Phoenix Homes

Environmental Noise Impact Assessment

1470 Hunt Club Road

July 19, 2024

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July 2024

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126884

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Table of Contents

Figures

Tables

Appendices

1 Introduction

Arcadis was retained by Phoenix Homes on behalf of Larga Baffin Ltd. to conduct an Environmental Noise Impact Assessment (ENIA) in support of a Site Plan Control application for a proposed medical boarding home development to be located at 1452, 1460 and 1470 Hunt Club Road and 1525, 1531 and 1545 Sieveright Avenue.

The proposed development consists of a five-storey, 350-bed medical home and is generally bound by Hunt Club Road to the north, general mixed-use and light industrial to the west, Sieveright Avenue to the south, as well as low-rise residential uses to the east.

This study evaluated the transportation-related noise levels within the subject development and recommended warning clauses or noise abatement measures associated with each unit within the proposed medical boarding facility. The analysis for this study was conducted in accordance with the City of Ottawa 2016 Environmental Noise Control (ENC) Guidelines, as well as the Ministry of the Environment Publication NPC-300 (August 2013).

The site location plan and its surrounding context are illustrated in **Figure 1-1** below.

Figure 1-1 – Site Location

2 Background

2.1 Noise Sources

The proposed development will be primarily subjected to roadway noise from Hunt Club Road, from both the eastbound and westbound segments. All other roads within 100 metres of subject development are identified as local roads and therefore were not analysed as part of this study.

The subject property is located within the limits of the Airport Vicinity Development Zone (AVDZ) for the Ottawa International Airport, as shown on Schedule C14 of the 2022 Official Plan. As such, aircraft noise will be considered in this study.

There are no rail lines within 500 metres of the site, therefore no consideration has been given to the noise impacts from rail traffic, in accordance with the City of Ottawa ENC Guidelines.

2.2 Sound Level limits for Road Traffic

Sound level criteria for road traffic, as described in the following sub-sections, was extracted from the ENC Guidelines and the *Ministry of the Environment Publication NPC-300 (August 2013)*. Noise levels are expressed in the form Leq (T), which refers to a weighted level of a steady sound carrying the same total energy in the time period T (in hours) as the observed fluctuation sound.

2.2.1 Indoor Sound Level Criterion

The recommended indoor sound level criteria from Table 2.2b and Table 2.2c of the ENC Guidelines are:

- Bedroom or Sleeping quarters – 23:00 to 07:00 – 40 dBA Leq (8 hours)
- Living/Dining/Den Areas – 07:00 to 23:00 – 45 dBA Leq (16 hours)

The sound levels are based on the windows and doors to an indoor space being closed.

As discussed previously, the proposed development consists of a 5-storey medical boarding facility. For the purpose of assessing noise levels at the building face, receptor locations were reviewed at 13.5 metres above ground level under both daytime and nighttime conditions to determine sounds levels for the most exposed fifth-storey windows.

As per NPC-300 C7.1.2.1 and C7.1.2.2, when the outdoor noise levels at the living room window are greater than 55 dBA and less than or equal to 65 dBA and/or greater than 50 dBA and less than or equal to 60 dBA at the bedroom window, then a warning clause specifying the use of forced air heating and a provision for central air conditioning is required. Should the outdoor noise levels exceed 65 dBA at the living room and/or exceed 60 dBA at the bedroom, then central air conditioning is mandatory, building components (walls, windows etc.) must be designed in compliance with the Ontario Building Code to achieve the indoor sound level criteria and a warning clause is required.

2.2.2 Outdoor Sound Level Criterion

As per Table 2.2a of the ENC Guidelines, the outdoor living area (OLA) sound level criteria for the daytime period between 07:00 and 23:00 hours is 55 dBA Leq (16). Sound levels for the OLA are typically calculated 3 metres from

the building face at the centre of the building or within the centre of the OLA. For the proposed development, noise levels were reviewed at the centre of the 2nd storey rooftop terrace, 4.5m above ground level.

If the Leq sound level is less than or equal to the above criteria, then no further action is required by the developer. If the sound level exceeds the criteria by less than 5 dBA then the proponent may, with City approval, either provide a warning clause to prospective tenants or install physical attenuation. For sound levels greater than 5 dBA above the criteria, control measures are required to reduce the noise levels as close to 55 dBA as technically, economically and administratively possible. Should the sound levels with the barrier in place exceed 55 dBA, then a warning clause is also required.

3 Roadway Noise

3.1 Traffic Volume Data

Based on the configuration of the collector and higher-order transportation network with respect to the proposed development, it is assumed that the major sources of transportation noise impacting the site will originate externally from Hunt Club Road to the north.

Hunt Club Road

Hunt Club Road, within the site's frontage, presently exists as a four-lane, urban divided arterial with a 60 km/h posted speed limit.

Table 3-1 below summarizes the traffic and road parameters used in this report. These parameters were extracted from Appendix B: Table B1 of the ENC Guidelines and are conservatively based on roadway capacity.

Table 3-1 – Traffic and Road Data Summary

Parameter	Hunt Club Road
Annual Average Daily Traffic (AADT)	17,500 (each direction)
Posted Speed Limit (km/h)	60
% Medium Trucks	7%
% Heavy Trucks	5%
% Daytime Traffic	92%

3.2 Calculation Methods

Roadway noise is calculated using the STAMSON 5.04 computer program from the Ontario Ministry of the Environment, Conservation and Parks (MECP).

Unattenuated daytime and nighttime noise levels at the building face were calculated to determine indoor sound levels, the results of which are presented in **Table 3-2** below. Locations of the indoor and outdoor receptors used for the noise calculations were selected to determine the limits of the noise criteria. Parameters used for calculating the noise levels, including the perpendicular distance from the source to receiver and the roadway segment angles are also indicated. As per standard practice, the noise impacts associated with a four-lane, divided arterial road (i.e. Hunt Club Road) were calculated separately for each direction of traffic flow and then the results were combined.

As indicated on **Noise Plan – Drawing No. 126884-N1**, there is one outdoor living area (OLA), referred to as the Rooftop Terrace (2nd Storey). An analysis of this shared amenity space is presented in **Table 3-3** below, and the noise level for this outdoor space was evaluated at location 'P1 OLA' on the Noise Plan in accordance with the ENC Guidelines which indicates that the midpoint is an appropriate receptor location for evaluation purposes.

Parameters used for calculating the noise levels, including the perpendicular distance from source to receiver and the roadway segment angles are also indicated in **Table 3-2** and **Table 3-3**, while sample measurements are provided on **Drawing No. 126884 – N1**. All output files are provided in **Appendix A**.

