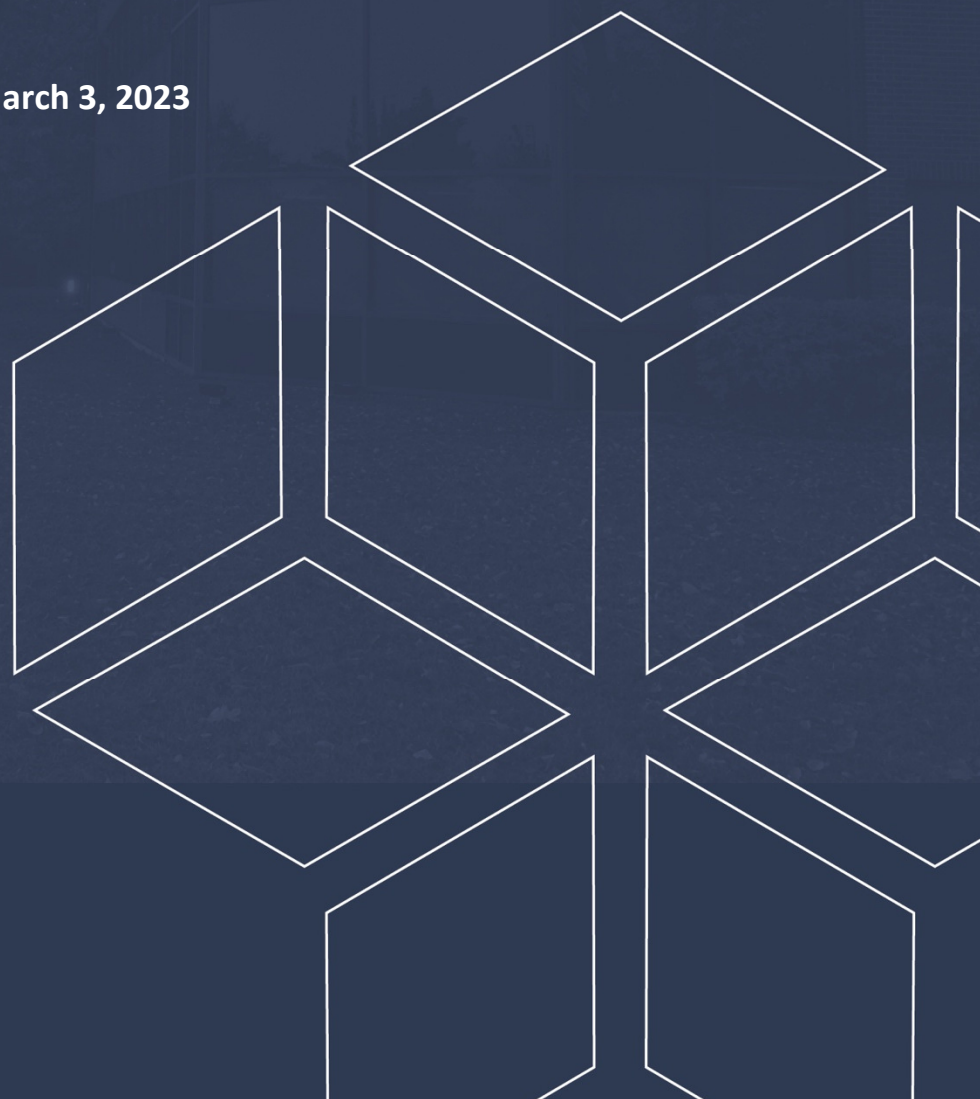


# **Environmental Noise Control Study Proposed Residential Development**

56 Capilano Drive  
Ottawa, Ontario

Prepared for CSV Architects

Report PG6606-1 dated March 3, 2023



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## 1.0 Introduction

Paterson Group (Paterson) was commissioned by CSV Architects to conduct an environmental noise control study for the proposed residential development to be located at 56 Capilano Drive, in the City of Ottawa.

The objective of the current study is to:

- Determine the primary noise sources impacting the site and compare the projected sound levels to guidelines set out by the Ministry of Environment and Climate Change (MOECC) and the City of Ottawa.
- Review the projected noise levels and offer recommendations regarding warning classes, construction materials or alternative sound barriers.

