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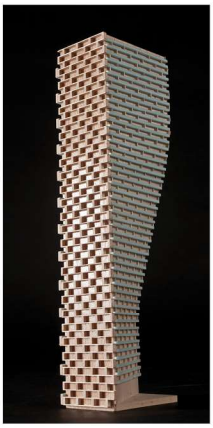
TRAFFIC NOISE STUDY

340 Parkdale Avenue
Ottawa, Ontario

Report: 25-168–Detailed Traffic Noise Study



January 9, 2026

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EXECUTIVE SUMMARY

This report describes a detailed traffic noise study undertaken for a proposed 38 storey high-rise residential development building located at 340 Parkdale Avenue in Ottawa, Ontario. The primary source of environmental noise affecting the site is Parkdale Avenue, an urban arterial roadway near the property.

The assessment is based on (i) theoretical noise prediction methods that conform to the Ministry of the Environment, Conservation and Parks (MECP) and City of Ottawa requirements; (ii) noise level criteria as specified by the City of Ottawa's Environmental Noise Control Guidelines (ENCG); (iii) future vehicular traffic volumes based on the City of Ottawa's Official Plan roadway classifications; and (iv) site plan drawings prepared by Hobin Architecture Incorporated.

The results of the current analysis indicated that noise levels will range between 54 and 66 dBA during the daytime period (07:00-23:00) and between 46 and 59 dBA during the nighttime period (23:00-07:00). The highest noise level (66 dBA) occurs at the east façade of the podium, which is nearest and most exposed to Parkdale Avenue.

Since levels predicted due to roadway traffic are expected to exceed 65 dBA, mitigation will be required to achieve the targeted indoor sound levels. The proposed development will require forced-air heating and a central air-conditioning system to allow windows and exterior doors to remain closed while maintaining a comfortable indoor environment. In addition to these ventilation requirements, a Type D warning clause will be required in all Lease, Purchase, and Sale Agreements. The east façade of the six-storey podium having a two-storey loft massing will require windows with a minimum sound transmission class (STC) rating of 25 and exterior walls with a minimum STC rating of 45. All other façades may be built with components in conformance with Ontario Building Code (OBC) standards and will be sufficient to attenuate indoor sound levels.

Stationary noise impacts of the buildings on the surroundings would be considered at a future stage once the mechanical design has progressed and equipment has been selected. Stationary noise sources associated with the development could include rooftop air handling units, cooling towers or dry coolers, and emergency generators. Should noise levels from these units exceed the criteria established in NPC-300 and ENCG, noise from these sources can be controlled to acceptable limits by judicious selection of

the equipment, locating the equipment on a high roof away from nearby residential receptors, and where necessary, installing silencers or noise screens.

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1. INTRODUCTION

Gradient Wind Engineering Inc. (Gradient Wind) was retained by Taggart Realty Management to undertake a detailed traffic noise study for a proposed high-rise apartment building located at 340 Parkdale Avenue in Ottawa, Ontario. This report summarizes the methodology, results, and recommendations related to the assessment of exterior and interior noise levels generated by local roadway traffic.

This work is based on theoretical noise calculation methods conforming to the City of Ottawa[1] and Ministry of the Environment, Conservation and Parks (MECP)[2] guidelines. Noise calculations were based on site plan drawings prepared by Hobin Architecture Incorporated, received November 2025, with future traffic volumes corresponding to the City of Ottawa's Official Plan (OP) roadway classifications.

2. TERMS OF REFERENCE

The subject site is located at 340 Parkdale Avenue in Ottawa, situated on a parcel of land bounded by Parkdale Avenue to the east, Armstrong Street to the south, Hamilton Avenue North to the west, and Spencer Street to the north. A low-rise restaurant building, referred to as "The Carleton Tavern", is to be retained at the southeast corner. The proposed development comprises a 38-storey mixed-use residential building, topped with a mechanical penthouse (MPH).

The ground floor of the proposed development comprises two rectangular masses divided by a central north-south parking ramp leading to underground parking via a drive aisle extending from Spencer Street. The smaller eastern massing includes a residential lobby along the west elevation with main entrances to its north and south, and retail spaces throughout the remainder of the level, while the larger western massing includes a central residential lobby with main entrances to its east and west, retail spaces to the south, a lounge near the southwest corner, a gym at the northwest corner, and shared building support spaces at the northeast corner. Levels 2 to 6 are reserved for residential use and comprise an 'L'-shaped planform with its long axis-oriented along Spencer Street. Level 7 includes an indoor amenity and a

[1] City of Ottawa Environmental Noise Control Guidelines, January 2016
[2] Ontario Ministry of the Environment, Conservation and Parks – Environmental Noise Guidelines, Publication NPC-300, Queens Printer for Ontario, Toronto, 2013

mechanical space to the south of the short-axis and residential units throughout the remainder of the level. The building steps back from all elevations at this level to accommodate a common amenity terrace at 21-m elevation to the south of the short-axis and private terraces within the remaining setbacks. The proposed development incorporates a six-storey "podium" having a two-storey loft massing. The podium fronts onto Parkdale Avenue with the 38-storey tower behind it. Levels 8 to 38 are reserved for residential occupancy.

3. OBJECTIVES

The principal objectives of this study are to (i) calculate the future noise levels on the study buildings produced by local roadway traffic, and (ii) ensure that interior and exterior noise levels do not exceed the allowable limits specified by the City of Ottawa's Environmental Noise Control Guidelines as outlined in Section 4.2 of this report.

