



May 29, 2018

JDE Project 1744

1029629 Ontario Inc.

c/o Carriage House Realty Corp.
16 Regan Road, Unit 35
Brampton, ON L7A 1C1

**RE: Traffic Brief
Mt. Pleasant Road, Town of Caledon**

On behalf of **1029629 Ontario Inc.** [the Developer], **JD Northcote Engineering Inc.** [JD Engineering] is pleased to submit the following Traffic Brief in support of the proposed development located on the west side of Mount Pleasant Road, south of Highway 9 in the Town of Caledon [Town], Regional Municipality of Peel [Region].

1.0 Project Background

The subject site is municipally known 17269 Mount Pleasant Road.

The subject site is bound by woodlands and the Caledon Trailway Path to the south, Mount Pleasant Road to the east, an existing residential property to the north and woodlands to the west.

Figure 1 illustrates the location of the subject site in relation to the surrounding area. The proposed development consists of eight single detached residential units. The proposed development has a full-movement access driveway onto Mount Pleasant Road [Street A]. The proposed development also includes one future road connection to the property to the north. There are currently no plans for redevelopment of the property to the north; consequently, no traffic interaction between the two properties has been considered for the purpose of this study.

The proposed Draft Plan of Subdivision is provided in the **Appendix**.

The Developer has retained JD Engineering to prepare this Traffic Brief in support of the proposed development.

The scope of the Traffic Brief is limited to a preliminary review of the additional traffic at the Mount Pleasant Road / Street A intersection.

It has been assumed that, should all approvals be granted, build-out of the proposed development will occur in 2019.



