Noise Impact Assessment
1158 Old Second Line Road
Ottawa, Ontario

Type of Document:
Plan of Subdivision Submission - Final

Client
SLK Limited Partnership

Developer
Theberge Homes

Project Number:
OTT-00245003-A1

Prepared By: Jason Fitzpatrick, P.Eng.

Reviewed By: Bruce Thomas, P.Eng.

EXP Services Inc.
100-2650 Queensview Drive
Ottawa, ON K2B 8H6

Date Submitted:
June 12, 2023

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Prepared By:
EXP Services Inc.
100-2650 Queensview Drive
Ottawa, ON K2B 8H6
Canada
T: 613 688-1899
F: 613 225-7337
www.EXP.com

Jason Fitzpatrick, P.Eng.
Senior Engineer
Infrastructure Services

Bruce Thomas, P.Eng.
Senior Project Manager
Infrastructure Services

Date Submitted:
June 12, 2023

Legal Notification

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1 Introduction

SLK Limited Partnership retained EXP Services Inc. (EXP) to undertake a noise impact assessment in support of a plan of subdivision application for a proposed 100-unit townhome development located at 1158 Old Second Line Road in the City of Ottawa. The site is situated on the east side of Old Second Line Road between Goward Drive and Klondike Road. As the site is within 100m of Old Second Line Road, which is classified as a major collector, a noise impact assessment is required.

This report assesses noise impact from surface transportation sources only. No stationary noise sources were noted at the site which would exceed the sound level criteria, and therefore an assessment of stationary noise sources was not completed as part of project report.

This study was carried out in accordance with the Ministry of Environment Conservation and Parks (MECP), formerly the Ministry of the Environment Environmental Noise Control Guidelines (NPC-300) and the City of Ottawa's Environmental Noise Control Guidelines (COENCG). The findings of the study will address noise levels and recommend if noise abatement measures are necessary to bring noise levels to acceptable levels. This noise impact study is prepared to address the following requirements as identified in Section 2.1 of the COENCG and Section 4.8.7 of the City's Official Plan (COOP):

Development proposals for new noise sensitive land uses are required to include a noise feasibility study and/or detailed noise study in the following locations:

- *Mixed Use Centre, Town Centre and Mainstreets as identified on Schedule B;*

or within

- *100 metres from the right-of-way of:*
  - *an existing or proposed arterial, collector or major collector road identified on Schedules E and F; or*
  - *a light rail transit corridor; bus rapid transit, or transit priority corridor identified on Schedule D;*
- *250 metres from the right-of-way of:*
  - *an existing or proposed highway;*
- *300 metres from the right of way of*
  - *a proposed or existing rail corridor or;*
  - *secondary main railway line;*
- *500 metres from the right-of-way of:*
  - *a 400-series provincial highway, freeway or*
  - *a principle main railway line.*

2 References

A summary of the documents that were referenced during the preparation of this report include the following:

- Ministry of the Environment Technical Document, ORNAMENT, Ontario Road Noise Analysis Method for Environment and Transportation, Sept 1999.
- Ontario Ministry of the Environment (MOE) Publication NPC-300, Stationery and Transportation Sources Approvals and Planning, August 2013.
- City of Ottawa Official Plan (COOP), 2013.
- City of Ottawa Transportation Master Plan (COTMP), November 2013.
- City of Ottawa Environmental Noise Control Guidelines (COENCG), January 2016.

3 Sound Level Criteria

MECP and the City of Ottawa Guidelines place limitations on indoor and outdoor sound levels from road traffic which are summarized in Table 3-1 below. Noise criteria is taken from Tables 2.2a and 2.2b from the COENCG.

Table 3-1: MECP and City of Ottawa Indoor and Outdoor Criteria for Noise from Road Traffic

Location	Space	Time Period	Equivalent Level Leq (dBA)
Indoors	Sleeping quarters of residences, hospitals, schools, nursing / retirement homes, etc.	Nighttime 23:00 to 07:00	40
	Sleeping quarters of hotels/motels	Nighttime 23:00 to 07:00	45
	Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	Daytime 07:00 to 23:00	45
	Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	Nighttime 23:00 to 07:00	40
	General offices, reception areas, retail stores, etc.	Daytime 07:00 to 23:00	50
Outdoors	Outdoor Living Areas	Daytime 07:00 to 23:00	55

The basic physical measurement of noise used in this report is the A-weighted sound level measured in dBA, which is an overall measurement of sound over a full range of frequencies. Because noise from roadway traffic fluctuates over the audible range of hearing, it is convenient to describe noise in terms of an equivalent 24-hour sound level (denoted as Leq). MECP Guidelines require that traffic noise be evaluated in relation to specific locations during certain time periods.

In general, noise levels are predicted for outdoor living areas (generally the backyard of a residential home) during the day and for indoor areas (living areas during the day and bedrooms during the nighttime. A summary of these requirements is shown in Tables 3-2 through 3-5.

Table 3-2: Outdoor, Ventilation & Warning Clause Requirements Road Noise, Daytime (0700-2300)

ASSESSMENT LOCATION	Leq (16 hr) (dBA)	VENTILATION REQUIREMENTS	OUTDOOR CONTROL MEASURES	WARNING CLAUSE
Outdoor Living Area (OLA)	Less than or equal to 55 dBA	N/A	None required	Not required
	Greater than 55 dBA to less than or equal to 60 dBA	N/A	Control measures (barriers) may not required but should be considered	Required if resultant Leq exceeds 55 dBA, Type A
	Greater than 60 dBA	N/A	Control measures (barriers) required to reduce the Leq to below 60 dBA and as close to 55 dBA as technically, economically and administratively feasible	Required if resultant Leq exceeds 55 dBA, Type B
Plane of Living Room Window	Greater than 50 dBA to less than or equal to 55 dBA	None required	N/A	Not required
	Greater than 55 dBA to less than or equal to 65 dBA	Forced air heating with provision for central air conditioning	N/A	Required Type C
	Greater than 65 dBA	Central air conditioning	N/A	Required Type D

Table 3-3: Ventilation and Warning Clause Requirements Road Noise, Nighttime (2300-0700)

ASSESSMENT LOCATION	L_{eq} (8 hr) (dBA)	VENTILATION REQUIREMENTS	WARNING CLAUSE
Plane of Bedroom Window	Greater than 50 dBA to less or equal to 60 dBA	Forced air heating with provision for central air conditioning	Required Type C
	Greater than 60 dBA	Central air conditioning	Required Type D

Table 3-4: Building Component Requirements Road Noise, Daytime (0700-2300)

ASSESSMENT LOCATION	NOISE SOURCE	L_{eq} (16 hr) (dBA)	WARNING CLAUSE
Plane of Living Room Window	Road	Less than or equal to 65 dBA	Building compliant with Ontario Building Code
		Greater than 65 dBA	Building components (walls, windows, etc.) must be designed to achieve indoor sound level criteria

Table 3-5: Building Component Requirements Road Noise, Nighttime (2300-0700)

ASSESSMENT LOCATION	NOISE SOURCE	L_{eq} (8 hr) (dBA)	WARNING CLAUSE
Plane of Bedroom Window	Road	Less than or equal to 60 dBA	Building compliant with Ontario Building Code
		Greater than 60 dBA	Building components (walls, windows, etc.) must be designed to achieve indoor sound level criteria

The warning clauses referred to above are contained in Table 3-6 below. MECP warning clauses and City of Ottawa specific warning clauses (*red italics*) are shown. Where applicable, these clauses are to be inserted on all Offers/Agreements of Purchase and Sale or Leases to notify potential purchasers and tenants of these environmental concerns. The City of Ottawa warning clauses were taken from Table A1 of the COENCG.

Table 3-6: MECP Warning Clauses

Type A	"Purchasers/tenants are advised that sound levels due to increasing road traffic (rail traffic) (air traffic) may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment." *"Purchasers/tenants are advised that sound levels due to increasing road/rail/Light Rail/transitway traffic may occasionally interfere with some outdoor activities as the sound levels may exceed the sound level limits of the City and the Ministry of the Environment."*
Type B	"Purchasers/tenants 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 (rail traffic) (air traffic) may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment." *"Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road/rail/Light Rail/transitway traffic may, on occasion, interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the City and the Ministry of the Environment."*
Type 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 in low and medium density developments 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." *"This dwelling unit has also been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the City and the Ministry of the Environment."*
Type D	"This dwelling unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment." *"This dwelling unit has been supplied with a central air conditioning system and other measures which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the City and the Ministry of the Environment."*
Type E	*"Purchasers/tenants are advised that due to the proximity of the adjacent industry (facility) (utility), noise from the industry (facility) (utility) may at times be audible."* *"Purchasers/tenants are advised that due to the proximity of the adjacent industry (facility) (utility), noise from the industry (facility) (utility) may at times interfere with outdoor activities."*

3.1 Vehicular Traffic Noise

The site is located within 100 meters from the right-of-way of an existing urban major collector (Old Second Line Rd) therefore per the City's guidelines a noise assessment is required

Figure 2 in Appendix A illustrates the noise source and receiver locations used. In general, noise levels are predicted at the: 1) building façade or plane of window (POW) during the daytime and nighttime, and 2) for Outdoor Living Areas (OLA) during the daytime.

The predicted noise levels were used to dictate the action required to achieve the recommended sound abatement requirements. The mitigation of the indoor sound levels is achieved by selection of building architectural components (walls, windows, doors), based on the noise reduction required to meet the indoor noise level criteria. The 16-hour daytime and 8-hour nighttime sound levels were calculated at four (4) OLA locations around the site, and twelve (12) building façade or plane of window (POW). The results of the predicted noise levels at the six locations stipulate the ventilation, building code and associated warning clause requirements.

STAMSON file names used were denoted based on the receiver used location.

3.2 Aircraft/Airport Noise

The site is located outside the Airport Vicinity Development Zone and outside the Airport Operating Influence Zone as per Schedule K of the Ottawa Official Plan. The site is also outside both the 25 NEF and NEP contours therefore noise from air traffic does not impact this site.

3.3 Stationary Noise

A review of the surrounding building uses, and the zoning of adjacent properties were completed to determine if there was a potential impact or influence from stationary noise sources. Typically, industrial, and commercial land uses can be a potential stationary noise source. Stationary sources of noise include all sources of sound and vibration that will exist or operate within the site, excluding construction noise. The noise level criteria for stationary noise sources is the higher value between the exclusion limit values prescribed by the MECP (and City of Ottawa) or the corresponding minimum hourly background /ambient sound level due to traffic. For OLA during the daytime and POW during the daytime or nighttime the exclusion limit values are 50 dBa and 45 dBa, respectively.

From our observations, there are no significant stationary noise sources have been identified that are likely to cause noise levels exceeding the MECP and City of Ottawa requirements.

4 Road Noise Prediction Procedures

All noise levels have been predicted using MECP's software and methodology. STAMSON Version 5.03 (1999), which is based on the Ontario Road Noise Analysis Method for Environment and Transportation ("ORNAMENT") Model, was used for all calculations in this report. Detailed output files are attached in Appendix D for reference. In addition to the traffic data that was used in the analysis, theoretical noise predictions were based on the following information:

- Truck traffic on Second Lind Rd consists of 5% heavy trucks, 7% medium trucks.
- The Day/Night split used was 92% and 8%.
- Intermediate surfaces between the source and receiver locations were assessed as an absorptive ground surface.
- Topography was assessed as flat/gentle slope between the noise source and the receivers.
- Road pavement and road gradient was assessed as typical asphalt or concrete and flat grade.

Traffic information used for this study was obtained from the review of the COENCG. Road and traffic parameters used in our analysis are summarized in Table 4-1 below.

Table 4-1: Traffic and Road Parameters

Traffic Parameters	Old Second Line Rd
R.O.W. WIDTH (m)	Approx. 20 m
Roadway Type	2 Lane Urban Major Collector (2-UMCU)
A.A.D.T. (veh/day)	12,000
Day/night split (%)	92 / 8
Medium trucks (%)	7
Heavy trucks (%)	5
Posted Speed Limit (km/hr)	60 km/hr

5 Summary of Results

The noise levels at the assessed receiver locations range from approximately 49.1 - 67.0 dBa during the daytime and between 42.0 – 58.0 dBa during the nighttime. With the extension of an existing noise wall, daytime and nighttime levels will be lowered to between 44.2 – 57.1 dBa during the daytime and between 42.0 – 56.4 dBa during the nighttime

A summary of predicted noise levels for various assessment locations is summarized below in Table 5-1 and 5-2 below. Detailed results and output from STAMSON Version 5.03 are contained in Appendix D.

