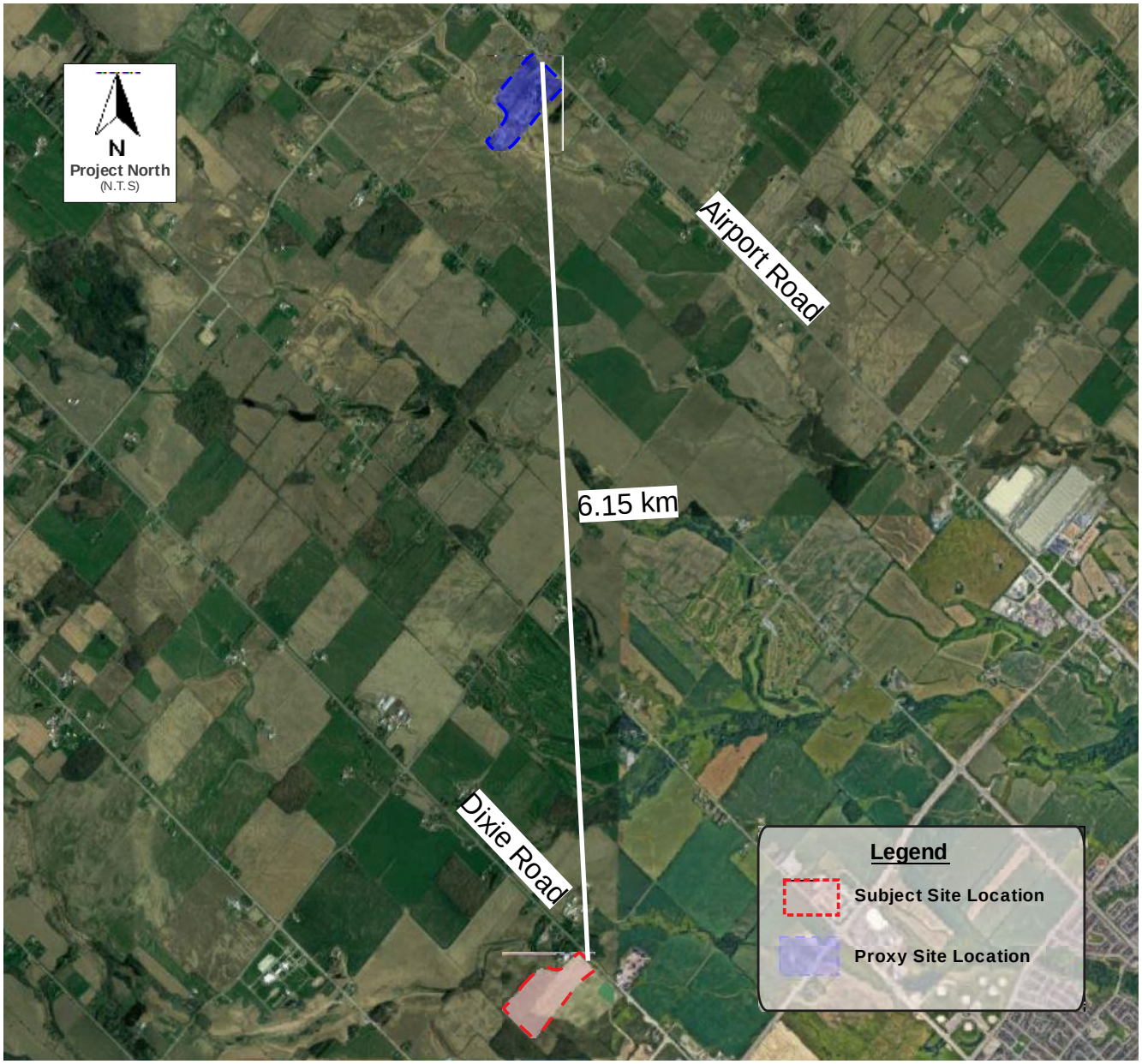
4.0 SITE TRAFFIC

The development proposal is to develop a truck trailer parking facility with a lot area of 107,000 m^2 and with an existing on-site building GFA of approximately 92.9 m^2. In addition, there is a residential building with a GFA of approximately 232.23 m^2. The proposed development is unique in the sense that the Trip Generation Manual, published by the Institute of Transportation Engineers (ITE), does not contain any information specific to land use case (truck/trailer parking facility).

To capture peak parking demand for the proposal, NexTrans Consulting Engineers opted to conduct driveway counts at an existing proxy site with a similar buildout as the proposed development. The proxy site is located approximately 8.3 km north of the subject site, municipally known as 13726 Airport Road and has a lot area of approximately 105,000 m^2 (10.5 ha). As Peel Region is currently under COVID-19 Phase 3 lockdown protocols, most businesses are functioning under regular hours of operation. Truck/trailer parking facilities are currently functioning, and it is our opinion

that the proxy driveway counts are acceptable. The proxy site locations, in comparison to the subject site location, are shown in **Figure 4-1** below.

Figure 4-1 – Proxy Site Survey Location



The proxy site driveway counts were conducted on Thursday, August 13, 2020 and Friday, August 14, 2020 during the morning (7:00 A.M. to 9:15 A.M.) and afternoon (4:00 P.M. to 6:00 P.M.) peak periods. The results of the morning peak and afternoon peak driveway counts at the proxy site (i.e. 13726 Airport Road) are shown in **Tables 4.1** and **4.2,** respectively.

Table 4.1 – Morning Peak Period

	Thursday, August 13, 2020				Friday, August 14, 2020			
Movement	**In**		**Out**		**In**		**Out**	
Vehicle	**Truck**	**Car**	**Truck**	**Car**	**Truck**	**Car**	**Truck**	**Car**
7:00 a.m.	0	1	0	1	0	0	0	0
7:15 a.m.	0	0	0	0	0	0	1	0
7:30 a.m.	1	0	0	0	0	0	0	0
7:45 a.m.	0	3	1	1	0	1	1	0
8:00 a.m.	0	0	0	0	0	2	0	0
8:15 a.m.	0	2	0	0	0	1	0	0
8:30 a.m.	0	0	1	1	0	0	0	0
8:45 a.m.	1	1	0	1	1	1	0	1
Peak hour one-way Total	5		4		5		1	
Peak hour two-way Total	**9**				**6**			

The peak A.M. traffic volume from both days occurs on Thursday, August 13, 2020 from 7:45 A.M.to 8:45 A.M. with a total traffic volume of nine (9) vehicles during this time, or **0.86 trips/ ha.**

Table 4.2 – Afternoon Peak Period

	Thursday, August 13, 2020				Friday, August 14, 2020			
Movement	**In**		**Out**		**In**		**Out**	
Vehicle	**Truck**	**Car**	**Truck**	**Car**	**Truck**	**Car**	**Truck**	**Car**
4:00 p.m.	1	0	1	0	0	0	0	2
4:15 p.m.	0	2	0	5	0	0	0	0
4:30 p.m.	0	1	0	0	2	1	0	2
4:45 p.m.	2	3	1	3	1	1	0	3
5:00 p.m.	1	0	0	0	2	0	0	1
5:15 p.m.	1	1	0	1	3	1	0	2
5:30 p.m.	0	0	0	4	1	1	0	1
5:45 p.m.	0	0	0	0	0	1	0	3
Peak hour one-way Total	10		10		11		8	
Peak hour two-way Total	**20**				**19**			

The peak P.M. recorded traffic volume from the proxy site from both days occurs on Thursday, August 13, 2020 from 4:00 P.M. to 5:00 P.M. with a total traffic volume of 20 vehicles during this time, or **1.90 trips/ ha.**

Based on the calculated proxy site trip rates, the proposed subject site is expected to generate 10 trips and 21 trips for the A.M. and P.M. peaks, respectively.

4.1. Site Trip Distribution and Assignment

The assumptions for trip distribution rates are based on the turning movement counts (TMC) obtained from Spectrum at a nearby trucking facility. The same distribution was used for the report NexTrans did for 12541 & 12577 Airport Road, and as the subject site is to be developed into a similar truck parking facility as 12541 & 12577 Airport Road, the same distribution was used to obtain similar results. As a result, the site traffic distribution is summarized in **Table 4.3**.

Table 4.3 – Site Traffic Trip Distribution

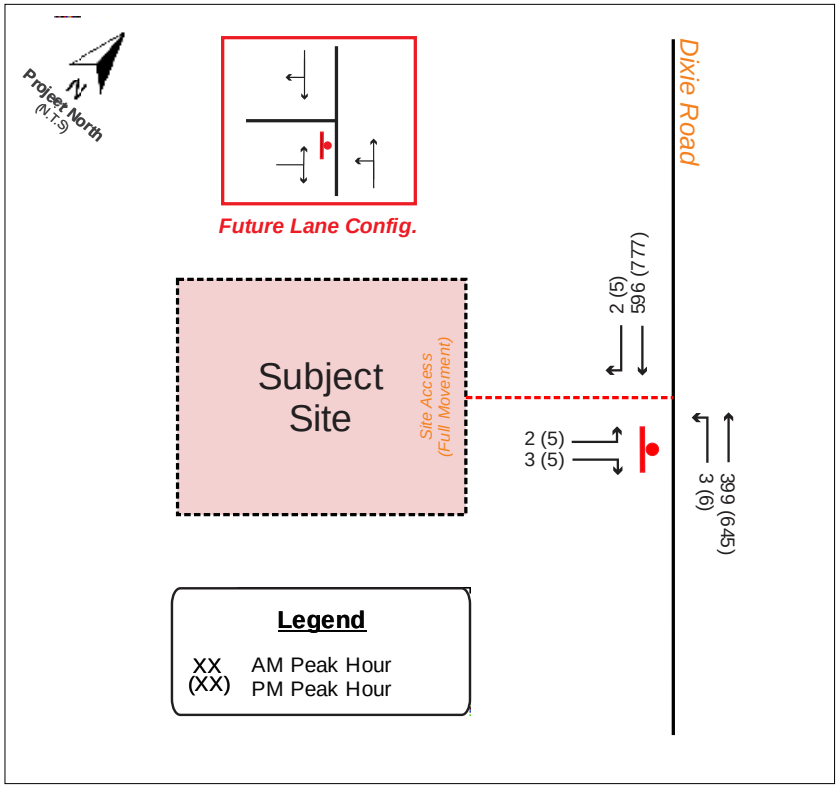
Direction	Via	AM Peak Hour		PM Peak Hour	
		Inbound	Outbound	Inbound	Outbound
North	Dixie Road	50%	50%	43%	43%
South	Dixie Road	50%	50%	57%	57%
Total		**100%**	**100%**	**100%**	**100%**

5.0 FUTURE TOTAL TRAFFIC CONDITIONS

The forecasted future (2025) total traffic volumes (future background traffic volumes plus site generated traffic volumes) are illustrated in **Figure 5-1**, for A.M. and P.M. peak hour, respectively, and were analyzed using Synchro 10 software. Based on communications with the client, all outbound A.M. peak hour traffic, as well as all inbound P.M. peak hour traffic is expected to be heavy vehicles. Therefore, a heavy vehicle percentage of 100% was applied accordingly in the traffic analysis.

