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Noise Feasibility Study
Proposed Residential Development
5034, 5054, & 5080 Ninth Line
Mississauga, Ontario

Prepared for:

Your Home Developments (Mississauga) Inc.
4965 Steeles Avenue West
Toronto, ON
M9L 1R4

Prepared by:

Andrew Rogers, BASc

Reviewed by:

LICENSED PROFESSIONAL ENGINEER
Sept. 17/21
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MC
PROVINCE OF ONTARIO

Mandy Chan, BASc, PEng

HGC Project No.: 02100439

September 17, 2021

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VERSION CONTROL

Noise Feasibility Study,

5034. 5054, & 5080 Ninth Line,

Mississauga, Ontario.

Ver.	Date	Version Description / Changelog	Prepared By
0	September 17, 2021	Noise Feasibility Study in support of rezoning and official plan applications	A. Rogers/ M. Chan

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1 Introduction and Summary

HGC Engineering was retained by Your Home Developments (Mississauga) Inc. to conduct a noise feasibility study for a proposed residential development in Mississauga, Ontario. The location of the proposed development site is at 5034, 5054, & 5080 Ninth Line. The purpose of this study is to determine the impact of environmental noise from the surrounding area in accordance with the Ministry of Environment, Conservation, and Parks (MECP) guidelines. This study has been prepared as part of the approval process by the municipality.

The primary noise sources at the proposed development site were determined to the road traffic on Highway 407, Ninth Line and Eglinton Avenue West. The road traffic data used for this study was obtained from the City of Mississauga. The predicted sound levels were evaluated with respect to the guidelines of the Ministry of the Environment, Conservation and Parks (MECP) and the city.

The results of the study indicate that with suitable noise control measures integrated into the design of the buildings, it is feasible to achieve MECP guideline sound levels. Central air conditioning systems and upgrade glazing constructions will be required for the buildings. Associated acoustical requirements are specified in this report. Noise warning clauses are also required to inform future occupants of the traffic noise impacts.

2 Site Description and Noise Sources

The key plan for the development is attached as Figure 1. The site is located on the western corner of Eglinton Avenue West and Ninth Line in Mississauga. A site plan prepared by Kirkor Architects and Planners dated July 7, 2021 is provided as Figure 2. Sound level predictions are also shown on Figure 2. The proposed development includes six multi-storey residential buildings with some retail and two blocks of back-to-back 3-storey townhouses along with underground parking.

HGC Engineering personnel visited the site during the month of July 2021 to observe the acoustical environment and note the significant noise sources. The acoustical environment surrounding the site is urban in nature. Highway 407, Ninth Line, and Eglinton Avenue West are the dominant sources of traffic noise. Highway 407 is a 6-lane highway (three lanes in each direction), Ninth Line is a 2-lane highway (one lane in each direction) and is proposed to be widened to four lanes, and Eglinton Avenue West is a 4-lane road (two lanes in each direction). There are existing residences north and east of the site. There are no significant stationary sources of noise observed within 500 m of this site.

3 Sound Level Criteria

Guidelines for acceptable levels of road traffic noise impacting residential developments are given in the MECP NPC-300, “Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning”, release date October 21, 2013 and are listed in Table I below. The values in Table I are energy equivalent (average) sound levels [L_{EQ}] in units of A-weighted decibels [dBA].

Table I: MECP Road Traffic Noise Criteria (dBA)

Space	Daytime $L_{EQ\ (16\ hour)}$	Nighttime $L_{EQ\ (8\ hour)}$
Outdoor Living Areas	55 dBA	--
Inside Living/Dining Rooms	45 dBA	45 dBA
Inside Bedrooms	45 dBA	40 dBA

Daytime refers to the period between 07:00 and 23:00, while nighttime refers to the period between 23:00 and 07:00. The term "Outdoor Living Area" (OLA) is used in reference to an outdoor patio, a backyard, a terrace or other area where passive recreation is expected to occur. Balconies and terraces that are less than 4 m in depth are not considered to be outdoor living areas under MECP

guidelines.

The guidelines in the MECP publication allow the daytime sound levels in an Outdoor Living Area to be exceeded by up to 5 dBA, without mitigation, if warning clauses are placed in the purchase and rental agreements to the property. Where OLA sound levels exceed 60 dBA, physical mitigation is required to reduce the OLA sound level to below 60 dBA and as close to 55 dBA as technically, economically, and administratively practical.

A central air conditioning system as an alternative means of ventilation to open windows is required for dwellings where nighttime sound levels outside bedroom or living/dining room windows exceed 60 dBA (59 dBA in the Region of Peel) or daytime sound levels outside bedroom or living/dining room windows exceed 65 dBA. Forced air ventilation with ducts sized to accommodate the future installation of air conditioning is required when nighttime sound levels at bedroom or living/dining room windows are in the range of 51 to 60 dBA or when daytime sound levels at bedroom or living/dining room windows are in the range of 56 to 65 dBA.

Building components such as walls, windows and doors must be designed to achieve indoor sound level criteria when the plane of window nighttime sound level is greater than 60 dBA or the daytime sound level is greater than 65 dBA due to road traffic noise.

Warning clauses are required to notify future residents of possible excesses when nighttime sound levels exceed 50 dBA at the plane of the bedroom/living/dining room window and daytime sound levels exceed 55 dBA in the outdoor living area and at the plane of the bedroom/living/dining room window due to road traffic.

4 Traffic Noise Assessment

4.1 Road Traffic Data

Traffic data for Ninth Line and Eglinton Avenue West were obtained from the City of Mississauga, in the form of ultimate traffic volumes, provided in Appendix A. An ultimate volume of 26 500 vehicles per day at a posted speed limit of 60 km/h was applied for the analysis for Ninth Line. An ultimate volume of 17 000 vehicles per day at a posted speed limit of 60 km/h was applied for the analysis for Eglinton Avenue West. A commercial vehicle percentage of 4% split into 2.2% medium trucks and 1.8% heavy trucks was applied for Ninth Line. A commercial vehicle percentage of 3%

split into 1.65% medium trucks and 1.35% heavy trucks was applied for Eglinton Avenue West. A day/night split of 90% / 10 % was used for both roadways.

Traffic data for Highway 407 was not available; hence ultimate traffic volumes for a 6-lane highway were used, which was previously estimated by Region of York personnel. An ultimate volume of 130 000 vehicles per day at a posted speed limit of 100 km/h was applied for the analysis. A commercial vehicle percentage of 13% split into 5% medium trucks and 8% heavy trucks was applied, although this estimate is likely conservative given the nature of this toll highway. A day/night split of 85% and 15% was used, as this is representative of the typical usage of Highway 407 based on sound measurements conducted by HGC Engineering for past projects near Highway 407. As these volumes are representative of ultimate traffic data, they were not projected into the future. Table II summarizes the traffic volume data used in this study.

Table II: Ultimate Road Traffic Data

Street	Time	Cars	Medium Trucks	Heavy Trucks	Total
Ninth Line	Daytime	22 896	525	429	**23 850**
	Nighttime	2 544	58	48	**2 650**
	Total	**25 440**	**583**	**477**	**26 500**
Eglinton Avenue West	Daytime	14 841	252	207	**15 300**
	Nighttime	1 649	28	23	**1 700**
	Total	**16 490**	**280**	**230**	**17 000**
Highway 407	Daytime	96 135	5 525	8 840	**110 500**
	Nighttime	16 965	975	1 560	**19 500**
	Total	**113 100**	**6 500**	**10 400**	**130 000**

4.2 Road Traffic Prediction

To assess the levels of road traffic noise which will impact the study area in the future, sound level predictions were made using STAMSON version 5.04, a computer algorithm developed by the MECP. Sample STAMSON output is included in Appendix B.

Predictions of the traffic sound levels were chosen around the proposed residential buildings to obtain an appropriate representation of future sound levels at various façades. Sound levels were predicted at the plane of the top storey bedroom and/or living/dining room windows during daytime

and nighttime hours to investigate ventilation and façade construction requirements. Sound levels were also predicted in possible OLA's to investigate the need for noise barriers. Figure 2 shows the site plan with prediction locations. The results of these predictions are summarized in Table III. The direction used in the Tables is based on project north shown on Figure 2.

Future traffic sound levels were predicted using STAMSON version 5.04, a computer algorithm developed by the MECP. Sample STAMSON output is included in Appendix B.

Table III: Predicted Tower Road Traffic Sound Levels [dBA], Without Mitigation

Prediction Location	Building	Description	Daytime – $L_{EQ\text{-}16\ hr}$	Nighttime – $L_{EQ\text{-}8\ hr}$
[A]	A	Façade Facing Ninth Line	62	55
[B]	A	Façade Facing Eglinton Ave.	74	69
[C]	B	Façade Facing Eglinton Ave.	72	67
[D]	C	Façade facing Hwy 407	76	72
[E]	D	Façade facing west	73	68
[F]	E	Façade facing west	67	62
[G]	F	Façade Facing Ninth Line	68	62
[H]	F	Façade facing Hwy 407	71	66
[I]	F	Façade facing west	66	61
[J]	E	OLA on 2nd floor +	65	NA

Note: + with a minimum 1.07 m high solid parapet wall

Sound levels were also predicted for the upper storey windows of the townhomes during the daytime and during nighttime hours to investigate ventilation requirements. The results of these predictions for the townhomes, without mitigation, are summarized in Table IV.

Table IV: Predicted Townhome Road Traffic Sound Levels [dBA], Without Mitigation

Prediction Location	Building	Description	Daytime – at the Façade $L_{EQ-16\ hr}$	Nighttime – at the Facade $L_{EQ-8\ hr}$
[K]	North TH	Façade Facing Ninth Line	60	53
[L]	North TH	Façade Facing Eglinton Ave.	65	61
[M]	North TH	Façade facing Hwy 407	71	66
[N]	North TH	Façade facing west	72	67
[O]	South TH	Façade Facing Ninth Line	<55	<50
[P]	South TH	Façade Facing Eglinton Ave.	74	69
[Q]	South TH	Façade facing Hwy 407	78	73
[R]	South TH	Façade facing west	74	69

5 Discussion and Recommendations

The sound level predictions indicate that the future traffic sound levels will exceed MECP guidelines at most of the building façades of the proposed development. The following discussion outlines the recommendations for acoustic barrier requirements, ventilation requirements, upgraded building façade construction, and warning clauses to achieve the noise criteria stated in Table I.

5.1 Outdoor Living Areas

The dwelling units in the proposed development may have balconies that are less than 4 m in depth. These areas are not considered to be outdoor amenity areas under MECP guidelines, and therefore are exempt from traffic noise assessment.

There is an outdoor amenity terrace on the 2nd floor of Building E shown on the site plan. The predicted sound level in this area is 65 dBA with a minimum 1.07 m high solid parapet around the perimeter of the area, 10 dBA in excess of the MECP limit of 55 dBA. Physical mitigation in the form of an acoustic barrier is required for this area. A tall acoustic barrier 4.1 m in height will be required around the terrace, to reduce traffic noise to levels acceptable to the MECP, which is likely not feasible. It is recommended that this area be reduced in size or relocated to another area. Consideration should also be given in detail design to integrate smaller structures or landscaping features to create quieter pockets or zones to reduce the required height of the acoustic barrier.

When grading information is available, the acoustic barrier heights and suitable locations should be refined. An acoustic barrier may be a combination of an acoustic wall and an earth berm. The wall component of the barrier should be of a solid construction with a surface density of no less than 20 kg/m^2. The walls may be constructed from a variety of materials such as glass, wood, brick, pre-cast concrete or other concrete/wood composite systems provided that it is free of gaps or cracks. The heights and extents of the barriers should be chosen to reduce the sound levels in the OLA's to below 60 dBA and as close to 55 dBA as is technically, administratively and economically feasible, subject to the approval of the municipality respecting any applicable fence height by-laws.

There are no other outdoor living area shown on the current drawing set. If other OLAs are added, they should be designed so they are well shielded from Highway 407; further noise mitigation may be required. The public park is not directly associated with the buildings in the development and as such, assessment in the park is not required per MECP guidelines.

5.2 Indoor Living Areas and Ventilation Requirements

Central Air Conditioning

As per the results summarized in Tables III and IV, the predicted future sound level at most of the building façades will be greater than 65 dBA during the daytime hours, and/or 60 dBA during the nighttime hours. To address these excesses, the MECP guidelines recommend that all the buildings be equipped with central air conditioning systems, so that the windows can be closed.

5.3 Building Façade Constructions

Predicted sound levels at the building facades were used to determine sound insulation requirements of the building envelope. The required acoustic insulation of the wall and window components was determined using methods developed by the National Research Council (NRC).

Detailed glazing requirements for different facades and spaces could be considered in value engineering, if required, when detailed floor plans and building elevations are available.

Exterior Wall Constructions

The exterior walls of the proposed buildings may include precast/masonry panel portions, as well as spandrel glass panels within an aluminum window system. In this analysis, it has been assumed that sound transmitted through elements other than the glazing elements is negligible in comparison. For

this assumption to be true, spandrel or metal panel sections must have an insulated drywall partition on separate framing behind.

Exterior Doors

There may be swing doors and some glazed sliding patio doors for entry onto the balconies from living/dining/bedrooms. The glazing areas on the doors are to be counted as part of the total window glazing area. If exterior swing doors are to be used, they shall be insulated metal doors equipped with head, jamb and threshold weather seals.

Acoustical Requirements for Glazing

At the time of this report, detailed floor plans and elevations are under development. Assuming a typical window to floor area of 50% (30% fixed and 20% operable) for the living/dining rooms and 40% (30% fixed and 10% operable) for the bedrooms in the towers, the minimum acoustical requirement for the basic window glazing, including glass in fixed sections, swing or sliding doors, and operable windows, is provided in Table V and shown on Figure 3.

Table V: Required Minimum Glazing STC for Specific Building Façades

Building	Façade	Space	Glazing STC[1, 2]
A	Façade Facing Ninth Line [A]	Living/Dining	OBC
		Bedroom	OBC
A	Façade Facing Eglinton Ave. [B]	Living/Dining	STC-36
		Bedroom	STC-34
B	Façade Facing Eglinton Ave. [C]	Living/Dining	STC-34
		Bedroom	STC-32
C	Façade facing Hwy. 407 [D]	Living/Dining	STC-38
		Bedroom	STC-37
D	Façade facing west [E]	Living/Dining	STC-35
		Bedroom	STC-33
E	Façade facing west [F]	Living/Dining	STC-29
		Bedroom	OBC
F	Façade Facing Ninth Line [G]	Living/Dining	STC-30
		Bedroom	OBC
F	Façade facing Hwy. 407 [H]	Living/Dining	STC-33
		Bedroom	STC-31
F	Façade facing west [I]	Living/Dining	STC-28
		Bedroom	OBC

Note: [X] Prediction location

[1] Based on 50% window to floor area ratio for living/dining rooms and 40% for the bedrooms.
[2] STC requirement refers to fixed glazing. Small leaks through operable doors and windows are assumed, however, tight weather seals should be provided to reduce such leakage to the extent feasible.
OBC – Ontario Building Code

For the townhomes, a window to floor area of 30% (20% fixed and 10% operable) for the living/dining rooms and 25% (20% fixed and 5% operable) for the bedrooms. The minimum acoustical requirement for the basic window glazing, including glass in fixed sections, swing or sliding doors, and operable windows, is provided in Table VI.

Table VI: Required Minimum Glazing STC for Specific Façades of Townhomes

Building	Façade	Space	Glazing STC[1, 2]
North TH	Façade Facing Ninth Line [K]	Living/Dining	OBC
		Bedroom	OBC
North TH	Façade Facing Eglinton Ave. [L]	Living/Dining	OBC
		Bedroom	OBC
North TH	Façade facing Hwy. 407 [M]	Living/Dining	STC-30
		Bedroom	STC-29
North TH	Façade facing west [N]	Living/Dining	STC-31
		Bedroom	STC-30
South TH	Façade Facing Ninth Line [O]	Living/Dining	OBC
		Bedroom	OBC
South TH	Façade Facing Eglinton Ave. [P]	Living/Dining	STC-33
		Bedroom	STC-32
South TH	Façade facing Hwy. 407 [Q]	Living/Dining	STC-37
		Bedroom	STC-36
South TH	Façade facing west [R]	Living/Dining	STC-33
		Bedroom	STC-32

Note that acoustic performance varies with manufacturer's construction details, and these are only guidelines to provide some indication of the type of glazing likely to be required. Acoustical test data for the selected assemblies should be requested from the suppliers, to ensure that the stated acoustic performance levels will be achieved by their assemblies.

Many of the façades of the buildings in the development require high STC ratings. To reduce the STC ratings for the glazing, consideration should be given to the following during the design of the

suites: minimize the window to floor area ratios and consideration of no sliding patio doors in bedrooms.

Further Work

When detailed floor plans and building elevations are available for the suites, the glazing requirements should be refined based on actual window to floor area ratios.

5.4 Warning Clauses

The MECP guidelines recommend that warning clauses be included in the property and tenancy agreements for all units with anticipated road traffic sound level. Examples are provided below.

Suggested wording for future dwellings with sound level excesses.

Type A:

> Purchasers/tenants are advised that sound levels due to increasing road traffic may occasionally interfere with some activities of the dwelling unit occupants as the sound levels exceed the Municipality's and the Ministry of the Environment, Conservation and Parks' noise criteria.

Suitable wording for future dwellings requiring central air conditioning systems is given below.

Type B:

> This dwelling unit has been supplied with a central air conditioning system which allows windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the noise criteria of the Municipality and the Ministry of the Environment, Conservation and Parks.

These sample clauses are provided by the MECP as examples and can be modified by the Municipality as required.

6 Impact of the Development on Itself

Section 5.8.1.1 of the Ontario Building Code (OBC), released on January 1, 2020, specifies the minimum required sound insulation characteristics for demising partitions, in terms of Sound Transmission Class (STC) or Apparent Sound Transmission Class (ASTC) values. In order to maintain adequate acoustical privacy between separate suites in a multi-tenant building, inter-suite walls must meet or exceed STC-50 or ASTC-47. Suite separation from a refuse chute or elevator shaft must meet or exceed STC-55. In addition, it is recommended that the floor/ceiling constructions

separating suites from any amenity or commercial spaces also meet or exceed STC-55. Tables 1 and 2 in Section SB-3 of the Supplementary Guideline to the OBC provide a comprehensive list of constructions that will meet the above requirements.

