

File 323927

March 1, 2024

Brittany Lowry
2959 Crane Avenue
Waubauskene, Ontario L0K 2C0
samlowry1964@gmail.com

Re: 65 Nettleton Drive, Penetanguishene
Traffic Impact Review

Dear Brittany:

We have prepared this letter to review the traffic impacts associated with the proposed development at 65 Nettleton Drive in the Town of Penetanguishene, as illustrated in Figure 1. It is our understanding that the existing property will be severed (forming one new lot fronting onto Nettleton Drive) with the intent of constructing a single residential unit on each lot. Recognizing that this development is expected to have a minimal impact on the surrounding road network, the scope of our review has been limited to the following:

- a review of the anticipated trip generation of the proposed development;
- a review of the available sight lines on Nettleton Drive and Scott Street; and
- a vehicle swept path assessment for each driveway.

Our findings are detailed below.

STUDY AREA

The road network to be addressed by this study consists of Nettleton Drive and Scott Street, which are both local roads under the jurisdiction of the Town of Penetanguishene (per *Schedule C - Transportation Network* of the *Town of Penetanguishene Official Plan*¹).

Nettleton Drive

Nettleton Drive is a paved single lane road which currently provides primary access to two residential properties fronting Nettleton Drive (67 and 71 Nettleton Drive, both of which are west of the subject site), and rear access to two residential properties fronting Robert Street West (75 Robert Street West which is

¹ *Town of Penetanguishene Official Plan*. WSP, November 2018.

west of the subject site, and 69 Robert Street West which is opposite the subject site; both of these units have primary access via Robert Street West). The road terminates in a dead end approximately 150 metres west of Scott Street, or 90 metres west of the site (measured from centre of site to end of road).

The road has a right-of-way width of 5.0 metres with a paved width of approximately 3.5 metres, providing similar function to a laneway or private residential driveway. A speed limit is not posted on the road – given the noted characteristics, a speed limit of 20 km/h has been assumed.

Scott Street

Scott Street is a paved two-lane road with a posted speed limit of 40 km/h. The road has an urban cross-section (i.e. curb and gutter) with a concrete sidewalk on the east side of the road. Scott Street has a paved width of approximately 8.5 metres.

SITE TRAFFIC

Trip Generation

As noted, the proposed development will consist of two new single-family residential units. An estimate of the trips to be generated by this development during the weekday AM and PM peak periods is provided in Table 1. The estimate has considered the type of development, size, and trip generation rates as per the *ITE Trip Generation Manual, 11th Edition*². Based on the type of development proposed, trips rates for the *single family detached* (ITE land-use code 210) land use have been applied. As indicated, the proposed development is anticipated to generate 1 to 2 peak hour trips.

Table 1: Trip Estimates – 65 Nettleton Drive

LAND USE	VARIABLE/ SIZE	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		In	Out	Total	In	Out	Total
single family detached (ITE 210)	per unit	0.18	0.52	0.70	0.59	0.35	0.94
	2 units	0	1	1	1	1	2

Traffic Impacts

Given the minimal development currently served by Nettleton Drive and very low volumes to be generated by the site, the proposed development is not expected to have a material impact on the operations of the surrounding road network. Nettleton Drive, while providing a narrow platform, will continue to operate as it currently does, with inbound and outbound traffic yielding as necessary to oncoming traffic.

² *Trip Generation Manual, 11th Edition*. Institute of Transportation Engineers. September 2021.



Recognizing that the road serves a single land-use (i.e. residential lots), there is no contradiction in the peak traffic flow – peak outbound traffic occurs during the AM peak hour, whereas peak inbound traffic occurs during the PM peak hour. Instances where inbound and outbound traffic conflict will be minimal. As residents are aware of the constraints, yielding when necessary is considered within normal driver expectation for residents using the road.

The intersection of Nettleton Drive with Scott Street is a low volume residential intersection. While inbound vehicles may have to delay entry should there be an outbound vehicle waiting to exit onto Scott Street, the wait time will be minimal as the exit movement from Nettleton Drive to Scott Street will occur with little to no delay given the limited volumes on the overall network (i.e. exiting traffic will clear quickly). As noted above, peak outbound and inbound flows will not overlap, thus instances of delay due to opposing traffic will be minimal at best.