The detailed calculations are provided in **Appendix D** and summarized in **Table 5.1**.

Figure 5-1 – Future Total Traffic Volumes



Based on proxy surveys of similar, existing sites, the proposed development is anticipated to generate 10 two-way trips (five (5) inbound and five (5) outbound) and 21 two-way trips (10 inbound and 11 outbound) during A.M. and P.M. peak hours, respectively.

Table 5.1 – Future Total Traffic Assessments

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		LOS (v/c)	Delay (s)	Queue (95th m)	LOS (v/c)	Delay (s)	Queue (95th m)
Site Access and Dixie Road (Unsignalized)	EBLR NBTL	C (0.03) A (0.01)	17.0 0.4	0.8 0.3	C (0.05) A (0.03)	23.3 0.8	1.3 0.7

As summarized in **Table 5.1**, it is shown that during future total traffic conditions, the subject study area intersection as well as the future site access will to operate at excellent levels of services with only minor changes over Future Total Traffic conditions. The study area intersections continue operating at LOS 'C' or better during the peak hour periods. Based on above, it is our opinion that the proposed site entrance in the future will have negligible impact to the future operations of Airport Road and may remain in their current state.

6.0 SITE PLAN REVIEW

6.1. Vehicle Maneuverability Assessment

AutoTURN software was used to generate a vehicular turning template to confirm and demonstrate the accessibility of the proposed study area. As illustrated in **Figure 6-1**, the AutoTURN analysis demonstrates that a truck (WB-19 TAC-2017) can effectively maneuver through the study area.

6.2. Left Turn Storage Lane Warrant

The MTO Geometric Design Manual was consulted to determine whether a left turn storage lane was warranted at the site access, as there are relatively large advancing and opposing volumes. The graph used to determine whether a left turn storage lane was warranted or not is included in **Appendix E** and was selected based on design speed and the percent of left turns in the advancing volume for both A.M. and P.M. peak hours, respectively.

Based on the advancing and opposing volumes for both A.M. and P.M., a left turn lane is warranted. However, as the percent of vehicles making left turns during both A.M. and P.M. peak hours is less than five percent (5%) (i.e. 1.48% and 1.7% for the A.M. and P.M. peaks, respectively), it was determined that a left turn storage lane would not be warranted.

6.3. Sight Line Analysis

For the purpose of sight distance assessment, a design speed of 100 km/hr (unposted speed plus 20 km/hr) under stop control will be utilized. Sight distance requirements will be considered for passenger vehicles approaching the proposed site access. The criteria applied for vehicles approaching the intersection is stopping sight distance refer to TAC Figure 2.3.3.2, attached in **Appendix F,** Under the stopping sight distance assessment, the target height applied is 0.38m for vehicle taillights, and for intersection movements a top of car height of 1.3 m is applied. A driver eye height of 1.05 m is applied for all scenarios. A road grade of -1.14% has been applied from the North approach, and a road grade of 0.92% has been applied from the South approach along Dixie Road.

Required stopping distance, adjusted for effect of grade, is determined using the formula:

$d = V^2 / 254(f +/- G)$ Where:
V = design speed
f = Coefficient of friction (0.31) (TAC 1999, Table 1.2.5.2)

then: Stopping Sight Distance = 0.278tV + d

Where:
t = perception / reaction time = 2.5s (TAC 1999, Table 1.2.5.3)
G = the percent grade divided by 100

Stopping Sight Distance Along Dixie Road

Average G for North approach = -0.0114
Average G for South approach = 0.0092

Minimum sight distance for North approach = [0.278 x 2.5 x 100] + [100^2 / 254 (0.31 + (-0.0114))]
= 201.35 ~ **205 m**
Minimum sight distance for South approach = [0.278 x 2.5 x 100] + [100^2 / 254 (0.31 + 0.0092)]
= 192.84 ~ **195 m**

Actual sight distances approaching the proposed site access via Dixie Road has been determined through on-site visit. The results at the proposed site access via Dixie Road are summarized in **Table 6.1**.

Table 6.1 – Stopping Sight Distance Assessment

Site Entrance	Movement	Stopping Sight Distance		
		Required	Achieved	Difference
North Approach	Left-Turn	205 m	400 m	+195 m
South Approach	Right-Turn	195 m	225 m	+30 m

The stopping sight distances for vehicles coming from both the North and South approaches are adequate, with a surplus distance of 195 m and 30 m, respectively. It is NexTrans' opinion that the existing access provides adequate sight lines.

7.0 CONCLUSION

The development proposal is to develop the 10.7 ha (107,000 m^2) site to include a trucking facility. The site is currently occupied by an existing building and existing residential building with GFA's of approximately 1000 ft^2 (92.9 m^2) and 2500 ft^2 (232.3 m^2), respectively. Vehicular access to the subject site is proposed through one (1) full movement entrance located via Dixie Road.

The findings and conclusions of our analysis are as follows:

- Based on a proxy survey of a similar existing site, the proposed development is anticipated to generate 10 two-way trips (five (5) inbound and five (5) outbound) and 21 two-way trips (10 inbound and 11 outbound) during A.M. and P.M. peak hours, respectively.

- The subject study area intersection as well as the future site access will to operate at excellent levels of services with only minor changes over Future Total Traffic conditions. The study area intersections continue operating at LOS 'C' or better during the peak hour periods.
- AutoTURN software was used to generate vehicular turning template to confirm and demonstrate the accessibility of a truck (WB-19 TAC-2017) through the proposed study area/loading space.
- The MTO Geometric Design Manual was consulted to determine if a left turn storage lane was warranted, however, it was found that no left turn storage was required for this development.
- The TAC Design Guide was consulted to determine required stopping sight distances on Dixie Road for vehicles approaching the subject site. In addition, site surveys were conducted to determine achieved stopping sight distances and the results were compared to the required stopping sight distances. It was determined that the subject site has adequate stopping sight distances along Dixie Road.

The study concludes that the proposed development can adequately be accommodated by the existing transportation network with manageable traffic impact to the adjacent public roadways.

We trust the enclosed sufficiently addresses your needs. Should you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

NEXTRANS CONSULTING ENGINEERS
A Division of NextEng Consulting Group Inc.

Prepared by:

Kristian Aviles, B. Eng
Transportation Analyst

Approved by:

Richard Pernicky, MITE
Principal

Environmental Study
may be required

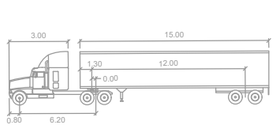
Limit of Greenbelt

POND

POND

Existing Structures

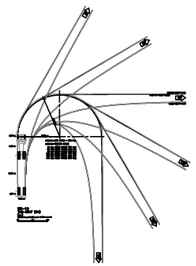
DIXIE ROAD



WB-19

meters

Tractor Width	: 2.60	Lock to Lock Time	: 6.0
Trailer Width	: 2.60	Steering Angle	: 28.9
Tractor Track	: 2.60	Articulating Angle	: 70.0
Trailer Track	: 2.60		



Subject Lands - 10.7 ha

Limit of Greenbelt

CONCEPTUAL TRANSPO
TRUCK / TRAILER PARKI

12434 DIXIE ROAD

Town of Caledon
Regional Municipality of Pe

KEY PLAN

BENCHMARK

REVISONS

NO	REVISION	DATE	BY

STAMP

nextrans
CONSULTING ENGINEERS
520 Industrial Parkway South, Suite 201
Aurora, Ontario L4G 6W8
Tel: 905-505-2563
www.nextrans.ca

PROJECT NAME:
TRANSPORT TRUCK/TRAILER PARKING FACILITY
12434 DIXIE ROAD
(TOWN OF CALEDON)

DRAWING TITLE:
AutoTURN Analysis
(WB-19 TAC-2017)

DESIGN BY: A.S.	DATE: August 20, 2020
CHECKED BY: R.P.	PROJECT NO. NT-20-104
DRAWN BY: A.S.	
SCALE: NTS	DRAWING NO. Figure 6-1

Appendix A – Terms of Reference

520 Industrial Parkway South, Suite 201
Aurora ON L4G 6W8

Phone: 905-503-2563
www.nextrans.ca

nexTrans
CONSULTING ENGINEERS

NextEng Consulting Group Inc.

Terms of Reference

To: Dylan Prowse, Peel Region

From: Kristian Aviles, Transportation Analyst, Nextrans Consulting Engineers

Date: August 4, 2020

Re: 12434 Dixie Road, Transport Truck/ Trailer Parking Facility – TOR for Traffic Brief

---

These terms of reference have been prepared to outline (for the Town's and Region's review and approval) the intended scope of work for a Traffic Brief for a proposed transport truck/ trailer parking facility. The subject site is located along Dixie Road between Old School Road to the north and Spokanne Street to the south, in the Town of Caledon.

Introduction

The report introduction will include:

1. Description of site location (along Dixie Road between Old School Road to the north and Spokanne Street to the south)
2. Description of nature of application
3. Description of proposed development and land use
4. Proposed study area

Existing Traffic Assessment

The existing conditions within the study area will be summarized and documented. This will include, but not limited to:

- A description of key roads and intersections (lanes, speed limits)
- Identifying forms of traffic control, lane configurations, turning restrictions
- Noting the location of adjacent driveways and access points
- Identifying other traffic generators in the vicinity of the site

Historic turning movement counts will be requested from the Town / Region during the weekday AM (7am-9am) and weekday PM (3pm-6pm) peak periods at the following study area intersection:

- Dixie Road and Mayfield Road

Once traffic volumes have been collected, through volumes will be projected north to the site access location.

We understand that existing traffic volumes cannot be obtained due to the COVID-19 Pandemic, as counts do not represent typica conditions. However, would it be acceptable to obtain historic traffic data, and apply the appropriate growth rates to represent current conditions?

Future Background Traffic Assessment

Future Background consists of background growth and other background development traffic. Based on the Peel Region open data from years 1998 to 2017 a growth rate of 5% for NE and 4% for SW directions for the assumed full build-out year for the proposed development along with a 5-year time horizon period thereafter. As such, is it acceptable to use a growth rate of 4%?

We do understand that there is and may be further redevelopment applications, as such traffic generation associated with those developments will be included in our analysis to reflect our horizon year assessment.

Operational deficiencies as a result of future forecasted traffic volumes will be identified and mitigative measures will be proposed and documented in the final report.