Tarion's Builder Bulletin B19R requires the internal design of condominium projects to integrate suitable acoustic features to insulate the suites from noise from each other and amenities in accordance with the OBC, and limit the potential intrusions of mechanical and electrical services of the buildings on its residents. If B19R certification is needed, an acoustical consultant is required to review the mechanical and electrical drawings and details of demising construction and mechanical/electrical equipment, when available, to help ensure that the noise impact of the redevelopment on itself is maintained within acceptable levels.

7 Impact of the Development on the Environment

Sound levels from noise sources such as rooftop air-conditioners, cooling towers, exhaust fans, etc. should not exceed the minimum one-hour L_{EQ} ambient (background) sound level from road traffic, at any potentially impacted residential point of reception. Based on the levels observed during our site visit, the typical minimum ambient sound levels in the area are expected to be in the range of 50 dBA or more during the day and 45 dBA or more at night. Thus, any electro-mechanical equipment associated with this development (e.g., emergency generator testing, fresh-air handling equipment, etc.) should be designed such that they do not result in noise impact beyond these ranges.

8 Summary of Recommendations

The following list and Table VII summarize the recommendations made in this report.

1. Central air conditioning is required for all buildings in the development.

2. Upgraded exterior building façade and glazing constructions are required for most façades in the development as shown on Figure 3. When detailed floor plans and building elevations are available, the glazing requirements should be refined based on window to floor area ratios.

3. Tall acoustic barriers are required in the outdoor amenity area on the 2nd floor of Building E. Consideration should be given in detail design to integrate smaller structures or landscaping

features to create quieter pockets or zones to reduce the required height of the acoustic barrier at the outdoor amenity area.

4. The use of warning clauses in the property and tenancy agreements is recommended to inform future residents of traffic noise issues.

5. A detailed noise study should be performed when detailed floor plans and building elevations are available to refine glazing requirements based on actual window to floor area ratios.

6. Tarion Builders Bulletin B19R requires that the internal design of condominium projects integrates suitable acoustic features to insulate the suites from noise from each other and amenities in accordance with the OBC, and limit the potential intrusions of mechanical and electrical services of the buildings on its residents. If B19R certification is to be sought, an acoustical consultant is required to review the mechanical and electrical drawings and details of demising constructions and mechanical/electrical equipment, when available, to help ensure that the noise impact of the development on itself are maintained within acceptable levels.

The following table summarizes the noise control recommendations and noise warning clauses for the dwellings in the proposed development.

Table VII: Summary of Noise Control Requirements and Noise Warning Clauses

Prediction Locations	Building	Acoustic Barrier	Ventilation Requirements*	Type of Warning Clause	Required STC+
[A]	A	--	Central A/C	A, C	OBC
[B]		--			LRDR: STC-36 BR: STC-34
[C]	B	--	Central A/C	A, C	LRDR: STC-34 BR: STC-32
[D]	C	--	Central A/C	A, C	LRDR: STC-38 BR: STC-37
[E]	D	--	Central A/C	A, C	LRDR: STC-35 BR: STC-33

Prediction Locations	Building	Acoustic Barrier	Ventilation Requirements*	Type of Warning Clause	Required STC+
[F]	E	--	Central A/C	A, C	LRDR: STC-29 BR: OBC
[G]	F	--	Central A/C	A, C	LRDR: STC-30 BR: OBC
[H]		--			LRDR: STC-33 BR: STC-31
[I]		--			LRDR: STC-28 BR: OBC
[K]	North Townhomes	--	Central A/C	A, C	OBC
[L]		--			OBC
[M]		--			LRDR: STC-31 BR: STC-29
[N]		--			LRDR: STC-32 BR: STC-30
[O]	South Townhomes	--	Central A/C	A, C	OBC
[P]		--			LRDR: STC-33 BR: STC-32
[Q]		--			LRDR: STC-38 BR: STC-36
[R]		--			LRDR: STC-33 BR: STC-32
[J]	OLA on 2nd floor (Bld. E)	✓	--	--	--

Notes:
-- no specific requirement
✓ Noise barrier greater than 4 m would be required to meet MECP guidelines in the outdoor amenity space
OBC – meeting the minimum requirements of the Ontario Building Code
LRDR – Living Room/Dining Room
BR – Bedroom
* The location, installation and sound rating of the air conditioning condensers must be compliant with MECP Guideline NPC-300, as applicable.
+ With assumed window to floor area ratios of 50% for LRDR and 40% for bedrooms. Refer to Figure 3 for STC requirements for all building facades. When detailed floor plans and building elevations are available, an acoustical consultant should review the drawings to refine the window glazing constructions based on actual window to floor area ratios, and to verify exterior wall construction.

8.1 Implementation

To ensure that the noise recommendations outlined above are fully implemented, it is recommended that:

1. When architectural plans are available for all buildings in the development, an acoustical consultant should review the window and room floor areas to refine glazing constructions and confirm any noise barrier requirements for the outdoor living areas.

2. Prior to the issuance of building permits for this development, a Professional Engineer qualified to perform acoustical engineer services in the Province of Ontario should review the exterior wall constructions, architectural plans and building elevations to ensure the building façade and glazing constructions will provide sufficient sound insulation for the indoor spaces and provide additional recommendations, as required.

3. Prior to the issuance of occupancy permits for this development, the City's building inspector or a Professional Engineer qualified to perform acoustical engineer services in the province of Ontario should certify that the noise control measures have been properly incorporated, installed, and constructed.

Figure 1 – Key Plan

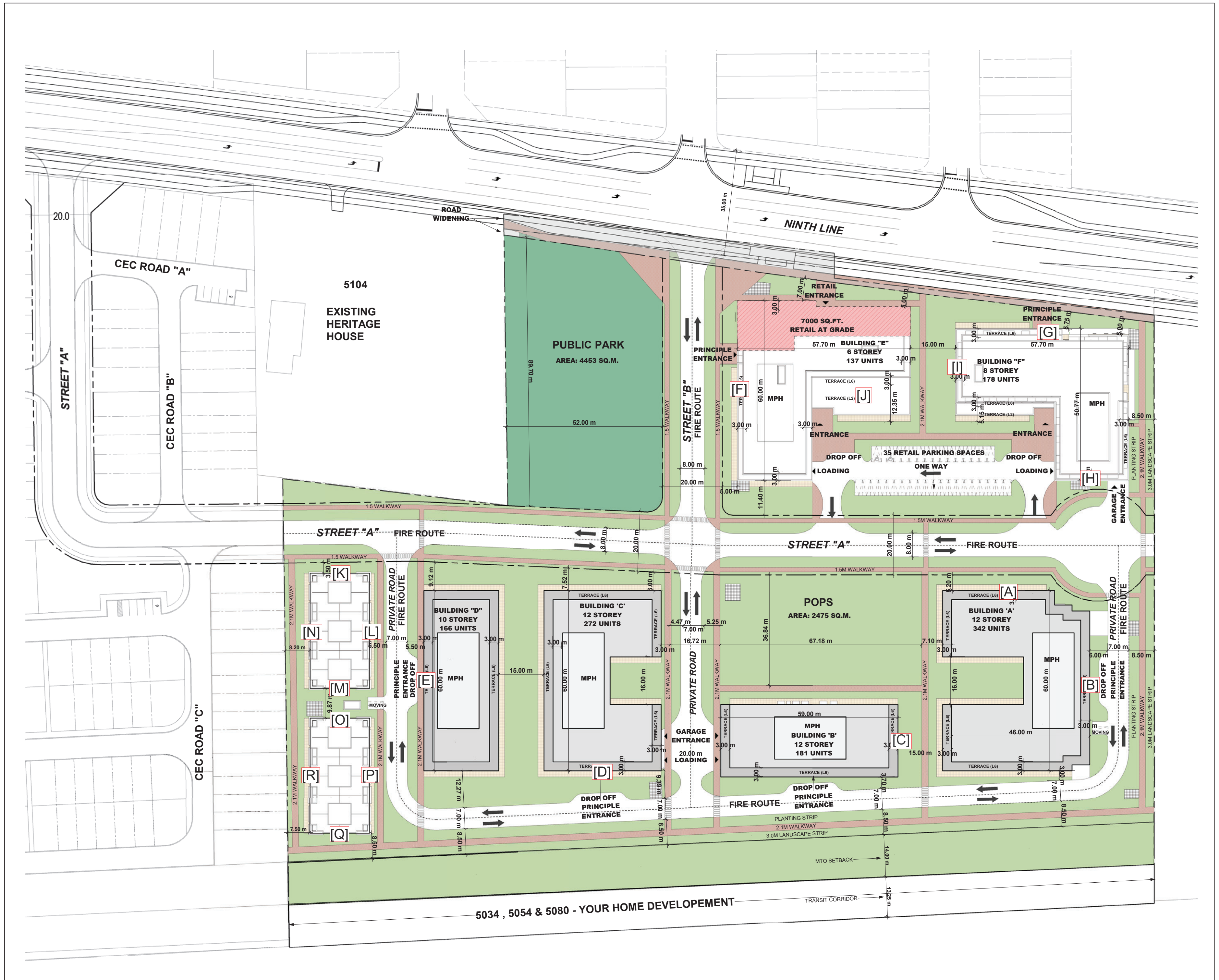

Figure 2 - Proposed Site Plan Showing Prediction Locations

Site Plan 1 A2-01

Key Map 2 A2-01

Project Statistics 3 A2-01

Legal Description 4 A2-01

KIRKOR ARCHITECTS + PLANNERS

20 De Boers Dr. # 400 Toronto ON M3J 0H1
TEL 416 665 6060 kirkorarchitects.com

No.: Revision: Date:

Drawing Title: Site Plan

Project: 5080 NINTH LINE
RESIDENTIAL DEVELOPMENT

Scale: 1 : 500
Drawn by: Author
Checked by: Checker
Project No.: 17-179
Date: 06/01/21
Drawing No.: A2-01

KIRKOR ARCHITECTS + PLANNERS

20 De Boers Dr. # 400 Toronto ON M3J 0H1
TEL 416 665 6060 kirkorarchitects.com

No.: | Revision: | Date:

Key Map 2 / A2-01

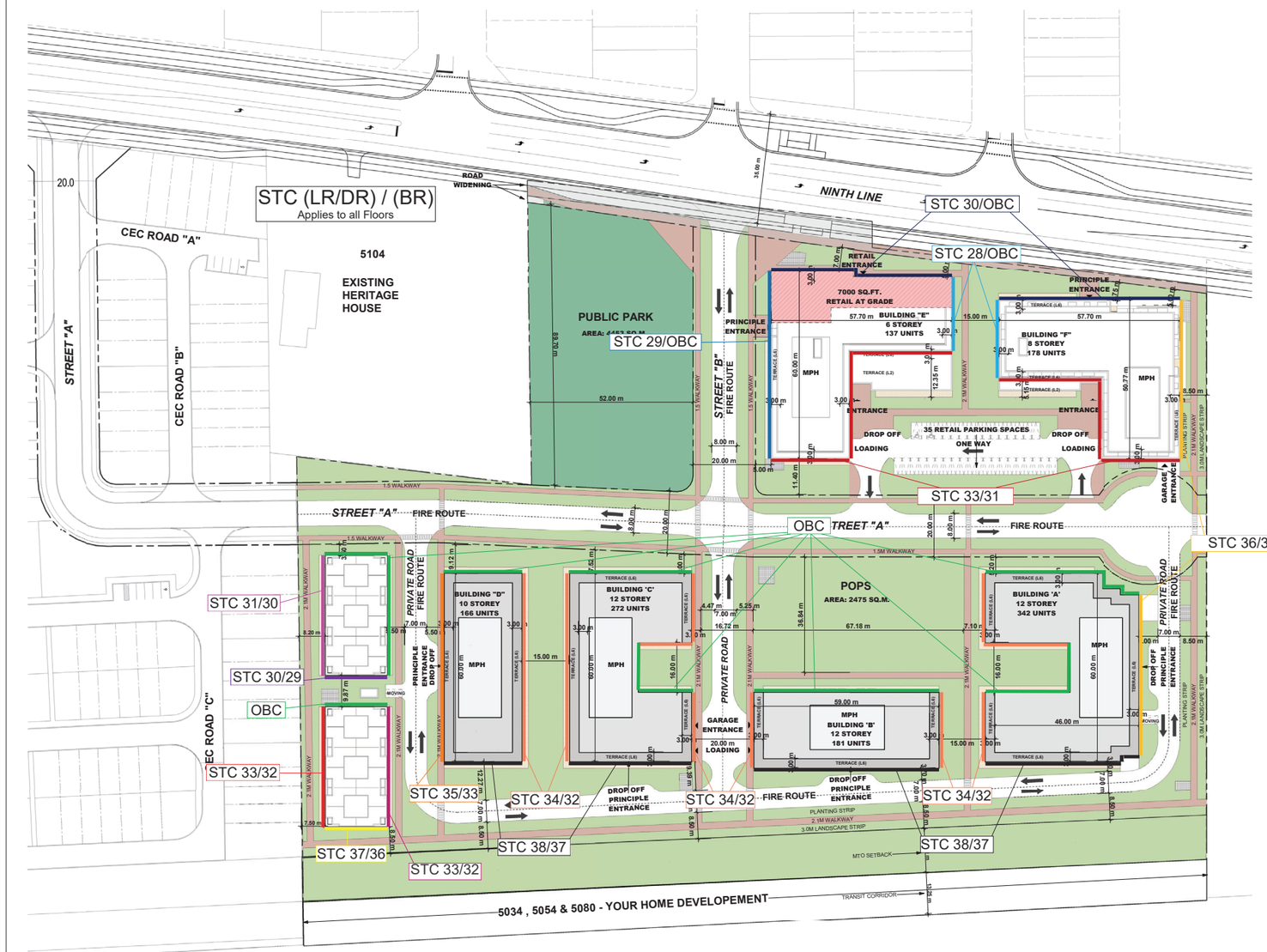

Figure 3 - Plan Showing Preliminary Glazing STC Requirements

Site Plan 1 / A2-01

Project Statistics 3 / A2-01

Legal Description 4 / A2-01

No. | Issued For: | Date:

Drawing Title:
Site Plan

Project:
5080 NINTH LINE
RESIDENTIAL DEVELOPMENT

Scale: 1 : 500
Drawn by: Author
Checked by: Checker
Project No.: 17-179
Date: 06/01/21
Drawing No.: A2-01

Plot Date: 2021-06-18 3:04:27 PM File Path: C:\Revit\2019\17179P1-Model-5080 Ninth Line Mississauga_Master Model_myojohnVCVC6.rvt

Appendix A

Road Traffic Data

NOISE REPORT FOR PROPOSED DEVELOPMENT

Date:	30-Jun-21

REQUESTED BY:

Name:	Andrew Rogers
Company:	HGC Engineering

PREPARED BY:

Nam	Steven Guan
Tel#:	905-615-3200 ext. 5933

MISSISSAUGA

Location: Ninth Line - Eglinton Avenue West to Erin Centre Boulevard
Eglinton Avenue West - Ninth Line to City West Limits

ID 514

ON SITE TRAFFIC DATA

Specific	*Street Names*				
[redacted]	Ninth Line	Eglinton Ave W			
AADT:	26,500	17,000			
# of Lanes:	4 Lanes*	2 Lanes			
% Trucks:	4%	3%			
Medium/Heavy Trucks Ratio:	55/45	55/45			
Day/Night Split:	90/10	90/10			
Posted Speed Limit:	60 km/h**	60 km/h			
Gradient Of Road:	<2%	<2%			
Ultimate R.O.W:	35 m	30 m			

Comments:

Ultimate traffic data only (2041).

*Note: Ninth Line is proposed to be widened (between Derry Road West to Eglinton Avenue West) from two lanes to four lanes (tentatively scheduled to begin 2023).

**Note: As part of the Ninth Line road widening project, the speed limit is proposed to be reduced from 70 km/h to 60 km/h.

Appendix B

Sample Stamson Output

STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:25:45
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: a_n.te Time Period: Day/Night 16/8 hours
Description: Building A north facade.

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

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Ninth (day/night)

Angle1 Angle2 : -83.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 110.00 / 110.00 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Eglington (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Eglington (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 148.00 / 148.00 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Ninth (day)

Source height = 1.16 m

ROAD (0.00 + 60.96 + 0.00) = 60.96 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-83	90	0.00	69.79	0.00	-8.65	-0.17	0.00	0.00	0.00	60.96

Segment Leq : 60.96 dBA

Results segment # 2: Eglington (day)

Source height = 1.08 m

ROAD (0.00 + 54.24 + 0.00) = 54.24 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	67.19	0.00	-9.94	-3.01	0.00	0.00	0.00	54.24

Segment Leq : 54.24 dBA

Total Leq All Segments: 61.80 dBA

Results segment # 1: Ninth (night)

Source height = 1.16 m

ROAD (0.00 + 54.44 + 0.00) = 54.44 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-83	90	0.00	63.27	0.00	-8.65	-0.17	0.00	0.00	0.00	54.44

Segment Leq : 54.44 dBA

Results segment # 2: Eglington (night)

A

Source height = 1.08 m

ROAD (0.00 + 47.70 + 0.00) = 47.70 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	60.66	0.00	-9.94	-3.01	0.00	0.00	0.00	47.70

Segment Leq : 47.70 dBA

Total Leq All Segments: 55.27 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 61.80
(NIGHT): 55.27

STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:28:23
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: a_e_2.te Time Period: Day/Night 16/8 hours
Description: Building A east facade.

