CONSEIL DES ÉCOLES PUBLIQUES DE L'EST DE L'ONTARIO

KANATA-SUD ELEMENTARY SCHOOL, OTTAWA

NOISE IMPACT STUDY

APRIL 01, 2022

KANATA-SUD ELEMENTARY SCHOOL, OTTAWA

NOISE IMPACT STUDY

CONSEIL DES ÉCOLES PUBLIQUES DE L'EST DE L'ONTARIO

PROJECT NO.: 219-00014-00
DATE: APRIL 01, 2022

WSP
UNIT 2
126 DON HILLOCK DRIVE
AURORA, ON, CANADA L4G 0G9

T: +1 905 750-3080
F: +1 905 727-0463
WSP.COM

VERSION HISTORY

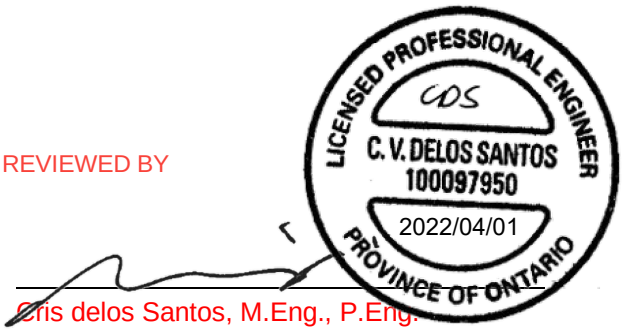
VERSION	DATE	TITLE	COMMENTS	PREPARED BY
1.0	April 01, 2022	Noise Impact Study	For Submission	WSP

SIGNATURES

PREPARED BY

Jalal Mian, B.Eng
Acoustics, Noise and Vibration Specialist

REVIEWED BY



Cris delos Santos, M.Eng., P.Eng.
Senior Engineer, Acoustics, Noise & Vibration

LIMITATIONS STATEMENT

WSP Canada Inc. (WSP) prepared this report solely for the use of the intended recipient, CONSEIL DES ÉCOLES PUBLIQUES DE L'EST DE L'ONTARIO, in accordance with the professional services agreement between the parties. In the event a contract has not been executed, the parties agree that the WSP General Terms for Consultant shall govern their business relationship which was provided to you prior to the preparation of this report.

The report is intended to be used in its entirety. No excerpts may be taken to be representative of the findings in the assessment.

The conclusions presented in this report are based on work performed by trained, professional and technical staff, in accordance with their reasonable interpretation of current and accepted engineering and scientific practices at the time the work was performed.

The content and opinions contained in the present report are based on the observations and/or information available to WSP at the time of preparation, using investigation techniques and engineering analysis methods consistent with those ordinarily exercised by WSP and other engineering/scientific practitioners working under similar conditions, and subject to the same time, financial and physical constraints applicable to this project.

WSP disclaims any obligation to update this report if, after the date of this report, any conditions appear to differ significantly from those presented in this report; however, WSP reserves the right to amend or supplement this report based on additional information, documentation or evidence.

WSP makes no other representations whatsoever concerning the legal significance of its findings.

The intended recipient is solely responsible for the disclosure of any information contained in this report. If a third party makes use of, relies on, or makes decisions in accordance with this report, said third party is solely responsible for such use, reliance or decisions. WSP does not accept responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken by said third party based on this report.

WSP has provided services to the intended recipient in accordance with the professional services agreement between the parties and in a manner consistent with that degree of care, skill and diligence normally provided by members of the same profession performing the same or comparable services in respect of projects of a similar nature in similar circumstances. It is understood and agreed by WSP and the recipient of this report that WSP provides no warranty, express or implied, of any kind. Without limiting the generality of the foregoing, it is agreed and understood by WSP and the recipient of this report that WSP makes no representation or warranty whatsoever as to the sufficiency of its scope of work for the purpose sought by the recipient of this report.

In preparing this report, WSP has relied in good faith on information provided by others, as noted in the report. WSP has reasonably assumed that the information provided is correct and WSP is not responsible for the accuracy or completeness of such information.

Benchmark and elevations used in this report are primarily to establish relative elevation differences between the specific testing and/or sampling locations and should not be used for other purposes, such as grading, excavating, construction, planning, development, etc.

The original of this digital file will be kept by WSP for a period of not less than 10 years. As the digital file transmitted to the intended recipient is no longer under the control of WSP, its integrity cannot be assured. As such, WSP does not guarantee any modifications made to this digital file subsequent to its transmission to the intended recipient.

This limitations statement is considered an integral part of this report.

EXECUTIVE SUMMARY

WSP Canada Inc. was retained by Conseil des écoles publiques de l'Est de l'Ontario to prepare an Environmental Noise Impact Study for the proposed Kanata-Sud Secondary School institutional development to be located at 755 Cope Drive in Stittsville, Ontario (the Site). This is completed to provide general guidance for the building components. The Site consists of a pair of buildings and portables for classrooms, a playground for childcare, a playground for kindergarten, outdoor sporting areas, and a parking lot.

This study assesses the potential noise effects of the environment onto the proposed development. This report was based on available design drawings received on December 1st, 2021.

The noise impact assessment was conducted in accordance with the City of Ottawa and the Ministry of Environment, Parks and Conservation (MECP) noise guidelines.

The significant sources of noise in the vicinity of the proposed development are transportation noise sources, mainly road traffic on Cope Drive and Bobolink Ridge urban collector roads.

The Site is located outside the Ottawa Macdonald Cartier International Airport Operating Influence Zone which includes Noise Exposure Forecast contours, and thus, aircraft noise assessment is not required.

Based on the predicted sound levels at the proposed development due to road traffic noise sources, exterior wall, door, and window construction meeting the Ontario Building Code (OBC) minimum requirements will be adequate to meet the indoor sound level limits to comply with the City of Ottawa and the MECP noise guidelines:

TABLES

APPENDICES

FIGURES

1 INTRODUCTION

WSP Canada Inc. (WSP) was retained by Conseil des écoles publiques de l'Est de l'Ontario to prepare an Environmental Noise Impact Study for the proposed Kanata-Sud Secondary School institutional development to be located at 755 Cope Drive in the community of Stittsville, located in the City of Ottawa, Ontario (the Site).

This study assesses the potential noise effects of the environment onto the proposed development. This is completed to provide general guidance for the building components. The findings and recommendations needed to comply with the applicable noise guidelines are included herein.

1.1 THE SITE AND SURROUNDING AREA

The Site is located west of Robert Grant Avenue and is bounded by:

- To the east, Finsbury Avenue;
- To the south, Cope Drive;
- To the west, Dagenham Street; and,
- To the north, Bobolink Ridge.

The Site is proposed to be surrounded by residential lots. The location of the site is shown in **Figure 1 – Site Location Plan.**

1.2 THE PROPOSED DEVELOPMENT

This report was based on the General Site Plan, prepared by A49 dated December 1st, 2021, as included in **Appendix A**. The Site consists of two (2) buildings at the southwest corner (a 1-storey Building, and a 2-storey Building), two (2) portable 6-pack classrooms at the southeast corner, playgrounds for childcare and kindergarten class at the west side, three (3) outdoor sporting areas, and a parking lot with sixty (60) parking spaces.

2 NOISE IMPACT ASSESSMENT

2.1 NOISE SOURCES

The City of Ottawa's (the City) *Environmental Noise Control Guidelines* (ENCG) stipulates that a noise study shall be prepared when a new development is proposed within distances as follows:

- 100 metres from the right-of-way of an existing or proposed road; arterial, major collector, light rail transit, bus rapid transit or transit priority corridor;
- 250 metres from the right-of-way of an existing or proposed highway or secondary main railway line; or,
- 500 metres from the right-of-way of a freeway or 400-series provincial highway or principal main railway line.

