Environmental Noise Feasibility Study

Bronte Creek Meadows – Phase 1

Proposed Mixed-Use Development

City of Burlington

June 27, 2025
Project: 123-0367

Prepared for

Alinea Land Corporation

Prepared by

Anthony Amarra, M.Sc.

Reviewed by



Kathryn Katsiroumpas, P.Eng.

VALCOUSTICS
Canada Ltd.

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1.0 INTRODUCTION

1.1 BACKGROUND AND PURPOSE

Valcoustics Canada Ltd. (VCL) has been retained to prepare this Environmental Noise Feasibility Study in support of the Re-zoning application for the proposed Bronte Creek Meadows (Phase 1) mixed-use development in the City of Burlington.

The purpose is to determine appropriate mitigation measures required to meet the applicable Ministry of the Environment, Conservation and Parks (MECP) noise guidelines as well as the requirements of the City of Burlington and Region of Halton.

1.2 SITE AND SURROUNDING AREA

1.2.1 Site Location

The overall development site is located on the northwest corner of Mainway and Burloak Drive, and is surrounded by:

- Upper Middle Road, with existing residential and mixed-use development beyond, to the north;
- Burloak Drive, with existing residential uses and the Bronte Creek Provincial Park beyond, to the east;
- Mainway, with existing commercial/employment uses beyond, to the south; and
- An existing school (Corpus Christi Catholic Secondary School) and residential uses to the west.

This report only addresses the Phase 1 lands which are located on the western portion of the site. Figure 1 shows a context plan.

1.2.2 Proposed Development

The site consists of existing woodlots as well as lands designated for future residential development (including detached dwellings, townhouse blocks, and medium-density mid-rise blocks), a school block, employment uses, parks, and stormwater management.

The assessment is based on the Draft Plan of Proposed Subdivision dated June 18, 2025 prepared by Bousfields Inc.

Appendix A contains the draft plan.

1.3 NOISE SOURCES

1.3.1 Transportation Noise Sources

The primary transportation noise sources with potential to impact the site are road traffic on Upper Middle Road and the internal collector roads including future Corporate Drive expansion (Street A) and future Sutton Drive expansion(Street B).

Existing (year 2022) traffic volumes for Upper Middle Road were obtained from the Region of Halton in the form of turning movement counts for Upper Middle Road at Blue Spruce Avenue. The 8-hour count data was converted to 24-hour counts assuming the counts represent 54.3% of the 24-hour volume (factor of 1.84). The truck percentages were also obtained from the traffic counts. The 24-hour volumes were escalated to the year 2045 (20 year future projection) as per the Region of Halton Noise Abatement Policy for regional roads.

For the internal collector roads (Corporate Drive and Sutton Drive), AM/PM peak hourly forecasts for the year 2040 were obtained from the traffic study prepared by Paradigm Transportation Solutions Limited (the traffic consultant for the project). The 24-hour volumes were calculated assuming that the higher of the peak AM/PM hourly volume represents 10% of the 24-hour traffic (factor of 10). To be consistent with the year being used for the regional roads, the traffic data was further escalated to the year 2045 using a 2% growth rate compounded annually.

The road traffic data is shown in Table 1.

Road traffic data correspondence is included as Appendix B.

1.3.2 Stationary Noise Source

The stationary sources in the vicinity of the site is the existing Corpus Christi Catholic Secondary School located at 5150 Upper Middle Road, northeast of the subject site. VCL staff conducted a site visit on May 2, 2024 to observe existing conditions and identify possible significant noise-emitting mechanical equipment at the school. The assessment of the potential noise impact from the school is provided in Section 3.0.

Other existing commercial/industrial establishments on the south side of The Mainway, are over 500 m away from the the proposed dwellings within the development (with non-residential uses in between) and are not expected to impact the site.

2.0 TRANSPORTATION NOISE ASSESSMENT

2.1 ENVIRONMENTAL NOISE GUIDELINES

2.1.1 MECP Noise Guidelines – Publication NPC-300

The applicable noise guidelines for new residential development are those in MECP Publication NPC-300, *"Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning"*.

The environmental noise guidelines contained in NPC-300 are discussed briefly below and summarized in Appendix D.

2.1.1.1 Architectural Elements

During daytime hours (0700 to 2300 hours), the indoor criterion for road noise is $L_{eq,Day}$(1) of 45 dBA for sensitive spaces such as living/dining rooms, dens and bedrooms. At night (2300 to 0700 hours), the indoor criterion for road noise is $L_{eq,Night}$(2) of 45 dBA for sensitive spaces such as living/dining rooms and dens, and 40 dBA for bedrooms (i.e. sleeping quarters).

The architectural design of the building envelope (walls, windows, etc.) must provide adequate sound isolation to achieve these indoor sound level limits.

2.1.1.2 Ventilation Requirements

In accordance with the MECP noise guidelines for transportation noise sources, if the daytime sound level ($L_{eq,Day}$) at the exterior facade of a noise sensitive window is greater than 65 dBA, means must be provided such that windows can be kept closed for noise control purposes, and central air conditioning is required. For daytime sound levels between 56 dBA and 65 dBA inclusive, there need only be the provision for adding air conditioning at a later date. A warning clause advising the occupants of the potential interference with some activities is also required. At nighttime, air conditioning would be required when the sound level exceeds 60 dBA ($L_{eq,Night}$) at a noise sensitive window. The provision for adding air conditioning is required when the nighttime sound level is greater than 50 dBA.

2.1.1.3 Outdoors

For OLA's the guideline sound level limit is a daytime 16-hour equivalent sound level ($L_{eq,Day}$) of 55 dBA, with an excess not more than 5 dBA considered acceptable if it is not feasible to achieve the 55 dBA objective for technical, economic or administrative reasons (i.e. an upper allowable design limit of 60 dBA). In these cases, warning clauses must be provided and registered on title. There are no nighttime sound level limits for OLAs.

(1) 16-hour daytime (0700 to 2300 hours) equivalent continuous sound pressure level.

(2) 8-hour nighttime (2300 to 0700 hours) equivalent continuous sound pressure level.

The point of assessment for an at-grade OLA is 3 m from the building facade, 1.5 m above grade, and aligned with the midnight of the subject building facade. It should be noted that a balcony/terrace is only considered an OLA:

- if it is the only OLA for the occupant,
- it is unenclosed, and
- it is 4 m in depth or more.

2.1.2 Region of Halton Noise Abatement Guidelines

The Region of Halton has published a Noise Attenuation Technical Policy for Regional Roads and New Developments (Report CS-69-06) as well as a Noise Abatement Guideline document. These policies indicate that the sound level criteria that should be met and are essentially the same as those outlined in the MECP noise guidelines (i.e., NPC-300). There are also some additional requirements for sound barriers and on the extrapolation of road traffic data in the Policy:

- Sound barriers must be installed on complete blocks and constructed on the Region's right-of-way (where feasible).
- The maximum height of a noise barrier wall is 3 metres measured from the base elevation, with higher noise barrier walls allowed by the Region subject to investigation of the aesthetics and depending on the availability of a wide right-of-way (R.O.W.) and deep residential lots.
- The Region also requires that noise assessments be based on a future 20-year design criterion, i.e., road traffic volumes are to be extrapolated 20 years in the future.

2.2 ASSESSMENT METHOD

Using the traffic data in Table 1, the sound levels in terms of $L_{eq\ Day}$ and $L_{eq\ Night}$ were determined using STAMSON V5.04 – ORNAMENT/STEAM, the computerized road and rail traffic noise prediction model of the MECP.

The daytime and nighttime sound levels were calculated at 4.5 m above grade representing the second-storey windows. At the rear yard OLAs, the receptor height was 1.5 m above grade. Figure D-1 in Appendix D shows the locations where the calculations were made.

2.3 RESULTS – TRANSPORTATION NOISE ASSESSMENT

The highest predicted sound levels of 67 dBA during the daytime and 61 dBA during the nighttime are predicted to occur at the high-rise mixed-use blocks closest to Burloak Drive and the future Street A (Corporate Drive).

At the OLAs, the highest predicted daytime sound level of 61 dBA occurs at the rear yards of dwellings siding onto Street A (Corporate Drive).

Table 2 shows the predicted sound levels due to the transportation sources. Sample calculations are included as Appendix D.

2.4 TRANSPORTATION NOISE CONTROL MEASURES

The noise control measures for transportation noise sources include ventilation and architectural elements to protect the indoor noise environment, design features to protect OLAs, and appropriate warning clauses.

Table 3, the notes to Table 3 and Figure 2 summarize the noise control measures for the site. These are also discussed in the following sections.

2.4.1 Ventilation Requirements

Air conditioning is mandatory for the first row of dwellings along the future Street A (Corporate Drive).

The provision to allow for the future installation of air conditioning by the occupant is required for Block 224 and Lot 1 (closest to Upper Middle Road), Lots 179 and 188 (closest to Street B), as well as Block 195 and Lot 48.

Note that for low-density developments, this normally takes the form of a ducted forced-air heating system suitably sized to accommodate the addition of central air conditioning. For high-rise buildings, central air conditioning is usually included, which inherently meets the above requirements.

2.4.2 Exterior Wall and Window Construction

The required Sound Transmission Class (STC) ratings for the exterior facades were calculated assuming window and exterior wall surface areas of potential worst-case bedrooms are:

- Single-family and townhouse dwellings – window areas equal to 30% of the room floor area, and wall areas equal to 80% of the room floor area;
- Mid-rise and high-rise buildings – window areas equal to 50% of the room floor area and wall areas equal to 50% of the room floor area.

Based on these assumptions, the following window and exterior wall constructions would be needed to meet the MECP indoor noise guideline limits:

- Mid-rise dwellings on Block 224 (along Upper Middle Road) require windows up to STC 29. Exterior wall construction meeting the minimum non-acoustical requirements of the Ontario Building Code (OBC) is expected to be sufficient.
- Low-rise dwellings along Street A (Corporate Drive) require windows up to STC 28. Exterior wall construction meeting the minimum non-acoustical requirements of the OBC is expected to be sufficient.
- For all other lots/blocks, windows and exterior wall construction meeting the minimum non-acoustical requirements of the OBC are expected to be sufficient.

The above requirements are based on assumed window and wall areas. The assessment should be updated and the STC requirements confirmed once detailed floor plan and elevation drawings are available.

2.4.3 Outdoors

The sound levels at the rear yards of the single-family and townhouse dwellings exposed to Street A (Corporate Drive) are predicted to exceed 60 dBA. A 1.8 m high sound barrier will reduce the sound level to 56 dBA; although this is a slight 1 dBA excess over the target 55 dBA limit, it is within the +5 dBA allowable leeway under the guideline limits. Therefore, a 1.8 m high sound barriers are considered acceptable.

For rear yards exposed to Street B (Sutton Drive), a 1.8 m high sound barrier reduces the sound level to below 55 dBA.

Based on the above, 1.8 m high sound barriers are recommended for rear yards of dwellings exposed to Streets A (Corporate Drive) and B (Sutton Drive).

If outdoor amenity areas are provided for the residential uses in Block 224, additional sound barriers may be required. This should be confirmed at the site plan approval stage for Block 224 when the block uses and layout are known.

2.4.4 Warning Clauses

Warning clauses are a tool to inform prospective owners/occupants of potential annoyance due to existing noise sources. Where the guideline sound level limits are exceeded (and noise control measures implemented), appropriate warning clauses should be registered on the title or included in the development agreement that is registered on title. The warning clauses should also be included in agreements of Offers of Purchase and Sale and lease/rental agreements to make future occupants aware of the potential noise situation.

Table 3 and the notes to Table 3 summarize the appropriate warning clauses for the dwellings.

3.0 STATIONARY NOISE ASSESSMENT

3.1 ENVIRONMENTAL NOISE GUIDELINES – STATIONARY NOISE SOURCES

Publication NPC-300 defines industrial, commercial, or institutional facilities (such as schools), as “stationary noise sources”. The requirements for stationary sources are defined in terms of the one-hour equivalent continuous sound level ($L_{eq, 1hr}$, in dBA).

The sound level limits depend on the level of background noise in the vicinity. This defines the area Class. The site and area would be considered Class 1 or Urban, given the proximity to busy roadways (Burloak Drive and Upper Middle Road).

3.1.1 Steady Sources

The sound level limits for steady sources are defined as the higher of the ambient (due to road traffic) or the minimum exclusion limits given by:

- 50 dBA during any hour in the daytime (0700 to 1900) and evening (1900 to 2300) at the exterior plane of window (POW) to a noise-sensitive space or at an outdoor point of reception (OPOR); and
- 45 dBA during any hour in the nighttime (2300 to 0700) at a POW.

The guideline limits for stationary sources do not apply to OPORs at night or indoors (at any time).

3.1.2 Emergency Equipment

For emergency equipment, such as standby generators, the sound level limits do not apply during operation in emergency situations. However, the sound level limits do apply to operation in non-emergency situations, such as routine testing activity, which is typically done during the daytime for about 60 minutes. During the testing period, the limits are 5 dBA higher than the limits for non-emergency (steady) equipment. For daytime testing, this corresponds to 55 dBA or the ambient due to road traffic plus 5 dBA.

In addition, NPC-300 specifies that noise emissions from testing of emergency equipment are to be assessed separately from other (non-emergency) equipment.

3.2 APPLICABLE GUIDELINE LIMITS

Road traffic on Upper Middle Road is expected to dominate the ambient sound environment, at least during the daytime (which is when the school is operational) and evening. At night, it is expected that the ambient is below the minimum exclusion limits. To be conservative, the minimum exclusion limits were used for all receptors during the daytime, evening, and nighttime period.

3.3 ANALYSIS METHOD

The noise assessment was done using the CadnaA V2022 MR2 environmental acoustics modelling software. The 3-D model follows the procedures of ISO 9613 Part 2, *"Acoustics – Attenuation of Sound during Propagation Outdoors"*.

The calculations were done at point receptors representing a second-storey window (4.5 m above grade) for dwellings closest to the school as well as associated rear yard receptors (1.5 m above grade).

3.4 NOISE SOURCES AND OPERATING SCENARIOS

Noise sources at the school include various rooftop air handling equipment (air conditioning, make-up air, and cooling condensers) as well as a dust collector located on the east side of the building. There is also a small standby generator unit located on the east driveway/parking lot. The sources are summarized in Table 4 and shown in Figure 3.

As mentioned, the school only operates during the daytime. However, there could be activities during the evening and therefore the air handling units were assumed to operate at full capacity during the worst-case daytime and evening hours, and 50% capacity at night. Cooling condensers (which could service freezers/refrigerators within the school) were assumed to operate at full capacity during the daytime, evening, and nighttime. The dust collector was assumed to only run during the daytime. The generator is assumed to only be tested during the daytime.

Sound data for the various sources were taken from similar projects done by VCL.

3.5 RESULTS – STATIONARY NOISE ASSESSMENT

Figure 4 shows the predicted sound levels due to the existing school. The left panel shows the sound levels due to non-emergency equipment and the right panel shows the sound levels due to testing of the emergency generator.