The unattenuated daytime and nighttime noise levels are based on existing Alcuf noise walls in place on adjacent lots.

Table 5-1: Summary of Anticipated Noise Levels

Receiver Location	Receptor Type	Unattenuated Noise Level Leq (dBa)		Attenuated Noise Level With Barrier, Leq (dBa)	
		Daytime (07:00 – 23:00)	Nighttime (23:00– 07:00)	Daytime (07:00 – 23:00)	Nighttime (23:00– 07:00)
R1	OLA	63.83	56.39	57.06	56.41
R2	OLA	59.29	51.82	53.17	51.92
R3	OLA	53.81	46.59	48.64	46.59
R4	OLA	49.13	41.99	44.17	41.99
R5	Façade	62.34	55.02	56.63	55.02
R6	Façade	58.90	51.65	53.87	51.65
R7	Façade	55.88	48.69	51.01	48.69
R8	Façade	53.37	46.25	48.66	46.25
R9	Façade	66.30	58.03		
R10	Façade	61.19	53.85		
R11	Façade	57.60	50.35		
R12	Façade	54.53	47.35		
R13	Façade	52.41	45.29		
R14	Façade	61.92	54.59		
R15	Façade	66.93	57.73		
R16	Façade	66.93	57.73		
R17	Façade	58.38	54.35	54.54	54.35

6 Mitigation Measures

Table 6-1 below summarizes the requirements for ventilation, outdoor control measures and building components for all assessment locations.

Table 6-1: Summary of Requirements Based on Receiver Location

Receiver Location	Receptor Type	Outdoor Control Measures Warning Clause	Ventilation Requirement		*Building Component Requirement	
			Plane of Living Room Windows (Daytime)	Plane of Bedroom Windows (Nighttime)	Plane of Living Room Windows (Daytime)	Plane of Bedroom Windows (Nighttime)
R1	OLA	Type B				
R2	OLA	Type A				
R3	OLA	None				
R4	OLA	None				
R5	Façade		Type C	Type C	Compliant	Compliant
R6	Façade		Type C	Type C	Compliant	Compliant
R7	Façade		Type C	None	Compliant	Compliant
R8	Façade		None	None	Compliant	Compliant
R9	Façade		Type D	Type C	Compliant	Non-compliant
R10	Façade		Type C	Type C	Compliant	Compliant
R11	Façade		Type C	None	Compliant	Compliant
R12	Façade		None	None	Compliant	Compliant
R13	Façade		None	Type C	Compliant	Compliant
R14	Façade		Type C	Type C	Compliant	Compliant
R15	Façade		Type D	Type C	Compliant	Non-compliant
R16	Façade		Type D	Type C	Compliant	Non-compliant
R17	Façade		Type C	Type C	Compliant	Compliant

**Building Code Requirements.*

Required = Building components must be designed to achieve indoor sound levels criteria, or Compliant = Building compliant with Ontario Building Code.

Table 6-2 below summarizes the noise attenuation barrier required to reduce noise levels in the outdoor living areas to acceptable levels. A minimum attenuation barrier of 2.5m is required connecting the existing noise barrier walls adjacent to either side of the site and tying into the closest unit as shown in Figure 3.

Type A: Regarding the outdoor living area, purchasers/tenants are advised that noise levels are greater than 55dba but less than 60dba, and that no sound mitigation is required.

Type B: Regarding the outdoor living area, purchasers/tenants are advised that noise levels are greater than 60dba and a noise control feature was put in place to reduce noise levels below 60dba.

Type C: Regarding the in door living area, either the daytime noise levels are greater than 55dba, but less than 65dba, or the nighttime levels are greater than 50dba, but less than 60dba. The unit shall have central air conditioning at the occupant's discretion such that windows may be kept closed to reduce noise levels within the unit.

Type D: Regarding the in door living area, either daytime noise levels are greater than 65dba, or nighttime levels are greater than 60dba. The unit shall have central air conditioning at the occupant's discretion such that windows may be kept closed to reduce noise levels within the unit. Also, building

components (walls, windows, etc.) shall be designed to achieve indoor sound levels by an acoustic engineer.

Table 6-2: Summary of Attenuation Barrier Requirements

Assessment Location	Height of Barrier Required (m)	Top of Barrier Elevation (m)
Block 1 – Unit 1	2.5	107.0
Block 3 - Unit 1	2.5	104.9

7 Recommendations

We recommend that this application for the proposed development at 1158 Old Second Line Road be approved from a "Noise Impact Assessment" perspective, based on the following:

Noise attenuation barriers will be located as illustrated in Figure 3 to reduce noise levels in the rear yards of Block 1 and Block 3. The noise attenuation barrier to meet specifications identified in Part 5 of the City of Ottawa Environmental Noise Control Guidelines. A 2.5m high attenuation barrier is proposed to reduce the anticipated noise levels for the outdoor living areas. The acoustic noise barrier wall shall have a minimum surface density of 20 Kg/m^3 as per COENCE. Minimum top of barrier wall elevations shall be as per Table 6-2.

Block 1 (Units 1 - 6). As Identified in Figure 2

There is a requirement for Central Air Conditioning Type "D" Warning Clause for the indoor areas of these units. The following Notices on Title for these residential units shall be included in all Agreements of Purchase and Sale in accordance with the terms specified by the Development Agreement:

"This dwelling unit has been supplied with a central air conditioning system and other measures which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the City and the Ministry of the Environment."

As the anticipated daytime noise levels exceeding acceptable levels due to road traffic, building components for windows/walls etc., will need to be designed to reduce indoor noise levels to acceptable levels. It is recommended that a qualified acoustic consultant inspect the building plans to certify that construction will be adequate in this regard.

Block 2 (Units 1 - 5). As Identified in Figure 2

There is a requirement for Central Air Conditioning Type "D" Warning Clause for the indoor areas of these units. The following Notices on Title for these residential units shall be included in all Agreements of Purchase and Sale in accordance with the terms specified by the Development Agreement:

"This dwelling unit has been supplied with a central air conditioning system and other measures which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the City and the Ministry of the Environment."

As the anticipated daytime noise levels exceeding acceptable levels due to road traffic, building components for windows/walls etc., will need to be designed to reduce indoor noise levels to acceptable

levels. It is recommended that a qualified acoustic consultant inspect the building plans to certify that construction will be adequate in this regard.

Block 3 (Unit 1). As Identified in Figure 2

A Type "B" Warning Clause for the Outdoor Living Area is required along with a requirement for Central Air Conditioning Type "D" Warning Clause for the indoor areas is required for this unit. The following Notices on Title for these residential units shall be included in all Agreements of Purchase and Sale in accordance with the terms specified by the Development Agreement:

"This dwelling unit has been supplied with a central air conditioning system and other measures which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the City and the Ministry of the Environment."

"Purchasers/tenants 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, on occasion, interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the City and the Ministry of the Environment."

As the anticipated daytime noise levels exceeding acceptable levels due to road traffic, building components for windows/walls etc., will need to be designed to reduce indoor noise levels to acceptable levels. It is recommended that a qualified acoustic consultant inspect the building plans to certify that construction will be adequate in this regard.

Block 3 (Unit 2). As Identified in Figure 2

A Type "B" Warning Clause for the Outdoor Living Area is required along with a requirement for Central Air Conditioning Type "C" Warning Clause for the indoor areas is required for these units. The following Notices on Title for these residential units shall be included in all Agreements of Purchase and Sale in accordance with the terms specified by the Development Agreement:

"This dwelling unit has also been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the City and the Ministry of the Environment."

"Purchasers/tenants 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, on occasion, interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the City and the Ministry of the Environment."

Block 3 (Units 3, 4). As Identified in Figure 2

A Type "A" Warning Clause for the Outdoor Living Area is required along with a requirement for Central Air Conditioning Type "C" Warning Clause for the indoor areas is required for these units. The following Notices on Title for these residential units shall be included in all Agreements of Purchase and Sale in accordance with the terms specified by the Development Agreement:

"This dwelling unit has also been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the City and the Ministry of the Environment."

"Purchasers/tenants 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, on occasion, interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the City and the Ministry of the Environment."

Block 1 (Units 5, 6). As Identified in Figure 2

A requirement for Central Air Conditioning Type "C" Warning Clause for the indoor areas is required for these units. The following Notices on Title for these residential units shall be included in all Agreements of Purchase and Sale in accordance with the terms specified by the Development Agreement:

"This dwelling unit has also been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the City and the Ministry of the Environment."

Appendix A – Figures

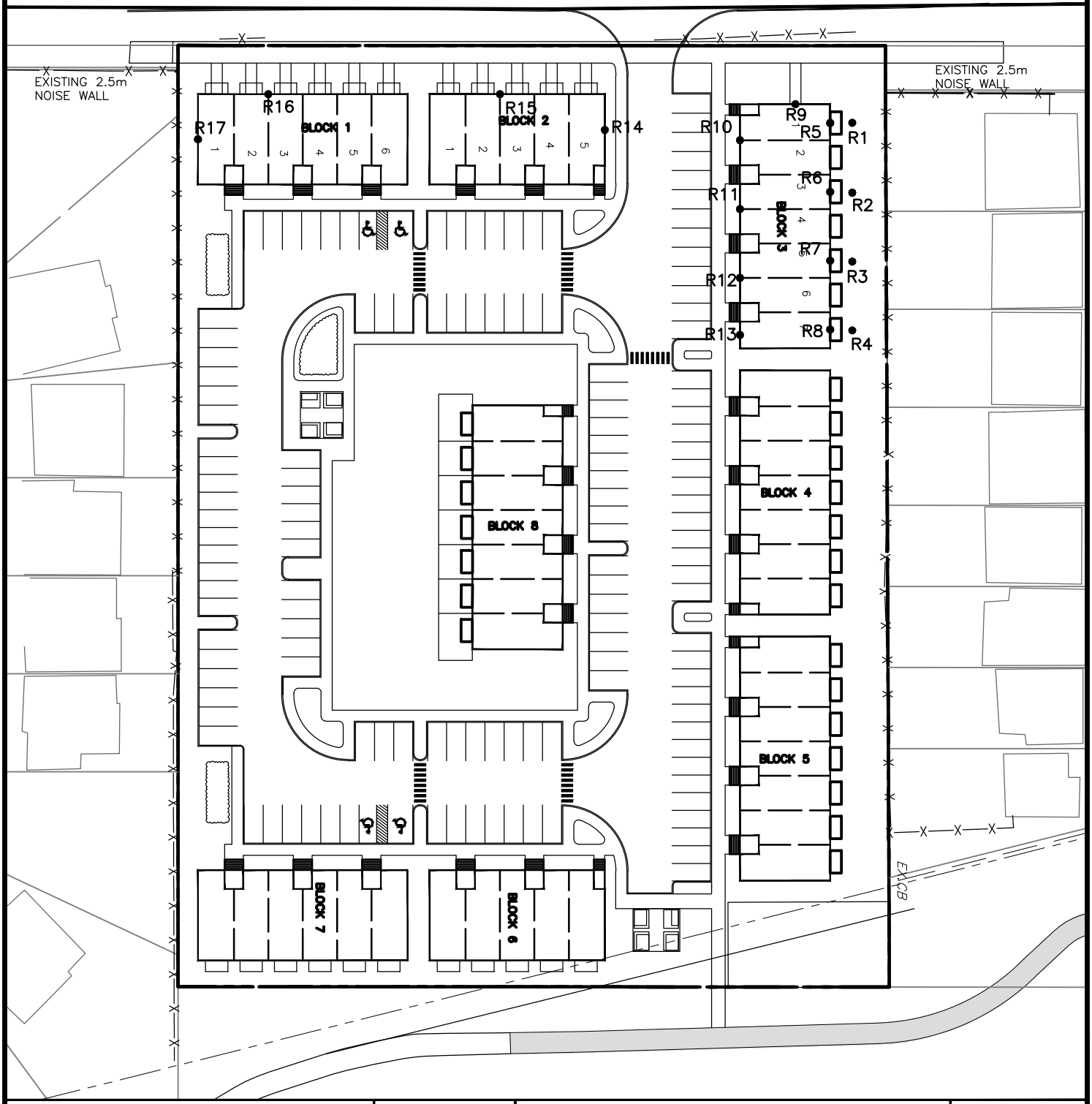
Figure 1 – Site Location Plan

Figure 2 – Source/Receiver Locations for Building Facade

Figure 3 – Required Noise Wall Locations

exp Services Inc. 100-2650 Queensview Drive Ottawa, ON K2B 8H6 www.exp.com	DESIGN JLF DRAWN SAB DATE JAN 2020 FILE NO 245003	1158 OLD SECOND LINE RD THEBERGE HOMES SITE LOCATION PLAN	SCALE 1:10000 SKETCH NO FIG 1