Table 3-2 – Unattenuated Noise Levels at Building Face

Receptor Location	Roadway	Source – Receiver Distance (m)	Segment Angles		Indoor Noise Levels (dBA)	
			Left	Right	Daytime	Nighttime
P1ILA	Hunt Club Road EB	22.0	-90.00	-10.00	65.87	58.27
	Hunt Club Road WB	37.5				
P2ILA	Hunt Club Road EB	34.5	-10.00	90.00	65.18	57.59
	Hunt Club Road WB	42.5				
P3ILA	Hunt Club Road EB	19.0	-90.00	0.00	67.19	59.60
	Hunt Club Road WB	34.5				
P4ILA	Hunt Club Road EB	18.0	-90.00	90.00	70.47	62.87
	Hunt Club Road WB	33.5				
P5ILA	Hunt Club Road EB	19.0	0.00	90.00	67.19	59.60
	Hunt Club Road WB	34.5				
P6ILA	Hunt Club Road EB	40.0	-90.00	-10.00	62.19	55.31
	Hunt Club Road WB	55.5				
P7ILA	Hunt Club Road EB	37.5	0.00	90.00	63.85	56.25
	Hunt Club Road WB	53.0				
P8ILA	Hunt Club Road EB	58.0	-90.00	-10.00	61.02	53.43
	Hunt Club Road WB	73.5				
P9ILA	Hunt Club Road EB	57.0	0.00	90.00	61.73	54.13
	Hunt Club Road WB	72.5				
P10ILA	Hunt Club Road EB	73.5	-90.00	-10.00	59.79	52.20
	Hunt Club Road WB	89.0				
P11ILA	Hunt Club Road EB	75.0	0.00	90.00	60.31	52.71
	Hunt Club Road WB	90.5				
P12ILA	Hunt Club Road EB	91.0	-90.00	-5.00	59.00	51.40
	Hunt Club Road WB	106.5				
P13ILA	Hunt Club Road EB	94.0	0.00	90.00	59.12	51.53
	Hunt Club Road WB	109.5				
P14ILA	Hunt Club Road EB	110.5	-90.00	0.00	58.27	50.67
	Hunt Club Road WB	126.0				
P15ILA	Hunt Club Road EB	113.5	0.00	90.00	58.13	50.53
	Hunt Club Road WB	129.0				

As indicated in **Table 3-2** above, all of the noise receptor locations evaluated at the building face exceed the 55 dBA daytime or 50 dBA nighttime criteria at the building face. Noise attenuation measures and warning clauses will therefore be considered in subsequent sections of the report.

Table 3-3 – Unattenuated Noise Levels at OLA

Receptor Location	Roadway	Source – Receiver Distance (m)	Segment Angles		Outdoor Noise Levels (dBA)
			Left	Right	
P1 OLA Rooftop Terrace (2nd Storey)	Hunt Club Road EB	52.0	-20.00	15.00	56.71
	Hunt Club Road WB	67.5			

As presented in **Table 3-3** above, an analysis of the rooftop terrace at the 'P1 OLA' receptor location identified on **Noise Plan Drawing No. 126884-N1** indicates that this location will experience noise levels slightly in excess of the 55 dBA threshold. The need for noise attenuation measures will therefore be considered in subsequent sections of this report.

4 Abatement Measures

4.1 Indoor Sound Levels

As identified in **Table 3-2** above, the units on the north, northeast and northwest and inner facades of the building's north wings have direct exposure to noise from Hunt Club Road and are expected to exceed 65 dBA (daytime) or 60 dBA (nighttime). Therefore, mandatory central air conditioning, a review of building components are required, as well as a Type 'D' warning clause for each unit along with an exterior wall occupying these facades.

For units along the southeast and southwest façade of the building, which will be indirectly exposed to noise from the existing road segments, daytime noise levels were determined to be less than 65 dBA but still are still expected to exceed 55 dBA (or nighttime noise level is less than 60 dBA but exceeds 50 dBA). As such, an alternative means of ventilation is required, as well as a Type 'C' warning clause for a unit occupying an exterior façade at the southeast or southwest corner of the building. Alternative means of ventilation usually consist of a forced air heating system with ducts sized for future installation of central air conditioning.

4.2 Building Components

An analysis of the required building components for units expected to experience noise levels at the building face is typically required when noise levels are either 65 dBA (daytime) or 60 dBA (nighttime). In this circumstance, the results presented in **Table 3-2** and **Table 3-3** above indicate that daytime noise levels along the northern building façade will exceed the 65 dBA threshold (70.47 dBA). Nighttime noise levels were found to be above the 60 dBA threshold (62.87 dBA). Given that the daytime noise levels exceed the thresholds for Type 'D', an assessment of building components was conducted under both daytime and nighttime conditions. This method was developed by the National Research Council (NRC) and involves a review of architectural plans to determine appropriate design assumptions (i.e. window/floor area ratios) in order to calculate the STC rating for windows and glazed doors.

Exterior walls were assumed to have an STC rating of 50, which is a conservative value for a pre-cast concrete wall designed to accommodate Ottawa winters from the Ontario Building Code. With the exterior walls in place, the amount of sound energy absorbed by the windows is calculated in order to determine the STC rating required to meet the sound criteria. All rooms were assumed to have an intermediate, absorptive interior rather than a hard or very absorptive interior, as would be expected for a residential unit.

As indicated in **Table 4-1** below, the maximum required STC rating for the largest windows on the northeast façade of the building and glazed doors was calculated to be 25. This rating was conservatively based on the expected noise levels for the top floor, single-level units with the highest exposure to roadway traffic.

Preliminary plan and profile architectural drawings are provided in **Appendix B**, while STC calculations for the proposed development are included in **Appendix C**.

Table 4-1: Traffic and Road Data Summary

Units	Level	Room Type	Required STC Rating
			Windows & Glazed Doors
Northern Façade	5th Floor	Living Room	25
		Bedroom	16

As indicated in **Table 4-1** above, the maximum required STC rating for windows and glazed doors with the highest exposure to traffic noise was calculated to be 25.

4.3 Outdoor Living Area (OLA)

Given that the noise levels within proposed 2nd Storey Rooftop Terrace are anticipated to remain above 55 dBA but below 60 dBA, warning clause Type 'A' is proposed in lieu of physical abatement measures.

4.4 Aircraft Sound Levels

As stated in **Section 2.1**, the subject lands are entirely located within the Airport Vicinity Development Zone (AVDZ). The site is, however, outside of the 25 NEF/NEP contour line so the building components and ventilation requirements of Part 6: Prescribed Measures for Aircraft Noise of the ENC Guidelines do not apply. A warning clause is required for the residential units inside the AVDZ, which in this case applies to all units proposed within the 1470 Hunt Club Road development.

Warning clause for aircraft noise is as follows:

"Building owners/tenants are advised that due to the proximity of the Ottawa Macdonald-Cartier International Airport, noise from the airport and individual aircraft may at times interfere with outdoor or indoor activities".