Site Traffic Assessment

The weekday AM and PM peak hour traffic to be generated by the proposed development will be estimated based on information published in the *Trip Generation, 10th Edition,* by the Institute of Transportation Engineers (ITE), specifically LUC 030 Intermodal Truck Terminal.

The directional trip distribution and assignment for traffic approaching and departing the site will be determined based upon existing traffic patterns and Transportation Tomorrow Survey (TTS) 2016 data.

Future Total Traffic Assessment

Future total traffic consists of future background plus site traffic. Operational deficiencies as a result of site traffic will be identified and mitigative measures will be proposed and documented in the final report. We will develop and recommend appropriate intersection controls and geometric improvements for all key intersections as well as determine the appropriateness of the proposed site access location(s) and the lane requirements at these new locations.

Parking / On Site Circulation and Site Access Review

- Review the available parking to determine whether the proposed parking supply is sufficient to accommodate the parking demand of the proposed site and meets current by-law requirements.
- We will review and provide comment on the most recent site plan with respect to the functionality of the internal vehicular circulation to facilitate vehicle maneuvering, loading, servicing, parking and pick-up / drop-off activities.
- Using Auto TURN, we will confirm the turning radius requirements and site circulation for passenger and heavy vehicles.
- Determine the appropriateness of access location and ensure adequate connections to main corridors are provided.
- Assign appropriate internal signage to site plan.
- Sight distances in accordance with the TAC Manual to be prepared.

Appendix B – Preliminary Concept Plan

- Subject Lands - 10.7 ha
- Limit of Greenbelt
- Waterbody
- Wetland +30m
- Meanderbelt
- Meanderbelt +30m
- Staked Valleyland 10m Buffer
- Woodland 10m Buffer

Schedule of Land Use

Gravel Parking Area	6.79 ha
Vegetation Groundcover	2.15 ha
Environmental Area	1.76 ha
Total Area	10.70 ha

Scale:

0 20 40 60 80 100m

CONCEPTUAL TRANSPORT TRUCK / TRAILER PARKING LAYOUT

12434 DIXIE ROAD

Town of Caledon
Regional Municipality of Peel

Date	Revision	By
Jan 6 / 21		

Prepared For:

MGP File: 19-2852

Malone Given Parsons.
140 Renfrew Drive, Suite 201 | Markham, ON | L3R 6B3
905 513 0170 | mgp.ca

Appendix C – Existing Traffic Data

Spectrum

Turning Movement Count
Location Name: MAYFIELD RD & CONSERVATION / STONEGATE DRIVE
Date: Thu, Oct 03, 2019 Deployment Lead: Patrick Filopoulos

Turning Movement Count (88 . MAYFIELD RD & CONSERVATION / STONEGATE DRIVE) CustID: 00427526 MioID:

Start Time	Southbound						Westbound						Northbound						Eastbound						Int. Total (15 min)
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	
07:00:00	6	46	73	0	0	125	11	104	7	0	0	122	21	8	6	0	0	35	58	222	52	0	0	332	614
07:15:00	6	60	104	0	0	170	10	105	6	0	0	121	23	14	2	0	0	39	58	259	72	0	0	389	719
07:30:00	2	9	57	0	0	68	10	115	7	0	0	132	31	7	7	0	0	45	68	302	90	0	0	460	705
07:45:00	4	22	56	0	0	82	18	163	3	0	0	184	27	12	11	0	0	50	50	412	94	0	0	556	872
Hourly	18	137	290	0	0	445	49	487	23	0	0	559	102	41	26	0	0	169	234	1195	308	0	0	1737	2910
08:00:00	10	21	39	0	0	70	22	152	2	0	0	176	40	13	11	0	0	64	61	299	108	0	0	468	778
08:15:00	3	19	44	0	0	66	6	119	1	0	0	126	27	17	9	0	0	53	60	265	89	0	0	414	659
08:30:00	3	14	50	0	0	67	6	92	7	0	0	105	46	13	5	0	0	64	47	266	65	0	0	378	614
08:45:00	3	22	40	0	1	65	7	113	5	0	0	125	32	17	3	0	1	52	57	234	76	0	1	367	609
Hourly	19	76	173	0	1	268	41	476	15	0	0	532	145	60	28	0	1	233	225	1064	338	0	1	1627	2660
BREAK																									
11:00:00	4	14	59	0	0	77	8	112	2	0	0	122	14	9	6	0	0	29	37	131	26	1	0	195	423
11:15:00	4	17	48	0	0	69	5	152	7	0	0	164	16	9	5	0	0	30	47	144	26	0	0	217	480
11:30:00	6	15	39	0	0	60	2	95	4	0	0	101	29	16	11	0	0	56	46	140	26	0	0	212	429
11:45:00	5	13	47	0	1	65	8	109	4	0	0	121	24	10	9	0	0	43	27	137	34	0	0	198	427
Hourly	19	59	193	0	1	271	23	468	17	0	0	508	83	44	31	0	0	158	157	552	112	1	0	822	1759
12:00:00	3	18	52	0	0	73	8	130	3	0	0	141	21	16	9	0	0	46	41	149	30	0	0	220	480
12:15:00	3	25	73	0	1	101	13	128	2	0	0	143	31	6	6	0	1	43	46	158	26	0	0	230	517
12:30:00	5	12	47	0	0	64	2	128	4	0	0	134	27	15	10	0	0	52	56	148	23	0	0	227	477
12:45:00	3	13	53	0	0	69	8	117	5	0	0	130	10	14	7	0	0	31	45	156	26	0	0	227	457
Hourly	14	68	225	0	1	307	31	503	14	0	0	548	89	51	32	0	1	172	188	611	105	0	0	904	1931
13:00:00	8	23	63	0	0	94	2	107	1	0	0	110	18	11	8	0	0	37	56	151	29	0	0	236	477
13:15:00	7	24	68	0	0	99	7	125	2	0	0	134	22	12	4	0	0	38	46	156	42	0	0	244	515
13:30:00	8	16	69	0	0	93	3	126	3	0	0	132	20	13	7	0	0	40	55	159	32	1	0	247	512
13:45:00	6	19	69	0	0	94	4	132	7	0	0	143	17	13	9	0	0	39	50	166	32	0	1	248	524
Hourly	29	82	269	0	0	380	16	490	13	0	0	519	77	49	28	0	0	154	207	632	135	1	1	975	2028
BREAK																									
15:00:00	6	17	70	0	0	93	9	219	6	0	0	234	49	22	11	0	0	82	67	152	51	0	0	270	679
15:15:00	0	9	54	0	0	63	15	182	3	0	0	200	54	39	11	0	1	104	83	234	37	0	0	354	721
15:30:00	3	19	75	0	0	97	0	190	2	0	0	192	82	45	11	0	0	138	67	179	50	0	0	296	723
15:45:00	4	18	58	0	0	80	11	214	2	0	0	227	52	33	3	0	0	88	74	193	49	0	0	316	711
Hourly	13	63	257	0	0	333	35	805	13	0	0	853	237	139	36	0	1	412	291	758	187	0	0	1236	2834
16:00:00	6	46	66	0	0	118	10	171	6	0	0	187	70	59	10	0	0	139	79	209	57	0	0	345	789
16:15:00	6	60	88	0	0	154	10	270	5	0	0	285	69	38	11	0	0	118	58	234	48	0	0	340	897
16:30:00	6	73	78	0	0	157	18	233	4	0	0	255	80	57	8	0	0	145	70	212	49	1	0	332	889
16:45:00	12	76	63	0	0	151	7	267	5	0	0	279	66	30	7	0	0	103	70	228	44	0	0	342	875
Hourly	30	255	295	0	0	580	45	941	20	0	0	1006	285	184	36	0	0	505	277	883	198	1	0	1359	3450
17:00:00	12	60	64	0	0	136	8	226	6	0	0	240	74	45	7	0	0	126	64	208	45	0	0	317	819
17:15:00	12	41	56	0	0	109	8	262	7	0	0	277	55	27	19	0	0	101	73	197	42	0	0	312	799
17:30:00	2	57	41	0	0	100	9	222	4	0	0	235	75	38	6	0	0	119	68	185	53	1	0	307	761
17:45:00	3	30	47	0	0	80	12	238	7	0	0	257	50	34	12	0	0	96	63	201	50	1	0	315	748
Hourly	29	188	208	0	0	425	37	948	24	0	0	1009	254	144	44	0	0	442	268	791	190	2	0	1251	3127
Grand Total	171	928	1910	0	3	3009	277	5118	139	0	0	5534	1272	712	261	0	3	2245	1847	6486	1573	5	2	9911	**20699**
Approach%	5.7%	30.8%	63.5%	0%		-	5%	92.5%	2.5%	0%		-	56.7%	31.7%	11.6%	0%		-	18.6%	65.4%	15.9%	0.1%		-	**-**
Totals %	0.8%	4.5%	9.2%	0%		14.5%	1.3%	24.7%	0.7%	0%		26.7%	6.1%	3.4%	1.3%	0%		10.8%	8.9%	31.3%	7.6%	0%		47.9%	**-**

Spectrum

Turning Movement Count
Location Name: MAYFIELD RD & CONSERVATION / STONEGATE DRIVE
Date: Thu, Oct 03, 2019 Deployment Lead: Patrick Filopoulos

Heavy	20	70	154	0	-	34	672	25	0	-	35	30	22	0	-	190	787	46	0	-	-
Heavy %	11.7%	7.5%	8.1%	0%	-	12.3%	13.1%	18%	0%	-	2.8%	4.2%	8.4%	0%	-	10.3%	12.1%	2.9%	0%	-	-
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Spectrum

Turning Movement Count
Location Name: MAYFIELD RD & CONSERVATION / STONEGATE DRIVE
Date: Thu, Oct 03, 2019 Deployment Lead: Patrick Filopoulos

Peak Hour: 07:00 AM - 08:00 AM Weather: Moderate Rain (9.08 °C)