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

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Ninth (day/night)

Angle1 Angle2 : -83.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 115.00 / 115.00 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Eglington (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Eglington (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 136.50 / 136.50 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Road data, segment # 3: 407.N (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: 407.N (day/night)

Angle1 Angle2 : -3.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 80.00 / 80.00 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Road data, segment # 4: 407.S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 4: 407.S (day/night)

Angle1 Angle2 : -3.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 107.00 / 107.00 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Results segment # 1: Ninth (day)

Source height = 1.16 m

ROAD (0.00 + 57.58 + 0.00) = 57.58 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-83	0	0.00	69.79	0.00	-8.85	-3.36	0.00	0.00	0.00	57.58

Segment Leq : 57.58 dBA

↟

Results segment # 2: Eglington (day)

Source height = 1.08 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
-90	90	0.00	67.19	0.00	-9.59	0.00	0.00	0.00	0.00	57.60

Segment Leq : 57.60 dBA

↟

Results segment # 3: 407.N (day)

Source height = 1.68 m

ROAD (0.00 + 71.10 + 0.00) = 71.10 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-3	90	0.00	81.23	0.00	-7.27	-2.87	0.00	0.00	0.00	71.10

Segment Leq : 71.10 dBA

↟

Results segment # 4: 407.S (day)

Source height = 1.68 m

ROAD (0.00 + 69.83 + 0.00) = 69.83 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-3	90	0.00	81.23	0.00	-8.53	-2.87	0.00	0.00	0.00	69.83

Segment Leq : 69.83 dBA

Total Leq All Segments: 73.74 dBA

↟
Results segment # 1: Ninth (night)

Source height = 1.16 m

ROAD (0.00 + 51.06 + 0.00) = 51.06 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-83	0	0.00	63.27	0.00	-8.85	-3.36	0.00	0.00	0.00	51.06

Segment Leq : 51.06 dBA

↟
Results segment # 2: Eglington (night)

Source height = 1.08 m

ROAD (0.00 + 51.07 + 0.00) = 51.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	60.66	0.00	-9.59	0.00	0.00	0.00	0.00	51.07

Segment Leq : 51.07 dBA

↟
Results segment # 3: 407.N (night)

Source height = 1.68 m

ROAD (0.00 + 66.57 + 0.00) = 66.57 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-3	90	0.00	76.71	0.00	-7.27	-2.87	0.00	0.00	0.00	66.57

Segment Leq : 66.57 dBA

↟
Results segment # 4: 407.S (night)

B

Source height = 1.68 m

ROAD (0.00 + 65.31 + 0.00) = 65.31 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-3	90	0.00	76.71	0.00	-8.53	-2.87	0.00	0.00	0.00	65.31

Segment Leq : 65.31 dBA

Total Leq All Segments: 69.13 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 73.74
(NIGHT): 69.13

C
STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 15:12:23
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b_e_2.te Time Period: Day/Night 16/8 hours
Description: Building B east facade.

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

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Ninth (day/night)

Angle1 Angle2 : -90.00 deg -65.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 164.00 / 164.00 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Ninth.Bar (day/night)

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Ninth.Bar (day/night)

Angle1 Angle2 : -65.00 deg 7.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 164.00 / 164.00 m
Receiver height : 36.00 / 36.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -65.00 deg Angle2 : 7.00 deg
Barrier height : 36.00 m

C
Barrier receiver distance : 21.00 / 21.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Road data, segment # 3: Eglington.N (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: Eglington.N (day/night)

Angle1 Angle2 : -90.00 deg -65.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 200.50 / 200.50 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 4: Eglington.S (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 4: Eglington.S (day/night)

Angle1 Angle2 : 23.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 200.50 / 200.50 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Road data, segment # 5: Egli.Bar (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 5: Egli.Bar (day/night)

Angle1 Angle2 : -65.00 deg 23.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 200.50 / 200.50 m
Receiver height : 36.00 / 36.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -65.00 deg Angle2 : 23.00 deg
Barrier height : 36.00 m
Barrier receiver distance : 21.00 / 21.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↟
Road data, segment # 6: 407N (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 6: 407N (day/night)

Angle1 Angle2 : 23.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 93.00 / 93.00 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Road data, segment # 7: 407S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 7: 407S (day/night)

Angle1 Angle2 : 23.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 120.00 / 120.00 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Road data, segment # 8: 407N.Bar (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 8: 407N.Bar (day/night)

Angle1 Angle2 : -3.00 deg 23.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 93.00 / 93.00 m
Receiver height : 36.00 / 36.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -3.00 deg Angle2 : 23.00 deg
Barrier height : 36.00 m
Barrier receiver distance : 21.00 / 21.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Road data, segment # 9: 407S.Bar (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 9: 407S.Bar (day/night)

Angle1 Angle2 : -3.00 deg 23.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 120.00 / 120.00 m
Receiver height : 36.00 / 36.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -3.00 deg Angle2 : 23.00 deg
Barrier height : 36.00 m
Barrier receiver distance : 21.00 / 21.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Results segment # 1: Ninth (day)

Source height = 1.16 m

ROAD (0.00 + 50.83 + 0.00) = 50.83 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-65	0.00	69.79	0.00	-10.39	-8.57	0.00	0.00	0.00	50.83

Segment Leq : 50.83 dBA

Results segment # 2: Ninth.Bar (day)

Source height = 1.16 m

Barrier height for grazing incidence

C

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.16	36.00	31.54	31.54

ROAD (0.00 + 41.63 + 0.00) = 41.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-65	7	0.00	69.79	0.00	-10.39	-3.98	0.00	0.00	-13.79	41.63

Segment Leq : 41.63 dBA

Results segment # 3: Eglington.N (day)

Source height = 1.08 m

ROAD (0.00 + 47.36 + 0.00) = 47.36 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-65	0.00	67.19	0.00	-11.26	-8.57	0.00	0.00	0.00	47.36

Segment Leq : 47.36 dBA

Results segment # 4: Eglington.S (day)

Source height = 1.08 m

ROAD (0.00 + 51.64 + 0.00) = 51.64 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
23	90	0.00	67.19	0.00	-11.26	-4.29	0.00	0.00	0.00	51.64

Segment Leq : 51.64 dBA

Results segment # 5: Egli.Bar (day)

Source height = 1.08 m

C

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	36.00	32.34	32.34

ROAD (0.00 + 40.53 + 0.00) = 40.53 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-65	23	0.00	67.19	0.00	-11.26	-3.11	0.00	0.00	-12.30	40.53

Segment Leq : 40.53 dBA

Results segment # 6: 407N (day)

Source height = 1.68 m

ROAD (0.00 + 69.02 + 0.00) = 69.02 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
23	90	0.00	81.23	0.00	-7.92	-4.29	0.00	0.00	0.00	69.02

Segment Leq : 69.02 dBA

Results segment # 7: 407S (day)

Source height = 1.68 m

ROAD (0.00 + 67.91 + 0.00) = 67.91 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
23	90	0.00	81.23	0.00	-9.03	-4.29	0.00	0.00	0.00	67.91

Segment Leq : 67.91 dBA

Results segment # 8: 407N.Bar (day)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	36.00	28.25	28.25

ROAD (0.00 + 45.26 + 0.00) = 45.26 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-3	23	0.00	81.23	0.00	-7.92	-8.40	0.00	0.00	-19.65	45.26

Segment Leq : 45.26 dBA

↟

Results segment # 9: 407S.Bar (day)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	36.00	29.99	29.99

ROAD (0.00 + 46.41 + 0.00) = 46.41 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-3	23	0.00	81.23	0.00	-9.03	-8.40	0.00	0.00	-17.39	46.41

Segment Leq : 46.41 dBA

Total Leq All Segments: 71.64 dBA

↟

Results segment # 1: Ninth (night)

Source height = 1.16 m

ROAD (0.00 + 44.31 + 0.00) = 44.31 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq

```
                                          C
   -90    -65   0.00  63.27   0.00 -10.39  -8.57   0.00   0.00   0.00  44.31
-------------------------------------------------------------------------------

Segment Leq : 44.31 dBA

↟
Results segment # 2: Ninth.Bar (night)
--------------------------------------

Source height = 1.16 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.16 !       36.00 !       31.54 !        31.54

ROAD (0.00 + 35.11 + 0.00) = 35.11 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -65      7   0.00  63.27   0.00 -10.39  -3.98   0.00   0.00 -13.79  35.11
-------------------------------------------------------------------------------

Segment Leq : 35.11 dBA

↟
Results segment # 3: Eglington.N (night)
----------------------------------------

Source height = 1.08 m

ROAD (0.00 + 40.82 + 0.00) = 40.82 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -65   0.00  60.66   0.00 -11.26  -8.57   0.00   0.00   0.00  40.82
-------------------------------------------------------------------------------

Segment Leq : 40.82 dBA

↟
Results segment # 4: Eglington.S (night)
----------------------------------------

Source height = 1.08 m

ROAD (0.00 + 45.10 + 0.00) = 45.10 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
```

```
-------------------------------------------------------------------------------
    23     90   0.00  60.66   0.00 -11.26  -4.29   0.00   0.00   0.00  45.10
-------------------------------------------------------------------------------

Segment Leq : 45.10 dBA

↟
Results segment # 5: Egli.Bar (night)
-----------------------------------

Source height = 1.08 m

Barrier height for grazing incidence
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.08 !       36.00 !       32.34 !        32.34

ROAD (0.00 + 33.99 + 0.00) = 33.99 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -65     23   0.00  60.66   0.00 -11.26  -3.11   0.00   0.00 -12.30  33.99
-------------------------------------------------------------------------------

Segment Leq : 33.99 dBA

↟
Results segment # 6: 407N (night)
---------------------------------

Source height = 1.68 m

ROAD (0.00 + 64.50 + 0.00) = 64.50 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    23     90   0.00  76.71   0.00  -7.92  -4.29   0.00   0.00   0.00  64.50
-------------------------------------------------------------------------------

Segment Leq : 64.50 dBA

↟
Results segment # 7: 407S (night)
---------------------------------

Source height = 1.68 m

ROAD (0.00 + 63.39 + 0.00) = 63.39 dBA
```

C

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
23	90	0.00	76.71	0.00	-9.03	-4.29	0.00	0.00	0.00	63.39

Segment Leq : 63.39 dBA

Results segment # 8: 407N.Bar (night)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	36.00	28.25	28.25

ROAD (0.00 + 40.74 + 0.00) = 40.74 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-3	23	0.00	76.71	0.00	-7.92	-8.40	0.00	0.00	-19.65	40.74

Segment Leq : 40.74 dBA

Results segment # 9: 407S.Bar (night)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	36.00	29.99	29.99

ROAD (0.00 + 41.89 + 0.00) = 41.89 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-3	23	0.00	76.71	0.00	-9.03	-8.40	0.00	0.00	-17.39	41.89

Segment Leq : 41.89 dBA

C

Total Leq All Segments: 67.08 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 71.64
(NIGHT): 67.08

D

STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:29:59
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: c_s_2.te Time Period: Day/Night 16/8 hours
Description: Building C south facade.

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

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Eglington (day/night)

Angle1 Angle2 : -90.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 279.50 / 279.50 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: 407N (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: 407N (day/night)

Angle1 Angle2 : -90.00 deg 86.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 85.00 / 85.00 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 3: 407S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: 407S (day/night)

Angle1 Angle2 : -90.00 deg 86.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 112.00 / 112.00 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Eglington (day)

Source height = 1.08 m

ROAD (0.00 + 51.48 + 0.00) = 51.48 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	67.19	0.00	-12.70	-3.01	0.00	0.00	0.00	51.48

Segment Leq : 51.48 dBA

Results segment # 2: 407N (day)

Source height = 1.68 m

ROAD (0.00 + 73.60 + 0.00) = 73.60 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	86	0.00	81.23	0.00	-7.53	-0.10	0.00	0.00	0.00	73.60

Segment Leq : 73.60 dBA

Results segment # 3: 407S (day)

Source height = 1.68 m

ROAD (0.00 + 72.41 + 0.00) = 72.41 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	86	0.00	81.23	0.00	-8.73	-0.10	0.00	0.00	0.00	72.41

Segment Leq : 72.41 dBA

Total Leq All Segments: 76.07 dBA

Results segment # 1: Eglington (night)

Source height = 1.08 m

ROAD (0.00 + 44.94 + 0.00) = 44.94 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	60.66	0.00	-12.70	-3.01	0.00	0.00	0.00	44.94

Segment Leq : 44.94 dBA

Results segment # 2: 407N (night)

Source height = 1.68 m

ROAD (0.00 + 69.08 + 0.00) = 69.08 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	86	0.00	76.71	0.00	-7.53	-0.10	0.00	0.00	0.00	69.08

Segment Leq : 69.08 dBA

Results segment # 3: 407S (night)

D

Source height = 1.68 m

ROAD (0.00 + 67.88 + 0.00) = 67.88 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	86	0.00	76.71	0.00	-8.73	-0.10	0.00	0.00	0.00	67.88

Segment Leq : 67.88 dBA

Total Leq All Segments: 71.54 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 76.07
(NIGHT): 71.54

E
STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:39:46
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: d_w_2.te Time Period: Day/Night 16/8 hours
Description: Building D west facade.

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

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Ninth (day/night)

Angle1 Angle2 : 7.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 198.00 / 198.00 m
Receiver height : 30.00 / 30.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: 407N (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: 407N (day/night)

Angle1 Angle2 : -90.00 deg -4.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 88.00 / 88.00 m
Receiver height : 30.00 / 30.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 3: 407S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: 407S (day/night)

Angle1 Angle2 : -90.00 deg -4.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 115.00 / 115.00 m
Receiver height : 30.00 / 30.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Ninth (day)

Source height = 1.16 m

ROAD (0.00 + 55.22 + 0.00) = 55.22 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
7	90	0.00	69.79	0.00	-11.21	-3.36	0.00	0.00	0.00	55.22

Segment Leq : 55.22 dBA

Results segment # 2: 407N (day)

Source height = 1.68 m

ROAD (0.00 + 70.34 + 0.00) = 70.34 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-4	0.00	81.23	0.00	-7.68	-3.21	0.00	0.00	0.00	70.34

Segment Leq : 70.34 dBA

Results segment # 3: 407S (day)

Source height = 1.68 m

ROAD (0.00 + 69.18 + 0.00) = 69.18 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-4	0.00	81.23	0.00	-8.85	-3.21	0.00	0.00	0.00	69.18

Segment Leq : 69.18 dBA

Total Leq All Segments: 72.88 dBA

Results segment # 1: Ninth (night)

Source height = 1.16 m

ROAD (0.00 + 48.70 + 0.00) = 48.70 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
7	90	0.00	63.27	0.00	-11.21	-3.36	0.00	0.00	0.00	48.70

Segment Leq : 48.70 dBA

Results segment # 2: 407N (night)

Source height = 1.68 m

ROAD (0.00 + 65.82 + 0.00) = 65.82 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-4	0.00	76.71	0.00	-7.68	-3.21	0.00	0.00	0.00	65.82

Segment Leq : 65.82 dBA

Results segment # 3: 407S (night)

E

Source height = 1.68 m

ROAD (0.00 + 64.66 + 0.00) = 64.66 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-4	0.00	76.71	0.00	-8.85	-3.21	0.00	0.00	0.00	64.66

Segment Leq : 64.66 dBA

Total Leq All Segments: 68.34 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 72.88
(NIGHT): 68.34

F
STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:38:59
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: e_w_2.te Time Period: Day/Night 16/8 hours
Description: Building E west facade.

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

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Ninth (day/night)

Angle1 Angle2 : 7.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 68.00 / 68.00 m
Receiver height : 18.00 / 18.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: 407N.W (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: 407N.W (day/night)

Angle1 Angle2 : -28.00 deg -4.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 200.00 / 200.00 m
Receiver height : 18.00 / 18.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Road data, segment # 3: 407N.S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: 407N.S (day/night)

Angle1 Angle2 : -87.00 deg -78.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 200.00 / 200.00 m
Receiver height : 18.00 / 18.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Road data, segment # 4: 407N.Bar.W (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 4: 407N.Bar.W (day/night)

Angle1 Angle2 : -78.00 deg -28.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 200.00 / 200.00 m
Receiver height : 18.00 / 18.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -78.00 deg Angle2 : -28.00 deg
Barrier height : 30.00 m
Barrier receiver distance : 119.00 / 119.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↟
Road data, segment # 5: 407N.Bar.S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 5: 407N.Bar.S (day/night)

Angle1 Angle2 : -90.00 deg -87.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 200.00 / 200.00 m
Receiver height : 18.00 / 18.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -87.00 deg
Barrier height : 36.00 m
Barrier receiver distance : 91.00 / 91.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↟
Road data, segment # 6: 407S.W (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 6: 407S.W (day/night)

Angle1 Angle2 : -28.00 deg -4.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 227.00 / 227.00 m
Receiver height : 18.00 / 18.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Road data, segment # 7: 407S.S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 7: 407S.S (day/night)

Angle1 Angle2 : -87.00 deg -78.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 227.00 / 227.00 m
Receiver height : 18.00 / 18.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Road data, segment # 8: 407S.Bar.W (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 8: 407S.Bar.W (day/night)

Angle1 Angle2 : -78.00 deg -28.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 227.00 / 227.00 m
Receiver height : 18.00 / 18.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -78.00 deg Angle2 : -28.00 deg
Barrier height : 30.00 m
Barrier receiver distance : 119.00 / 119.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Road data, segment # 9: 407S.Bar.S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 9: 407S.Bar.S (day/night)

Angle1 Angle2 : -90.00 deg -87.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 227.00 / 227.00 m
Receiver height : 18.00 / 18.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -87.00 deg
Barrier height : 36.00 m
Barrier receiver distance : 91.00 / 91.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Results segment # 1: Ninth (day)

Source height = 1.16 m

ROAD (0.00 + 59.86 + 0.00) = 59.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
7	90	0.00	69.79	0.00	-6.56	-3.36	0.00	0.00	0.00	59.86

Segment Leq : 59.86 dBA

Results segment # 2: 407N.W (day)

Source height = 1.68 m

ROAD (0.00 + 61.23 + 0.00) = 61.23 dBA

```
                                                F
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -28     -4   0.00  81.23   0.00 -11.25  -8.75   0.00   0.00   0.00  61.23
-------------------------------------------------------------------------------

Segment Leq : 61.23 dBA

♠
Results segment # 3: 407N.S (day)
---------------------------------

Source height = 1.68 m

ROAD (0.00 + 56.98 + 0.00) = 56.98 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -87    -78   0.00  81.23   0.00 -11.25 -13.01   0.00   0.00   0.00  56.98
-------------------------------------------------------------------------------

Segment Leq : 56.98 dBA

♠
Results segment # 4: 407N.Bar.W (day)
-------------------------------------

Source height = 1.68 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.68 !       18.00 !        8.29 !         8.29

ROAD (0.00 + 44.66 + 0.00) = 44.66 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -78    -28   0.00  81.23   0.00 -11.25  -5.56   0.00   0.00 -19.76  44.66
-------------------------------------------------------------------------------

Segment Leq : 44.66 dBA

♠
Results segment # 5: 407N.Bar.S (day)
-------------------------------------

Source height = 1.68 m
```

F

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	18.00	10.58	10.58

ROAD (0.00 + 42.84 + 0.00) = 42.84 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-87	0.00	81.23	0.00	-11.25	-17.78	0.00	0.00	-9.36	42.84