4. METHODOLOGY

4.1 Background

Noise can be defined as any obtrusive sound. It is created at a source, transmitted through a medium, such as air, and intercepted by a receiver. Noise may be characterized in terms of the power of the source or the sound pressure at a specific distance. While the power of a source is characteristic of that particular source, the sound pressure depends on the location of the receiver and the path that the noise takes to reach the receiver. Measurement of noise is based on the decibel unit, dBA, which is a logarithmic ratio referenced to a standard noise level (2×10^{-5} Pascals). The 'A' suffix refers to a weighting scale, which better represents how the noise is perceived by the human ear. With this scale, a doubling of power results in a 3 dBA increase in measured noise levels and is just perceptible to most people. An increase of 10 dBA is often perceived to be twice as loud.

4.2 Roadway Traffic Noise

4.2.1 Criteria for Roadway Traffic Noise

For surface roadway traffic noise, the equivalent sound energy level, L_{eq}, provides a measure of the time-varying noise levels, which is well correlated with the annoyance of sound. It is defined as the continuous sound level, which has the same energy as a time-varying noise level over a period of time. For roadways, the L_{eq} is commonly calculated on the basis of a 16-hour (L_{eq16}) daytime (07:00-23:00) / 8-hour (L_{eq8}) nighttime (23:00-07:00) split to assess its impact on residential buildings. The City of Ottawa's Environmental Noise Control Guidelines (ENCG) specifies that the recommended indoor noise limit range (that is relevant to this study) is 45 and 40 dBA for living rooms and sleeping quarters respectively for roadway as listed in Table 1.

TABLE 1: INDOOR SOUND LEVEL CRITERIA (ROAD) [3]

Type of Space	Time Period	L_{eq} (dBA)
General offices, reception areas, retail stores, etc.	07:00 – 23:00	50
Living/dining/den areas of **residences**, hospitals, schools, nursing/retirement homes, day-care centres, theatres, places of worship, libraries, individual or semi-private offices, conference rooms, etc.	07:00 – 23:00	45
Sleeping quarters of hotels/motels	23:00 – 07:00	45
Sleeping quarters of **residences**, hospitals, nursing/retirement homes, etc.	23:00 – 07:00	40

Predicted noise levels at the plane of window (POW) dictate the action required to achieve the recommended sound levels. An open window is considered to provide a 10 dBA reduction in noise, while a standard closed window is capable of providing a minimum 20 dBA noise reduction[4]. A closed window due to a ventilation requirement will bring noise levels down to achieve an acceptable indoor environment[5]. Therefore, where noise levels exceed 55 dBA daytime and 50 dBA nighttime, the ventilation

[3] Adapted from ENCG 2016 – Tables 2.2b and 2.2c
[4] Burberry, P.B. (2014). Mitchell's Environment and Services. Routledge, Page 125
[5] MOECP, Environmental Noise Guidelines, NPC 300 – Part C, Section 7.8

for the building should consider the need for having windows and doors closed, which triggers the need for forced air heating with provision for central air conditioning. Where noise levels exceed 65 dBA daytime and 60 dBA nighttime, air conditioning will be required and building components will require higher levels of sound attenuation[6].

The sound level criterion for outdoor living areas (OLA) is 55 dBA, which applies during the daytime (07:00 to 23:00). When noise levels exceed 55 dBA, mitigation should be provided to reduce noise levels where technically and administratively feasible to acceptable levels at or below the criterion. Furthermore, noise levels at the OLA must not exceed 60 dBA if mitigation can be technically and administratively achieved.

4.2.2 Theoretical Roadway Noise Predictions

Noise predictions were performed with the aid of the MECP computerized noise assessment program, STAMSON 5.04, for road analysis. Appendix A includes the STAMSON 5.04 input and output data. Roadway traffic noise calculations were performed by treating each roadway segment as separate line sources of noise. In addition to the traffic volumes summarized in Table 2, theoretical noise predictions were based on the following parameters:

- Truck traffic on all roadways was taken to comprise 5% heavy trucks and 7% medium trucks, as per ENCG requirements for noise level predictions.
- The day/night split was taken to be 92% / 8% respectively for all streets.
- The ground surface was modelled as reflective where pavement and concrete are present.
- The study site was treated as having flat or gently sloping topography.
- Eight plane of window (POW) receptors and one outdoor living area (OLA) receptor (shown in Figure 2) were strategically placed throughout the study area.
- Receptor distances and exposure angles are illustrated in Figure 3.

4.2.3 Roadway Traffic Volumes

The ENCG dictates that noise calculations should consider future sound levels based on a roadway's classification at the mature state of development. Therefore, traffic volumes are based on the roadway classifications outlined in the City of Ottawa's Official Plan (OP) and Transportation Master Plan[7] which

[6] MOECP, Environmental Noise Guidelines, NPC 300 – Part C, Section 7.1.3
[7] City of Ottawa Transportation Master Plan, November 2013

provide additional details on future roadway expansions. Average Annual Daily Traffic (AADT) volumes are then based on data in Table B1 of the ENCG for each roadway classification. Table 2 (below) summarizes the AADT values used for the roadway included in this assessment.

TABLE 2: ROADWAY TRAFFIC DATA

Segment	Roadway Traffic Data	Speed Limit (km/h)	Traffic Volumes
Parkdale Avenue	2-Lane Arterial (2-UAU)	40	**15,000**

4.3 Indoor Noise Calculations

The difference between outdoor and indoor noise levels is the noise attenuation provided by the building envelope. According to common industry practice, complete walls and individual wall elements are rated according to the Sound Transmission Class (STC). The STC ratings of common residential walls built in conformance with the Ontario Building Code (2012) typically exceed STC 35, depending on exterior cladding, thickness and interior finish details. For example, brick veneer walls can achieve STC 50 or more. Standard commercially sided exterior metal stud walls have around STC 45. Standard good quality double-glazed non-operable windows can have STC ratings ranging from 25 to 40, depending on the window manufacturer, pane thickness and inter-pane spacing. As previously mentioned, the windows are the known weak point in a partition.

