



Corbeil Road Proposed Estate Lots East Ferris, Ontario

Traffic Assessment

Prepared by:

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Prepared for:

Degagne Group of Companies

452 Quae Quae Rd.

Corbeil, Ontario P0H 1K0

February 2024



February 23, 2024

Mr. Dan Degagne
Owner/Partner
Degagne Group of Companies
452 Quae Quae Road
Corbeil, Ontario, P0H 1K0

Dear Mr. Degagne:

**Subject: Proposed Residential Estate Lots
Corbeil Road, East Ferris
Traffic Analysis**

We are pleased to submit our traffic report dealing with the proposed residential estate lots along the west side of Corbeil Road north of Quae Quae Road/Bertha Road in the Municipality of East Ferris.

From a traffic perspective, access sightlines are the critical issue in the development of the proposed lots. Since the rolling hills along Corbeil Road limit sight distances, a detailed analysis of access sightlines was completed for each of the proposed twelve lots.

Our overall conclusion is that access with adequate sight distance can be provided for all twelve proposed lots, but in the case of three lots, severe restrictions are recommended in terms of driveway location and design. Some restrictions on driveway location are also recommended for five additional lots, while no restrictions are recommended for the remaining four lots.

It has been a pleasure assisting you with this project.

Yours truly,

Toivo Rukholm, P.Eng.
Tranplan Associates



TR/

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1.0 INTRODUCTION

Tranplan Associates was retained by Degagne Group of Companies to carry out a traffic assessment for the 16 land lots proposed to be developed as rural estate residential, located on the north-west corner of Corbeil Road/Quae Quae Road/Bertha Road intersection in the Township of East Ferris (see *Exhibit 1 Key Map*). Twelve of the 16 lots have frontages on Corbeil Road. The lot layout prepared by Tulloch (see *Exhibit 2 Plan of Proposed Lots*) was used to establish the lot boundaries. This traffic assessment will form part of the application for municipal approval of the development.

Due to the hilly terrain of Corbeil Road, the traffic study aims to assess the sight line restrictions likely to be present for lots having frontages on Corbeil Road. This report presents the results of the sight line assessment of each of the lots on Corbeil Road to ensure that the future lot driveways have safe access to/from Corbeil Road.

2.0 ANALYSIS

2.1 ROAD DESCRIPTION

Corbeil Road is a municipal road under the jurisdiction of the Township of East Ferris, with a two-lane rural cross-section and a posted speed limit of 70 km/hr. In the vicinity of the study lots, Corbeil Road has a hilly terrain causing the vehicles to disappear and reappear while passing through the valleys and over the crests of the hills.

2.2 SIGHT DISTANCE STANDARDS

Based on the TAC Geometric Design Guide for Canadian Roads, 2017, Section 9.9, the following table provides the intersection sight distance standards for 80 km/h design speed:

EXHIBIT 1 : KEY MAP

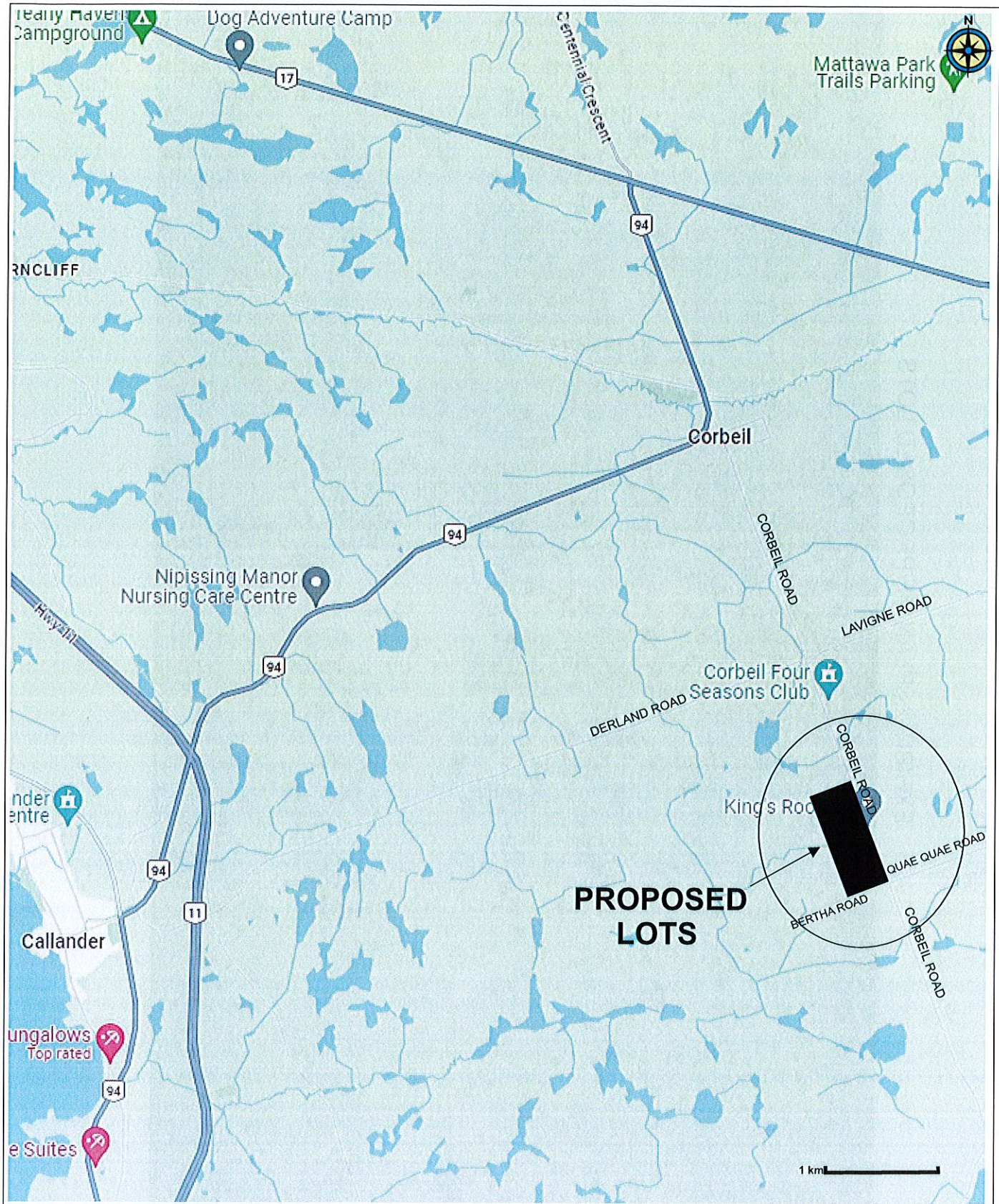


EXHIBIT 2 : PLAN OF PROPOSED LOTS



Table 1: Intersection Sight Distances Standards

	Intersection Sight Distance			
Design Speed*	Minimum Stopping Distance (m)	Left Turns from Minor Road (m)	Right Turns from Minor Road (m)	Left Turns from Major Road (m)
Time Gap		7.5 sec.	6.5 sec.	5.5 sec.
80km/h	130	170	145	125

*Corbeil Road, has a posted speed limit of 70km/h. The study assumed 10km/h above posted speed as design speed.