NOISE SOURCE: OLD SECOND LINE ROAD, 60km/hr



exp Services Inc.
100-2650 Queensview Drive
Ottawa, ON K2B 8H6

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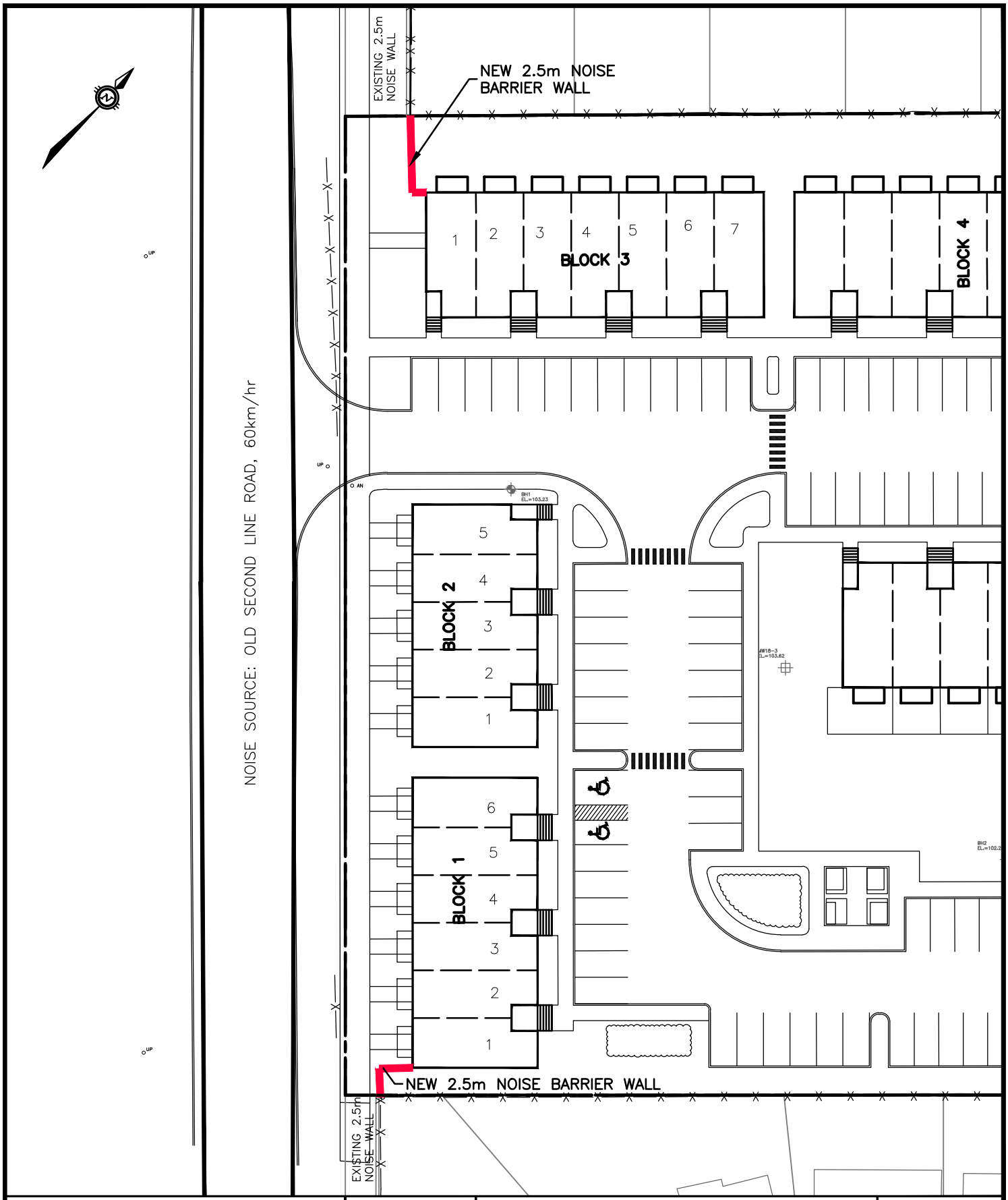
DESIGN	MZG
DRAWN	MZG
DATE	23-06-12
FILE NO	OTT-00245003-A1

1158 OLD SECOND LINE ROAD
THEBERGE HOMES

NOISE SOURCE/RECEIVER LOCATIONS

SCALE 1:750

SKETCH NO FIG 2



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DRAWN	MZG
DATE	23-06-12
FILE NO	OTT-00245003-A1

1158 OLD SECOND LINE ROAD
THEBERGE HOMES

PROPOSED NOISE BARRIERS

SCALE 1:500

SKETCH NO FIG 3

Appendix B – Tables

Table B1: Noise Source/Receiver Data

Table B2: Summary of Warning Clauses

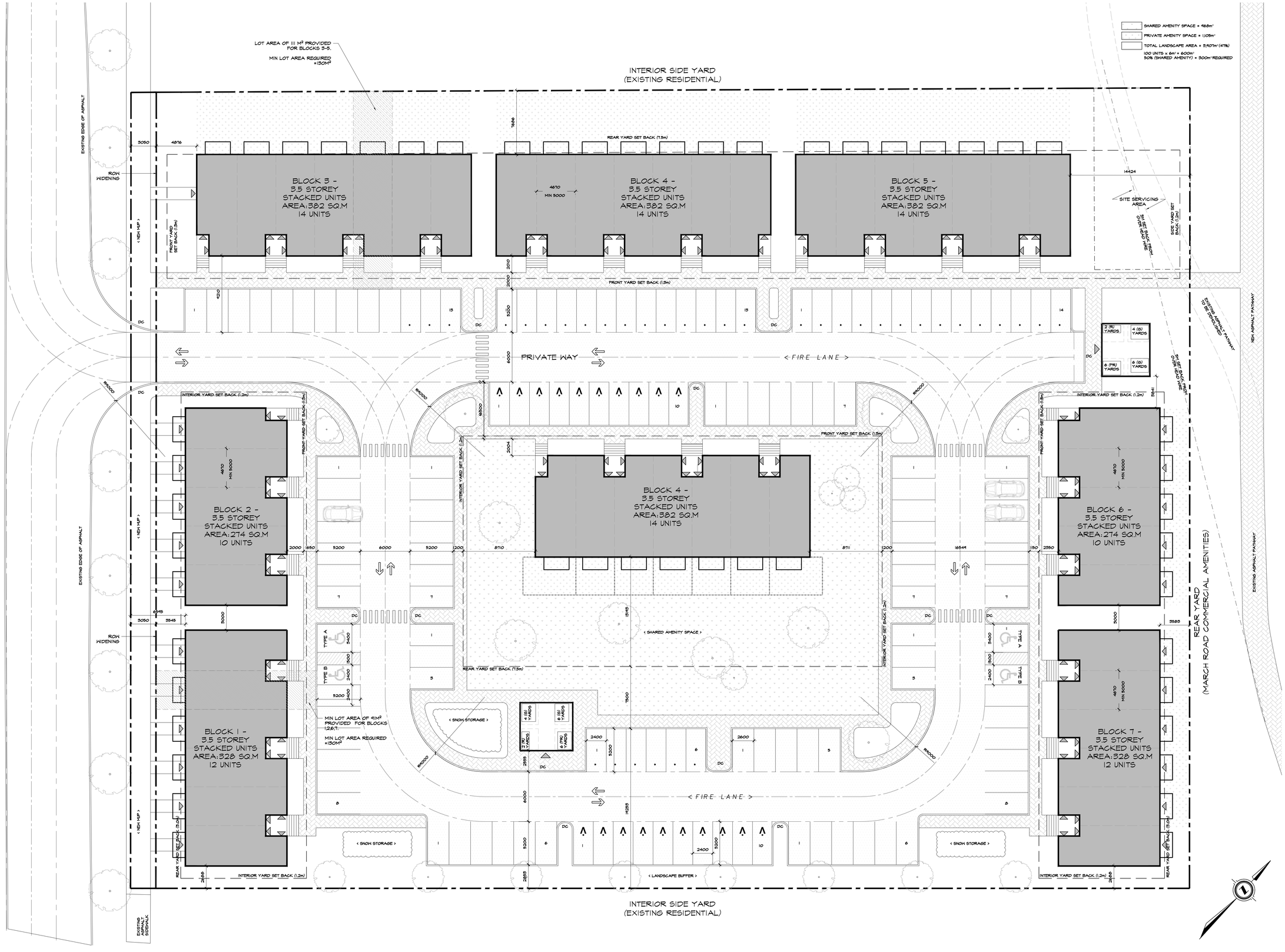
TABLE B1 - SOURCE/Combined Stamson DATA

Location	Assessment Location	Noise Source	Angles		Source to Receiver Dist (m)	Source Ground Elev (m)	Receiver Ground Elev (m)	Receiver Height (m)	Barrier to Receiver Dist (m)	Base of Barrier Elev (m)	Height of Wall Determined	AADT	Speed Limit (km/h)	Combined Equivalent Noise Level Leq (dBa)		Combined Equivalent Noise Level Leq (dBa) With Barrier	
			From	To										Daytime (7:00-23:00)	Nighttime (23:00-7:00)	Daytime (7:00-23:00)	Nighttime (23:00-7:00)
R1	**OLA**	**2nd Line Rd**	**-48**	**51**	**20.4**	**102.94**	**102.78**	**1.5**	**4.1**	**102.40**	**NA**	**12,000**	**60**	**63.83**	**56.39**	**57.06**	**56.41**
R2	**OLA**	**2nd Line Rd**	**-12**	**21**	**29.9**	**102.94**	**102.74**	**1.5**	**13.6**	**102.40**	**2.50**	**12,000**	**60**	**59.29**	**51.82**	**53.17**	**51.92**
R3	**OLA**	**2nd Line Rd**	**-6**	**21**	**39.2**	**102.94**	**102.70**	**1.5**	**22.9**	**102.40**	**2.50**	**12,000**	**60**	**53.81**	**46.59**	**48.64**	**46.59**
R4	**OLA**	**2nd Line Rd**	**-3**	**10**	**48.6**	**102.94**	**102.65**	**1.5**	**32.3**	**102.40**	**2.50**	**12,000**	**60**	**49.13**	**41.99**	**44.17**	**41.99**
R5	**Façade**	**2nd Line Rd**	**0**	**90**	**20.4**	**102.99**	**102.90**	**1.5**	**4.1**	**102.40**	**2.50**	**12,000**	**60**	**62.34**	**55.02**	**56.63**	**55.02**
R6	**Façade**	**2nd Line Rd**	**0**	**63**	**29.8**	**102.99**	**102.86**	**1.5**	**13.6**	**102.40**	**2.50**	**12,000**	**60**	**58.90**	**51.65**	**53.87**	**51.65**
R7	**Façade**	**2nd Line Rd**	**0**	**46**	**39.1**	**102.99**	**102.82**	**1.5**	**22.9**	**102.40**	**2.50**	**12,000**	**60**	**55.88**	**48.69**	**51.01**	**48.69**
R8	**Façade**	**2nd Line Rd**	**0**	**36**	**48.6**	**102.99**	**102.77**	**1.5**	**32.3**	**102.40**	**2.50**	**12,000**	**60**	**53.37**	**46.25**	**48.66**	**46.25**
R9	**Façade**	**2nd Line Rd**	**-90**	**90**	**17.9**	**103.09**	**103.32**	**1.5**			**2.50**	**12,000**	**60**	**66.30**	**58.03**		
R10	**Façade**	**2nd Line Rd**	**-71**	**0**	**22.7**	**103.24**	**103.90**	**1.5**			**2.50**	**12,000**	**60**	**61.19**	**53.85**		
R11	**Façade**	**2nd Line Rd**	**-50**	**0**	**32.1**	**103.24**	**103.83**	**1.5**			**2.50**	**12,000**	**60**	**57.60**	**50.35**		
R12	**Façade**	**2nd Line Rd**	**-36**	**0**	**41.4**	**103.24**	**103.76**	**1.5**			**2.50**	**12,000**	**60**	**54.53**	**47.35**		
R13	**Façade**	**2nd Line Rd**	**-29**	**0**	**49.2**	**103.24**	**103.70**	**1.5**			**2.50**	**12,000**	**60**	**52.41**	**45.29**		
R14	**Façade**	**2nd Line Rd**	**0**	**81**	**16.4**	**103.63**	**103.90**	**1.5**			**2.50**	**12,000**	**60**	**61.92**	**54.59**		
R15	**Façade**	**2nd Line Rd**	**-90**	**90**	**16.4**	**103.85**	**103.97**	**1.5**			**2.50**	**12,000**	**60**	**66.93**	**57.73**		
R16	**Façade**	**2nd Line Rd**	**-90**	**90**	**16.4**	**104.25**	**104.47**	**1.5**			**2.50**	**12,000**	**60**	**66.93**	**57.73**		
R17	**Façade**	**2nd Line Rd**	**-90**	**-21**	**22.5**	**104.33**	**104.50**	**1.5**			**2.50**	**12,000**	**60**	**58.38**	**54.35**	**54.54**	**54.35**
			-21	**0**	**22.5**	**104.33**	**104.50**	**1.5**	**9.3**	**104.50**							