The significant sources of noise in the vicinity of the proposed development are transportation noise sources. The road types were identified using the City's "Annex 1 – Road Classification and Rights-of-Way Protection" as provided in **Appendix B**. The road meeting the City's requirements are Cope Drive and Bobolink Ridge urban collectors. Based on the location and size of the road, it was assumed that Bobolink Ridge had the same classification as Cope Drive. Other roads are over 100 metres away from the Site and are not expected to have a significant impact. Thus, other roads are not considered further in the assessment.

The light rail transit corridor, bus rapid transit and transit priority corridors are located greater than 100 m away from the Site and, therefore, were not included in the assessment.

The proposed development is located outside the City of Ottawa's Macdonald–Cartier International Airport Operating Influence Zone which includes Noise Exposure Forecast contours. Therefore, an assessment of aircraft noise is not required in this study.

2.2 NOISE GUIDELINES AND ASSESSMENT CRITERIA

Noise is recognized as a pollutant in the Environmental Protection Act, as uncontrolled noise can affect human activities. Ontario provincial noise control guidelines require that noise concerns are addressed in the planning of any new development.

2.2.1 MECP AND CITY OF OTTAWA NOISE GUIDELINES

In land use planning, although elimination or control of the source of pollution is usually a primary objective, there are general limits as to what is practical and technically possible. The City's ENCG follows the MECP's Publication NPC-300, *Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning* for acceptable levels of road traffic noise impacting noise-sensitive institutional developments. These limits are discussed in Section "Part C – Land Use Planning" of NPC-300 as well as Section 2 of the ENCG. **Table 2-1** summarizes these limits applicable for the proposed institutional development.

Table 2-1 ENCG & NPC-300 Indoor Sound Level Criteria for Road Noise

AREA	TIME PERIOD	L_{EQ} (dBA) [1] -ROAD	REFERENCE
Indoor Living/Dining Areas of Schools, Daycares	Daytime (0700 – 2300h)	45	ENCG Table 2.2b

Notes: [1] Daytime: $L_{EQ\ 16HR}$; Nighttime: $L_{EQ\ 8\text{-}HR}$.

The NPC-300 and ENCG provide sound level limits in terms of energy equivalent (average) sound levels [L_{EQ}] in units of A-weighted decibels (dBA) at a specific noise-sensitive location. Outdoor areas are not considered noise-sensitive for institutional developments. Therefore, only indoor locations are identified and only during the daytime period.

2.2.2 BUILDING REQUIREMENTS

To determine the appropriate noise control to achieve the criteria or sound level limits, NPC-300 and ENCG have provided further guidance.

Sound Level in Indoor Spaces - To comply with the indoor sound level criteria listed in **Table 2-1**, the ENCG and NPC-300 provides guidelines based on predicted sound level at the façade/plane of window. If the predicted sound level at the plane of window exceeds, additional considerations such as the type of windows, exterior walls, and doors that can provide noise attenuation must be selected. In addition, warning clauses to inform the future occupants are also required.

Table 2-2 summarizes requirements for type of building façade construction for institutional purpose buildings.

Table 2-2 Building Requirements for Indoor Spaces

AREA	TIME PERIOD	LEQ (DBA)[2]	BUILDING COMPONENT REQUIREMENTS
Plane of Window [1]	Daytime (0700 – 2300h)	$\leq$ 55	Building components compliant with Ontario Building Code (OBC)
		> 55 and $\leq$ 65	Building components compliant with OBC
		> 65	Building components designed/selected to meet Indoor Requirements

Notes: [1] Plane of Window of an institutional purpose building leading to a noise sensitive room, such as teacher's lounge, classrooms, etc.
[2] Daytime: $L_{EQ\ 16HR}$.

2.3 ROAD TRAFFIC DATA

Road traffic data were obtained from the ENCG Appendix B for Cope Drive and Bobolink Ridge. The data obtained from the ENCG provides future traffic volume, day/night split, commercial vehicle percentages, and posted speed limits for various roadways based on roadway class and number of lanes. The ENCG data represents the future traffic volume and corresponding to a "mature state of development", in the City's Official Plan.

The traffic and road parameters used for sound level predictions are shown in **Table 2-3**. The surrounding topography is generally flat and assessed as such.

Road traffic data from ENCG and calculations used for the study are included in **Appendix C**.

Table 2-3 Summary of Road Traffic Data Used in the Transportation Noise Analysis

ROAD	ROAD CLASSIFICATION	TRAFFIC VOLUMES (AADT)	DAY/NIGHT SPLIT (%)	MEDIUM TRUCKS (%)	HEAVY TRUCKS (%)	POSTED SPEED LIMIT (KPH)
Cope Drive	2-Lane Urban Collector	8,000	92/8	7%	5%	50
Bobolink Ridge	2-Lane Urban Collector	8,000	92/8	7%	5%	50

2.4 ANALYSIS METHOD

The predicted sound levels at the receptors were estimated using the future road traffic data presented in **Table 2-3**. The sound level predictions were made using the algorithms ORNAMENT, developed by the MECP, and implemented by STAMSON version 5.04, a computer software also developed by the MECP. STAMSON output files are included in **Appendix D**.

The following factors were taken into account in the analysis:

- Vehicle speeds;
- Road traffic volumes;
- Percentage of trucks;
- Horizontal and vertical road-receiver geometry;
- Ground absorption; and
- Screening provided by terrain, houses, existing barriers, as applicable.

The most impacted receptor locations (in terms of façade and height) were chosen as representative receptor locations for each facade. The modelled receptor locations are shown in **Figure 3**. STAMSON calculations are included in **Appendix C**.

2.5 RESULTS

Sound levels were predicted at the most impacted representative façades during the daytime hours. The predicted sound levels were used to investigate building construction requirements. The results of these predictions are summarized in **Table 2-4**.

Table 2-4 - Summary of Predicted Facade Sound Levels due to Road Traffic

RECEPTOR LOCATION	DESCRIPTION	DAYTIME SOUND LEVEL LEQ (dBA)
A	Northern Portable 6 Pack – North façade	55
B	Southern Portable 6 Pack – East façade	59
C	Southern Portable 6 Pack – South façade	63
D	2 Storey Building – East façade	60
E	2 Storey Building – South façade	64
F	1 Storey Building – South façade	63
G	1 Storey Building – North façade	58

The predicted sound levels shown above indicate that daytime façade sound levels are between 55 dBA and 64 dBA.

2.6 RECOMMENDATIONS

The following discussion outlines the recommendations for building facade construction requirements to achieve the noise criteria stated in **Table 2-2**.

2.6.1 BUILDING COMPONENT REQUIREMENTS

As shown in **Table 2-4**, the sound levels at the plane of window are not predicted to exceed 65 dBA during the daytime hours. Thus, wall, door and window glazing assemblies meeting the minimum non-acoustical requirements of the Ontario Building Code (OBC) will be sufficient to meet the applicable indoor sound level limits.

3 CONCLUSIONS

Based on the predicted sound levels at the proposed development due to transportation (road) noise sources, indoor acoustic requirements can be met by following minimum non-acoustical OBC requirements for exterior wall, door and window construction (refer to **Table 3-1)**.

Table 3-1 Summary of Noise Control Requirements

BUILDING	BUILDING COMPONENTS (WALLS, WINDOWS & DOORS) STC
1-Storey Building	OBC[1]
2-Storey Building	OBC[1]
Portable 6 Pack	OBC[1]

Notes:
[1] OBC – Meet or exceed the minimum non-acoustical requirement of Ontario Building Code (OBC).