JD Engineering Inc.
Phone: 705.725.4035
Email: Info@JDEngineering.ca

Figure 1 – Site Location and Study Area

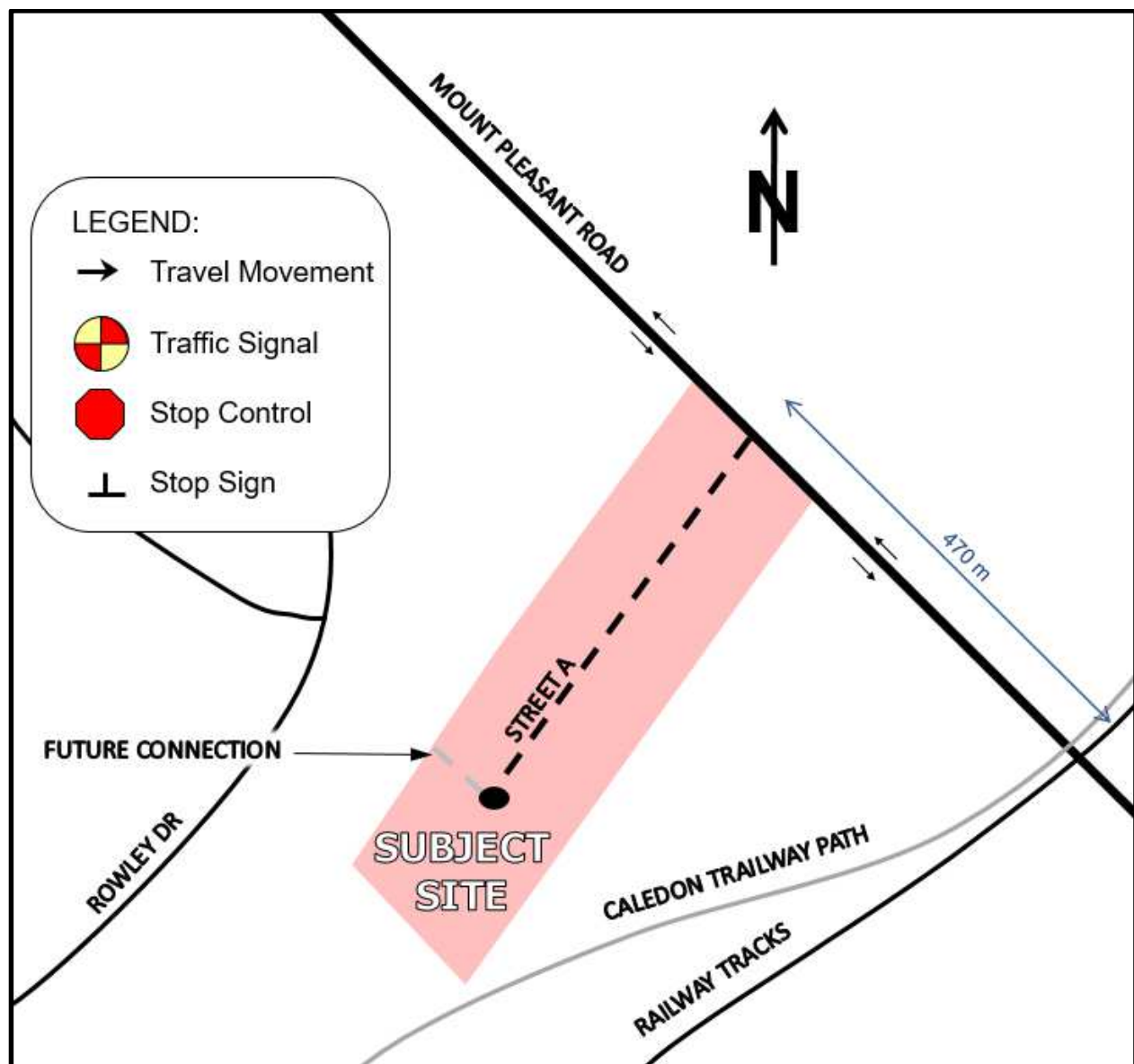


2.0 Street and Intersection Characteristics

Mount Pleasant Road is a two-lane local road with a rural cross-section and no sidewalks. Mount Pleasant Road has a posted speed limit of 60km/h and is under the jurisdiction of the Town.

The existing intersection spacing and lane configuration within the study area is illustrated in **Figure 2**.

Figure 2 – Existing (2017) Intersection Spacing and Lane Configuration with in Study Area



3.0 Local Road Improvements and Development in the Study Area

Based on discussions with the Town there are no planned transportation infrastructure improvements within the study area that will have a significant impact on local traffic volumes or capacity.

4.0 Other Developments in the Study Area

Through our discussions with Town staff and a review of the Town's Active Development Map, there are many developments currently underway within the Town; however, only the Beaverhall Homes and the 1680578 Ontario Inc. developments will have a notable impact on the local traffic volumes in the study area.

The Beaverhall Homes development is located on the east side of Mount Pleasant Road, south of Highway 9, slightly north of our proposed development. The Beaverhall Homes development application is in circulation at the Town and consists of a total of 42 single detached residential units.

The 1680578 Ontario Inc. development is located in the southeast corner of the Mount Pleasant Road / Highway 9 intersection. The 1680578 Ontario Inc. development application is in circulation at the Town and consists of a total of 22 single detached residential units.

Based on the local street network, it is assumed that the majority of the southbound automobile trips from the above noted developments would travel via Mount Pleasant Road adjacent to the subject site. It is anticipated that the above-noted developments would generate approximately 28 AM and 37 PM peak hour two-way trips on Mount Pleasant Road, adjacent to the subject site. Based on our observations of the existing volume of traffic on Mount Pleasant Road, this would not have a significant impact on the overall traffic volumes in the study area.

5.0 Proposed Development

The Institute of Transportation Engineers [ITE] produces a document entitled *Trip Generation Manual* (9th Edition), which is used to predict the number of trips associated with new developments. The ITE is a well-recognized agency throughout North America, and has completed numerous studies to identify trip rates associated with various types of developments including retail, residential, recreational, institutional, industrial, and office.

The traffic generation for the subject site has been based on the ITE *Trip Generation Manual* data. The following ITE land uses have been applied to estimate the traffic from the proposed development:

- ITE land use #210 (Single-Family Detached Housing)

The estimated trip generation for the proposed development during the weekday morning [AM] and weekday afternoon [PM] periods are illustrated in **Table 1**. The AM and PM peak hour of traffic generation for the subject site is generally expected to align with the AM and PM peak hour of traffic in the study area.