As per Section 4.2, when daytime noise levels from road sources at the plane of the window exceed 65 dBA, calculations must be performed to evaluate the sound transmission quality of the building components to ensure acceptable indoor noise levels are achieved. The calculation procedure[8] considers:

- Window type and total area as a percentage of total room floor area.
- Exterior wall type and total area as a percentage of the total room floor area.
- Acoustic absorption characteristics of the room.
- Outdoor noise source type and approach geometry.
- Indoor sound level criteria, which varies according to the intended use of a space.

[8] Building Practice Note: Controlling Sound Transmission into Buildings by J.D. Quirt, National Research Council of Canada, September 1985

Based on published research[9], exterior walls possess specific sound attenuation characteristics that are used as a basis for calculating the required STC ratings of windows in the same partition. Due to the limited information available at the time of the study, detailed floor layouts have not been finalized; therefore, detailed STC calculations could not be performed at this time. As a guideline, the anticipated STC requirements for windows can be estimated based on the overall noise reduction required for each intended use of space (STC = Outdoor Noise Level – Targeted Indoor Noise Levels + Safety Factor).

5. RESULTS & DISCUSSION

5.1 Roadway Traffic Noise Levels

The results of the roadway traffic noise calculations are summarized in Table 3 below.

TABLE 3: EXTERIOR NOISE LEVELS DUE TO TRANSPORTATION SOURCES

Receptor Number	Receptor Height Above Grade (m)	Receptor Location	Noise Level (dBA)	
			Day	Night
1	7.5	POW – 3rd Floor - East Façade of Podium	66	58
2	19.5	POW – 6th Floor - East Façade of Podium	66	59
3	25.5	POW – 7th Floor - East Façade of Podium	66	59
4	7.5	POW – 3rd Floor - North Façade of Podium	58	50
5	91.5	POW – 30th Floor - North Façade	54	46
6	31.5	OLA – 7th Floor - Outdoor Amenity	48	N/A*
7	91.5	POW – 30th Floor - South Façade	58	50
8	7.5	POW – 3rd Floor - South Façade of Podium	54	46
9	91.5	POW – 30th Floor – East Façade of Tower	62	54

*Nighttime noise levels at the OLA are not considered as per ENCG.

The results of the current analysis indicated that POW noise levels will range between 54 and 66 dBA during the daytime period (07:00-23:00) and between 46 and 59 dBA during the nighttime period (23:00-07:00). The highest noise level (66 dBA) occurs at the east façade of the podium, which is nearest and

[9] CMHC, Road & Rail Noise: Effects on Housing

most exposed to Parkdale Avenue. The OLA receptor placed at the outdoor amenity area had a predicted noise level of 48 dBA in the daytime, which is within the 55 dBA limit.

Table 4 below provides a comparison between CadnaA and STAMSON. Noise levels calculated in STAMSON were found to have good correlation with CadnaA and variability between the two programs was within an acceptable level of ±1-3 dBA.

TABLE 4: RESULT CORRELATION WITH CADNAA

Receptor Number	Receptor Location	STAMSON Noise Level (dBA)		CadnaA Noise Level (dBA)	
		Day	Night	Day	Night
2	POW – 6th Floor - East Façade of Podium	66	59	66	59
4	POW – 3rd Floor - North Façade of Podium	58	50	58	49
6	OLA – 7th Floor - Outdoor Amenity	48	N/A*	49	N/A*

*Nighttime noise levels at the OLA are not considered as per ENCG.

5.2 Noise Control Measures

The noise levels predicted due to roadway traffic are expected to fall between 54 dBA and 66 dBA at the plane of window for the proposed development. Since noise levels exceed 65 dBA, the proposed development will require forced air heating and a central air conditioning system to allow for windows and doors to remain closed and maintain a comfortable living environment. In addition to ventilation requirements, a Type D Warning Clause will also be required in all Lease, Purchase and Sale Agreements, as summarized in Section 6. Type D warning clauses are required due to predicted plane-of-window noise levels exceeding 65 dBA, necessitating permanently closed windows. To meet the ENCG limits for indoor noise levels, a minimum STC rating of 25 for all windows is recommended for the design. The STC rating for a standard non-operable double-glazed typically range between 25 to 40 STC, windows within this range would allow for indoor noise criteria to be achieved.

TABLE 5: NOISE CONTROL MEASURES

Location	STC Bedroom / Living Room Windows	Ventilation Requirements	Warning Clause
East Façade of Podium	25 STC	A/C	Type D
All Other Façades	OBC		

*Exterior walls to have a minimum STC 45

Noise levels at the outdoor amenity area are predicted to be within the acceptable limit, no noise mitigation is required.

6. CONCLUSIONS AND RECOMMENDATIONS

The results of the current analysis indicated that noise levels will range between 54 and 66 dBA during the daytime period (07:00-23:00) and between 46 and 59 dBA during the nighttime period (23:00-07:00). The highest noise level (66 dBA) occurs at the east façade of the podium, which is nearest and most exposed to Parkdale Avenue.

Noise levels predicted due to roadway traffic are expected to exceed 65 dBA therefore noise mitigation is required to achieve the targeted indoor sound levels. The proposed development will require forced-air heating and a central air-conditioning system to allow windows and exterior doors to remain closed while maintaining a comfortable indoor environment. The east façade of the podium will require windows with a minimum STC rating of 25 and exterior walls with a minimum STC rating of 45. All other façades can be designed with components in conformance with Ontario Building Code (OBC) standards and will be sufficient to attenuate indoor sound levels. In addition, a Type D warning clause will be required in all Lease, Purchase, and Sale Agreements, as summarized below:

Type D

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

Stationary noise impacts of the buildings on the surroundings would be considered at a future stage once the mechanical design has progressed and equipment has been selected. Stationary noise sources associated with the development could include rooftop air handling units, cooling towers or dry coolers, and emergency generators. Should noise levels from these units exceed the criteria established in NPC-300 and ENCG, noise from these sources can be controlled to acceptable limits by judicious selection of the equipment, locating the equipment on a high roof away from nearby residential receptors, and where necessary, installing silencers or noise screens.