Start Time	Southbound						Westbound						Northbound						Eastbound						Int. Total (15 min)
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	
07:00:00	6	46	73	0	0	125	11	104	7	0	0	122	21	8	6	0	0	35	58	222	52	0	0	332	614
07:15:00	6	60	104	0	0	170	10	105	6	0	0	121	23	14	2	0	0	39	58	259	72	0	0	389	719
07:30:00	2	9	57	0	0	68	10	115	7	0	0	132	31	7	7	0	0	45	68	302	90	0	0	460	705
07:45:00	4	22	56	0	0	82	18	163	3	0	0	184	27	12	11	0	0	50	50	412	94	0	0	556	872
Grand Total	18	137	290	0	0	445	49	487	23	0	0	559	102	41	26	0	0	169	234	1195	308	0	0	1737	**2910**
Approach%	4%	30.8%	65.2%	0%		-	8.8%	87.1%	4.1%	0%		-	60.4%	24.3%	15.4%	0%		-	13.5%	68.8%	17.7%	0%		-	-
Totals %	0.6%	4.7%	10%	0%		15.3%	1.7%	16.7%	0.8%	0%		19.2%	3.5%	1.4%	0.9%	0%		5.8%	8%	41.1%	10.6%	0%		59.7%	-
PHF	0.75	0.57	0.7	0		0.65	0.68	0.75	0.82	0		0.76	0.82	0.73	0.59	0		0.85	0.86	0.73	0.82	0		0.78	-
Heavy	2	9	26	0		37	6	93	7	0		106	4	5	2	0		11	28	82	11	0		121	-
Heavy %	11.1%	6.6%	9%	0%		8.3%	12.2%	19.1%	30.4%	0%		19%	3.9%	12.2%	7.7%	0%		6.5%	12%	6.9%	3.6%	0%		7%	-
Lights	16	128	264	0		408	43	394	16	0		453	98	36	24	0		158	206	1113	297	0		1616	-
Lights %	88.9%	93.4%	91%	0%		91.7%	87.8%	80.9%	69.6%	0%		81%	96.1%	87.8%	92.3%	0%		93.5%	88%	93.1%	96.4%	0%		93%	-
Single-Unit Trucks	2	5	20	0		27	0	43	2	0		45	3	3	0	0		6	20	23	5	0		48	-
Single-Unit Trucks %	11.1%	3.6%	6.9%	0%		6.1%	0%	8.8%	8.7%	0%		8.1%	2.9%	7.3%	0%	0%		3.6%	8.5%	1.9%	1.6%	0%		2.8%	-
Buses	0	2	2	0		4	5	20	4	0		29	1	2	2	0		5	2	29	4	0		35	-
Buses %	0%	1.5%	0.7%	0%		0.9%	10.2%	4.1%	17.4%	0%		5.2%	1%	4.9%	7.7%	0%		3%	0.9%	2.4%	1.3%	0%		2%	-
Articulated Trucks	0	2	4	0		6	1	30	1	0		32	0	0	0	0		0	6	30	2	0		38	-
Articulated Trucks %	0%	1.5%	1.4%	0%		1.3%	2%	6.2%	4.3%	0%		5.7%	0%	0%	0%	0%		0%	2.6%	2.5%	0.6%	0%		2.2%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-

Spectrum

Turning Movement Count
Location Name: MAYFIELD RD & CONSERVATION / STONEGATE DRIVE
Date: Thu, Oct 03, 2019 Deployment Lead: Patrick Filopoulos

Peak Hour: 01:00 PM - 02:00 PM Weather: Light Rain (9.06 °C)

Start Time	Southbound						Westbound						Northbound						Eastbound						Int. Total (15 min)
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	
13:00:00	8	23	63	0	0	94	2	107	1	0	0	110	18	11	8	0	0	37	56	151	29	0	0	236	477
13:15:00	7	24	68	0	0	99	7	125	2	0	0	134	22	12	4	0	0	38	46	156	42	0	0	244	515
13:30:00	8	16	69	0	0	93	3	126	3	0	0	132	20	13	7	0	0	40	55	159	32	1	0	247	512
13:45:00	6	19	69	0	0	94	4	132	7	0	0	143	17	13	9	0	0	39	50	166	32	0	1	248	524
Grand Total	29	82	269	0	0	380	16	490	13	0	0	519	77	49	28	0	0	154	207	632	135	1	1	975	**2028**
Approach%	7.6%	21.6%	70.8%	0%		-	3.1%	94.4%	2.5%	0%		-	50%	31.8%	18.2%	0%		-	21.2%	64.8%	13.8%	0.1%		-	**-**
Totals %	1.4%	4%	13.3%	0%		18.7%	0.8%	24.2%	0.6%	0%		25.6%	3.8%	2.4%	1.4%	0%		7.6%	10.2%	31.2%	6.7%	0%		48.1%	**-**
PHF	0.91	0.85	0.97	0		0.96	0.57	0.93	0.46	0		0.91	0.88	0.94	0.78	0		0.96	0.92	0.95	0.8	0.25		0.98	**-**
Heavy	5	6	24	0		35	3	103	2	0		108	1	4	7	0		12	31	120	5	0		156	**-**
Heavy %	17.2%	7.3%	8.9%	0%		9.2%	18.8%	21%	15.4%	0%		20.8%	1.3%	8.2%	25%	0%		7.8%	15%	19%	3.7%	0%		16%	**-**
Lights	24	76	245	0		345	13	387	11	0		411	76	45	21	0		142	176	512	130	1		819	**-**
Lights %	82.8%	92.7%	91.1%	0%		90.8%	81.3%	79%	84.6%	0%		79.2%	98.7%	91.8%	75%	0%		92.2%	85%	81%	96.3%	100%		84%	**-**
Single-Unit Trucks	4	4	21	0		29	2	59	0	0		61	1	3	5	0		9	21	54	3	0		78	**-**
Single-Unit Trucks %	13.8%	4.9%	7.8%	0%		7.6%	12.5%	12%	0%	0%		11.8%	1.3%	6.1%	17.9%	0%		5.8%	10.1%	8.5%	2.2%	0%		8%	**-**
Buses	1	2	3	0		6	1	14	1	0		16	0	1	0	0		1	0	4	2	0		6	**-**
Buses %	3.4%	2.4%	1.1%	0%		1.6%	6.3%	2.9%	7.7%	0%		3.1%	0%	2%	0%	0%		0.6%	0%	0.6%	1.5%	0%		0.6%	**-**
Articulated Trucks	0	0	0	0		0	0	30	1	0		31	0	0	2	0		2	10	62	0	0		72	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	6.1%	7.7%	0%		6%	0%	0%	7.1%	0%		1.3%	4.8%	9.8%	0%	0%		7.4%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	100%		**-**

Spectrum

Turning Movement Count
Location Name: MAYFIELD RD & CONSERVATION / STONEGATE DRIVE
Date: Thu, Oct 03, 2019 Deployment Lead: Patrick Filopoulos

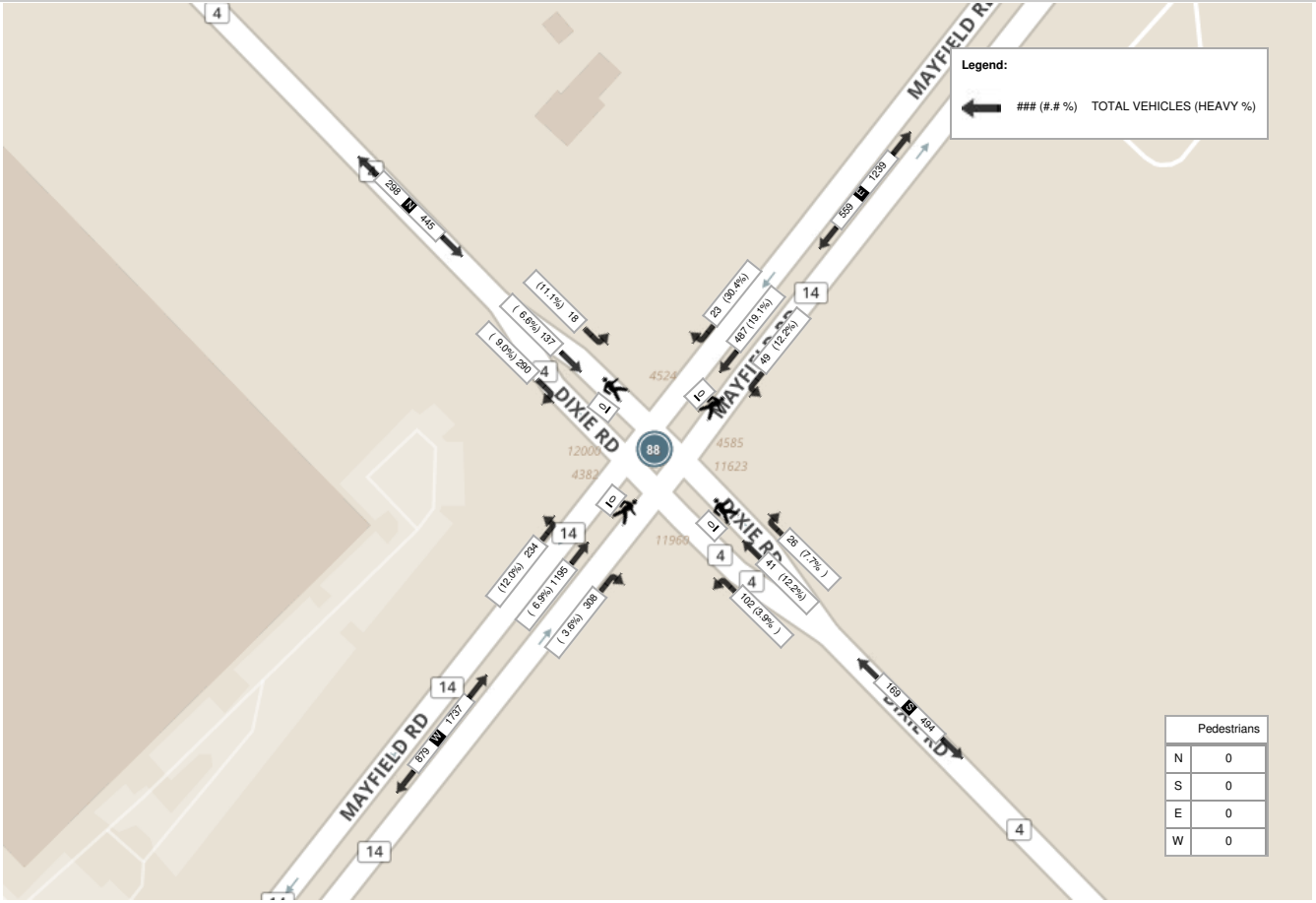
Peak Hour: 04:00 PM - 05:00 PM Weather: Light Rain (10.54 °C)