Table 1– Estimated Traffic Generation of Existing Development

Land Use	Size	AM Peak Hour			PM Peak Hour		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Single-Family Detached Housing ITE Land Use: 210	8 units	2	4	6	5	3	8

For the purposes of this study, it has been assumed that all residential traffic generated by the proposed development will be new traffic and would not be in the study area if the development was not constructed.

The ITE data provides the anticipated percentage of new traffic entering and exiting during the peak hour. The distribution of traffic has been calculated based on the 2011 Transportation Tomorrow Survey [TTS] data for traffic zone 3199 retrieved using the TTS Internet Data Retrieval System [IDRS] (output attached as **Appendix**). TTS data provides historical origin and destination work trip percentages for specific areas within the County and the Greater Toronto and Hamilton Area [GTHA].

Traffic distribution for the trips generated by the subject site during the AM and PM peak hour is expected to generally follow commuter travel patterns. Our analysis is based on egress traffic during the AM peak hour. Logically, the distribution of ingress traffic will follow the inverse of the exiting traffic distribution. For each of the individual areas identified in the TTS data, we have selected the probable route of travel, assuming that people will select their route primarily based on travel time.

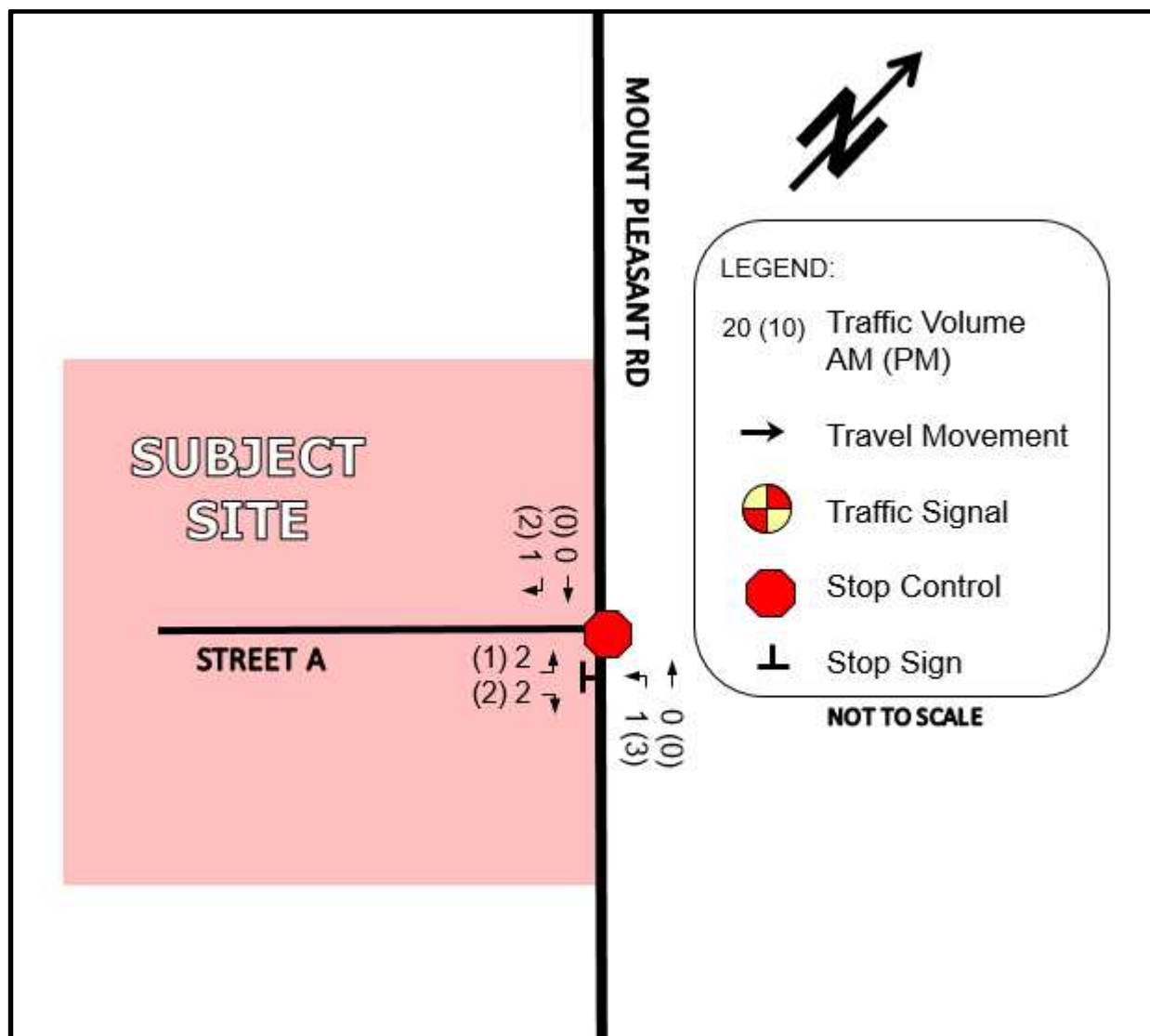
The distribution of trips is illustrated in **Table 2** using the methodology outlined above.