The study examined whether each lot has the required sight distance as per the TAC standards in Table 1 using the road profile of Corbeil Road, field measurements and time gap measurements.

2.3 METHODOLOGY AND DISCUSSION

- **Field Work and Inspection:**
 - Detailed field work was carried out to inspect the Corbeil Road terrain in relation to the study lots.
 - A walking measuring wheel was used to locate and measure the hill crests and valleys in relation to the study lot boundaries.
 - Each of the lots was assessed for sight distance along Corbeil Road by looking north (for checking sight line availability for right turns from driveway) and by looking south (for checking sight line availability for left turns from driveway). Based on the observed sight distances, approximate best driveway locations were identified for each lot.
 - Lots with limited visibility were identified and sight distances were measured using a walking measuring wheel.
 - Cameras were set up at selected locations to record time gap measurements at lots with limited visibility.
- **Sight Distance from Road Profile:** The sight distance was calculated from each lot to the north and south along Corbeil Road using the road profile drawing provided by Tulloch (see *Appendix A*). If a lot was found to have restricted sight lines, alternative driveway locations along the frontage were tested to identify if a safe location was possible.

- The lots with the most restricted sight lines were examined in more detail using field measurement data and the video recordings with time gaps.

The sight distance calculations and exhibits for each of the lots are provided in *Appendix B*. Time gap measurements collected for Lot 2 and 5 are provided in *Appendix C*.

3.0 FINDINGS AND RECOMMENDATIONS

3.1 GENERAL CONCLUSION

It was observed from the field investigation that Lots 1, 3, 8 and 11 have sufficient sight distance at all points along their frontage. All other lots have adequate sight distance at limited locations along their frontage with Lots 2, 4, 5 and 9 requiring particularly restrictive conditions.

The recommended driveway location for each of the twelve lots is shown in Table 2 below and illustrated in *Exhibit 3*.

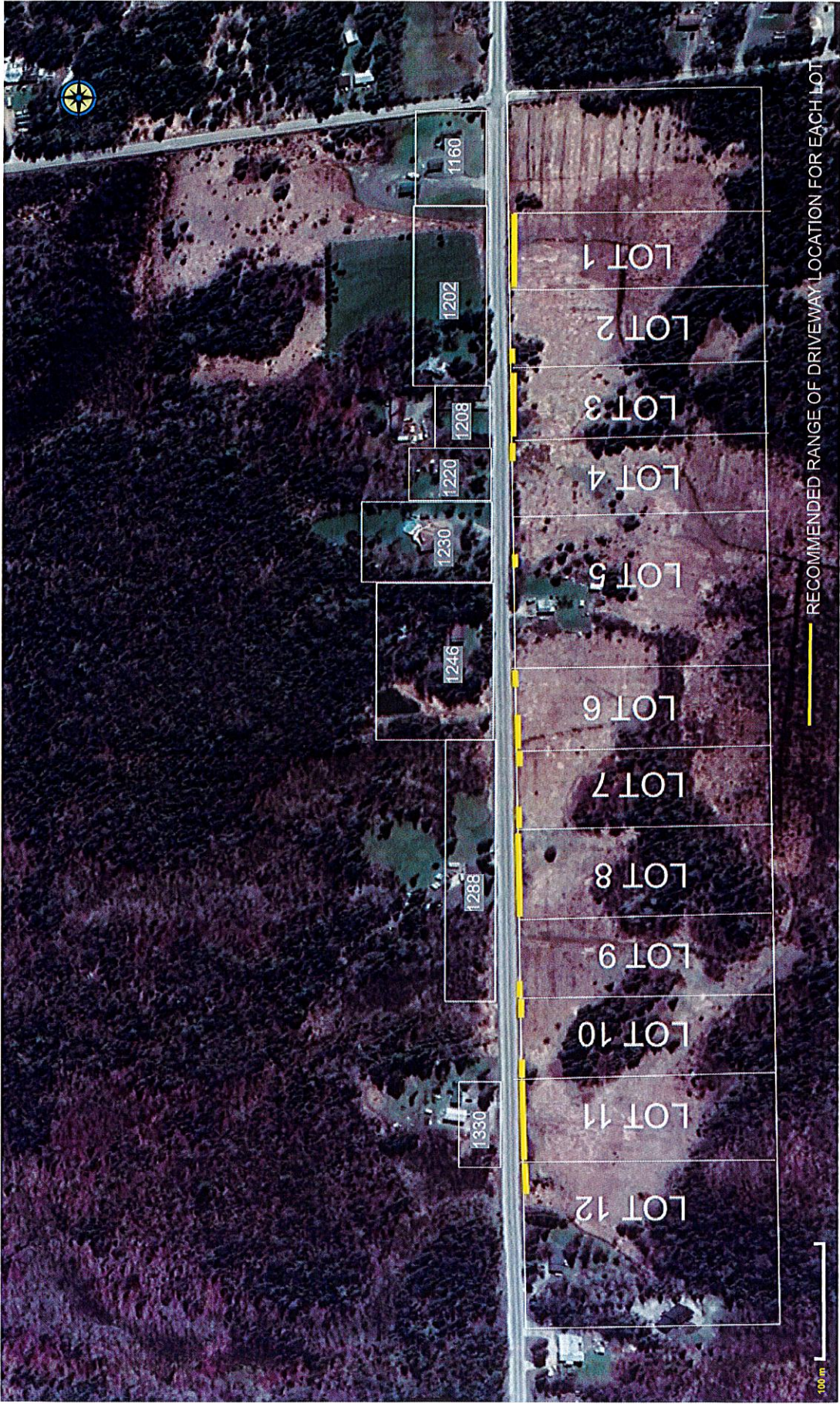
Table 2: Recommended Driveway Locations

Lot No.	Driveway Location (Recommended)
1	Anywhere within the lot
2	At north lot line
3	Anywhere within the lot
4	At south lot line*
5	Within 15m of north lot line*
6	At south lot line or anywhere within 30m of north lot line
7	Within 15m of north lot line or at south lot line
8	Anywhere within the lot
9	At north lot line*
10	At south lot line or north lot line
11	Anywhere within the lot
12	Within 30m of south lot line

*careful design of entrance required with raised approach to Corbeil Road

The proposed lot lines do not need to be altered to accommodate sight distances if the driveways are located as recommended.