5 Summary of Attenuation Measures

5.1 Warning Clauses

A clause regarding noise must appear on the impacted units, as indicated on **Noise Plan – Drawing No. 126884-N1** and listed below:

Type 'A' 2nd Floor Rooftop Terrace - All Units

Type 'C' Southeastern Façade

Southwestern Façade

Type 'D' Northern Façade

Northeastern Façade

Northwestern Façade

Inner Façades (North Wing)

Aircraft Warning Applicable to all units within the proposed 1470 Hunt Club Road development.

The following warning clauses are taken from Section C8.1 of NPC 300:

Type 'A'	"Building owners/tenants are advised that sound levels due to increasing Hunt Club Road traffic may occasionally interfere with some activities of the occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment, Conservation and Park's noise criteria."
Type 'C'	"This unit has been fitted with a forced air heating system and the ducting, etc. was sized to accommodate central air conditioning. Installation of central air conditioning by the occupant will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the City's and the Ministry of the Environment, Conservation and Park's noise criteria. (Note: The location and installation of the outdoor air conditioning device should be done so as to comply with noise criteria of MOE Publication NPC-216, Residential Air Conditioning Devices and thus minimize the noise impacts both on and in the immediate vicinity of the subject property."
Type 'D'	"This unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the City's and the Ministry of the Environment, Conservation and Parks noise criteria."

The aircraft warning clause was provided previously in **Section 4.4**.

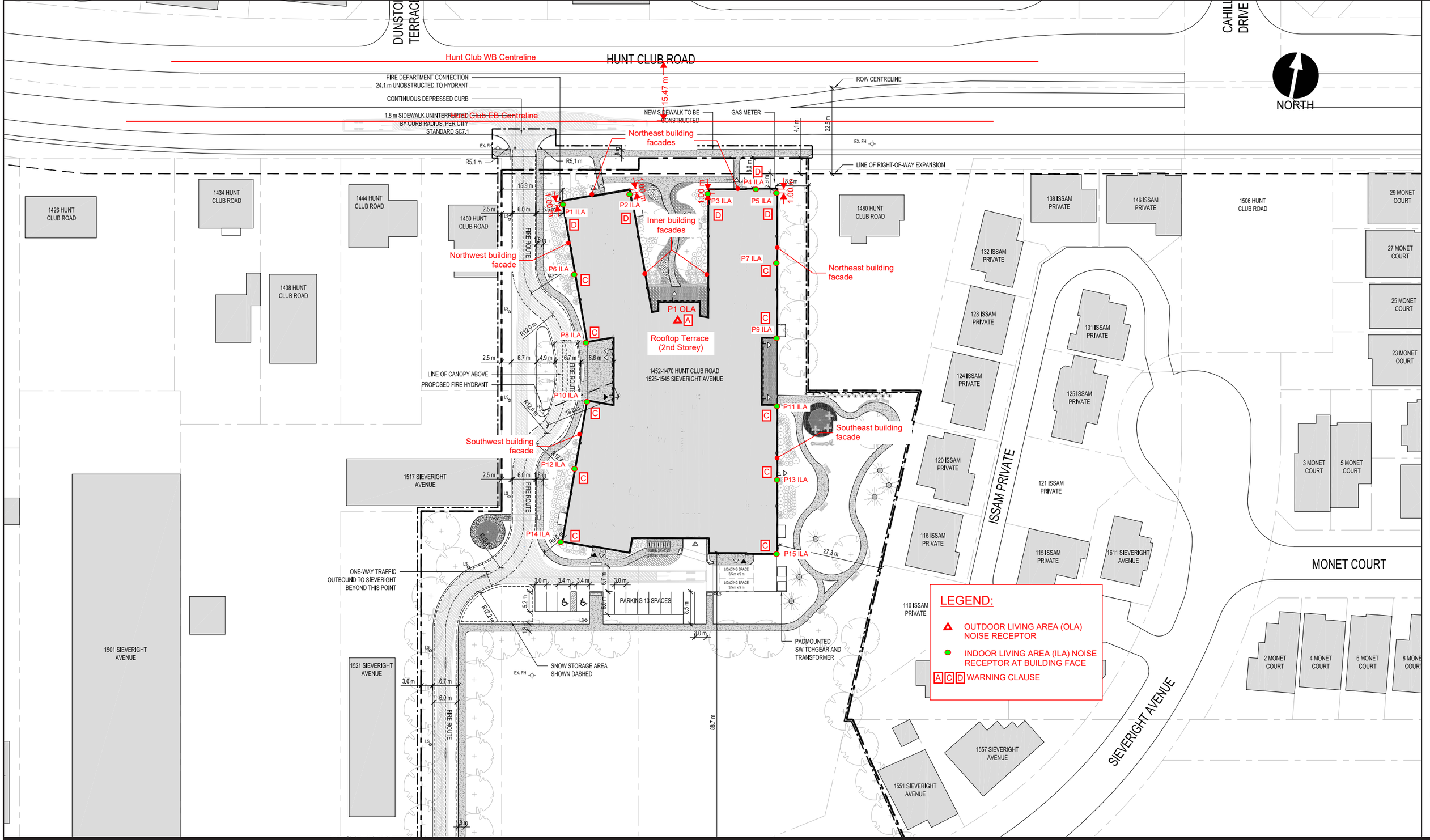
6 Conclusion

This Environmental Noise Impact Assessment (ENIA) evaluated the impact of roadway noise on the proposed five-storey medical boarding home located at 1470 Hunt Club Road, Ottawa. As indicated through the analysis conducted for this study, it is anticipated that noise levels will remain within the standards established by the City of Ottawa and Ministry of the Environment, Conservation and Parks (MECP), with the exception of select units identified on **Noise Plan – Drawing No. 126884-N1**. For these units, appropriate warning clauses and associated noise abatement measures must be provided for each unit. Since the subject site is located entirely within the Airport Vicinity Development Zone (AVDZ), a warning clause will be required for each unit as well.

7 Professional Authorization

Prepared By:

Ben Pascolo-Neveu, P.Eng.