Start Time	Southbound						Westbound						Northbound						Eastbound						Int. Total (15 min)
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	
16:00:00	6	46	66	0	0	118	10	171	6	0	0	187	70	59	10	0	0	139	79	209	57	0	0	345	789
16:15:00	6	60	88	0	0	154	10	270	5	0	0	285	69	38	11	0	0	118	58	234	48	0	0	340	897
16:30:00	6	73	78	0	0	157	18	233	4	0	0	255	80	57	8	0	0	145	70	212	49	1	0	332	889
16:45:00	12	76	63	0	0	151	7	267	5	0	0	279	66	30	7	0	0	103	70	228	44	0	0	342	875
Grand Total	30	255	295	0	0	580	45	941	20	0	0	1006	285	184	36	0	0	505	277	883	198	1	0	1359	**3450**
Approach%	5.2%	44%	50.9%	0%		-	4.5%	93.5%	2%	0%		-	56.4%	36.4%	7.1%	0%		-	20.4%	65%	14.6%	0.1%		-	**-**
Totals %	0.9%	7.4%	8.6%	0%		16.8%	1.3%	27.3%	0.6%	0%		29.2%	8.3%	5.3%	1%	0%		14.6%	8%	25.6%	5.7%	0%		39.4%	**-**
PHF	0.63	0.84	0.84	0		0.92	0.63	0.87	0.83	0		0.88	0.89	0.78	0.82	0		0.87	0.88	0.94	0.87	0.25		0.98	**-**
Heavy	3	12	10	0		25	14	64	1	0		79	7	1	1	0		9	12	105	4	0		121	**-**
Heavy %	10%	4.7%	3.4%	0%		4.3%	31.1%	6.8%	5%	0%		7.9%	2.5%	0.5%	2.8%	0%		1.8%	4.3%	11.9%	2%	0%		8.9%	**-**
Lights	27	243	285	0		555	31	877	19	0		927	278	183	35	0		496	265	778	194	1		1238	**-**
Lights %	90%	95.3%	96.6%	0%		95.7%	68.9%	93.2%	95%	0%		92.1%	97.5%	99.5%	97.2%	0%		98.2%	95.7%	88.1%	98%	100%		91.1%	**-**
Single-Unit Trucks	2	8	10	0		20	12	30	0	0		42	2	0	0	0		2	10	29	0	0		39	**-**
Single-Unit Trucks %	6.7%	3.1%	3.4%	0%		3.4%	26.7%	3.2%	0%	0%		4.2%	0.7%	0%	0%	0%		0.4%	3.6%	3.3%	0%	0%		2.9%	**-**
Buses	1	3	0	0		4	0	8	1	0		9	4	1	1	0		6	0	21	4	0		25	**-**
Buses %	3.3%	1.2%	0%	0%		0.7%	0%	0.9%	5%	0%		0.9%	1.4%	0.5%	2.8%	0%		1.2%	0%	2.4%	2%	0%		1.8%	**-**
Articulated Trucks	0	1	0	0		1	2	26	0	0		28	1	0	0	0		1	2	55	0	0		57	**-**
Articulated Trucks %	0%	0.4%	0%	0%		0.2%	4.4%	2.8%	0%	0%		2.8%	0.4%	0%	0%	0%		0.2%	0.7%	6.2%	0%	0%		4.2%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

Turning Movement Count
Location Name: MAYFIELD RD & CONSERVATION / STONEGATE DRIVE
Date: Thu, Oct 03, 2019 Deployment Lead: Patrick Filopoulos

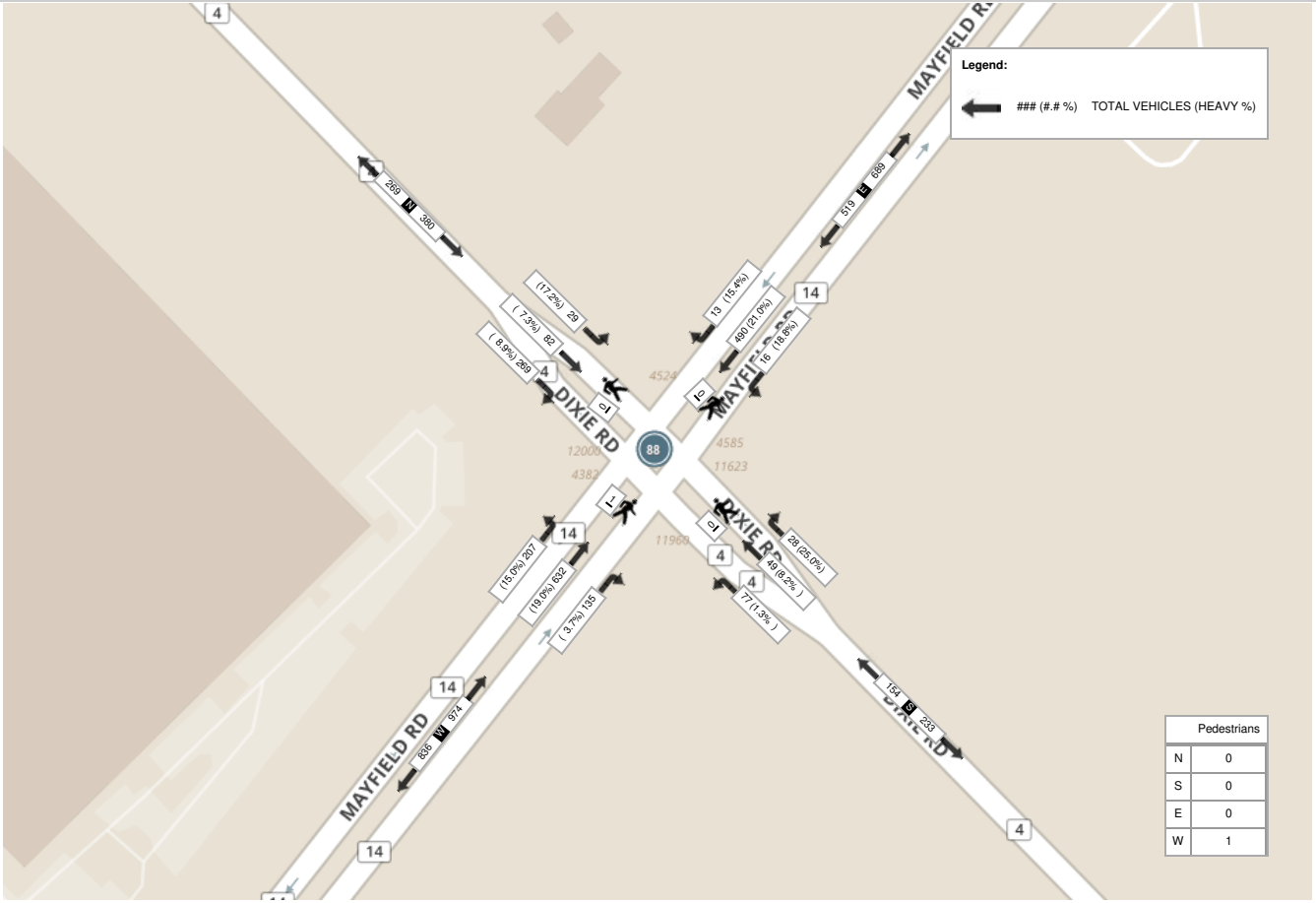
Peak Hour: 07:00 AM - 08:00 AM **Weather: Moderate Rain (9.08 °C)**



Spectrum

Turning Movement Count
Location Name: MAYFIELD RD & CONSERVATION / STONEGATE DRIVE
Date: Thu, Oct 03, 2019 Deployment Lead: Patrick Filopoulos

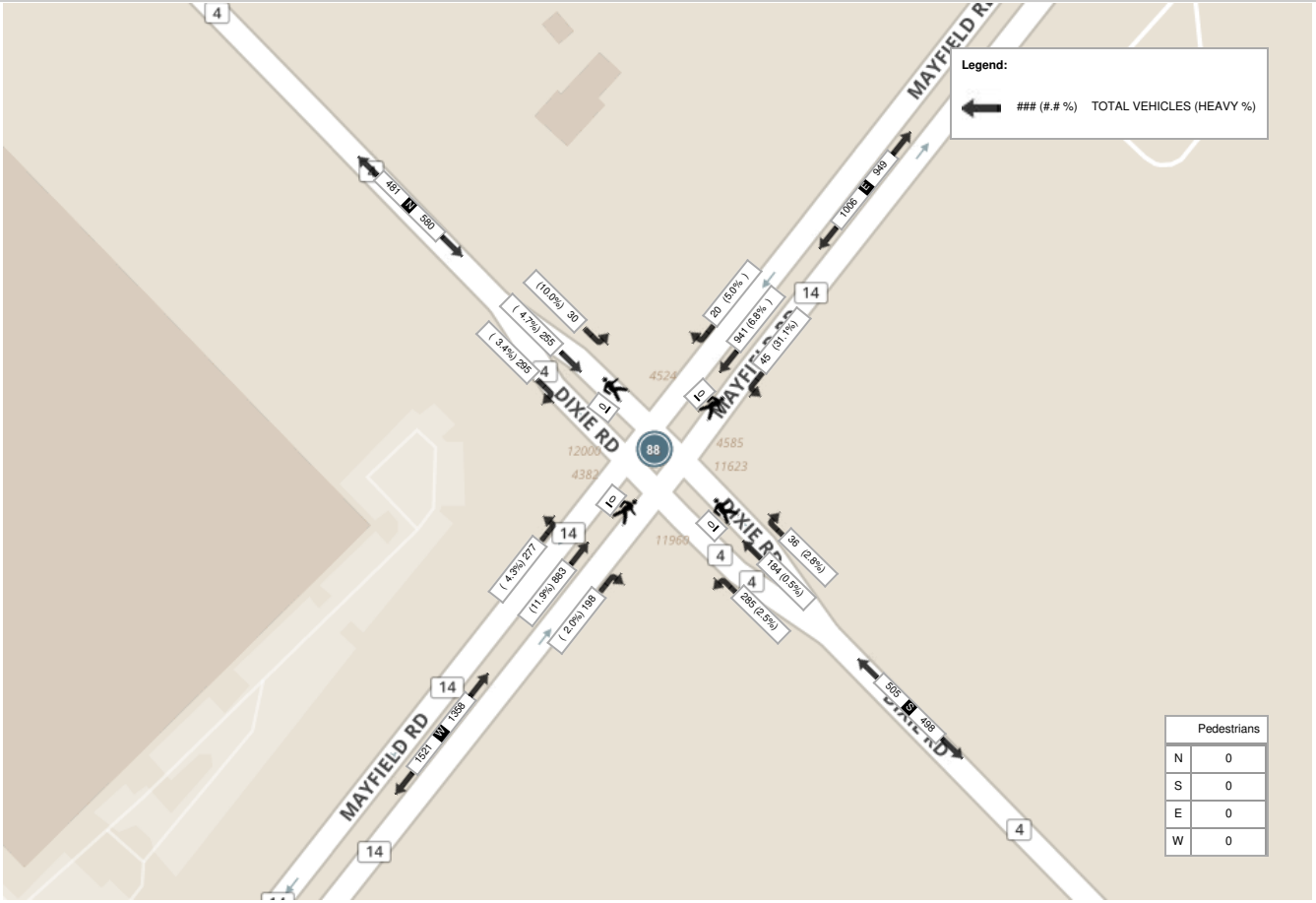
Peak Hour: 01:00 PM - 02:00 PM **Weather: Light Rain (9.06 °C)**