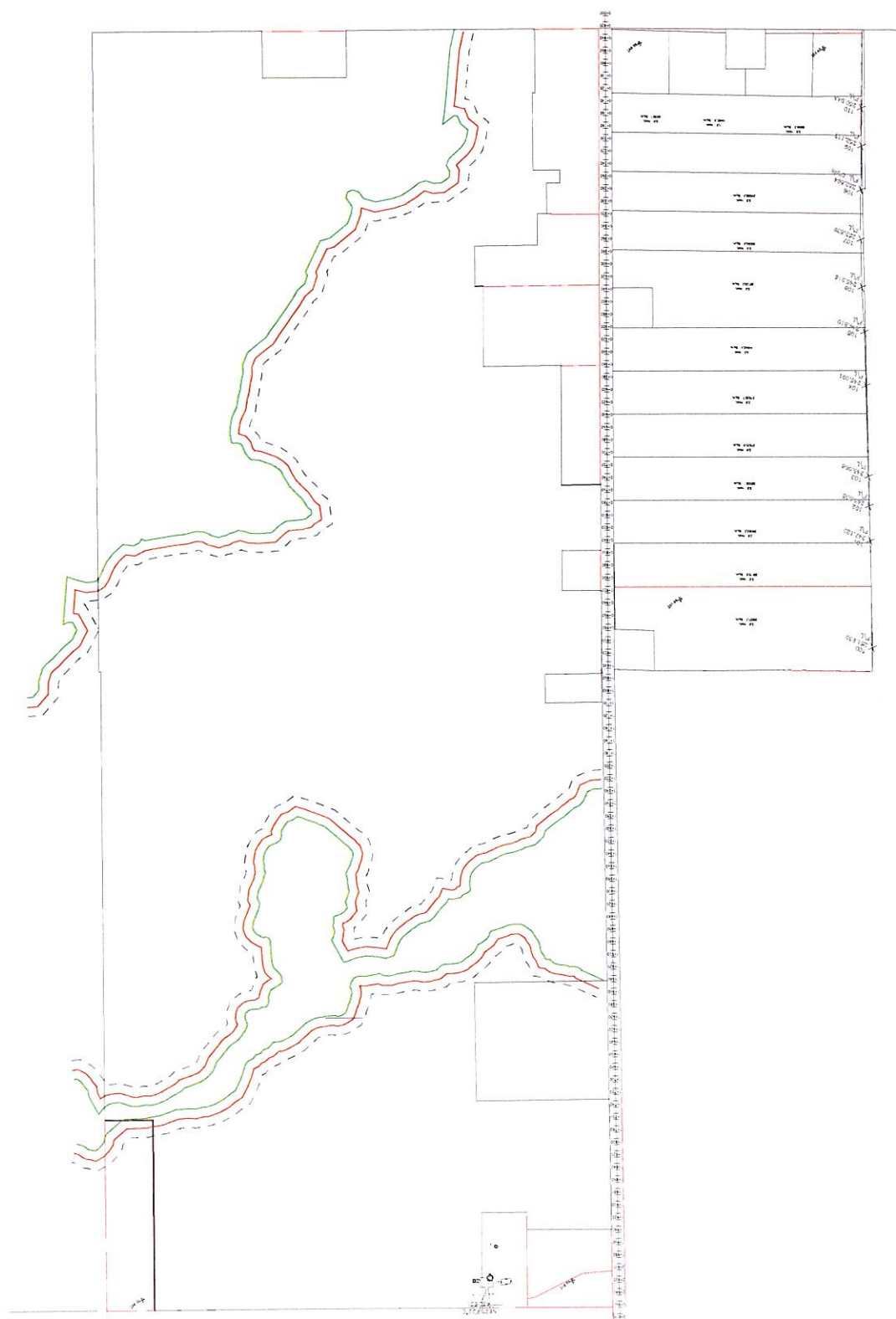
EXHIBIT 3 : RECOMMENDED DRIVEWAY LOCATIONS



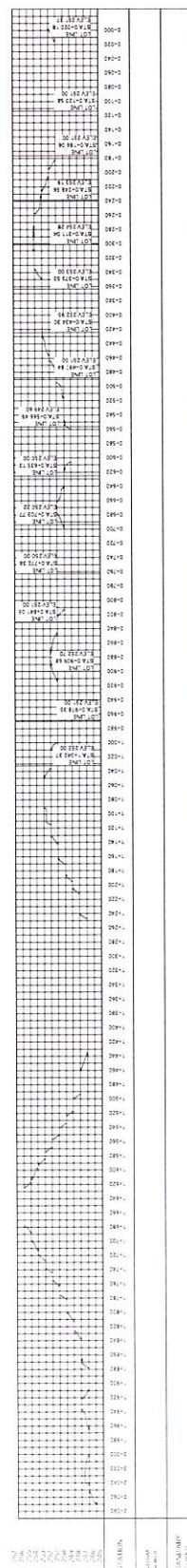
APPENDIX

APPENDIX A

CORBEIL ROAD PLAN AND PROFILE DRAWING (TULLOCH)