ARCADIS
IBI GROUP

1470 Hunt Club Road
Environmental Noise Impact Assessment

Noise Plan - Drawing No. 126884-N1

PROJECT No. 126884

SCALE: 0m 15m 30m

Appendix A

STAMSON Output Reports

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:19:58
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p1ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : -90.00 deg -10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 22.00 / 22.00 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : -90.00 deg -10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 37.50 / 37.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 64.11 + 0.00) = 64.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	70.67	0.00	-2.16	-4.40	0.00	0.00	0.00	64.11

Segment Leq : 64.11 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 61.09 + 0.00) = 61.09 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	70.67	0.00	-5.17	-4.40	0.00	0.00	0.00	61.09

Segment Leq : 61.09 dBA

Total Leq All Segments: 65.87 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 56.51 + 0.00) = 56.51 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	63.07	0.00	-2.16	-4.40	0.00	0.00	0.00	56.51

Segment Leq : 56.51 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 53.50 + 0.00) = 53.50 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	63.07	0.00	-5.17	-4.40	0.00	0.00	0.00	53.50

Segment Leq : 53.50 dBA

Total Leq All Segments: 58.27 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 65.87
(NIGHT): 58.27

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:20:19
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p2ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : -10.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 34.50 / 34.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : -10.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 42.50 / 42.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 62.72 + 0.00) = 62.72 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	90	0.30	70.67	0.00	-4.70	-3.24	0.00	0.00	0.00	62.72

Segment Leq : 62.72 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 61.55 + 0.00) = 61.55 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	90	0.30	70.67	0.00	-5.88	-3.24	0.00	0.00	0.00	61.55

Segment Leq : 61.55 dBA

Total Leq All Segments: 65.18 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 55.13 + 0.00) = 55.13 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	90	0.30	63.07	0.00	-4.70	-3.24	0.00	0.00	0.00	55.13

Segment Leq : 55.13 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 53.95 + 0.00) = 53.95 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-10	90	0.30	63.07	0.00	-5.88	-3.24	0.00	0.00	0.00	53.95

Segment Leq : 53.95 dBA

Total Leq All Segments: 57.59 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 65.18
(NIGHT): 57.59

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:20:28
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p3ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : -90.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 19.00 / 19.00 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : -90.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 34.50 / 34.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 65.55 + 0.00) = 65.55 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.30	70.67	0.00	-1.33	-3.78	0.00	0.00	0.00	65.55

Segment Leq : 65.55 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 62.18 + 0.00) = 62.18 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.30	70.67	0.00	-4.70	-3.78	0.00	0.00	0.00	62.18

Segment Leq : 62.18 dBA

Total Leq All Segments: 67.19 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 57.95 + 0.00) = 57.95 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.30	63.07	0.00	-1.33	-3.78	0.00	0.00	0.00	57.95

Segment Leq : 57.95 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 54.59 + 0.00) = 54.59 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.30	63.07	0.00	-4.70	-3.78	0.00	0.00	0.00	54.59

Segment Leq : 54.59 dBA

Total Leq All Segments: 59.60 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 67.19
(NIGHT): 59.60

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:20:42
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p4ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (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 : 18.00 / 18.00 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (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 : 33.50 / 33.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 68.87 + 0.00) = 68.87 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.30	70.67	0.00	-1.03	-0.77	0.00	0.00	0.00	68.87

Segment Leq : 68.87 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 65.36 + 0.00) = 65.36 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.30	70.67	0.00	-4.54	-0.77	0.00	0.00	0.00	65.36

Segment Leq : 65.36 dBA

Total Leq All Segments: 70.47 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 61.27 + 0.00) = 61.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.30	63.07	0.00	-1.03	-0.77	0.00	0.00	0.00	61.27

Segment Leq : 61.27 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 57.76 + 0.00) = 57.76 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.30	63.07	0.00	-4.54	-0.77	0.00	0.00	0.00	57.76

Segment Leq : 57.76 dBA

Total Leq All Segments: 62.87 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 70.47
(NIGHT): 62.87

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:20:51
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p5ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 19.00 / 19.00 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 34.50 / 34.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 65.55 + 0.00) = 65.55 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	70.67	0.00	-1.33	-3.78	0.00	0.00	0.00	65.55

Segment Leq : 65.55 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 62.18 + 0.00) = 62.18 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	70.67	0.00	-4.70	-3.78	0.00	0.00	0.00	62.18

Segment Leq : 62.18 dBA

Total Leq All Segments: 67.19 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 57.95 + 0.00) = 57.95 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	63.07	0.00	-1.33	-3.78	0.00	0.00	0.00	57.95

Segment Leq : 57.95 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 54.59 + 0.00) = 54.59 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	63.07	0.00	-4.70	-3.78	0.00	0.00	0.00	54.59

Segment Leq : 54.59 dBA

Total Leq All Segments: 59.60 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 67.19
(NIGHT): 59.60

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:21:02
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p6ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : -90.00 deg -10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 40.00 / 40.00 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : -90.00 deg -10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 55.50 / 55.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 60.73 + 0.00) = 60.73 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	70.67	0.00	-5.54	-4.40	0.00	0.00	0.00	60.73

Segment Leq : 60.73 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 58.88 + 0.00) = 58.88 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	70.67	0.00	-7.39	-4.40	0.00	0.00	0.00	58.88

Segment Leq : 58.88 dBA

Total Leq All Segments: 62.91 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 53.13 + 0.00) = 53.13 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	63.07	0.00	-5.54	-4.40	0.00	0.00	0.00	53.13

Segment Leq : 53.13 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 51.28 + 0.00) = 51.28 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	63.07	0.00	-7.39	-4.40	0.00	0.00	0.00	51.28

Segment Leq : 51.28 dBA

Total Leq All Segments: 55.31 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 62.91
(NIGHT): 55.31

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:21:11
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p7ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 37.50 / 37.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 53.00 / 53.00 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 61.71 + 0.00) = 61.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	70.67	0.00	-5.17	-3.78	0.00	0.00	0.00	61.71

Segment Leq : 61.71 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 59.76 + 0.00) = 59.76 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	70.67	0.00	-7.13	-3.78	0.00	0.00	0.00	59.76

Segment Leq : 59.76 dBA

Total Leq All Segments: 63.85 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 54.11 + 0.00) = 54.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	63.07	0.00	-5.17	-3.78	0.00	0.00	0.00	54.11

Segment Leq : 54.11 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 52.16 + 0.00) = 52.16 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	63.07	0.00	-7.13	-3.78	0.00	0.00	0.00	52.16

Segment Leq : 52.16 dBA

Total Leq All Segments: 56.25 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 63.85
(NIGHT): 56.25

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:21:20
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p8ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : -90.00 deg -10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 58.00 / 58.00 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : -90.00 deg -10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 73.50 / 73.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 58.63 + 0.00) = 58.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	70.67	0.00	-7.64	-4.40	0.00	0.00	0.00	58.63

Segment Leq : 58.63 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 57.29 + 0.00) = 57.29 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	70.67	0.00	-8.97	-4.40	0.00	0.00	0.00	57.29

Segment Leq : 57.29 dBA

Total Leq All Segments: 61.02 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 51.03 + 0.00) = 51.03 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	63.07	0.00	-7.64	-4.40	0.00	0.00	0.00	51.03

Segment Leq : 51.03 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 49.70 + 0.00) = 49.70 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	63.07	0.00	-8.97	-4.40	0.00	0.00	0.00	49.70

Segment Leq : 49.70 dBA

Total Leq All Segments: 53.43 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 61.02
(NIGHT): 53.43

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:21:30
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p9ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 57.00 / 57.00 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 72.50 / 72.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 59.35 + 0.00) = 59.35 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	70.67	0.00	-7.54	-3.78	0.00	0.00	0.00	59.35

