

March 20, 2020



Township of Beckwith
1702 9th Line Beckwith
Carleton Place ON K7C 3P2

**Re: Proposed 3160 Ninth Line Residential Subdivision – Traffic Letter Report,
Revision 3 - Township of Beckwith, Ontario**

This letter serves to provide an update to two previous traffic reports that have included:

- The original Traffic Letter Report (Castleglenn, July 12th, 2018) which had proposed an access to 10 residential lots near the existing Dalton Lane; and
- A Traffic Letter Report, Revision 2 (Castleglenn, October 11th, 2019) that re-evaluated the sight lines associated with a revised site plan that relocated the sub-division access to the south of Dalton Lane.

This Traffic Letter Report, Revision 3 serves to update the report regarding a new Site Plan (Attachment “A”) of the proposed Beckwith Subdivision located at 3160 Ninth Line Road. The February, 2020 site plan proposes an additional residential unit (total: 11 units) without any changes to the proposed access location. It is understood that the site would be served by way of a new Road “A” located south of the existing Dalton Lane. No changes are proposed to the existing Dalton Lane. The proposed subdivision development is anticipated to be built-out in a single phase.

1.0 EXISTING CONDITIONS

The immediate study area surrounding Ninth Line Road is characterized by low density residential dwellings. Ninth Line Road is characterized by 2-lanes of travel and accommodates multiple accesses and driveways along the corridor. In general, the posted speed along the road is 60km/hr and includes cautionary signs that recommend a 40km/hr speed due to the road curvature and hidden driveways.

2.0 TRIP GENERATION ESTIMATES

The proposed development consists of 11 dwelling lots west of Ninth Line Road and therefore the trips generated by the proposed subdivision is anticipated to be negligible. For the purpose of traffic generation from the proposed subdivision, the ‘Single Family Dwelling’ (Land Use

2460 Lancaster Road, Suite 200, Ottawa, Ontario, K1B 4S5

Code 210) trip rate was adopted from “*ITE Trip Generation Manual – 10th Edition*” for single-family dwellings. Therefore, the proposed subdivision was found to result in:

- 8 vph (2 in / 6 out) during the morning peak hour (Avg Rate of 0.74 vehicle-per-dwelling during peak hour of adjacent street); and
- 11 vph (7 in / 4 out) during the afternoon peak hour (Avg Rate of 0.99 vehicle-per-dwelling during peak hour of adjacent street).

The traffic volume generated by the proposed development during the peak hour results in an average frequency of a single vehicle every 10 minutes in the peak direction of travel.

3.0 SIGHT LINE ANALYSIS

The theoretical required sight distance requirements for a passenger vehicle (design vehicle) was calculated based on a design speed of 70 km/hr¹. The design speed selected for this analysis was believed to be conservative given that the area is posted at 60 km/hr with multiple caution signs that recommend 40 km/hr on the adjacent curves.

The sight distance requirements for a passenger vehicle were found to be:

- Approximately 145m to the south to complete a left turn out of the site; and
- Approximately 125m to the north to complete a right-turn out of the site.

Exhibits 1 and 2 below illustrate the available sight-lines to the north and to the south of the proposed Road ‘A’ access, located approximately 100m south from the most adjacent residential access (Dalton Lane).

A site visit was undertaken on October 9th, 2019 during the morning hours to assess and confirm the sight-lines in the vicinity of the proposed site access.

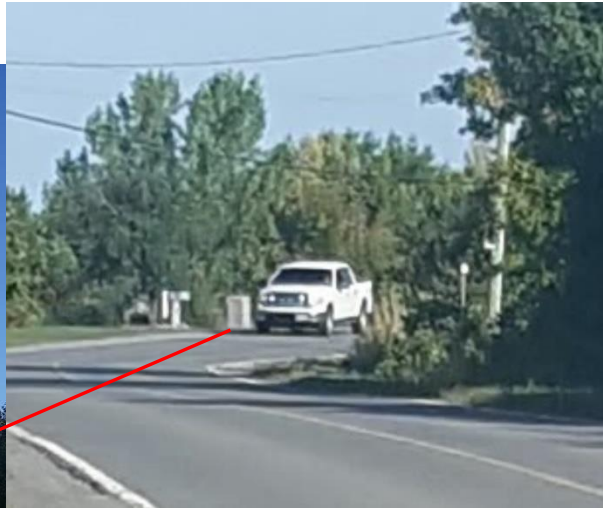
The sight-line assessment was found to indicate that:

- sufficient sight lines exist to the south (Approx. 150m available vs 145m required) that would provide sufficient distance for a left-turn out of the site; and
- sufficient sight-lines exist to the north (Approx. 175m available vs 125m required) that would provide for the right turn egress.