This concludes our roadway traffic noise assessment and report. If you have any questions or wish to discuss our findings, please advise us. In the interim, we thank you for the opportunity to be of service.

Sincerely,

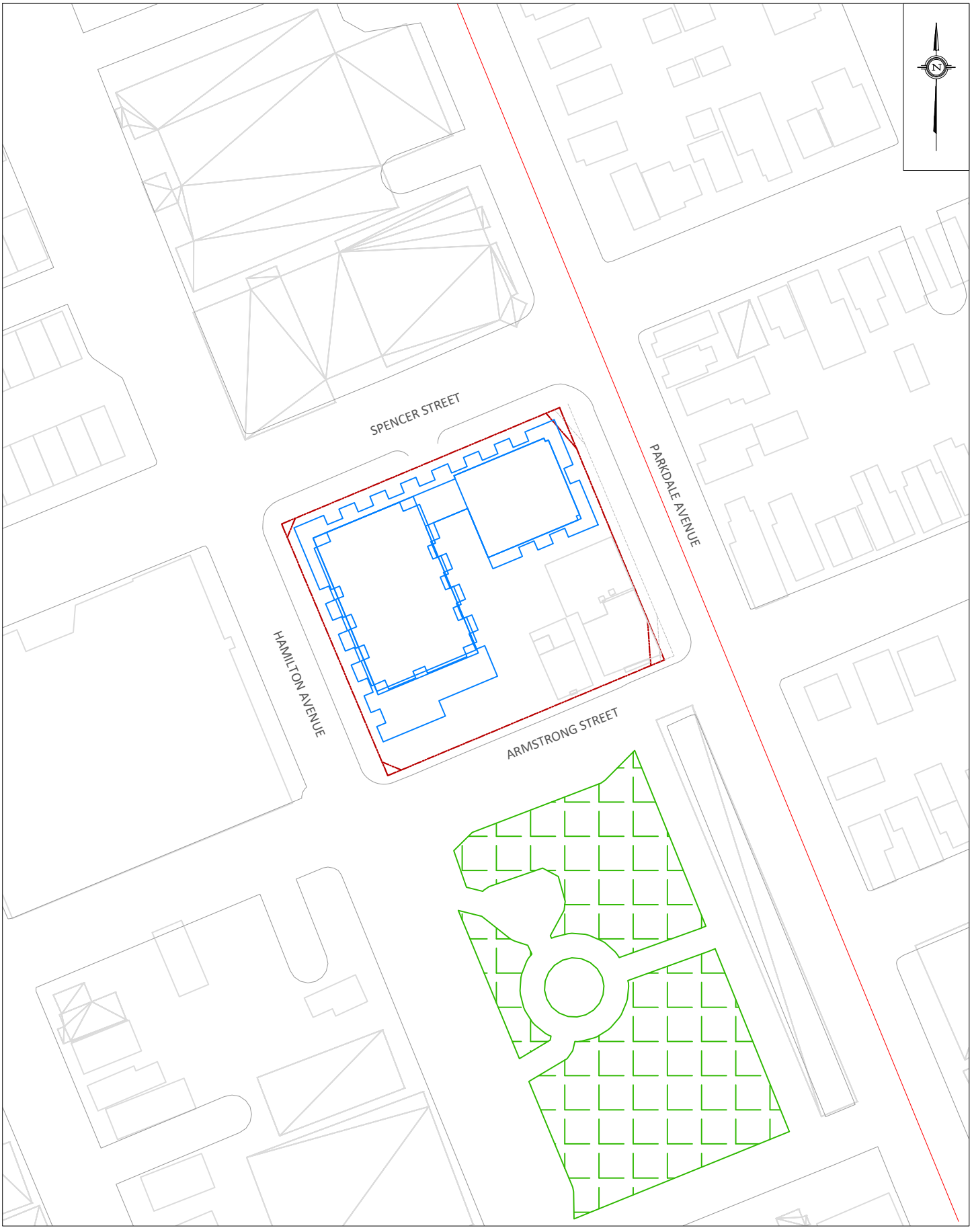
Gradient Wind Engineering Inc.

Nick Cunnington-Bourbonniere

Nick Cunnington-Bourbonniere, MSc
Jr. Acoustic, Environmental Noise and Vibrations Scientist