The results show that the guideline limits are met at all receptors during the daytime, evening, and nighttime. Therefore, no additional mitigation is required to address the potential impact from the school.

Appendix E contains additional details regarding the stationary noise assessment.

4.0 OTHER BLOCKS

4.1 BLOCK 224 – MIXED-USE BLOCK

Note that the future mixed uses may have the potential to generate noise which may impact the surrounding residential uses. The mechanical systems for these buildings must be designed to comply with the sound level limits outlined in Publication NPC-300 for stationary sources. This is typically addressed at the site plan approval stage for this block. Any resulting mitigation required to meet NPC-300 would be the responsibility of the developer/builder of the health care/educational uses.

4.2 BLOCK 225 AND 226 – SCHOOL BLOCK & EMPLOYMENT BLOCK

As with the mixed use block, future uses in the employment and school blocks have the potential to generate noise which may impact the adjacent dwellings. The mechanical systems and any significant truck activities in these blocks should be assessed and, where required, mitigation designed to meet the noise guideline limits in Publication NPC-300 for stationary sources. This is typically addressed at the site plan approval stage and/or in the detailed design stage for the employment/school block. Any resulting mitigation required to meet the applicable MECP noise guidelines would be the responsibility of the developer/builder of the school/employment use.

5.0 CONCLUSIONS

With the incorporation of the recommended noise mitigation measurements, the applicable MECP and Region of Halton noise guidelines can be met, and a suitable acoustical environment provided for future occupants of the proposed development.

The approvals and administrative procedures are available to ensure that the noise control requirements are implemented. Detailed noise assessments should be completed for Block plans prior to site plan approval for each block once layouts have been developed. The proposed development is considered feasible with respect to environmental noise, by means of proper design as outlined in this report.

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TABLE 1: ROAD TRAFFIC DATA

Roadway	AADT		% Trucks		Day/Night Split (%)	Speed (km/hr)
	Current	Future	Medium	Heavy		
Upper Middle Road[1]	18 405	28 454	0.54	0.72	90/10	60
Street A (Corporate Drive)[2][3]	—	22 168	0.75	1.31	90/10	50
Street B/C (Sutton Drive)[2]	—	6 560	2[4]	3[4]	90/10	50

Notes:

(1) Data for the year 2022 obtained from the Region of Halton. Future volumes were projected to the year 2045 (20-year) condition using a 2% growth rate compounded annually.

(2) Data for the year 2045 (20-year future) were calculated from provided 2040 forecasts obtained from the traffic study prepared by Paradigm Transportation Solutions Limited.

(3) Truck percentages for Street A were assumed based on the truck percentages at Burloak Drive, which has a similar volume to Street A.

(4) Typical truck percentages assumed for lower-volume collector roads.

TABLE 2: PREDICTED SOUND LEVELS DUE TO TRANSPORTATION SOURCES

Location[1]	Source	Distance (m)[2]	$L_{eq\ Day}$ (dBA)	$L_{eq\ Night}$ (dBA)
A Lot 1	Upper Middle Road	71	56	49
B Block 224	Upper Middle Road	71	61	55
	Sutton Drive	16	60	53
	Total	**—**	**63**	**57**
C Block 211	Corporate Drive	17	65	59
	Sutton Drive	23	58	52
	Total	**—**	**66**	**60**
D Lot 49	Corporate Drive	16	66	59
E Lot 48	Corporate Drive	28	57	51
G Lot 47	Corporate Drive	41	55	48
OLA1 Lot 49	Corporate Drive	20	61	N/A[3]
OLA2 Lot 48	Corporate Drive	32	57	N/A[3]
OLA3 Lot 47	Corporate Drive	45	54	N/A[3]
OLA4 Lot 188	Sutton Drive	19	58	N/A[3]
OLA5 Lot 187	Sutton Drive	32	53	N/A[3]
OLA6 Lot 1	Upper Middle Road	73	54	N/A[3]

Notes:

(1) See Figure D-1 in Appendix D for receptor locations.

(2) Distance measured from the receptor to the centreline of the roadway/railway.

(3) MECP guideline limits do not apply to OLAs during the nighttime.

TABLE 3: NOISE ABATEMENT MEASURES

Dwelling	Air Conditioning(1)	Exterior Wall(2)	Exterior Window(2)(3)	Sound Barrier(4)	Warning Clause(5)
Lot 49, Block 188	Mandatory	OBC	STC 28	1.8 m High	A + B
Blocks 199 to 212, and 221 to 223	Mandatory	OBC	STC 28	None	A + B
Lots 48, 179, 188, Block 195	Provision for Adding	OBC	OBC	1.8 m High	A + C
Lot 1	Provision for Adding	OBC	OBC	None	A + C
Block 224 (Medium-density Mixed-use)	Provision for Adding	OBC	STC 29	To be determined	A + C
All other lots/blocks	No special acoustic requirements				

Notes:

(1) Central air conditioning allows windows to remain closed for noise control purposes. Provision for adding air conditioning typically takes the form of a ducted ventilation system sized to accommodate the addition of central air conditioning by the occupant.

(2) Window and exterior wall requirements were based on standard assumptions and should be reviewed once building (floor) plans are finalized.

The window STC rating applies to the entire window assembly and not just the glazing. A sliding glass walkout door should be considered as a window and be included in the percentage of glazing.

The window supplier should provide acoustical laboratory test data (following a recognized test standard) for the intended windows indicated the STC ratings can be met.

(3) Sound barriers must be of solid construction with no gaps cracks or holes and must have a minimum surface density of 20 kg/m².

(4) Standard example warning clauses to be registered on title and be included in Offers of Purchase and Sale and Leases on designated units:

A. "Purchasers are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road traffic may occasionally interfere with some activities of the dwelling occupants as the sound level may exceed the noise guidelines of the Municipality and the Ministry of the Environment."

B. "This dwelling unit has been designed with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that Ministry of the Environment."

C. "This dwelling unit has been designed with the provision for adding central air conditioning at the occupant's discretion. 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 sound level limits of the Municipality and the Ministry of the Environment."

(5) Conventional roof construction meeting Ontario Building Code requirements is satisfactory in all cases.

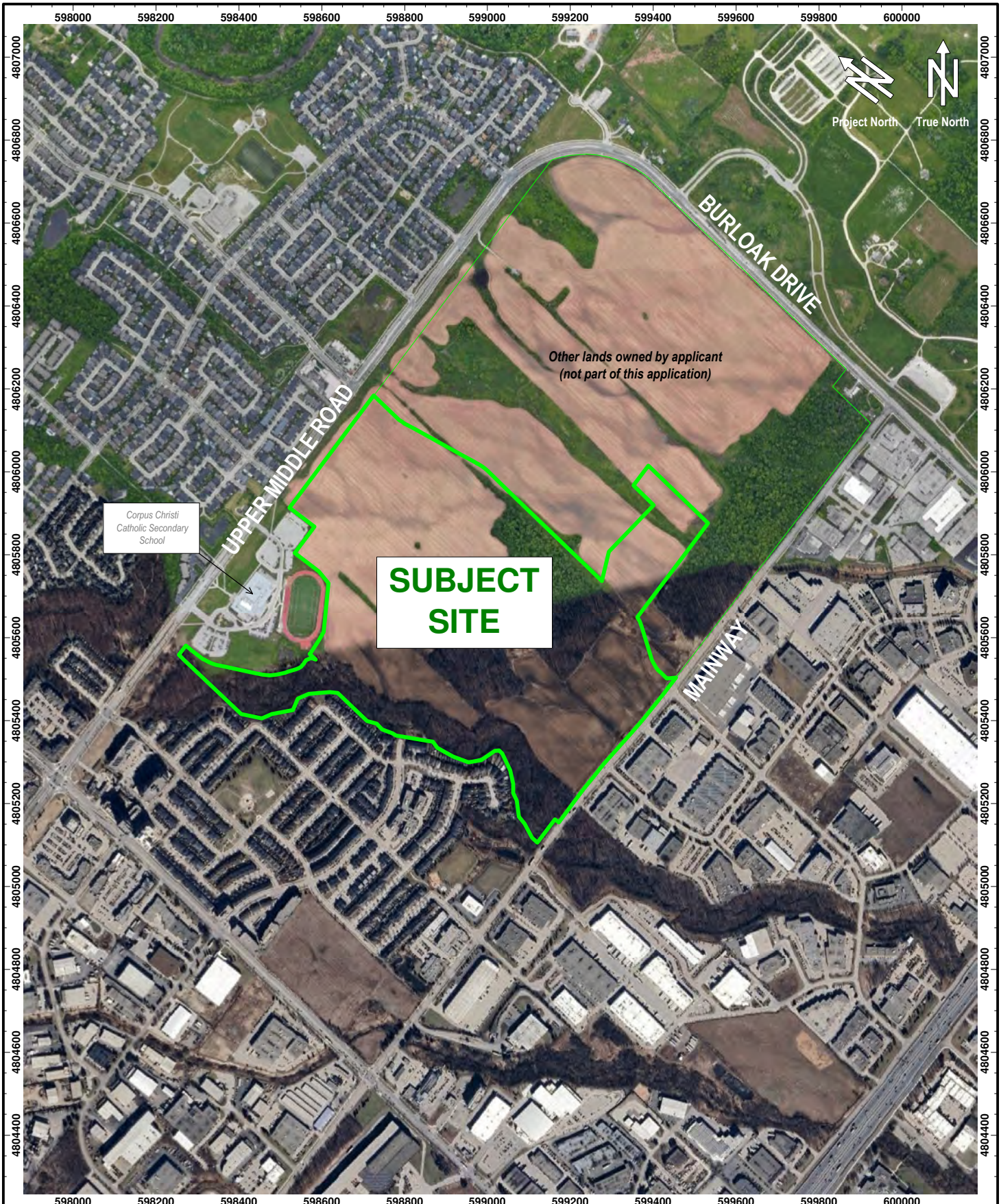
(6) All exterior doors shall be fully weatherstripped.

TABLE 4: STATIONARY NOISE SOURCE SUMMARY

Source ID(1)	Description	Sound Power Level (dBA re 10^{-12} W)
CND1	School condensing unit	86
CND2	School condensing unit	86
CND3	School condensing unit	86
MUA1	Make-up air unit	81
MUA2	Make-up air unit	81
MUA3	Make-up air unit	81
MUA4	Make-up air unit	81
AHU1	Air handling unit	88
AHU2	Air handling unit	88
AHU3	Air handling unit	88
AHU4	Air handling unit	88
AHU5	Air handling unit	88
AHU6	Air handling unit	88
AHU7	Air handling unit	88
AHU8	Air handling unit	88
AHU9	Air handling unit	88
DC1	Dust collector	93
GEN	Generator	100

Note:

(1) See Figure 3 for noise source locations.



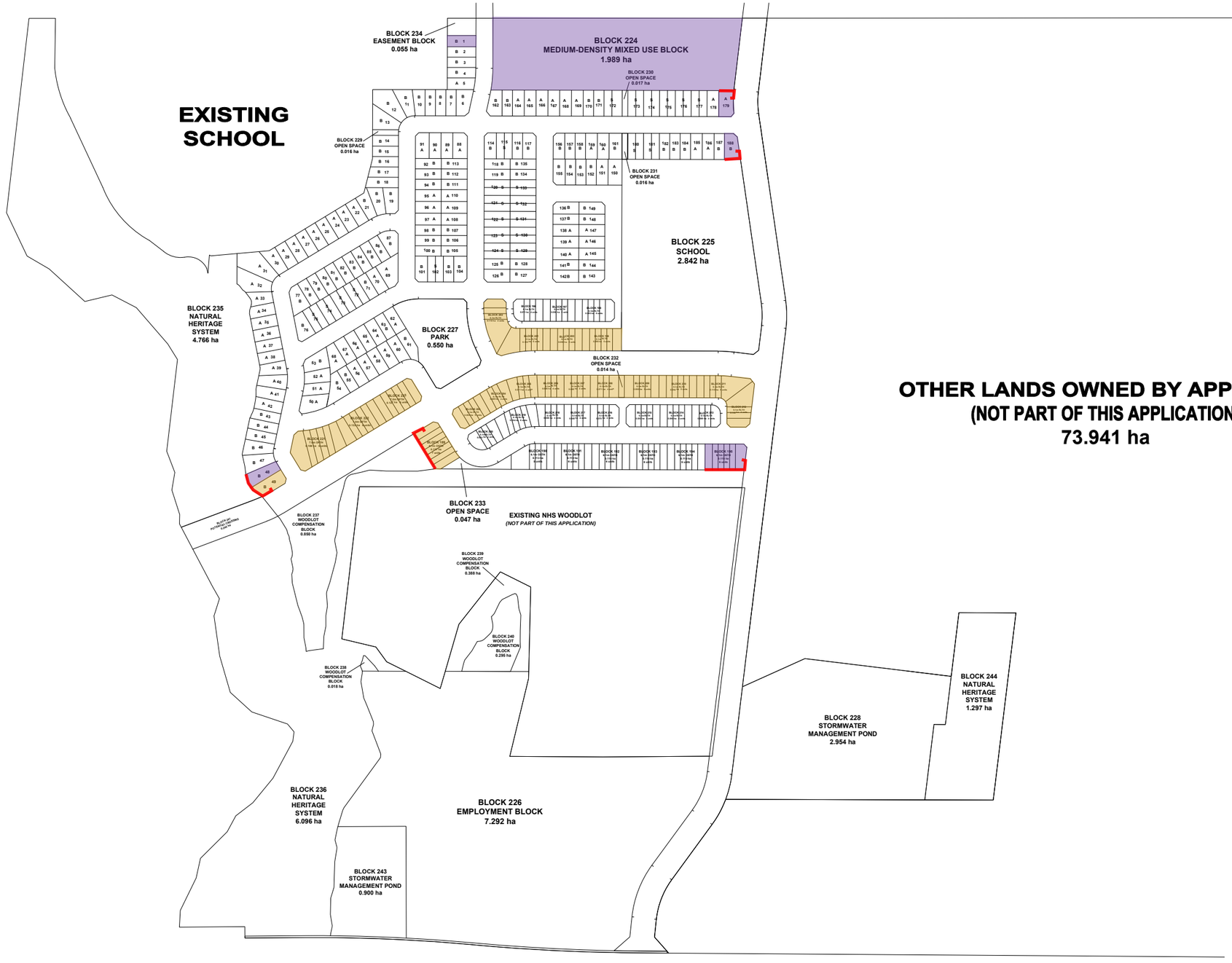
VALCOUSTICS Canada Ltd. consulting acoustical engineers	Title: **Context Plan**	Date: **2025-06-24**	Figure: **1**
	Project Name: **Bronte Creek Meadows, Burlington**	Project No.: **123-0367**	

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Date Plotted: 27.06.25

Legend:

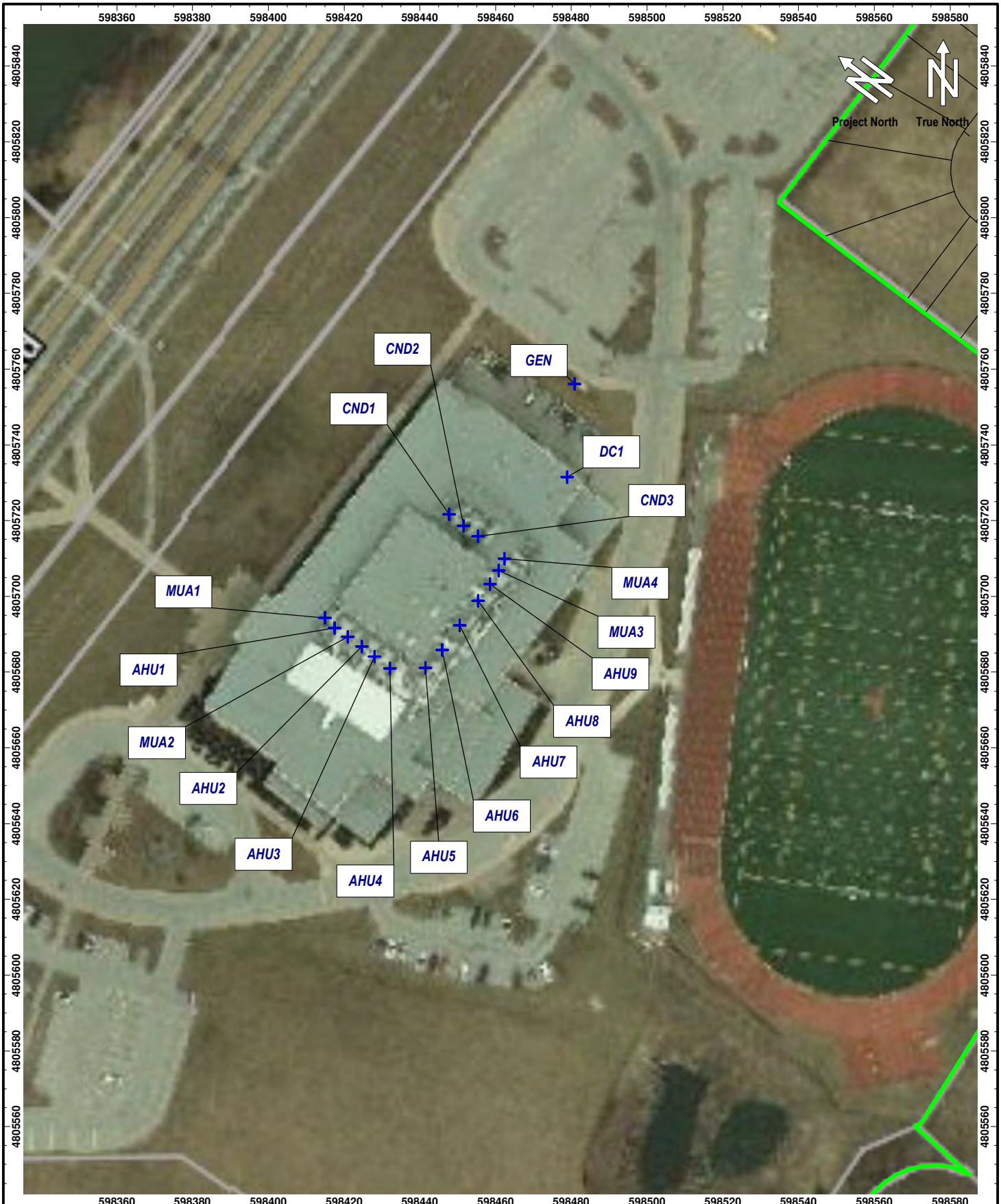
- Mandatory A/C
- Provision for adding A/C
- 1.8 m High Sound Barrier



OTHER LANDS OWNED BY APPLICANT
(NOT PART OF THIS APPLICATION)
73.941 ha

Project North True North

VALCOUSTICS Canada Ltd.	Title: Transportation Noise Control Requirements	Date: 2025-06-24	Figure: 2
	Project Name: Bronte Creek Meadows, Burlington	Project No.: 123-0367	



VALCOUSTICS
Canada Ltd.
consulting acoustical engineers

Title	Date	Figure
Stationary Noise Source IDs	**2025-06-24**	**3**
Project Name	Project No.	
Bronte Creek Meadows, Burlington	**123-0367**	

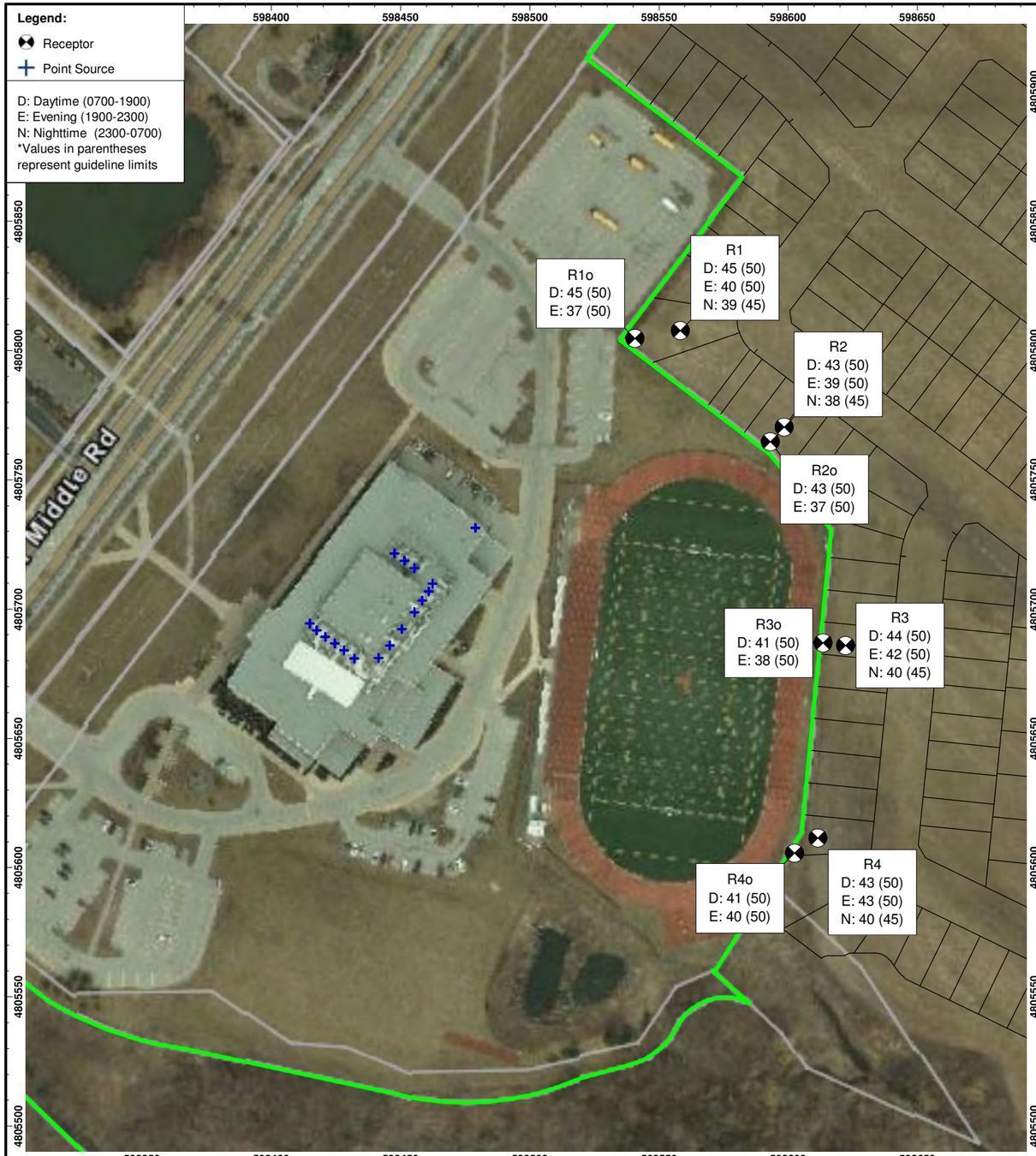
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Date Plotted: 24.06.25

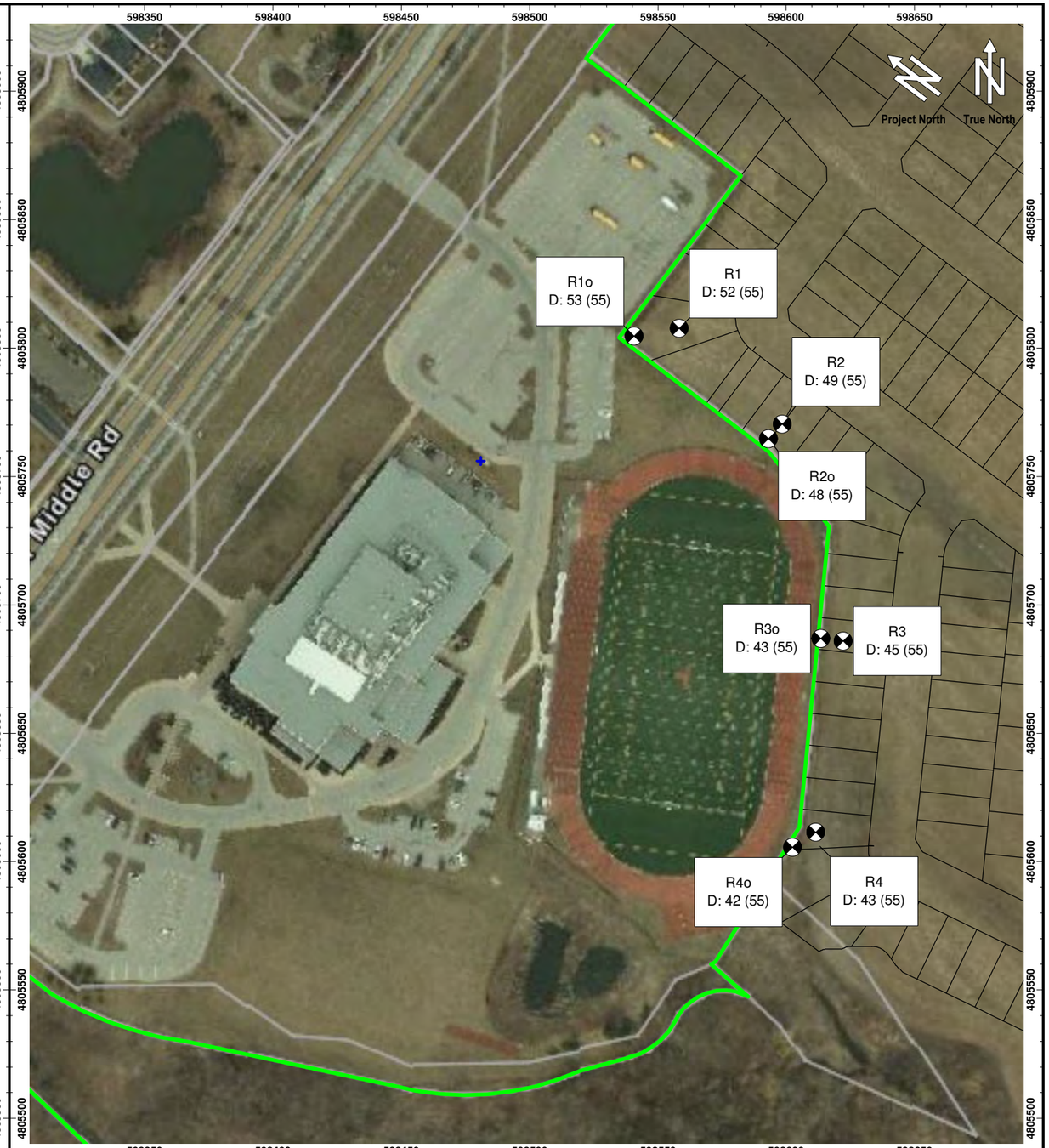
Legend:

- Receptor
- Point Source

D: Daytime (0700-1900)
E: Evening (1900-2300)
N: Nighttime (2300-0700)
*Values in parentheses represent guideline limits



Non-Emergency Equipment



Emergency Generator Testing

VALCOUSTICS Canada Ltd. consulting acoustical engineers

Title
Predicted Sound Levels (dBA) due to Stationary Sources

Date
2025-06-24

Figure
4

Project Name
Bronte Creek Meadows, Burlington

Project No.
123-0367

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Date Plotted: 24.06.25

APPENDIX A
DRAFT PLAN

EXISTING RESIDENTIAL

EXISTING RESIDENTIAL

EXISTING RESIDENTIAL

EXISTING SCHOOL

KNOWN AS **UPPER MIDDLE ROAD**
(ROAD ALLOWANCE BETWEEN CONCESSION 1 AND 2 S.D.S.)

BLOCK 234
EASEMENT BLOCK
0.055 ha

BLOCK 224
MEDIUM-DENSITY MIXED USE BLOCK
1.989 ha

BLOCK 225
SCHOOL
2.842 ha

BLOCK 227
PARK
0.550 ha

BLOCK 235
NATURAL HERITAGE SYSTEM
4.766 ha

BLOCK 233
OPEN SPACE
0.047 ha

EXISTING NHS WOODLOT
(NOT PART OF THIS APPLICATION)
PART 2 PLAN 20R-10977
"NOT A PART OF THIS PLAN"
PIN 07183-0188

BLOCK 226
EMPLOYMENT BLOCK
7.292 ha

BLOCK 236
NATURAL HERITAGE SYSTEM
6.096 ha

BLOCK 243
STORMWATER MANAGEMENT POND
0.309 ha

BLOCK 228
STORMWATER MANAGEMENT POND
2.954 ha

BLOCK 244
NATURAL HERITAGE SYSTEM
1.297 ha

BLOCK 242
ROAD WIDENING
0.090 ha

STREET 'A' · STREET 'B' · STREET 'C' · STREET 'D' · STREET 'E' · STREET 'F' · STREET 'G' · STREET 'H' · STREET 'I' · STREET 'J' · STREET 'K'

LANE 'A' · LANE 'B' · LANE 'C'

CORPORATE DRIVE (DEDICATED BY PLAN 20M-722)

BURLOAK DRIVE (KNOWN AS WOODWARD AVENUE ROAD ALLOWANCE BETWEEN CONCESSION 1 AND 2 S.D.S.)

OTHER LANDS OWNED BY APPLICANT
(NOT PART OF THIS APPLICATION)
73.941 ha

BRONTE CREEK PROVINCIAL PARK

EXISTING INDUSTRIAL

MAINWAY (ASSUMED AND NAME AS PUBLIC HIGHWAY BY BY-LAW 8-1994, INST. No. 817492) PIN 07183-0184

MAINWAY (DEDICATED BY PLAN 20M-525)

MAINWAY (DEDICATED BY PLAN 20M-505)

DETAIL "B"
NOT TO SCALE

DETAIL "A"
NOT TO SCALE

SEE DETAIL "A"

SEE DETAIL "B"

KEY PLAN

Subject Property

Other Lands Owned by Applicant

LEGEND

Subject Property

NOTES

All dimensions are in metres.
All area measurements are computer generated.
All elevations refer to Geodetic Datum.