CORBEIL ROAD PROFILE

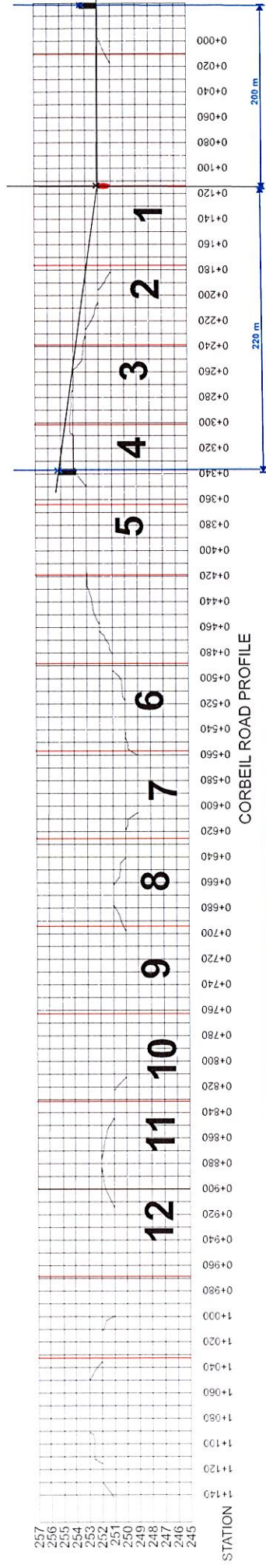


APPENDIX B

AVAILABLE SIGHT LINES

AVAILABLE SIGHT LINES

LOT 1



N.T.S

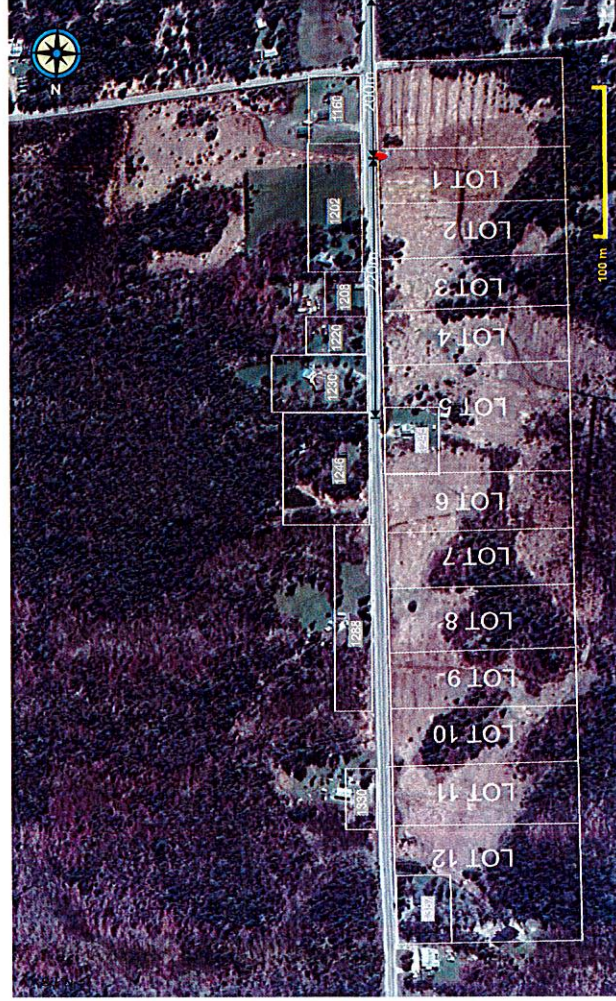
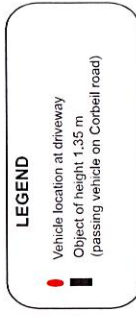
SIGHT LINE REQUIREMENTS

As per TAC Geometric Design Guide for Canadian Roads, 2017, Section 9.9, the Intersection Sight Distance required for a road of design speed 80km/hr:

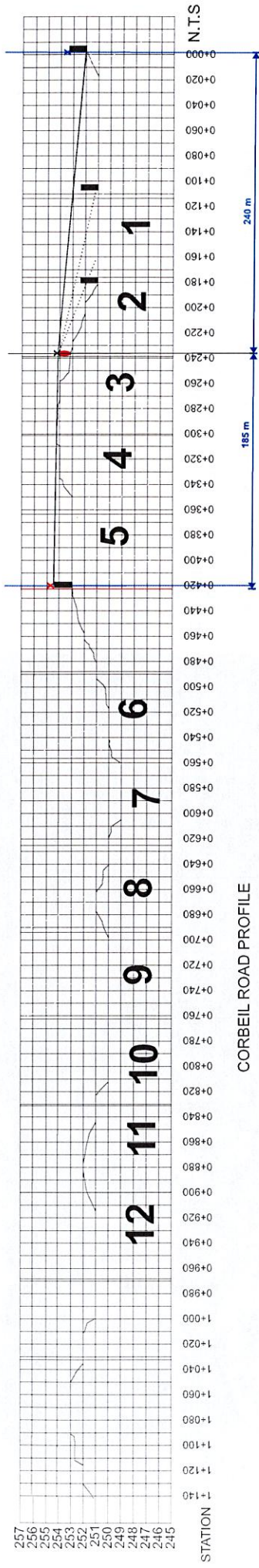
1. For Left turns from minor road = 170 m
2. For Right turns from minor road = 145 m

Available Sight Lines from Lot 1 (when driveway is located at the southern boundary line):

1. For Left turns from minor road = 200 m (measured to the south)
2. For Right turns from minor road = 220m (measured to the north)



LOT 2



CORBEIL ROAD PROFILE

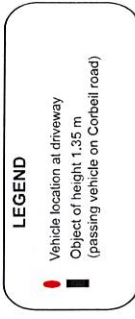
SIGHT LINE REQUIREMENTS

As per TAC Geometric Design Guide for Canadian Roads, 2017, Section 9.9, the Intersection Sight Distance required for a road of design speed 80km/hr:

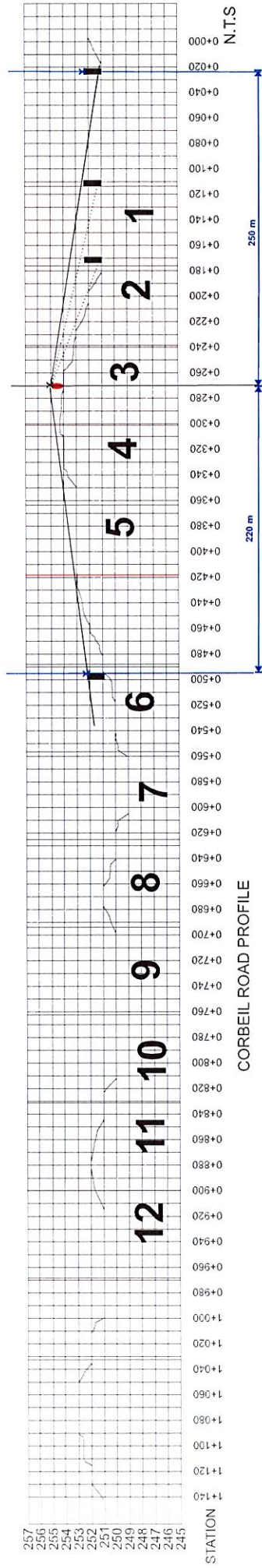
1. For Left turns from minor road = 170 m
2. For Right turns from minor road = 145 m

Available Sight Lines from Lot 2 (when driveway is located at the northern boundary line):

1. For Left turns from minor road = 240 m (measured to the south)
2. For Right turns from minor road = 185 m (measured to the north)



LOT 3



SIGHT LINE REQUIREMENTS

As per TAC Geometric Design Guide for Canadian Roads, 2017, Section 9.9, the Intersection Sight Distance required for a road of design speed 80km/hr:

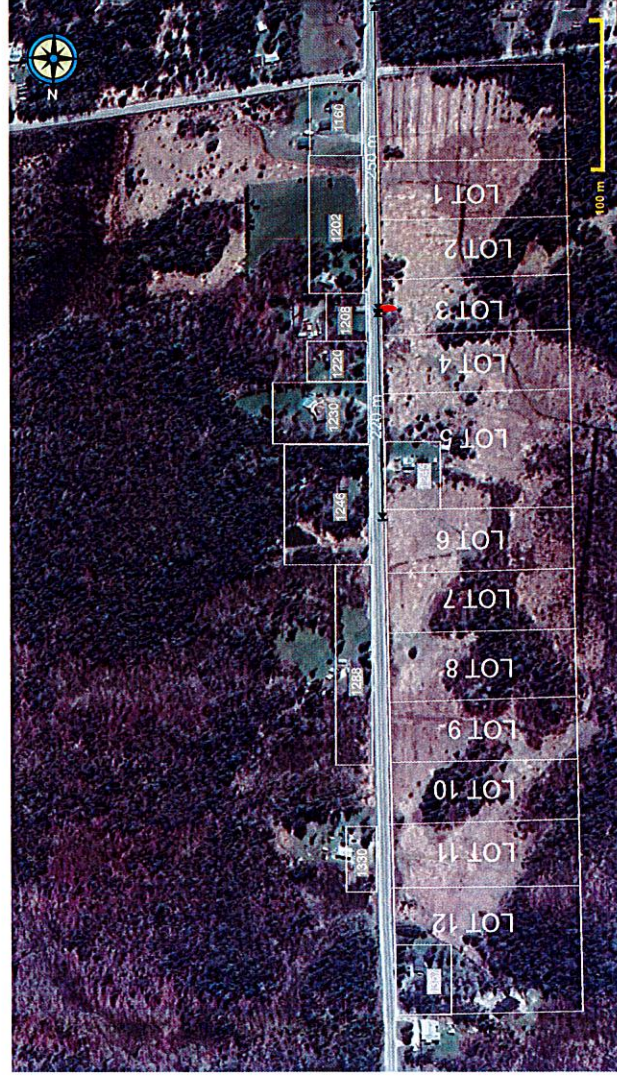
1. For Left turns from minor road = 170 m
2. For Right turns from minor road = 145 m

Available Sight Lines from Lot 3 (when driveway is located opposite 1208 driveway):

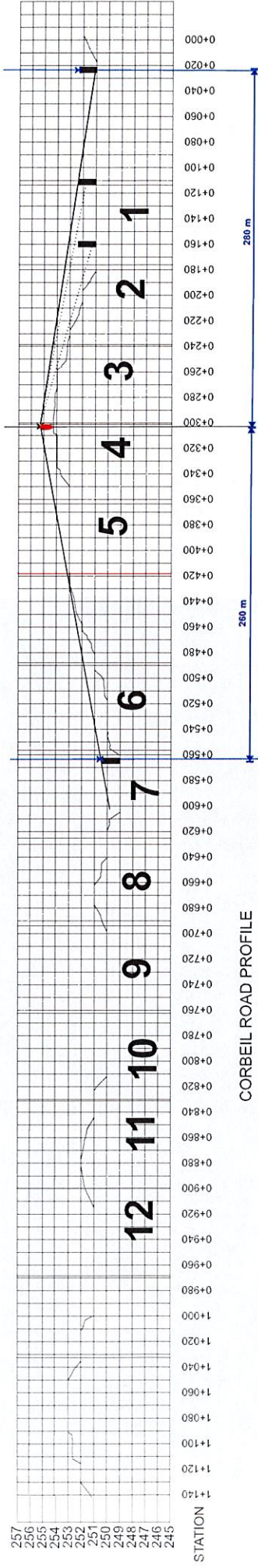
1. For Left turns from minor road = 250 m (measured to the south)
2. For Right turns from minor road = 220 m (measured to the north)

LEGEND

- Vehicle location at driveway
- Object of height 1.35 m (passing vehicle on Corbell road)



LOT 4



N.T.S

SIGHT LINE REQUIREMENTS

As per TAC Geometric Design Guide for Canadian Roads, 2017, Section 9.9, the Intersection Sight Distance required for a road of design speed 80km/hr:

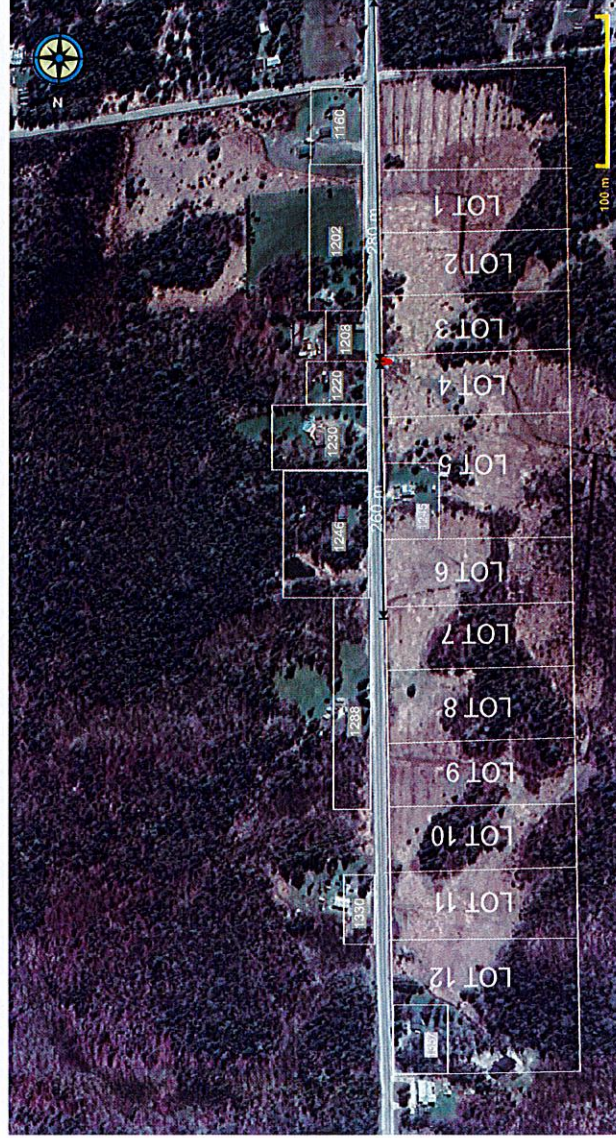
1. For Left turns from minor road = 170 m
2. For Right turns from minor road = 145 m