Joshua Foster, P.Eng.
Lead Engineer

Gradient Wind File #25-213-Traffic Noise Assessment



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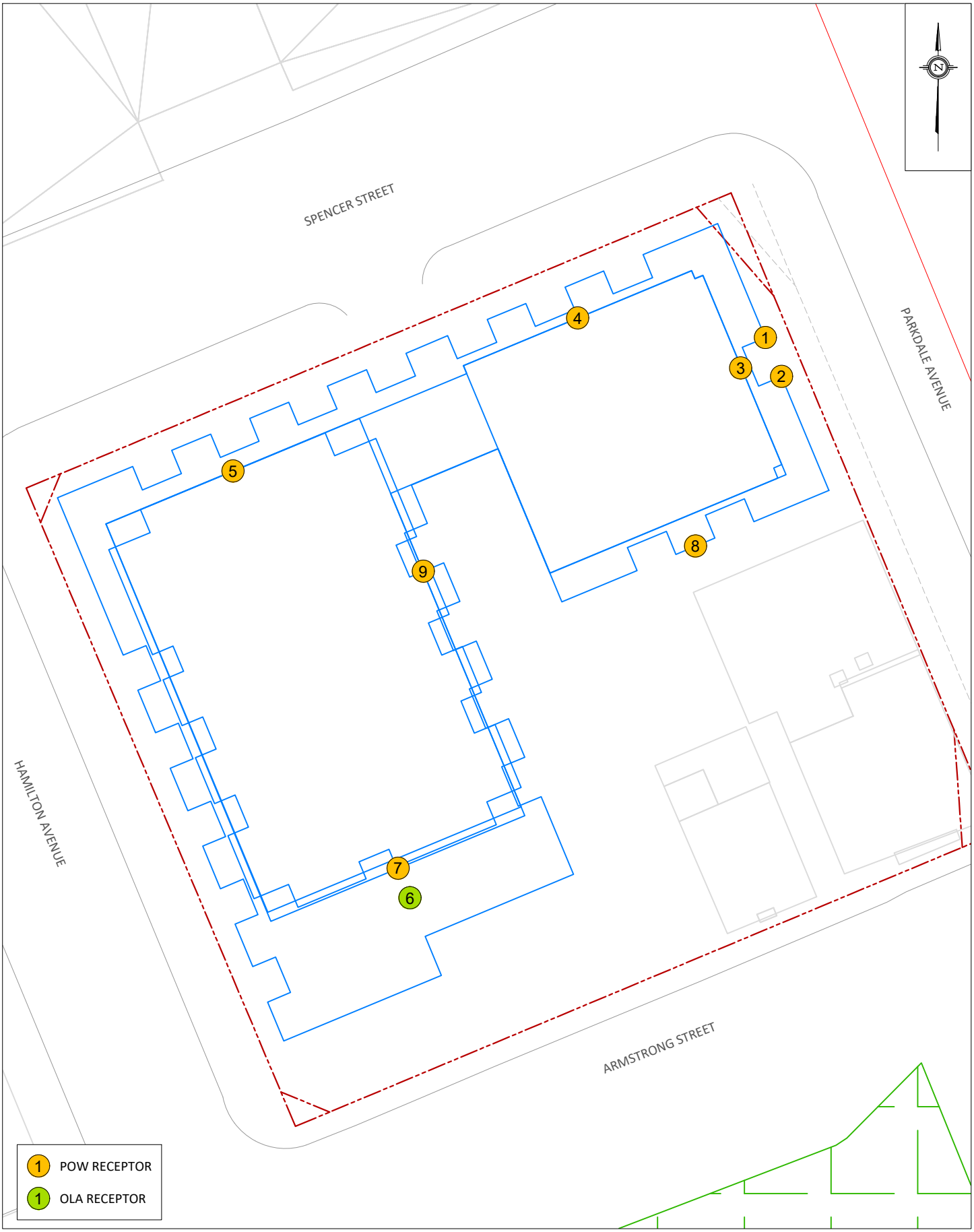
PROJECT	340 PARKDALE AVENUE, OTTAWA ROADWAY TRAFFIC/STATIONARY NOISE ASSESSMENT		DESCRIPTION
SCALE	1:1000 (APPROX.)	DRAWING NO.	GW25-168-1
DATE	JANUARY 9, 2026	DRAWN BY	N.C.B.

FIGURE 1:
SITE PLAN AND SURROUNDING CONTEXT



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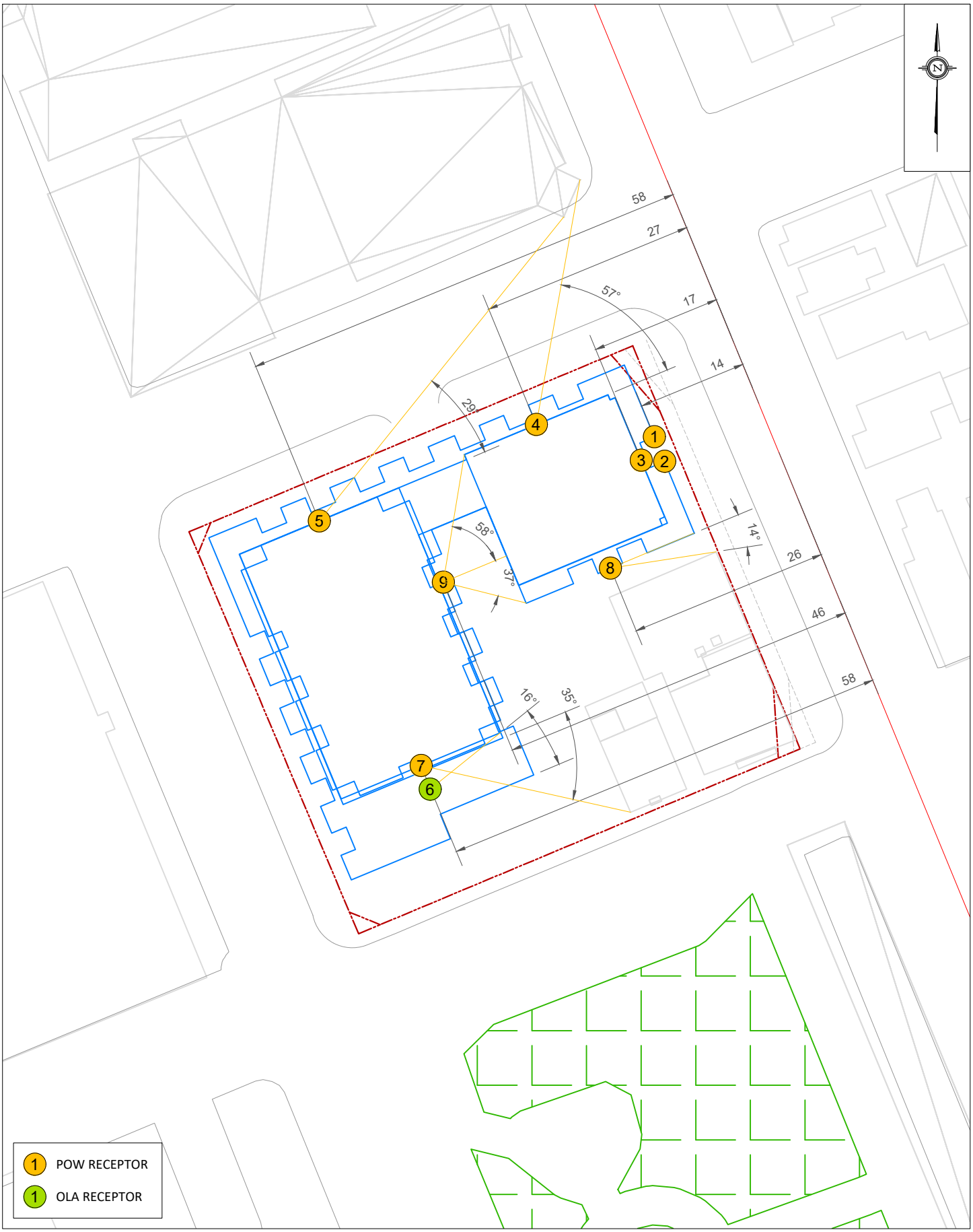
PROJECT	340 PARKDALE AVENUE, OTTAWA ROADWAY TRAFFIC/STATIONARY NOISE ASSESSMENT		DESCRIPTION
SCALE	1:500 (APPROX.)	DRAWING NO.	GW25-168-2
DATE	JANUARY 9, 2026	DRAWN BY	N.C.B.