0 10 25 50 100

LAND USE - AREA TABLE	23121 - 42dp			June 18, 2025
Low Density Residential	Lots	1-188	14%	6.924 ha±
On-Street Townhouses	Blocks	189-195	2%	0.798
Rear-Lane Townhouses	Blocks	196-220	4%	2.089
Double Frontage Townhouses	Blocks	221-223	1%	0.449
Med Density Mixed Use	Block	224	4%	1.989
School	Block	225	6%	2.842
Employment Block	Block	226	15%	7.292
Park	Block	227	1%	0.550
Stormwater Management Pond	Blocks	228,243	8%	3.854
Open Space Blocks	Blocks	229-233	0%	0.111
Easement Blocks	Block	234	0%	0.055
Natural Heritage Blocks	Blocks	235-236,244	24%	12.159
Woodlot Compensation Blocks	Blocks	237-240	3%	1.551
Potential Crossing Block	Block	241	0%	0.245
Road Widening	Block	242	0%	0.090
Roads			18%	8.752
Total			100%	**49.750 ha±**

ROADS			
26.0m Public R.O.W.	1,574 m		4.032
18.0m Public R.O.W.	2,384 m		4.337
7.5m Public Lane	485 m		0.383
Total	**4,443 m**		**8.752 ha**

ESTIMATED UNIT COUNT			
12.5m Single Family Detached	A	17%	68
11.0m Single Family Detached	B	25%	96
8.4m Semi-Detached	S	12%	48
6.1m On-Street Townhouses		11%	42
6.1m Rear Lane Townhouses		30%	117
7.0m Double Frontage Townhouses		5%	18
Total		**100%**	**389 units**

ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT

A, B, E, F, G, J, L - As Shown on Plan
C. Additional lands owned by the applicant as shown on the key plan.
D. Low Density Residential, On-Street Townhouses, Rear-Lane Townhouses, Dual Frontage Townhouses, Medium Density Mixed Use, School, Employment Block, Park, Stormwater Management Pond, Open Space, Easement, Natural Heritage Blocks, Woodlot Compensation Blocks, Potential Crossing, Road Widening, Roads
H. Piped water to be provided.
I. Clay loam soil.
K. Sanitary & storm sewers to be provided.

SURVEYOR'S CERTIFICATE

I certify that: the boundaries of the lands to be subdivided and their relationship to the adjacent lands are correctly shown.

ROY C. MAYO, O.L.S.
MACKAY, MACKAY AND PETERS LIMITED
Day Month Year

OWNER'S AUTHORIZATION

I/we, a. 5201 Mainway - Paletta Bros. Four Ltd.
b. 5164 Upper Middle Road - 2362302 Ontario Inc.
c. 5366 Upper Middle Road - Qualico Foods (1994) Inc.
d. 5900 Upper Middle Road - 2362302 Ontario Inc.
e. 5470 Upper Middle Road - Paletta International (1990) Inc.

being the registered owner(s) of the subject lands hereby authorize BOUSFIELD's INC. to prepare and submit a draft plan of subdivision for approval.

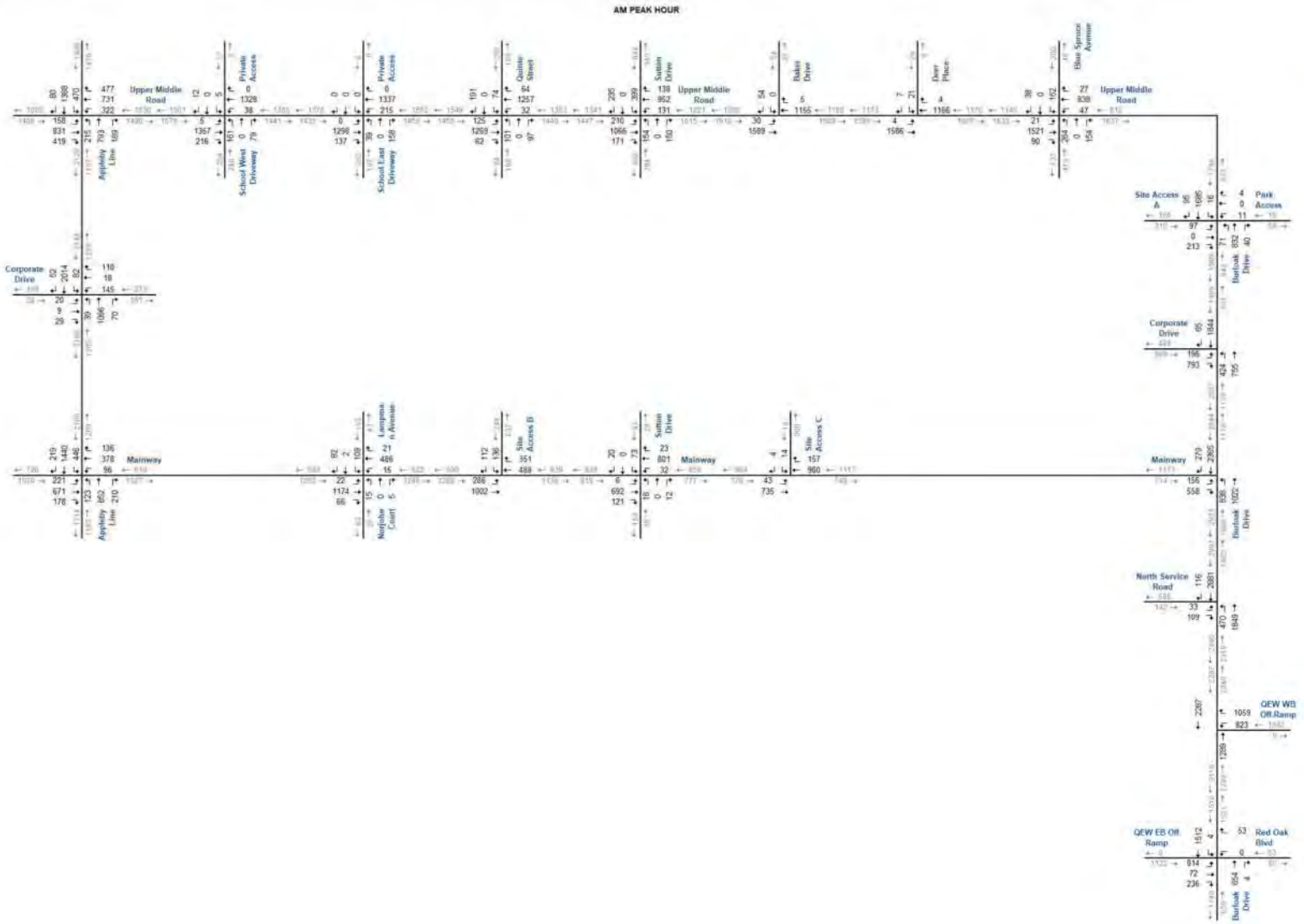
a. Signature Day Month Year
b. Signature Day Month Year
c. Signature Day Month Year
d. Signature Day Month Year
e. Signature Day Month Year

DRAFT PLAN OF PROPOSED SUBDIVISION
LOTS 1, 2, 3 & 4
CONCESSION 2 S.D.S.
(GEOGRAPHIC TOWNSHIP OF NELSON)
CITY OF BURLINGTON
REGIONAL MUNICIPALITY OF HALTON

BOUSFIELDs INC.
3 Church Street, Suite 200
Toronto, Ontario M5E 1M2
P (416) 947-9744
F (416) 947-0781

1 : 2500	June 18, 2025	23121 - 42dp
Scale	Date	Drawing Number

APPENDIX B
TRAFFIC DATA

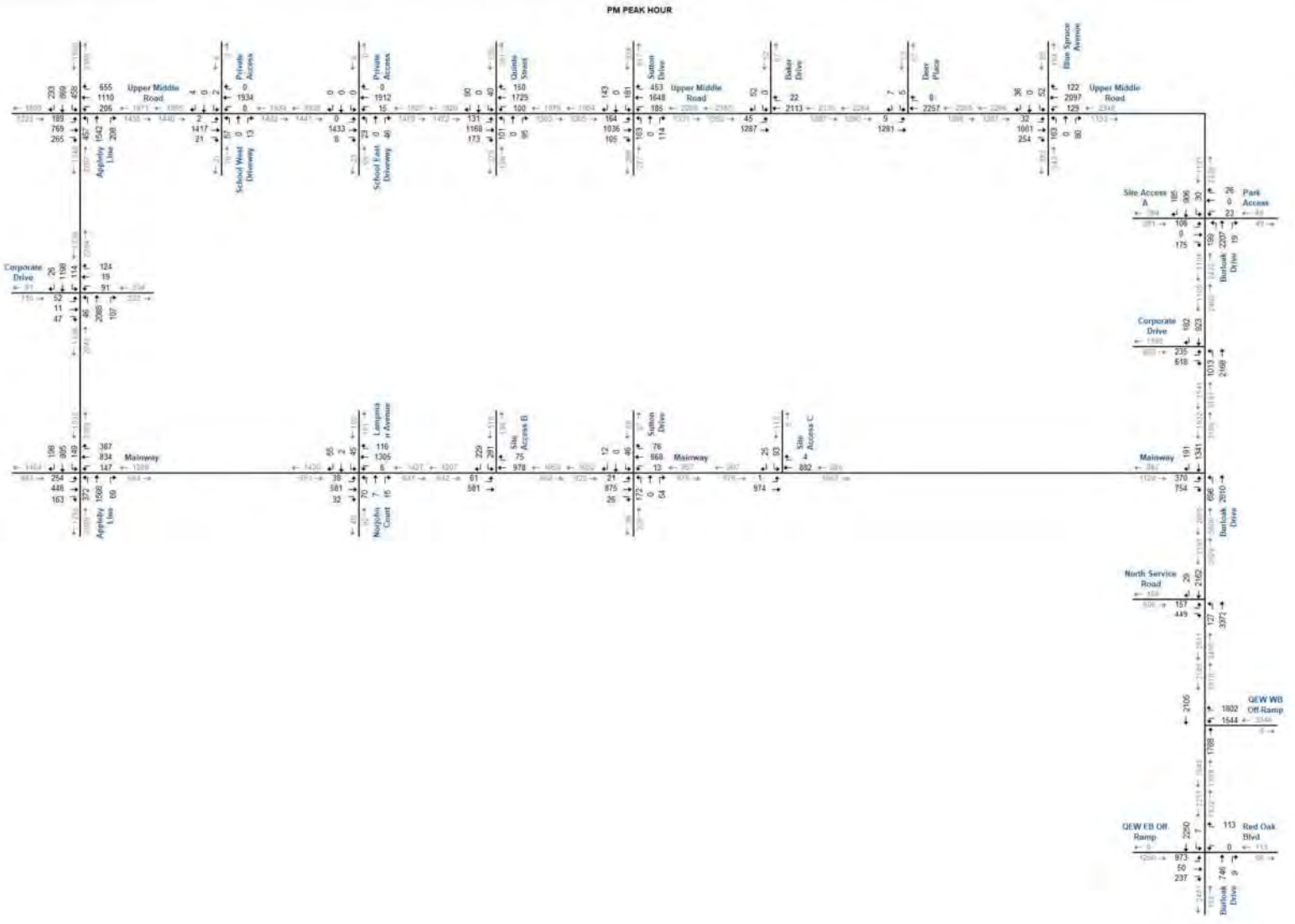


NTS

Total Traffic Volumes – 2040 Horizon AM Peak Hour

Bronte Creek Meadows, Burlington
230533

Figure I



NTS

Total Traffic Volumes – 2040 Horizon PM Peak Hour

Bronte Creek Meadows, Burlington
230533

Figure J

Upper Middle Rd @ Blue Spruce Ave

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 7:30:00
To: 8:30:00

Municipality: Halton Region
Site #: 1005220100
Intersection: Upper Middle Rd & Blue Spruce Ave
TFR File #: 4
Count date: 28-Sep-2023

Weather conditions:
Cloudy/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

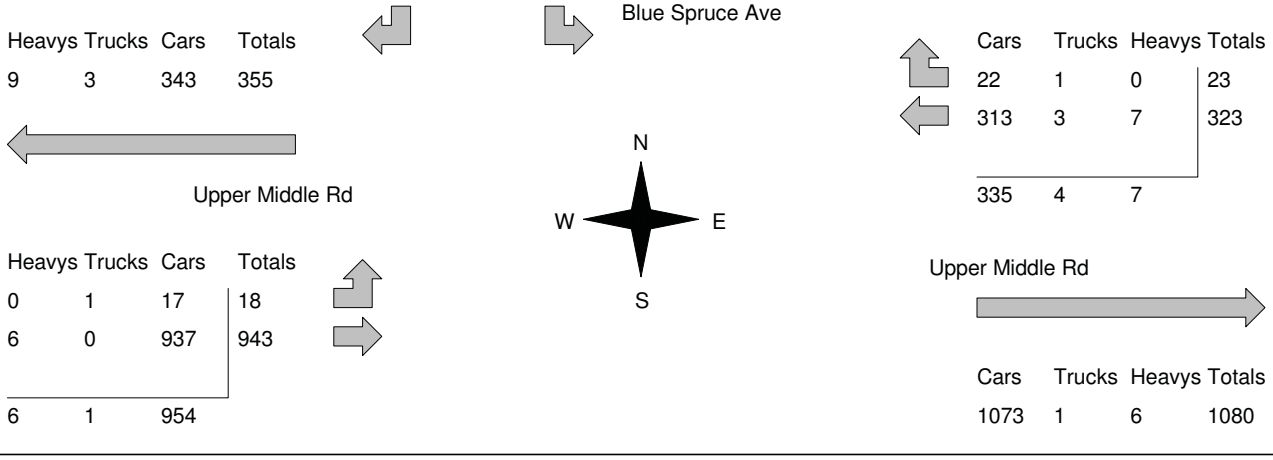
Major Road: Upper Middle Rd runs W/E

North Leg Total: 210
North Entering: 169
North Peds: 6
Peds Cross: ⋈

Heavys	2	0	2
Trucks	0	1	1
Cars	30	136	166
Totals	32	137	

Heavys	0
Trucks	2
Cars	39
Totals	41

East Leg Total: 1426
East Entering: 346
East Peds: 0
Peds Cross: ⧖



Heavys	Trucks	Cars	Totals
9	3	343	355

Cars	Trucks	Heavys	Totals
22	1	0	23
313	3	7	323
335	4	7	

Heavys	Trucks	Cars	Totals
0	1	17	18
6	0	937	943
6	1	954	

Cars	Trucks	Heavys	Totals
1073	1	6	1080

Peds Cross: ⧖
West Peds: 0
West Entering: 961
West Leg Total: 1316

Comments

Upper Middle Rd @ Blue Spruce Ave

Mid-day Peak Diagram

Specified Period
From: 11:00:00
To: 14:00:00

One Hour Peak
From: 12:30:00
To: 13:30:00

Municipality: Halton Region
Site #: 1005220100
Intersection: Upper Middle Rd & Blue Spruce Ave
TFR File #: 4
Count date: 28-Sep-2023