Spectrum

Turning Movement Count
Location Name: MAYFIELD RD & CONSERVATION / STONEGATE DRIVE
Date: Thu, Oct 03, 2019 Deployment Lead: Patrick Filopoulos

Peak Hour: 04:00 PM - 05:00 PM **Weather: Light Rain (10.54 °C)**



Appendix D – Future Total Traffic Assessment

HCM Unsignalized Intersection Capacity Analysis
3: Dixie Road & Site Access

08/24/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	5	11	399	596	10
Future Volume (Veh/h)	5	5	11	399	596	10
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)	5	5	12	434	648	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	1112	654	659			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1112	654	659			
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	99	99			
cM capacity (veh/h)	230	471	939			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	10	446	659
Volume Left	5	12	0
Volume Right	5	0	11
cSH	309	939	1700
Volume to Capacity	0.03	0.01	0.39
Queue Length 95th (m)	0.8	0.3	0.0
Control Delay (s)	17.0	0.4	0.0
Lane LOS	C	A	
Approach Delay (s)	17.0	0.4	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
3: Dixie Road & Site Access

08/24/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	6	12	645	777	10
Future Volume (Veh/h)	4	6	12	645	777	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	7	13	701	845	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	1578	850	856			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1578	850	856			
tC, single (s)	6.4	6.2	5.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	3.1			
p0 queue free %	97	98	97			
cM capacity (veh/h)	119	363	488			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	11	714	856
Volume Left	4	13	0
Volume Right	7	0	11
cSH	207	488	1700
Volume to Capacity	0.05	0.03	0.50
Queue Length 95th (m)	1.3	0.7	0.0
Control Delay (s)	23.3	0.8	0.0
Lane LOS	C	A	
Approach Delay (s)	23.3	0.8	0.0
Approach LOS	C		

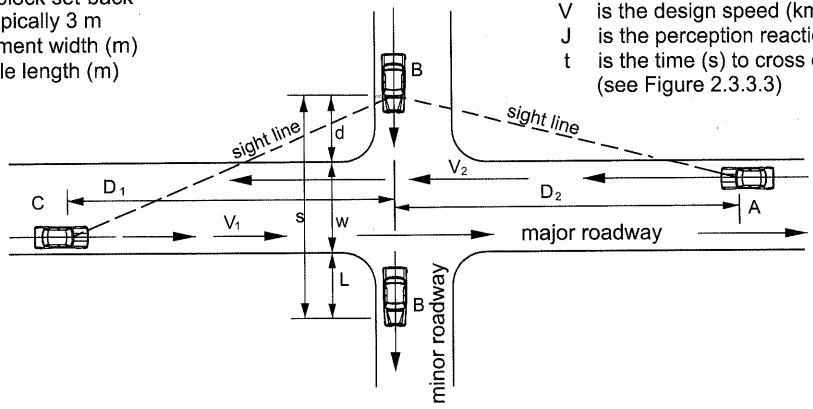
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix E – Left Turn Storage Lane Warrant

Figure 2.3.3.2 Departure Sight Triangles

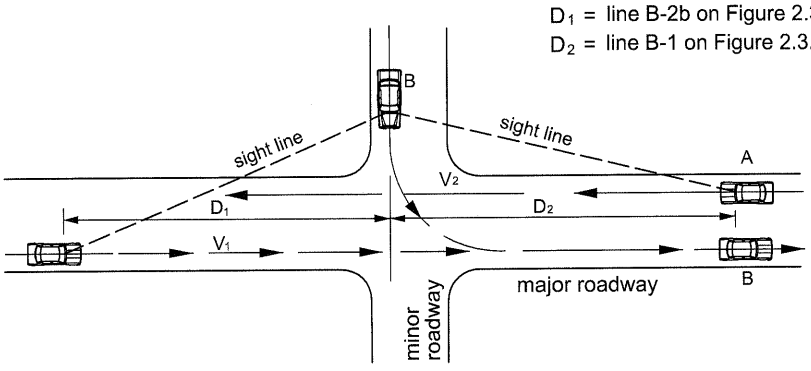
s = d+w+L (Equation 2.3.2)
s is the distance travelled to cross the major roadway (m)
d is the stop block set-back distance, typically 3 m
w is the pavement width (m)
L is the vehicle length (m)

$D_1, D_2 = \frac{V(J+t)}{3.6}$ (Equation 2.3.1)
D_1, D_2 = line A on Figure 2.3.3.4 required (m)
V is the design speed (km/h)
J is the perception reaction time, 2 s
t is the time (s) to cross distances 's' (m) (see Figure 2.3.3.3)



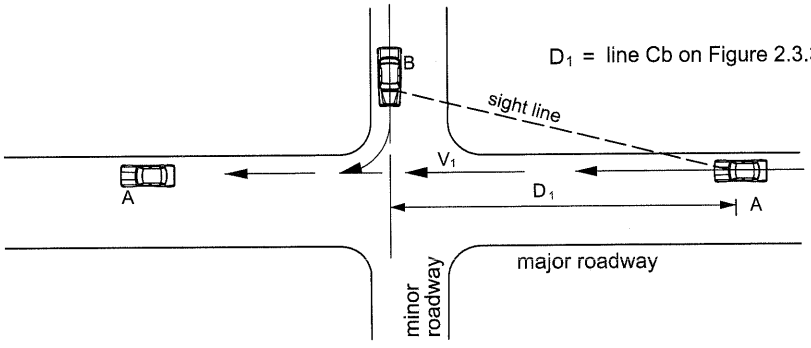
a. crossing

D_1 = line B-2b on Figure 2.3.3.4
D_2 = line B-1 on Figure 2.3.3.4



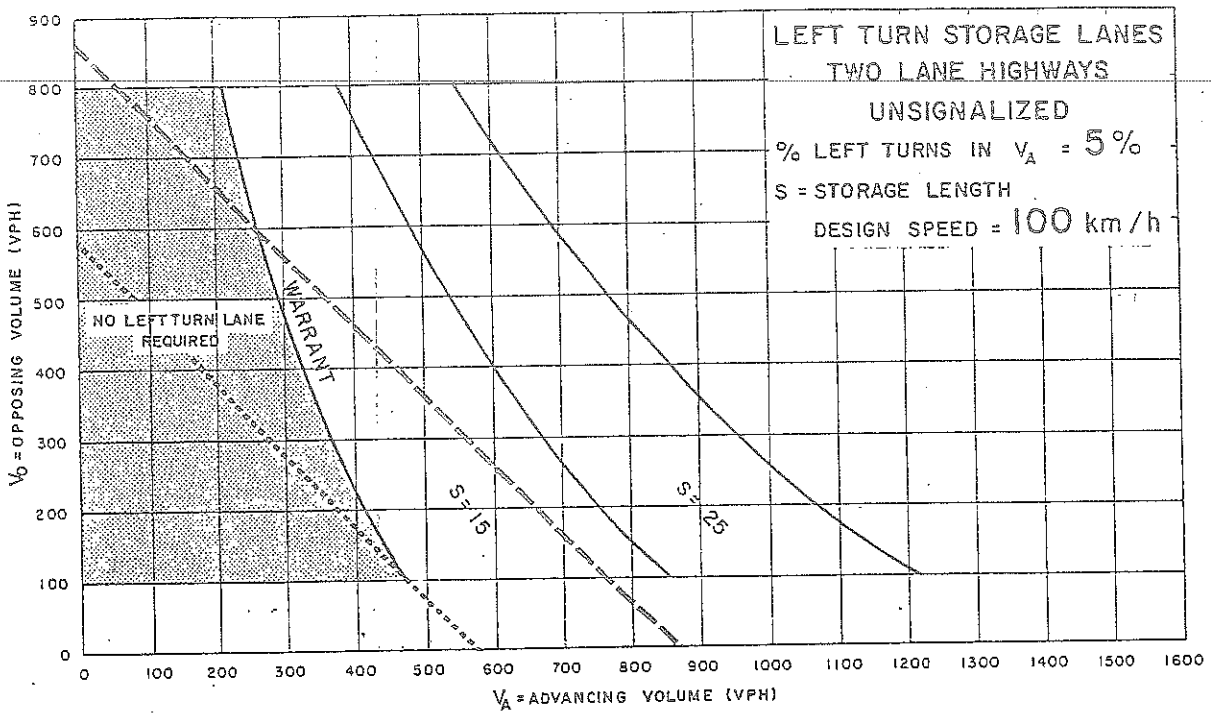
b. left-turn

D_1 = line Cb on Figure 2.3.3.4



c. right-turn

Appendix F – TAC Figure 2.3.3.2



TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW

TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS

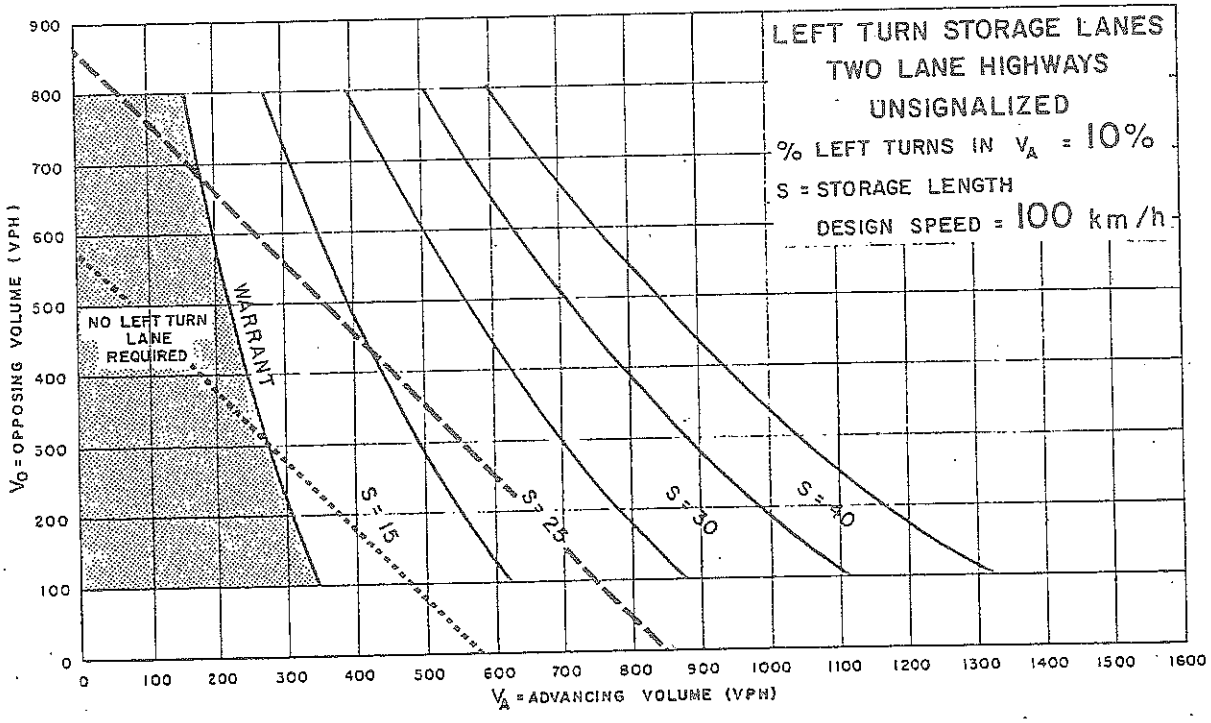


Figure EA-22

APPENDIX 3

Future Total Traffic Operations – Synchro Output

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	388	3	0	744
Future Vol, veh/h	1	0	388	3	0	744
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	422	3	0	809