The following report has been prepared specifically and solely for the aforementioned project which is described herein. It contains our findings and includes acoustical recommendations pertaining to the design and construction of the subject development as they are understood at the time of writing this report.

This study has been conducted according to City of Ottawa document - Engineering Noise Control Guidelines (ENCG), dated January 2016, and the Ontario Ministry of the Environment Guideline NPC-300.

## 2.0 Proposed Development

It is understood that the proposed development will consist of a two (2) storey townhouses with one basement level at the northern part of the site, and a four (4) storey apartment building with one basement level at the southern part of the site. It is anticipated that the townhouses will consist of 4 units and the apartment building will consist of 54 units. The townhouses will rise 6 metres above grade and the apartment building will rise 13 metres above grade. Associated walkways, driveways, parking areas, and landscaped areas are further anticipated. Outdoor living areas – rear yards at the townhouses, rooftop terrace at the apartment building, and at-grade amenity area are identified on the proposed site plan.

### 3.0 Methodology and Noise Assessment Criteria

The City of Ottawa outlines three (3) sources of environmental noise that must be analyzed separately:

- Surface Transportation Noise
- Stationary Noise
  - new noise-sensitive development applications (noise receptors) in proximity to existing or approved stationary sources of noise, and
  - new stationary sources of noise (noise generating) in proximity to existing or approved noise-sensitive developments
- Aircraft Noise

#### Surface Transportation Noise

Surface roadway traffic noise, equivalent to sound level energy  $L_{eq}$ , provides a measure of the time varying noise level over a period of time. For roadways, the  $L_{eq}$  is commonly calculated on the basis of 16-hour ( $L_{eq16}$ ) daytime (07:00-23:00) and 8-hour ( $L_{eq8}$ ) nighttime (23:00-7:00) split to assess its impact on residential, commercial and institutional buildings.

The City of Ottawa's Official Plan dictates that the influence area must contain any of following conditions to classify as a surface transportation noise source for a subject site:

- Within 100 m of the right-of-way of an existing or proposed arterial, collector or major collector road; a light rail transit corridor; bus rapid transit, or transit priority corridor
- Within 250 m of the right-of-way for an existing or proposed highway or secondary rail line
- Within 300 m from the right of way of a proposed or existing rail corridor or a secondary main railway line
- Within 500 m of an existing 400 series provincial highway, freeway or principle main railway line.

The Environmental Noise Guidelines for Stationary and Transportation Sources – NPC-300 outlines the limitations of noise levels in relation to the location of the receptors. These can be found in the following tables:

<b>Table 1 – Noise Level Limit for Outdoor Living Areas</b>	
<b>Time Period</b>	<b>L<sub>eq</sub> Level (dBA)</b>
Daytime, 7:00-23:00	55
➤ Standard taken from Table 2.2a; Sound Level Limit for Outdoor Living Areas – Road and Rail	

<b>Table 2 – Noise Level Limits for Indoor Living Areas</b>			
<b>Type of Space</b>	<b>Time Period</b>	<b>L<sub>eq</sub> Level (dBA)</b>	
		<b>Road</b>	<b>Rail</b>
General offices, reception areas, retail stores, etc.	Daytime 7:00-23:00	50	45
Theatres, places of worship, libraries, individual or semi-private offices, conference rooms, reading rooms, etc.	Daytime 7:00-23:00	45	40
Living/dining/den areas of <b>residences</b> , hospitals, nursing/retirement homes, schools, day-care centres	Daytime 7:00-23:00	45	40
Living/dining/den areas of <b>residences</b> , hospitals, nursing/retirement homes etc. (except schools or day-care centres)	Nighttime 23:00-7:00	45	40
Sleeping quarters of hotels/motels	Nighttime 23:00-7:00	45	40
Sleeping quarters of <b>residences</b> , hospitals, nursing/retirement homes, etc.	Nighttime 23:00-7:00	40	35
➤ Standards taken from Table 2.2b, Sound Level Limit for Indoor Living Areas – Road and Rail and Table 2.2c, Supplementary Sound Level Limits for Indoor Spaces – Road and Rail			