Segment Leq : 42.84 dBA

↟
Results segment # 6: 407S.W (day)

Source height = 1.68 m

ROAD (0.00 + 60.68 + 0.00) = 60.68 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-28	-4	0.00	81.23	0.00	-11.80	-8.75	0.00	0.00	0.00	60.68

Segment Leq : 60.68 dBA

↟
Results segment # 7: 407S.S (day)

Source height = 1.68 m

ROAD (0.00 + 56.43 + 0.00) = 56.43 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-87	-78	0.00	81.23	0.00	-11.80	-13.01	0.00	0.00	0.00	56.43

Segment Leq : 56.43 dBA

↟
Results segment # 8: 407S.Bar.W (day)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	18.00	9.45	9.45

ROAD (0.00 + 44.46 + 0.00) = 44.46 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-78	-28	0.00	81.23	0.00	-11.80	-5.56	0.00	0.00	-19.41	44.46

Segment Leq : 44.46 dBA

↟

Results segment # 9: 407S.Bar.S (day)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	18.00	11.46	11.46

ROAD (0.00 + 42.67 + 0.00) = 42.67 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-87	0.00	81.23	0.00	-11.80	-17.78	0.00	0.00	-8.98	42.67

Segment Leq : 42.67 dBA

Total Leq All Segments: 66.53 dBA

↟

Results segment # 1: Ninth (night)

Source height = 1.16 m

ROAD (0.00 + 53.34 + 0.00) = 53.34 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq

```
                                        F
     7     90   0.00  63.27   0.00  -6.56  -3.36   0.00   0.00   0.00  53.34
-------------------------------------------------------------------------------

Segment Leq : 53.34 dBA

↟
Results segment # 2: 407N.W (night)
-----------------------------------

Source height = 1.68 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
-------------------------------------------------------------------------------
   -28     -4   0.00  76.71   0.00 -11.25  -8.75   0.00   0.00   0.00  56.71
-------------------------------------------------------------------------------

Segment Leq : 56.71 dBA

↟
Results segment # 3: 407N.S (night)
-----------------------------------

Source height = 1.68 m

ROAD (0.00 + 52.45 + 0.00) = 52.45 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -87    -78   0.00  76.71   0.00 -11.25 -13.01   0.00   0.00   0.00  52.45
-------------------------------------------------------------------------------

Segment Leq : 52.45 dBA

↟
Results segment # 4: 407N.Bar.W (night)
---------------------------------------

Source height = 1.68 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.68 !       18.00 !        8.29 !         8.29

ROAD (0.00 + 40.14 + 0.00) = 40.14 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
```

```
-------------------------------------------------------------------------------
   -78    -28   0.00  76.71   0.00 -11.25  -5.56   0.00   0.00 -19.76  40.14
-------------------------------------------------------------------------------

Segment Leq : 40.14 dBA

↟
Results segment # 5: 407N.Bar.S (night)
---------------------------------------

Source height = 1.68 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.68 !       18.00 !       10.58 !        10.58

ROAD (0.00 + 38.32 + 0.00) = 38.32 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -87   0.00  76.71   0.00 -11.25 -17.78   0.00   0.00  -9.36  38.32
-------------------------------------------------------------------------------

Segment Leq : 38.32 dBA

↟
Results segment # 6: 407S.W (night)
-----------------------------------

Source height = 1.68 m

ROAD (0.00 + 56.16 + 0.00) = 56.16 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -28     -4   0.00  76.71   0.00 -11.80  -8.75   0.00   0.00   0.00  56.16
-------------------------------------------------------------------------------

Segment Leq : 56.16 dBA

↟
Results segment # 7: 407S.S (night)
-----------------------------------

Source height = 1.68 m

ROAD (0.00 + 51.90 + 0.00) = 51.90 dBA
```

F

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-87	-78	0.00	76.71	0.00	-11.80	-13.01	0.00	0.00	0.00	51.90

Segment Leq : 51.90 dBA

↟
Results segment # 8: 407S.Bar.W (night)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	18.00	9.45	9.45

ROAD (0.00 + 39.94 + 0.00) = 39.94 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-78	-28	0.00	76.71	0.00	-11.80	-5.56	0.00	0.00	-19.41	39.94

Segment Leq : 39.94 dBA

↟
Results segment # 9: 407S.Bar.S (night)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	18.00	11.46	11.46

ROAD (0.00 + 38.15 + 0.00) = 38.15 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-87	0.00	76.71	0.00	-11.80	-17.78	0.00	0.00	-8.98	38.15

Segment Leq : 38.15 dBA

F

Total Leq All Segments: 61.65 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 66.53
(NIGHT): 61.65

↟
↟

STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:40:40
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: f_n.te Time Period: Day/Night 16/8 hours
Description: Building F north facade.

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

Car traffic volume	: 22896/2544	veh/TimePeriod
Medium truck volume	: 525/58	veh/TimePeriod
Heavy truck volume	: 429/48	veh/TimePeriod
Posted speed limit	: 60 km/h	
Road gradient	: 2 %	
Road pavement	: 1 (Typical asphalt or concrete)	

Data for Segment # 1: Ninth (day/night)

Angle1 Angle2	: -83.00 deg	90.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 2	(Reflective ground surface)
Receiver source distance	: 22.50 / 22.50	m
Receiver height	: 24.00 / 24.00	m
Topography	: 1	(Flat/gentle slope; no barrier)
Reference angle	: 0.00	

Road data, segment # 2: Eglington (day/night)

Car traffic volume	: 14841/1649	veh/TimePeriod
Medium truck volume	: 252/28	veh/TimePeriod
Heavy truck volume	: 207/23	veh/TimePeriod
Posted speed limit	: 60 km/h	
Road gradient	: 2 %	
Road pavement	: 1 (Typical asphalt or concrete)	

Data for Segment # 2: Eglington (day/night)

Angle1 Angle2	: 0.00 deg	90.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 2	(Reflective ground surface)
Receiver source distance	: 123.50 / 123.50	m
Receiver height	: 24.00 / 24.00	m
Topography	: 1	(Flat/gentle slope; no barrier)
Reference angle	: 0.00	

Results segment # 1: Ninth (day)

Source height = 1.16 m

ROAD (0.00 + 67.85 + 0.00) = 67.85 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-83	90	0.00	69.79	0.00	-1.76	-0.17	0.00	0.00	0.00	67.85

Segment Leq : 67.85 dBA

Results segment # 2: Eglington (day)

Source height = 1.08 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	0.00	67.19	0.00	-9.16	-3.01	0.00	0.00	0.00	55.02

Segment Leq : 55.02 dBA

Total Leq All Segments: 68.07 dBA

Results segment # 1: Ninth (night)

Source height = 1.16 m

ROAD (0.00 + 61.33 + 0.00) = 61.33 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-83	90	0.00	63.27	0.00	-1.76	-0.17	0.00	0.00	0.00	61.33

Segment Leq : 61.33 dBA

Results segment # 2: Eglington (night)

Source height = 1.08 m

ROAD (0.00 + 48.49 + 0.00) = 48.49 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	60.66	0.00	-9.16	-3.01	0.00	0.00	0.00	48.49

Segment Leq : 48.49 dBA

Total Leq All Segments: 61.55 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 68.07
(NIGHT): 61.55

H

STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:41:16
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: f_s_2.te Time Period: Day/Night 16/8 hours
Description: Building F south facade.

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

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Eglington (day/night)

Angle1 Angle2 : -90.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 136.00 / 136.00 m
Receiver height : 24.00 / 24.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: 407N.S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: 407N.S (day/night)

Angle1 Angle2 : -90.00 deg 2.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 175.00 / 175.00 m
Receiver height : 24.00 / 24.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

H

Road data, segment # 3: 407N.W (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: 407N.W (day/night)

Angle1 Angle2 : 81.00 deg 86.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 175.00 / 175.00 m
Receiver height : 24.00 / 24.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 4: 407N.Bar (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 4: 407N.Bar (day/night)

Angle1 Angle2 : 2.00 deg 81.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 175.00 / 175.00 m
Receiver height : 24.00 / 24.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : 2.00 deg Angle2 : 81.00 deg
Barrier height : 36.00 m
Barrier receiver distance : 95.00 / 95.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↟
Road data, segment # 5: 407S.S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 5: 407S.S (day/night)

Angle1 Angle2 : -90.00 deg 2.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 202.00 / 202.00 m
Receiver height : 24.00 / 24.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Road data, segment # 6: 407S.W (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 6: 407S.W (day/night)

Angle1 Angle2 : 81.00 deg 86.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 202.00 / 202.00 m
Receiver height : 24.00 / 24.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Road data, segment # 7: 407S.Bar (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod

H

Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 7: 407S.Bar (day/night)

Angle1 Angle2 : 2.00 deg 81.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 202.00 / 202.00 m
Receiver height : 24.00 / 24.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : 2.00 deg Angle2 : 81.00 deg
Barrier height : 36.00 m
Barrier receiver distance : 95.00 / 95.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Results segment # 1: Eglington (day)

Source height = 1.08 m

ROAD (0.00 + 54.60 + 0.00) = 54.60 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	67.19	0.00	-9.57	-3.01	0.00	0.00	0.00	54.60

Segment Leq : 54.60 dBA

Results segment # 2: 407N.S (day)

Source height = 1.68 m

ROAD (0.00 + 67.65 + 0.00) = 67.65 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	2	0.00	81.23	0.00	-10.67	-2.91	0.00	0.00	0.00	67.65

Segment Leq : 67.65 dBA

Results segment # 3: 407N.W (day)

Source height = 1.68 m

ROAD (0.00 + 55.00 + 0.00) = 55.00 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
81	86	0.00	81.23	0.00	-10.67	-15.56	0.00	0.00	0.00	55.00

Segment Leq : 55.00 dBA

Results segment # 4: 407N.Bar (day)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	24.00	11.88	11.88

ROAD (0.00 + 47.10 + 0.00) = 47.10 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
2	81	0.00	81.23	0.00	-10.67	-3.58	0.00	0.00	-19.89	47.10

Segment Leq : 47.10 dBA

Results segment # 5: 407S.S (day)

Source height = 1.68 m

ROAD (0.00 + 67.03 + 0.00) = 67.03 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	2	0.00	81.23	0.00	-11.29	-2.91	0.00	0.00	0.00	67.03

Segment Leq : 67.03 dBA

↟

Results segment # 6: 407S.W (day)

Source height = 1.68 m

ROAD (0.00 + 54.38 + 0.00) = 54.38 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
81	86	0.00	81.23	0.00	-11.29	-15.56	0.00	0.00	0.00	54.38

Segment Leq : 54.38 dBA

↟

Results segment # 7: 407S.Bar (day)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	24.00	13.50	13.50

ROAD (0.00 + 46.65 + 0.00) = 46.65 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
2	81	0.00	81.23	0.00	-11.29	-3.58	0.00	0.00	-19.72	46.65

Segment Leq : 46.65 dBA

Total Leq All Segments: 70.73 dBA

↟

Results segment # 1: Eglington (night)

Source height = 1.08 m

ROAD (0.00 + 48.07 + 0.00) = 48.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq

```
                                          H
   -90      0   0.00  60.66   0.00  -9.57  -3.01   0.00   0.00   0.00  48.07
--------------------------------------------------------------------------------

Segment Leq : 48.07 dBA

↟
Results segment # 2: 407N.S (night)
----------------------------------

Source height = 1.68 m

ROAD (0.00 + 63.13 + 0.00) = 63.13 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
--------------------------------------------------------------------------------
   -90      2   0.00  76.71   0.00 -10.67  -2.91   0.00   0.00   0.00  63.13
--------------------------------------------------------------------------------

Segment Leq : 63.13 dBA

↟
Results segment # 3: 407N.W (night)
----------------------------------

Source height = 1.68 m

ROAD (0.00 + 50.48 + 0.00) = 50.48 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
--------------------------------------------------------------------------------
    81     86   0.00  76.71   0.00 -10.67 -15.56   0.00   0.00   0.00  50.48
--------------------------------------------------------------------------------

Segment Leq : 50.48 dBA

↟
Results segment # 4: 407N.Bar (night)
----------------------------------

Source height = 1.68 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.68 !       24.00 !       11.88 !        11.88

ROAD (0.00 + 42.57 + 0.00) = 42.57 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
```

H

2	81	0.00	76.71	0.00	-10.67	-3.58	0.00	0.00	-19.89	42.57

Segment Leq : 42.57 dBA

↟
Results segment # 5: 407S.S (night)

Source height = 1.68 m

ROAD (0.00 + 62.51 + 0.00) = 62.51 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	2	0.00	76.71	0.00	-11.29	-2.91	0.00	0.00	0.00	62.51

Segment Leq : 62.51 dBA

↟
Results segment # 6: 407S.W (night)

Source height = 1.68 m

ROAD (0.00 + 49.86 + 0.00) = 49.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
81	86	0.00	76.71	0.00	-11.29	-15.56	0.00	0.00	0.00	49.86

Segment Leq : 49.86 dBA

↟
Results segment # 7: 407S.Bar (night)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	24.00	13.50	13.50

ROAD (0.00 + 42.13 + 0.00) = 42.13 dBA

							H			
Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
2	81	0.00	76.71	0.00	-11.29	-3.58	0.00	0.00	-19.72	42.13

Segment Leq : 42.13 dBA

Total Leq All Segments: 66.18 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 70.73
(NIGHT): 66.18

STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:41:54
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: f_w_2.te Time Period: Day/Night 16/8 hours
Description: Building F west facade.

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

Car traffic volume	: 22896/2544	veh/TimePeriod
Medium truck volume	: 525/58	veh/TimePeriod
Heavy truck volume	: 429/48	veh/TimePeriod
Posted speed limit	: 60	km/h
Road gradient	: 2	%
Road pavement	: 1	(Typical asphalt or concrete)

Data for Segment # 1: Ninth (day/night)

Angle1 Angle2	: 7.00 deg	90.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 2	(Reflective ground surface)
Receiver source distance	: 42.00 / 42.00	m
Receiver height	: 24.00 / 24.00	m
Topography	: 1	(Flat/gentle slope; no barrier)
Reference angle	: 0.00	

Road data, segment # 2: 407N.W (day/night)

Car traffic volume	: 48068/8483	veh/TimePeriod
Medium truck volume	: 2763/488	veh/TimePeriod
Heavy truck volume	: 4420/780	veh/TimePeriod
Posted speed limit	: 100	km/h
Road gradient	: 0	%
Road pavement	: 1	(Typical asphalt or concrete)

Data for Segment # 2: 407N.W (day/night)

Angle1 Angle2	: -22.00 deg	-4.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 2	(Reflective ground surface)
Receiver source distance	: 213.00 / 213.00	m
Receiver height	: 24.00 / 24.00	m
Topography	: 1	(Flat/gentle slope; no barrier)
Reference angle	: 0.00	

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↟
Road data, segment # 3: 407N.S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488   veh/TimePeriod
Heavy truck volume : 4420/780   veh/TimePeriod
Posted speed limit :   100 km/h
Road gradient   :   0 %
Road pavement   :   1 (Typical asphalt or concrete)

Data for Segment # 3: 407N.S (day/night)

Angle1   Angle2   : -86.00 deg   -81.00 deg
Wood depth   :   0   (No woods.)
No of house rows   :   0 / 0
Surface   :   2   (Reflective ground surface)
Receiver source distance : 213.00 / 213.00 m
Receiver height   : 24.00 / 24.00 m
Topography   :   1   (Flat/gentle slope; no barrier)
Reference angle   :   0.00

↟
Road data, segment # 4: 407N.Bar.W (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488   veh/TimePeriod
Heavy truck volume : 4420/780   veh/TimePeriod
Posted speed limit :   100 km/h
Road gradient   :   0 %
Road pavement   :   1 (Typical asphalt or concrete)

Data for Segment # 4: 407N.Bar.W (day/night)

Angle1   Angle2   : -81.00 deg   -22.00 deg
Wood depth   :   0   (No woods.)
No of house rows   :   0 / 0
Surface   :   2   (Reflective ground surface)
Receiver source distance : 213.00 / 213.00 m
Receiver height   : 24.00 / 24.00 m
Topography   :   2   (Flat/gentle slope; with barrier)
Barrier angle1   : -81.00 deg   Angle2 : -22.00 deg
Barrier height   : 36.00 m
Barrier receiver distance : 135.00 / 135.00 m
Source elevation   :   0.00 m
Receiver elevation   :   0.00 m
Barrier elevation   :   0.00 m
Reference angle   :   0.00

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Road data, segment # 5: 407N.Bar.S (day/night)

```
Car traffic volume  : 48068/8483  veh/TimePeriod
Medium truck volume :  2763/488   veh/TimePeriod
Heavy truck volume  :  4420/780   veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)
```

Data for Segment # 5: 407N.Bar.S (day/night)

```
Angle1   Angle2           : -90.00 deg   -86.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 213.00 / 213.00 m
Receiver height           :  24.00 / 24.00  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : -86.00 deg
Barrier height            :  36.00 m
Barrier receiver distance :  73.00 / 73.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

↟

Road data, segment # 6: 407S.W (day/night)

```
Car traffic volume  : 48068/8483  veh/TimePeriod
Medium truck volume :  2763/488   veh/TimePeriod
Heavy truck volume  :  4420/780   veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)
```

Data for Segment # 6: 407S.W (day/night)

```
Angle1   Angle2           : -22.00 deg   -4.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 240.00 / 240.00 m
Receiver height           :  24.00 / 24.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

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↟
Road data, segment # 7: 407S.S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488   veh/TimePeriod
Heavy truck volume : 4420/780   veh/TimePeriod
Posted speed limit :   100 km/h
Road gradient   :   0 %
Road pavement   :   1 (Typical asphalt or concrete)

Data for Segment # 7: 407S.S (day/night)

Angle1   Angle2   : -86.00 deg   -81.00 deg
Wood depth   :   0   (No woods.)
No of house rows   :   0 / 0
Surface   :   2   (Reflective ground surface)
Receiver source distance : 240.00 / 240.00 m
Receiver height   : 24.00 / 24.00 m
Topography   :   1   (Flat/gentle slope; no barrier)
Reference angle   :   0.00

↟
Road data, segment # 8: 407S.Bar.W (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488   veh/TimePeriod
Heavy truck volume : 4420/780   veh/TimePeriod
Posted speed limit :   100 km/h
Road gradient   :   0 %
Road pavement   :   1 (Typical asphalt or concrete)