FIGURE 2:
RECEPTOR LOCATIONS



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PROJECT	340 PARKDALE AVENUE, OTTAWA ROADWAY TRAFFIC/STATIONARY NOISE ASSESSMENT		DESCRIPTION
SCALE	1:750 (APPROX.)	DRAWING NO.	GW25-168-3
DATE	JANUARY 9, 2026	DRAWN BY	N.C.B.

FIGURE 3:
STAMSON INPUT PARAMETERS

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APPENDIX A

STAMSON 5.04 – INPUT AND OUTPUT DATA

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STAMSON 5.0 NORMAL REPORT Date: 02-01-2026 16:55:11
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 340pd_R1.te Time Period: Day/Night 16/8 hours
Description: 340 Parkdale: Receptor 1

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

Car traffic volume : 12144/1056 veh/TimePeriod *
Medium truck volume : 966/84 veh/TimePeriod *
Heavy truck volume : 690/60 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 15000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Parkdale ave (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 15.00 / 15.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

```
Results segment # 1: Parkdale ave (day)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 65.55 + 0.00) = 65.55 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.48  66.69   0.00   0.00  -1.14   0.00   0.00   0.00  65.55
-------------------------------------------------------------------------------

Segment Leq : 65.55 dBA

Total Leq All Segments: 65.55 dBA


Results segment # 1: Parkdale ave (night)
-----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 57.95 + 0.00) = 57.95 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.48  59.09   0.00   0.00  -1.14   0.00   0.00   0.00  57.95
-------------------------------------------------------------------------------

Segment Leq : 57.95 dBA

Total Leq All Segments: 57.95 dBA


TOTAL Leq FROM ALL SOURCES (DAY): 65.55
                           (NIGHT): 57.95
```

STAMSON 5.0 NORMAL REPORT Date: 05-01-2026 08:58:53
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

```
Filename: 340pd_r2.te          Time Period: Day/Night 16/8 hours
Description: 340 Parkdale: Receptor 2


Road data, segment # 1: Parkdale ave (day/night)
-----------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Parkdale ave (day/night)
-----------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :  19.50 / 19.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Results segment # 1: Parkdale ave (day)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 66.35 + 0.00) = 66.35 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.12  66.69   0.00   0.00  -0.34   0.00   0.00   0.00  66.35
-------------------------------------------------------------------------------

Segment Leq : 66.35 dBA

Total Leq All Segments: 66.35 dBA


Results segment # 1: Parkdale ave (night)
-----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 58.75 + 0.00) = 58.75 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.12  59.09   0.00   0.00  -0.34   0.00   0.00   0.00  58.75
-------------------------------------------------------------------------------

Segment Leq : 58.75 dBA

Total Leq All Segments: 58.75 dBA


TOTAL Leq FROM ALL SOURCES (DAY): 66.35
                           (NIGHT): 58.75
```

STAMSON 5.0 NORMAL REPORT Date: 02-01-2026 16:55:53
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

```
Filename: 340pd_r2.te          Time Period: Day/Night 16/8 hours
Description: 340 Parkdale: Receptor 3


Road data, segment # 1: Parkdale ave (day/night)
-----------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Parkdale ave (day/night)
-----------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  16.08 / 16.08  m
Receiver height           :  25.50 / 25.50  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :  21.00 m
Barrier receiver distance :   2.70 / 2.70   m
Source elevation          :   1.50 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

```
Results segment # 1: Parkdale ave (day)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 66.38 + 0.00) = 66.38 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  66.69   0.00  -0.30   0.00   0.00   0.00  -4.23  62.15*
   -90     90   0.00  66.69   0.00  -0.30   0.00   0.00   0.00   0.00  66.38
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 66.38 dBA