Table 2 – Proposed Development Traffic Distribution

Travel Direction (to / from)	Percentage of Total Traffic Generation
Eastbound via Highway 9	37%
Westbound via Highway 9	5%
Southbound via Mount Pleasant Road	58%
TOTAL	100%

Using the traffic distribution pattern noted above, the site traffic assignment for the proposed development was calculated for the AM and PM peak hour and is illustrated in **Figure 3**.

Figure 3 – Traffic Assignment for Proposed Development



6.0 Traffic Impact Analysis

The proposed development is estimated to generate a total of 6 AM peak hour trips and 8 PM peak hour trips.

Based on our review of the study area (including the additional traffic generation from the two adjacent developments noted in Section 4.0) and observation of the existing traffic on Mount Pleasant Road, there is considerable excess capacity available on Mount Pleasant Road in the study area. The minor additional traffic generated by the proposed development will not adversely affect the capacity or result in any traffic safety issues on Mount Pleasant Road.

It is recommended that proposed intersection of Mount Pleasant Road / Street A include eastbound one-way stop control with a single lane for ingress and a single lane for egress traffic movements for the Street A approach. No traffic-related issues are anticipated as a result of the proposed intersection of Mount Pleasant Road / Street A.

7.0 Sight Distance Review

A review of the available sight distance for the proposed Street A was completed as part of this analysis.

The sight distance to the south of Street A is significantly greater than the minimum stopping sight distance requirements as identified in the Transportation Association of Canada *Design Guide for Canadian Roads* (2017) [TAC Guidelines] for a design speed of 70km/h (105 meters).

The sight distance to the north of Street A marginally meets the minimum stopping sight distance requirements as identified in the TAC Guidelines for a design speed of 70km/h (105 meters). Regardless, it is recommended that hidden intersection signage is provided for southbound traffic on Mount Pleasant Road. The recommended sign location is 200 metres north of the proposed Mount Pleasant Road / Street A intersection.

With the above-noted mitigation measures, there are no issues with the available sight distance for the proposed Mount Pleasant Road / Street A intersection.

8.0 Street A Interaction with Adjacent Driveways and Railway Tracks

The proposed location of Street A is approximately 135 metres¹ south of the existing residential driveway and 470 meters² north of the existing railway tracks. The proposed spacing between Street A and the adjacent driveway to the north exceeds the minimum spacing requirements identified in the TAC Guidelines - Figure 8.8.2 (Suggested Minimum Corner Clearances to Accesses or Public Lanes at Major Intersections, for both signalized and unsignalized conditions). Based on the relatively low volume of traffic generated by the subject site and the distance to the railway tracks, there will be no interaction or operational issues as a result of the proposed Street A intersection on Mount Pleasant Road.

¹ Measured centre of intersection to centre of intersection

² Measured centre of intersection to centre of railway tracks

9.0 Conclusion

This chapter summarizes the conclusions and recommendations from the study.

- 1) It is recommended that proposed intersection of Mount Pleasant Road / Street A include eastbound one-way stop control on Street A, with a single lane for ingress and a single lane for egress traffic movements.
- 2) It is recommended that a hidden intersection sign is provided on Mount Pleasant Road (southbound), 200 metres north of Street A.
- 3) The additional traffic generated by the proposed development is expected to have a negligible impact on the existing traffic operations in the study area.

