



August 25, 2021

268499 Ontario Limited
23 Lesmill Road, Suite 111
Toronto, Ontario, M3B 3P6

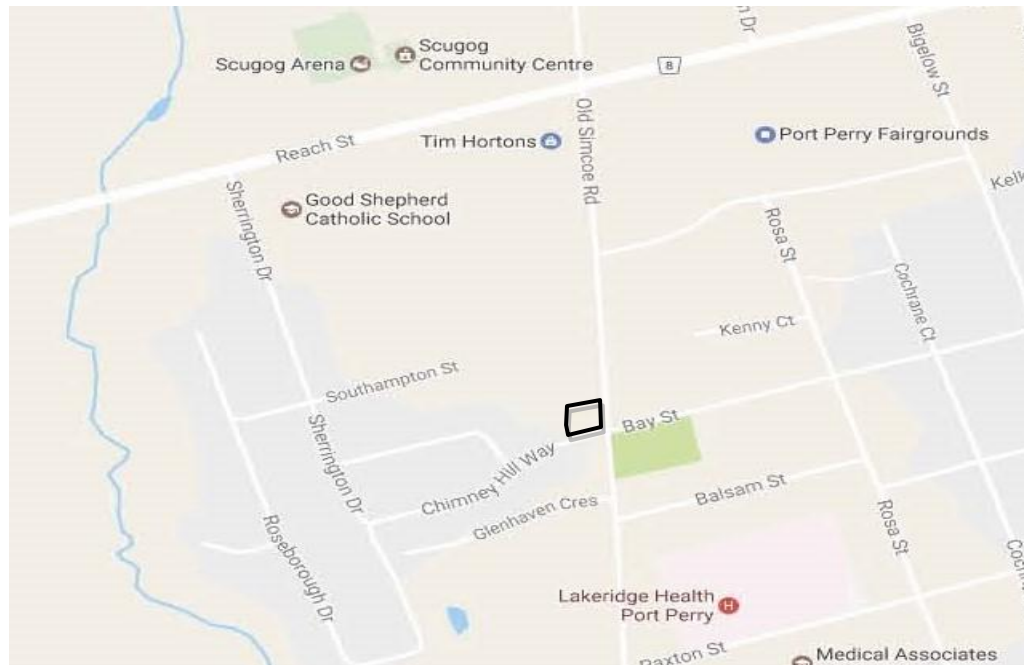
Attention: Mr. David Brand

**Re: Environmental Noise Assessment -Updated
268499 Ontario Limited (Residential Development)
Chimney Hill Way and Old Simcoe Road
Township of Scugog
Project No. Y1639A**

INTRODUCTION

We are pleased to submit for your review a letter describing the results of our investigation of the noise environment for the above noted site based on the attached latest Site Plan prepared by HUNT Design Associates Inc. The present report recommends noise abatement measures to meet the sound levels acceptable to the Regional of Durham, Township of Scugog and the Ministry of Environment.

The proposed development will be comprised of two townhouse blocks and one detached dwelling. The surrounding land uses are existing and proposed residential developments with commercial developments east of Old Simcoe Road. The location of the proposed residential development is further indicated by the key plan below.



NOISE SOURCES

The study addresses noise generated by vehicular traffic on Old Simcoe Road to the east, adjacent to the proposed severed residential lots in the Township of Scugog. Noise generated by Reach Street is not expected to be significant due to distance separation.

Old Simcoe Road is a Collector Road based on Township of Scugog's Official Plan which needs to be assessed for noise study purposes as per the MOE noise guidelines. The ultimate traffic data was not available for Old Simcoe Road traffic at the Township of Scugog, however the 2011 traffic count was 10,260 AADT. Assuming an area growth rate of 1.6%, the 10 year projection traffic volume is expected to be 13,250 AADT for Old Simcoe Road.

The traffic data for Old Simcoe Road is summarized in Table 1 below.

TABLE 1: OLD SIMCOE ROAD TRAFFIC DATA	
Projected Annual Average Daily Traffic *	13,250
Percent Trucks	5%
Heavy and Medium trucks ratio	50:50
Speed (km/hr)	50
Number of Lanes	4

* The projected traffic data for the year 2027. Traffic counts provided by the Township of Scugog.

Port Perry Curling Club and the Royal Canadian Legion Branch office is located east of Old Simcoe Road. The Durham Health Services with medical buildings at approximately 200m to the southeast. Due to the nature of activities and distance separation, the noise impact from these commercial activities and the Health Centre are expected to be acoustically insignificant and meet the sound level limits at the proposed residential development.