BIBLIOGRAPHY

- National Research Council of Canada (1995, September). Building Practice Note (BPN) No. 56: Controlling Sound Transmission into Buildings, Canada
- Ontario Ministry of the Environment and Climate Change (2013). Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning – Publication NPC-300. Ontario, Canada
- Ontario Ministry of the Environment and Climate Change (1996), STAMSON v5.04: Road, Rail and Rapid Transit Noise Prediction Model, Ontario, Canada
- Ontario Ministry of the Environment (1989). Ontario Road Noise Analysis Method for Environment and Transportation (ORNAMENT), Ontario, Canada
- City of Ottawa (2016; January). Environmental Noise Control Guidelines (ENCG), Ontario, Canada

FIGURES

wsp

LEGEND

- APPROXIMATE SITE LOCATION
- 1000 m STUDY AREA

100 50 0 100 Metres

N W E S

CLIENT:

CONSEIL DES ÉCOLES PUBLIQUES DE L'EST DE L'ONTARIO

PROJECT:

NOISE STUDY
KANATA-SUD ELEMENTARY SCHOOL
STITTSVILLE, ONTARIO

PROJECT NO:	DATE:
219-00014-00	JANUARY 2022

DESIGNED BY: -

DRAWN BY: TP

CHECKED BY: -

FIGURE NO:	SCALE:
1	1:10,000

TITLE:

SITE LOCATION PLAN

DISCIPLINE: ENVIRONMENT

ISSUE:	REV.:
	-

Document Path: D:\aProjects\219-00014-00\MXD\219-00014-00 Figure 1 Site Location.mxd

wsp

126 DON HILLOCK DRIVE, UNIT 2
AURORA, ONTARIO CANADA L4G 0G9
TEL.: 905-750-3080 | FAX: 905-727-0463 | WWW.WSP.COM

LEGEND

APPROXIMATE SITE BOUNDARY

CLIENT:

CONSEIL DES ÉCOLES PUBLIQUES DE L'EST DE L'ONTARIO

PROJECT:

NOISE STUDY
KANATA-SUD ELEMENTARY SCHOOL
STITTSVILLE, ONTARIO

PROJECT NO:	DATE / DATE:
219-00014-00	JANUARY 2022

DESIGNED BY: --

DRAWN BY: JM

CHECKED BY: --

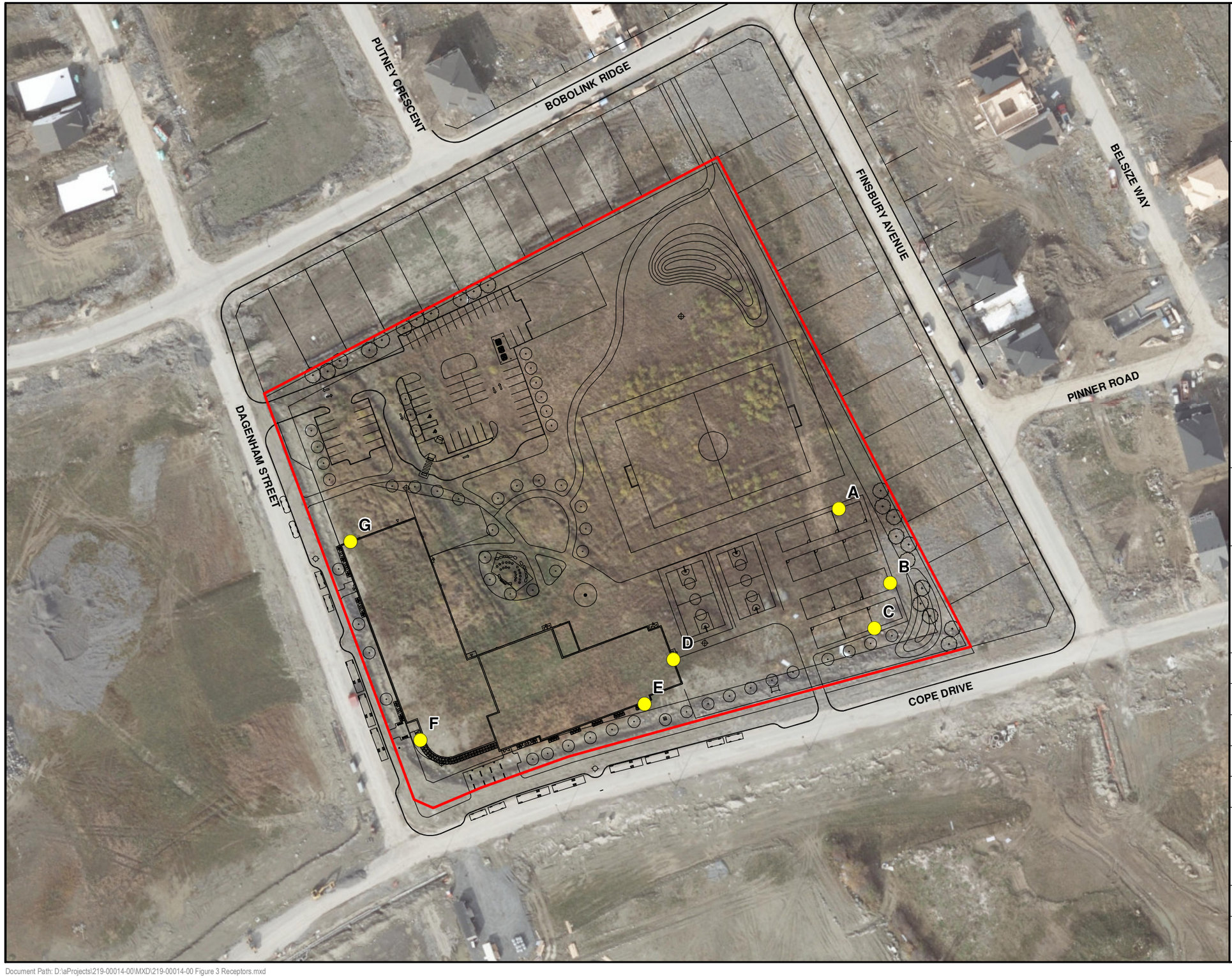
FIGURE NO:	SCALE:
2	NTS

TITLE:

PROPOSED SITE PLAN OF SCHOOL

DISCIPLINE: ENVIRONMENT

ISSUE:



wsp

LEGEND

- APPROXIMATE SITE LOCATION
- PROPOSED DEVELOPMENT
- RECEPTORS

10 5 0 10 Metres

N W E S

CLIENT:

CONSEIL DES ÉCOLES PUBLIQUES DE L'EST DE L'ONTARIO

PROJECT:

NOISE STUDY
KANATA-SUD ELEMENTARY SCHOOL
STITTSVILLE, ONTARIO

PROJECT NO:	DATE:
219-00014-00	JANUARY 2022

DESIGNED BY: -

DRAWN BY: TP

CHECKED BY: -

FIGURE NO:	SCALE:
3	1:1,250

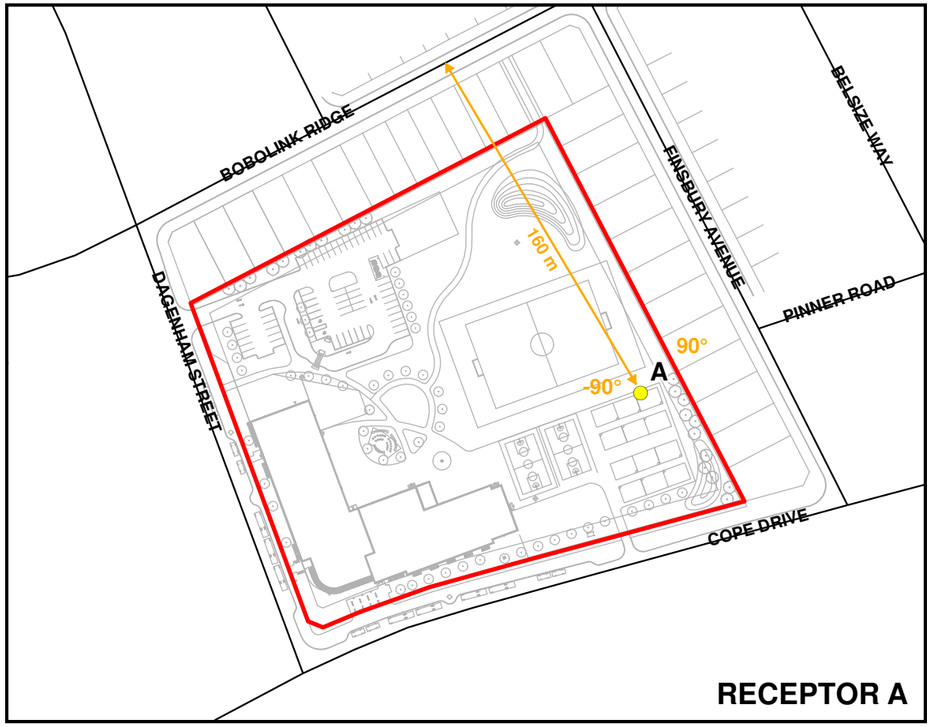
TITLE:

RECEPTORS

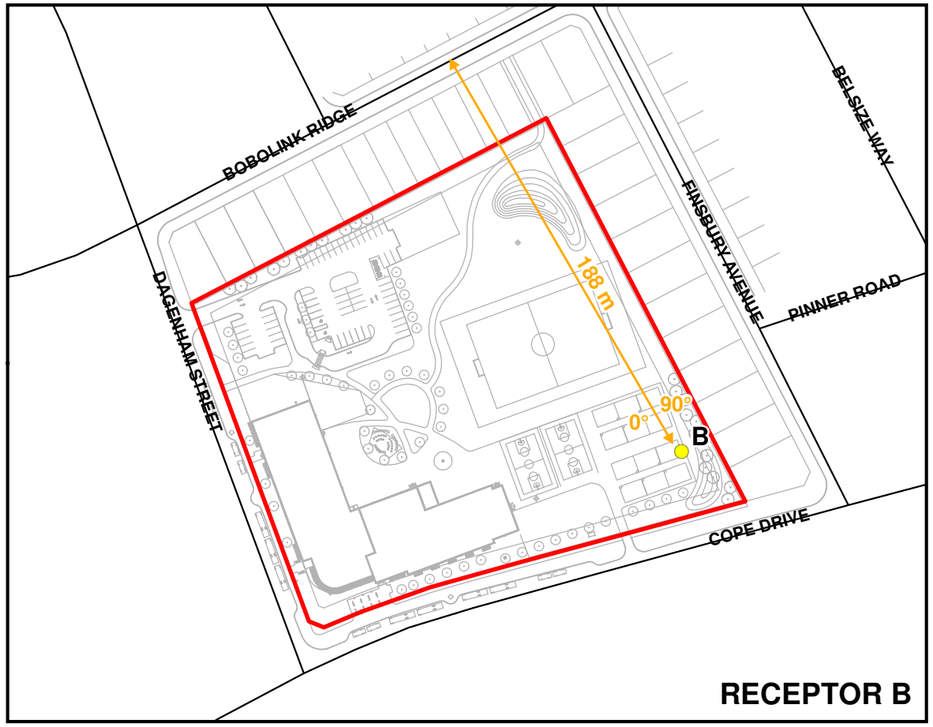
DISCIPLINE: ENVIRONMENT

ISSUE:	REV.:
	-

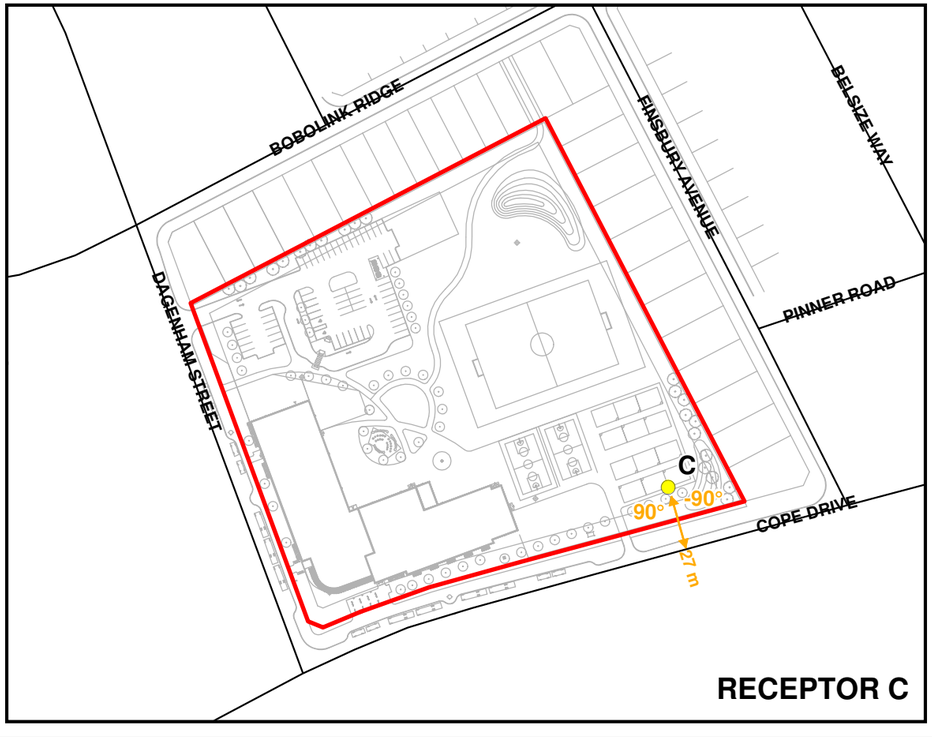
Document Path: D:\aProjects\219-00014-00\MXD\219-00014-00 Figure 3 Receptors.mxd



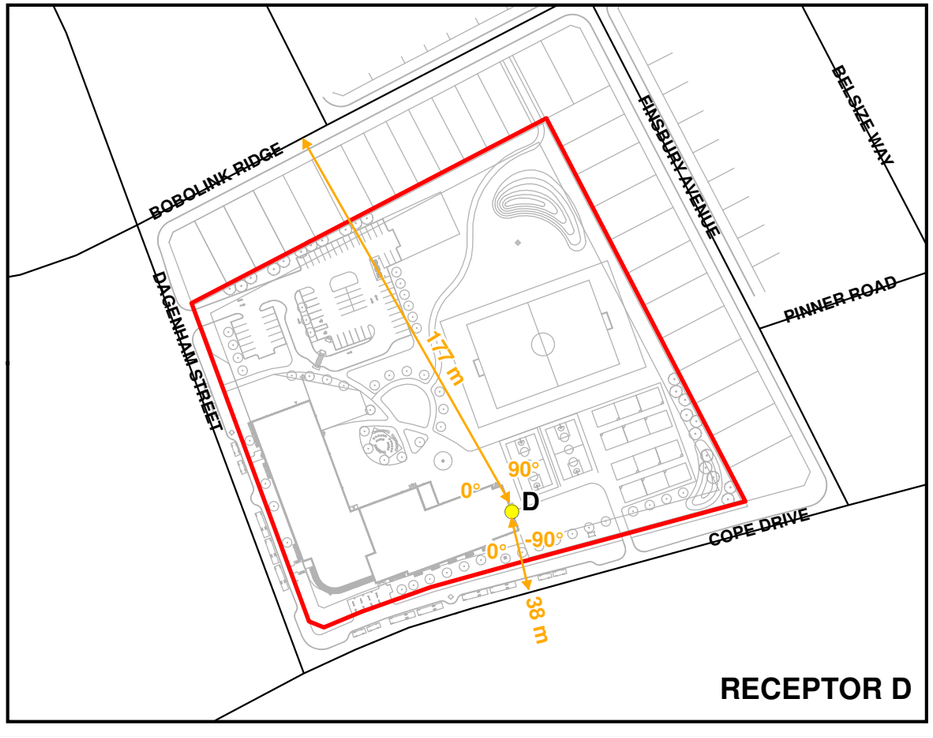
RECEPTOR A



RECEPTOR B



RECEPTOR C



RECEPTOR D

wsp

LEGEND

- APPROXIMATE SITE LOCATION
- PROPOSED DEVELOPMENT
- RECEPTORS

N
W E
S

10 5 0 10 Metres

CLIENT:

CONSEIL DES ÉCOLES PUBLIQUES DE L'EST DE L'ONTARIO

PROJECT:

NOISE STUDY
KANATA-SUD ELEMENTARY SCHOOL
STITTSVILLE, ONTARIO

PROJECT NO:	DATE:
219-00014-00	JANUARY 2022

DESIGNED BY: -

DRAWN BY: TP

CHECKED BY: -

FIGURE NO:	SCALE:
4	1:500

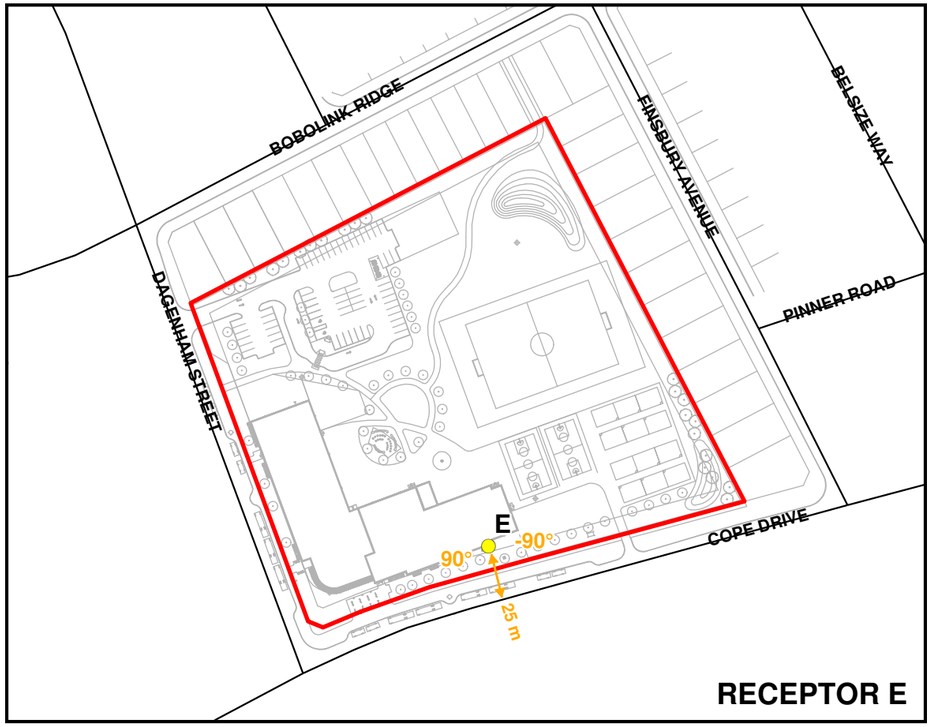
TITLE:

SITE PLAN SHOWING ANGLES AND DISTANCES
(TRANSPORTATION NOISE IMPACTS)
RECEPTORS A TO D

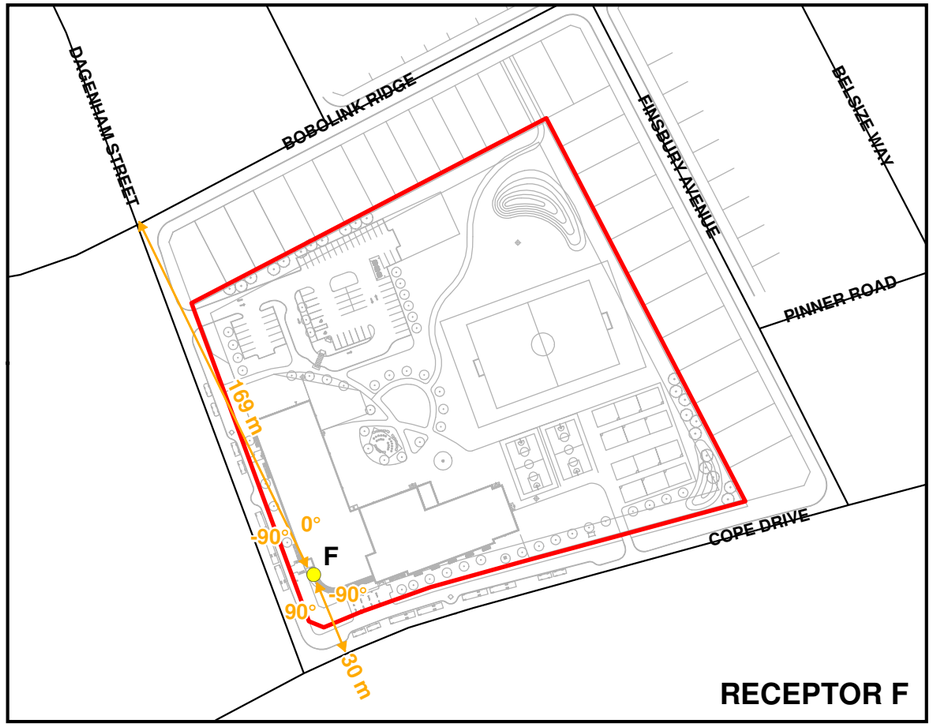
DISCIPLINE: ENVIRONMENT

ISSUE:	REV.:
	-

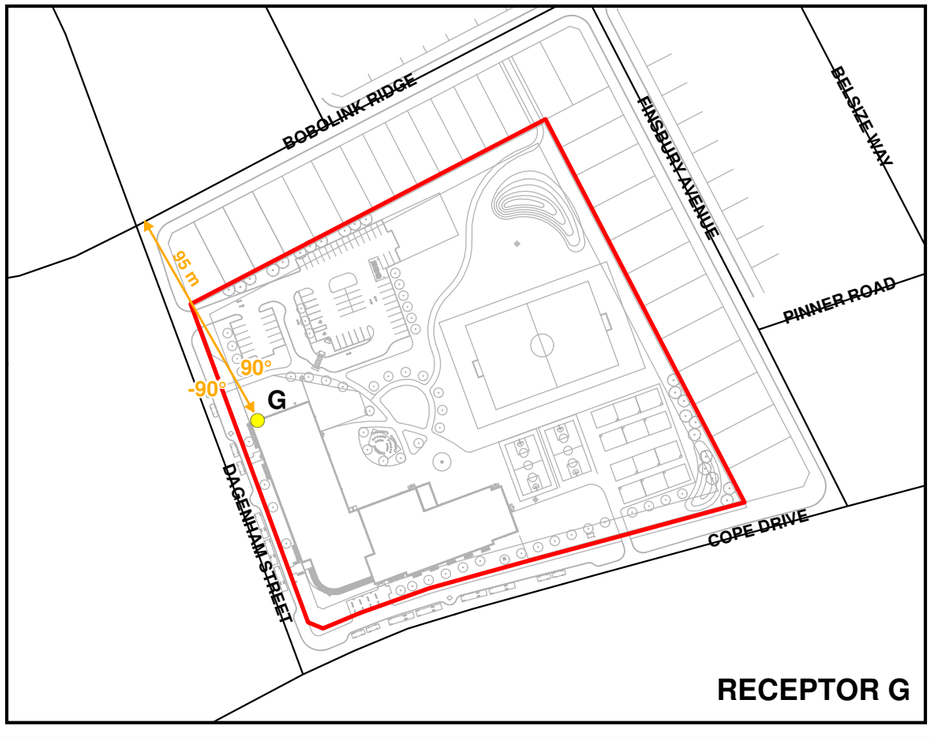
Document Path: D:\aProjects\219-00014-00\MXD\219-00014-00 Figure 4 Distances Angles.mxd