Total Leq All Segments: 66.38 dBA


Results segment # 1: Parkdale ave (night)
-----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 58.79 + 0.00) = 58.79 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  59.09   0.00  -0.30   0.00   0.00   0.00  -4.23  54.56*
   -90     90   0.00  59.09   0.00  -0.30   0.00   0.00   0.00   0.00  58.79
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 58.79 dBA

Total Leq All Segments: 58.79 dBA


TOTAL Leq FROM ALL SOURCES (DAY): 66.38
                           (NIGHT): 58.79
```

```
STAMSON 5.0        NORMAL REPORT        Date: 05-01-2026 09:40:12
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 340pd_r4.te          Time Period: Day/Night 16/8 hours
Description: 340 Parkdale: Receptor 4


Road data, segment # 1: Parkdale ave (day/night)
-----------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Parkdale ave (day/night)
-----------------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  26.73 / 26.73  m
Receiver height           :   7.50 / 7.50   m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : -56.00 deg
Barrier height            :  29.00 m
Barrier receiver distance :  15.73 / 15.73  m
Source elevation          :   1.50 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

```
Results segment # 1: Parkdale ave (day)
---------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        7.50 !        4.85 !         4.85

ROAD (0.00 + 38.08 + 57.54) = 57.59 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -56   0.00  66.69   0.00  -2.51  -7.24   0.00   0.00 -18.86  38.08
-------------------------------------------------------------------------------
   -56      0   0.48  66.69   0.00  -3.71  -5.43   0.00   0.00   0.00  57.54
-------------------------------------------------------------------------------

Segment Leq : 57.59 dBA

Total Leq All Segments: 57.59 dBA

Results segment # 1: Parkdale ave (night)
-----------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        7.50 !        4.85 !         4.85

ROAD (0.00 + 30.48 + 49.95) = 50.00 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -56   0.00  59.09   0.00  -2.51  -7.24   0.00   0.00 -18.86  30.48
-------------------------------------------------------------------------------
   -56      0   0.48  59.09   0.00  -3.71  -5.43   0.00   0.00   0.00  49.95
-------------------------------------------------------------------------------

Segment Leq : 50.00 dBA

Total Leq All Segments: 50.00 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.59
                           (NIGHT): 50.00
```

STAMSON 5.0 NORMAL REPORT Date: 05-01-2026 09:34:01
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 340pd_r5.te Time Period: Day/Night 16/8 hours
Description: 340 Parkdale: Receptor 5

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

Car traffic volume : 12144/1056 veh/TimePeriod *
Medium truck volume : 966/84 veh/TimePeriod *
Heavy truck volume : 690/60 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 15000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Parkdale ave (day/night)

Angle1 Angle2 : -90.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 58.00 / 58.00 m
Receiver height : 91.50 / 91.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -29.00 deg
Barrier height : 29.00 m
Barrier receiver distance : 47.00 / 47.00 m
Source elevation : 1.50 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

```
Results segment # 1: Parkdale ave (day)
---------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       91.50 !       19.78 !        19.78

ROAD (0.00 + 45.07 + 52.88) = 53.55 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -29   0.00  66.69   0.00  -5.87  -4.70   0.00   0.00 -11.04  45.07
-------------------------------------------------------------------------------
   -29      0   0.00  66.69   0.00  -5.87  -7.93   0.00   0.00   0.00  52.88
-------------------------------------------------------------------------------

Segment Leq : 53.55 dBA

Total Leq All Segments: 53.55 dBA

Results segment # 1: Parkdale ave (night)
-----------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       91.50 !       19.78 !        19.78

ROAD (0.00 + 37.47 + 45.29) = 45.95 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -29   0.00  59.09   0.00  -5.87  -4.70   0.00   0.00 -11.04  37.47
-------------------------------------------------------------------------------
   -29      0   0.00  59.09   0.00  -5.87  -7.93   0.00   0.00   0.00  45.29
-------------------------------------------------------------------------------

Segment Leq : 45.95 dBA

Total Leq All Segments: 45.95 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 53.55
                           (NIGHT): 45.95
```

```
STAMSON 5.0        NORMAL REPORT        Date: 05-01-2026 09:48:22
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 340pd_r6.te          Time Period: Day/Night 16/8 hours
Description: 340 Parkdale: Receptor 6


Road data, segment # 1: Parkdale ave (day/night)
-----------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Parkdale ave (day/night)
-----------------------------------------------
Angle1   Angle2           : -16.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  57.12 / 57.12  m
Receiver height           :  22.50 / 7.50   m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -16.00 deg   Angle2 : 90.00 deg
Barrier height            :  21.00 m
Barrier receiver distance :  13.00 / 13.00  m
Source elevation          :   1.50 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

```
Results segment # 1: Parkdale ave (day)
---------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       22.50 !       18.06 !        18.06

ROAD (0.00 + 47.67 + 0.00) = 47.67 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -16     90   0.00  66.69   0.00  -5.81  -2.30   0.00   0.00 -10.91  47.67
-------------------------------------------------------------------------------

Segment Leq : 47.67 dBA

Total Leq All Segments: 47.67 dBA

Results segment # 1: Parkdale ave (night)
-----------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        7.50 !        6.47 !         6.47

ROAD (0.00 + 32.10 + 0.00) = 32.10 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -16     90   0.00  59.09   0.00  -5.81  -2.30   0.00   0.00 -18.88  32.10
-------------------------------------------------------------------------------

Segment Leq : 32.10 dBA

Total Leq All Segments: 32.10 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 47.67
                           (NIGHT): 32.10
```

STAMSON 5.0 NORMAL REPORT Date: 05-01-2026 09:30:46
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 340pd_r8.te Time Period: Day/Night 16/8 hours
Description: 340 Parkdale: Receptor 7

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

Car traffic volume : 12144/1056 veh/TimePeriod *
Medium truck volume : 966/84 veh/TimePeriod *
Heavy truck volume : 690/60 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 15000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Parkdale ave (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 57.12 / 57.12 m
Receiver height : 91.50 / 91.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : 0.00 deg Angle2 : 36.00 deg
Barrier height : 8.00 m
Barrier receiver distance : 45.00 / 45.00 m
Source elevation : 1.50 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