Segment Leq : 59.35 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 57.99 + 0.00) = 57.99 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	70.67	0.00	-8.90	-3.78	0.00	0.00	0.00	57.99

Segment Leq : 57.99 dBA

Total Leq All Segments: 61.73 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 51.75 + 0.00) = 51.75 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	63.07	0.00	-7.54	-3.78	0.00	0.00	0.00	51.75

Segment Leq : 51.75 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 50.39 + 0.00) = 50.39 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	63.07	0.00	-8.90	-3.78	0.00	0.00	0.00	50.39

Segment Leq : 50.39 dBA

Total Leq All Segments: 54.13 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 61.73
(NIGHT): 54.13

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:18:45
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p10ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : -90.00 deg -10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 73.50 / 73.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : -90.00 deg -10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 89.00 / 89.00 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 57.29 + 0.00) = 57.29 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	70.67	0.00	-8.97	-4.40	0.00	0.00	0.00	57.29

Segment Leq : 57.29 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 56.21 + 0.00) = 56.21 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	70.67	0.00	-10.05	-4.40	0.00	0.00	0.00	56.21

Segment Leq : 56.21 dBA

Total Leq All Segments: 59.79 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 49.70 + 0.00) = 49.70 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	63.07	0.00	-8.97	-4.40	0.00	0.00	0.00	49.70

Segment Leq : 49.70 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 48.62 + 0.00) = 48.62 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.30	63.07	0.00	-10.05	-4.40	0.00	0.00	0.00	48.62

Segment Leq : 48.62 dBA

Total Leq All Segments: 52.20 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.79
(NIGHT): 52.20

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:19:00
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p11ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 75.00 / 75.00 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 90.50 / 90.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 57.80 + 0.00) = 57.80 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	70.67	0.00	-9.09	-3.78	0.00	0.00	0.00	57.80

Segment Leq : 57.80 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 56.74 + 0.00) = 56.74 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	70.67	0.00	-10.15	-3.78	0.00	0.00	0.00	56.74

Segment Leq : 56.74 dBA

Total Leq All Segments: 60.31 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 50.20 + 0.00) = 50.20 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	63.07	0.00	-9.09	-3.78	0.00	0.00	0.00	50.20

Segment Leq : 50.20 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 49.14 + 0.00) = 49.14 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	63.07	0.00	-10.15	-3.78	0.00	0.00	0.00	49.14

Segment Leq : 49.14 dBA

Total Leq All Segments: 52.71 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 60.31
(NIGHT): 52.71

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:19:08
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p12ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : -90.00 deg -5.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 91.00 / 91.00 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : -90.00 deg -5.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 106.50 / 106.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 56.41 + 0.00) = 56.41 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-5	0.30	70.67	0.00	-10.18	-4.08	0.00	0.00	0.00	56.41

Segment Leq : 56.41 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 55.52 + 0.00) = 55.52 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-5	0.30	70.67	0.00	-11.07	-4.08	0.00	0.00	0.00	55.52

Segment Leq : 55.52 dBA

Total Leq All Segments: 59.00 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 48.81 + 0.00) = 48.81 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-5	0.30	63.07	0.00	-10.18	-4.08	0.00	0.00	0.00	48.81

Segment Leq : 48.81 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 47.92 + 0.00) = 47.92 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-5	0.30	63.07	0.00	-11.07	-4.08	0.00	0.00	0.00	47.92

Segment Leq : 47.92 dBA

Total Leq All Segments: 51.40 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.00
(NIGHT): 51.40

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:19:18
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p13ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 94.00 / 94.00 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 109.50 / 109.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 56.52 + 0.00) = 56.52 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	70.67	0.00	-10.36	-3.78	0.00	0.00	0.00	56.52

Segment Leq : 56.52 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 55.66 + 0.00) = 55.66 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	70.67	0.00	-11.22	-3.78	0.00	0.00	0.00	55.66

Segment Leq : 55.66 dBA

Total Leq All Segments: 59.12 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 48.93 + 0.00) = 48.93 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	63.07	0.00	-10.36	-3.78	0.00	0.00	0.00	48.93

Segment Leq : 48.93 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 48.06 + 0.00) = 48.06 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	63.07	0.00	-11.22	-3.78	0.00	0.00	0.00	48.06

Segment Leq : 48.06 dBA

Total Leq All Segments: 51.53 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.12
(NIGHT): 51.53

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:19:28
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p14ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : -90.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 110.50 / 110.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : -90.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 126.00 / 126.00 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 55.61 + 0.00) = 55.61 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.30	70.67	0.00	-11.28	-3.78	0.00	0.00	0.00	55.61

Segment Leq : 55.61 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 54.87 + 0.00) = 54.87 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.30	70.67	0.00	-12.02	-3.78	0.00	0.00	0.00	54.87

Segment Leq : 54.87 dBA

Total Leq All Segments: 58.27 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 48.01 + 0.00) = 48.01 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.30	63.07	0.00	-11.28	-3.78	0.00	0.00	0.00	48.01

Segment Leq : 48.01 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 47.27 + 0.00) = 47.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.30	63.07	0.00	-12.02	-3.78	0.00	0.00	0.00	47.27

Segment Leq : 47.27 dBA

Total Leq All Segments: 50.67 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 58.27
(NIGHT): 50.67

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:19:36
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p15ila.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 113.50 / 113.50 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 129.00 / 129.00 m
Receiver height : 13.50 / 13.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 55.46 + 0.00) = 55.46 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	70.67	0.00	-11.43	-3.78	0.00	0.00	0.00	55.46

Segment Leq : 55.46 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 54.74 + 0.00) = 54.74 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	70.67	0.00	-12.15	-3.78	0.00	0.00	0.00	54.74

Segment Leq : 54.74 dBA

Total Leq All Segments: 58.13 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 47.86 + 0.00) = 47.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	63.07	0.00	-11.43	-3.78	0.00	0.00	0.00	47.86

Segment Leq : 47.86 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 47.14 + 0.00) = 47.14 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.30	63.07	0.00	-12.15	-3.78	0.00	0.00	0.00	47.14

Segment Leq : 47.14 dBA

Total Leq All Segments: 50.53 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 58.13
(NIGHT): 50.53

STAMSON 5.0 NORMAL REPORT Date: 03-04-2024 08:20:10
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: p1ola.te Time Period: Day/Night 16/8 hours
Description:

Road data, segment # 1: Hunt Club EB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hunt Club EB (day/night)

Angle1 Angle2 : -20.00 deg 15.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 52.00 / 52.00 m
Receiver height : 1.50 / 0.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hunt Club WB (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hunt Club WB (day/night)

Angle1 Angle2 : -20.00 deg 15.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 67.50 / 67.50 m
Receiver height : 1.50 / 0.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Hunt Club EB (day)