RECEPTOR E



RECEPTOR F



RECEPTOR G

wsp

LEGEND

- APPROXIMATE SITE LOCATION
- PROPOSED DEVELOPMENT
- RECEPTORS

N W E S

10 5 0 10 Metres

CLIENT:

CONSEIL DES ÉCOLES PUBLIQUES DE L'EST DE L'ONTARIO

PROJECT:

NOISE STUDY
KANATA-SUD ELEMENTARY SCHOOL
STITTSVILLE, ONTARIO

PROJECT NO:	DATE:
219-00014-00	JANUARY 2022

DESIGNED BY: -

DRAWN BY: TP

CHECKED BY: -

FIGURE NO:	SCALE:
5	1:500

TITLE:

SITE PLAN SHOWING ANGLES AND DISTANCES
(TRANSPORTATION NOISE IMPACTS)
RECEPTORS E TO G

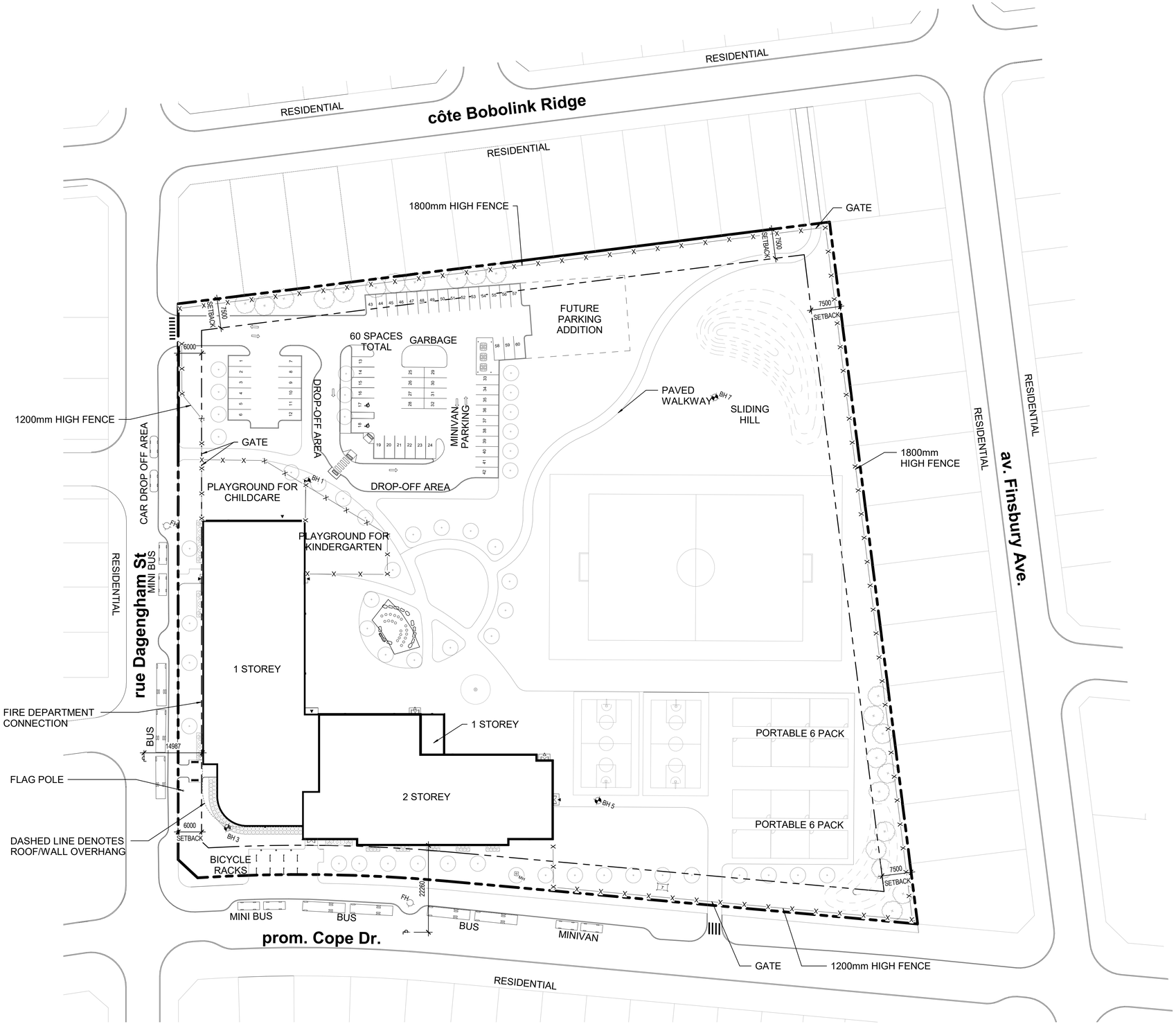
DISCIPLINE: ENVIRONMENT

ISSUE:	REV.:
	-

Document Path: D:\aProjects\219-00014-00\MXD\219-00014-00 Figure 5 Distances Angles.mxd

APPENDIX

A DRAWINGS



1 / a1.0(2) GENERAL SITE PLAN

1 : 500

(23 1/2" x 33" | 594mm x 841mm)

ARCHITECTURE 49

ARCHITECTURE49
1600 BUFFALO PLACE | WINNIPEG, MB, CANADA R3T 6B8
Phone: 204-477-1260 | winnipeg@architecture49.com | architecture49.com

CONSULTANT

CONSULTANT

CLIENT

SEAL:

NOT FOR CONSTRUCTION

THIS BAR IS 25mm LONG WHEN PLOTTED AT CORRECT SCALE. DO NOT SCALE DRAWINGS. 25mm

NORTH ARROW: PROJECT NORTH

DIGITAL REFERNECE:

EDIT FAMILY AND ADD QR CODE FOR BIM 360 SITE. REMOVE HIDDEN LINE.

PROJECT NO.: 219-00014-00 CONTRACT NO.

DRAWN BY: Author CHECKED BY: Checker APPROVED BY: Approver

KEYPLAN:

EDIT FAMILY AND ADD BUILDING FOOTPRINT KEYPLAN HERE. REMOVE TEXT AND HIDDEN LINE. ADD SHADED AREAS WITH YES/NO PARAMATERS TO CONTROL VISIBILITY OF BUILDING PARTS.