We trust you will find this submission acceptable. Should you have any questions or concerns or require any additional information in this regard, please contact our office.

Yours truly,

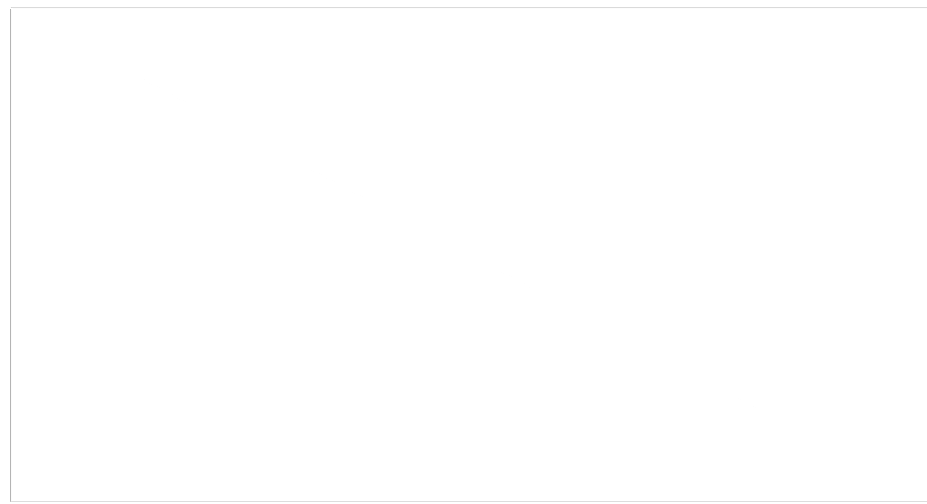
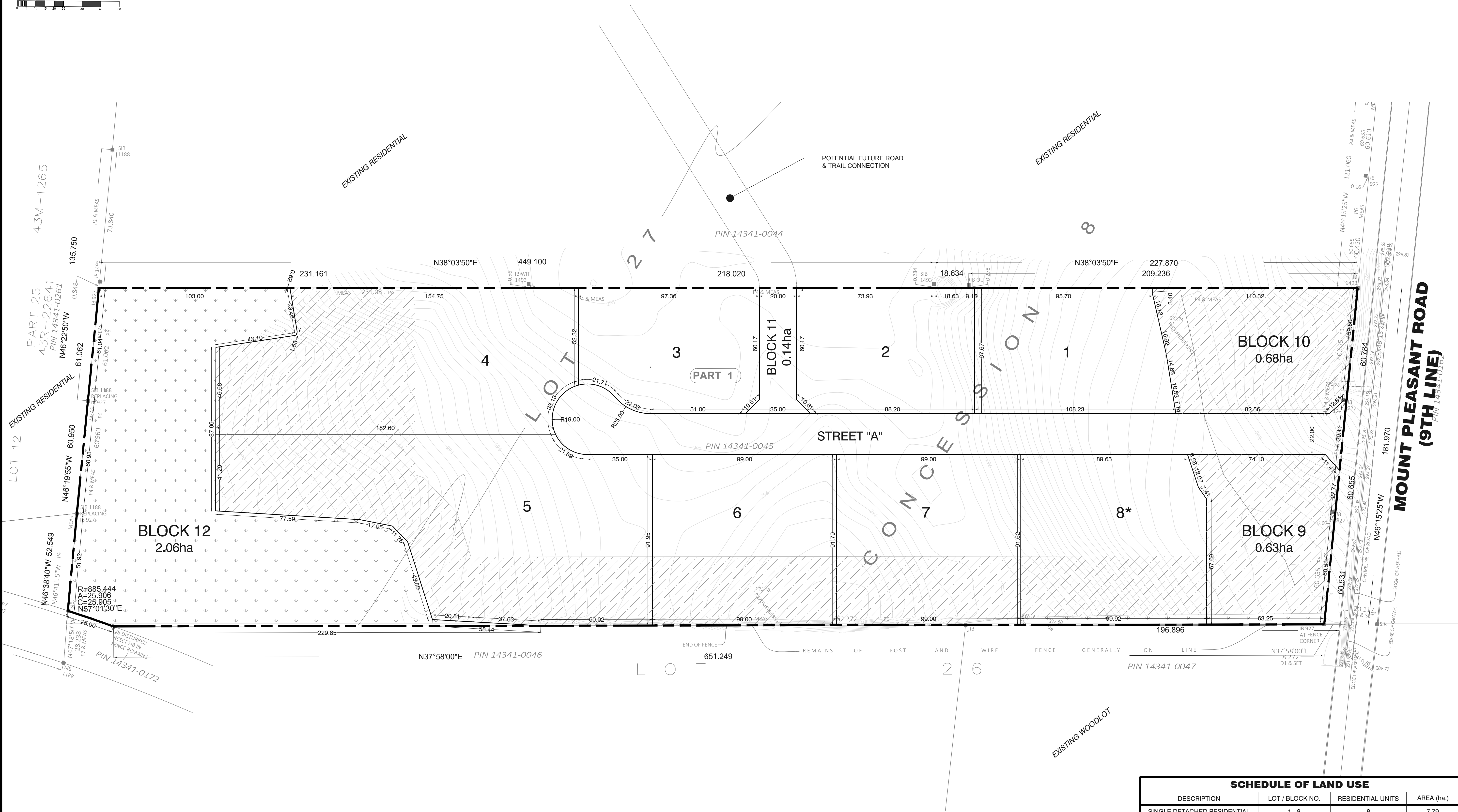
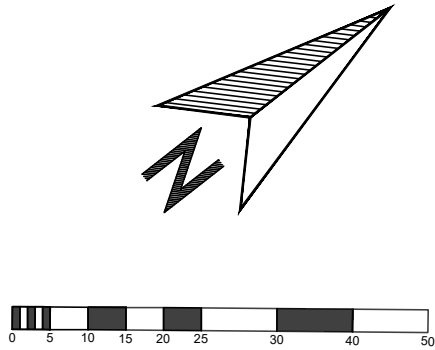
JD Northcote Engineering Inc.



