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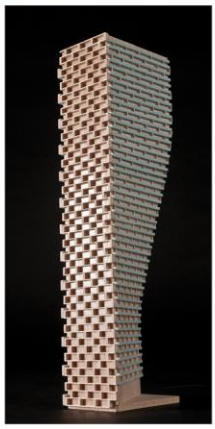
ENGINEERS & SCIENTISTS

TRAFFIC NOISE ASSESSMENT

211 Armstrong Street
Ottawa, Ontario

Report: 22-319 – Traffic Noise



November 8, 2022

PREPARED FOR

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EXECUTIVE SUMMARY

This report describes a traffic noise assessment undertaken in support of a Site Plan Control (SPC) application for the proposed residential development located at 211 Armstrong Street in Ottawa, Ontario. The proposed development comprises a rectangular three-storey building. The dominant source of roadway traffic noise impacting the development is Parkdale Avenue, located west of the development. As the LRT is further than 100m away from the development, noise and ground-borne vibration impacts are insignificant and are excluded from the study. Figure 1 illustrates the site location with the surrounding context.

The assessment is based on (i) theoretical noise prediction methods that conform to the Ministry of the Environment, Conservation and Parks (MECP), Ministry of Transportation of Ontario (MTO), 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) architectural drawings prepared by Project 1 Studio Incorporated, dated March 16, 2022.

The results of the current analysis indicated that Plane-of-Window noise levels will range between 49 and 55 dBA during the daytime period (07:00-23:00) and between 42 and 47 dBA during the nighttime period (23:00-07:00). The highest noise level (55 dBA) occurs at the south façade, which is most exposed to Parkdale Avenue. Since noise levels are less than 65 dBA at all the building façades, standard building components in compliance with Ontario Building Code standards will be sufficient to attenuate noise levels indoors when windows are closed.

As noise levels do not exceed 55 dBA, there are no ventilation requirements for noise-mitigation purposes or need of Warning Clauses. Furthermore, as noise levels do not exceed the OLA noise requirement for the rear yard, acoustic barriers will not be required.

Due to the size of the development, stationary noise impact on the surroundings is expected to be minimal. The building will likely have small internal Energy Recovery Ventilators or Heat Pump systems, with small residential sized air conditioning condoners on the roof or side of the building. The mechanical system would be required to comply with MECP's Publication NPC-216 Residential Air Conditioning

Devices. A review of aerial imagery shows that the surroundings comprise mainly of single-family dwellings, which are of no concern in terms of noise impacts onto the development. As such, no significant existing sources of noise were identified.

TABLE OF CONTENTS

1. INTRODUCTION

Gradient Wind Engineering Inc. (Gradient Wind) was retained by Lion Trade Limited to undertake a traffic noise assessment for a proposed residential development located at 211 Armstrong Street 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 assessment is based on theoretical noise calculation methods conforming to the Ministry of the Environment, Conservation and Parks (MECP) NPC-300[1], Ministry of Transportation Ontario (MTO)[2], and City of Ottawa Environmental Noise Control Guidelines (ENCG)[3] guidelines. Noise calculations were based on architectural drawings, provided by Project 1 Studio Incorporated, dated March 16, 2022, 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 211 Armstrong Street in Ottawa, Ontario. The site is bordered by Armstrong Street to the South, Oxford Street to the north, Parkdale Avenue to the west, and Hinchey Avenue to the east. Throughout this report, Armstrong Avenue is referred to as project west. The relevant source of roadway traffic noise is Parkdale Avenue, classified as a two-lane arterial roadway.

The proposed development comprises a 3-storey rectangular residential building, with an entry half a storey above-grade. The basement level contains three residential suites and a mechanical room. The ground level includes three residential suites with private balconies, a rear yard adjacent to bike racks and a detached garbage storage area north of the building. Levels 2 and 3 comprise 3 residential suites on each floor, each suite including a private balcony.

Due to the development's size, the stationary noise impact onto neighboring dwellings is expected to be minimal. Moreover, as the study site is surrounded by single-family homes, noise impacts from surroundings onto the development is also expected to be insignificant.

[1] Ontario Ministry of the Environment and Climate Change – Environmental Noise Guidelines, Publication NPC-300, Queens Printer for Ontario, Toronto, 2013
[2] Ministry of Transportation Ontario, "*Environmental Guide for Noise*", February 2022
[3] City of Ottawa, Environmental Noise Control Guidelines, January 2016

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) specify 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) [4]

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[5]. A closed window due to a ventilation requirement will bring noise levels down to achieve an acceptable indoor environment[6]. Therefore, where noise levels exceed 55 dBA daytime and 50 dBA nighttime, the ventilation 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[7].