NO. DATE ISSUED

PROJECT

ÉCOLE ÉLÉMENTAIRE KANATA - STITTSVILLE

DRAWING TITLE

GENERAL SITE PLAN

DRAWING NO. **a1.0(2)**

PRINT DATE: 2021-12-01 12:32:04 PM

APPENDIX

B TRAFFIC DATA

Appendix B: Table of Traffic and Road Parameters To Be Used For Sound Level Predictions

Table B1 Traffic And Road Parameters To Be Used For Sound Level Predictions

Row Width (m)	Implied Roadway Class	AADT Vehicles/Day	Posted Speed Km/Hr	Day/Night Split %	Medium Trucks %	Heavy Trucks % [1]
NA [2]	Freeway, Queensway, Highway	18,333 per lane	100	92/8	7	5
37.5-44.5	6-Lane Urban Arterial-Divided (6 UAD)	50,000	50-80	92/8	7	5
34-37.5	4-Lane Urban Arterial-Divided (4-UAD)	35,000	50-80	92/8	7	5
23-34	4-Lane Urban Arterial-Undivided (4-UAU)	30,000	50-80	92/8	7	5
23-34	4-Lane Major Collector (4-UMCU)	24,000	40-60	92/8	7	5
30-35.5	2-Lane Rural Arterial (2-RAU)	15,000	50-80	92/8	7	5
20-30	2-Lane Urban Arterial (2-UAU)	15,000	50-80	92/8	7	5
20-30	2-Lane Major Collector (2-UMCU)	12,000	40-60	92/8	7	5
30-35.5	2-Lane Outer Rural Arterial (near the extremities of the City) (2-RAU)	10,000	50-80	92/8	7	5
20-30	2-Lane Urban Collector (2-UCU)	8,000	40-50	92/8	7	5

[1] The MOE Vehicle Classification definitions should be used to estimate automobiles, medium trucks and heavy trucks.

[2] The number of lanes is determined by the future mature state of the roadway.

Carbery	Beechfern	Abbott East	24	collector	urban
Carling	March	Herzberg	44.5 Note: Subject to unequal widening: 44.5 m, measured from the existing south ROW limit	arterial	urban
Carling	Herzberg	Greenbelt boundary	G	arterial	urban
Carling	Greenbelt boundary	Holly Acres	44.5	arterial	urban
Carling	Holly Acres	Richmond	37.5	arterial	urban
Carling	Richmond	Bronson	44.5	arterial	urban
Carp	Approx. 600 m south of Craig Side	Approx. 600 m north of March	23	arterial	village
Carp	Richardson Side	Urban Area Limit	37.5	arterial	rural
Carp	Stittsville urban area- north limit	Hazeldean	37.5	arterial	urban
Carp	Hazeldean	Main Street	23	arterial	urban
Catherine	Bronson	Elgin	23	arterial	urban
Cedarview	Baseline	Lytle	G	arterial	urban
Cedarview	Lytle	Fallowfield	37.5 Note: An additional 5.0 m on the either side may be required to construct a rural cross-section.	arterial	urban
Cedarview	Fallowfield	Jockvale	26	major collector	urban
Cedarview	Jockvale	Kennevale	24	collector	urban
Cedarview	Strandherd	Cambrian	37.5	arterial	urban
Cedarview	Cambrian	Urban Limit	24	collector	urban
Centrepoint	63m north of Hemming-woode	Tallwood	26	major collector	urban
Chamberlain	Bronson	Bank	23	arterial	urban
Chesterton	Viewmount	Meadowlands	24	collector	urban
Chimo	Katimavik	Katimavik	24	collector	urban
Clare	34.90m east of Evered	Tweedsmuir	24 *Note: North Side*	collector	urban
Claridge	Strandherd	Woodroffe	24	collector	urban
Clementine	Bélanger	Ohio	15	local	urban
Clementine	Rockingham	Bélanger	20	local	urban
Cleopatra	West Hunt Club	Merivale	24	collector	urban
Clyde	Maitland	Baseline	34	arterial	urban
Clyde	Baseline	Merivale	34	arterial	urban
Colonial	Trim	Delson	23	arterial	village
Colonial	Western boundary of Village of Sarsfield	Eastern boundary of Village of Sarsfield	23	arterial	village
Colonnade	Merivale	Prince of Wales	26	major collector	urban
Colonnade S.	Colonnade N.	Colonnade N.	24	collector	urban
Conroy	Walkley	Greenbelt boundary	44.5	arterial	urban
Conroy	Greenbelt boundary	Bank	G	arterial	urban
Constance Bay	Dunrobin	Bayview	20	arterial	village
Constellation	Centrepoint	Baseline	24	collector	urban
Cope	Entire Length		24	collector	urban
Cordova	Withrow	Baseline	24	collector	urban

APPENDIX

C STAMSON OUTPUTS

STAMSON 5.0 NORMAL REPORT Date: 24-12-2021 13:42:19
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: a.te Time Period: Day/Night 16/8 hours Description: Portable 6 Pack - North Facade

Road data, segment # 1: Bobolink Rid (day/night) ----------
Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 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): 8000
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: Bobolink Rid (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 : 160.00 / 160.00 m
Receiver height : 2.50 / 2.50 m
Topography : 1 (Flat/gentle slope; no barrier) Reference angle : 0.00

Results segment # 1: Bobolink Rid (day) ----------

Source height = 1.50 m

ROAD (0.00 + 55.47 + 0.00) = 55.47 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
---------- -90 90
0.00 65.75 0.00 -10.28 0.00 0.00 0.00 0.00 55.47 ----------

Segment Leq : 55.47 dBA
Total Leq All Segments: 55.47 dBA

Results segment # 1: Bobolink Rid (night) ----------

Source height = 1.50 m

ROAD (0.00 + 47.88 + 0.00) = 47.88 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
---------- -90 90
0.00 58.16 0.00 -10.28 0.00 0.00 0.00 0.00 47.88 ----------

Segment Leq : 47.88 dBA

Total Leq All Segments: 47.88 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 55.47
 (NIGHT): 47.88

STAMSON 5.0 NORMAL REPORT Date: 24-12-2021 13:39:47
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: B.te Time Period: Day/Night 16/8 hours Description: Portable 6 Pack - East Facade

Road data, segment # 1: Bobolink Rid (day/night) ----------
Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 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): 8000
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: Bobolink Rid (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 : 188.00 / 188.00 m
Receiver height : 2.50 / 2.50 m
Topography : 1 (Flat/gentle slope; no barrier) Reference angle : 0.00

Road data, segment # 2: Cope Drive (day/night) ----------
Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 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): 8000 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: Cope Drive (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 : 42.00 /
42.00 m
Receiver height : 2.50 / 2.50 m
Topography : 1 (Flat/gentle slope; no barrier) Reference angle : 0.00


Results segment # 1: Bobolink Rid (day) ----------------------------------
--

Source height = 1.50 m

ROAD (0.00 + 51.76 + 0.00) = 51.76 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
-----------------------------------------------------------------  0 90
0.00 65.75 0.00 -10.98 -3.01 0.00 0.00 0.00 51.76 ---------------------------
-----------------------------------------------

Segment Leq : 51.76 dBA


Results segment # 2: Cope Drive (day)
-----------------------------------

Source height = 1.50 m

ROAD (0.00 + 58.27 + 0.00) = 58.27 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
-----------------------------------------------------------------  -90 0
0.00 65.75 0.00 -4.47 -3.01 0.00 0.00 0.00 58.27 ---------------------------
-----------------------------------------------

Segment Leq : 58.27 dBA

Total Leq All Segments: 59.15 dBA


Results segment # 1: Bobolink Rid (night) --------------------------------
------

Source height = 1.50 m

ROAD (0.00 + 44.17 + 0.00) = 44.17 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
-----------------------------------------------------------------  0 90
0.00 58.16 0.00 -10.98 -3.01 0.00 0.00 0.00 44.17 ---------------------------
-----------------------------------------------