Sound levels were calculated using the Ministry of Environment's Stamson 5.04 computer based noise prediction model and evaluated with the sound level criteria and recommended by the Ministry of Environment. Table 2 lists the unattenuated sound levels.

TABLE 2: UNATTENUATED SOUND LEVELS					
LOCATION		DISTANCE TO CENTRELINE OF ROAD (m)	DAYTIME (16 Hr. Leq (dBA))		NIGHT-TIME (8 Hr. Leq (dBA))
			REAR YARD	DWELLING WALL	SECOND STOREY
Block 1	Front Wall	17.5*	-	63.60	57.28
	Balcony	28.0*	<55	-	-
Block 2	Side Wall	48.0*	-	56.69	50.77
	Rear Yard	65.0*	<55	-	-
Detached House	Side Wall	70.0*	-	52.71	46.93

* Old Simcoe Road

VENTILATION REQUIREMENTS

Based on the noise analysis, residential Blocks 1 and 2 (All Units) must be constructed with a forced air heating system with ducting sized to accommodate an air conditioning unit, in order to allow the homeowner the option of installing air conditioning should he or she wish to do so in the future as per Table 2 sound level results with the addition of Warning Clause Type C.

Warning Clause TYPE C:

"This unit was fitted with ducting sized to accommodate an air conditioning unit to allow windows and exterior doors to be kept closed, thereby achieving indoor sound levels within the limits recommended by the Ministry of Environment".

OUTDOOR MEASURES

The outdoor amenity areas for Block 1 are the balconies above the garages facing away from the noise source (Old Simcoe Street) to the west. The outdoor amenity areas for Block 2 and the detached dwelling are the rear yards.

The daytime rear yard sound level at all the outdoor amenity areas are expected to be below 55dBA in the absence of mitigative measures. Therefore, noise mitigation measures are not required.

However, we recommend the following warning clause Type A to be incorporated into the Development Agreement.

Warning Clause TYPE A:

"Purchasers/tenants are advised that the sound levels due to increasing road traffic may continue to be of concern, occasionally interfering with the activities of the occupants as the noise levels may exceed the noise criteria of the Municipality and the Ministry of the Environment."

BUILDING COMPONENTS

Building components within the proposed development were investigated using the STC (Sound Transmission Class) method recommended by the M.O.E.

Although the detailed floor plans are not yet available for the proposed development, the following general comments can be made at this time: a living, dining or recreation room is located at the side of the house closest to the roadway and contains three components (two exterior walls at 80% of floor area and a set of windows at 25% of the floor area).

In order to ensure acceptable daytime indoor sound levels, the various building components must provide a STC rating of 27 for windows and a STC rating of 34 for the exterior wall construction and for night-time second storey sound levels, the various building components must provide a STC rating of 24 for windows and a STC rating of 31 for exterior wall construction.

STC ratings of 30 or less for windows and STC ratings of 38 or less for exterior walls are standard Ontario Building Code (OBC) construction, therefore standard windows and exterior wall constructions are sufficient for all blocks and lot within this development.

SUMMARY AND CONCLUSION

The summary of recommendations for ventilation, building components, outdoor control measures and warning clauses are included in Table 3:

TABLE 3: SUMMARY OF NOISE MITIGATION MEASURES				
LOCATION	VENTILATION REQUIREMENT	BUILDING COMPONENTS	SOUND BARRIERS	WARNING CLAUSES
Blocks 1 and 2 (All Units)	Provision for air Conditioning	Walls: OBC* Windows: OBC	No	Type A and C
Detached House	No Requirements			

* OBC: Ontario Building Code Standard.

This report has determined that sound levels acceptable to the Ministry of Environment, Conservation and Parks, Township of Scugog and the Regional Municipality of Durham will be achieved using the abatement measures as described in this Environmental Noise Assessment.