TABLE B2- SUMMARY OF WARNING CLAUSES - SORTED BY RECEIVER LOCATIONS

Receiver Location	Assessment Location	Outdoor Control Measures Warning Clause	Ventilation Requirement			*Building Component Requirement		
			Plane of Living Room Windows (Daytime)	Plane of Bedroom Windows (Nighttime)	Governing Warning Clause Requirement	Plane of Living Room Windows (Daytime)	Plane of Bedroom Windows (Nighttime)	Governing BC Requirement
R1	**OLA**	Type B				Compliant	Compliant	Compliant
R2	**OLA**	Type A						
R3	**OLA**	None						
R4	**OLA**	None						
R5	**Façade**		Type C	Type C	Type C	Compliant	Compliant	Compliant
R6	**Façade**		Type C	Type C	Type C	Compliant	Compliant	Compliant
R7	**Façade**		Type C	None	Type C	Compliant	Compliant	Compliant
R8	**Façade**		None	None	None	Compliant	Compliant	Compliant
R9	**Façade**		Type D	Type C	Type D	Non-Compliant	Compliant	Non-Compliant
R10	**Façade**		Type C	Type C	Type C	Compliant	Compliant	Compliant
R11	**Façade**		Type C	Type C	Type C	Compliant	Compliant	Compliant
R12	**Façade**		None	None	None	Compliant	Compliant	Compliant
R13	**Façade**		None	None	None	Compliant	Compliant	Compliant
R14	**Façade**		Type C	Type C	Type C	Compliant	Compliant	Compliant
R15	**Façade**		Type D	Type C	Type D	Non-Compliant	Compliant	Non-Compliant
R16	**Façade**		Type D	Type C	Type D	Non-Compliant	Compliant	Non-Compliant
R17	**Façade**		Type C	Type C	Type C	Compliant	Compliant	Compliant
			None	None	None	Compliant	Compliant	Compliant
			None	None	None	Compliant	Compliant	Compliant
			None	None	None	Compliant	Compliant	Compliant
			None	None	None	Compliant	Compliant	Compliant

Appendix C - Architectural Plan



CLIENT NAME:

THEBERGE HOMES

NOTES:

1) ALL WORK TO BE IN COMPLIANCE WITH LOCAL BUILDING CODES, REGULATIONS AND BY-LAWS.

2) ADDITIONAL DRAWINGS MAY BE ISSUED FOR CLARIFICATION TO ASSIST PROPER EXECUTION OF WORK. SUCH DRAWINGS WILL HAVE THE SAME MEANING AND INTENT AS IF THEY WERE INCLUDED WITH PLANS IN CONTRACT DOCUMENTS.

3) DO NOT SCALE DRAWINGS.

4) ALL SUB-CONTRACTORS TO TAKE THEIR OWN ON-SITE MEASUREMENTS AND BE RESPONSIBLE FOR THEIR ACCURACY

5) NOTIFY SHAWN J. LAWRENCE ARCHITECT FOR ANY ERRORS AND/OR OMISSIONS PRIOR TO START OF WORK.

UNIT COUNT

STACKED TOWNS: 100 UNITS

TOTAL UNIT COUNT: 100

TOTAL PARKING

PARKING SPACES REQUIRED: 1.2 PER UNIT
VISITOR SPACES REQUIRED: 0.2 PER UNIT
40% OF PARKING ALLOWED TO BE REDUCED SIZE (4.6mx2.4m)

TOTAL SPACES REQUIRED: 140 SPACES
(20 REQUIRED TO BE VISITOR PARKING)

SPACES PROVIDED: 140

-20 VISITOR
-4 ACCESSIBLE SPACES
-56 REDUCED SIZED SPACES

WASTE MANAGEMENT

GARBAGE 0.231 YARDS PER UNIT
RECYCLING (FIBRE) 0.062 YARDS PER UNIT
RECYCLING (GMP) 0.018 YARDS PER UNIT

GARBAGE: 24 YARDS REQUIRED
RECYCLING (FIBRE): 7 YARDS REQUIRED
RECYCLING (GMP): 2 YARDS REQUIRED

SEAL:

NORTH ARROW:

No.	DATE	REVISION
08	2023.03.20	RE-ISSUED FOR PRE-CONSULT
07	2023.03.14	ISSUED FOR REVIEW
06	2023.02.22	RE-ISSUED FOR PRE-CONSULT
05	2023.02.14	ISSUED FOR REVIEW
04	2023.01.19	ISSUED FOR REVIEW
03	2022.11.22	ISSUED FOR PRE-CONSULT
02	2022.11.18	ISSUED FOR REVIEW
01	2022.11.04	ISSUED FOR REVIEW

S.J.LAWRENCE ARCHITECT INCORPORATED
18 DEAKIN STREET
SUITE 209
OTTAWA, ONTARIO
K2E 8B7
T: (613) 734.7770
F: (613) 734.7103
sjles@sjlarchitect.com

LAWRENCE ARCHITECT INCORPORATED

PROJECT:
OLD SECOND LINE DEVELOPMENT
1150 OLD SECOND LINE ROAD, OTTAWA, ON

SHEET TITLE:
CONCEPT SITE PLAN OPTION 03 (100 UNITS)

DRAWN BY:	CHECKED BY:
D.T.	B.L. S.J.L.
PLOT DATE:	PROJECT DATE:
2023.03.20	DATE
JOB NUMBER:	SCALE:
SL-1086-22	1:200

SHEET NUMBER:

A1.2

PLAN #

APPLICATION #

NOTES:

1. DRAWING TO BE READ IN CONJUNCTION WITH STRUCTURAL DRAWING S100 BY OTHER CONSULTANT
2. REFER TO DWG. A100 & S100 FOR CONSTRUCTION NOTES
3. FRAMER TO VERIFY ALL BEAM LENGTHS ON-SITE AGAINST AS-BUILT CONDITIONS PRIOR TO FABRICATION
4. PROVIDE SOUND ATTENUATION BATT INSULATION IN STUD CAVITY FOR SOUNDPROOFING AROUND WALLS IN ALL MECHANICAL, UTILITY, BATHROOMS, AND SUMP ROOM
5. PROVIDE ACOUSTICAL SEALANT @ TOP & BOTTOM OF WOOD PLATES
6. FOR CONCRETE FOOTINGS SEE PLAN/SCHEDULE.
7. FOUNDATION WALLS TO BE MIN. 10" C/W 10M @ 16" VEF + DWLS. 10M @ 24" HEF + 1-10M HEF ADD'L AT TOP. HOOK HORIZONTAL AT CORNERS C/W 4-15M VERTS ADD'L. PROVIDE CLASS 'B' LAPS. F'C 25MPa CLASS F.2.- TYP.

LEGEND:

POINT LOAD (REFER TO ROOF TRUSS LAYOUT)

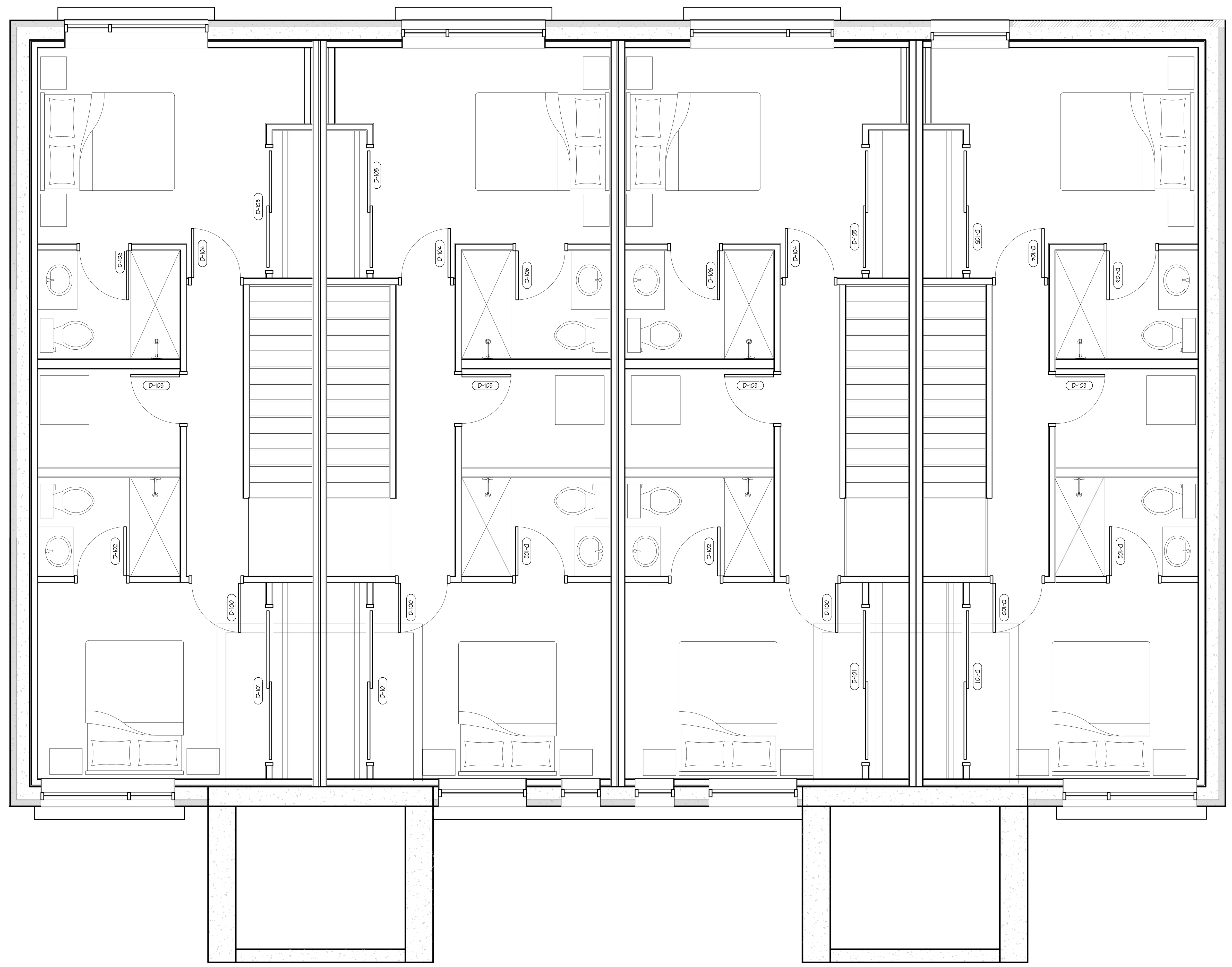
GIRDER TRUSS (REFER TO ROOF TRUSS LAYOUT)

** ALL GIRDERS TO HAVE P3 UNLESS NOTED OTHERWISE

CONCRETE WALL/PAD FOOTINGS
F1 PAD FOOTING. 4.5' x 4.5' x 12" C/W 5-15M BEW + HOOK TO TOP
F2 STRIP FOOTING. 3' WIDE x 12" deep C/W 3-15M BOT CONT
F3 STRIP FOOTING. 4' WIDE x 12" deep C/W 3-15M BOT CONT
F4 5'-5" X 1' RETAINING WALL FOOTING C/W 5-15M BOT CONT + 15M @ 8" T&B SHORT (HOOK TOP BARS TO BOT)

DESIGN BEARING CAPACITIES:
-75 kPa @ SLS
-100 kPa @ ULS

PROVIDE MIN SOIL COVER AT ALL FOUNDATIONS OR EQUIVALENT COVER FROM RIGID INSULATION



01 / A2.0 BASEMENT FLOOR PLAN
SCALE: 1/4" = 1'-0"

CLIENT NAME: THEBERGE HOMES

NOTES:

1) ALL WORK TO BE IN COMPLIANCE WITH LOCAL BUILDING CODES, REGULATIONS AND BY-LAWS.