Predicted noise levels at the pane of window dictate the action required to achieve recommended noise levels. It is noted in ENCG that the limits outlined in Table 2 are for the noise levels on the interior of the window glass pane. An open window is considered to provide a 10 dBA noise reduction, while a standard closed window is capable to provide a minimum 20 dBA noise reduction. The noise level limits of residential building are 45 dBA daytime and 40 dBA nighttime. Therefore, where noise levels exceed 55 dBA daytime and 50 dBA nighttime, the ventilation for the building should consider the provision for central air conditioning. Where noise levels exceed 65 dBA daytime and 60 dBA nighttime, central air conditioning will be required, and the building components will require higher levels of sound attenuation.

When the noise levels are equal to or less than the specified criteria, no noise attenuation (control) measures are required.

When the exceedance of the recommended noise level limits is between 1 dBA and 5 dBA for outdoor living areas ( $55 \text{ dBA} < L_{eq} \leq 60 \text{ dBA}$ ), the proposed development can be completed with no noise control measures incorporated into the site, but the prospective purchasers / tenants should be made aware by suitable Warning Clauses. When the exceedance of recommended noise level limits is more than 5 dBA for outdoor living areas ( $L_{eq} > 60 \text{ dBA}$ ), noise control measures are required to reduce  $L_{eq}$  to below 60 dBA and as close as 55 dBA as it is technically and economically feasible.

Noise attenuation (control) measures include any or all of the following:

- Noise attenuation barrier
- Provisions for the installation of central air conditioning
- Central air conditioning
- Architectural components designed to provide additional acoustic insulation

In addition to the implementation of noise attenuation features, if required, the following Warning Clauses may be recommended to advise the prospective purchasers / tenants of affected units of potential environmental noise problem:

<b>Table 3 – Warning Clauses for Outdoor Living Areas</b>		
<b>Leq (dBA)</b>	<b>Warning Clause</b>	<b>Description</b>
$55 \text{ dBA} < L_{eq(16)} \leq 60 \text{ dBA}$	Warning Clause Type A	"Purchasers/tenants are advised that sound levels due to increasing road traffic (rail traffic) (air traffic) may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment."
$60 \text{ dBA} < L_{eq(16)}$	Warning Clause Type B	"Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road traffic (rail traffic) (air traffic) may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment."
<ul style="list-style-type: none"> <li>➤ Clauses taken from section C8 Warning Clauses; Environmental Noise Guidelines for Stationary and Transportation Sources - NPC-300</li> </ul>		

<b>Table 4 – Warning Clauses for Indoor Living Areas</b>		
<b>Leq (dBA)</b>	<b>Warning Clause</b>	<b>Description</b>
$55 \text{ dBA} < L_{\text{eq}(16)} \leq 65 \text{ dBA}$ $50 \text{ dBA} < L_{\text{eq}(8)} \leq 60 \text{ dBA}$	Warning Clause Type C	"This dwelling unit has been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning by the occupant in low and medium density developments will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment."
$65 \text{ dBA} < L_{\text{eq}(16)}$ $60 \text{ dBA} < L_{\text{eq}(8)}$	Warning Clause 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."
<p>➤ Clauses taken from section C8 Warning Clauses; Environmental Noise Guidelines for Stationary and Transportation Sources - NPC-300</p>		

### **Stationary Noise**

Stationary noise sources include sources or facilities that are fixed or mobile and can cause a combination of sound and vibration levels emitted beyond the property line. These sources may include commercial air conditioner units, generators and fans. Facilities that may contribute to stationary noise may include car washes, snow disposal sites, transit stations and manufacturing facilities.

The subject site is not in proximity to existing or approved stationary sources of noise. Therefore, a stationary noise analysis will not be required.

### **Aircraft / Airport Noise**

The subject site is not located within the Airport Vicinity Development Zone. Therefore this project will not require an aircraft/airport noise analysis. No warning clauses regarding aircraft or airport noise will be required.