Data for Segment # 8: 407S.Bar.W (day/night)

Angle1   Angle2   : -81.00 deg   -22.00 deg
Wood depth   :   0   (No woods.)
No of house rows   :   0 / 0
Surface   :   2   (Reflective ground surface)
Receiver source distance : 240.00 / 240.00 m
Receiver height   : 24.00 / 24.00 m
Topography   :   2   (Flat/gentle slope; with barrier)
Barrier angle1   : -81.00 deg   Angle2 : -22.00 deg
Barrier height   : 36.00 m
Barrier receiver distance : 135.00 / 135.00 m
Source elevation   :   0.00 m
Receiver elevation   :   0.00 m
Barrier elevation   :   0.00 m
Reference angle   :   0.00

Road data, segment # 9: 407S.Bar.S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 9: 407S.Bar.S (day/night)

Angle1 Angle2 : -90.00 deg -86.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 240.00 / 240.00 m
Receiver height : 24.00 / 24.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -86.00 deg
Barrier height : 36.00 m
Barrier receiver distance : 73.00 / 73.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Results segment # 1: Ninth (day)

Source height = 1.16 m

ROAD (0.00 + 61.95 + 0.00) = 61.95 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
7	90	0.00	69.79	0.00	-4.47	-3.36	0.00	0.00	0.00	61.95

Segment Leq : 61.95 dBA

Results segment # 2: 407N.W (day)

Source height = 1.68 m

ROAD (0.00 + 59.71 + 0.00) = 59.71 dBA

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Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-22	-4	0.00	81.23	0.00	-11.52	-10.00	0.00	0.00	0.00	59.71

Segment Leq : 59.71 dBA

↟
Results segment # 3: 407N.S (day)

Source height = 1.68 m

ROAD (0.00 + 54.15 + 0.00) = 54.15 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-86	-81	0.00	81.23	0.00	-11.52	-15.56	0.00	0.00	0.00	54.15

Segment Leq : 54.15 dBA

↟
Results segment # 4: 407N.Bar.W (day)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	24.00	9.85	9.85

ROAD (0.00 + 44.99 + 0.00) = 44.99 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	-22	0.00	81.23	0.00	-11.52	-4.84	0.00	0.00	-19.87	44.99

Segment Leq : 44.99 dBA

↟
Results segment # 5: 407N.Bar.S (day)

Source height = 1.68 m

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Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	24.00	16.35	16.35

ROAD (0.00 + 44.27 + 0.00) = 44.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-86	0.00	81.23	0.00	-11.52	-16.53	0.00	0.00	-8.91	44.27

Segment Leq : 44.27 dBA

↟

Results segment # 6: 407S.W (day)

Source height = 1.68 m

ROAD (0.00 + 59.19 + 0.00) = 59.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-22	-4	0.00	81.23	0.00	-12.04	-10.00	0.00	0.00	0.00	59.19

Segment Leq : 59.19 dBA

↟

Results segment # 7: 407S.S (day)

Source height = 1.68 m

ROAD (0.00 + 53.63 + 0.00) = 53.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-86	-81	0.00	81.23	0.00	-12.04	-15.56	0.00	0.00	0.00	53.63

Segment Leq : 53.63 dBA

↟

Results segment # 8: 407S.Bar.W (day)

Source height = 1.68 m

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Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	24.00	11.45	11.45

ROAD (0.00 + 44.71 + 0.00) = 44.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	-22	0.00	81.23	0.00	-12.04	-4.84	0.00	0.00	-19.64	44.71

Segment Leq : 44.71 dBA

↟

Results segment # 9: 407S.Bar.S (day)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	24.00	17.21	17.21

ROAD (0.00 + 44.07 + 0.00) = 44.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-86	0.00	81.23	0.00	-12.04	-16.53	0.00	0.00	-8.59	44.07

Segment Leq : 44.07 dBA

Total Leq All Segments: 65.95 dBA

↟

Results segment # 1: Ninth (night)

Source height = 1.16 m

ROAD (0.00 + 55.43 + 0.00) = 55.43 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq

```
                                        I
     7     90   0.00  63.27   0.00  -4.47  -3.36   0.00   0.00   0.00  55.43
-------------------------------------------------------------------------------

Segment Leq : 55.43 dBA

↟
Results segment # 2: 407N.W (night)
----------------------------------

Source height = 1.68 m

ROAD (0.00 + 55.19 + 0.00) = 55.19 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -22     -4   0.00  76.71   0.00 -11.52 -10.00   0.00   0.00   0.00  55.19
-------------------------------------------------------------------------------

Segment Leq : 55.19 dBA

↟
Results segment # 3: 407N.S (night)
----------------------------------

Source height = 1.68 m

ROAD (0.00 + 49.63 + 0.00) = 49.63 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -86    -81   0.00  76.71   0.00 -11.52 -15.56   0.00   0.00   0.00  49.63
-------------------------------------------------------------------------------

Segment Leq : 49.63 dBA

↟
Results segment # 4: 407N.Bar.W (night)
--------------------------------------

Source height = 1.68 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.68 !       24.00 !        9.85 !         9.85

ROAD (0.00 + 40.47 + 0.00) = 40.47 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
```

```
-------------------------------------------------------------------------------
   -81    -22   0.00  76.71   0.00 -11.52  -4.84   0.00   0.00 -19.87  40.47
-------------------------------------------------------------------------------

Segment Leq : 40.47 dBA

↟
Results segment # 5: 407N.Bar.S (night)
---------------------------------------

Source height = 1.68 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.68 !       24.00 !       16.35 !        16.35

ROAD (0.00 + 39.75 + 0.00) = 39.75 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -86   0.00  76.71   0.00 -11.52 -16.53   0.00   0.00  -8.91  39.75
-------------------------------------------------------------------------------

Segment Leq : 39.75 dBA

↟
Results segment # 6: 407S.W (night)
-----------------------------------

Source height = 1.68 m

ROAD (0.00 + 54.67 + 0.00) = 54.67 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -22     -4   0.00  76.71   0.00 -12.04 -10.00   0.00   0.00   0.00  54.67
-------------------------------------------------------------------------------

Segment Leq : 54.67 dBA

↟
Results segment # 7: 407S.S (night)
-----------------------------------

Source height = 1.68 m

ROAD (0.00 + 49.11 + 0.00) = 49.11 dBA
```

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Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-86	-81	0.00	76.71	0.00	-12.04	-15.56	0.00	0.00	0.00	49.11

Segment Leq : 49.11 dBA

Results segment # 8: 407S.Bar.W (night)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	24.00	11.45	11.45

ROAD (0.00 + 40.19 + 0.00) = 40.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	-22	0.00	76.71	0.00	-12.04	-4.84	0.00	0.00	-19.64	40.19

Segment Leq : 40.19 dBA

Results segment # 9: 407S.Bar.S (night)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	24.00	17.21	17.21

ROAD (0.00 + 39.55 + 0.00) = 39.55 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-86	0.00	76.71	0.00	-12.04	-16.53	0.00	0.00	-8.59	39.55

Segment Leq : 39.55 dBA

I

Total Leq All Segments: 60.74 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 65.95
(NIGHT): 60.74

STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:44:03
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: ola_e1_2.te Time Period: 16 hours
Description: Building E ola part 1.

Road data, segment # 1: Ninth.Bar.N

Car traffic volume : 22896 veh/TimePeriod
Medium truck volume : 525 veh/TimePeriod
Heavy truck volume : 429 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Ninth.Bar.N

Angle1 Angle2 : -83.00 deg 71.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 54.00 m
Receiver height : 1.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : -83.00 deg Angle2 : 71.00 deg
Barrier height : 12.00 m
Elevation : 6.00 m
Barrier receiver distance : 6.50 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↑
Road data, segment # 2: Ninth.Bar.E

Car traffic volume : 22896 veh/TimePeriod
Medium truck volume : 525 veh/TimePeriod
Heavy truck volume : 429 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Ninth.Bar.E

Angle1 Angle2 : 71.00 deg 90.00 deg
Wood depth : 0 (No woods.)

```
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  54.00 m
Receiver height           :   1.50 m
Topography                :      4       (Elevated; with barrier)
Barrier angle1            :  71.00 deg   Angle2 : 90.00 deg
Barrier height            :  18.00 m
Elevation                 :   6.00 m
Barrier receiver distance :  30.50 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

↑

```
Road data, segment # 3: Elgi.Bar.N
----------------------------------
Car traffic volume  : 14841 veh/TimePeriod
Medium truck volume :   252 veh/TimePeriod
Heavy truck volume  :   207 veh/TimePeriod
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 3: Elgi.Bar.N
--------------------------------
Angle1   Angle2           : -90.00 deg   -19.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 213.00 m
Receiver height           :   1.50 m
Topography                :      4       (Elevated; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : -19.00 deg
Barrier height            :  12.00 m
Elevation                 :   6.00 m
Barrier receiver distance :   6.50 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

↑

```
Road data, segment # 4: Egli.Bar.E
----------------------------------
Car traffic volume  : 14841 veh/TimePeriod
Medium truck volume :   252 veh/TimePeriod
Heavy truck volume  :   207 veh/TimePeriod
```

```
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 4: Egli.Bar.E
--------------------------------
Angle1   Angle2           : -19.00 deg   24.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 213.00 m
Receiver height           :   1.50 m
Topography                :      4       (Elevated; with barrier)
Barrier angle1            : -19.00 deg   Angle2 : 24.00 deg
Barrier height            :  18.00 m
Elevation                 :   6.00 m
Barrier receiver distance :  30.50 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00

↑
Road data, segment # 5: Eglington.E
----------------------------------
Car traffic volume  : 14841 veh/TimePeriod
Medium truck volume :   252 veh/TimePeriod
Heavy truck volume  :   207 veh/TimePeriod
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 5: Eglington.E
--------------------------------
Angle1   Angle2           :  24.00 deg   44.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 213.00 m
Receiver height           :   1.50 m
Topography                :      4       (Elevated; with barrier)
Barrier angle1            :  24.00 deg   Angle2 : 44.00 deg
Barrier height            :   1.07 m
Elevation                 :   6.00 m
Barrier receiver distance :  15.50 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
```

Reference angle : 0.00

↟

Road data, segment # 6: Egli.Bar.S

Car traffic volume : 14841 veh/TimePeriod
Medium truck volume : 252 veh/TimePeriod
Heavy truck volume : 207 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 6: Egli.Bar.S

Angle1 Angle2 : 44.00 deg 79.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 213.00 m
Receiver height : 1.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : 44.00 deg Angle2 : 79.00 deg
Barrier height : 30.00 m
Elevation : 6.00 m
Barrier receiver distance : 100.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↟

Road data, segment # 7: Eglington.S

Car traffic volume : 14841 veh/TimePeriod
Medium truck volume : 252 veh/TimePeriod
Heavy truck volume : 207 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 7: Eglington.S

Angle1 Angle2 : 79.00 deg 84.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 213.00 m
Receiver height : 1.50 m

```
Topography                :      4       (Elevated; with barrier)
Barrier angle1            :  79.00 deg   Angle2 : 84.00 deg
Barrier height            :   1.07 m
Elevation                 :   6.00 m
Barrier receiver distance : 100.00 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```



```
Road data, segment # 8: Egli.Bar.W
----------------------------------
Car traffic volume  : 14841 veh/TimePeriod
Medium truck volume :   252 veh/TimePeriod
Heavy truck volume  :   207 veh/TimePeriod
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 8: Egli.Bar.W
--------------------------------
Angle1   Angle2           :  84.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 213.00 m
Receiver height           :   1.50 m
Topography                :      4       (Elevated; with barrier)
Barrier angle1            :  84.00 deg   Angle2 : 90.00 deg
Barrier height            :  30.00 m
Elevation                 :   6.00 m
Barrier receiver distance : 100.00 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```



```
Road data, segment # 9: 407N.E
------------------------------
Car traffic volume  : 48068 veh/TimePeriod
Medium truck volume :  2763 veh/TimePeriod
Heavy truck volume  :  4420 veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)
```

Data for Segment # 9: 407N.E

Angle1 Angle2 : -66.00 deg -46.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 207.00 m
Receiver height : 1.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : -66.00 deg Angle2 : -46.00 deg
Barrier height : 1.07 m
Elevation : 6.00 m
Barrier receiver distance : 6.50 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↑
Road data, segment # 10: 407N.Bar.S

Car traffic volume : 48068 veh/TimePeriod
Medium truck volume : 2763 veh/TimePeriod
Heavy truck volume : 4420 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 10: 407N.Bar.S

Angle1 Angle2 : -46.00 deg -11.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 207.00 m
Receiver height : 1.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : -46.00 deg Angle2 : -11.00 deg
Barrier height : 30.00 m
Elevation : 6.00 m
Barrier receiver distance : 100.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↑
Results segment # 1: Ninth.Bar.N

Source height = 1.16 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.16	1.50	1.46	1.46

ROAD (0.00 + 43.62 + 0.00) = 43.62 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-83	71	0.00	69.79	0.00	-5.56	-0.68	0.00	0.00	-19.92	43.62

Segment Leq : 43.62 dBA

↟

Results segment # 2: Ninth.Bar.E

Source height = 1.16 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.16	1.50	1.31	1.31

ROAD (0.00 + 38.54 + 0.00) = 38.54 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
71	90	0.00	69.79	0.00	-5.56	-9.77	0.00	0.00	-15.92	38.54

Segment Leq : 38.54 dBA

↟

Results segment # 3: Elgi.Bar.N

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	1.50	1.49	1.49

ROAD (0.00 + 33.81 + 0.00) = 33.81 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-19	0.00	67.19	0.00	-11.52	-4.04	0.00	0.00	-17.82	33.81

Segment Leq : 33.81 dBA

↟

Results segment # 4: Egli.Bar.E

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	1.50	1.44	1.44

ROAD (0.00 + 29.45 + 0.00) = 29.45 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-19	24	0.00	67.19	0.00	-11.52	-6.22	0.00	0.00	-20.00	29.45

Segment Leq : 29.45 dBA

↟

Results segment # 5: Eglington.E

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	1.50	1.47	1.47

ROAD (0.00 + 46.12 + 0.00) = 46.12 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
24	44	0.00	67.19	0.00	-11.52	-9.54	0.00	0.00	-4.75	41.37*
24	44	0.00	67.19	0.00	-11.52	-9.54	0.00	0.00	0.00	46.12

* Bright Zone !

Segment Leq : 46.12 dBA

Results segment # 6: Egli.Bar.S

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	1.50	1.30	1.30

ROAD (0.00 + 28.58 + 0.00) = 28.58 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
44	79	0.00	67.19	0.00	-11.52	-7.11	0.00	0.00	-19.98	28.58

Segment Leq : 28.58 dBA

Results segment # 7: Eglington.S

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	1.50	1.30	1.30

ROAD (0.00 + 40.10 + 0.00) = 40.10 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
79	84	0.00	67.19	0.00	-11.52	-15.56	0.00	0.00	-5.00	35.11*

79	84	0.00	67.19	0.00	-11.52	-15.56	0.00	0.00	0.00	40.10

* Bright Zone !

Segment Leq : 40.10 dBA

Results segment # 8: Egli.Bar.W

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	1.50	1.30	1.30

ROAD (0.00 + 29.16 + 0.00) = 29.16 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
84	90	0.00	67.19	0.00	-11.52	-14.77	0.00	0.00	-11.73	29.16

Segment Leq : 29.16 dBA

Results segment # 9: 407N.E

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	1.50	1.51	1.51

ROAD (0.00 + 60.29 + 0.00) = 60.29 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-66	-46	0.00	81.23	0.00	-11.40	-9.54	0.00	0.00	-4.54	55.76*
-66	-46	0.00	81.23	0.00	-11.40	-9.54	0.00	0.00	0.00	60.29

* Bright Zone !

Segment Leq : 60.29 dBA

↟

Results segment # 10: 407N.Bar.S

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	1.50	1.59	1.59

ROAD (0.00 + 42.72 + 0.00) = 42.72 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-46	-11	0.00	81.23	0.00	-11.40	-7.11	0.00	0.00	-20.00	42.72

Segment Leq : 42.72 dBA

Total Leq All Segments: 60.70 dBA

↟

TOTAL Leq FROM ALL SOURCES: 60.70

↟

↟

STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:44:35
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: ola_e2_2.te Time Period: 16 hours
Description: Building E ola part 2.