In consideration of the above, no road network improvements are required to accommodate the proposed development.

SIGHT LINES

Sight lines along Nettleton Drive across the site frontage and along Scott Street at its intersection with Nettleton Drive were reviewed in context of Transportation Association of Canada (TAC) standards. The assessment has considered minimum stopping sight distance, defined as follows:

- the minimum stopping sight distance provides sufficient distance for an approaching motorist to observe a stationary hazard in the road and bring their vehicle to a complete stop prior to the hazard.

The minimum stopping sight distance (SSD) requirements for design speeds of 30 km/h and 50 km/h (reflective of the noted speed limits on each road) are 35 and 65 metres respectively. The available sight distances along Nettleton Drive and Scott Street (as determined through field measurements) are summarized in Table 2 and illustrated in Figure 2.

As indicated, the sight lines along Nettleton Drive to/from the east and west at the proposed driveways and along Scott Street to/from the north and south at Nettleton Drive satisfy the noted TAC requirements. As such, the available sight lines are considered adequate.



Table 2: Available Sight Distance

LOCATION	DESIGN SPEED	AVAILABLE SIGHT DISTANCE TO/FROM			
		North	South	East	West
Nettleton Drive					
at west driveway	30 km/h	-	-	70 m	75 m
at east driveway	30 km/h	-	-	45 m	100 m
Scott Street					
at Nettleton Drive	50 km/h	80 m	70 m	-	-

VEHICLE SWEEP PATH ASSESSMENT

To ensure that sufficient manoeuvring space is provided for design vehicles (i.e. private automobiles) to navigate in/out of the proposed driveways, a vehicle turning assessment was completed for each proposed driveway. Results of the turning assessments are illustrated in Appendix A.

As indicated, sufficient manoeuvring space is provided at each proposed driveway to navigate typical private vehicles to/from Nettleton Drive.

SUMMARY

This letter has reviewed the traffic impacts of the development proposed for the property at 65 Nettleton Drive in the Town of Penetanguishene. Based on the findings of the review:

- trip generation of the proposed development will be minimal, with no material impacts to the adjacent road network;
- no road network improvements are required to accommodate the proposed development;
- sight lines along Nettleton Drive to/from each proposed driveway are adequate;
- sight lines along Scott Street to/from Nettleton Drive are adequate; and
- sufficient manoeuvring space is provided for typical private automobiles to navigate to/from each proposed driveway.



CLOSING

Should you have any questions regarding the above, please do not hesitate to contact us directly.