John Northcote, P.Eng.
President



Appendix



LOT SIZE SUMMARY CHART		
LOT #	LOT AREA (Ha)	STRUCTURAL ENVELOPE (Ha)
1	0.69	0.69
2	0.64	0.64
3	0.62	0.62
4	1.38	0.66
5	1.73	0.70
6	0.91	0.54
7	0.91	0.54
8	0.90	0.53

SCHEDULE OF LAND USE			
DESCRIPTION	LOT / BLOCK NO.	RESIDENTIAL UNITS	AREA (ha.)
SINGLE DETACHED RESIDENTIAL	1 - 8	8	7.79
TOTAL SINGLE DETACHED		8	
NET DEVELOPABLE TOTAL		8	7.79
OPEN SPACES	9, 10		1.31
ENVIRONMENTAL PROTECTION	12		2.06
FUTURE ROAD & TRAIL CONNECTION	11		0.14
RIGHT OF WAY	STREET "A"		0.98
TOTAL SITE AREA		8	12.28

TITLE:
**PROPOSED DRAFT
PLAN OF SUBDIVISION**

LEGAL DESCRIPTION:
PART OF LOT 27
CONCESSION 8
GEOGRAPHIC TOWNSHIP OF ALBION
TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL

KEY PLAN:

REQUIRED INFORMATION:
AS REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT R.S.O. 1990:
(a) SEE PLAN
(b) SEE PLAN
(c) SEE KEY MAP
(d) SEE SCHEDULE OF LAND USE
(e) SEE PLAN
(f) SEE PLAN
(g) SEE PLAN
(h) MUNICIPAL PIPED WATER AVAILABLE AT TIME OF DEVELOPMENT
(i) TOP SOIL, SAND, SANDY SILT, CLAYEY SILT
(j) SEE PLAN
(k) GARBAGE COLLECTION & FIRE PROTECTION
(l) SEE PLAN
NOTE: CONTAINS RELATE TO CANADIAN GEODETIC DATUM

SURVEYOR'S CERTIFICATE:
I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AS SHOWN ON THIS PLAN AND THEIR RELATIONSHIP TO THE ADJACENT LANDS ARE ACCURATE AND CORRECTLY SHOWN IN ACCORDANCE WITH A PLAN OF SURVEY PREPARED BY VAN HARTEN

FOR MAK
VAN HARTEN

DATE

OWNER'S CERTIFICATE:
I HEREBY AUTHORIZE THE BIGLIERI GROUP LTD. TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE CALEDON

DAVID GOODMAN
TROPICAL LAND DEVELOPMENT LIMITED

DATE

0 MOUNT PLEASANT ROAD

APPROVAL STAMP:

TROPICAL LAND DEVELOPMENT LTD.