Segment Leq : 44.17 dBA
```

Results segment # 2: Cope Drive (night) ----------
--

Source height = 1.50 m

ROAD (0.00 + 50.68 + 0.00) = 50.68 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
---------- -90 0
0.00 58.16 0.00 -4.47 -3.01 0.00 0.00 0.00 50.68 ----------

Segment Leq : 50.68 dBA

Total Leq All Segments: 51.56 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.15
 (NIGHT): 51.56

STAMSON 5.0 NORMAL REPORT Date: 24-12-2021 13:45:44
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: C.te Time Period: Day/Night 16/8 hours Description: Portable 6 Pack - South Facade

Road data, segment # 1: Cope Drive (day/night) ----------
Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 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): 8000
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: Cope Drive (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 : 27.00 / 27.00 m
Receiver height : 2.50 / 2.50 m
Topography : 1 (Flat/gentle slope; no barrier) Reference angle : 0.00

Results segment # 1: Cope Drive (day)

Source height = 1.50 m

ROAD (0.00 + 63.20 + 0.00) = 63.20 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
--- -90 90
0.00 65.75 0.00 -2.55 0.00 0.00 0.00 0.00 63.20 ----------

Segment Leq : 63.20 dBA
Total Leq All Segments: 63.20 dBA

Results segment # 1: Cope Drive (night) ----------
--

Source height = 1.50 m

ROAD (0.00 + 55.60 + 0.00) = 55.60 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
---------- -90 90
0.00 58.16 0.00 -2.55 0.00 0.00 0.00 0.00 55.60 ----------

Segment Leq : 55.60 dBA

Total Leq All Segments: 55.60 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 63.20
 (NIGHT): 55.60

STAMSON 5.0 NORMAL REPORT Date: 27-12-2021 14:34:02
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: D.te Time Period: Day/Night 16/8 hours Description: 2 Storey Building - East Facade

Road data, segment # 1: Bobolink Rid (day/night) ----------

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 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): 8000
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: Bobolink Rid (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 : 177.00 / 177.00 m
Receiver height : 4.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier) Reference angle : 0.00

Road data, segment # 2: Cope Drive (day/night) ----------

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 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): 8000 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: Cope Drive (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 : 38.00 /
38.00 m
Receiver height : 4.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier) Reference angle : 0.00


Results segment # 1: Bobolink Rid (day) ----------------------------------
--

Source height = 1.50 m

ROAD (0.00 + 52.02 + 0.00) = 52.02 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
-----------------------------------------------------------------  0 90
0.00 65.75 0.00 -10.72 -3.01 0.00 0.00 0.00 52.02 ---------------------------
-----------------------------------------------

Segment Leq : 52.02 dBA


Results segment # 2: Cope Drive (day)
-----------------------------------

Source height = 1.50 m

ROAD (0.00 + 58.70 + 0.00) = 58.70 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
-----------------------------------------------------------------  -90 0
0.00 65.75 0.00 -4.04 -3.01 0.00 0.00 0.00 58.70 ---------------------------
-----------------------------------------------

Segment Leq : 58.70 dBA

Total Leq All Segments: 59.54 dBA


Results segment # 1: Bobolink Rid (night) --------------------------------
------

Source height = 1.50 m

ROAD (0.00 + 44.43 + 0.00) = 44.43 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
-----------------------------------------------------------------  0 90
0.00 58.16 0.00 -10.72 -3.01 0.00 0.00 0.00 44.43 ---------------------------
-----------------------------------------------

Segment Leq : 44.43 dBA
```

Results segment # 2: Cope Drive (night) ----------
--

Source height = 1.50 m

ROAD (0.00 + 51.11 + 0.00) = 51.11 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
---------- -90 0
0.00 58.16 0.00 -4.04 -3.01 0.00 0.00 0.00 51.11 ----------

Segment Leq : 51.11 dBA

Total Leq All Segments: 51.95 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.54
 (NIGHT): 51.95

STAMSON 5.0 NORMAL REPORT Date: 27-12-2021 14:40:15
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: e.te Time Period: Day/Night 16/8 hours Description: 2 Storey Building - South Facade

Road data, segment # 1: Cope Drive (day/night) ----------
Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 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): 8000
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: Cope Drive (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 : 25.00 / 25.00 m
Receiver height : 4.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier) Reference angle : 0.00

Results segment # 1: Cope Drive (day)

Source height = 1.50 m

ROAD (0.00 + 63.53 + 0.00) = 63.53 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
--- -90 90
0.00 65.75 0.00 -2.22 0.00 0.00 0.00 0.00 63.53 ----------

Segment Leq : 63.53 dBA
Total Leq All Segments: 63.53 dBA

Results segment # 1: Cope Drive (night) ----------
--

Source height = 1.50 m

ROAD (0.00 + 55.94 + 0.00) = 55.94 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
---------- -90 90
0.00 58.16 0.00 -2.22 0.00 0.00 0.00 0.00 55.94 ----------

Segment Leq : 55.94 dBA

Total Leq All Segments: 55.94 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 63.53
 (NIGHT): 55.94

STAMSON 5.0 NORMAL REPORT Date: 27-12-2021 15:02:35
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: f.te Time Period: Day/Night 16/8 hours Description: 1 Storey Building - South Facade

Road data, segment # 1: Bobolink Rid (day/night) ----------

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 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): 8000
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: Bobolink Rid (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 : 169.00 / 169.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier) Reference angle : 0.00

Road data, segment # 2: Cope Drive (day/night) ----------

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 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): 8000 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: Cope Drive (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 : 30.00 /
30.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier) Reference angle : 0.00


Results segment # 1: Bobolink Rid (day) ----------------------------------
--

Source height = 1.50 m

ROAD (0.00 + 52.22 + 0.00) = 52.22 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
-----------------------------------------------------------------  -90 0
0.00 65.75 0.00 -10.52 -3.01 0.00 0.00 0.00 52.22 -------------------------
-----------------------------------------------

Segment Leq : 52.22 dBA


Results segment # 2: Cope Drive (day)
-----------------------------------

Source height = 1.50 m

ROAD (0.00 + 62.74 + 0.00) = 62.74 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
-----------------------------------------------------------------  -90 90
0.00 65.75 0.00 -3.01 0.00 0.00 0.00 0.00 62.74 ---------------------------
-----------------------------------------------

Segment Leq : 62.74 dBA

Total Leq All Segments: 63.11 dBA


Results segment # 1: Bobolink Rid (night) --------------------------------
------

Source height = 1.50 m

ROAD (0.00 + 44.63 + 0.00) = 44.63 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
-----------------------------------------------------------------  -90 0
0.00 58.16 0.00 -10.52 -3.01 0.00 0.00 0.00 44.63 -------------------------
-----------------------------------------------

Segment Leq : 44.63 dBA
```

Results segment # 2: Cope Drive (night) ----------
--

Source height = 1.50 m

ROAD (0.00 + 55.15 + 0.00) = 55.15 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
---------- -90 90
0.00 58.16 0.00 -3.01 0.00 0.00 0.00 0.00 55.15 ----------

Segment Leq : 55.15 dBA

Total Leq All Segments: 55.52 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 63.11
 (NIGHT): 55.52

STAMSON 5.0 NORMAL REPORT Date: 27-12-2021 15:01:47
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: G.te Time Period: Day/Night 16/8 hours Description: 1 Storey Building - North Facade

Road data, segment # 1: Bobolink Rid (day/night) ----------

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 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): 8000
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: Bobolink Rid (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 : 95.00 / 95.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier) Reference angle : 0.00

Results segment # 1: Bobolink Rid (day) ----------
--

Source height = 1.50 m

ROAD (0.00 + 57.73 + 0.00) = 57.73 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
---------- -90 90
0.00 65.75 0.00 -8.02 0.00 0.00 0.00 0.00 57.73 ----------

Segment Leq : 57.73 dBA
Total Leq All Segments: 57.73 dBA

Results segment # 1: Bobolink Rid (night) ----------

Source height = 1.50 m

ROAD (0.00 + 50.14 + 0.00) = 50.14 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
---------- -90 90
0.00 58.16 0.00 -8.02 0.00 0.00 0.00 0.00 50.14 ----------

Segment Leq : 50.14 dBA

Total Leq All Segments: 50.14 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.73
 (NIGHT): 50.14