Weather conditions:
Cloudy/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Upper Middle Rd runs W/E

North Leg Total: 108
North Entering: 49
North Peds: 4
Peds Cross: ⋈

Heavys	1	0	1
Trucks	0	0	0
Cars	13	35	48
Totals	14	35	

Heavys	1
Trucks	1
Cars	57
Totals	59

East Leg Total: 940
East Entering: 542
East Peds: 0
Peds Cross: ⧖

Blue Spruce Ave

Heavys	Trucks	Cars	Totals
4	6	508	518

Upper Middle Rd

Heavys	Trucks	Cars	Totals
0	1	20	21
2	4	357	363
2	5	377	

N
W E
S

Cars	Trucks	Heavys	Totals
37	0	1	38
495	6	3	504
532	6	4	

Upper Middle Rd

Cars	Trucks	Heavys	Totals
392	4	2	398

Peds Cross: ⧖
West Peds: 0
West Entering: 384
West Leg Total: 902

Comments

Upper Middle Rd @ Blue Spruce Ave

Afternoon Peak Diagram

Specified Period
From: 15:00:00
To: 18:00:00

One Hour Peak
From: 16:45:00
To: 17:45:00

Municipality: Halton Region
Site #: 1005220100
Intersection: Upper Middle Rd & Blue Spruce Ave
TFR File #: 4
Count date: 28-Sep-2023

Weather conditions:
Cloudy/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

Major Road: Upper Middle Rd runs W/E

North Leg Total: 205
North Entering: 75
North Peds: 14
Peds Cross: ⋈

Heavys	0	0	0
Trucks	1	0	1
Cars	30	44	74
Totals	31	44	

Heavys	0
Trucks	0
Cars	130
Totals	130

East Leg Total: 1960
East Entering: 1484
East Peds: 0
Peds Cross: ⧖

Blue Spruce Ave

Heavys	Trucks	Cars	Totals
7	6	1399	1412

Upper Middle Rd

Heavys	Trucks	Cars	Totals
0	0	27	27
3	0	429	432
3	0	456	

N
W E
S

Cars	Trucks	Heavys	Totals
103	0	0	103
1369	5	7	1381
1472	5	7	

Upper Middle Rd

Cars	Trucks	Heavys	Totals
473	0	3	476

Peds Cross: ⧖
West Peds: 0
West Entering: 459
West Leg Total: 1871

Comments

Upper Middle Rd @ Blue Spruce Ave

Total Count Diagram

Municipality: Halton Region
Site #: 1005220100
Intersection: Upper Middle Rd & Blue Spruce Ave
TFR File #: 4
Count date: 28-Sep-2023

Weather conditions:
Cloudy/Dry

Person(s) who counted:
Cam

**** Non-Signalized Intersection ****

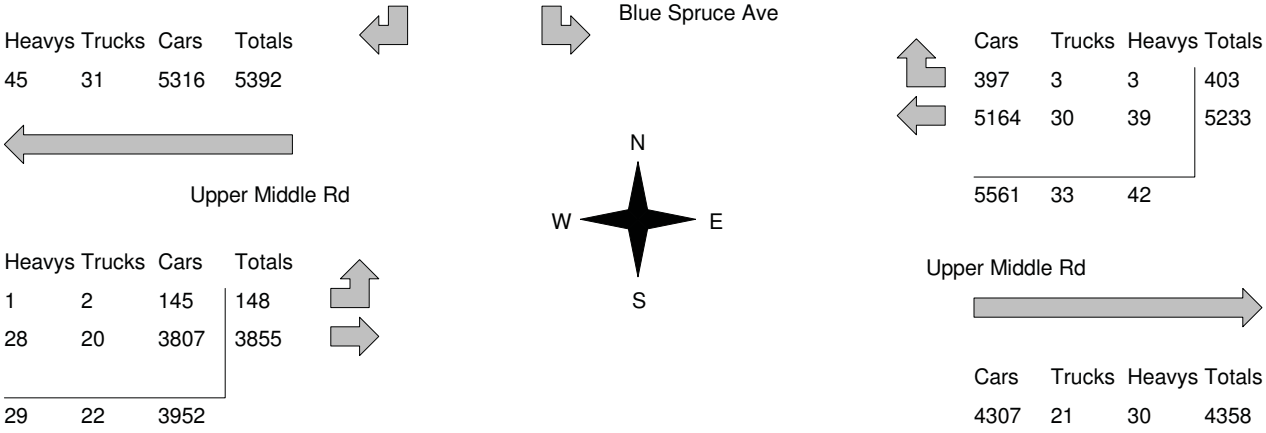
Major Road: Upper Middle Rd runs W/E

North Leg Total: 1213
North Entering: 662
North Peds: 56
Peds Cross: ⋈

Heavys	6	2	8
Trucks	1	1	2
Cars	152	500	652
Totals	159	503	

Heavys	4
Trucks	5
Cars	542
Totals	551

East Leg Total: 9994
East Entering: 5636
East Peds: 1
Peds Cross: ⧖



Heavys	Trucks	Cars	Totals
45	31	5316	5392

Cars	Trucks	Heavys	Totals
397	3	3	403
5164	30	39	5233
5561	33	42	

Heavys	Trucks	Cars	Totals
1	2	145	148
28	20	3807	3855
29	22	3952	

Cars	Trucks	Heavys	Totals
4307	21	30	4358

Peds Cross: ⧖
West Peds: 0
West Entering: 4003
West Leg Total: 9395

Comments

APPENDIX C
ENVIRONMENTAL NOISE GUIDELINES

ENVIRONMENTAL NOISE GUIDELINES

MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS (MECP)

Reference: MECP Publication NPC-300, October 2013: *"Environmental Noise Guideline, Stationary and Transportation Source – Approval and Planning"*.

SPACE	SOURCE	TIME PERIOD	CRITERION
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	Road	07:00 to 23:00	45 dBA
	Rail	07:00 to 23:00	40 dBA
	Aircraft	24-hour period	NEF/NEP 5
Living/dining, den areas of residences, hospitals, nursing homes, etc. (except schools or daycare centres)	Road	23:00 to 07:00	45 dBA
	Rail	23:00 to 07:00	40 dBA
	Aircraft	24-hour period	NEF/NEP 5
Sleeping quarters	Road	07:00 to 23:00	45 dBA
	Rail	07:00 to 23:00	40 dBA
	Aircraft	24-hour period	NEF/NEP 0
Sleeping quarters	Road	23:00 to 07:00	40 dBA
	Rail	23:00 to 07:00	35 dBA
	Aircraft	24-hour period	NEF/NEP 0
Outdoor Living Areas	Road and Rail	07:00 to 23:00	55 dBA
Outdoor Point of Reception	Aircraft	24-hour period	NEF/NEP 30#
	Stationary Source		
	Class 1 Area	07:00 to 19:00(1)	50* dBA
		19:00 to 23:00(1)	50* dBA
	Class 2 Area	07:00 to 19:00(2)	50* dBA
		19:00 to 23:00(2)	45* dBA
	Class 3 Area	07:00 to 19:00(3)	45* dBA
		19:00 to 23:00(3)	40* dBA
	Class 4 Area	07:00 to 19:00(4)	55* dBA
		19:00 to 23:00(4)	55* dBA

…./cont'd

SPACE	SOURCE	TIME PERIOD	CRITERION
Plane of a Window of Noise Sensitive Spaces	Stationary Source		
	Class 1 Area	07:00 to 19:00(1)	50* dBA
		19:00 to 23:00(1)	50* dBA
		23:00 to 07:00(1)	45* dBA
	Class 2 Area	07:00 to 19:00(2)	50* dBA
		19:00 to 23:00(2)	50* dBA
		23:00 to 07:00(2)	45* dBA
	Class 3 Area	07:00 to 19:00(3)	45* dBA
		19:00 to 23:00(3)	45* dBA
		23:00 to 07:00(3)	40* dBA
	Class 4 Area	07:00 to 19:00(4)	60* dBA
		19:00 to 23:00(4)	60* dBA
		23:00 to 07:00(4)	55* dBA

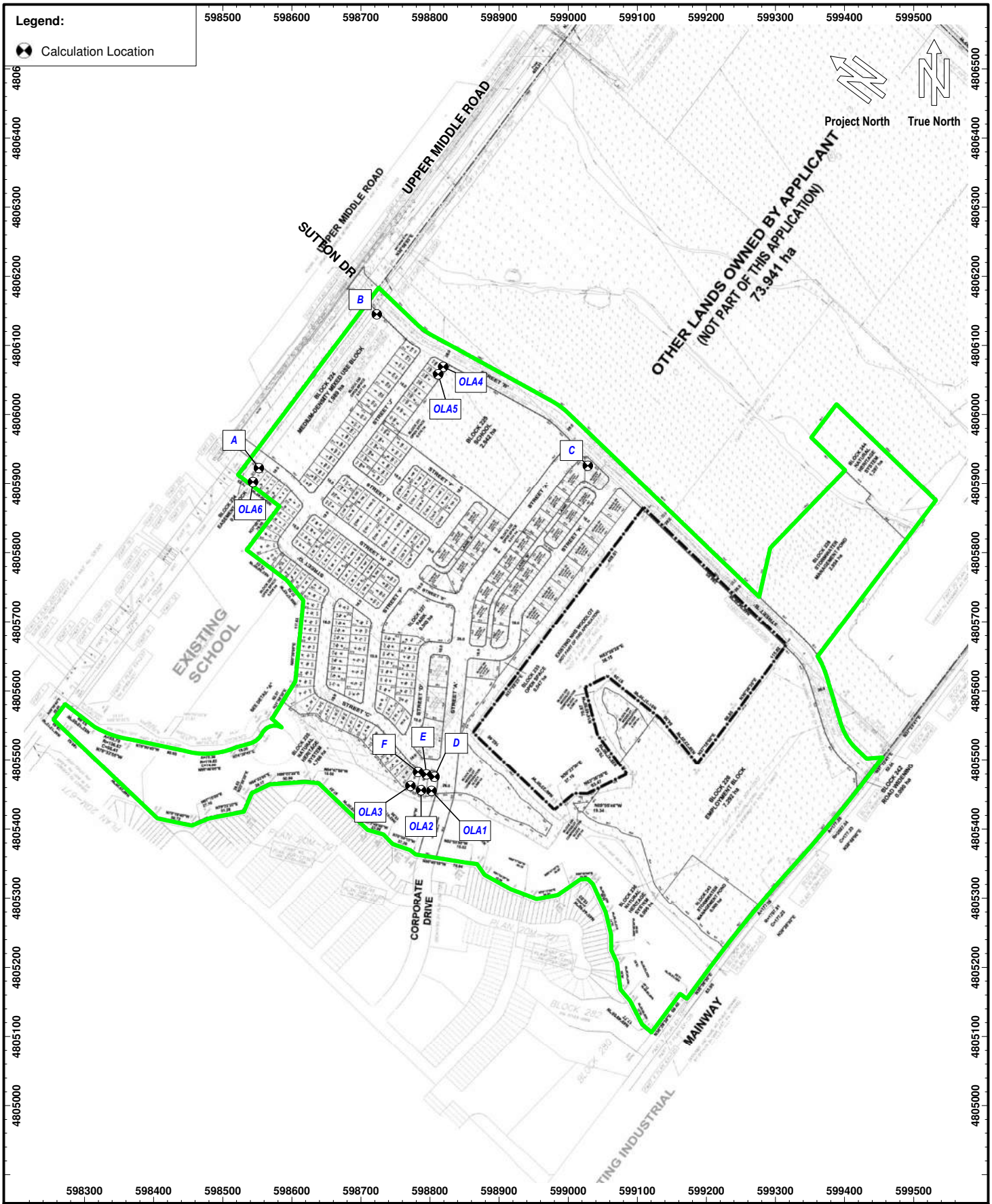
\# may not apply to in-fill or re-development.
* or the minimum hourly background sound exposure $L_{eq(1)}$, due to road traffic, if higher.
(1) Class 1 Area: Urban.
(2) Class 2 Area: Urban during day; rural-like evening and night.
(3) Class 3 Area: Rural.
(4) Class 4 Area: Subject to land use planning authority's approval.

Reference: MECP Publication ISBN 0-7729-2804-5, 1987: *"Environmental Noise Assessment in Land-Use Planning"*.

EXCESS ABOVE RECOMMENDED SOUND LEVEL LIMITS (dBA)	CHANGE IN SUBJECTIVE LOUDNESS ABOVE	MAGNITUDE OF THE NOISE PROBLEM	NOISE CONTROL MEASURES (OR ACTION TO BE TAKEN)
No excess (<55 dBA)	—	No expected noise problem	None
1 to 5 inclusive (56 to 60 dBA)	Noticeably louder	Slight noise impact	If no physical measures are taken, then prospective purchasers or tenants should be made aware by suitable warning clauses.
6 to 10 inclusive (61 - 65 dBA)	Almost twice as loud	Definite noise impact	Recommended.
11 to 15 inclusive (66 - 70 dBA)	Almost three times as loud	Serious noise impact	Strongly Recommended.
16 and over (>70 dBA)	Almost four times as loud	Very serious noise impact	Strongly Recommended (may be mandatory).