¹ Using acceleration figure 2.3.3.3 from *Geometric Design Guide for Canadian Roads*; it was determined that a passenger car would require acceleration time of about 5 sec to cross major roadway pavement plus 2.5 sec perception/ reaction time for a total of 7.5 seconds. The sight-line distance was determined using $D = [V \times (J+t)] / 3.6$, where J is perception/reaction time and t is time to cross major roadway pavement.



Looking north along Ninth Line Road in the proximity of the relocated Road "A" Access
Available Sight-line: ~175m



Looking south along Ninth Line Road in the proximity of the proposed Road "A" access
Available Sight-line: ~150m



Exhibit 2: Looking south along Ninth Line Road from the centerline of Road 'A'

4.0 CONCLUSIONS

It can be concluded that:

- The proposed Beckwith subdivision is anticipated to generate low traffic volumes during the peak hours of travel demand (7 vehicles-per-hour in the peak direction).
- The proposed development is anticipated to result in negligible changes to the traffic patterns within the study area.
- Sufficient sight-lines exist in both the north and south directions along Ninth Line Road. Observed during the site visit substantiates the theoretical calculations of sight distance and gap acceptance (passenger vehicles, gap requirement of 7.5 sec and 70 kph design speed).

Based on the above conclusions, the Township of Beckwith is encouraged to proceed with processing the application for the proposed Young Subdivision located at 3160 Ninth Line Road.

Should you have any questions or comments, please do not hesitate to contact us at 613-731-4052.

Yours Truly,



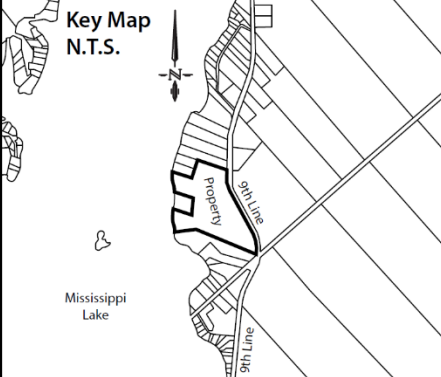
Mr. Arthur Gordon B.A. P.Eng
Principal Engineer
Castleglenn Consultants Inc.

A handwritten signature in blue ink, which appears to read "Jake Berube".

Mr. Jake Berube B.Eng. EIT
Traffic Planning Specialist
Castleglenn Consultants Inc.

Young Subdivision Concept

3160 Ninth Line Beckwith
 Part Lot 3, Concession 8
 Parts 1 - 3, 27R-2652, Parts 1 & 2,
 27R-2874, Part 1, 27R-9676
 Township of Beckwith
 COUNTY OF LANARK