Available Sight Lines from Lot 4 (driveway location- southern boundary line):

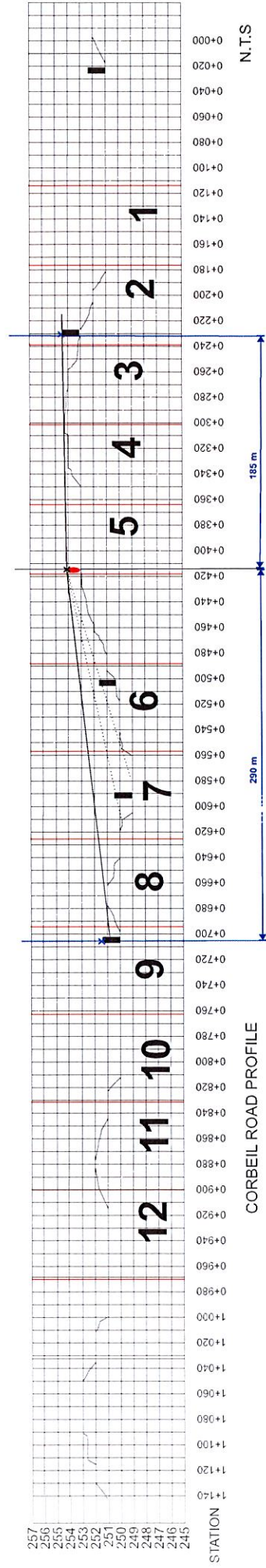
1. For Left turns from minor road = 280 m (measured to the south)
2. For Right turns from minor road = 260 m (measured to the north)

LEGEND

- Vehicle location at driveway
- Object of height 1.35 m (passing vehicle on Corbeil road)



LOT 5



SIGHT LINE REQUIREMENTS

As per TAC Geometric Design Guide for Canadian Roads, 2017, Section 9.9, the Intersection Sight Distance required for a road of design speed 80km/hr:

1. For Left turns from minor road = 170 m
2. For Right turns from minor road = 145 m

Available Sight Lines from Lot 5 (driveway location- northern boundary line):

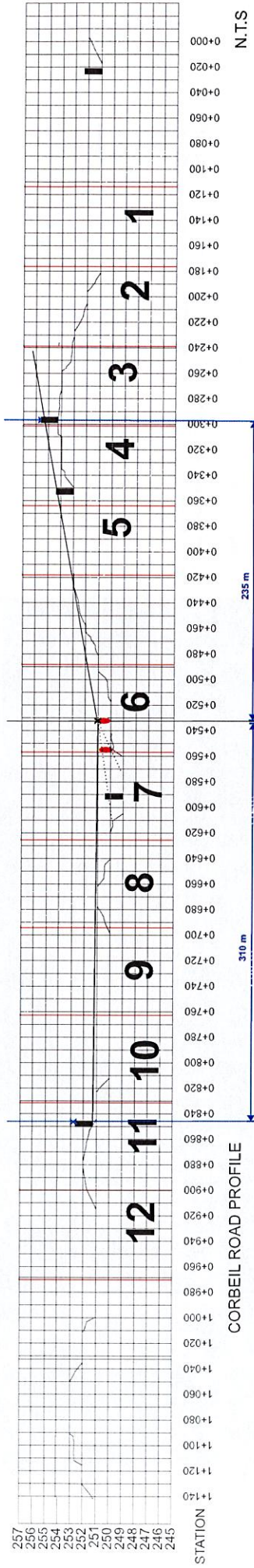
1. For Left turns from minor road = 185 m (measured to the south)
2. For Right turns from minor road = 290 m (measured to the north)

LEGEND

- Vehicle location at driveway
- Object of height 1.35 m (passing vehicle on Corbeil road)



LOT 6



SIGHT LINE REQUIREMENTS

As per TAC Geometric Design Guide for Canadian Roads, 2017, Section 9.9, the Intersection Sight Distance required for a road of design speed 80km/hr:

1. For Left turns from minor road = 170 m
2. For Right turns from minor road = 145 m

Available Sight Lines from Lot 6 (driveway location- northern boundary line):

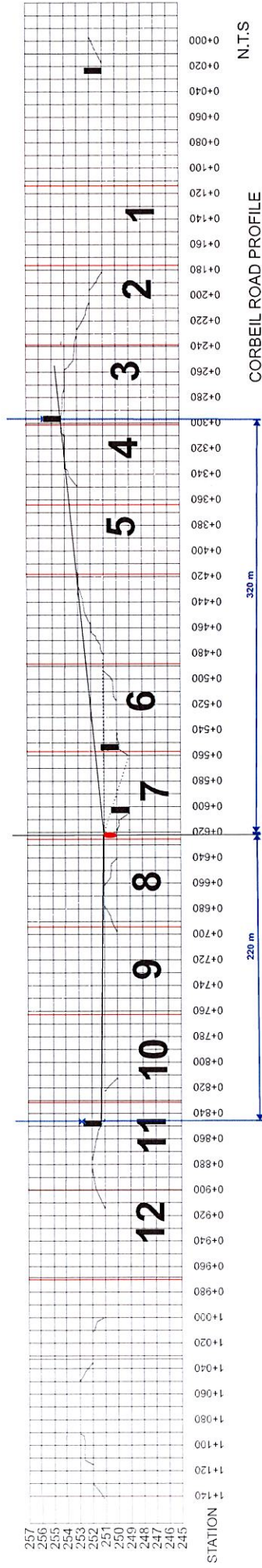
1. For Left turns from minor road = 235 m (measured to the south)
2. For Right turns from minor road = 310 m (measured to the north)

LEGEND

- Vehicle location at driveway
- Object of height 1.35 m (passing vehicle on Corbeil road)



LOT 7



SIGHT LINE REQUIREMENTS

As per TAC Geometric Design Guide for Canadian Roads, 2017, Section 9.9, the Intersection Sight Distance required for a road of design speed 80km/hr:

1. For Left turns from minor road = 170 m
2. For Right turns from minor road = 145 m

Available Sight Lines from Lot 7 (driveway location- northern boundary line):