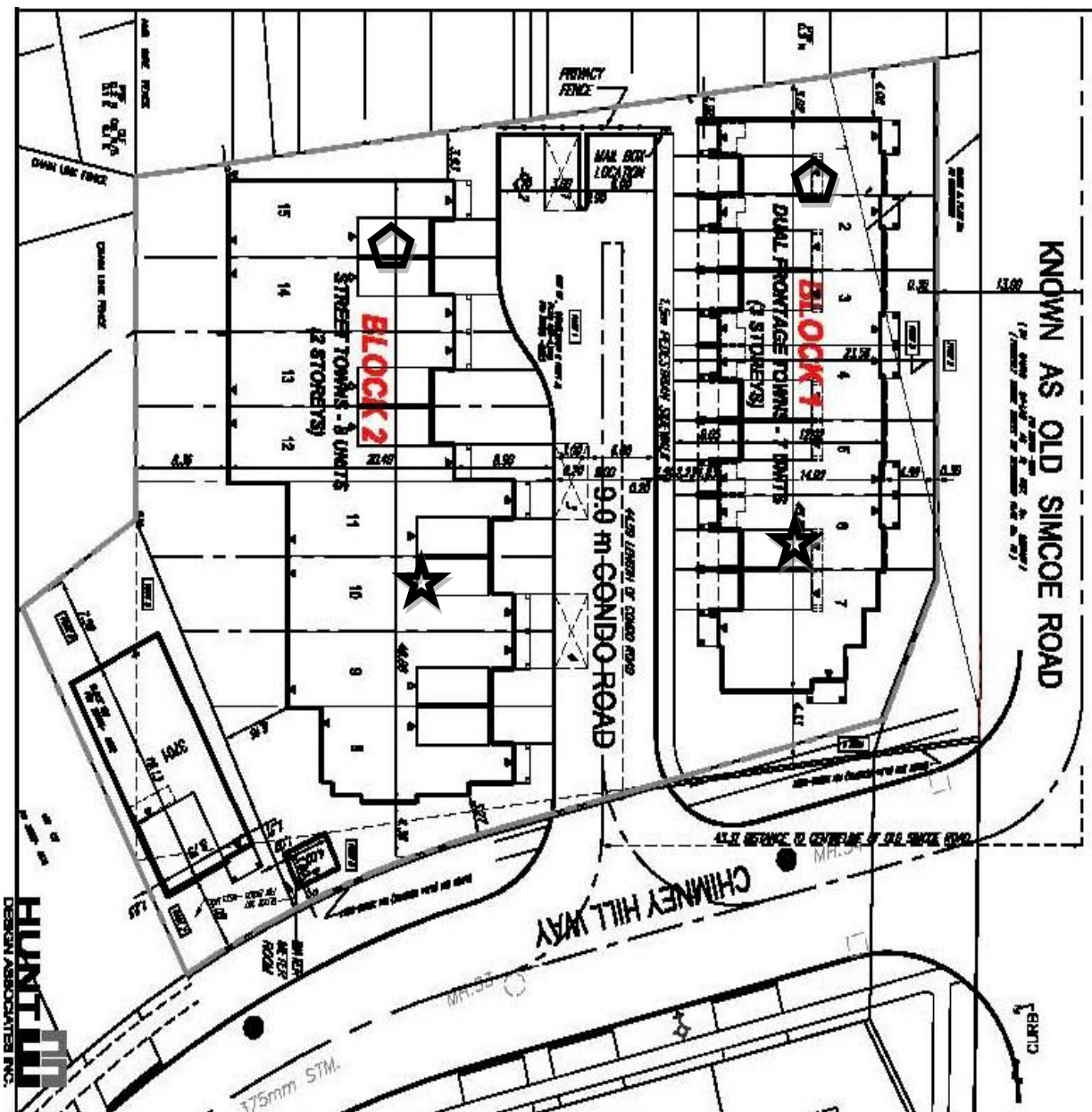
Should you have any questions regarding this report, please contact the undersigned.

Yours truly,

YCA ENGINEERING Limited

Hava Jouharchi, P.Eng.
Senior Project Engineer





LEGEND:

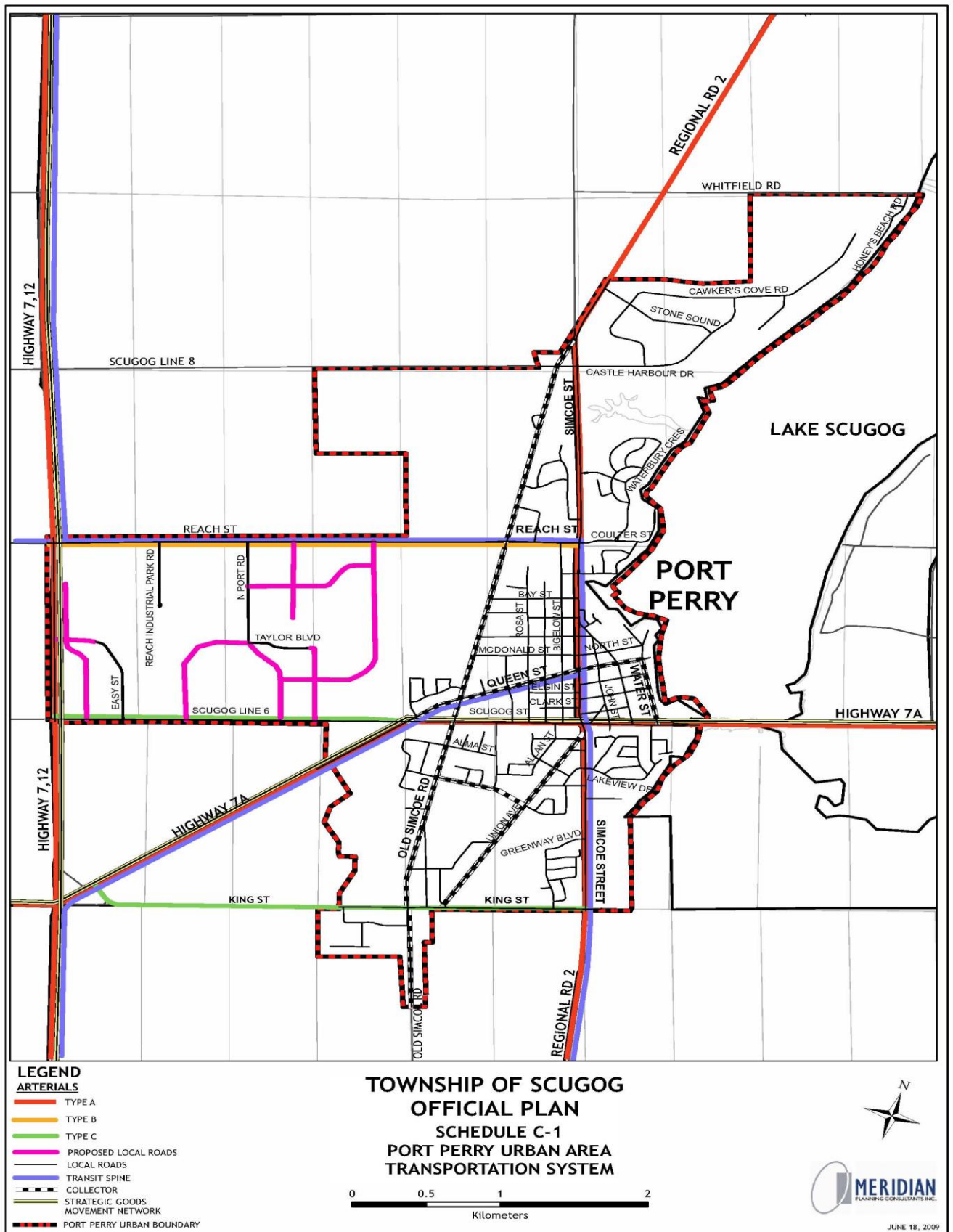
Provision for Air Conditioning
and Warning Clause C