REVISIONS

No.	Description	Date	Int.
3			
2			
1			

No.

Description

Date

Int.

PROJECT No.:

17445

DATE:

May 4, 2018

SCALE:

1:1000

DRAFTED BY:

JS

CHECKED BY:

MJ

DRAWING No.:

DP-01

THE BIGLIERI GROUP LTD.
Planning | Development | Project Management
20 Leslie Street, Suite 111, Toronto, Ontario M4M 2L4
Office: (416) 893-9155 Fax: (416) 893-9133
tbg@thebiglierigroup.com



TTS Cross Tabulation

Cross Tabulation Query Form - Trip - 2011

Filter Variables

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

Group Attributes

Row Grouping Column Grouping Table Grouping

Grouping file: [Choose File](#) No file chosen

Filter Selection +

☒ 2006 GTA zone of household In 3199
And
☒ Trip purpose of destination In W.
And
☒ Start time of trip In 700-900

[Add](#) [Delete](#)

Output

☒ Comma-delimited table ☐ Column format ☒ Expansion Factor On [Click to Select Load](#) [Load](#)

[Execute Query](#) [Select All](#) [Save As](#)

Thu Aug 17 2017 13:15:59 GMT-0400 (Eastern Daylight Time) - Run Time: 2528ms

Cross Tabulation Query Form - Trip - 2011
Row: Planning district of destination - pd_dest
Column: 2006 GTA zone of household - gta06_hhld

Filters:
(2006 GTA zone of household - gta06_hhld In 3199
and
Trip purpose of destination - purp_dest In W,
and
Start time of trip - start_time In 700-900)

Trip 2011
Table:
,3199
PD 1 of Toronto,57
PD 2 of Toronto,23
PD 3 of Toronto,18
PD 8 of Toronto,18
PD 9 of Toronto,18
PD 11 of Toronto,23
Newmarket,18
Vaughan,26
Caledon,201
Mississauga,20
Niagara Falls,23
Adjala-Tosorontio,23



TTS Cross Tabulation

Cross Tabulation Query Form - Trip - 2011

Filter Variables

2006 GTA zone of desti... X ▼

2006 GTA zone of hous... X ▼

(Optional) Table Attribute ▼

Group Attributes

Row Grouping

Column Grouping

Table Grouping

Grouping file: [Choose File](#) No file chosen

Filter Selection +

<input checked="" type="checkbox"/>	2006 GTA zone of household	In
	3199	
	And	
<input checked="" type="checkbox"/>	Trip purpose of destination	In
	W,	
	And	
<input checked="" type="checkbox"/>	Start time of trip	In
	700-900	

[Add](#) [Delete](#)

Output

☒ Comma-delimited table

☐ Column format

☒ Expansion Factor On

[Click to Select Load](#)

[Load](#)

Add Delete

Output

☒ Comma-delimited table ☐ Column format Expansion Factor On Click to Select Load Load

Execute Query Select All Save As

Thu Aug 17 2017 13:19:23 GMT-0400 (Eastern Daylight Time) - Run Time: 2562ms

Cross Tabulation Query Form - Trip - 2011

Row: 2006 GTA zone of destination - gta06_dest

Column: 2006 GTA zone of household - gta06_hhld

Filters:
(2006 GTA zone of household - gta06_hhld In 3199
and
Trip purpose of destination - purp_dest In W,
and
Start time of trip - start_time In 700-900)

Trip 2011
Table:

,3199
36,20
46,23
80,14
125,23
180,18
307,18
368,18
430,23
2001,26
2621,18
3190,28
3191,81
3192, 28
3193,21
3194,43
3834,20
6212,23
8585,23