2) ADDITIONAL DRAWINGS MAY BE ISSUED FOR CLARIFICATION TO ASSIST PROPER EXECUTION OF WORK. SUCH DRAWINGS WILL HAVE THE SAME MEANING AND INTENT AS IF THEY WERE INCLUDED WITH PLANS IN CONTRACT DOCUMENTS.

3) DO NOT SCALE DRAWINGS.

4) ALL SUB-CONTRACTORS TO TAKE THEIR OWN ON-SITE MEASUREMENTS AND BE RESPONSIBLE FOR THEIR ACCURACY

5) NOTIFY SHAWN J. LAWRENCE ARCHITECT FOR ANY ERRORS AND/OR OMISSIONS PRIOR TO START OF WORK.

SEAL:

NORTH ARROW: N

No.	DATE	REVISION
01	2023.05.30	ISSUED FOR REVIEW

S.J.LAWRENCE ARCHITECT INCORPORATED
18 DEAKIN STREET
SUITE 205
OTTAWA, ONTARIO
K2E 8B7
T: (613) 739.7770
F: (613) 739.7703
sjl@sjlarchitect.com

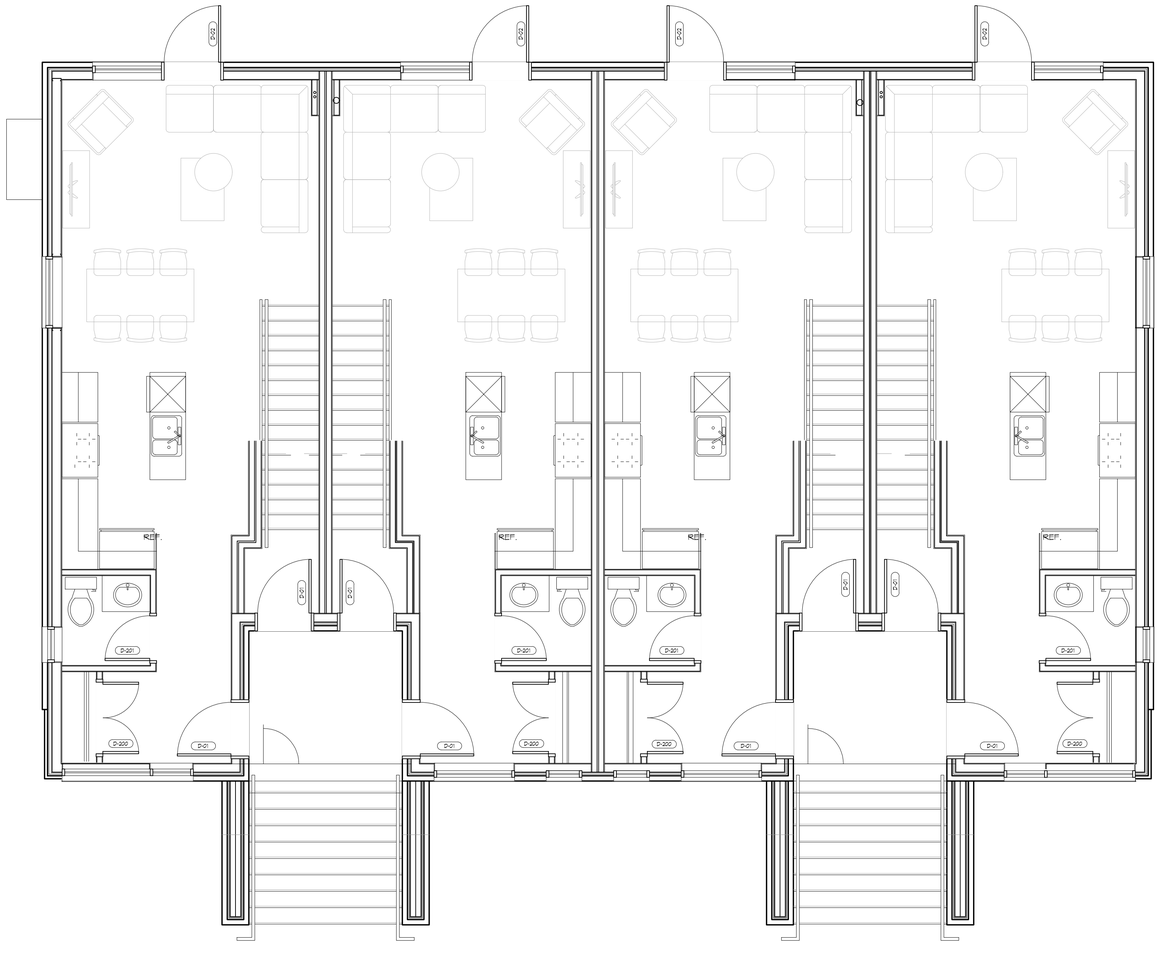
PROJECT:
OLD SECOND LINE DEVELOPMENT
1158 OLD SECOND LINE ROAD, OTTAWA, ON

SHEET TITLE:
BASEMENT FLOOR PLAN

DRAWN BY: B.L.
CHECKED BY: S.J.L.
PLOT DATE: 2023.05.30
PROJECT DATE: 2022.09.19
JOB NUMBER: SL-1086-22
SCALE: AS SHOWN
SHEET NUMBER: A2.0

PLAN #

APPLICATION #



01 A2.1 GROUND FLOOR PLAN

SCALE: 1/4" = 1'-0"

CLIENT NAME:

THEBERGE HOMES

NOTES:

1) ALL WORK TO BE IN COMPLIANCE WITH LOCAL BUILDING CODES, REGULATIONS AND BY-LAWS.

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5) NOTIFY SHAWN J. LAWRENCE ARCHITECT FOR ANY ERRORS AND/OR OMISSIONS PRIOR TO START OF WORK.

SEAL:

NORTH ARROW:

N

NO.	DATE	REVISION
01	2023.05.30	ISSUED FOR REVIEW

S.J.LAWRENCE ARCHITECT INCORPORATED

15 DEAKIN STREET
SUITE 209
OTTAWA, ONTARIO
K2E 8B7

T: (613) 734.7770
F: (613) 734.7720
sjles@jlarchitect.com

LAWRENCE ARCHITECT INCORPORATED

PROJECT:

OLD SECOND LINE DEVELOPMENT

1150 OLD SECOND LINE ROAD, OTTAWA, ON

SHEET TITLE:

GROUND FLOOR PLAN

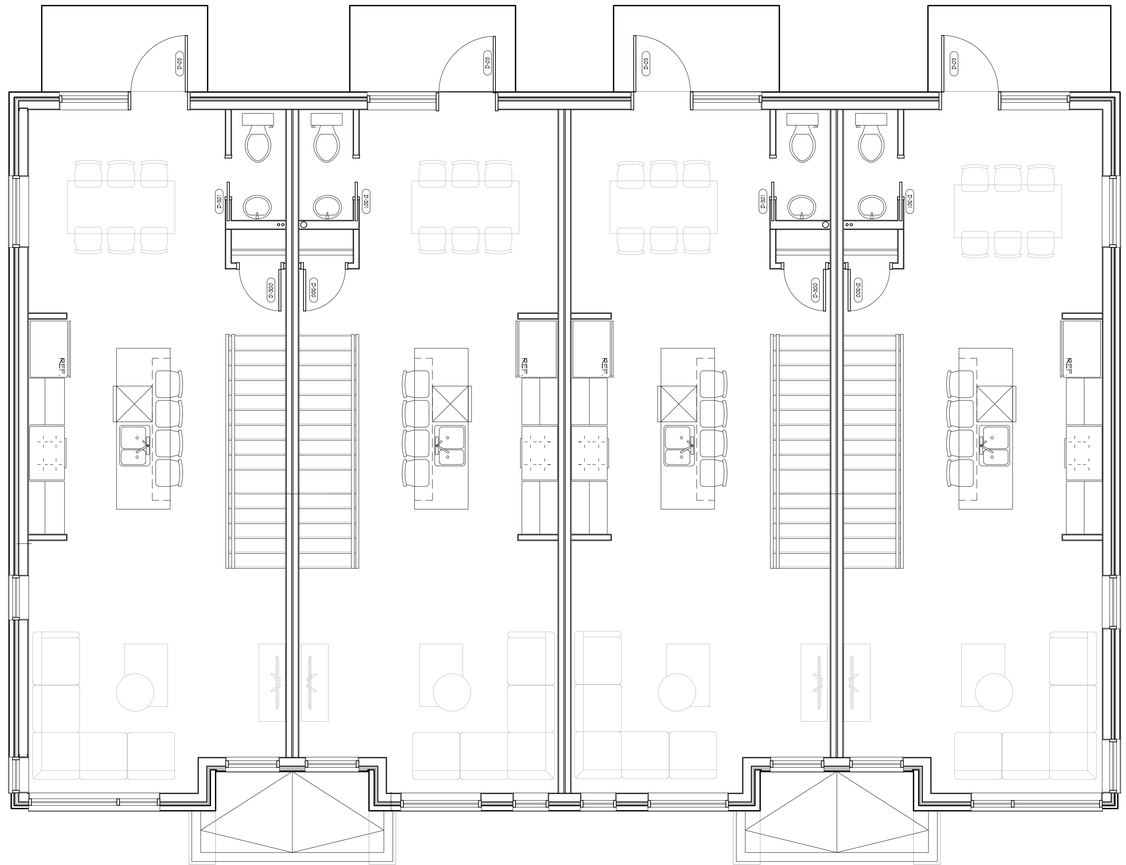
DRAWN BY: B.L.	CHECKED BY: S.J.L.
PLOT DATE: 2023.05.30	PROJECT DATE: 2022.09.19
JOB NUMBER: SL-1086-22	SCALE: AS SHOWN

SHEET NUMBER:

A2.1

PLAN #

APPLICATION #



01 SECOND FLOOR PLAN
A2.2 SCALE: 1/4" = 1'-0"

CLIENT NAME:
THEBERGE HOMES

NOTES:

1) ALL WORK TO BE IN COMPLIANCE WITH LOCAL BUILDING CODES, REGULATIONS AND BY-LAWS.

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3) DO NOT SCALE DRAWINGS.

4) ALL SUB-CONTRACTORS TO TAKE THEIR OWN ON-SITE MEASUREMENTS AND BE RESPONSIBLE FOR THEIR ACCURACY

5) NOTIFY SHAWN J. LAWRENCE ARCHITECT FOR ANY ERRORS AND/OR OMISSIONS PRIOR TO START OF WORK.