APPENDIX D

TRANSPORTATION NOISE CALCULATION DETAILS



VALCOUSTICS
Canada Ltd.
consulting acoustical engineers

Title	Date	Figure
Transportation Noise Calculation Locations	**2025-06-24**	**D-1**
Project Name: **Bronte Creek Meadows, Burlington**	Project No.: **123-0367**	

C:\Users\aamarra\Box\WIP - Canada\2023\1230367\000\Analysis\STAMSON\2024-04-16\Transportation Noise Control (250624).cna

Date Plotted: 24.06.25

```
STAMSON 5.04       NORMAL REPORT        Date: 24-06-2025 34:40:46
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b.te                 Time Period: Day/Night 16/8 hours
Description: Block 224 - North

Road data, segment # 1: UppMidd (day/night)
-------------------------------------------
Car traffic volume  : 25792/2866  veh/TimePeriod  *
Medium truck volume :   141/16    veh/TimePeriod  *
Heavy truck volume  :   188/21    veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  29023
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   0.54
    Heavy Truck  % of Total Volume     :   0.72
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: UppMidd (day/night)
-----------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  71.00 / 71.00  m
Receiver height           :  22.50 / 4.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: Sutton (day/night)
------------------------------------------
Car traffic volume  :  5721/636   veh/TimePeriod  *
Medium truck volume :   120/13    veh/TimePeriod  *
Heavy truck volume  :   181/20    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):   6691
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   3.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Sutton (day/night)
----------------------------------------
Angle1   Angle2           :   0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  16.00 / 16.00  m
Receiver height           :  22.50 / 4.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Results segment # 1: UppMidd (day)
----------------------------------

Source height = 0.92 m

ROAD (0.00 + 61.20 + 0.00) = 61.20 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  67.96   0.00  -6.75   0.00   0.00   0.00   0.00  61.20
-------------------------------------------------------------------------------

Segment Leq : 61.20 dBA

Results segment # 2: Sutton (day)
---------------------------------

Source height = 1.32 m

ROAD (0.00 + 59.51 + 0.00) = 59.51 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     90   0.00  62.80   0.00  -0.28  -3.01   0.00   0.00   0.00  59.51
-------------------------------------------------------------------------------

Segment Leq : 59.51 dBA

Total Leq All Segments: 63.45 dBA

Results segment # 1: UppMidd (night)
------------------------------------

Source height = 0.92 m

ROAD (0.00 + 54.68 + 0.00) = 54.68 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  61.44   0.00  -6.75   0.00   0.00   0.00   0.00  54.68
-------------------------------------------------------------------------------

Segment Leq : 54.68 dBA

Results segment # 2: Sutton (night)
-----------------------------------

Source height = 1.31 m

ROAD (0.00 + 52.96 + 0.00) = 52.96 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     90   0.00  56.25   0.00  -0.28  -3.01   0.00   0.00   0.00  52.96
-------------------------------------------------------------------------------

Segment Leq : 52.96 dBA

Total Leq All Segments: 56.91 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 63.45
                           (NIGHT): 56.91
```

```
STAMSON 5.04       NORMAL REPORT        Date: 24-06-2025 34:41:10
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: c.te                 Time Period: Day/Night 16/8 hours
Description: Block 211 - North

Road data, segment # 1: Corporate (day/night)
----------------------------------------------
Car traffic volume  : 19932/2215  veh/TimePeriod  *
Medium truck volume :   153/17    veh/TimePeriod  *
Heavy truck volume  :   267/30    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  22612
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   0.75
    Heavy Truck  % of Total Volume     :   1.31
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Corporate (day/night)
--------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  17.00 / 17.00  m
Receiver height           :   4.50 / 4.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: Sutton (day/night)
-------------------------------------------
Car traffic volume  :  5721/636   veh/TimePeriod  *
Medium truck volume :   120/13    veh/TimePeriod  *
Heavy truck volume  :   181/20    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):   6691
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   3.00
    Day (16 hrs) % of Total Volume     :  90.00
```

```
Data for Segment # 2: Sutton (day/night)
----------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  22.00 / 22.00  m
Receiver height           :   4.50 / 4.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Results segment # 1: Corporate (day)
-----------------------------------

Source height = 1.07 m

ROAD (0.00 + 65.41 + 0.00) = 65.41 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  65.96   0.00  -0.54   0.00   0.00   0.00   0.00  65.41
-------------------------------------------------------------------------------

Segment Leq : 65.41 dBA

Results segment # 2: Sutton (day)
---------------------------------

Source height = 1.32 m

ROAD (0.00 + 58.13 + 0.00) = 58.13 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90      0   0.00  62.80   0.00  -1.66  -3.01   0.00   0.00   0.00  58.13
-------------------------------------------------------------------------------

Segment Leq : 58.13 dBA

Total Leq All Segments: 66.15 dBA

Results segment # 1: Corporate (night)
--------------------------------------

Source height = 1.07 m

ROAD (0.00 + 58.90 + 0.00) = 58.90 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  59.45   0.00  -0.54   0.00   0.00   0.00   0.00  58.90
-------------------------------------------------------------------------------

Segment Leq : 58.90 dBA
```

```
Results segment # 2: Sutton (night)
-----------------------------------

Source height = 1.31 m

ROAD (0.00 + 51.57 + 0.00) = 51.57 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90      0   0.00  56.25   0.00  -1.66  -3.01   0.00   0.00   0.00  51.57
-------------------------------------------------------------------------------

Segment Leq : 51.57 dBA

Total Leq All Segments: 59.64 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 66.15
                           (NIGHT): 59.64
```

```
STAMSON 5.04       NORMAL REPORT        Date: 24-06-2025 34:43:07
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: ola1.te              Time Period: 16 hours
Description: Lot 49 - Rear Yard (w/ barrier)

Road data, segment # 1: Corporate
---------------------------------
Car traffic volume  : 19932 veh/TimePeriod  *
Medium truck volume :   153 veh/TimePeriod  *
Heavy truck volume  :   267 veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 1: Corporate
------------------------------
Angle1   Angle2           : -90.00 deg   37.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  20.00 m
Receiver height           :   1.50 m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 37.00 deg
Barrier height            :   1.80 m
Barrier receiver distance :   7.00 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00

Results segment # 1: Corporate
------------------------------

Source height = 1.07 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.07 !        1.50 !        1.35 !         1.35

ROAD (0.00 + 55.77 + 0.00) = 55.77 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     37   0.56  65.96   0.00  -1.96  -2.45   0.00   0.00  -5.78  55.77
-------------------------------------------------------------------------------

Segment Leq : 55.77 dBA

Total Leq All Segments: 55.77 dBA

TOTAL Leq FROM ALL SOURCES:       55.77
```

APPENDIX E

STATIONARY NOISE CALCULATION DETAILS

Point Source Table

Name	Sel.	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
				Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
				(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
School condensing unit			CND1	85.7	85.7	85.7	Lw	CND		0.0	0.0	0.0							0.0		(none)	2.50	g	598447.68	4805721.60	14.50
School condensing unit			CND2	85.7	85.7	85.7	Lw	CND		0.0	0.0	0.0							0.0		(none)	2.50	g	598451.56	4805718.64	14.50
School condensing unit			CND3	85.7	85.7	85.7	Lw	CND		0.0	0.0	0.0							0.0		(none)	2.50	g	598455.43	4805715.89	14.50
Make-up air unit			MUA1	80.6	80.6	80.6	Lw	MUA1		0.0	0.0	0.0				60.00	60.00	30.00	0.0		(none)	1.20	g	598414.92	4805694.35	13.20
Make-up air unit			MUA2	80.6	80.6	80.6	Lw	MUA1		0.0	0.0	0.0				60.00	60.00	30.00	0.0		(none)	1.20	g	598420.92	4805689.30	13.20
Make-up air unit			MUA3	80.6	80.6	80.6	Lw	MUA1		0.0	0.0	0.0				60.00	60.00	30.00	0.0		(none)	1.20	g	598460.88	4805706.85	13.20
Make-up air unit			MUA4	80.6	80.6	80.6	Lw	MUA1		0.0	0.0	0.0				60.00	60.00	30.00	0.0		(none)	1.20	g	598462.38	4805709.89	13.20
Air handling unit			AHU1	88.3	88.3	88.3	Lw	RTU		0.0	0.0	0.0				60.00	60.00	30.00	0.0		(none)	1.20	g	598417.54	4805691.68	13.20
Air handling unit			AHU2	88.3	88.3	88.3	Lw	RTU		0.0	0.0	0.0				60.00	60.00	30.00	0.0		(none)	1.20	g	598424.67	4805686.72	13.20
Air handling unit			AHU3	88.3	88.3	88.3	Lw	RTU		0.0	0.0	0.0				60.00	60.00	30.00	0.0		(none)	1.20	g	598428.04	4805684.05	13.20
Air handling unit			AHU4	88.3	88.3	88.3	Lw	RTU		0.0	0.0	0.0				60.00	60.00	30.00	0.0		(none)	1.20	g	598432.13	4805680.93	13.20
Air handling unit			AHU5	88.3	88.3	88.3	Lw	RTU		0.0	0.0	0.0				60.00	60.00	30.00	0.0		(none)	1.20	g	598441.50	4805681.10	13.20
Air handling unit			AHU6	88.3	88.3	88.3	Lw	RTU		0.0	0.0	0.0				60.00	60.00	30.00	0.0		(none)	1.20	g	598445.84	4805685.89	13.20
Air handling unit			AHU7	88.3	88.3	88.3	Lw	RTU		0.0	0.0	0.0				60.00	60.00	30.00	0.0		(none)	1.20	g	598450.51	4805692.31	13.20
Air handling unit			AHU8	88.3	88.3	88.3	Lw	RTU		0.0	0.0	0.0				60.00	60.00	30.00	0.0		(none)	1.20	g	598455.34	4805698.81	13.20
Air handling unit			AHU9	88.3	88.3	88.3	Lw	RTU		0.0	0.0	0.0				60.00	60.00	30.00	0.0		(none)	1.20	g	598458.47	4805703.27	13.20
Dust collector			DC1	93.0	93.0	93.0	Lw	DC		0.0	0.0	0.0				60.00	0.00	0.00	0.0		(none)	2.00	r	598478.90	4805731.46	2.00
Generator		~	GEN	99.9	99.9	99.9	Lw	GEN		0.0	0.0	0.0				60.00	0.00	0.00	0.0		(none)	2.50	r	598480.93	4805756.01	2.50

Sound Power Levels

Name	ID	Type	Octave Spectrum (dB)												Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
Large condensing unit	CND	Lw		93.2	92.0	84.6	77.3	77.4	79.6	80.3	77.8	73.3	85.7	96.4	Measured at another school
10-ton air handling unit	RTU	Lw	A	0.0	0.0	76.0	79.0	84.0	83.0	79.0	73.0	66.0	88.3	94.8	Manufacturer's data
Dust collector	DC	Lw		90.1	98.3	93.4	91.4	89.9	89.0	83.4	80.3	76.5	93.0	101.3	Measured at another site
Make-up Air Unit	MUA1	Lw		0.0	85.0	85.0	81.0	78.0	76.0	71.0	64.0	57.0	80.6	89.4	Manufacturer's data
175 kW Generator (75 dBA @ 7 m)	GEN	Lw		0.0	110.7	106.2	104.0	97.3	91.3	86.6	84.6	79.1	99.9	112.8	VCL Database

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Sample Calculation - R3 (Non-Emergency Equipment)

Receiver
Name: (untitled)
ID: R3
X: 598622.12 m
Y: 4805685.85 m
Z: 4.50 m

Point Source, ISO 9613, Name: "Air handling unit", ID: "AHU9"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5	598458.47	4805703.27	13.20	0	D	125	76.0	0.0	0.0	0.0	0.0	55.3	0.1	0.8	0.0	0.0	0.0	0.0	0.0	19.8
5	598458.47	4805703.27	13.20	0	D	250	79.0	0.0	0.0	0.0	0.0	55.3	0.2	-0.2	0.0	0.0	0.0	0.0	0.0	23.7
5	598458.47	4805703.27	13.20	0	D	500	84.0	0.0	0.0	0.0	0.0	55.3	0.3	-1.1	0.0	0.0	0.0	0.0	0.0	29.5
5	598458.47	4805703.27	13.20	0	D	1000	83.0	0.0	0.0	0.0	0.0	55.3	0.6	-1.1	0.0	0.0	0.0	0.0	0.0	28.2
5	598458.47	4805703.27	13.20	0	D	2000	79.0	0.0	0.0	0.0	0.0	55.3	1.6	-1.1	0.0	0.0	0.0	0.0	0.0	23.2
5	598458.47	4805703.27	13.20	0	D	4000	73.0	0.0	0.0	0.0	0.0	55.3	5.4	-1.1	0.0	0.0	0.0	0.0	0.0	13.4
5	598458.47	4805703.27	13.20	0	D	8000	66.0	0.0	0.0	0.0	0.0	55.3	19.3	-1.1	0.0	0.0	0.0	0.0	0.0	-7.5

Point Source, ISO 9613, Name: "Dust collector", ID: "DC1"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
14	598478.90	4805731.46	2.00	0	D	32	50.7	0.0	0.0	0.0	0.0	54.5	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	-0.8
14	598478.90	4805731.46	2.00	0	D	63	72.1	0.0	0.0	0.0	0.0	54.5	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	20.5
14	598478.90	4805731.46	2.00	0	D	125	77.3	0.0	0.0	0.0	0.0	54.5	0.1	0.5	0.0	0.0	0.0	0.0	0.0	22.2
14	598478.90	4805731.46	2.00	0	D	250	82.8	0.0	0.0	0.0	0.0	54.5	0.2	0.5	0.0	0.0	0.0	0.0	0.0	27.6
14	598478.90	4805731.46	2.00	0	D	500	86.7	0.0	0.0	0.0	0.0	54.5	0.3	-1.2	0.0	0.0	0.0	0.0	0.0	33.1
14	598478.90	4805731.46	2.00	0	D	1000	89.0	0.0	0.0	0.0	0.0	54.5	0.5	-1.6	0.0	0.0	0.0	0.0	0.0	35.5
14	598478.90	4805731.46	2.00	0	D	2000	84.6	0.0	0.0	0.0	0.0	54.5	1.5	-1.6	0.0	0.0	0.0	0.0	0.0	30.3
14	598478.90	4805731.46	2.00	0	D	4000	81.3	0.0	0.0	0.0	0.0	54.5	4.9	-1.6	0.0	0.0	0.0	0.0	0.0	23.5
14	598478.90	4805731.46	2.00	0	D	8000	75.4	0.0	0.0	0.0	0.0	54.5	17.6	-1.6	0.0	0.0	0.0	0.0	0.0	4.9

Point Source, ISO 9613, Name: "Air handling unit", ID: "AHU8"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
22	598455.34	4805698.81	13.20	0	D	125	76.0	0.0	0.0	0.0	0.0	55.5	0.1	0.8	0.0	0.0	0.0	0.0	0.0	19.6
22	598455.34	4805698.81	13.20	0	D	250	79.0	0.0	0.0	0.0	0.0	55.5	0.2	-0.2	0.0	0.0	0.0	0.0	0.0	23.6
22	598455.34	4805698.81	13.20	0	D	500	84.0	0.0	0.0	0.0	0.0	55.5	0.3	-1.1	0.0	0.0	0.0	0.0	0.0	29.3
22	598455.34	4805698.81	13.20	0	D	1000	83.0	0.0	0.0	0.0	0.0	55.5	0.6	-1.1	0.0	0.0	0.0	0.0	0.0	28.1
22	598455.34	4805698.81	13.20	0	D	2000	79.0	0.0	0.0	0.0	0.0	55.5	1.6	-1.1	0.0	0.0	0.0	0.0	0.0	23.0
22	598455.34	4805698.81	13.20	0	D	4000	73.0	0.0	0.0	0.0	0.0	55.5	5.5	-1.1	0.0	0.0	0.0	0.0	0.0	13.2
22	598455.34	4805698.81	13.20	0	D	8000	66.0	0.0	0.0	0.0	0.0	55.5	19.6	-1.1	0.0	0.0	0.0	0.0	0.0	-7.9
25	598455.34	4805698.81	13.20	1	D	125	76.0	0.0	0.0	0.0	0.0	56.0	0.1	0.8	0.0	0.0	4.0	0.0	2.0	13.2
25	598455.34	4805698.81	13.20	1	D	250	79.0	0.0	0.0	0.0	0.0	56.0	0.2	-0.3	0.0	0.0	5.0	0.0	2.0	16.1
25	598455.34	4805698.81	13.20	1	D	500	84.0	0.0	0.0	0.0	0.0	56.0	0.3	-1.2	0.0	0.0	6.0	0.0	2.0	20.9
25	598455.34	4805698.81	13.20	1	D	1000	83.0	0.0	0.0	0.0	0.0	56.0	0.6	-1.2	0.0	0.0	6.0	0.0	2.0	19.6
25	598455.34	4805698.81	13.20	1	D	2000	79.0	0.0	0.0	0.0	0.0	56.0	1.7	-1.2	0.0	0.0	6.0	0.0	2.0	14.5
25	598455.34	4805698.81	13.20	1	D	4000	73.0	0.0	0.0	0.0	0.0	56.0	5.8	-1.2	0.0	0.0	6.0	0.0	2.0	4.5