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1232	423	0	0	425	0
Stage 1	423	-	-	-	-	-
Stage 2	809	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	196	631	-	-	1134	-
Stage 1	661	-	-	-	-	-
Stage 2	438	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	196	631	-	-	1134	-
Mov Cap-2 Maneuver	196	-	-	-	-	-
Stage 1	661	-	-	-	-	-
Stage 2	438	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	23.51	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	196	1134	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Ctrl Dly (s/v)	-	-	23.5	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	0	634	4	0	777
Future Vol, veh/h	6	0	634	4	0	777
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	0	689	4	0	845

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1536	691	0	0	693	0
Stage 1	691	-	-	-	-	-
Stage 2	845	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	128	444	-	-	902	-
Stage 1	497	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	128	444	-	-	902	-
Mov Cap-2 Maneuver	128	-	-	-	-	-
Stage 1	497	-	-	-	-	-
Stage 2	421	-	-	-	-	-

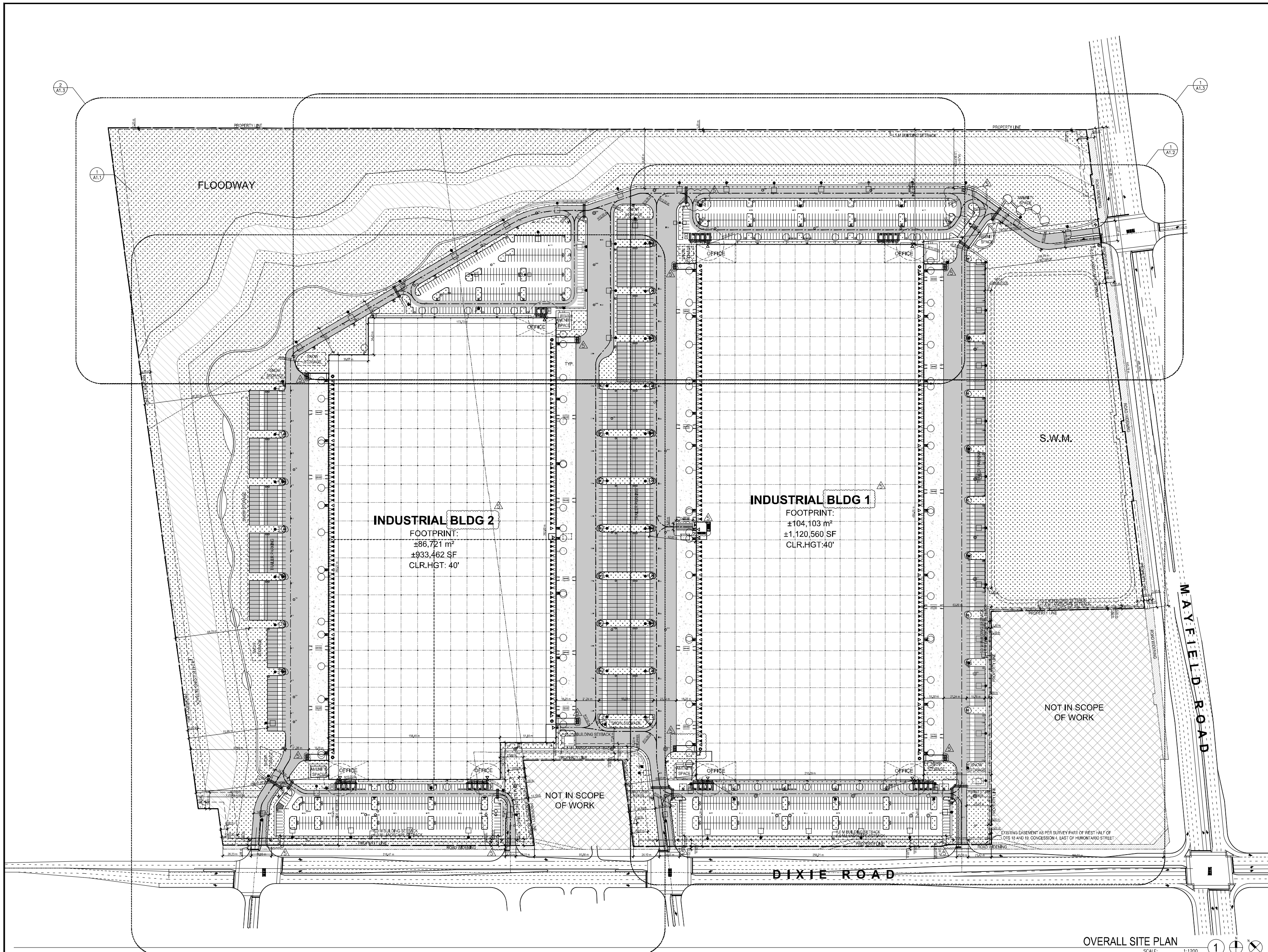
Approach	WB	NB	SB
HCM Ctrl Dly, s/v	34.69	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	128	902	-
HCM Lane V/C Ratio	-	-	0.051	-	-
HCM Ctrl Dly (s/v)	-	-	34.7	0	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

APPENDIX 4

Full Site Plan for the Warehouse just East of the Subject Site

CAUTION: IF THIS SHEET IS NOT 36"x48" IT IS A REDUCED PRINT



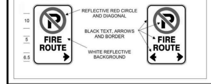
OVERALL SITE PLAN
SCALE: 1:1200
1

SITE STATISTICS		
Zoning Category	MP ZONE	
Zone	Prestige Industrial Zone	
Ontario Regulation 157/22 & MP-522 (By-law2012-095)		
Building Classification	Group F2 (O.B.C. A- 3.1.2.1.(1))	
GROSS SITE AREA	5,972,102 SF	554,826.43m²
S.W.M. (m²)	388,236 SF	36,068.28m²
NET SITE AREA	5,583,866 SF	518,758.14m²
GROSS FLOOR AREA:		
BUILDING 2	**933,694 SF**	**86,743.04 m²**
Warehouse Area	*887,010 SF*	*82,405.89 m²*
Office Area (Max.)	*5.00%*	*4,337.15 m²*
BUILDING 1	**1,120,600 SF**	**104,107.15 m²**
Warehouse Area	*1,064,570 SF*	*98,901.79 m²*
Office Area (Max.)	*5.00%*	*5,205.36 m²*
TOTAL G.F.A.	**2,054,294 SF**	**190,850.19 m²**
NET FLOOR AREA:		
BUILDING 2	**931,601 SF**	**86,548.57 m²**
Floor Area	*933,694 SF*	*86,743.04 m²*
Building Area under services, M&E rooms etc.	*2,093 SF*	*194.47 m²*
BUILDING 1	**1,119,228 SF**	**103,979.65 m²**
Floor Area	*1,120,600 SF*	*104,107.15 m²*
Building Area under services, M&E rooms etc.	*1,372 SF*	*127.50 m²*
TOTAL NET FLOOR AREA	**2,050,829 SF**	**190,528.22 m²**
Requirements	**Proposed**	**Required**
Min. Lot Area	55.48 ha	0.80 ha
Net Floor Area	190,528.22m²	-
Gross Floor Area	190,850.19m²	-
Building Area	34.40%	60.00%
Min. Lot Frontage (m)	445.78	30.00
Min. Front Yard Building Setback (Mayfield Rd) (m)	162.57	-
Min. Ext. Side Yard Building Set back (Dixie Rd) (m)	60.64	6.00
Min. Ext. Side Yard Building Set back (m) - Abutting Residential	15.98	15.00
Min. Int. Side Yard Building Set back (East) (m)	105.88	1.50
Min. Rear Yard Building Setback (North) (m)	122.89	6.00
Maximum Building Height (m) - BUILDING 2	16.01	20.00
Maximum Building Height (m) - BUILDING 1	14.50	20.00
Min. Landscape Area (% of Lot Area)	37.16%	10.00%
Min. Landscape Area	*206,199.54m²*	*55,482.64m²*
Min. Front Landscape Buffer (Mayfield Rd) (m)	108.79	6.00
Min. Ext. Side Landscape Buffer (Dixie Rd) (m)	7.90	6.00
Min. Int. Side Landscape Buffer (m) - Abutting Residential	12.32	6.00
Min. Int. Side Landscape Buffer (m) - Abutting SWM	5.67	3.00
Min. Int. Side Landscape Buffer (East) (m)	54.16	1.50
Min. Landscape Buffer (m) - Abutting EPA > 6m width	26.23	-
Parking Calculations	**Proposed**	**Required**
BUILDING 2		
@1/230 m² of Gross Floor Area (As per O. Reg. 157/22)	563	377
BUILDING 1		
@1/230 m² of Gross Floor Area (As per O. Reg. 157/22)	686	453
Total no. of Parking Spaces	**1249**	**830**
(Including Accessible Parking Spaces)		
Accessible Parking Spaces	*26*	*19*
@201 to 1000 parking spaces is 2 plus 2% of total spaces		
@More than 1000 parking spaces is 11 plus 1% of total spaces		
EV Parking Spaces	*18*	-
Parking Stall Dimensions	*STANDARD: 2.75m X 6.0m w/ 6.0m Aisle* *ACCESSIBLE: TYPE A - 3.4m X 5.4m* *TYPE B - 2.75m X 5.4m* *w/ 1.5m access aisle on either side*	
Proposed Trailer Parking	**Proposed**	**Required**
BUILDING 2	194	-
BUILDING 1	320	-
Total no. of Trailer Parking Spaces	**514**	-
Loading Space Calculations	**Proposed**	**Required**
BUILDING 2	152	12
BUILDING 1	191	14
@3 + 1 per 9300 m² in excess of 7441 m² of Net Floor Area		
Total no. of Loading Spaces	**343**	**26**
Min. Loading Space Dimensions	*3.5m(W) X 14.0m(L) X 3.35m(H)*	

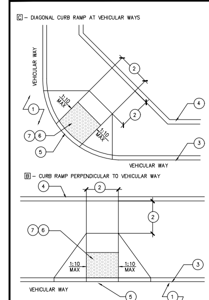
SCHEDULE "M" TO BY-LAW BL-2015-058
FIRE ROUTE REQUIREMENTS

7. Signs shall be erected on a sign post anchored securely to the ground or a platform capable of holding the sign erect during all weather conditions. The maximum height of signs shall be no greater than 3 metres and the minimum height of signs shall be no less than 2 metres above the wearing surface of the fire route. The height measurement referred to in this section shall be taken to the top of the sign for both the minimum and maximum heights.