SEAL:

NORTH ARROW:

No.	DATE	REVISION
01	2023.05.30	ISSUED FOR REVIEW

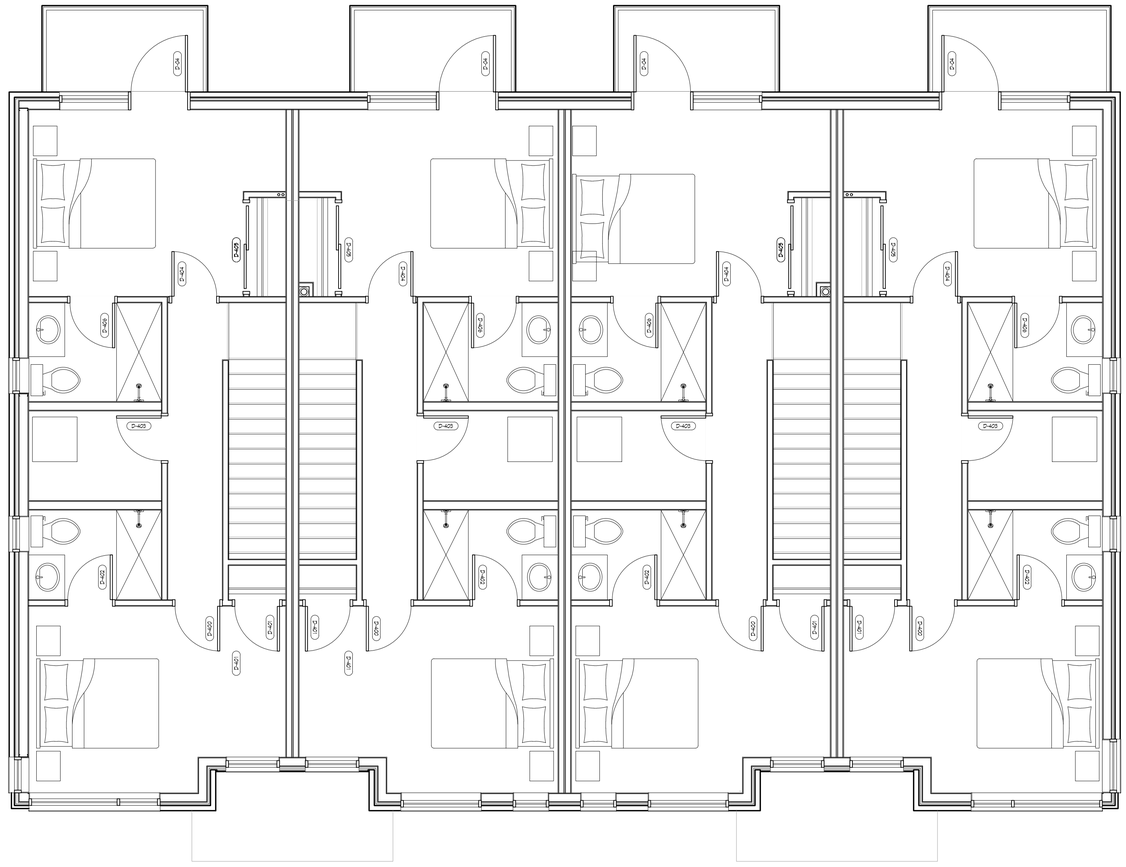
S.J.LAWRENCE ARCHITECT INCORPORATED
15 DEAKIN STREET
SUITE 205
OTTAWA, ONTARIO
K2E 0B7
T: (613) 734.7730
F: (613) 734.7303
sjles@architect.com

PROJECT:
OLD SECOND LINE DEVELOPMENT
1150 OLD SECOND LINE ROAD, OTTAWA, ON

SHEET TITLE:
SECOND FLOOR PLAN

DRAWN BY: B.L.
CHECKED BY: S.J.L.
PLOT DATE: 2023.05.30
PROJECT DATE: 2022.09.19
JOB NUMBER: SL-1086-22
SCALE: AS SHOWN
SHEET NUMBER: A2.2

PLAN #
APPLICATION #



01 A2.3 THIRD FLOOR PLAN

SCALE: 1/4" = 1'-0"

CLIENT NAME:

THEBERGE HOMES

NOTES:

1) ALL WORK TO BE IN COMPLIANCE WITH LOCAL BUILDING CODES, REGULATIONS AND BY-LAWS.

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3) DO NOT SCALE DRAWINGS.

4) ALL SUB-CONTRACTORS TO TAKE THEIR OWN ON-SITE MEASUREMENTS AND BE RESPONSIBLE FOR THEIR ACCURACY

5) NOTIFY SHAWN J. LAWRENCE ARCHITECT FOR ANY ERRORS AND/OR OMISSIONS PRIOR TO START OF WORK.

SEAL:

NORTH ARROW:

N

No.	DATE	REVISION
01	2023.05.30	ISSUED FOR REVIEW

S.J.LAWRENCE ARCHITECT INCORPORATED

10 DEAKIN STREET
SUITE 209
OTTAWA, ONTARIO
K2E 8B7

T: (613) 734.7770
F: (613) 734.7103
sjles@jlarchitect.com

SJL LAWRENCE ARCHITECT INCORPORATED

PROJECT:

OLD SECOND LINE DEVELOPMENT

1150 OLD SECOND LINE ROAD, OTTAWA, ON

SHEET TITLE:

THIRD FLOOR PLAN

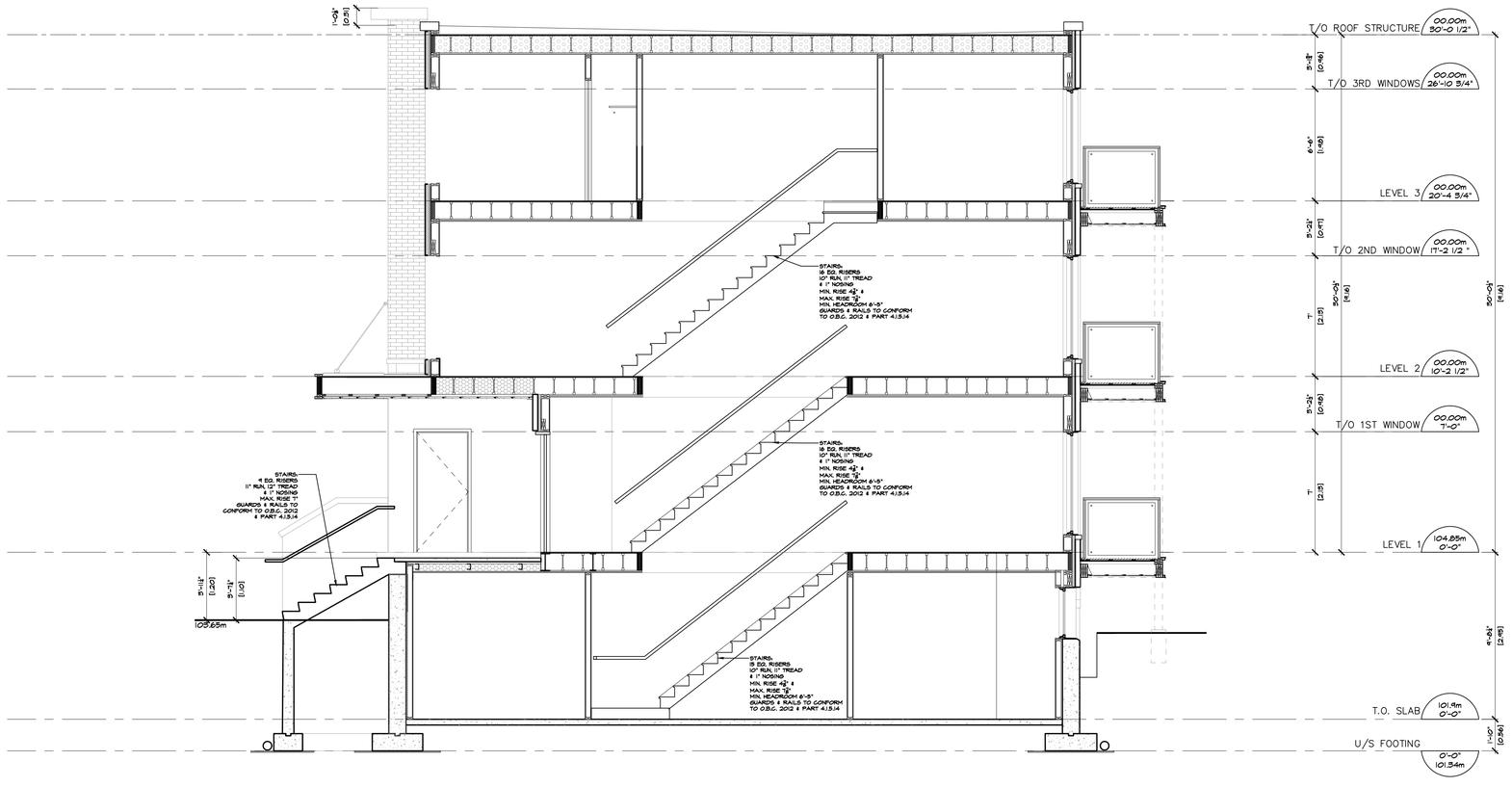
DRAWN BY:	CHECKED BY:
B.L.	S.J.L.
PLOT DATE:	PROJECT DATE:
2023.05.30	2022.09.19
JOB NUMBER:	SCALE:
SL-1086-22	AS SHOWN

SHEET NUMBER:

A2.3

PLAN #

APPLICATION #



01 BUILDING SECTION
A4.0 SCALE: 1/4" = 1'-0"

CLIENT NAME:
THEBERGE HOMES

NOTES:

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3) DO NOT SCALE DRAWINGS.

4) ALL SUB-CONTRACTORS TO TAKE THEIR OWN ON-SITE MEASUREMENTS AND BE RESPONSIBLE FOR THEIR ACCURACY

5) NOTIFY SHAWN J. LAWRENCE ARCHITECT FOR ANY ERRORS AND/OR OMISSIONS PRIOR TO START OF WORK.

SEAL:

NORTH ARROW:
N

NO.	DATE	REVISION
01	2023.05.30	ISSUED FOR REVIEW

S.J.LAWRENCE ARCHITECT INCORPORATED
15 DEAKIN STREET
SUITE 205
OTTAWA, ONTARIO
K2E 0B7
T: (613) 739.7770
F: (613) 739.7703
sj@sjlarchitect.com

PROJECT:
OLD SECOND LINE DEVELOPMENT
1158 OLD SECOND LINE ROAD, OTTAWA, ON

SHEET TITLE:
BUILDING SECTION

DRAWN BY: S.J.L.	CHECKED BY: S.J.L.
PLOT DATE: 2023.05.30	PROJECT DATE: 2022.09.19
JOB NUMBER: SL-1086-22	SCALE: AS SHOWN

SHEET NUMBER:
A4.0

PLAN #
APPLICATION #

Appendix D – STAMSON Output

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 13:08:04
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: R1_NW.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R1 - NOW WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -47.60 deg 51.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 20.40 / 20.40 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 63.83 + 0.00) = 63.83 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-48	51	0.66	69.03	0.00	-2.22	-2.99	0.00	0.00	0.00	63.83

Segment Leq : 63.83 dBA

Total Leq All Segments: 63.83 dBA

↟
Results segment # 1: Seg 1 (night)

Source height = 1.50 m

ROAD (0.00 + 56.39 + 0.00) = 56.39 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-48	51	0.57	61.43	0.00	-2.10	-2.94	0.00	0.00	0.00	56.39

Segment Leq : 56.39 dBA

Total Leq All Segments: 56.39 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 63.83
(NIGHT): 56.39
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 13:55:39
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r1_ww.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R1 - WITH WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -48.00 deg 51.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 20.40 / 20.40 m
Receiver height : 1.50 / 4.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : -48.00 deg Angle2 : 51.00 deg
Barrier height : 2.50 m
Elevation : 0.00 m
Barrier receiver distance : 4.08 / 4.08 m
Source elevation : 102.94 m
Receiver elevation : 102.78 m
Barrier elevation : 102.40 m
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        1.91 !       104.31

ROAD (0.00 + 57.06 + 0.00) = 57.06 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -48     51   0.51  69.03   0.00  -2.02  -2.89   0.00   0.00  -7.06  57.06
-------------------------------------------------------------------------------

Segment Leq : 57.06 dBA

Total Leq All Segments: 57.06 dBA

↟
Results segment # 1: Seg 1 (night)
----------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        4.50 !        4.31 !       106.71

ROAD (0.00 + 56.41 + 0.00) = 56.41 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -48     51   0.42  61.43   0.00  -1.90  -2.84   0.00   0.00   0.00  56.69*
   -48     51   0.57  61.43   0.00  -2.10  -2.92   0.00   0.00   0.00  56.41
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 56.41 dBA

Total Leq All Segments: 56.41 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 57.06
                          (NIGHT): 56.41
↟
↟
```

STAMSON 5.0 COMPREHENSIVE REPORT Date: 08-06-2023 14:05:29
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r2_Nw.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R2 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -12.00 deg 21.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 20.70 / 20.70 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 59.29 + 0.00) = 59.29 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-12	21	0.66	69.03	0.00	-2.32	-7.42	0.00	0.00	0.00	59.29

Segment Leq : 59.29 dBA

Total Leq All Segments: 59.29 dBA

↟
Segment # 1: Seg 1 (night)

Source height = 1.50 m

ROAD (0.00 + 51.82 + 0.00) = 51.82 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-12	21	0.57	61.43	0.00	-2.20	-7.41	0.00	0.00	0.00	51.82

Segment Leq : 51.82 dBA

Total Leq All Segments: 51.82 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 59.29
(NIGHT): 51.82

↟
↟

STAMSON 5.0 COMPREHENSIVE REPORT Date: 08-06-2023 14:02:41
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r2_ww.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R2 - WITH WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -12.00 deg 21.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 20.40 / 20.40 m
Receiver height : 1.50 / 4.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : -12.00 deg Angle2 : 21.00 deg
Barrier height : 2.50 m
Elevation : 0.00 m
Barrier receiver distance : 13.60 / 13.60 m
Source elevation : 102.94 m
Receiver elevation : 102.74 m
Barrier elevation : 102.40 m
Reference angle : 0.00

↑
Segment # 1: Seg 1 (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        1.97 !       104.37

ROAD (0.00 + 53.17 + 0.00) = 53.17 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -12     21   0.51  69.03   0.00  -2.02  -7.41   0.00   0.00  -6.43  53.17
-------------------------------------------------------------------------------

Segment Leq : 53.17 dBA

Total Leq All Segments: 53.17 dBA

↟
Segment # 1: Seg 1 (night)
--------------------------

Source height = 1.50 m

Barrier height for grazing incidence
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        4.50 !        2.97 !       105.37

ROAD (0.00 + 51.92 + 0.00) = 51.92 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -12     21   0.42  61.43   0.00  -1.90  -7.40   0.00   0.00  -3.62  48.52*
   -12     21   0.57  61.43   0.00  -2.10  -7.41   0.00   0.00   0.00  51.92
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 51.92 dBA

Total Leq All Segments: 51.92 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 53.17
                           (NIGHT): 51.92
↟
↟
```