Yours truly,

Tatham Engineering Limited



Matthew Buttrum B.Eng., EIT
Engineering Intern
MJB/DP: mjb



David Perks M.Sc., PTP
Transportation Planner, Group Leader

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Source: opengis.simcoe.ca

65 NETTLETON DRIVE TRAFFIC REVIEW

Figure 1: Site Location





65 NETTLETON DRIVE TRAFFIC REVIEW

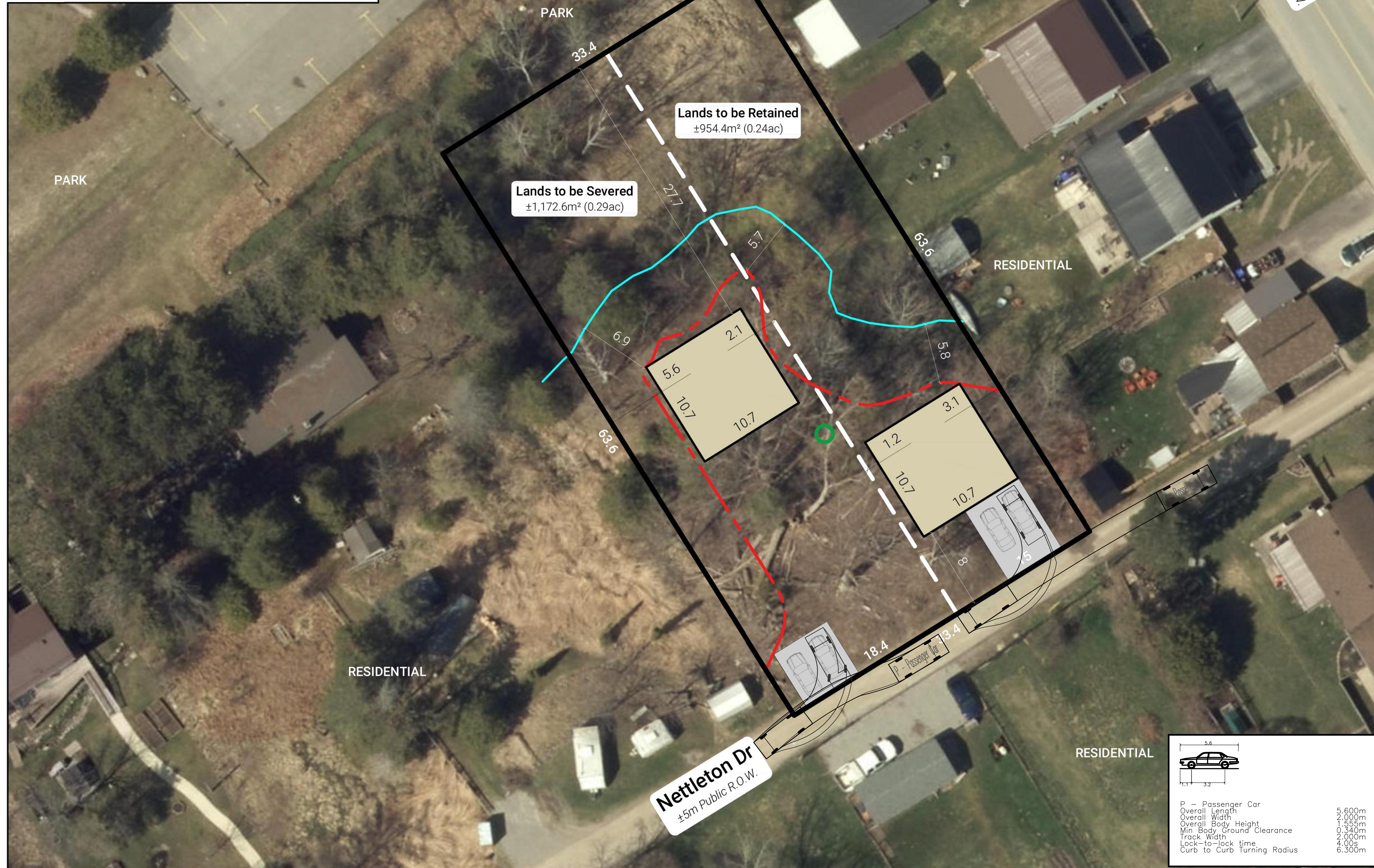
Figure 2: Sight Lines



APPENDIX A: VEHICLE TURNING TEMPLATES



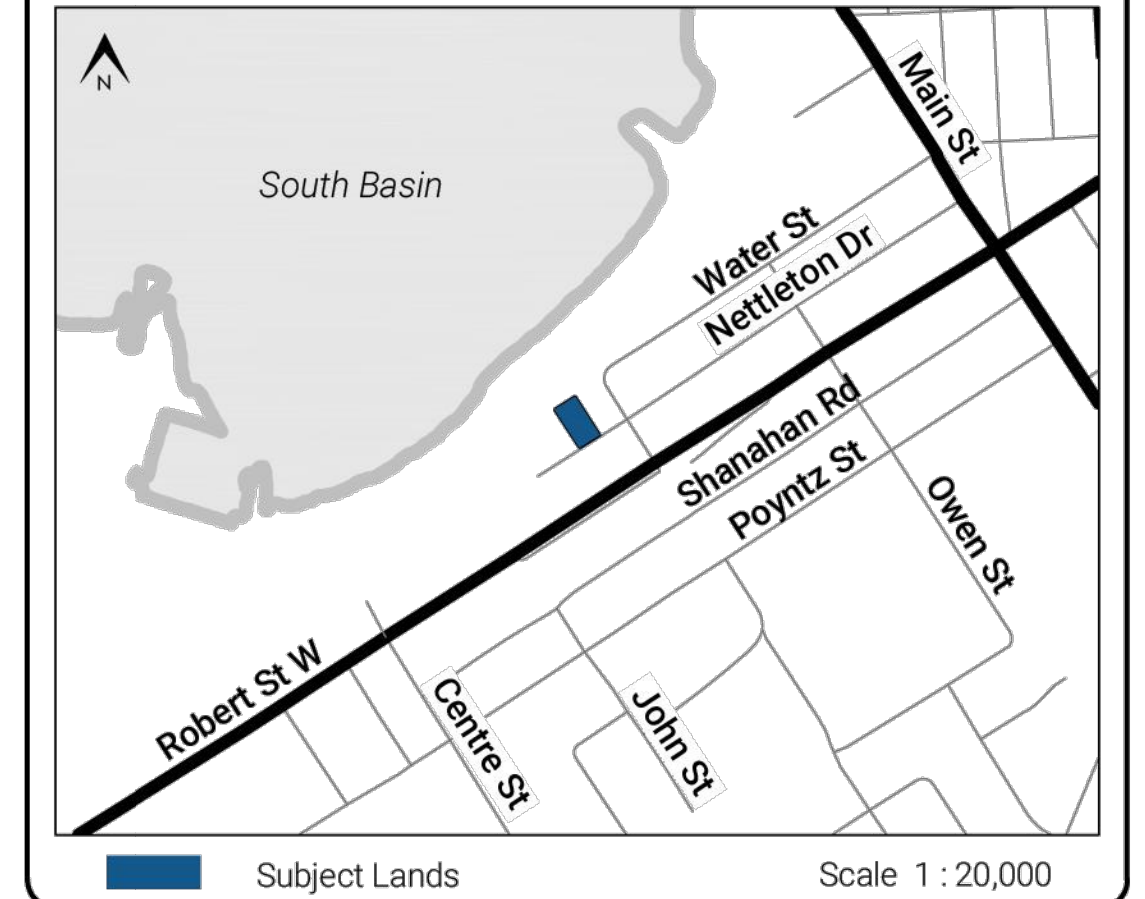
Zone Matrix	Residential One (R1) (ZBL 2022-17)	PROPOSED
Lot Area (min)	460m ²	±954.4m ² (0.24ac)
Lot Frontage (min)	15m	±15.0m
Lot Coverage (max)	35%	<12%
Front Yard (min)	6.0m	8.0m
Side Yard (min)	1.2m	1.2m
Rear Yard (min)	7.5m	±27.7m
Building Height (max)	11.0m	<11.0m



CONCEPT PLAN 'B'

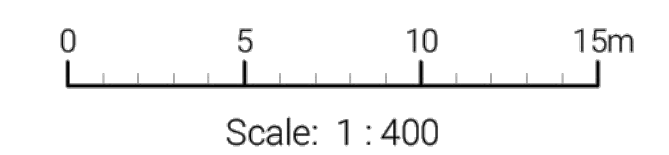
65 Nettleton Drive

Part of Lot 116, Concession 1 W of Penetanguishene Rd
Penetanguishene, County of Simcoe



LEGEND

- Subject Lands
Lot Area: ±2,127.0m² (0.53ac)
Lot Frontage: ±33.4m
- Lands to be Severed
Lot Area: ±1,172.6m² (0.29ac)
Lot Frontage: ±18.4m
- Lands to be Retained
Lot Area: ±954.4m² (0.24ac)
Lot Frontage: ±15.0m
- Limit of Development
- Proposed Building Footprint
- Bat Snag - High Quality
- Watercourse



Note: This drawing is for discussion purposes only.
Boundary to be verified by an O.L.S.

Source: Environmental Constraints sketch, Azimuth Environmental
Consultants Inc, October 2022.
County of Simcoe interactive map.