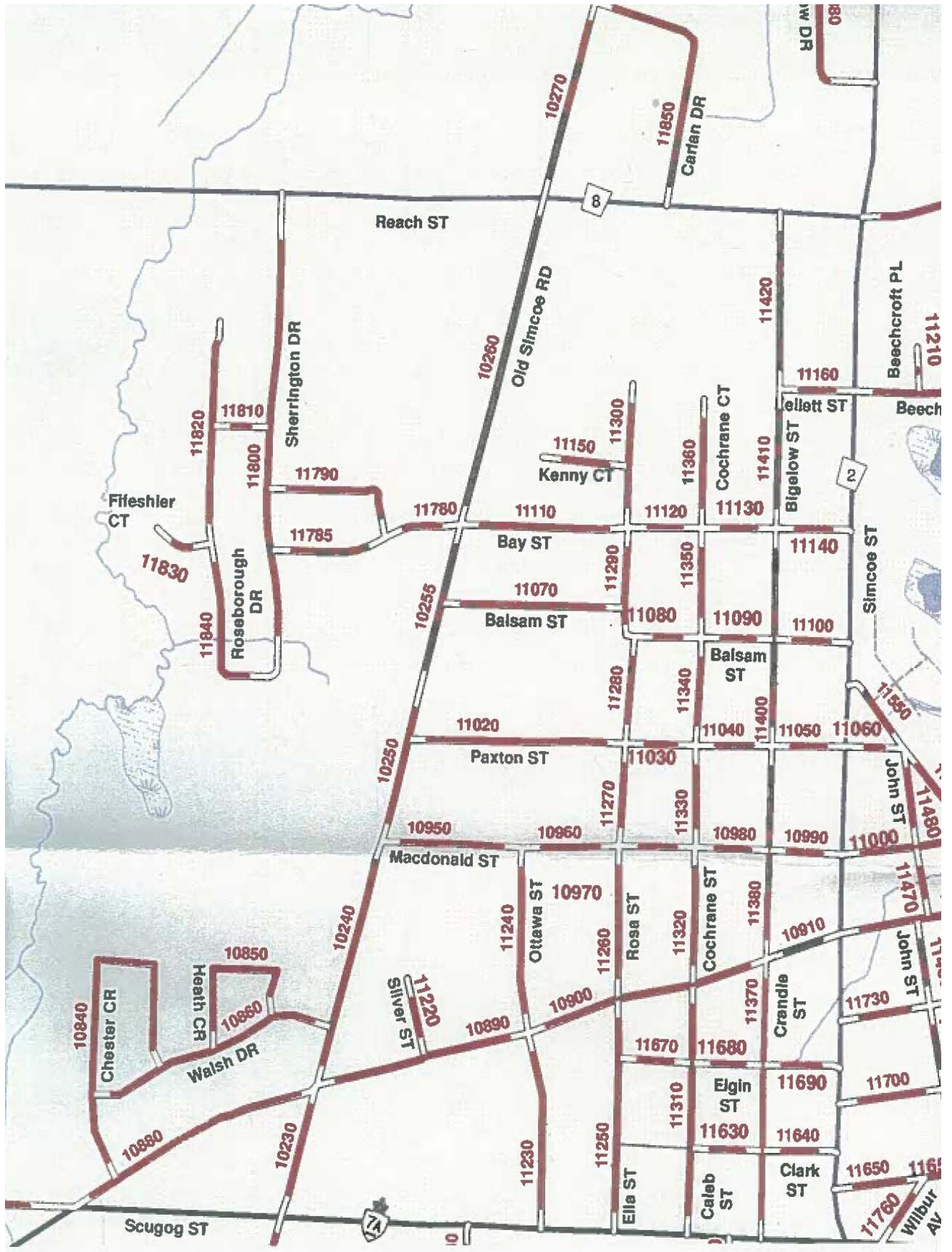


Warning Clause Type A



**FIGURE 1 - 268499 ONTARIO LIMITED
Residential Development
NOISE MITIGATION MEASURES**





STAMSON 5.0 SUMMARY REPORT Date: 16-08-2021 08:34:36
 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT
 Filename: bklfw.te Time Period: Day/Night 16/8 hours
 Description: Block 1, Front Wall

Road data, segment # 1: Old Simcoe R (day/night)

```
-----
Car traffic volume : 11329/1259 veh/TimePeriod *
Medium truck volume : 298/33 veh/TimePeriod *
Heavy truck volume : 298/33 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)
* Refers to calculated road volumes based on the following input:
  24 hr Traffic Volume (AADT or SADT): 13250
  Percentage of Annual Growth : 0.00
  Number of Years of Growth : 0.00
  Medium Truck % of Total Volume : 2.50
  Heavy Truck % of Total Volume : 2.50
  Day (16 hrs) % of Total Volume : 90.00
-----
```

Data for Segment # 1: Old Simcoe R (day/night)

```
-----
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 17.50 / 17.50 m
Receiver height : 4.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
-----
```

Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----+-----
1.Old Simcoe R ! 1.26 ! 63.60 ! 63.60
-----+-----+-----+-----
Total 63.60 dBA
-----
```

Result summary (night)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----+-----
1.Old Simcoe R ! 1.26 ! 57.28 ! 57.28
-----+-----+-----+-----
Total 57.28 dBA
-----
```

TOTAL Leq FROM ALL SOURCES (DAY): 63.60
 (NIGHT): 57.28

STAMSON 5.0 SUMMARY REPORT Date: 16-08-2021 08:35:33
 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT
 Filename: bklola.te Time Period: Day/Night 16/8 hours
 Description: Block 1, OLA

Road data, segment # 1: Old Simcoe R (day/night)