STAMSON 5.0 COMPREHENSIVE REPORT Date: 08-06-2023 14:11:07
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r3_Nw.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R3 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -6.00 deg 21.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 39.20 / 39.20 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 53.81 + 0.00) = 53.81 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-6	21	0.66	69.03	0.00	-6.93	-8.29	0.00	0.00	0.00	53.81

Segment Leq : 53.81 dBA

Total Leq All Segments: 53.81 dBA

↟
Segment # 1: Seg 1 (night)

Source height = 1.50 m

ROAD (0.00 + 46.59 + 0.00) = 46.59 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-6	21	0.57	61.43	0.00	-6.55	-8.28	0.00	0.00	0.00	46.59

Segment Leq : 46.59 dBA

Total Leq All Segments: 46.59 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 53.81
(NIGHT): 46.59
↟
↟

STAMSON 5.0 COMPREHENSIVE REPORT Date: 08-06-2023 14:08:56
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r3_ww.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R3 - WITH WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -6.00 deg 21.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 39.20 / 39.20 m
Receiver height : 1.50 / 4.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : -6.00 deg Angle2 : 21.00 deg
Barrier height : 2.50 m
Elevation : 0.00 m
Barrier receiver distance : 22.90 / 22.90 m
Source elevation : 102.94 m
Receiver elevation : 102.70 m
Barrier elevation : 102.40 m
Reference angle : 0.00

↑
Segment # 1: Seg 1 (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        1.94 !       104.34

ROAD (0.00 + 48.64 + 0.00) = 48.64 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
    -6     21   0.51  69.03   0.00  -6.30  -8.28   0.00   0.00  -5.81  48.64
-------------------------------------------------------------------------

Segment Leq : 48.64 dBA

Total Leq All Segments: 48.64 dBA

↟
Segment # 1: Seg 1 (night)
--------------------------

Source height = 1.50 m

Barrier height for grazing incidence
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        4.50 !        3.18 !       105.58

ROAD (0.00 + 46.59 + 0.00) = 46.59 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
    -6     21   0.42  61.43   0.00  -5.92  -8.27   0.00   0.00  -3.58  43.66*
    -6     21   0.57  61.43   0.00  -6.55  -8.28   0.00   0.00   0.00  46.59
-------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 46.59 dBA

Total Leq All Segments: 46.59 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 48.64
                          (NIGHT): 46.59
↟
↟
```

STAMSON 5.0 COMPREHENSIVE REPORT Date: 08-06-2023 14:36:11
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r4_Nw.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R4 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -3.00 deg 10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 48.60 / 48.60 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 49.13 + 0.00) = 49.13 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-3	10	0.66	69.03	0.00	-8.48	-11.42	0.00	0.00	0.00	49.13

Segment Leq : 49.13 dBA

Total Leq All Segments: 49.13 dBA

↟
Segment # 1: Seg 1 (night)

Source height = 1.50 m

ROAD (0.00 + 41.99 + 0.00) = 41.99 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-3	10	0.57	61.43	0.00	-8.02	-11.42	0.00	0.00	0.00	41.99

Segment Leq : 41.99 dBA

Total Leq All Segments: 41.99 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 49.13
(NIGHT): 41.99
↟
↟

STAMSON 5.0 COMPREHENSIVE REPORT Date: 08-06-2023 14:34:26
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r4_ww.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R4 - WITH WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -3.00 deg 10.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 48.60 / 48.60 m
Receiver height : 1.50 / 4.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : -3.00 deg Angle2 : 10.00 deg
Barrier height : 2.50 m
Elevation : 0.00 m
Barrier receiver distance : 32.30 / 32.30 m
Source elevation : 102.94 m
Receiver elevation : 102.65 m
Barrier elevation : 102.40 m
Reference angle : 0.00

↑
Segment # 1: Seg 1 (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        1.94 !       104.34

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
-------------------------------------------------------------------------
    -3     10   0.51  69.03   0.00  -7.71 -11.42   0.00   0.00  -5.72  44.17
-------------------------------------------------------------------------

Segment Leq : 44.17 dBA

Total Leq All Segments: 44.17 dBA

↟
Segment # 1: Seg 1 (night)
--------------------------

Source height = 1.50 m

Barrier height for grazing incidence
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        4.50 !        2.95 !       105.35

ROAD (0.00 + 41.99 + 0.00) = 41.99 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
    -3     10   0.42  61.43   0.00  -7.25 -11.42   0.00   0.00  -4.50  38.26*
    -3     10   0.57  61.43   0.00  -8.02 -11.42   0.00   0.00   0.00  41.99
-------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 41.99 dBA

Total Leq All Segments: 41.99 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 44.17
                          (NIGHT): 41.99
↟
↟
```

STAMSON 5.0 COMPREHENSIVE REPORT Date: 08-06-2023 14:42:07
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r5_nw.te Time Period: Day/Night 16/8 hours
Description: RECIEVER R5 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 20.40 / 20.40 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 62.34 + 0.00) = 62.34 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.66	69.03	0.00	-2.22	-4.47	0.00	0.00	0.00	62.34

Segment Leq : 62.34 dBA

Total Leq All Segments: 62.34 dBA

↟
Segment # 1: Seg 1 (night)

Source height = 1.50 m

ROAD (0.00 + 55.02 + 0.00) = 55.02 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.57	61.43	0.00	-2.10	-4.31	0.00	0.00	0.00	55.02

Segment Leq : 55.02 dBA

Total Leq All Segments: 55.02 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 62.34
(NIGHT): 55.02
↟
↟

STAMSON 5.0 COMPREHENSIVE REPORT Date: 08-06-2023 14:46:36
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r5_ww.te Time Period: Day/Night 16/8 hours
Description: RECIEVER R5 - WITH WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 20.40 / 20.40 m
Receiver height : 1.50 / 4.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : 0.00 deg Angle2 : 90.00 deg
Barrier height : 2.50 m
Elevation : 0.00 m
Barrier receiver distance : 4.08 / 4.08 m
Source elevation : 102.99 m
Receiver elevation : 102.86 m
Barrier elevation : 102.40 m
Reference angle : 0.00

↑
Segment # 1: Seg 1 (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        1.99 !       104.39

ROAD (0.00 + 56.63 + 0.00) = 56.63 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
     0     90   0.51  69.03   0.00  -2.02  -4.20   0.00   0.00  -6.17  56.63
-------------------------------------------------------------------------

Segment Leq : 56.63 dBA

Total Leq All Segments: 56.63 dBA

↑
Segment # 1: Seg 1 (night)
--------------------------

Source height = 1.50 m

Barrier height for grazing incidence
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        4.50 !        4.39 !       106.79

ROAD (0.00 + 55.02 + 0.00) = 55.02 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
     0     90   0.42  61.43   0.00  -1.90  -4.03   0.00   0.00  -0.17  55.33*
     0     90   0.57  61.43   0.00  -2.10  -4.31   0.00   0.00   0.00  55.02
-------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 55.02 dBA

Total Leq All Segments: 55.02 dBA

↑



TOTAL Leq FROM ALL SOURCES (DAY): 56.63
                          (NIGHT): 55.02
↑
↑
```

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 15:22:26
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r6_Nw.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R6 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : 0.00 deg 63.20 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 29.80 / 29.80 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 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
0	63	0.66	69.03	0.00	-4.95	-5.17	0.00	0.00	0.00	58.90

Segment Leq : 58.90 dBA

Total Leq All Segments: 58.90 dBA

↟
Results segment # 1: Seg 1 (night)

Source height = 1.50 m

ROAD (0.00 + 51.65 + 0.00) = 51.65 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	63	0.57	61.43	0.00	-4.68	-5.09	0.00	0.00	0.00	51.65

Segment Leq : 51.65 dBA

Total Leq All Segments: 51.65 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 58.90
(NIGHT): 51.65
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 15:06:43
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r6_ww.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R6 - WITH WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : 0.00 deg 63.20 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 29.80 / 29.80 m
Receiver height : 1.50 / 4.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : 0.00 deg Angle2 : 63.00 deg
Barrier height : 2.50 m
Elevation : 0.00 m
Barrier receiver distance : 13.60 / 13.60 m
Source elevation : 102.99 m
Receiver elevation : 102.86 m
Barrier elevation : 102.40 m
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
-------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        2.02 !       104.42

ROAD (0.00 + 53.84 + 32.26) = 53.87 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     63   0.51  69.03   0.00  -4.50  -5.05   0.00   0.00  -5.64  53.84
-------------------------------------------------------------------------------
    63     63   0.66  69.03   0.00  -4.95 -31.82   0.00   0.00   0.00  32.26
-------------------------------------------------------------------------------

Segment Leq : 53.87 dBA

Total Leq All Segments: 53.87 dBA

↑
Results segment # 1: Seg 1 (night)
-----------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
-------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        4.50 !        3.65 !       106.05

ROAD (0.00 + 51.64 + 25.24) = 51.65 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     63   0.42  61.43   0.00  -4.23  -4.97   0.00   0.00  -0.37  51.86*
     0     63   0.57  61.43   0.00  -4.68  -5.10   0.00   0.00   0.00  51.64
-------------------------------------------------------------------------------
    63     63   0.57  61.43   0.00  -4.68 -31.51   0.00   0.00   0.00  25.24
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 51.65 dBA

Total Leq All Segments: 51.65 dBA

↑
```

TOTAL Leq FROM ALL SOURCES (DAY): 53.87
(NIGHT): 51.65

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 15:37:31
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r7_Nw.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R7 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : 0.00 deg 46.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 39.10 / 39.10 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 55.88 + 0.00) = 55.88 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	46	0.66	69.03	0.00	-6.91	-6.25	0.00	0.00	0.00	55.88

Segment Leq : 55.88 dBA

Total Leq All Segments: 55.88 dBA

↟
Results segment # 1: Seg 1 (night)

Source height = 1.50 m

ROAD (0.00 + 48.69 + 0.00) = 48.69 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	46	0.57	61.43	0.00	-6.53	-6.20	0.00	0.00	0.00	48.69

Segment Leq : 48.69 dBA

Total Leq All Segments: 48.69 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 55.88
(NIGHT): 48.69
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 15:41:04
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r7_ww.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R7 - WITH WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : 0.00 deg 46.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 39.10 / 39.10 m
Receiver height : 1.50 / 4.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : 0.00 deg Angle2 : 46.00 deg
Barrier height : 2.50 m
Elevation : 0.00 m
Barrier receiver distance : 22.90 / 22.90 m
Source elevation : 102.99 m
Receiver elevation : 102.82 m
Barrier elevation : 102.40 m
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        2.02 !       104.42

ROAD (0.00 + 51.01 + 0.00) = 51.01 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     46   0.51  69.03   0.00  -6.28  -6.17   0.00   0.00  -5.56  51.01
-------------------------------------------------------------------------------

Segment Leq : 51.01 dBA

Total Leq All Segments: 51.01 dBA

↟
Results segment # 1: Seg 1 (night)
-----------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        4.50 !        3.26 !       105.66

ROAD (0.00 + 48.69 + 0.00) = 48.69 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     46   0.42  61.43   0.00  -5.91  -6.13   0.00   0.00  -3.37  46.02*
     0     46   0.57  61.43   0.00  -6.53  -6.20   0.00   0.00   0.00  48.69
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 48.69 dBA

Total Leq All Segments: 48.69 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 51.01
                           (NIGHT): 48.69
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 15:59:39
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r8_Nw.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R8 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : 0.00 deg 36.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 48.60 / 48.60 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 53.37 + 0.00) = 53.37 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	36	0.66	69.03	0.00	-8.48	-7.18	0.00	0.00	0.00	53.37