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] Adapted from ENCG 2016 – Tables 2.2b and 2.2c
[5] Burberry, P.B. (2014). Mitchell's Environment and Services. Routledge, Page 125
[6] MECP, Environmental Noise Guidelines, NPC 300 – Part C, Section 7.8
[7] MECP, Environmental Noise Guidelines, NPC 300 – Part C, Section 7.1.3

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 for all streets was taken to be 92%/8%, respectively.
- Ground surfaces were taken to be reflective due to the presence of hard (paved) ground.
- Topography was assumed to be a flat/gentle slope surrounding the study building.
- Noise receptors were strategically placed at 3 locations around the study area (see Figure 2).
- Receptors considered the existing buildings as a barrier partially or fully obstructing exposure to the source as illustrated by exposure angles 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[8] which 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 each roadway included in this assessment.

TABLE 2: ROADWAY TRAFFIC DATA

Segment	Roadway Traffic Classification	Speed Limit (km/h)	Traffic Volumes
Parkdale Avenue	2-Lane Arterial	50	**15,000**

[8] City of Ottawa Transportation Master Plan, November 2013

5. RESULTS

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 ROADWAY TRAFFIC

Receptor Number	Receptor Height Above Grade (m)	Receptor Location	STAMSON 5.04 Noise Level (dBA)	
			Day	Night
R1	9	POW – West Façade – Level 3	49	42
R2	9	POW – South Façade – Level 3	55	47
R3	1.5	OLA – Rear Yard	44	N/A*

*OLA nighttime noise levels are not considered, as per the ENCG.

The results of the current analysis indicated that Plane-of-Window noise levels will range between 55 and 49 dBA during the daytime period (07:00-23:00) and between 47 and 42 dBA during the nighttime period (23:00-07:00). The highest noise level (55 dBA) occurs at the south façade, which is most exposed to Parkdale Avenue.

5.2 Noise Control Measures

Since noise levels do not exceed 65 dBA at any of the building façades, standard building components in compliance with the Ontario Building Code standards will be sufficient to attenuate noise levels indoors when windows are closed. The development will not require ventilation provisions for noise mitigation purposes, or Warning Clauses. As for the rear yard, noise levels are expected to fall below the noise level criteria for OLAs; therefore, requiring no acoustic barriers.

6. CONCLUSIONS AND RECOMMENDATIONS

The results of the current analysis indicated that noise levels will range between 55 and 49 dBA during the daytime period (07:00-23:00) and between 47 and 42 dBA during the nighttime period (23:00-07:00). The highest noise level (55 dBA) occurs at the south façade, which is most exposed to Parkdale Avenue. Since noise levels are less than 65 dBA at all building façades, standard building components in compliance with the Ontario Building Code standards will be sufficient to attenuate noise levels indoors when windows are closed. As for the OLAs in this development, noise levels are expected to fall below the noise level criteria. As such, no acoustic mitigation is required. Furthermore, as noise levels do not exceed 55 dBA, the development will not require ventilation provisions for noise mitigation purposes or Warning Clauses.

Due to the size of the development, stationary noise impact on the surroundings is expected to be minimal. The building will likely have small internal Energy Recovery Ventilators or Heat Pump systems, with small residential sized Air conditioning condoners on the roof or side of the building. The mechanical system would be required to comply with MECP's Publication NPC-216 Residential Air Conditioning Devices. A review of aerial imagery shows that the surroundings comprise mainly of single-family dwellings, which are of no concern in terms of noise impacts onto the development. As such, no significant existing sources of noise were identified.

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.

Essraa Alqassab, BASc.
Junior Environmental Scientist

Joshua Foster, P.Eng.
Lead Engineer

Gradient Wind File #22-319

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PROJECT	211 ARMSTRONG STREET, OTTAWA ROADWAY TRAFFIC NOISE ASSESSMENT
SCALE	1:2000 (APPROX.)
DRAWING NO.	GW22-319-1
DATE	OCTOBER 25 2022
DRAWN BY	E.A.

DESCRIPTION

FIGURE 1:
SITE PLAN AND SURROUNDING CONTEXT

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PROJECT	211 ARMSTRONG STREET, OTTAWA ROADWAY TRAFFIC NOISE ASSESSMENT		DESCRIPTION
SCALE	1:400 (APPROX.)	DRAWING NO.	GW22-319-2
DATE	OCTOBER 25 2022	DRAWN BY	E.A.

FIGURE 2:
RECEPTOR LOCATIONS

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PROJECT	211 ARMSTRONG STREET, OTTAWA ROADWAY TRAFFIC NOISE ASSESSMENT		DESCRIPTION
SCALE	1:400 (APPROX.)	DRAWING NO.	GW22-319-3
DATE	OCTOBER 25 2022	DRAWN BY	E.A.