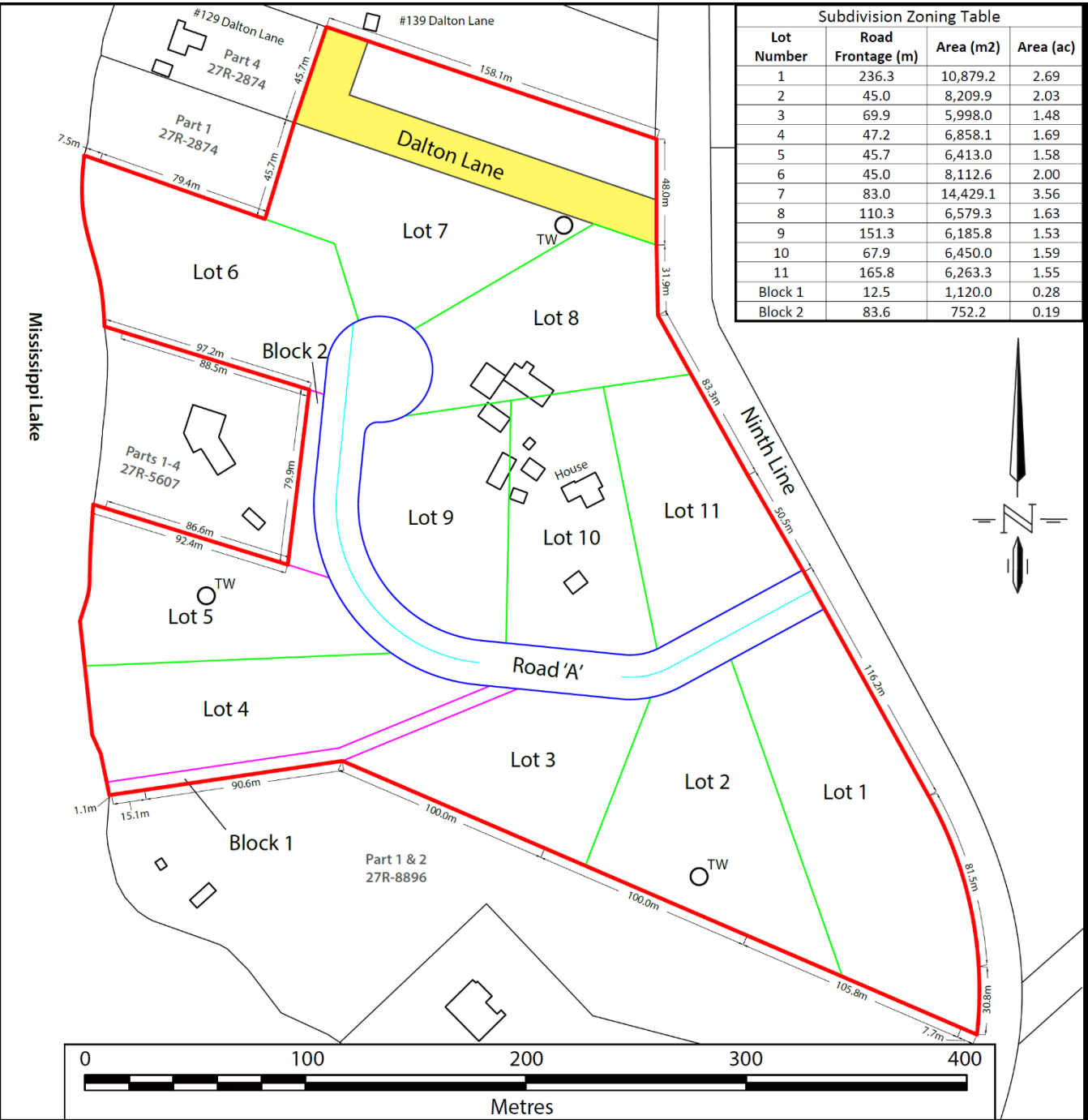
Legend

- Proposed Easement
- Subdivision Boundary
- Right-of-Way / Edge of Road
- Road Centreline
- Lot Lines
- Block Lines
- TW Test Wells

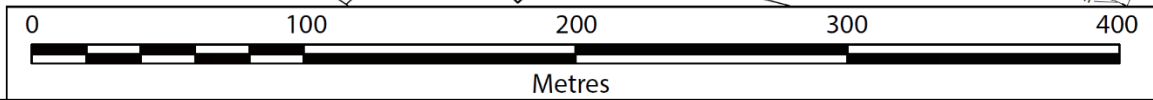
Notes:

1. The proposed easement is to protect the access for those lots fronting on Mississippi Lake which currently use Dalton Lane for road access.
2. Block 2 will form an addition onto the proponents property, described as Parts 1 - 4 on 27R-5607.
3. Boundary and dimensions of the subject property derived in part from Plan 27R-2652, Plan 27R-2874, Plan 27R-4439, Plan 27R-5607 and Plan 27R-8896 with some dimensions approximated using aerial photography.

ZANDERPLAN
 Your rural land planning experts
 Version Date: February 18, 2020



Subdivision Zoning Table			
Lot Number	Road Frontage (m)	Area (m ²)	Area (ac)
1	236.3	10,879.2	2.69
2	45.0	8,209.9	2.03
3	69.9	5,998.0	1.48
4	47.2	6,858.1	1.69
5	45.7	6,413.0	1.58
6	45.0	8,112.6	2.00
7	83.0	14,429.1	3.56
8	110.3	6,579.3	1.63
9	151.3	6,185.8	1.53
10	67.9	6,450.0	1.59
11	165.8	6,263.3	1.55
Block 1	12.5	1,120.0	0.28
Block 2	83.6	752.2	0.19



Attachment "A": Subdivision Concept Plan (February, 2020)