```
Results segment # 1: Parkdale ave (day)
---------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       91.50 !       21.77 !        21.77

ROAD (0.00 + 53.89 + 55.65) = 57.87 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     36   0.00  66.69   0.00  -5.81  -6.99   0.00   0.00   0.00  53.89*
     0     36   0.00  66.69   0.00  -5.81  -6.99   0.00   0.00   0.00  53.89
-------------------------------------------------------------------------------
    36     90   0.00  66.69   0.00  -5.81  -5.23   0.00   0.00   0.00  55.65
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 57.87 dBA

Total Leq All Segments: 57.87 dBA

Results segment # 1: Parkdale ave (night)
-----------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       91.50 !       21.77 !        21.77

ROAD (0.00 + 46.29 + 48.05) = 50.27 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     36   0.00  59.09   0.00  -5.81  -6.99   0.00   0.00   0.00  46.29*
     0     36   0.00  59.09   0.00  -5.81  -6.99   0.00   0.00   0.00  46.29
-------------------------------------------------------------------------------
    36     90   0.00  59.09   0.00  -5.81  -5.23   0.00   0.00   0.00  48.05
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 50.27 dBA
```

```
Total Leq All Segments: 50.27 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.87
                           (NIGHT): 50.27
```

STAMSON 5.0 NORMAL REPORT Date: 05-01-2026 09:27:40
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

```
Filename: 340pd_r9.te          Time Period: Day/Night 16/8 hours
Description: 340 Parkdale: Receptor 8


Road data, segment # 1: Parkdale ave (day/night)
-----------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Parkdale ave (day/night)
-----------------------------------------------
Angle1   Angle2           :   0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  25.03 / 25.03  m
Receiver height           :   7.50 / 7.50   m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            :  14.00 deg   Angle2 : 90.00 deg
Barrier height            :   8.00 m
Barrier receiver distance :  13.50 / 13.50  m
Source elevation          :   1.50 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

```
Results segment # 1: Parkdale ave (day)
---------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        7.50 !        5.07 !         5.07

ROAD (52.28 + 48.98 + 0.00) = 53.95 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     14   0.48  66.69   0.00  -3.29 -11.11   0.00   0.00   0.00  52.28
-------------------------------------------------------------------------------
    14     90   0.00  66.69   0.00  -2.22  -3.75   0.00   0.00 -11.74  48.98
-------------------------------------------------------------------------------

Segment Leq : 53.95 dBA

Total Leq All Segments: 53.95 dBA

Results segment # 1: Parkdale ave (night)
-----------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        7.50 !        5.07 !         5.07

ROAD (44.69 + 41.38 + 0.00) = 46.35 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     14   0.48  59.09   0.00  -3.29 -11.11   0.00   0.00   0.00  44.69
-------------------------------------------------------------------------------
    14     90   0.00  59.09   0.00  -2.22  -3.75   0.00   0.00 -11.74  41.38
-------------------------------------------------------------------------------

Segment Leq : 46.35 dBA

Total Leq All Segments: 46.35 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 53.95
                           (NIGHT): 46.35
```

STAMSON 5.0 NORMAL REPORT Date: 05-01-2026 09:15:56
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 340pd_r2.te Time Period: Day/Night 16/8 hours
Description: 340 Parkdale: Receptor 9

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

Car traffic volume : 12144/1056 veh/TimePeriod *
Medium truck volume : 966/84 veh/TimePeriod *
Heavy truck volume : 690/60 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 15000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Parkdale ave (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 45.46 / 45.46 m
Receiver height : 91.50 / 91.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -58.00 deg Angle2 : 37.00 deg
Barrier height : 28.00 m
Barrier receiver distance : 29.38 / 29.38 m
Source elevation : 1.50 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

```
Results segment # 1: Parkdale ave (day)
---------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       91.50 !       34.30 !        34.30

ROAD (54.37 + 59.09 + 56.56) = 61.87 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -58   0.00  66.69   0.00  -4.82  -7.50   0.00   0.00   0.00  54.37
-------------------------------------------------------------------------------
   -58     37   0.00  66.69   0.00  -4.82  -2.78   0.00   0.00   0.00  59.09*
   -58     37   0.00  66.69   0.00  -4.82  -2.78   0.00   0.00   0.00  59.09
-------------------------------------------------------------------------------
    37     90   0.00  66.69   0.00  -4.82  -5.31   0.00   0.00   0.00  56.56
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 61.87 dBA

Total Leq All Segments: 61.87 dBA

Results segment # 1: Parkdale ave (night)
-----------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       91.50 !       34.30 !        34.30

ROAD (46.77 + 51.50 + 48.96) = 54.27 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -58   0.00  59.09   0.00  -4.82  -7.50   0.00   0.00   0.00  46.77
-------------------------------------------------------------------------------
   -58     37   0.00  59.09   0.00  -4.82  -2.78   0.00   0.00   0.00  51.50*
   -58     37   0.00  59.09   0.00  -4.82  -2.78   0.00   0.00   0.00  51.50
-------------------------------------------------------------------------------
    37     90   0.00  59.09   0.00  -4.82  -5.31   0.00   0.00   0.00  48.96
-------------------------------------------------------------------------------
```

```
 * Bright Zone !

Segment Leq : 54.27 dBA

Total Leq All Segments: 54.27 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 61.87
                           (NIGHT): 54.27
```