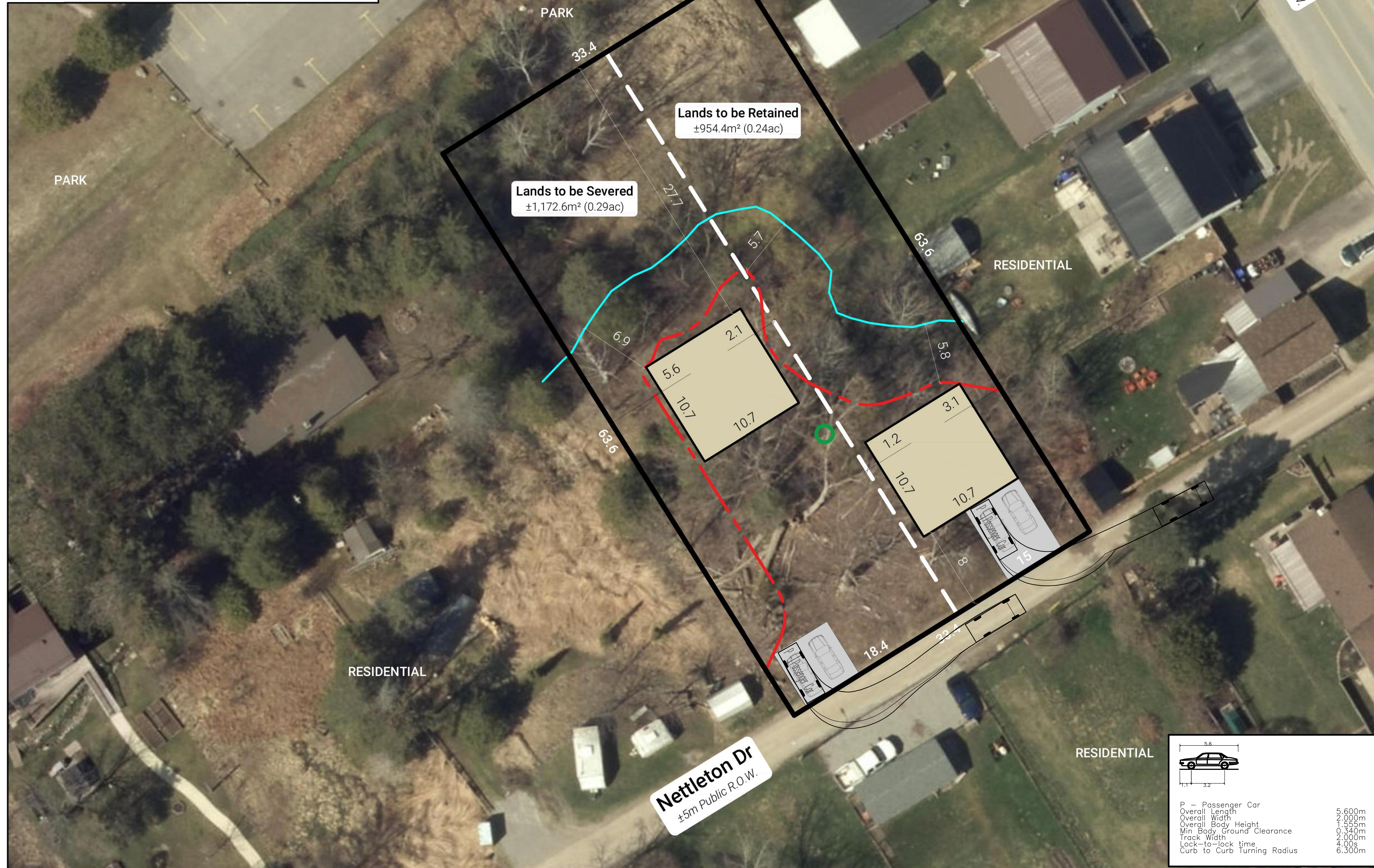
Drawn By: A.M. Date: September 20, 2023 File No: 1332