FIGURE 3:
STAMSON PARAMETERS

APPENDIX A

STAMSON 5.04 – INPUT AND OUTPUT DATA

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```
STAMSON 5.0        NORMAL REPORT        Date: 25-10-2022 13:15:28
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r1.te                Time Period: Day/Night 16/8 hours
Description:


Road data, segment # 1: Parkdale (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  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  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 (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  :  56.00 / 56.00  m
Receiver height           :   9.00 / 9.00   m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :   7.00 m
Barrier receiver distance :  46.00 / 46.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00


Results segment # 1: Parkdale (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 !        9.00 !        2.84 !         2.84

ROAD (0.00 + 49.31 + 0.00) = 49.31 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------------
--
   -90     90   0.00  68.48   0.00  -5.72   0.00   0.00   0.00 -13.44
49.31
-------------------------------------------------------------------------------
--

Segment Leq : 49.31 dBA

Total Leq All Segments: 49.31 dBA


Results segment # 1: Parkdale (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 !        9.00 !        2.84 !         2.84

ROAD (0.00 + 41.72 + 0.00) = 41.72 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------------
--
   -90     90   0.00  60.88   0.00  -5.72   0.00   0.00   0.00 -13.44
41.72
-------------------------------------------------------------------------------
--

Segment Leq : 41.72 dBA

Total Leq All Segments: 41.72 dBA



TOTAL Leq FROM ALL SOURCES (DAY): 49.31
                           (NIGHT): 41.72
```

```
STAMSON 5.0        NORMAL REPORT        Date: 25-10-2022 13:15:35
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r2.te                Time Period: Day/Night 16/8 hours
Description:


Road data, segment # 1: Parkdale (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  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  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 (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  :  59.00 / 59.00  m
Receiver height           :   9.00 / 9.00   m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : -25.00 deg
Barrier height            :   7.00 m
Barrier receiver distance :  46.00 / 46.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00


Results segment # 1: Parkdale (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 !        9.00 !        3.15 !         3.15

ROAD (0.00 + 46.60 + 53.96) = 54.69 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
--
   -90    -25   0.00  68.48   0.00  -5.95  -4.42   0.00   0.00 -11.51
46.60
-------------------------------------------------------------------------
--
   -25      0   0.00  68.48   0.00  -5.95  -8.57   0.00   0.00   0.00
53.96
-------------------------------------------------------------------------
--

Segment Leq : 54.69 dBA

Total Leq All Segments: 54.69 dBA


Results segment # 1: Parkdale (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 !        9.00 !        3.15 !         3.15

ROAD (0.00 + 39.01 + 46.36) = 47.10 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
--
   -90    -25   0.00  60.88   0.00  -5.95  -4.42   0.00   0.00 -11.51
39.01
-------------------------------------------------------------------------
--
   -25      0   0.00  60.88   0.00  -5.95  -8.57   0.00   0.00   0.00
46.36
-------------------------------------------------------------------------
--

Segment Leq : 47.10 dBA
```

```
Total Leq All Segments: 47.10 dBA


TOTAL Leq FROM ALL SOURCES (DAY): 54.69
                           (NIGHT): 47.10
```

```
STAMSON 5.0        NORMAL REPORT        Date: 25-10-2022 13:15:43
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r3.te                Time Period: Day/Night 16/8 hours
Description:


Road data, segment # 1: Parkdale (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  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  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 (day/night)
----------------------------------------------
Angle1   Angle2           : -22.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  66.00 / 66.00  m
Receiver height           :   1.50 / 1.50   m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -22.00 deg   Angle2 : 90.00 deg
Barrier height            :   7.00 m
Barrier receiver distance :  55.00 / 55.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00


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

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
```

```
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        1.50 !         1.50

ROAD (0.00 + 44.32 + 0.00) = 44.32 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------------
--
   -22     90   0.00  68.48   0.00  -6.43  -2.06   0.00   0.00 -15.67
44.32
-------------------------------------------------------------------------------
--

Segment Leq : 44.32 dBA

Total Leq All Segments: 44.32 dBA


Results segment # 1: Parkdale (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 !        1.50 !        1.50 !         1.50

ROAD (0.00 + 36.72 + 0.00) = 36.72 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------------
--
   -22     90   0.00  60.88   0.00  -6.43  -2.06   0.00   0.00 -15.67
36.72
-------------------------------------------------------------------------------
--

Segment Leq : 36.72 dBA

Total Leq All Segments: 36.72 dBA



TOTAL Leq FROM ALL SOURCES (DAY): 44.32
                           (NIGHT): 36.72
```