Source height = 1.50 m

ROAD (0.00 + 54.54 + 0.00) = 54.54 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	15	0.66	70.67	0.00	-8.96	-7.16	0.00	0.00	0.00	54.54

Segment Leq : 54.54 dBA

Results segment # 2: Hunt Club WB (day)

Source height = 1.50 m

ROAD (0.00 + 52.66 + 0.00) = 52.66 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	15	0.66	70.67	0.00	-10.84	-7.16	0.00	0.00	0.00	52.66

Segment Leq : 52.66 dBA

Total Leq All Segments: 56.71 dBA

Results segment # 1: Hunt Club EB (night)

Source height = 1.50 m

ROAD (0.00 + 46.95 + 0.00) = 46.95 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	15	0.66	63.07	0.00	-8.96	-7.16	0.00	0.00	0.00	46.95

Segment Leq : 46.95 dBA

Results segment # 2: Hunt Club WB (night)

Source height = 1.50 m

ROAD (0.00 + 45.07 + 0.00) = 45.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-20	15	0.66	63.07	0.00	-10.84	-7.16	0.00	0.00	0.00	45.07

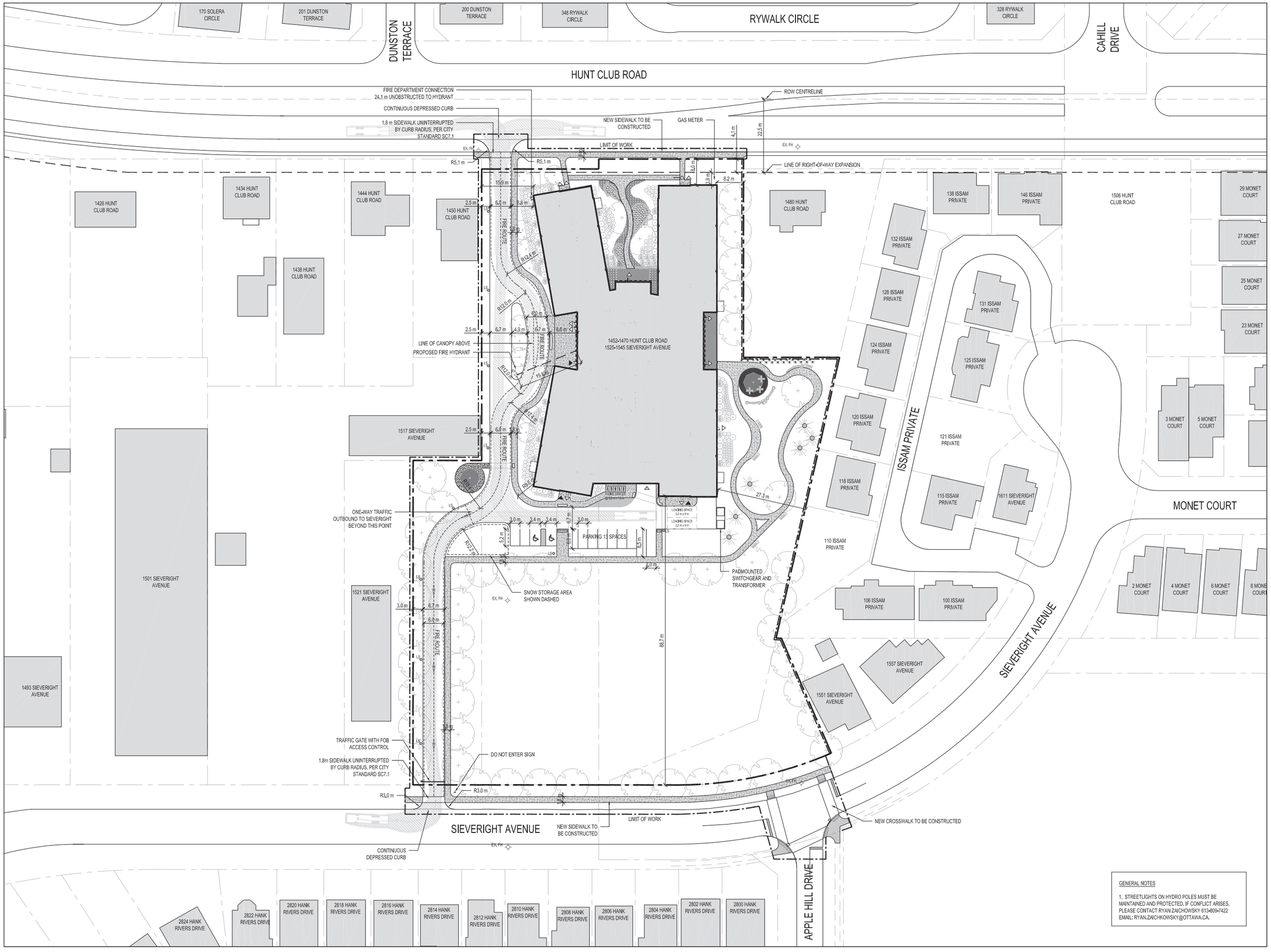
Segment Leq : 45.07 dBA

Total Leq All Segments: 49.12 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 56.71
(NIGHT): 49.12

Appendix B

Architecture Plans



LEGEND

- PROPERTY LINE
- LIMIT OF WORK LINE
- EX. FH — EXISTING FIRE HYDRANT
- FH — PROPOSED FIRE HYDRANT
- LS — LIGHT STANDARD, REFER TO ELECTRICAL
- NEW CONCRETE SIDEWALK
- TWSI WITH CONTINUOUS DEPRESSED CURB
- BUILDING ENTRANCE
- BUILDING EXIT
- PARKING ENTRANCE

SURVEY CREDIT

LOT REFERENCE: PART OF LOTS 4 AND 5 REGISTERED PLAN 141 CITY OF OTTAWA

AS PREPARED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD.

14 CONCOURSE GATE
SUITE 500
NEPEAN, ON, K2E 7S6
PHONE: 613-727-0850
EMAIL: NEPEAN@AOVLTD.COM

DATED JULY 9th, 2021

7	2024-07-12	SPA PHASE 3 REVIEW
6	2024-04-24	SPA PHASE 3 REVIEW
5	2024-03-07	SPA PHASE 3 REVIEW
4	2023-10-06	COSTING - CLASS D 60%
3	2022-05-17	OPA / ZBLA FINAL
NO.	DATE	DESCRIPTION

ISSUE RECORD

DTAH Architects Limited
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ONTARIO ASSOCIATION OF ARCHITECTS — LARGA EN HIN MA — MEGAN TORDA — LICENCE 5400

LARGA BAFFIN

1452-1470 Hunt Club Road
1525-1545 Sieveright Avenue
Ottawa, Ontario, Canada

DRAWING TITLE:

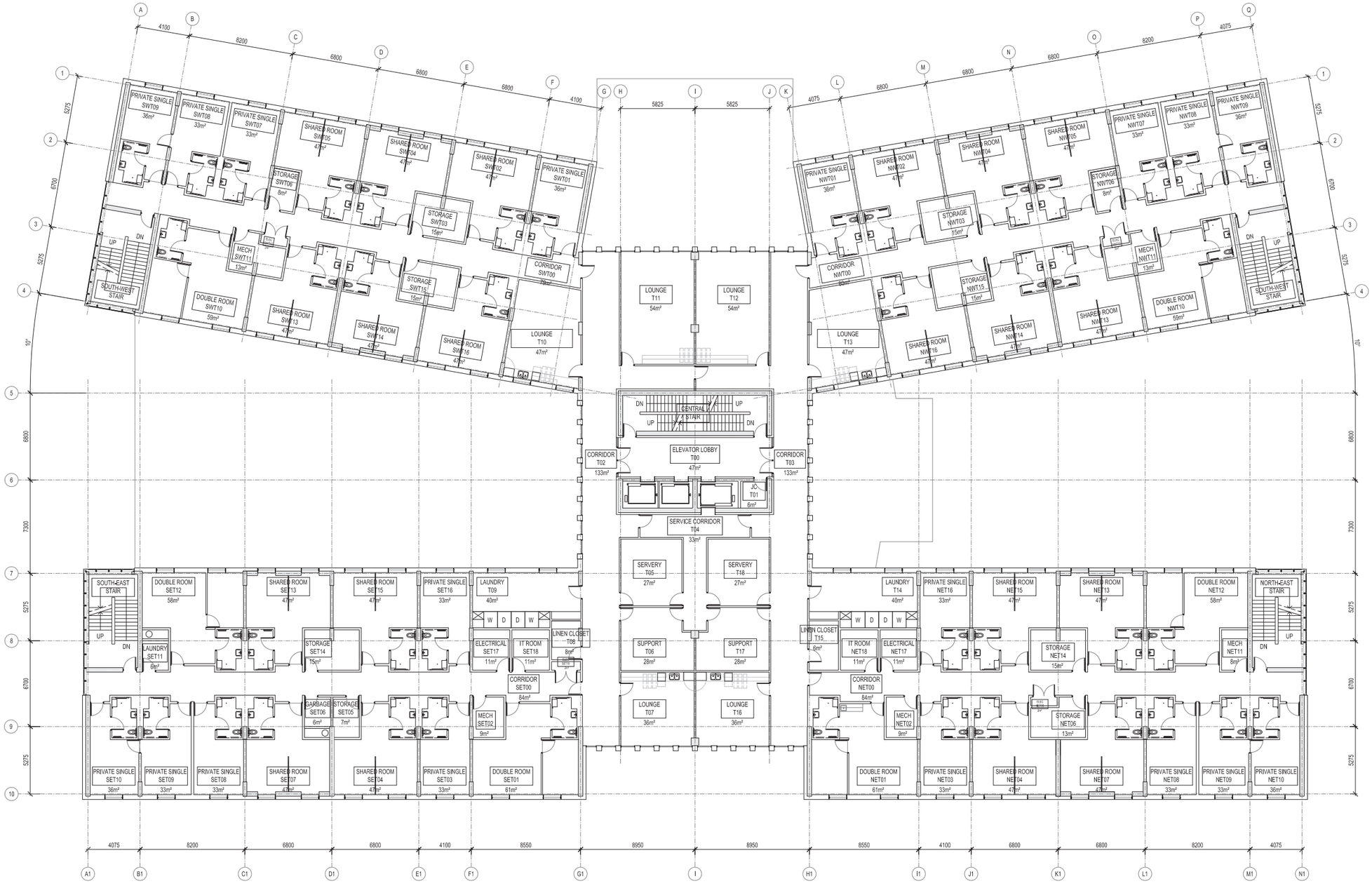
SITE PLAN

GENERAL NOTES

1. STREETLIGHTS ON HYDRO POLES MUST BE MAINTAINED AND PROTECTED. IF CONFLICT ARISES, PLEASE CONTACT RYAN ZAICHOWSKY 613-809-7422 EMAIL: RYAN.ZAICHOWSKY@OTTAWA.CA.

PRINT DATE:	2024-07-11
SCALE:	1:500
PROJECT NO.	17-029
DRAWN BY:	NP/FC
CHECKED BY:	MT

A100



NO.	DATE	DESCRIPTION
6	2024-07-12	SPA PHASE 3 REVIEW
5	2024-04-24	SPA PHASE 3 REVIEW
4	2024-03-07	SPA PHASE 3 REVIEW
3	2023-10-06	COSTING - CLASS D 60%
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MEGAN TOYDA
LICENCE 9460

LARGA BAFFIN

1452-1470 Hunt Club Road
1525-1545 Sieveright Avenue
Ottawa, Ontario, Canada

DRAWING TITLE:
THIRD AND FOURTH LEVEL PLAN

PRINT DATE:	2024-07-11
SCALE:	1:150
PROJECT NO.	17-029
DRAWN BY:	NP/FC
CHECKED BY:	MT

A203

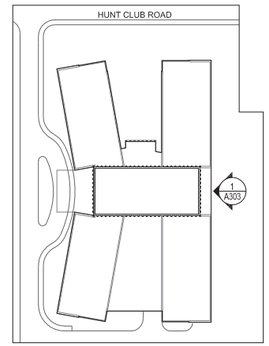
GENERAL NOTE

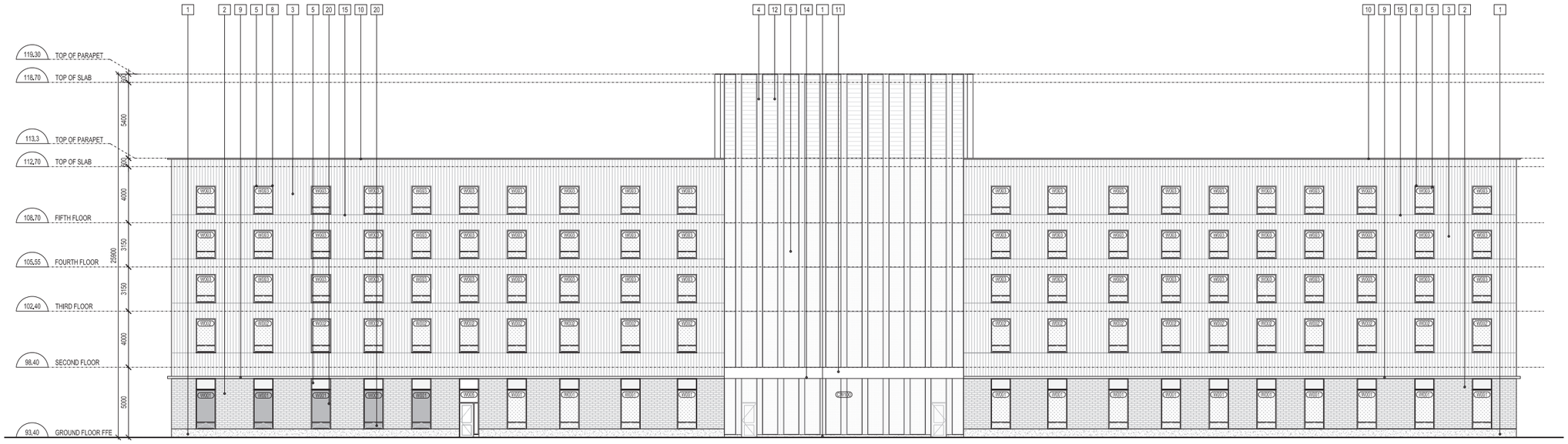
ALL GLAZING WITHIN 16M OF FINISHED GRADE TO BE TREATED WITH BIRD-FRIENDLY FRIT PATTERN