 Car traffic volume : 11329/1259 veh/TimePeriod *
 Medium truck volume : 298/33 veh/TimePeriod *
 Heavy truck volume : 298/33 veh/TimePeriod *
 Posted speed limit : 50 km/h
 Road gradient : 2 %
 Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 13250
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 2.50
 Heavy Truck % of Total Volume : 2.50
 Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Old Simcoe R (day/night)

 Angle1 Angle2 : -90.00 deg 35.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 28.00 / 28.00 m
 Receiver height : 1.50 / 7.50 m
 Topography : 2 (Flat/gentle slope; with barrier)
 Barrier angle1 : -90.00 deg Angle2 : 35.00 deg
 Barrier height : 4.00 m
 Barrier receiver distance : 2.00 / 2.00 m
 Source elevation : 0.00 m
 Receiver elevation : 2.80 m
 Barrier elevation : 2.80 m

Data for Segment # 2: Old Simcoe R (day/night)

 Angle1 Angle2 : 35.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 28.00 / 28.00 m
 Receiver height : 1.50 / 7.50 m
 Topography : 2 (Flat/gentle slope; with barrier)
 Barrier angle1 : 35.00 deg Angle2 : 90.00 deg
 Barrier height : 0.00 m
 Barrier receiver distance : 2.00 / 2.00 m
 Source elevation : 0.00 m
 Receiver elevation : 2.80 m
 Barrier elevation : 2.80 m
 Reference angle : 0.00

Result summary (day)

	! source !	Road !	Total
	! height !	Leq !	Leq
	! (m) !	(dBA) !	(dBA)
1.Old Simcoe R	! 1.26 !	43.73 !	43.73
2.Old Simcoe R	! 1.26 !	53.80 !	53.80 *
Total			54.21 dBA

STAMSON 5.0 SUMMARY REPORT Date: 16-08-2021 08:34:54
 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT
 Filename: bk2fw.te Time Period: Day/Night 16/8 hours
 Description: Block 2, Front Wall

Road data, segment # 1: Old Simcoe R (day/night)

 Car traffic volume : 11329/1259 veh/TimePeriod *
 Medium truck volume : 298/33 veh/TimePeriod *
 Heavy truck volume : 298/33 veh/TimePeriod *
 Posted speed limit : 50 km/h
 Road gradient : 2 %
 Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 13250
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 2.50
 Heavy Truck % of Total Volume : 2.50
 Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Old Simcoe R (day/night)

 Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 48.00 / 48.00 m
 Receiver height : 4.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)

Result summary (day)

	! source !	Road !	Total
	! height !	Leq !	Leq
	! (m) !	(dBA) !	(dBA)
1.Old Simcoe R	! 1.26 !	56.69 !	56.69
Total			56.69 dBA

Result summary (night)

	! source !	Road !	Total
	! height !	Leq !	Leq
	! (m) !	(dBA) !	(dBA)
1.Old Simcoe R	! 1.26 !	50.77 !	50.77
Total			50.77 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 56.69
 (NIGHT): 50.77

STAMSON 5.0 SUMMARY REPORT Date: 16-08-2021 08:35:57
 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT
 Filename: bk2ry.te Time Period: Day/Night 16/8 hours
 Description: Block 2, Rear Yard

Road data, segment # 1: Old Simcoe R (day/night)

 Car traffic volume : 11329/1259 veh/TimePeriod *
 Medium truck volume : 298/33 veh/TimePeriod *
 Heavy truck volume : 298/33 veh/TimePeriod *
 Posted speed limit : 50 km/h
 Road gradient : 2 %
 Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 13250
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 2.50
 Heavy Truck % of Total Volume : 2.50
 Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Old Simcoe R (day/night)

 Angle1 Angle2 : 50.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 65.00 / 65.00 m
 Receiver height : 1.50 / 7.50 m
 Topography : 2 (Flat/gentle slope; with barrier)
 Barrier angle1 : 50.00 deg Angle2 : 90.00 deg
 Barrier height : 0.00 m
 Barrier receiver distance : 4.50 / 4.50 m
 Source elevation : 0.00 m
 Receiver elevation : 0.00 m
 Barrier elevation : 0.00 m

Result summary (day)

	! source !	Road !	Total
	! height !	Leq !	Leq
	! (m) !	(dBA) !	(dBA)
1.Old Simcoe R	! 1.26 !	45.53 !	45.53 *
Total			45.53 dBA