98 Tecumseth Street, Phone: (705) 327-1873
Orillia, ON, L3V 1Y2 jmorgan@morganplanning.ca

	5.600m
P - Passenger Car	2.000m
Overall Length	1.555m
Overall Width	0.340m
Overall Body Height	2.000m
Min. Body Ground Clearance	4.00s
Track Width	4.00s
Lock-to-lock time	6.300m
Curb to Curb Turning Radius	

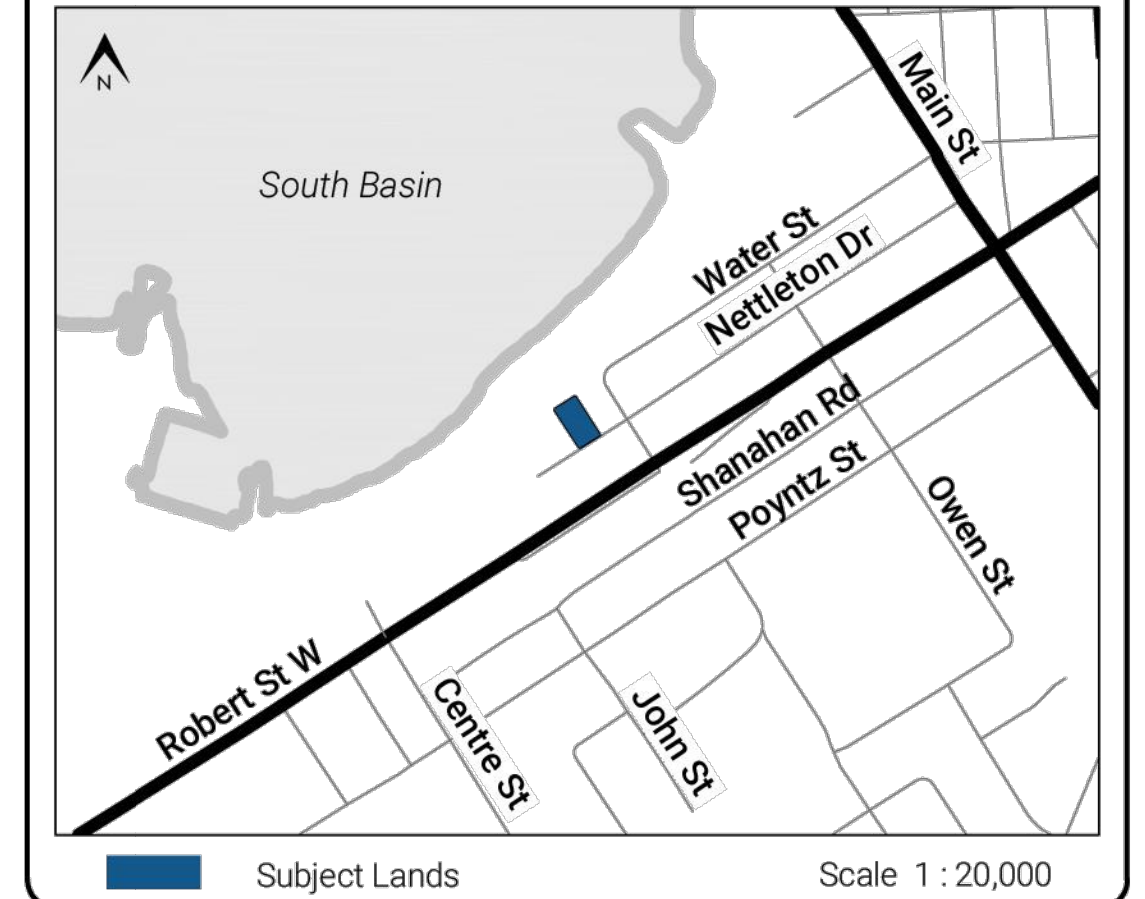
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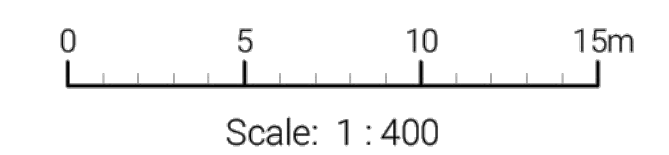
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