Road data, segment # 1: 407N.S

Car traffic volume : 48068 veh/TimePeriod
Medium truck volume : 2763 veh/TimePeriod
Heavy truck volume : 4420 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: 407N.S

Angle1 Angle2 : -11.00 deg -6.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 207.00 m
Receiver height : 1.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : -11.00 deg Angle2 : -6.00 deg
Barrier height : 1.07 m
Elevation : 6.00 m
Barrier receiver distance : 6.50 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↑
Road data, segment # 2: 407N.Bar.W

Car traffic volume : 48068 veh/TimePeriod
Medium truck volume : 2763 veh/TimePeriod
Heavy truck volume : 4420 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: 407N.Bar.W

Angle1 Angle2 : -6.00 deg 32.00 deg
Wood depth : 0 (No woods.)

```
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 207.00 m
Receiver height           :   1.50 m
Topography                :      4       (Elevated; with barrier)
Barrier angle1            :  -6.00 deg   Angle2 : 32.00 deg
Barrier height            :  30.00 m
Elevation                 :   6.00 m
Barrier receiver distance : 100.00 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

↑

```
Road data, segment # 3: 407N.Bar.N
----------------------------------
Car traffic volume  : 48068 veh/TimePeriod
Medium truck volume :  2763 veh/TimePeriod
Heavy truck volume  :  4420 veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 3: 407N.Bar.N
--------------------------------
Angle1   Angle2           :  32.00 deg   86.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 207.00 m
Receiver height           :   1.50 m
Topography                :      4       (Elevated; with barrier)
Barrier angle1            :  32.00 deg   Angle2 : 86.00 deg
Barrier height            :  12.00 m
Elevation                 :   6.00 m
Barrier receiver distance :  15.50 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

↑

```
Road data, segment # 4: 407S.E
------------------------------
Car traffic volume  : 48068 veh/TimePeriod
Medium truck volume :  2763 veh/TimePeriod
Heavy truck volume  :  4420 veh/TimePeriod
```

```
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 4: 407S.E
----------------------------
Angle1   Angle2           : -66.00 deg   -46.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 234.00 m
Receiver height           :   1.50 m
Topography                :      4       (Elevated; with barrier)
Barrier angle1            : -66.00 deg   Angle2 : -46.00 deg
Barrier height            :   1.07 m
Elevation                 :   6.00 m
Barrier receiver distance :   6.50 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00

↟
Road data, segment # 5: 407S.Bar.S
----------------------------------
Car traffic volume  : 48068 veh/TimePeriod
Medium truck volume :  2763 veh/TimePeriod
Heavy truck volume  :  4420 veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 5: 407S.Bar.S
--------------------------------
Angle1   Angle2           : -46.00 deg   -11.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 234.00 m
Receiver height           :   1.50 m
Topography                :      4       (Elevated; with barrier)
Barrier angle1            : -46.00 deg   Angle2 : -11.00 deg
Barrier height            :  30.00 m
Elevation                 :   6.00 m
Barrier receiver distance : 100.00 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
```

```
Reference angle           :   0.00
```

↟

```
Road data, segment # 6: 407S.S
------------------------------
Car traffic volume  : 48068 veh/TimePeriod
Medium truck volume :  2763 veh/TimePeriod
Heavy truck volume  :  4420 veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 6: 407S.S
----------------------------
Angle1   Angle2           : -11.00 deg   -6.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 234.00 m
Receiver height           :   1.50 m
Topography                :      4       (Elevated; with barrier)
Barrier angle1            : -11.00 deg   Angle2 : -6.00 deg
Barrier height            :   1.07 m
Elevation                 :   6.00 m
Barrier receiver distance :   6.50 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

↟

```
Road data, segment # 7: 407S.Bar.W
----------------------------------
Car traffic volume  : 48068 veh/TimePeriod
Medium truck volume :  2763 veh/TimePeriod
Heavy truck volume  :  4420 veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 7: 407S.Bar.W
--------------------------------
Angle1   Angle2           :  -6.00 deg   32.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 234.00 m
Receiver height           :   1.50 m
```

```
Topography                :      4       (Elevated; with barrier)
Barrier angle1            :  -6.00 deg   Angle2 : 32.00 deg
Barrier height            :  30.00 m
Elevation                 :   6.00 m
Barrier receiver distance : 100.00 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```



```
Road data, segment # 8: 407S.Bar.N
----------------------------------
Car traffic volume  : 48068 veh/TimePeriod
Medium truck volume :  2763 veh/TimePeriod
Heavy truck volume  :  4420 veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 8: 407S.Bar.N
--------------------------------
Angle1   Angle2           :  32.00 deg   86.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 234.00 m
Receiver height           :   1.50 m
Topography                :      4       (Elevated; with barrier)
Barrier angle1            :  32.00 deg   Angle2 : 86.00 deg
Barrier height            :  12.00 m
Elevation                 :   6.00 m
Barrier receiver distance :  15.50 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```



```
Road data, segment # 9: 407N.Bar.E
----------------------------------
Car traffic volume  : 48068 veh/TimePeriod
Medium truck volume :  2763 veh/TimePeriod
Heavy truck volume  :  4420 veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)
```

Data for Segment # 9: 407N.Bar.E

Angle1 Angle2 : -90.00 deg -66.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 207.00 m
Receiver height : 1.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -66.00 deg
Barrier height : 18.00 m
Elevation : 6.00 m
Barrier receiver distance : 30.50 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↑
Road data, segment # 10: 407S.Bar.E

Car traffic volume : 48068 veh/TimePeriod
Medium truck volume : 2763 veh/TimePeriod
Heavy truck volume : 4420 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 10: 407S.Bar.E

Angle1 Angle2 : -90.00 deg -66.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 234.00 m
Receiver height : 1.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -66.00 deg
Barrier height : 18.00 m
Elevation : 6.00 m
Barrier receiver distance : 30.50 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↑
Results segment # 1: 407N.S

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	1.50	1.51	1.51

ROAD (0.00 + 54.27 + 0.00) = 54.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-11	-6	0.00	81.23	0.00	-11.40	-15.56	0.00	0.00	-4.16	50.12*
-11	-6	0.00	81.23	0.00	-11.40	-15.56	0.00	0.00	0.00	54.27

* Bright Zone !

Segment Leq : 54.27 dBA

Results segment # 2: 407N.Bar.W

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	1.50	1.59	1.59

ROAD (0.00 + 43.08 + 0.00) = 43.08 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-6	32	0.00	81.23	0.00	-11.40	-6.75	0.00	0.00	-20.00	43.08

Segment Leq : 43.08 dBA

Results segment # 3: 407N.Bar.N

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	1.50	1.51	1.51

ROAD (0.00 + 46.58 + 0.00) = 46.58 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
32	86	0.00	81.23	0.00	-11.40	-5.23	0.00	0.00	-18.03	46.58

Segment Leq : 46.58 dBA

↟

Results segment # 4: 407S.E

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	1.50	1.51	1.51

ROAD (0.00 + 59.76 + 0.00) = 59.76 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-66	-46	0.00	81.23	0.00	-11.93	-9.54	0.00	0.00	-4.54	55.22*
-66	-46	0.00	81.23	0.00	-11.93	-9.54	0.00	0.00	0.00	59.76

* Bright Zone !

Segment Leq : 59.76 dBA

↟

Results segment # 5: 407S.Bar.S

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	1.50	1.58	1.58

ROAD (0.00 + 42.19 + 0.00) = 42.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-46	-11	0.00	81.23	0.00	-11.93	-7.11	0.00	0.00	-20.00	42.19

Segment Leq : 42.19 dBA

Results segment # 6: 407S.S

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	1.50	1.51	1.51

ROAD (0.00 + 53.74 + 0.00) = 53.74 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-11	-6	0.00	81.23	0.00	-11.93	-15.56	0.00	0.00	-4.16	49.58*
-11	-6	0.00	81.23	0.00	-11.93	-15.56	0.00	0.00	0.00	53.74

* Bright Zone !

Segment Leq : 53.74 dBA

Results segment # 7: 407S.Bar.W

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)

```
       1.68 !        1.50 !        1.58 !         1.58

ROAD (0.00 + 42.55 + 0.00) = 42.55 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    -6     32   0.00  81.23   0.00 -11.93  -6.75   0.00   0.00 -20.00  42.55
-------------------------------------------------------------------------------

Segment Leq : 42.55 dBA

♠
Results segment # 8: 407S.Bar.N
-------------------------------

Source height = 1.68 m

Barrier height for grazing incidence
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.68 !        1.50 !        1.51 !         1.51

ROAD (0.00 + 46.07 + 0.00) = 46.07 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    32     86   0.00  81.23   0.00 -11.93  -5.23   0.00   0.00 -18.00  46.07
-------------------------------------------------------------------------------

Segment Leq : 46.07 dBA

♠
Results segment # 9: 407N.Bar.E
-------------------------------

Source height = 1.68 m

Barrier height for grazing incidence
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.68 !        1.50 !        1.53 !         1.53

ROAD (0.00 + 46.41 + 0.00) = 46.41 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -66   0.00  81.23   0.00 -11.40  -8.75   0.00   0.00 -14.68  46.41
```

Segment Leq : 46.41 dBA

↟
Results segment # 10: 407S.Bar.E

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	1.50	1.52	1.52

ROAD (0.00 + 45.94 + 0.00) = 45.94 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-66	0.00	81.23	0.00	-11.93	-8.75	0.00	0.00	-14.61	45.94

Segment Leq : 45.94 dBA

Total Leq All Segments: 62.24 dBA

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TOTAL Leq FROM ALL SOURCES: 62.24
↟
↟

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STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:45:43
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: nth_n.te Time Period: Day/Night 16/8 hours
Description: North TH north facade.

Road data, segment # 1: Ninth.N (day/night)

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Ninth.N (day/night)

Angle1 Angle2 : -83.00 deg 57.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 136.50 / 136.50 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Ninth.E (day/night)

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Ninth.E (day/night)

Angle1 Angle2 : 83.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 136.50 / 136.50 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟

Road data, segment # 3: Ninth.Bar (day/night)

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: Ninth.Bar (day/night)

Angle1 Angle2 : 57.00 deg 83.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 136.50 / 136.50 m
Receiver height : 9.00 / 9.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : 57.00 deg Angle2 : 83.00 deg
Barrier height : 18.00 m
Barrier receiver distance : 87.00 / 87.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↟

Road data, segment # 4: Egli.N (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 4: Egli.N (day/night)

Angle1 Angle2 : 0.00 deg 57.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 387.00 / 387.00 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Road data, segment # 5: Egli.E (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 5: Egli.E (day/night)

Angle1 Angle2 : 83.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 387.00 / 387.00 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Road data, segment # 6: Egli.Bar (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 6: Egli.Bar (day/night)

Angle1 Angle2 : 57.00 deg 83.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 387.00 / 387.00 m
Receiver height : 9.00 / 9.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : 57.00 deg Angle2 : 83.00 deg
Barrier height : 18.00 m
Barrier receiver distance : 87.00 / 87.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↟
Results segment # 1: Ninth.N (day)

Source height = 1.16 m

ROAD (0.00 + 59.11 + 0.00) = 59.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-83	57	0.00	69.79	0.00	-9.59	-1.09	0.00	0.00	0.00	59.11

Segment Leq : 59.11 dBA

↟
Results segment # 2: Ninth.E (day)

Source height = 1.16 m

ROAD (0.00 + 46.10 + 0.00) = 46.10 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
83	90	0.00	69.79	0.00	-9.59	-14.10	0.00	0.00	0.00	46.10

Segment Leq : 46.10 dBA

↟
Results segment # 3: Ninth.Bar (day)

Source height = 1.16 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.16	9.00	4.00	4.00

ROAD (0.00 + 34.75 + 0.00) = 34.75 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
57	83	0.00	69.79	0.00	-9.59	-8.40	0.00	0.00	-17.05	34.75

Segment Leq : 34.75 dBA

Results segment # 4: Egli.N (day)

Source height = 1.08 m

ROAD (0.00 + 48.08 + 0.00) = 48.08 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	57	0.00	67.19	0.00	-14.12	-4.99	0.00	0.00	0.00	48.08

Segment Leq : 48.08 dBA

Results segment # 5: Egli.E (day)

Source height = 1.08 m

ROAD (0.00 + 38.97 + 0.00) = 38.97 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
83	90	0.00	67.19	0.00	-14.12	-14.10	0.00	0.00	0.00	38.97

Segment Leq : 38.97 dBA

Results segment # 6: Egli.Bar (day)

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	9.00	7.22	7.22

ROAD (0.00 + 32.73 + 0.00) = 32.73 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
57	83	0.00	67.19	0.00	-14.12	-8.40	0.00	0.00	-11.94	32.73

Segment Leq : 32.73 dBA

Total Leq All Segments: 59.70 dBA

↟
Results segment # 1: Ninth.N (night)

Source height = 1.16 m

ROAD (0.00 + 52.59 + 0.00) = 52.59 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-83	57	0.00	63.27	0.00	-9.59	-1.09	0.00	0.00	0.00	52.59

Segment Leq : 52.59 dBA

↟
Results segment # 2: Ninth.E (night)

Source height = 1.16 m

ROAD (0.00 + 39.57 + 0.00) = 39.57 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
83	90	0.00	63.27	0.00	-9.59	-14.10	0.00	0.00	0.00	39.57

Segment Leq : 39.57 dBA

↟
Results segment # 3: Ninth.Bar (night)

Source height = 1.16 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.16	9.00	4.00	4.00

ROAD (0.00 + 28.23 + 0.00) = 28.23 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq

```
                                        K
    57     83   0.00  63.27   0.00  -9.59  -8.40   0.00   0.00 -17.04  28.23
-------------------------------------------------------------------------------

Segment Leq : 28.23 dBA

↟
Results segment # 4: Egli.N (night)
-----------------------------------

Source height = 1.08 m

ROAD (0.00 + 41.55 + 0.00) = 41.55 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     57   0.00  60.66   0.00 -14.12  -4.99   0.00   0.00   0.00  41.55
-------------------------------------------------------------------------------

Segment Leq : 41.55 dBA

↟
Results segment # 5: Egli.E (night)
-----------------------------------

Source height = 1.08 m

ROAD (0.00 + 32.44 + 0.00) = 32.44 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    83     90   0.00  60.66   0.00 -14.12 -14.10   0.00   0.00   0.00  32.44
-------------------------------------------------------------------------------

Segment Leq : 32.44 dBA

↟
Results segment # 6: Egli.Bar (night)
-----------------------------------

Source height = 1.08 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.08 !        9.00 !        7.22 !         7.22

ROAD (0.00 + 26.20 + 0.00) = 26.20 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
```

```
                                          K
-------------------------------------------------------------------------------
    57     83   0.00  60.66   0.00 -14.12  -8.40   0.00   0.00 -11.94  26.20
-------------------------------------------------------------------------------

Segment Leq : 26.20 dBA

Total Leq All Segments: 53.18 dBA

↑



TOTAL Leq FROM ALL SOURCES (DAY): 59.70
                           (NIGHT): 53.18
↑
↑
```

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STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:46:13
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: nth_e_2.te Time Period: Day/Night 16/8 hours
Description: North TH east facade.

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

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Ninth (day/night)

Angle1 Angle2 : -90.00 deg -38.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 153.50 / 153.50 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Ninth.Bar (day/night)

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Ninth.Bar (day/night)

Angle1 Angle2 : -38.00 deg 7.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 153.50 / 153.50 m
Receiver height : 9.00 / 9.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -38.00 deg Angle2 : 7.00 deg
Barrier height : 30.00 m

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Barrier receiver distance : 17.00 / 17.00 m
Source elevation   :   0.00 m
Receiver elevation   :   0.00 m
Barrier elevation   :   0.00 m
Reference angle   :   0.00

↟
Road data, segment # 3: Egli.N (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume :   252/28   veh/TimePeriod
Heavy truck volume :   207/23   veh/TimePeriod
Posted speed limit :   60 km/h
Road gradient   :   2 %
Road pavement   :   1 (Typical asphalt or concrete)

Data for Segment # 3: Egli.N (day/night)

Angle1   Angle2   : -90.00 deg   -38.00 deg
Wood depth   :   0   (No woods.)
No of house rows   :   0 / 0
Surface   :   2   (Reflective ground surface)
Receiver source distance : 376.00 / 376.00 m
Receiver height   :   9.00 / 9.00   m
Topography   :   1   (Flat/gentle slope; no barrier)
Reference angle   :   0.00

↟
Road data, segment # 4: Egli.S (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume :   252/28   veh/TimePeriod
Heavy truck volume :   207/23   veh/TimePeriod
Posted speed limit :   60 km/h
Road gradient   :   2 %
Road pavement   :   1 (Typical asphalt or concrete)

Data for Segment # 4: Egli.S (day/night)

Angle1   Angle2   : 70.00 deg   90.00 deg
Wood depth   :   0   (No woods.)
No of house rows   :   0 / 0
Surface   :   2   (Reflective ground surface)
Receiver source distance : 376.00 / 376.00 m
Receiver height   :   9.00 / 9.00   m
Topography   :   1   (Flat/gentle slope; no barrier)
Reference angle   :   0.00

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Road data, segment # 5: Egli.Bar (day/night)

```
-----------------------------------------
Car traffic volume  : 14841/1649  veh/TimePeriod
Medium truck volume :   252/28    veh/TimePeriod
Heavy truck volume  :   207/23    veh/TimePeriod
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 5: Egli.Bar (day/night)
-----------------------------------------
Angle1   Angle2           : -38.00 deg   70.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 376.00 / 376.00 m
Receiver height           :   9.00 / 9.00   m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -38.00 deg   Angle2 : 70.00 deg
Barrier height            :  30.00 m
Barrier receiver distance :  17.00 / 17.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

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Road data, segment # 6: 407N (day/night)

```
-----------------------------------------
Car traffic volume  : 48068/8483  veh/TimePeriod
Medium truck volume :  2763/488   veh/TimePeriod
Heavy truck volume  :  4420/780   veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 6: 407N (day/night)
-----------------------------------------
Angle1   Angle2           :  70.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 136.00 / 136.00 m
Receiver height           :   9.00 / 9.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

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Road data, segment # 7: 407N.Bar (day/night)

```
------------------------------------------
Car traffic volume  : 48068/8483  veh/TimePeriod
Medium truck volume :  2763/488   veh/TimePeriod
Heavy truck volume  :  4420/780   veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 7: 407N.Bar (day/night)
------------------------------------------
Angle1   Angle2           :  -4.00 deg   70.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 136.00 / 136.00 m
Receiver height           :   9.00 / 9.00   m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            :  -4.00 deg   Angle2 : 70.00 deg
Barrier height            :  30.00 m
Barrier receiver distance :  17.00 / 17.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