Point Source, ISO 9613, Name: "Air handling unit", ID: "AHU7"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
28	598450.51	4805692.31	13.20	0	D	125	76.0	0.0	0.0	0.0	0.0	55.7	0.1	0.8	0.0	0.0	0.0	0.0	0.0	19.4
28	598450.51	4805692.31	13.20	0	D	250	79.0	0.0	0.0	0.0	0.0	55.7	0.2	-0.2	0.0	0.0	0.0	0.0	0.0	23.3
28	598450.51	4805692.31	13.20	0	D	500	84.0	0.0	0.0	0.0	0.0	55.7	0.3	-1.2	0.0	0.0	0.0	0.0	0.0	29.1
28	598450.51	4805692.31	13.20	0	D	1000	83.0	0.0	0.0	0.0	0.0	55.7	0.6	-1.2	0.0	0.0	0.0	0.0	0.0	27.8
28	598450.51	4805692.31	13.20	0	D	2000	79.0	0.0	0.0	0.0	0.0	55.7	1.7	-1.2	0.0	0.0	0.0	0.0	0.0	22.8
28	598450.51	4805692.31	13.20	0	D	4000	73.0	0.0	0.0	0.0	0.0	55.7	5.6	-1.2	0.0	0.0	0.0	0.0	0.0	12.8
28	598450.51	4805692.31	13.20	0	D	8000	66.0	0.0	0.0	0.0	0.0	55.7	20.1	-1.2	0.0	0.0	0.0	0.0	0.0	-8.6
30	598450.51	4805692.31	13.20	1	D	125	76.0	0.0	0.0	0.0	0.0	56.2	0.1	0.8	0.0	0.0	4.0	0.0	2.0	13.0
30	598450.51	4805692.31	13.20	1	D	250	79.0	0.0	0.0	0.0	0.0	56.2	0.2	-0.3	0.0	0.0	5.1	0.0	2.0	15.9
30	598450.51	4805692.31	13.20	1	D	500	84.0	0.0	0.0	0.0	0.0	56.2	0.3	-1.2	0.0	0.0	6.0	0.0	2.0	20.7
30	598450.51	4805692.31	13.20	1	D	1000	83.0	0.0	0.0	0.0	0.0	56.2	0.7	-1.2	0.0	0.0	6.0	0.0	2.0	19.4
30	598450.51	4805692.31	13.20	1	D	2000	79.0	0.0	0.0	0.0	0.0	56.2	1.8	-1.2	0.0	0.0	6.0	0.0	2.0	14.3

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Sample Calculation - R3 (Non-Emergency Equipment)

Point Source, ISO 9613, Name: "Air handling unit", ID: "AHU7"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
30	598450.51	4805692.31	13.20	1	D	4000	73.0	0.0	0.0	0.0	0.0	56.2	5.9	-1.2	0.0	0.0	6.0	0.0	2.0	4.1

Point Source, ISO 9613, Name: "Air handling unit", ID: "AHU6"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
38	598445.84	4805685.89	13.20	0	D	125	76.0	0.0	0.0	0.0	0.0	55.9	0.1	0.8	0.0	0.0	0.0	0.0	0.0	19.2
38	598445.84	4805685.89	13.20	0	D	250	79.0	0.0	0.0	0.0	0.0	55.9	0.2	-0.2	0.0	0.0	0.0	0.0	0.0	23.1
38	598445.84	4805685.89	13.20	0	D	500	84.0	0.0	0.0	0.0	0.0	55.9	0.3	-1.2	0.0	0.0	0.0	0.0	0.0	28.9
38	598445.84	4805685.89	13.20	0	D	1000	83.0	0.0	0.0	0.0	0.0	55.9	0.6	-1.2	0.0	0.0	0.0	0.0	0.0	27.6
38	598445.84	4805685.89	13.20	0	D	2000	79.0	0.0	0.0	0.0	0.0	55.9	1.7	-1.2	0.0	0.0	0.0	0.0	0.0	22.5
38	598445.84	4805685.89	13.20	0	D	4000	73.0	0.0	0.0	0.0	0.0	55.9	5.8	-1.2	0.0	0.0	0.0	0.0	0.0	12.5
38	598445.84	4805685.89	13.20	0	D	8000	66.0	0.0	0.0	0.0	0.0	55.9	20.6	-1.2	0.0	0.0	0.0	0.0	0.0	-9.4
55	598445.84	4805685.89	13.20	1	D	125	76.0	0.0	0.0	0.0	0.0	56.4	0.1	0.8	0.0	0.0	4.0	0.0	2.0	12.8
55	598445.84	4805685.89	13.20	1	D	250	79.0	0.0	0.0	0.0	0.0	56.4	0.2	-0.3	0.0	0.0	5.1	0.0	2.0	15.6
55	598445.84	4805685.89	13.20	1	D	500	84.0	0.0	0.0	0.0	0.0	56.4	0.4	-1.2	0.0	0.0	6.0	0.0	2.0	20.5
55	598445.84	4805685.89	13.20	1	D	1000	83.0	0.0	0.0	0.0	0.0	56.4	0.7	-1.2	0.0	0.0	6.0	0.0	2.0	19.2
55	598445.84	4805685.89	13.20	1	D	2000	79.0	0.0	0.0	0.0	0.0	56.4	1.8	-1.2	0.0	0.0	6.0	0.0	2.0	14.0
55	598445.84	4805685.89	13.20	1	D	4000	73.0	0.0	0.0	0.0	0.0	56.4	6.1	-1.2	0.0	0.0	6.0	0.0	2.0	3.8

Point Source, ISO 9613, Name: "Air handling unit", ID: "AHU5"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
58	598441.50	4805681.10	13.20	0	D	125	76.0	0.0	0.0	0.0	0.0	56.1	0.1	0.8	0.0	0.0	0.0	0.0	0.0	18.9
58	598441.50	4805681.10	13.20	0	D	250	79.0	0.0	0.0	0.0	0.0	56.1	0.2	-0.2	0.0	0.0	0.0	0.0	0.0	22.9
58	598441.50	4805681.10	13.20	0	D	500	84.0	0.0	0.0	0.0	0.0	56.1	0.3	-1.2	0.0	0.0	0.0	0.0	0.0	28.7
58	598441.50	4805681.10	13.20	0	D	1000	83.0	0.0	0.0	0.0	0.0	56.1	0.7	-1.2	0.0	0.0	0.0	0.0	0.0	27.4
58	598441.50	4805681.10	13.20	0	D	2000	79.0	0.0	0.0	0.0	0.0	56.1	1.7	-1.2	0.0	0.0	0.0	0.0	0.0	22.3
58	598441.50	4805681.10	13.20	0	D	4000	73.0	0.0	0.0	0.0	0.0	56.1	5.9	-1.2	0.0	0.0	0.0	0.0	0.0	12.1
58	598441.50	4805681.10	13.20	0	D	8000	66.0	0.0	0.0	0.0	0.0	56.1	21.1	-1.2	0.0	0.0	0.0	0.0	0.0	-10.1
67	598441.50	4805681.10	13.20	1	D	125	76.0	0.0	0.0	0.0	0.0	56.5	0.1	0.8	0.0	0.0	4.0	0.0	2.0	12.6
67	598441.50	4805681.10	13.20	1	D	250	79.0	0.0	0.0	0.0	0.0	56.5	0.2	-0.3	0.0	0.0	5.1	0.0	2.0	15.5
67	598441.50	4805681.10	13.20	1	D	500	84.0	0.0	0.0	0.0	0.0	56.5	0.4	-1.2	0.0	0.0	6.0	0.0	2.0	20.3
67	598441.50	4805681.10	13.20	1	D	1000	83.0	0.0	0.0	0.0	0.0	56.5	0.7	-1.2	0.0	0.0	6.0	0.0	2.0	19.0
67	598441.50	4805681.10	13.20	1	D	2000	79.0	0.0	0.0	0.0	0.0	56.5	1.8	-1.2	0.0	0.0	6.0	0.0	2.0	13.9
67	598441.50	4805681.10	13.20	1	D	4000	73.0	0.0	0.0	0.0	0.0	56.5	6.2	-1.2	0.0	0.0	6.0	0.0	2.0	3.5

Point Source, ISO 9613, Name: "Air handling unit", ID: "AHU4"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
91	598432.13	4805680.93	13.20	0	D	125	76.0	0.0	0.0	0.0	0.0	56.6	0.1	0.8	0.0	0.0	3.9	0.0	0.0	14.6
91	598432.13	4805680.93	13.20	0	D	250	79.0	0.0	0.0	0.0	0.0	56.6	0.2	-0.3	0.0	0.0	5.0	0.0	0.0	17.4
91	598432.13	4805680.93	13.20	0	D	500	84.0	0.0	0.0	0.0	0.0	56.6	0.4	-1.2	0.0	0.0	6.0	0.0	0.0	22.3
91	598432.13	4805680.93	13.20	0	D	1000	83.0	0.0	0.0	0.0	0.0	56.6	0.7	-1.2	0.0	0.0	6.0	0.0	0.0	20.9
91	598432.13	4805680.93	13.20	0	D	2000	79.0	0.0	0.0	0.0	0.0	56.6	1.8	-1.2	0.0	0.0	6.0	0.0	0.0	15.8
91	598432.13	4805680.93	13.20	0	D	4000	73.0	0.0	0.0	0.0	0.0	56.6	6.2	-1.2	0.0	0.0	6.0	0.0	0.0	5.4

Point Source, ISO 9613, Name: "Air handling unit", ID: "AHU3"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
114	598428.04	4805684.05	13.20	0	D	125	76.0	0.0	0.0	0.0	0.0	56.8	0.1	0.8	0.0	0.0	8.2	0.0	0.0	10.2
114	598428.04	4805684.05	13.20	0	D	250	79.0	0.0	0.0	0.0	0.0	56.8	0.2	-0.3	0.0	0.0	11.6	0.0	0.0	10.7
114	598428.04	4805684.05	13.20	0	D	500	84.0	0.0	0.0	0.0	0.0	56.8	0.4	-1.2	0.0	0.0	15.5	0.0	0.0	12.6
114	598428.04	4805684.05	13.20	0	D	1000	83.0	0.0	0.0	0.0	0.0	56.8	0.7	-1.2	0.0	0.0	19.0	0.0	0.0	7.8
114	598428.04	4805684.05	13.20	0	D	2000	79.0	0.0	0.0	0.0	0.0	56.8	1.9	-1.2	0.0	0.0	22.0	0.0	0.0	-0.4

Point Source, ISO 9613, Name: "Air handling unit", ID: "AHU2"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
122	598424.67	4805686.72	13.20	0	D	125	76.0	0.0	0.0	0.0	0.0	56.9	0.1	0.8	0.0	0.0	9.7	0.0	0.0	8.6
122	598424.67	4805686.72	13.20	0	D	250	79.0	0.0	0.0	0.0	0.0	56.9	0.2	-0.3	0.0	0.0	14.0	0.0	0.0	8.2
122	598424.67	4805686.72	13.20	0	D	500	84.0	0.0	0.0	0.0	0.0	56.9	0.4	-1.3	0.0	0.0	18.3	0.0	0.0	9.6
122	598424.67	4805686.72	13.20	0	D	1000	83.0	0.0	0.0	0.0	0.0	56.9	0.7	-1.3	0.0	0.0	21.7	0.0	0.0	5.0
122	598424.67	4805686.72	13.20	0	D	2000	79.0	0.0	0.0	0.0	0.0	56.9	1.9	-1.3	0.0	0.0	24.0	0.0	0.0	-2.6

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Sample Calculation - R3 (Non-Emergency Equipment)

Point Source, ISO 9613, Name: "School condensing unit", ID: "CND3"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
129	598455.43	4805715.89	14.50	0	DEN	32	53.8	0.0	0.0	0.0	0.0	55.6	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	1.2
129	598455.43	4805715.89	14.50	0	DEN	63	65.8	0.0	0.0	0.0	0.0	55.6	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	13.2
129	598455.43	4805715.89	14.50	0	DEN	125	68.5	0.0	0.0	0.0	0.0	55.6	0.1	0.8	0.0	0.0	0.0	0.0	0.0	12.0
129	598455.43	4805715.89	14.50	0	DEN	250	68.7	0.0	0.0	0.0	0.0	55.6	0.2	-0.3	0.0	0.0	0.0	0.0	0.0	13.2
129	598455.43	4805715.89	14.50	0	DEN	500	74.2	0.0	0.0	0.0	0.0	55.6	0.3	-1.2	0.0	0.0	0.0	0.0	0.0	19.4
129	598455.43	4805715.89	14.50	0	DEN	1000	79.6	0.0	0.0	0.0	0.0	55.6	0.6	-1.2	0.0	0.0	0.0	0.0	0.0	24.6
129	598455.43	4805715.89	14.50	0	DEN	2000	81.5	0.0	0.0	0.0	0.0	55.6	1.6	-1.2	0.0	0.0	0.0	0.0	0.0	25.4
129	598455.43	4805715.89	14.50	0	DEN	4000	78.8	0.0	0.0	0.0	0.0	55.6	5.6	-1.2	0.0	0.0	0.0	0.0	0.0	18.8
129	598455.43	4805715.89	14.50	0	DEN	8000	72.2	0.0	0.0	0.0	0.0	55.6	19.8	-1.2	0.0	0.0	0.0	0.0	0.0	-2.1