8. Signs shall be erected on the boulevard of a designated fire route so that no part of the sign is closer than 60 cm nor greater than 3 metres to the edge of the fire route.



FIRE ROUTE SIGN
SCALE: N.T.S.
A



1 STREET PAVEMENT
2 ACCESSIBLE ROUTE OF PEDSTRIAN TRAVEL 1219mm MIN (UNLESS OTHERWISE NOTED ON PLANS)
3 TOP OF CURB
4 WALL, FENCE, LANDSCAPING OR OTHER OBSTRUCTION
5 152mm CURB FACE
6 TRUNCATED DOMES PER
7 DETECTABLE WARNINGS AT CURB RAMPS SHALL EXTEND 914 MM IN THE DIRECTION OF TRAVEL DETECTABLE SHALL EXTEND THE FULL WIDTH OF THE RAMP RUN EXCLUDING ANY FLARED SIDES
8 A MINIMUM 914 MM WIDE SECTION OF TRUNCATED DOMES SHALL BE PROVIDED WHEN FLAT TRAVEL SURFACE ADJOINS A VEHICULAR WAY (152 MM CURB FACE)

NOTES:
A. DETECTABLE WARNING SURFACES, AT THE OPTION OF THE CONTRACTOR, SHALL BE CONSTRUCTED BY CAST-IN PLACE OR STAMPED METHOD, OR CONSIST OF A PREFABRICATED SURFACE. THE PREFABRICATED SURFACE (NO RUBBERS MATS ALLOWED) SHALL BE EITHER TACTILE TILES, BY CARSONITE INTERNATIONAL CORPORATION OR DETECTABLE WARNING MATS, BY DETECTABLE WARNING SYSTEM, OR APPROVED EQUAL
B. MINIMUM RAMP THICKNESS SHALL BE 101.6 MM P.C.C. OVER 101.6 MM CLASS II AB OVER 152.4 MM OF SUBGRADE. ALL AB AND/OR SUBGRADE SHALL BE PROCESSED TO 95% RELATIVE COMPACTION

ACCESSIBLE
CURB RAMP DETAIL
SCALE: N.T.S.
B

GENERAL NOTES

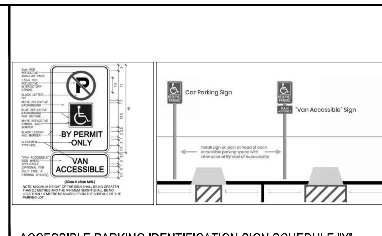
1 PROPERTY LINE
2 2750x6000 PARKING STALL, PAINTED PARKING STRIPPING PER CITY STANDARDS.
3 PRINCIPLE ENTRY – TENANT FIT-UP SUBJECT TO INTERIOR ALTERATION PERMIT
4 TYPICAL SHARED ACCESSIBLE PARKING STALLS, PAINTED PARKING STRIPING PER CITY STANDARDS. TO HAVE (2) TYPE B (2750x6000),(2) TYPE A STALLS (3400X6000),OR ONE OF EACH WITH 1500mm PATH STRIP BETWEEN – REFER TO TOWN OF CALEDON'S ACCESSIBLE PARKING STANDARDS.
5 150mm WIDE CURB TYPICAL
6 MIN. 1800mm WIDE SIDEWALK TYPICAL U.N.O
7 TRAILER PARKING STALL – 12'-0" X 55'-0"
8 RESERVED
9 FIRE DEPARTMENT CONNECTION / SIAMESE
10 PROPOSED LOCATION OF TRANSFORMER C/W CONCRETE PAD
11 1.8m HIGH BLACK VINYL CHAIN LINK FENCING OR APPROVED EQUAL ALONG DEVELOPMENT LIMIT BOUNDARY
12 CONCRETE APRON
13 LANDSCAPE AREA – SEE LANDSCAPE DWGS.
14 PEDESTRIAN RAIL (1070mm HIGH) SET INTO RETAINING WALL WHERE GRADE CHANGE GREATER THAN 600mm. PROVIDE CONCRETE-FILLED STEEL BOLLARD AT END OF RETAINING WALL – SEE CIVIL DWGS.
15 EXTERIOR STEEL STAIRS W/ TUBE STEEL GUARDRAIL, TYP.
16 TRUCK LOADING DOCK (TYPICAL)
17 LOADING SPACE – L.S. (3.5m x 14m)
18 FIRE ACCESS ROUTE W/ 12M TURNING RADIUS
19 PROPOSED ELECTRICAL ROOM
20 PROPOSED MECHANICAL ROOM
21 CURB RADII AT ENTRANCES WITHIN MUNICIPAL SIDEWALK LIMITS TO CONFORM TO OPSD 350.010. – SEE CIVIL DWGS.
22 1.5M WIDE PAINTED PEDESTRIAN PATHWAY
23 HATCHED AREA DENOTES HEAVY DUTY ASHPHALT. TYPICAL FOR ALL AREAS REQUIRING FIRE TRUCK OR TRACTOR TRUCK ACCESS.
24 15.0m CENTERLINE RADIUS DISTANCE TO FIRE ACCESS ROAD
25 ROAD CURB AND SIDEWALK TO BE CONTINUOUS THROUGH THE DRIVEWAY. DRIVEWAY GRADE TO BE COMPATIBLE WITH EXIST. SIDEWALK AND A CURB DEPRESSION WILL BE PROVIDED FOR AT EACH ENTRANCE.
26 INVERTED U-SHAPE GALVANIZED BICYCLE RACKS MIN. 1.8Mx0.6M PER SPACE
27 PROPOSED STOP SIGN LOCATION
28 PRESSED PATTERNED ASPHALT PEDESTRIAN PATHWAY
29 YELLOW PAINTED LINES
30 RETAINING WALL
31 PRECAST SCREEN WALL TO BE INSTALLED ON TOP OF RETAINING WALL – REFER TO STRUC. DWGS
32 1.5m MIN. WIDE SIDEWALK
33 DRIVE THRU TRUCK WASH
34 PROPOSED AMENITY AREA
35 SNOW STORAGE ON SITE AT 2% TOTAL SITE AREA
36 PROPOSED CHAIN-LINK FENCE
37 CONCRETE/STEEL SAFETY BOLLARD
38 SCREEN WALL
39 PROPOSED PYLON SIGNAGE
40 DRIVE-IN RAMP WITH GALVANIZED GUARDRAIL. SEE CIVIL DWGS FOR SLOPE %
41 RB-93 PERMIT SIGNAGE
42 DETECTIBLE TACTILE WARNING SURFACE, CONFORMING TO 2012 O.B.C.
43 MIN. 3m WIDE CONCRETE DOLLY PAD AT TRAILER STALLS
44 9.2m X 9.2m FENCED ENCLOSURE FOR ELEC. SWITCHGEAR. REFER TO ELECTRICAL DRAWINGS FOR DETAILS
45 PROPOSED 1.8M HIGH WOODEN FENCE. REFER LANDSCAPE DWGS.
46 WASTE COLLECTION STAGING AREA. TO BE USED TO TEMPORARILY PLACE BINS FOR GARBAGE COLLECTION

NOTE:
ALL PAVEMENT MARKINGS AND SIGNAGE MUST BE INSTALLED IN ACCORDANCE WITH THE APPROVED PAVEMENT MARKINGS AND SIGNAGE PLAN.

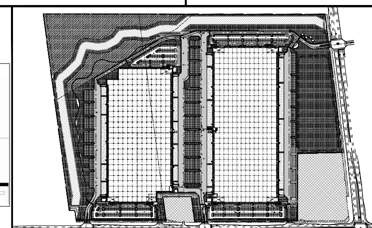
SITE LEGEND

NEW HEAVY DUTY PAVEMENT (HATCHED)
LANDSCAPE AREA
AREA NOT IN SCOPE OF WORK
LOCATION OF CREEK
FIRE ACCESS ROUTE WITH 12.5M TURNING RADIUS
TRUCK LOADING DOCK DOOR
KNOCK OUT PANEL
MAN DOOR ENTRY
FIRE DEPT CONNECTION (VERIFY LOCATION WITH CIVIL DRAWINGS)
FH PROPOSED FIRE HYDRANT (VERIFY LOCATION WITH CIVIL DRAWINGS)
FH EXISTING FIRE HYDRANT (VERIFY LOCATION WITH CIVIL DRAWINGS)
D.C. 1500mm WIDE DEPRESSED CURB FOR ACCESSIBLE PARKING AND PEDESTRIAN ACCESS – REFER TO DETAIL 4/A1.2
CB DENOTES CATCHBASIN
MH DENOTES MANHOLE
WHP/HP EXISTING HYDRO POLE
CP PAINTED CARPOOL PARKING SPACE SYMBOL
BFPS BARRIER FREE PARKING SIGN
BFPSV BARRIER FREE PARKING SIGN WITH VAN TAB
DRIVE-IN DOOR
STOP NEW STOP SIGN
GM GAS METER & PRESSURE REGULATING STATION BY GAS COMPANY
LIGHT FIXTURES, REFER ELECTRICAL DWG FOR DETAILS
LIGHT POLES, REFER ELECTRICAL DWG FOR DETAILS

NOTE: HEIGHT OF ALL LIGHT FIXTURES NOT TO EXCEED 9M FROM GRADE LEVEL



ACCESSIBLE PARKING IDENTIFICATION SIGN SCHEDULE "X"
SCALE: N.T.S.
C



KEY PLAN
SCALE: N.T.S.
2

WARE MALCOMB
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ANA CATALINA ROCHA
LICENCE
7266

SPA FILE NO.:
SPA 2021-0013

QUADREAL PROPERTY GROUP
TOWN OF CALEDON DIXIE ROAD
12173 DIXIE ROAD
CALEDON, ONTARIO CANADA

OVERALL SITE PLAN

	DATE	REMARKS
1	2022-11-24	ISSUED FOR SPA
2	2023-04-27	REISSUED FOR SPA
3	2023-06-06	REISSUED FOR SPA
4	2023-12-15	REISSUED FOR SPA
5	2024-05-10	REISSUED FOR SPA

PA / PM:	C.R
DRAWN BY:	JS
JOB NO.:	TOR21-0134-00

SHEET
A1.0