↟

Road data, segment # 8: 407S (day/night)

```
------------------------------------------
Car traffic volume  : 48068/8483  veh/TimePeriod
Medium truck volume :  2763/488   veh/TimePeriod
Heavy truck volume  :  4420/780   veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 8: 407S (day/night)
------------------------------------------
Angle1   Angle2           :  70.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 163.00 / 163.00 m
Receiver height           :   9.00 / 9.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

Road data, segment # 9: 407S.Bar (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 9: 407S.Bar (day/night)

Angle1 Angle2 : -4.00 deg 70.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 163.00 / 163.00 m
Receiver height : 9.00 / 9.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -4.00 deg Angle2 : 70.00 deg
Barrier height : 30.00 m
Barrier receiver distance : 17.00 / 17.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Results segment # 1: Ninth (day)

Source height = 1.16 m

ROAD (0.00 + 54.30 + 0.00) = 54.30 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-38	0.00	69.79	0.00	-10.10	-5.39	0.00	0.00	0.00	54.30

Segment Leq : 54.30 dBA

Results segment # 2: Ninth.Bar (day)

Source height = 1.16 m

Barrier height for grazing incidence

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Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.16	9.00	8.13	8.13

ROAD (0.00 + 33.67 + 0.00) = 33.67 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-38	7	0.00	69.79	0.00	-10.10	-6.02	0.00	0.00	-20.00	33.67

Segment Leq : 33.67 dBA

↟
Results segment # 3: Egli.N (day)

Source height = 1.08 m

ROAD (0.00 + 47.81 + 0.00) = 47.81 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-38	0.00	67.19	0.00	-13.99	-5.39	0.00	0.00	0.00	47.81

Segment Leq : 47.81 dBA

↟
Results segment # 4: Egli.S (day)

Source height = 1.08 m

ROAD (0.00 + 43.66 + 0.00) = 43.66 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
70	90	0.00	67.19	0.00	-13.99	-9.54	0.00	0.00	0.00	43.66

Segment Leq : 43.66 dBA

↟
Results segment # 5: Egli.Bar (day)

Source height = 1.08 m

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Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	9.00	8.64	8.64

ROAD (0.00 + 30.98 + 0.00) = 30.98 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-38	70	0.00	67.19	0.00	-13.99	-2.22	0.00	0.00	-20.00	30.98

Segment Leq : 30.98 dBA

Results segment # 6: 407N (day)

Source height = 1.68 m

ROAD (0.00 + 62.12 + 0.00) = 62.12 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
70	90	0.00	81.23	0.00	-9.57	-9.54	0.00	0.00	0.00	62.12

Segment Leq : 62.12 dBA

Results segment # 7: 407N.Bar (day)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	9.00	8.09	8.09

ROAD (0.00 + 47.80 + 0.00) = 47.80 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-4	70	0.00	81.23	0.00	-9.57	-3.86	0.00	0.00	-20.00	47.80

Segment Leq : 47.80 dBA

↟
Results segment # 8: 407S (day)

Source height = 1.68 m

ROAD (0.00 + 61.33 + 0.00) = 61.33 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
70	90	0.00	81.23	0.00	-10.36	-9.54	0.00	0.00	0.00	61.33

Segment Leq : 61.33 dBA

↟
Results segment # 9: 407S.Bar (day)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	9.00	8.24	8.24

ROAD (0.00 + 47.01 + 0.00) = 47.01 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-4	70	0.00	81.23	0.00	-10.36	-3.86	0.00	0.00	-20.00	47.01

Segment Leq : 47.01 dBA

Total Leq All Segments: 65.38 dBA

↟
Results segment # 1: Ninth (night)

Source height = 1.16 m

ROAD (0.00 + 47.77 + 0.00) = 47.77 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq

```
                                          L
   -90    -38   0.00  63.27   0.00 -10.10  -5.39   0.00   0.00   0.00  47.77
-------------------------------------------------------------------------------

Segment Leq : 47.77 dBA

↟
Results segment # 2: Ninth.Bar (night)
-------------------------------------

Source height = 1.16 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.16 !        9.00 !        8.13 !         8.13

ROAD (0.00 + 27.15 + 0.00) = 27.15 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -38      7   0.00  63.27   0.00 -10.10  -6.02   0.00   0.00 -20.00  27.15
-------------------------------------------------------------------------------

Segment Leq : 27.15 dBA

↟
Results segment # 3: Egli.N (night)
-----------------------------------

Source height = 1.08 m

ROAD (0.00 + 41.27 + 0.00) = 41.27 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -38   0.00  60.66   0.00 -13.99  -5.39   0.00   0.00   0.00  41.27
-------------------------------------------------------------------------------

Segment Leq : 41.27 dBA

↟
Results segment # 4: Egli.S (night)
-----------------------------------

Source height = 1.08 m

ROAD (0.00 + 37.12 + 0.00) = 37.12 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
```

70	90	0.00	60.66	0.00	-13.99	-9.54	0.00	0.00	0.00	37.12

Segment Leq : 37.12 dBA

Results segment # 5: Egli.Bar (night)

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	9.00	8.64	8.64

ROAD (0.00 + 24.45 + 0.00) = 24.45 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-38	70	0.00	60.66	0.00	-13.99	-2.22	0.00	0.00	-20.00	24.45

Segment Leq : 24.45 dBA

Results segment # 6: 407N (night)

Source height = 1.68 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
70	90	0.00	76.71	0.00	-9.57	-9.54	0.00	0.00	0.00	57.60

Segment Leq : 57.60 dBA

Results segment # 7: 407N.Bar (night)

Source height = 1.68 m

Barrier height for grazing incidence

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Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	9.00	8.09	8.09

ROAD (0.00 + 43.28 + 0.00) = 43.28 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-4	70	0.00	76.71	0.00	-9.57	-3.86	0.00	0.00	-20.00	43.28

Segment Leq : 43.28 dBA

Results segment # 8: 407S (night)

Source height = 1.68 m

ROAD (0.00 + 56.81 + 0.00) = 56.81 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
70	90	0.00	76.71	0.00	-10.36	-9.54	0.00	0.00	0.00	56.81

Segment Leq : 56.81 dBA

Results segment # 9: 407S.Bar (night)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	9.00	8.24	8.24

ROAD (0.00 + 42.49 + 0.00) = 42.49 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-4	70	0.00	76.71	0.00	-10.36	-3.86	0.00	0.00	-20.00	42.49

Segment Leq : 42.49 dBA

L

Total Leq All Segments: 60.69 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 65.38
(NIGHT): 60.69

M

STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:47:03
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: nth_s_2.te Time Period: Day/Night 16/8 hours
Description: North TH south facade.

Road data, segment # 1: Egli.Bar.E (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Egli.Bar.E (day/night)

Angle1 Angle2 : -90.00 deg -45.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 386.50 / 386.50 m
Receiver height : 9.00 / 9.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -45.00 deg
Barrier height : 30.00 m
Barrier receiver distance : 39.00 / 39.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↑
Road data, segment # 2: Egli.Bar.S (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Egli.Bar.S (day/night)

Angle1 Angle2 : -45.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0

```
                                        M
Surface                    :      2       (Reflective ground surface)
Receiver source distance   : 386.50 / 386.50 m
Receiver height            :   9.00 / 9.00   m
Topography                 :      2       (Flat/gentle slope; with barrier)
Barrier angle1             : -45.00 deg   Angle2 : 0.00 deg
Barrier height             :   9.00 m
Barrier receiver distance  :  10.00 / 10.00  m
Source elevation           :   0.00 m
Receiver elevation         :   0.00 m
Barrier elevation          :   0.00 m
Reference angle            :   0.00

↑
Road data, segment # 3: 407N (day/night)
---------------------------------------
Car traffic volume  : 48068/8483  veh/TimePeriod
Medium truck volume :  2763/488   veh/TimePeriod
Heavy truck volume  :  4420/780   veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 3: 407N (day/night)
---------------------------------------
Angle1   Angle2            :  43.00 deg   86.00 deg
Wood depth                 :      0       (No woods.)
No of house rows           :      0 / 0
Surface                    :      2       (Reflective ground surface)
Receiver source distance   : 117.00 / 117.00 m
Receiver height            :   9.00 / 9.00   m
Topography                 :      1       (Flat/gentle slope; no barrier)
Reference angle            :   0.00

↑
Road data, segment # 4: 407N.Bar.E (day/night)
-----------------------------------------------
Car traffic volume  : 48068/8483  veh/TimePeriod
Medium truck volume :  2763/488   veh/TimePeriod
Heavy truck volume  :  4420/780   veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 4: 407N.Bar.E (day/night)
-----------------------------------------------
Angle1   Angle2            : -90.00 deg   -45.00 deg
Wood depth                 :      0       (No woods.)
No of house rows           :      0 / 0
```

```
                                        M
Surface                    :      2       (Reflective ground surface)
Receiver source distance   : 117.00 / 117.00 m
Receiver height            :   9.00 / 9.00   m
Topography                 :      2       (Flat/gentle slope; with barrier)
Barrier angle1             : -90.00 deg   Angle2 : -45.00 deg
Barrier height             :  30.00 m
Barrier receiver distance  :  39.00 / 39.00  m
Source elevation           :   0.00 m
Receiver elevation         :   0.00 m
Barrier elevation          :   0.00 m
Reference angle            :   0.00
```

↟

```
Road data, segment # 5: 407N.Bar.S (day/night)
----------------------------------------------
Car traffic volume  : 48068/8483  veh/TimePeriod
Medium truck volume :  2763/488   veh/TimePeriod
Heavy truck volume  :  4420/780   veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 5: 407N.Bar.S (day/night)
--------------------------------------------
Angle1   Angle2            : -45.00 deg   43.00 deg
Wood depth                 :      0       (No woods.)
No of house rows           :      0 / 0
Surface                    :      2       (Reflective ground surface)
Receiver source distance   : 117.00 / 117.00 m
Receiver height            :   9.00 / 9.00   m
Topography                 :      2       (Flat/gentle slope; with barrier)
Barrier angle1             : -45.00 deg   Angle2 : 43.00 deg
Barrier height             :   9.00 m
Barrier receiver distance  :  10.00 / 10.00  m
Source elevation           :   0.00 m
Receiver elevation         :   0.00 m
Barrier elevation          :   0.00 m
Reference angle            :   0.00
```

↟

```
Road data, segment # 6: 407S (day/night)
----------------------------------------
Car traffic volume  : 48068/8483  veh/TimePeriod
Medium truck volume :  2763/488   veh/TimePeriod
Heavy truck volume  :  4420/780   veh/TimePeriod
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)
```

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Data for Segment # 6: 407S (day/night)

Angle1 Angle2 : 43.00 deg 86.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 144.00 / 144.00 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟
Road data, segment # 7: 407S.Bar.E (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 7: 407S.Bar.E (day/night)

Angle1 Angle2 : -90.00 deg -45.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 144.00 / 144.00 m
Receiver height : 9.00 / 9.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -45.00 deg
Barrier height : 30.00 m
Barrier receiver distance : 39.00 / 39.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

↟
Road data, segment # 8: 407S.Bar.S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 8: 407S.Bar.S (day/night)

Angle1 Angle2 : -45.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 144.00 / 144.00 m
Receiver height : 9.00 / 9.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -45.00 deg Angle2 : 43.00 deg
Barrier height : 9.00 m
Barrier receiver distance : 10.00 / 10.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Results segment # 1: Egli.Bar.E (day)

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	9.00	8.20	8.20

ROAD (0.00 + 30.04 + 0.00) = 30.04 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.00	67.19	0.00	-14.11	-6.02	0.00	0.00	-17.02	30.04

Segment Leq : 30.04 dBA

Results segment # 2: Egli.Bar.S (day)

Source height = 1.08 m

Barrier height for grazing incidence

Source ! Receiver ! Barrier ! Elevation of

M

Height (m)	Height (m)	Height (m)	Barrier Top (m)
1.08	9.00	8.80	8.80

ROAD (0.00 + 41.96 + 0.00) = 41.96 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	0	0.00	67.19	0.00	-14.11	-6.02	0.00	0.00	-5.10	41.96

Segment Leq : 41.96 dBA

↟

Results segment # 3: 407N (day)

Source height = 1.68 m

ROAD (0.00 + 66.10 + 0.00) = 66.10 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
43	86	0.00	81.23	0.00	-8.92	-6.22	0.00	0.00	0.00	66.10

Segment Leq : 66.10 dBA

↟

Results segment # 4: 407N.Bar.E (day)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	9.00	6.56	6.56

ROAD (0.00 + 48.41 + 0.00) = 48.41 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.00	81.23	0.00	-8.92	-6.02	0.00	0.00	-17.88	48.41

Segment Leq : 48.41 dBA

↟

M

Results segment # 5: 407N.Bar.S (day)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	9.00	8.37	8.37

ROAD (0.00 + 63.26 + 0.00) = 63.26 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	43	0.00	81.23	0.00	-8.92	-3.11	0.00	0.00	-5.94	63.26

Segment Leq : 63.26 dBA

↟
Results segment # 6: 407S (day)

Source height = 1.68 m

ROAD (0.00 + 65.19 + 0.00) = 65.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
43	86	0.00	81.23	0.00	-9.82	-6.22	0.00	0.00	0.00	65.19

Segment Leq : 65.19 dBA

↟
Results segment # 7: 407S.Bar.E (day)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	9.00	7.02	7.02

ROAD (0.00 + 47.73 + 0.00) = 47.73 dBA

M

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.00	81.23	0.00	-9.82	-6.02	0.00	0.00	-17.66	47.73

Segment Leq : 47.73 dBA

↟

Results segment # 8: 407S.Bar.S (day)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	9.00	8.49	8.49

ROAD (0.00 + 62.67 + 0.00) = 62.67 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	43	0.00	81.23	0.00	-9.82	-3.11	0.00	0.00	-5.63	62.67

Segment Leq : 62.67 dBA

Total Leq All Segments: 70.60 dBA

↟

Results segment # 1: Egli.Bar.E (night)

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	9.00	8.20	8.20

ROAD (0.00 + 23.50 + 0.00) = 23.50 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.00	60.66	0.00	-14.11	-6.02	0.00	0.00	-17.02	23.50

Segment Leq : 23.50 dBA

↟
Results segment # 2: Egli.Bar.S (night)

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	9.00	8.80	8.80

ROAD (0.00 + 35.42 + 0.00) = 35.42 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	0	0.00	60.66	0.00	-14.11	-6.02	0.00	0.00	-5.10	35.42

Segment Leq : 35.42 dBA

↟
Results segment # 3: 407N (night)

Source height = 1.68 m

ROAD (0.00 + 61.57 + 0.00) = 61.57 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
43	86	0.00	76.71	0.00	-8.92	-6.22	0.00	0.00	0.00	61.57

Segment Leq : 61.57 dBA

↟
Results segment # 4: 407N.Bar.E (night)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)

```
                                        M
------------+-------------+-------------+--------------
       1.68 !        9.00 !        6.56 !         6.56

ROAD (0.00 + 43.89 + 0.00) = 43.89 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -45   0.00  76.71   0.00  -8.92  -6.02   0.00   0.00 -17.88  43.89
-------------------------------------------------------------------------------

Segment Leq : 43.89 dBA

↟
Results segment # 5: 407N.Bar.S (night)
---------------------------------------

Source height = 1.68 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.68 !        9.00 !        8.37 !         8.37

ROAD (0.00 + 58.74 + 0.00) = 58.74 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -45     43   0.00  76.71   0.00  -8.92  -3.11   0.00   0.00  -5.94  58.74
-------------------------------------------------------------------------------

Segment Leq : 58.74 dBA

↟
Results segment # 6: 407S (night)
---------------------------------

Source height = 1.68 m

ROAD (0.00 + 60.67 + 0.00) = 60.67 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    43     86   0.00  76.71   0.00  -9.82  -6.22   0.00   0.00   0.00  60.67
-------------------------------------------------------------------------------

Segment Leq : 60.67 dBA

↟
Results segment # 7: 407S.Bar.E (night)
```

M

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	9.00	7.02	7.02

ROAD (0.00 + 43.21 + 0.00) = 43.21 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.00	76.71	0.00	-9.82	-6.02	0.00	0.00	-17.66	43.21

Segment Leq : 43.21 dBA

Results segment # 8: 407S.Bar.S (night)

Source height = 1.68 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.68	9.00	8.49	8.49

ROAD (0.00 + 58.15 + 0.00) = 58.15 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	43	0.00	76.71	0.00	-9.82	-3.11	0.00	0.00	-5.63	58.15

Segment Leq : 58.15 dBA

Total Leq All Segments: 66.08 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 70.60
(NIGHT): 66.08

M

N

STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:47:33
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: nth_w_2.te Time Period: Day/Night 16/8 hours
Description: North TH west facade.

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

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Ninth (day/night)

Angle1 Angle2 : 7.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 138.00 / 138.00 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: 407N (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: 407N (day/night)

Angle1 Angle2 : -90.00 deg -4.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 118.00 / 118.00 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 3: 407S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: 407S (day/night)

Angle1 Angle2 : -90.00 deg -4.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 145.00 / 145.00 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Ninth (day)

Source height = 1.16 m

ROAD (0.00 + 56.79 + 0.00) = 56.79 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
7	90	0.00	69.79	0.00	-9.64	-3.36	0.00	0.00	0.00	56.79

Segment Leq : 56.79 dBA

Results segment # 2: 407N (day)

Source height = 1.68 m

ROAD (0.00 + 69.07 + 0.00) = 69.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-4	0.00	81.23	0.00	-8.96	-3.21	0.00	0.00	0.00	69.07

Segment Leq : 69.07 dBA

N

Results segment # 3: 407S (day)

Source height = 1.68 m

ROAD (0.00 + 68.17 + 0.00) = 68.17 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-4	0.00	81.23	0.00	-9.85	-3.21	0.00	0.00	0.00	68.17

Segment Leq : 68.17 dBA

Total Leq All Segments: 71.79 dBA

Results segment # 1: Ninth (night)

Source height = 1.16 m

ROAD (0.00 + 50.27 + 0.00) = 50.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
7	90	0.00	63.27	0.00	-9.64	-3.36	0.00	0.00	0.00	50.27

Segment Leq : 50.27 dBA

Results segment # 2: 407N (night)

Source height = 1.68 m

ROAD (0.00 + 64.55 + 0.00) = 64.55 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-4	0.00	76.71	0.00	-8.96	-3.21	0.00	0.00	0.00	64.55

Segment Leq : 64.55 dBA

Results segment # 3: 407S (night)

N

Source height = 1.68 m

ROAD (0.00 + 63.65 + 0.00) = 63.65 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-4	0.00	76.71	0.00	-9.85	-3.21	0.00	0.00	0.00	63.65

Segment Leq : 63.65 dBA

Total Leq All Segments: 67.22 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 71.79
(NIGHT): 67.22

STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:48:29
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: sth_n.te Time Period: Day/Night 16/8 hours
Description: South TH north facade.

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

```
Car traffic volume  : 22896/2544  veh/TimePeriod
Medium truck volume :   525/58    veh/TimePeriod
Heavy truck volume  :   429/48    veh/TimePeriod
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)
```

Data for Segment # 1: Ninth (day/night)

```
Angle1   Angle2           : -83.00 deg   -43.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 183.50 / 183.50 m
Receiver height           :   9.00 / 9.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

Road data, segment # 2: Ninth.Bar.N (day/night)

```
Car traffic volume  : 22896/2544  veh/TimePeriod
Medium truck volume :   525/58    veh/TimePeriod
Heavy truck volume  :   429/48    veh/TimePeriod
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)
```

Data for Segment # 2: Ninth.Bar.N (day/night)

```
Angle1   Angle2           : -43.00 deg   43.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 183.50 / 183.50 m
Receiver height           :   9.00 / 9.00   m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -43.00 deg   Angle2 : 43.00 deg
Barrier height            :   9.00 m
```

O
Barrier receiver distance : 10.00 / 10.00 m
Source elevation   :   0.00 m
Receiver elevation   :   0.00 m
Barrier elevation   :   0.00 m
Reference angle   :   0.00