Segment Leq : 53.37 dBA

Total Leq All Segments: 53.37 dBA

↟
Results segment # 1: Seg 1 (night)

Source height = 1.50 m

ROAD (0.00 + 46.25 + 0.00) = 46.25 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	36	0.57	61.43	0.00	-8.02	-7.16	0.00	0.00	0.00	46.25

Segment Leq : 46.25 dBA

Total Leq All Segments: 46.25 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 53.37
(NIGHT): 46.25
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 15:47:06
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r8_ww.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R8 - WITH WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : 0.00 deg 36.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 48.60 / 48.60 m
Receiver height : 1.50 / 4.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : 0.00 deg Angle2 : 36.00 deg
Barrier height : 2.50 m
Elevation : 0.00 m
Barrier receiver distance : 32.30 / 32.30 m
Source elevation : 102.99 m
Receiver elevation : 102.77 m
Barrier elevation : 102.40 m
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        2.01 !       104.41

ROAD (0.00 + 48.66 + 0.00) = 48.66 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
     0     36   0.51  69.03   0.00  -7.71  -7.14   0.00   0.00  -5.52  48.66
-------------------------------------------------------------------------

Segment Leq : 48.66 dBA

Total Leq All Segments: 48.66 dBA

↟
Results segment # 1: Seg 1 (night)
----------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        4.50 !        3.02 !       105.42

ROAD (0.00 + 46.25 + 0.00) = 46.25 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
     0     36   0.42  61.43   0.00  -7.25  -7.11   0.00   0.00  -4.35  42.71*
     0     36   0.57  61.43   0.00  -8.02  -7.16   0.00   0.00   0.00  46.25
-------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 46.25 dBA

Total Leq All Segments: 46.25 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 48.66
                           (NIGHT): 46.25
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 16:04:12
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r9_nw.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R9 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 17.90 / 20.40 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 66.30 + 0.00) = 66.30 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	69.03	0.00	-1.27	-1.46	0.00	0.00	0.00	66.30

Segment Leq : 66.30 dBA

Total Leq All Segments: 66.30 dBA

↟
Results segment # 1: Seg 1 (night)

Source height = 1.50 m

ROAD (0.00 + 58.03 + 0.00) = 58.03 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.57	61.43	0.00	-2.10	-1.30	0.00	0.00	0.00	58.03

Segment Leq : 58.03 dBA

Total Leq All Segments: 58.03 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 66.30
(NIGHT): 58.03
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 16:13:07
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r10_nw.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R10 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -71.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 22.70 / 22.70 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 61.19 + 0.00) = 61.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-71	0	0.66	69.03	0.00	-2.99	-4.85	0.00	0.00	0.00	61.19

Segment Leq : 61.19 dBA

Total Leq All Segments: 61.19 dBA

↟
Results segment # 1: Seg 1 (night)

Source height = 1.50 m

ROAD (0.00 + 53.85 + 0.00) = 53.85 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-71	0	0.57	61.43	0.00	-2.83	-4.75	0.00	0.00	0.00	53.85

Segment Leq : 53.85 dBA

Total Leq All Segments: 53.85 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 61.19
(NIGHT): 53.85
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 16:15:07
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r11_nw.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R11 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -50.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 32.10 / 32.10 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 57.60 + 0.00) = 57.60 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-50	0	0.66	69.03	0.00	-5.48	-5.94	0.00	0.00	0.00	57.60

Segment Leq : 57.60 dBA

Total Leq All Segments: 57.60 dBA

↟
Results segment # 1: Seg 1 (night)

Source height = 1.50 m

ROAD (0.00 + 50.35 + 0.00) = 50.35 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-50	0	0.57	61.43	0.00	-5.19	-5.89	0.00	0.00	0.00	50.35

Segment Leq : 50.35 dBA

Total Leq All Segments: 50.35 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 57.60
(NIGHT): 50.35
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 16:17:12
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r12_nw.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R12 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -36.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 41.40 / 41.40 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 54.53 + 0.00) = 54.53 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-36	0	0.66	69.03	0.00	-7.32	-7.18	0.00	0.00	0.00	54.53

Segment Leq : 54.53 dBA

Total Leq All Segments: 54.53 dBA

↟
Results segment # 1: Seg 1 (night)

Source height = 1.50 m

ROAD (0.00 + 47.35 + 0.00) = 47.35 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-36	0	0.57	61.43	0.00	-6.92	-7.16	0.00	0.00	0.00	47.35

Segment Leq : 47.35 dBA

Total Leq All Segments: 47.35 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 54.53
(NIGHT): 47.35
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 16:19:10
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r13_nw.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R13 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -29.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 49.20 / 49.20 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 52.41 + 0.00) = 52.41 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-29	0	0.66	69.03	0.00	-8.56	-8.05	0.00	0.00	0.00	52.41

Segment Leq : 52.41 dBA

Total Leq All Segments: 52.41 dBA

↟
Results segment # 1: Seg 1 (night)

Source height = 1.50 m

ROAD (0.00 + 45.29 + 0.00) = 45.29 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-29	0	0.57	61.43	0.00	-8.10	-8.04	0.00	0.00	0.00	45.29

Segment Leq : 45.29 dBA

Total Leq All Segments: 45.29 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 52.41
(NIGHT): 45.29
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 16:22:04
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r14_nw.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R14 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : 0.00 deg 81.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 21.30 / 21.30 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 61.92 + 0.00) = 61.92 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	81	0.66	69.03	0.00	-2.53	-4.58	0.00	0.00	0.00	61.92

Segment Leq : 61.92 dBA

Total Leq All Segments: 61.92 dBA

↟
Results segment # 1: Seg 1 (night)

Source height = 1.50 m

ROAD (0.00 + 54.59 + 0.00) = 54.59 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	81	0.57	61.43	0.00	-2.39	-4.45	0.00	0.00	0.00	54.59

Segment Leq : 54.59 dBA

Total Leq All Segments: 54.59 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 61.92
(NIGHT): 54.59
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 16:25:17
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r15_nw.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R15 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 16.40 / 21.30 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 66.93 + 0.00) = 66.93 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	69.03	0.00	-0.64	-1.46	0.00	0.00	0.00	66.93

Segment Leq : 66.93 dBA

Total Leq All Segments: 66.93 dBA

↟
Results segment # 1: Seg 1 (night)

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	0.57	61.43	0.00	-2.39	-1.30	0.00	0.00	0.00	57.73

Segment Leq : 57.73 dBA

Total Leq All Segments: 57.73 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 66.93
(NIGHT): 57.73
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 16:26:25
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r16_nw.te Time Period: Day/Night 16/8 hours
Description: RECEIVER R16 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 16.40 / 21.30 m
Receiver height : 1.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: Seg 1 (day)

Source height = 1.50 m

ROAD (0.00 + 66.93 + 0.00) = 66.93 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	69.03	0.00	-0.64	-1.46	0.00	0.00	0.00	66.93

Segment Leq : 66.93 dBA

Total Leq All Segments: 66.93 dBA

↟
Results segment # 1: Seg 1 (night)

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	0.57	61.43	0.00	-2.39	-1.30	0.00	0.00	0.00	57.73

Segment Leq : 57.73 dBA

Total Leq All Segments: 57.73 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 66.93
(NIGHT): 57.73
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 16:56:42
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r17_nw.te Time Period: Day/Night 16/8 hours
Description: RECIEVER R17 - NO WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -90.00 deg -21.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 22.50 / 22.50 m
Receiver height : 1.50 / 4.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -21.00 deg
Barrier height : 2.50 m
Elevation : 0.00 m
Barrier receiver distance : 9.30 / 9.30 m
Source elevation : 104.33 m
Receiver elevation : 104.50 m
Barrier elevation : 104.50 m
Reference angle : 0.00

↑
Road data, segment # 2: (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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):  12000
    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:  (day/night)
---------------------------------
Angle1   Angle2           : -21.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  22.50 / 22.50  m
Receiver height           :   1.50 / 4.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

↟
Results segment # 1: Seg 1 (day)
--------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        1.43 !       105.93

ROAD (0.00 + 53.41 + 0.00) = 53.41 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -21   0.51  69.03   0.00  -2.66  -5.78   0.00   0.00  -7.18  53.41
-------------------------------------------------------------------------------

Segment Leq : 53.41 dBA

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

Source height = 1.50 m
```

ROAD (0.00 + 56.71 + 0.00) = 56.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-21	0	0.66	69.03	0.00	-2.92	-9.40	0.00	0.00	0.00	56.71

Segment Leq : 56.71 dBA

Total Leq All Segments: 58.38 dBA

Results segment # 1: Seg 1 (night)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	4.50	3.19	107.69

ROAD (0.00 + 52.73 + 0.00) = 52.73 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-21	0.42	61.43	0.00	-2.50	-5.53	0.00	0.00	-3.58	49.81*
-90	-21	0.57	61.43	0.00	-2.76	-5.93	0.00	0.00	0.00	52.73

* Bright Zone !

Segment Leq : 52.73 dBA

Results segment # 2: (night)

Source height = 1.50 m

ROAD (0.00 + 49.28 + 0.00) = 49.28 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-21	0	0.57	61.43	0.00	-2.76	-9.39	0.00	0.00	0.00	49.28

Segment Leq : 49.28 dBA

Total Leq All Segments: 54.35 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 58.38
(NIGHT): 54.35

↑
↑

STAMSON 5.0 NORMAL REPORT Date: 08-06-2023 16:55:09
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r17_ww.te Time Period: Day/Night 16/8 hours
Description: RECIEVER R17 - WITH WALL

Road data, segment # 1: Seg 1 (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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): 12000
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: Seg 1 (day/night)

Angle1 Angle2 : -90.00 deg -21.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 22.50 / 22.50 m
Receiver height : 1.50 / 4.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -21.00 deg
Barrier height : 2.50 m
Elevation : 0.00 m
Barrier receiver distance : 9.30 / 9.30 m
Source elevation : 104.33 m
Receiver elevation : 104.50 m
Barrier elevation : 104.50 m
Reference angle : 0.00

↑
Road data, segment # 2: (day/night)

Car traffic volume : 9715/845 veh/TimePeriod *
Medium truck volume : 773/67 veh/TimePeriod *
Heavy truck volume : 552/48 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):  12000
    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:  (day/night)
---------------------------------
Angle1   Angle2           : -21.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  22.50 / 22.50  m
Receiver height           :   1.50 / 4.50   m
Topography                :      4       (Elevated; with barrier)
Barrier angle1            : -21.00 deg   Angle2 : 0.00 deg
Barrier height            :   2.50 m
Elevation                 :   0.00 m
Barrier receiver distance :   9.30 / 9.30   m
Source elevation          : 104.33 m
Receiver elevation        : 104.50 m
Barrier elevation         : 104.50 m
Reference angle           :   0.00

🠝
Results segment # 1: Seg 1 (day)
---------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        1.43 !       105.93

ROAD (0.00 + 53.41 + 0.00) = 53.41 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -21   0.51  69.03   0.00  -2.66  -5.78   0.00   0.00  -7.18  53.41
-------------------------------------------------------------------------------

Segment Leq : 53.41 dBA
```

↟
Results segment # 2: (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	1.50	1.43	105.93

ROAD (0.00 + 48.12 + 0.00) = 48.12 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-21	0	0.51	69.03	0.00	-2.66	-9.38	0.00	0.00	-8.86	48.12

Segment Leq : 48.12 dBA

Total Leq All Segments: 54.54 dBA

↟
Results segment # 1: Seg 1 (night)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	4.50	3.19	107.69

ROAD (0.00 + 52.73 + 0.00) = 52.73 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-21	0.42	61.43	0.00	-2.50	-5.53	0.00	0.00	-3.58	49.81*
-90	-21	0.57	61.43	0.00	-2.76	-5.93	0.00	0.00	0.00	52.73

 * Bright Zone !

Segment Leq : 52.73 dBA

↟
Results segment # 2: (night)

```
-----------------------------

Source height = 1.50 m

Barrier height for grazing incidence
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        4.50 !        3.19 !       107.69

ROAD (0.00 + 49.28 + 0.00) = 49.28 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -21      0   0.42  61.43   0.00  -2.50  -9.37   0.00   0.00  -2.34  47.22*
   -21      0   0.57  61.43   0.00  -2.76  -9.39   0.00   0.00   0.00  49.28
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 49.28 dBA

Total Leq All Segments: 54.35 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 54.54
                           (NIGHT): 54.35
↟
↟
```