Point Source, ISO 9613, Name: "School condensing unit", ID: "CND2"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
130	598451.56	4805718.64	14.50	0	DEN	32	53.8	0.0	0.0	0.0	0.0	55.8	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	1.0
130	598451.56	4805718.64	14.50	0	DEN	63	65.8	0.0	0.0	0.0	0.0	55.8	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	13.0
130	598451.56	4805718.64	14.50	0	DEN	125	68.5	0.0	0.0	0.0	0.0	55.8	0.1	0.8	0.0	0.0	0.0	0.0	0.0	11.8
130	598451.56	4805718.64	14.50	0	DEN	250	68.7	0.0	0.0	0.0	0.0	55.8	0.2	-0.3	0.0	0.0	0.0	0.0	0.0	13.0
130	598451.56	4805718.64	14.50	0	DEN	500	74.2	0.0	0.0	0.0	0.0	55.8	0.3	-1.2	0.0	0.0	0.0	0.0	0.0	19.2
130	598451.56	4805718.64	14.50	0	DEN	1000	79.6	0.0	0.0	0.0	0.0	55.8	0.6	-1.2	0.0	0.0	0.0	0.0	0.0	24.3
130	598451.56	4805718.64	14.50	0	DEN	2000	81.5	0.0	0.0	0.0	0.0	55.8	1.7	-1.2	0.0	0.0	0.0	0.0	0.0	25.2
130	598451.56	4805718.64	14.50	0	DEN	4000	78.8	0.0	0.0	0.0	0.0	55.8	5.7	-1.2	0.0	0.0	0.0	0.0	0.0	18.5
130	598451.56	4805718.64	14.50	0	DEN	8000	72.2	0.0	0.0	0.0	0.0	55.8	20.3	-1.2	0.0	0.0	0.0	0.0	0.0	-2.8

Point Source, ISO 9613, Name: "Air handling unit", ID: "AHU1"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
131	598417.54	4805691.68	13.20	0	D	125	76.0	0.0	0.0	0.0	0.0	57.2	0.1	0.8	0.0	0.0	11.2	0.0	0.0	6.8
131	598417.54	4805691.68	13.20	0	D	250	79.0	0.0	0.0	0.0	0.0	57.2	0.2	-0.3	0.0	0.0	15.9	0.0	0.0	6.0
131	598417.54	4805691.68	13.20	0	D	500	84.0	0.0	0.0	0.0	0.0	57.2	0.4	-1.3	0.0	0.0	20.0	0.0	0.0	7.7
131	598417.54	4805691.68	13.20	0	D	1000	83.0	0.0	0.0	0.0	0.0	57.2	0.7	-1.3	0.0	0.0	23.1	0.0	0.0	3.2
131	598417.54	4805691.68	13.20	0	D	2000	79.0	0.0	0.0	0.0	0.0	57.2	2.0	-1.3	0.0	0.0	25.4	0.0	0.0	-4.3

Point Source, ISO 9613, Name: "School condensing unit", ID: "CND1"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
132	598447.68	4805721.60	14.50	0	DEN	32	53.8	0.0	0.0	0.0	0.0	56.0	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	0.8
132	598447.68	4805721.60	14.50	0	DEN	63	65.8	0.0	0.0	0.0	0.0	56.0	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	12.8
132	598447.68	4805721.60	14.50	0	DEN	125	68.5	0.0	0.0	0.0	0.0	56.0	0.1	0.8	0.0	0.0	0.0	0.0	0.0	11.6
132	598447.68	4805721.60	14.50	0	DEN	250	68.7	0.0	0.0	0.0	0.0	56.0	0.2	-0.3	0.0	0.0	0.0	0.0	0.0	12.8
132	598447.68	4805721.60	14.50	0	DEN	500	74.2	0.0	0.0	0.0	0.0	56.0	0.3	-1.2	0.0	0.0	0.0	0.0	0.0	19.0
132	598447.68	4805721.60	14.50	0	DEN	1000	79.6	0.0	0.0	0.0	0.0	56.0	0.7	-1.2	0.0	0.0	0.0	0.0	0.0	24.1
132	598447.68	4805721.60	14.50	0	DEN	2000	81.5	0.0	0.0	0.0	0.0	56.0	1.7	-1.2	0.0	0.0	0.0	0.0	0.0	25.0
132	598447.68	4805721.60	14.50	0	DEN	4000	78.8	0.0	0.0	0.0	0.0	56.0	5.8	-1.2	0.0	0.0	0.0	0.0	0.0	18.1
132	598447.68	4805721.60	14.50	0	DEN	8000	72.2	0.0	0.0	0.0	0.0	56.0	20.8	-1.2	0.0	0.0	0.0	0.0	0.0	-3.5
133	598447.68	4805721.60	14.50	1	DEN	63	65.8	0.0	0.0	0.0	0.0	56.3	0.0	-3.0	0.0	0.0	0.0	0.0	2.0	10.4
133	598447.68	4805721.60	14.50	1	DEN	125	68.5	0.0	0.0	0.0	0.0	56.3	0.1	0.8	0.0	0.0	0.0	0.0	2.0	9.3
133	598447.68	4805721.60	14.50	1	DEN	250	68.7	0.0	0.0	0.0	0.0	56.3	0.2	-0.3	0.0	0.0	0.0	0.0	2.0	10.5
133	598447.68	4805721.60	14.50	1	DEN	500	74.2	0.0	0.0	0.0	0.0	56.3	0.4	-1.2	0.0	0.0	0.0	0.0	2.0	16.7
133	598447.68	4805721.60	14.50	1	DEN	1000	79.6	0.0	0.0	0.0	0.0	56.3	0.7	-1.2	0.0	0.0	0.0	0.0	2.0	21.8
133	598447.68	4805721.60	14.50	1	DEN	2000	81.5	0.0	0.0	0.0	0.0	56.3	1.8	-1.2	0.0	0.0	0.0	0.0	2.0	22.6
133	598447.68	4805721.60	14.50	1	DEN	4000	78.8	0.0	0.0	0.0	0.0	56.3	6.1	-1.2	0.0	0.0	0.0	0.0	2.0	15.6
133	598447.68	4805721.60	14.50	1	DEN	8000	72.2	0.0	0.0	0.0	0.0	56.3	21.6	-1.2	0.0	0.0	0.0	0.0	2.0	-6.5

Point Source, ISO 9613, Name: "Make-up air unit", ID: "MUA4"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
139	598462.38	4805709.89	13.20	0	D	63	58.8	0.0	0.0	0.0	0.0	55.2	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	6.6
139	598462.38	4805709.89	13.20	0	D	125	68.9	0.0	0.0	0.0	0.0	55.2	0.1	0.8	0.0	0.0	0.0	0.0	0.0	12.8
139	598462.38	4805709.89	13.20	0	D	250	72.4	0.0	0.0	0.0	0.0	55.2	0.2	-0.2	0.0	0.0	0.0	0.0	0.0	17.3
139	598462.38	4805709.89	13.20	0	D	500	74.8	0.0	0.0	0.0	0.0	55.2	0.3	-1.1	0.0	0.0	0.0	0.0	0.0	20.4
139	598462.38	4805709.89	13.20	0	D	1000	76.0	0.0	0.0	0.0	0.0	55.2	0.6	-1.1	0.0	0.0	0.0	0.0	0.0	21.4
139	598462.38	4805709.89	13.20	0	D	2000	72.2	0.0	0.0	0.0	0.0	55.2	1.6	-1.1	0.0	0.0	0.0	0.0	0.0	16.6
139	598462.38	4805709.89	13.20	0	D	4000	65.0	0.0	0.0	0.0	0.0	55.2	5.3	-1.1	0.0	0.0	0.0	0.0	0.0	5.6

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Sample Calculation - R3 (Non-Emergency Equipment)

Point Source, ISO 9613, Name: "Make-up air unit", ID: "MUA3"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
141	598460.88	4805706.85	13.20	0	D	63	58.8	0.0	0.0	0.0	0.0	55.2	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	6.5
141	598460.88	4805706.85	13.20	0	D	125	68.9	0.0	0.0	0.0	0.0	55.2	0.1	0.8	0.0	0.0	0.0	0.0	0.0	12.8
141	598460.88	4805706.85	13.20	0	D	250	72.4	0.0	0.0	0.0	0.0	55.2	0.2	-0.2	0.0	0.0	0.0	0.0	0.0	17.2
141	598460.88	4805706.85	13.20	0	D	500	74.8	0.0	0.0	0.0	0.0	55.2	0.3	-1.1	0.0	0.0	0.0	0.0	0.0	20.4
141	598460.88	4805706.85	13.20	0	D	1000	76.0	0.0	0.0	0.0	0.0	55.2	0.6	-1.1	0.0	0.0	0.0	0.0	0.0	21.3
141	598460.88	4805706.85	13.20	0	D	2000	72.2	0.0	0.0	0.0	0.0	55.2	1.6	-1.1	0.0	0.0	0.0	0.0	0.0	16.5
141	598460.88	4805706.85	13.20	0	D	4000	65.0	0.0	0.0	0.0	0.0	55.2	5.3	-1.1	0.0	0.0	0.0	0.0	0.0	5.6

Point Source, ISO 9613, Name: "Make-up air unit", ID: "MUA2"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
152	598420.92	4805689.30	13.20	0	D	63	58.8	0.0	0.0	0.0	0.0	57.1	0.0	-3.0	0.0	0.0	10.6	0.0	0.0	-5.9
152	598420.92	4805689.30	13.20	0	D	125	68.9	0.0	0.0	0.0	0.0	57.1	0.1	0.8	0.0	0.0	10.6	0.0	0.0	0.4
152	598420.92	4805689.30	13.20	0	D	250	72.4	0.0	0.0	0.0	0.0	57.1	0.2	-0.3	0.0	0.0	15.3	0.0	0.0	0.2
152	598420.92	4805689.30	13.20	0	D	500	74.8	0.0	0.0	0.0	0.0	57.1	0.4	-1.3	0.0	0.0	19.5	0.0	0.0	-0.9
152	598420.92	4805689.30	13.20	0	D	1000	76.0	0.0	0.0	0.0	0.0	57.1	0.7	-1.3	0.0	0.0	22.7	0.0	0.0	-3.2
152	598420.92	4805689.30	13.20	0	D	2000	72.2	0.0	0.0	0.0	0.0	57.1	1.9	-1.3	0.0	0.0	25.0	0.0	0.0	-10.5

Point Source, ISO 9613, Name: "Make-up air unit", ID: "MUA1"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
155	598414.92	4805694.35	13.20	0	D	63	58.8	0.0	0.0	0.0	0.0	57.3	0.0	-3.0	0.0	0.0	12.8	0.0	0.0	-8.4
155	598414.92	4805694.35	13.20	0	D	125	68.9	0.0	0.0	0.0	0.0	57.3	0.1	0.7	0.0	0.0	12.6	0.0	0.0	-1.9
155	598414.92	4805694.35	13.20	0	D	250	72.4	0.0	0.0	0.0	0.0	57.3	0.2	-0.4	0.0	0.0	17.5	0.0	0.0	-2.3
155	598414.92	4805694.35	13.20	0	D	500	74.8	0.0	0.0	0.0	0.0	57.3	0.4	-1.3	0.0	0.0	21.7	0.0	0.0	-3.4
155	598414.92	4805694.35	13.20	0	D	1000	76.0	0.0	0.0	0.0	0.0	57.3	0.8	-1.3	0.0	0.0	24.8	0.0	0.0	-5.6

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Receiver
Name: (untitled)
ID: R1o
X: 598540.68 m
Y: 4805804.71 m
Z: 1.50 m

Point Source, ISO 9613, Name: "Generator", ID: "GEN"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4	598480.93	4805756.01	2.50	0	D	63	84.5	0.0	0.0	0.0	0.0	48.7	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	38.8
4	598480.93	4805756.01	2.50	0	D	125	90.1	0.0	0.0	0.0	0.0	48.7	0.0	-2.2	0.0	0.0	0.0	0.0	0.0	43.5
4	598480.93	4805756.01	2.50	0	D	250	95.4	0.0	0.0	0.0	0.0	48.7	0.1	-0.8	0.0	0.0	0.0	0.0	0.0	47.4
4	598480.93	4805756.01	2.50	0	D	500	94.1	0.0	0.0	0.0	0.0	48.7	0.1	-1.5	0.0	0.0	0.0	0.0	0.0	46.7
4	598480.93	4805756.01	2.50	0	D	1000	91.3	0.0	0.0	0.0	0.0	48.7	0.3	-2.4	0.0	0.0	0.0	0.0	0.0	44.6
4	598480.93	4805756.01	2.50	0	D	2000	87.8	0.0	0.0	0.0	0.0	48.7	0.7	-2.5	0.0	0.0	0.0	0.0	0.0	40.8
4	598480.93	4805756.01	2.50	0	D	4000	85.6	0.0	0.0	0.0	0.0	48.7	2.5	-2.5	0.0	0.0	0.0	0.0	0.0	36.8
4	598480.93	4805756.01	2.50	0	D	8000	78.0	0.0	0.0	0.0	0.0	48.7	9.0	-2.5	0.0	0.0	0.0	0.0	0.0	22.7
10	598480.93	4805756.01	2.50	1	D	125	90.1	0.0	0.0	0.0	0.0	52.4	0.0	-2.4	0.0	0.0	0.0	0.0	2.0	38.0
10	598480.93	4805756.01	2.50	1	D	250	95.4	0.0	0.0	0.0	0.0	52.4	0.1	-1.0	0.0	0.0	0.0	0.0	2.0	41.8
10	598480.93	4805756.01	2.50	1	D	500	94.1	0.0	0.0	0.0	0.0	52.4	0.2	-1.5	0.0	0.0	0.0	0.0	2.0	40.9
10	598480.93	4805756.01	2.50	1	D	1000	91.3	0.0	0.0	0.0	0.0	52.4	0.4	-2.5	0.0	0.0	0.0	0.0	2.0	38.9
10	598480.93	4805756.01	2.50	1	D	2000	87.8	0.0	0.0	0.0	0.0	52.4	1.1	-2.6	0.0	0.0	0.0	0.0	2.0	34.8
10	598480.93	4805756.01	2.50	1	D	4000	85.6	0.0	0.0	0.0	0.0	52.4	3.9	-2.6	0.0	0.0	0.0	0.0	2.0	29.9
10	598480.93	4805756.01	2.50	1	D	8000	78.0	0.0	0.0	0.0	0.0	52.4	13.8	-2.6	0.0	0.0	0.0	0.0	2.0	12.4
12	598480.93	4805756.01	2.50	1	D	125	90.1	0.0	0.0	0.0	0.0	56.3	0.1	-3.4	0.0	0.0	20.3	0.0	2.0	14.7
12	598480.93	4805756.01	2.50	1	D	250	95.4	0.0	0.0	0.0	0.0	56.3	0.2	-1.8	0.0	0.0	21.9	0.0	2.0	16.8
12	598480.93	4805756.01	2.50	1	D	500	94.1	0.0	0.0	0.0	0.0	56.3	0.4	-2.3	0.0	0.0	25.4	0.0	2.0	12.3
12	598480.93	4805756.01	2.50	1	D	1000	91.3	0.0	0.0	0.0	0.0	56.3	0.7	-3.5	0.0	0.0	28.5	0.0	2.0	7.3
12	598480.93	4805756.01	2.50	1	D	2000	87.8	0.0	0.0	0.0	0.0	56.3	1.8	-3.6	0.0	0.0	28.6	0.0	2.0	2.7
12	598480.93	4805756.01	2.50	1	D	4000	85.6	0.0	0.0	0.0	0.0	56.3	6.1	-3.6	0.0	0.0	28.6	0.0	2.0	-3.8

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