↟
Road data, segment # 3: Ninth.Bar.E (day/night)

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume :   525/58   veh/TimePeriod
Heavy truck volume :   429/48   veh/TimePeriod
Posted speed limit :   60 km/h
Road gradient   :   2 %
Road pavement   :   1 (Typical asphalt or concrete)

Data for Segment # 3: Ninth.Bar.E (day/night)

Angle1   Angle2   : 43.00 deg   90.00 deg
Wood depth   :   0   (No woods.)
No of house rows   :   0 / 0
Surface   :   2   (Reflective ground surface)
Receiver source distance : 183.50 / 183.50 m
Receiver height   :   9.00 / 9.00   m
Topography   :   2   (Flat/gentle slope; with barrier)
Barrier angle1   : 43.00 deg   Angle2 : 90.00 deg
Barrier height   : 30.00 m
Barrier receiver distance : 40.00 / 40.00 m
Source elevation   :   0.00 m
Receiver elevation   :   0.00 m
Barrier elevation   :   0.00 m
Reference angle   :   0.00

↟
Road data, segment # 4: Elgi.Bar.N (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume :   252/28   veh/TimePeriod
Heavy truck volume :   207/23   veh/TimePeriod
Posted speed limit :   60 km/h
Road gradient   :   2 %
Road pavement   :   1 (Typical asphalt or concrete)

Data for Segment # 4: Elgi.Bar.N (day/night)

Angle1   Angle2   :   0.00 deg   43.00 deg
Wood depth   :   0   (No woods.)
No of house rows   :   0 / 0

```
                                        O
Surface                    :      2       (Reflective ground surface)
Receiver source distance   : 386.50 / 386.50 m
Receiver height            :   9.00 / 9.00   m
Topography                 :      2       (Flat/gentle slope; with barrier)
Barrier angle1             :   0.00 deg   Angle2 : 43.00 deg
Barrier height             :   9.00 m
Barrier receiver distance :  10.00 / 10.00  m
Source elevation           :   0.00 m
Receiver elevation         :   0.00 m
Barrier elevation          :   0.00 m
Reference angle            :   0.00
```

```
Road data, segment # 5: Egli.Bar.E (day/night)
-----------------------------------------------
Car traffic volume  : 14841/1649  veh/TimePeriod
Medium truck volume :   252/28    veh/TimePeriod
Heavy truck volume  :   207/23    veh/TimePeriod
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 5: Egli.Bar.E (day/night)
-----------------------------------------------
Angle1   Angle2            :  43.00 deg   90.00 deg
Wood depth                 :      0       (No woods.)
No of house rows           :      0 / 0
Surface                    :      2       (Reflective ground surface)
Receiver source distance   : 386.50 / 386.50 m
Receiver height            :   9.00 / 9.00   m
Topography                 :      2       (Flat/gentle slope; with barrier)
Barrier angle1             :  43.00 deg   Angle2 : 90.00 deg
Barrier height             :  30.00 m
Barrier receiver distance :  40.00 / 40.00  m
Source elevation           :   0.00 m
Receiver elevation         :   0.00 m
Barrier elevation          :   0.00 m
Reference angle            :   0.00
```

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

Source height = 1.16 m

ROAD (0.00 + 52.38 + 0.00) = 52.38 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
```

O

-83	-43	0.00	69.79	0.00	-10.88	-6.53	0.00	0.00	0.00	52.38

Segment Leq : 52.38 dBA

Results segment # 2: Ninth.Bar.N (day)

Source height = 1.16 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.16	9.00	8.57	8.57

ROAD (0.00 + 50.26 + 0.00) = 50.26 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-43	43	0.00	69.79	0.00	-10.88	-3.21	0.00	0.00	-5.45	50.26

Segment Leq : 50.26 dBA

Results segment # 3: Ninth.Bar.E (day)

Source height = 1.16 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.16	9.00	7.29	7.29

ROAD (0.00 + 35.55 + 0.00) = 35.55 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
43	90	0.00	69.79	0.00	-10.88	-5.83	0.00	0.00	-17.53	35.55

Segment Leq : 35.55 dBA

Results segment # 4: Elgi.Bar.N (day)

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	9.00	8.80	8.80

ROAD (0.00 + 41.76 + 0.00) = 41.76 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	43	0.00	67.19	0.00	-14.11	-6.22	0.00	0.00	-5.10	41.76

Segment Leq : 41.76 dBA

Results segment # 5: Egli.Bar.E (day)

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	9.00	8.18	8.18

ROAD (0.00 + 30.17 + 0.00) = 30.17 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
43	90	0.00	67.19	0.00	-14.11	-5.83	0.00	0.00	-17.08	30.17

Segment Leq : 30.17 dBA

Total Leq All Segments: 54.75 dBA

Results segment # 1: Ninth (night)

Source height = 1.16 m

O

ROAD (0.00 + 45.86 + 0.00) = 45.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-83	-43	0.00	63.27	0.00	-10.88	-6.53	0.00	0.00	0.00	45.86

Segment Leq : 45.86 dBA

Results segment # 2: Ninth.Bar.N (night)

Source height = 1.16 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.16	9.00	8.57	8.57

ROAD (0.00 + 43.74 + 0.00) = 43.74 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-43	43	0.00	63.27	0.00	-10.88	-3.21	0.00	0.00	-5.45	43.74

Segment Leq : 43.74 dBA

Results segment # 3: Ninth.Bar.E (night)

Source height = 1.16 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.16	9.00	7.29	7.29

ROAD (0.00 + 29.03 + 0.00) = 29.03 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
43	90	0.00	63.27	0.00	-10.88	-5.83	0.00	0.00	-17.53	29.03

Segment Leq : 29.03 dBA

↟
Results segment # 4: Elgi.Bar.N (night)

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	9.00	8.80	8.80

ROAD (0.00 + 35.23 + 0.00) = 35.23 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	43	0.00	60.66	0.00	-14.11	-6.22	0.00	0.00	-5.10	35.23

Segment Leq : 35.23 dBA

↟
Results segment # 5: Egli.Bar.E (night)

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	9.00	8.18	8.18

ROAD (0.00 + 23.64 + 0.00) = 23.64 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
43	90	0.00	60.66	0.00	-14.11	-5.83	0.00	0.00	-17.08	23.64

Segment Leq : 23.64 dBA

Total Leq All Segments: 48.23 dBA

↟

O

TOTAL Leq FROM ALL SOURCES (DAY): 54.75
(NIGHT): 48.23

P
STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:48:58
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: sth_e_2.te Time Period: Day/Night 16/8 hours
Description: South TH east facade.

Road data, segment # 1: Ninth.N (day/night)

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Ninth.N (day/night)

Angle1 Angle2 : -90.00 deg -74.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 201.50 / 201.50 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Ninth.S (day/night)

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Ninth.S (day/night)

Angle1 Angle2 : -4.00 deg 7.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 201.50 / 201.50 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 3: Ninth.Bar (day/night)

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: Ninth.Bar (day/night)

Angle1 Angle2 : -74.00 deg -4.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 201.50 / 201.50 m
Receiver height : 9.00 / 9.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -74.00 deg Angle2 : -4.00 deg
Barrier height : 30.00 m
Barrier receiver distance : 17.00 / 17.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Road data, segment # 4: Egli.N (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 4: Egli.N (day/night)

Angle1 Angle2 : -90.00 deg -74.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 376.00 / 376.00 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

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Road data, segment # 5: Egli.S (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 5: Egli.S (day/night)

Angle1 Angle2 : -4.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 376.00 / 376.00 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 6: Egli.Bar (day/night)

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 6: Egli.Bar (day/night)

Angle1 Angle2 : -74.00 deg -4.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 376.00 / 376.00 m
Receiver height : 9.00 / 9.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -74.00 deg Angle2 : -4.00 deg
Barrier height : 30.00 m
Barrier receiver distance : 17.00 / 17.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

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Road data, segment # 7: 407N (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 7: 407N (day/night)

Angle1 Angle2 : -4.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 87.50 / 87.50 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 8: 407S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 8: 407S (day/night)

Angle1 Angle2 : -4.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 114.50 / 114.50 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Ninth.N (day)

Source height = 1.16 m

P

ROAD (0.00 + 47.99 + 0.00) = 47.99 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-74	0.00	69.79	0.00	-11.28	-10.51	0.00	0.00	0.00	47.99

Segment Leq : 47.99 dBA

↟

Results segment # 2: Ninth.S (day)

Source height = 1.16 m

ROAD (0.00 + 46.37 + 0.00) = 46.37 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-4	7	0.00	69.79	0.00	-11.28	-12.14	0.00	0.00	0.00	46.37

Segment Leq : 46.37 dBA

↟

Results segment # 3: Ninth.Bar (day)

Source height = 1.16 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.16	9.00	8.34	8.34

ROAD (0.00 + 34.40 + 0.00) = 34.40 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-74	-4	0.00	69.79	0.00	-11.28	-4.10	0.00	0.00	-20.00	34.40

Segment Leq : 34.40 dBA

↟

Results segment # 4: Egli.N (day)

Source height = 1.08 m

ROAD (0.00 + 42.69 + 0.00) = 42.69 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-74	0.00	67.19	0.00	-13.99	-10.51	0.00	0.00	0.00	42.69

Segment Leq : 42.69 dBA

↟

Results segment # 5: Egli.S (day)

Source height = 1.08 m

ROAD (0.00 + 50.38 + 0.00) = 50.38 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-4	90	0.00	67.19	0.00	-13.99	-2.82	0.00	0.00	0.00	50.38

Segment Leq : 50.38 dBA

↟

Results segment # 6: Egli.Bar (day)

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	9.00	8.64	8.64

ROAD (0.00 + 29.10 + 0.00) = 29.10 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-74	-4	0.00	67.19	0.00	-13.99	-4.10	0.00	0.00	-20.00	29.10

Segment Leq : 29.10 dBA

↟

Results segment # 7: 407N (day)

P

Source height = 1.68 m

ROAD (0.00 + 70.75 + 0.00) = 70.75 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-4	90	0.00	81.23	0.00	-7.66	-2.82	0.00	0.00	0.00	70.75

Segment Leq : 70.75 dBA

Results segment # 8: 407S (day)

Source height = 1.68 m

ROAD (0.00 + 69.59 + 0.00) = 69.59 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-4	90	0.00	81.23	0.00	-8.83	-2.82	0.00	0.00	0.00	69.59

Segment Leq : 69.59 dBA

Total Leq All Segments: 73.27 dBA

Results segment # 1: Ninth.N (night)

Source height = 1.16 m

ROAD (0.00 + 41.47 + 0.00) = 41.47 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-74	0.00	63.27	0.00	-11.28	-10.51	0.00	0.00	0.00	41.47

Segment Leq : 41.47 dBA

Results segment # 2: Ninth.S (night)

Source height = 1.16 m

ROAD (0.00 + 39.85 + 0.00) = 39.85 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq

```
-------------------------------------------------------------------------
    -4      7   0.00  63.27   0.00 -11.28 -12.14   0.00   0.00   0.00  39.85
-------------------------------------------------------------------------

Segment Leq : 39.85 dBA

↟
Results segment # 3: Ninth.Bar (night)
-------------------------------------

Source height = 1.16 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.16 !        9.00 !        8.34 !         8.34

ROAD (0.00 + 27.88 + 0.00) = 27.88 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
   -74     -4   0.00  63.27   0.00 -11.28  -4.10   0.00   0.00 -20.00  27.88
-------------------------------------------------------------------------

Segment Leq : 27.88 dBA

↟
Results segment # 4: Egli.N (night)
-----------------------------------

Source height = 1.08 m

ROAD (0.00 + 36.15 + 0.00) = 36.15 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
   -90    -74   0.00  60.66   0.00 -13.99 -10.51   0.00   0.00   0.00  36.15
-------------------------------------------------------------------------

Segment Leq : 36.15 dBA

↟
Results segment # 5: Egli.S (night)
-----------------------------------

Source height = 1.08 m

ROAD (0.00 + 43.84 + 0.00) = 43.84 dBA
```

```
                                          P
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    -4     90   0.00  60.66   0.00 -13.99  -2.82   0.00   0.00   0.00  43.84
-------------------------------------------------------------------------------

Segment Leq : 43.84 dBA

🠉
Results segment # 6: Egli.Bar (night)
-----------------------------------

Source height = 1.08 m

Barrier height for grazing incidence
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.08 !        9.00 !        8.64 !         8.64

ROAD (0.00 + 22.56 + 0.00) = 22.56 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -74     -4   0.00  60.66   0.00 -13.99  -4.10   0.00   0.00 -20.00  22.56
-------------------------------------------------------------------------------

Segment Leq : 22.56 dBA

🠉
Results segment # 7: 407N (night)
---------------------------------

Source height = 1.68 m

ROAD (0.00 + 66.23 + 0.00) = 66.23 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    -4     90   0.00  76.71   0.00  -7.66  -2.82   0.00   0.00   0.00  66.23
-------------------------------------------------------------------------------

Segment Leq : 66.23 dBA

🠉
Results segment # 8: 407S (night)
---------------------------------

Source height = 1.68 m
```

P

ROAD (0.00 + 65.06 + 0.00) = 65.06 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-4	90	0.00	76.71	0.00	-8.83	-2.82	0.00	0.00	0.00	65.06

Segment Leq : 65.06 dBA

Total Leq All Segments: 68.73 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 73.27
(NIGHT): 68.73

Q
STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:49:24
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: sth_s_2.te Time Period: Day/Night 16/8 hours
Description: South TH south facade.

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

Car traffic volume : 14841/1649 veh/TimePeriod
Medium truck volume : 252/28 veh/TimePeriod
Heavy truck volume : 207/23 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Eglington (day/night)

Angle1 Angle2 : -90.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 376.00 / 376.00 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: 407N (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: 407N (day/night)

Angle1 Angle2 : -90.00 deg 86.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 68.50 / 68.50 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 3: 407S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: 407S (day/night)

Angle1 Angle2 : -90.00 deg 86.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 68.50 / 68.50 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Eglington (day)

Source height = 1.08 m

ROAD (0.00 + 50.19 + 0.00) = 50.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	67.19	0.00	-13.99	-3.01	0.00	0.00	0.00	50.19

Segment Leq : 50.19 dBA

Results segment # 2: 407N (day)

Source height = 1.68 m

ROAD (0.00 + 74.54 + 0.00) = 74.54 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	86	0.00	81.23	0.00	-6.60	-0.10	0.00	0.00	0.00	74.54

Segment Leq : 74.54 dBA

Results segment # 3: 407S (day)

Source height = 1.68 m

ROAD (0.00 + 74.54 + 0.00) = 74.54 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	86	0.00	81.23	0.00	-6.60	-0.10	0.00	0.00	0.00	74.54

Segment Leq : 74.54 dBA

Total Leq All Segments: 77.56 dBA

Results segment # 1: Eglington (night)

Source height = 1.08 m

ROAD (0.00 + 43.66 + 0.00) = 43.66 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	60.66	0.00	-13.99	-3.01	0.00	0.00	0.00	43.66

Segment Leq : 43.66 dBA

Results segment # 2: 407N (night)

Source height = 1.68 m

ROAD (0.00 + 70.02 + 0.00) = 70.02 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	86	0.00	76.71	0.00	-6.60	-0.10	0.00	0.00	0.00	70.02

Segment Leq : 70.02 dBA

Results segment # 3: 407S (night)

Source height = 1.68 m

ROAD (0.00 + 70.02 + 0.00) = 70.02 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	86	0.00	76.71	0.00	-6.60	-0.10	0.00	0.00	0.00	70.02

Segment Leq : 70.02 dBA

Total Leq All Segments: 73.04 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 77.56
(NIGHT): 73.04

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STAMSON 5.0 NORMAL REPORT Date: 17-09-2021 13:49:46
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: sth_w_2.te Time Period: Day/Night 16/8 hours
Description: South TH west facade.

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

Car traffic volume : 22896/2544 veh/TimePeriod
Medium truck volume : 525/58 veh/TimePeriod
Heavy truck volume : 429/48 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Ninth (day/night)

Angle1 Angle2 : 7.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 222.50 / 222.50 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: 407N (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: 407N (day/night)

Angle1 Angle2 : -90.00 deg -4.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 69.50 / 69.50 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 3: 407S (day/night)

Car traffic volume : 48068/8483 veh/TimePeriod
Medium truck volume : 2763/488 veh/TimePeriod
Heavy truck volume : 4420/780 veh/TimePeriod
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: 407S (day/night)

Angle1 Angle2 : -90.00 deg -4.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 96.50 / 96.50 m
Receiver height : 9.00 / 9.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Ninth (day)

Source height = 1.16 m

ROAD (0.00 + 54.71 + 0.00) = 54.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
7	90	0.00	69.79	0.00	-11.71	-3.36	0.00	0.00	0.00	54.71

Segment Leq : 54.71 dBA

Results segment # 2: 407N (day)

Source height = 1.68 m

ROAD (0.00 + 71.37 + 0.00) = 71.37 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-4	0.00	81.23	0.00	-6.66	-3.21	0.00	0.00	0.00	71.37

Segment Leq : 71.37 dBA

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Results segment # 3: 407S (day)

Source height = 1.68 m

ROAD (0.00 + 69.94 + 0.00) = 69.94 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-4	0.00	81.23	0.00	-8.08	-3.21	0.00	0.00	0.00	69.94

Segment Leq : 69.94 dBA

Total Leq All Segments: 73.78 dBA

↟
Results segment # 1: Ninth (night)

Source height = 1.16 m

ROAD (0.00 + 48.19 + 0.00) = 48.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
7	90	0.00	63.27	0.00	-11.71	-3.36	0.00	0.00	0.00	48.19

Segment Leq : 48.19 dBA

↟
Results segment # 2: 407N (night)

Source height = 1.68 m

ROAD (0.00 + 66.85 + 0.00) = 66.85 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-4	0.00	76.71	0.00	-6.66	-3.21	0.00	0.00	0.00	66.85

Segment Leq : 66.85 dBA

↟
Results segment # 3: 407S (night)

Source height = 1.68 m

ROAD (0.00 + 65.42 + 0.00) = 65.42 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-4	0.00	76.71	0.00	-8.08	-3.21	0.00	0.00	0.00	65.42

Segment Leq : 65.42 dBA

Total Leq All Segments: 69.24 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 73.78
(NIGHT): 69.24