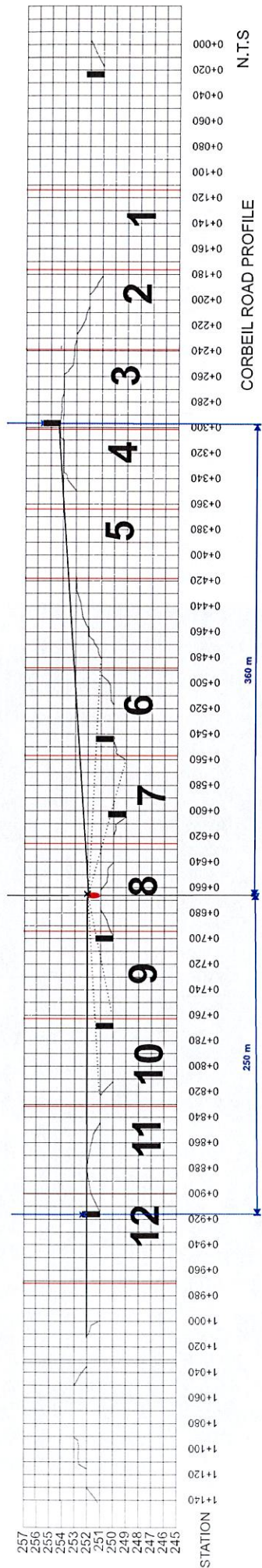
1. For Left turns from minor road = 320 m (measured to the south)
2. For Right turns from minor road = 220 m (measured to the north)

LEGEND

- Vehicle location at driveway
- Object of height 1.35 m (passing vehicle on Corbeil road)



LOT 8



SIGHT LINE REQUIREMENTS

As per TAC Geometric Design Guide for Canadian Roads, 2017, Section 9.9, the Intersection Sight Distance required for a road of design speed 80km/hr:

1. For Left turns from minor road = 170 m
2. For Right turns from minor road = 145 m

Available Sight Lines from Lot 8 (driveway location- opposite 1288 driveway):

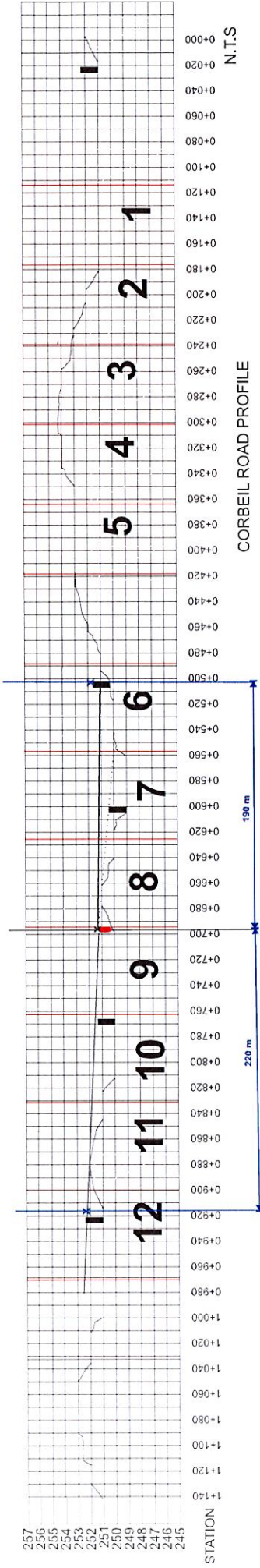
1. For Left turns from minor road = 360 m (measured to the south)
2. For Right turns from minor road = 250 m (measured to the north)



LEGEND

- Vehicle location at driveway
- Object of height 1.35 m (passing vehicle on Corbeil road)

LOT 9



CORBEIL ROAD PROFILE

SIGHT LINE REQUIREMENTS

As per TAC Geometric Design Guide for Canadian Roads, 2017, Section 9.9, the Intersection Sight Distance required for a road of design speed 80km/hr:

1. For Left turns from minor road = 170 m
2. For Right turns from minor road = 145 m

Available Sight Lines from Lot 9 (driveway location- southern boundary line):

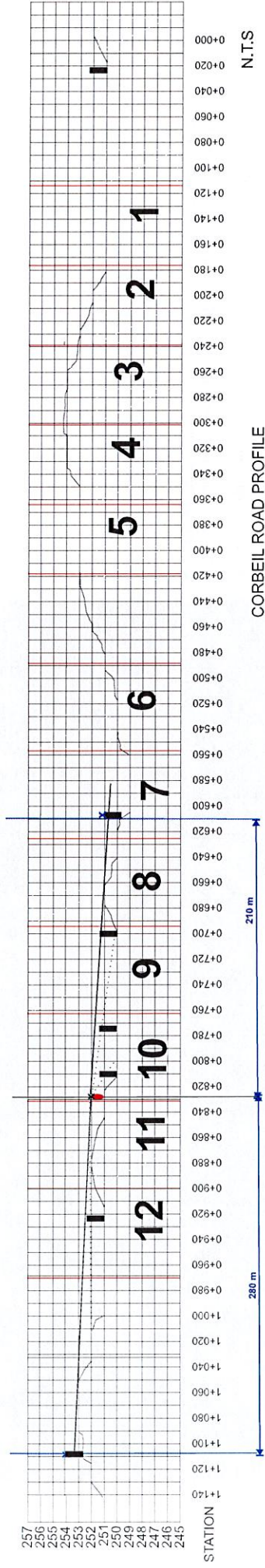
1. For Left turns from minor road = 220 m (measured to the south)
2. For Right turns from minor road = 190 m (measured to the north)

LEGEND

- Vehicle location at driveway
- Object of height 1.35 m (passing vehicle on Corbeil road)



LOT 10



N.T.S

CORBEIL ROAD PROFILE

SIGHT LINE REQUIREMENTS

As per TAC Geometric Design Guide for Canadian Roads, 2017, Section 9.9, the Intersection Sight Distance required for a road of design speed 80km/hr:

1. For Left turns from minor road = 170 m
2. For Right turns from minor road = 145 m

Available Sight Lines from Lot 10 (driveway location- northern boundary line):

1. For Left turns from minor road = 210 m (measured to the south)
2. For Right turns from minor road = 280 m (measured to the north)

LEGEND

- Vehicle location at driveway
- Object of height 1.35 m (passing vehicle on Corbeil road)



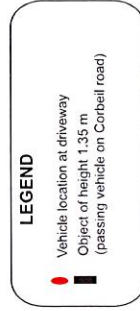


As per TAC Geometric Design Guide for Canadian Roads, 2017, Section 9.9, the Intersection Sight Distance required for a road of design speed 80km/hr:

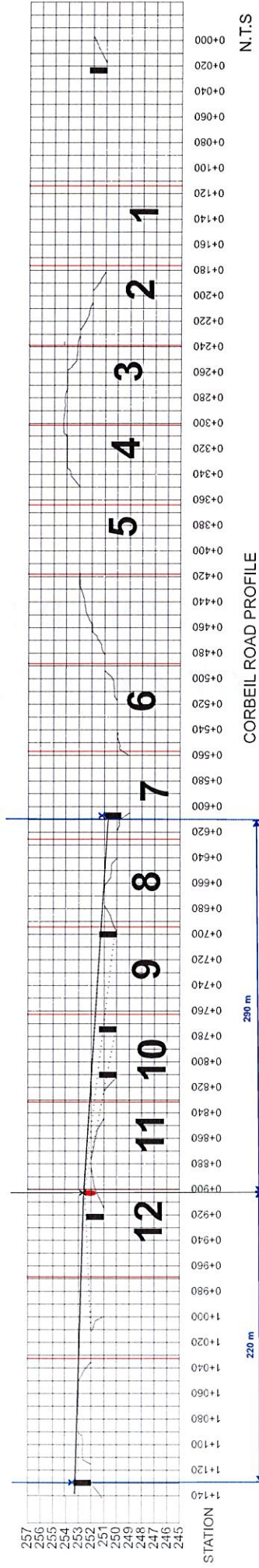
1. For Left turns from minor road = 170 m
2. For Right turns from minor road = 145 m

Available Sight Lines from Lot 11 (driveway location-southern boundary line):

1. For Left turns from minor road = 220 m (measured to the south)
2. For Right turns from minor road = 270 m (measured to the north)



LOT 12



SIGHT LINE REQUIREMENTS

As per TAC Geometric Design Guide for Canadian Roads, 2017, Section 9.9, the Intersection Sight Distance required for a road of design speed 80km/hr:

1. For Left turns from minor road = 170 m
2. For Right turns from minor road = 145 m

Available Sight Lines from Lot 12 (driveway location- southern boundary line):

1. For Left turns from minor road = 290 m (measured to the south)
2. For Right turns from minor road = 220 m (measured to the north)

LEGEND

- Vehicle location at driveway
- Object of height 1.35 m (passing vehicle on Corbeil road)



APPENDIX C

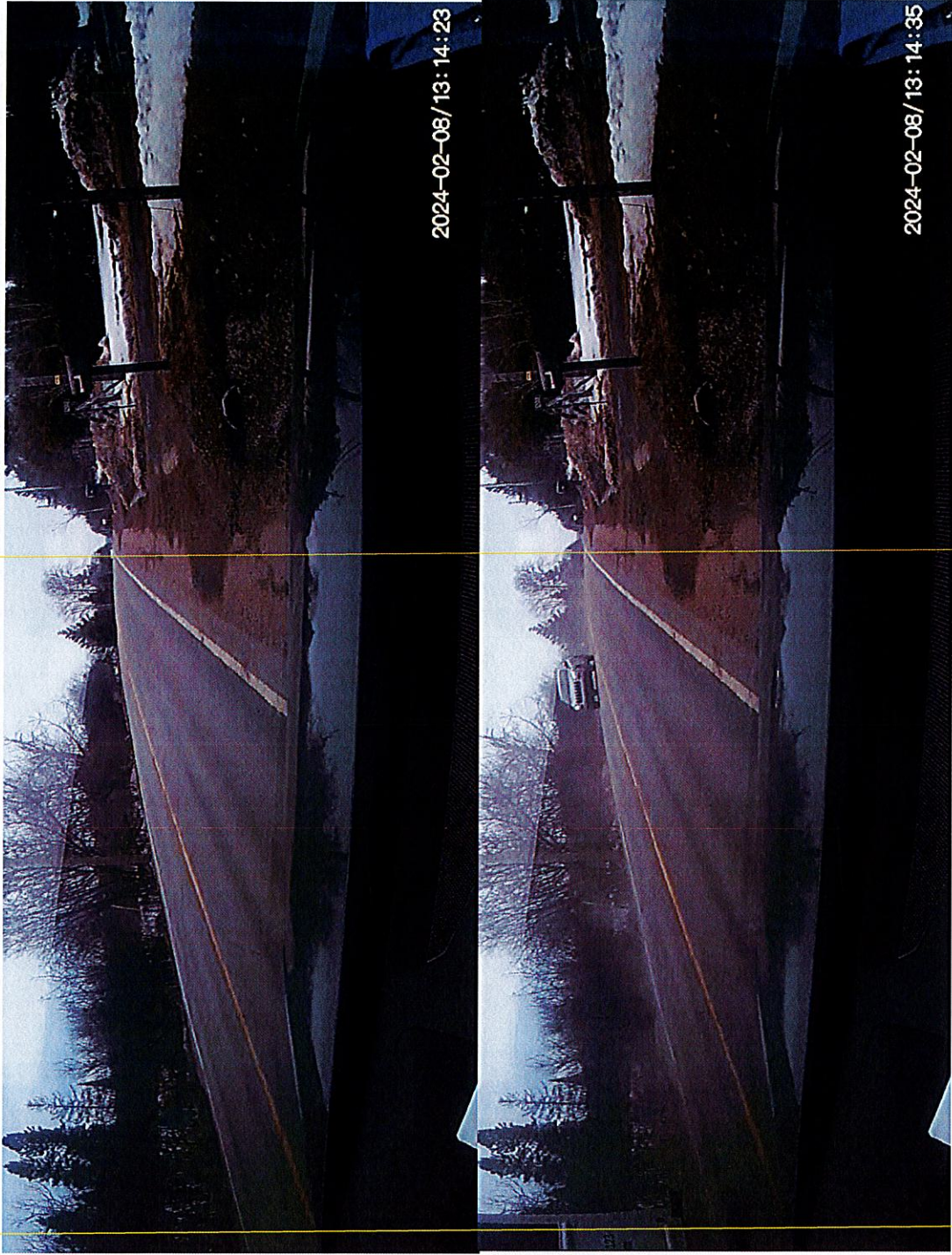
TIME GAP MEASUREMENTS (LOT 2 & LOT 5)



Looking North
(right turn for Lot 2)

TRAVEL DISTANCE = APPROXIMATELY 140 M

0.06
0.08
0.08
0.07
0.08
0.07
0.07
0.08
0.07
0.07
0.10
0.09
0.08
0.09
0.09
0.13 school bus
0.07
0.10
0.07
0.10
0.07
0.12 truck
0.08 Average



GAP TIME

[illegible]

A 2x2 grid of four images. The top-left image shows a blue car parked on a paved road, viewed from the side. The top-right image shows the same blue car from a front-three-quarter perspective. The bottom-left and bottom-right images show a field of tall, dry, brown grass. A timestamp '02/08/2024 12:23:09' is overlaid on the bottom-right image.

0.12
0.11
0.10
0.11
0.12
0.10
0.11
0.10
0.11
0.10
0.10
0.14 school bus
0.10
0.11
0.12
0.10
0.10
0.11
0.14 Truck
0.12
0.10
0.11
0.11 Average