LEGEND

1. SANDBLASTED CONCRETE FOUNDATION UPSTAND
2. MASONRY CLADDING
3. VARIEGATED VERTICAL WOOD CLADDING
4. METAL CLAD PILASTER
5. ALUMINUM PUNCHED WINDOW
6. ALUMINUM CURTAIN WALL
7. STAIR ALUMINUM CURTAIN WALL W/ PRIVACY FILM
8. SHADOWBOX WINDOW FRAME
9. PREFINISHED METAL CAP
10. PREFINISHED METAL PARAPET CAP FLASHING
11. PREFINISHED METAL FLASHING
12. PREFINISHED METAL LOUVRES
13. BUILDING SIGNAGE
14. ENTRANCE CANOPY
15. MATERIAL REVEAL
16. OVERHEAD GARAGE / SERVICE DOOR
17. MURAL WALL SIGNAGE
18. FIRE DEPARTMENT CONNECTION
19. SANDBLASTED CONCRETE PANEL CLADDING
20. TRANSLUCENT PRIVACY FILM

KEY PLAN





1 / A303 EAST ELEVATION
1:150

NO.	DATE	DESCRIPTION
6	2024-07-12	SPA PHASE 3 REVIEW
5	2024-04-24	SPA PHASE 3 REVIEW
4	2024-03-07	SPA PHASE 3 REVIEW
3	2023-10-06	COSTING - CLASS D 60%
2	2022-05-17	OPA / ZBLA FINAL

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Ottawa, Ontario, Canada

DRAWING TITLE:

ELEVATIONS

PRINT DATE: 2024-07-11
SCALE: 1:150
PROJECT NO. 17-029
DRAWN BY: NP/FC
CHECKED BY: MT

A303

Appendix C

STC Calculations

Northeast Façade, 5th Floor, Daytime Conditions

DAYTIME

Reverse Evaluation of Sound Transmission Class (STC) for Building Components

1.0	Free field sound level		70.47	dBA	Noise source
	Correction for reflections		3	dBA	Road
	Outdoor sound level		73.47	dBA	Indoor Quarters
	Indoor sound level	(Daytime)	45	dBA	Living
	Required Noise Reduction (NR)		28.47	dB	Subtract indoor from outdoor sound level
2.0	Sound angle of insidence	0 to 90 degrees			C_1 Correction from Table 7.7 0 dB
					Sum 28.47 dB

	Component:	Wall		STC 50 dB
3.0	Noise spectrum type	D - Mixed Road Traffic, Distant Aircraft		C_4 from Table 7.10 7 dB
	Component category	d. Sealed thick window, or exterior wall, or roof/ceiling		Correction -7 dB
4.0	Room floor area	35.21 m^2	28.40102 % of floor area	
	Component Area	10 m^2		
	Room absorption category	Intermediate		C_3 from Table 7.9 -10 dB
				Correction 10 dB
5.0	Noise reduction if only this component transmits sound			53 dB
6.0	Required noise reduction (from Step 1)			28 dB
7.0	Term C_2: Subtract the Required NR from the Noise Reduction for this component			25 dB
8.0	Determine from Table 7.8 the corresponding value of total transmitted sound energy			5 %

	Component:	Window		After step 2 28.47 dB
9.0	Transmits	95 % of total sound energy		C_2 from Table 7.8 0 dB
10.0	Room floor area	35.21 m^2	8.520307 % of floor area	
	Component Area	3 m^2		
	Room absorption category	Intermediate		C_3 from Table 7.9 -10 dB
11.0	Noise spectrum type	D - Mixed Road Traffic, Distant Aircraft		
	Component category	d. Sealed thick window, or exterior wall, or roof/ceil		C_4 from Table 7.10 7 dB
			$STC=NR+C_1+C_2+C_3+C_4$	Required STC 25

Tables from Environmental Noise Assessment in Land Use Planning, dated 1999, published by the MOE

Northeast Façade - 5th Floor Unit - Nighttime Conditions

Reverse Evaluation of Sound Transmission Class (STC) for Building Components

1.0	Free field sound level		62.87	dBA	Noise source
	Correction for reflections		3	dBA	Road
	Outdoor sound level		65.87	dBA	Indoor Quarters
	Indoor sound level	(Night time)	40	dBA	Sleeping
	Required Noise Reduction (NR)		25.87	dB	Subtract indoor from outdoor sound level
2.0	Sound angle of insidence	0 to 90 degrees			C_1 Correction from Table 7.7 0 dB
					Sum 25.87 dB

	Component:	Wall		STC 50 dB
3.0	Noise spectrum type	A - Large Aircraft Landing		C_4 from Table 7.10 0 dB
	Component category	d. Sealed thick window, or exterior wall, or roof/ceiling		Correction 0 dB
4.0	Room floor area	35.21 m^2	28.40102 % of floor area	
	Component Area	10 m^2		
	Room absorption category	Intermediate		C_3 from Table 7.9 -10 dB
				Correction 10 dB
5.0	Noise reduction if only this component transmits sound			60 dB
6.0	Required noise reduction (from Step 1)			26 dB
7.0	Term C_2: Subtract the Required NR from the Noise Reduction for this component			34 dB
8.0	Determine from Table 7.8 the corresponding value of total transmitted sound energy			5 %

	Component:	Window		After step 2 25.87 dB
9.0	Transmits	95 % of total sound energy		C_2 from Table 7.8 0 dB
10.0	Room floor area	35.21 m^2	9.940358 % of floor area	
	Component Area	3.5 m^2		
	Room absorption category	Intermediate		C_3 from Table 7.9 -10 dB
11.0	Noise spectrum type	A - Large Aircraft Landing		
	Component category	d. Sealed thick window, or exterior wall, or roof/ceil		C_4 from Table 7.10 0 dB
			$STC=NR+C_1+C_2+C_3+C_4$	Required STC 16

Tables from Environmental Noise Assessment in Land Use Planning, dated 1999, published by the MOE

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