## 4.0 Analysis

### Surface Transportation Noise

The subject development is bordered to the north by Capilano Drive followed by residential dwellings, Kerry Crescent, and Gilbey Drive, to the east by parking area, residential dwellings, and Birchwood Drive, to the south by parking area and recreational building, and to the west by parking areas and commercial buildings. Capilano Drive, Kerry Crescent, Gilbey Drive and Birchwood Drive are identified within the 100 m radius of proposed development.

Based on the City of Ottawa’s Official Plan, Schedule E, Capilano Drive is considered a 2-lane urban collector road (2-UCU). Other roads within the 100 m radius of the proposed development are not classified as either arterial, collector or major collector roads and therefore are not included in this study. The major source of traffic noise is due to the Capilano Drive north of the proposed development.

All noise sources are presented in Drawing PG6606-3 - Site Geometry located in Appendix 1.

The noise levels from road traffic are provided by the City of Ottawa, taking into consideration the right-of-way width and the implied roadway classification. It is understood that these values represent the maximum allowable capacity of the proposed roadways. The parameters to be used for sound level predictions can be found below.

<b>Segment</b>	<b>Roadway Classification</b>	<b>AADT Veh/Day</b>	<b>Speed Limit (km/h)</b>	<b>Day/Night Split %</b>	<b>Medium Truck %</b>	<b>Heavy Truck %</b>
Capilano Drive	2-UCU	8000	40	92/8	7	5
➤ Data obtained from the City of Ottawa document ENCG						

Three (3) levels of reception points at townhouses, three (3) levels of reception points at the apartment building, and one (1) level of receptor point at the at-grade amenity area at the middle portion of the site were selected for this analysis. The following elevations were selected from the heights provided on the survey plan for the subject buildings.



<b>Table 6 – Elevations of Reception Points</b>			
<b>Floor Number</b>	<b>Elevation at Centre of Window (m)</b>	<b>Floor Use</b>	<b>Daytime / Nighttime Analysis</b>
Townhouses:			
First Floor	1.5	Living Area/Bedroom	Daytime / Nighttime
Second Floor	4.5	Living Area/Bedroom	Daytime / Nighttime
Rear Yard	1.5	--	Outdoor Living Area
Apartment Building:			
First Floor	1.5	Living Area/Bedroom	Daytime / Nighttime
Fourth Floor	11.0	Living Area/Bedroom	Daytime / Nighttime
Rooftop Terrace	14.5	--	Outdoor Living Area
At-Grade Amenity Area:			
Amenity Area	1.5	--	Outdoor Living Area

For this analysis, a reception point was taken at the centre of each floor, at the first floor and top floor. Outdoor living areas consisting of rear yards are identified at the townhouses. Additional outdoor living areas were identified as a rooftop terrace at the apartment building and an at-grade amenity area at the middle portion of the site. Two receptors (REC 4 and REC 5) were selected in the centre of rear yards of townhouses at an elevation of 1.5 m. One receptor (REC 9) was selected in the centre of rooftop terrace of apartment building at an elevation of 14.5 m. One receptor (REC 10) was selected in the centre of at-grade amenity area at the middle portion of the site at an elevation of 1.5 m. Reception points are detailed on Drawing PG6606-2 - Receptor Locations presented in Appendix 1.

All horizontal distances have been measured from the reception point to the edge of the right-of-way. The roadway was analyzed where it intersected the 100 m buffer zone, which is reflected in the local angles described in Paterson Drawings PG6606-3A to 3E, PG6606-4A to 4D, PG6606-5A - Site Geometry in Appendix 1. The subject site is generally levelled and at grade with the neighbouring roads within the 100 m radius.

Table 8 - Summary of Reception Points and Geometry, located in Appendix 1, provides a summary of the points of reception and their geometry with respect to the noise sources. The analysis is completed so that no effects of sound reflection off of the building facade are considered, as stipulated by the ENGC.

The analysis was completed using STAMSON version 5.04, a computer program which uses the road and rail traffic noise prediction methods using ORNAMENT (Ontario Road Noise Analysis Method for Environment and Transportation) and STEAM (Sound from Trains Environment Analysis Method), publications from the Ontario Ministry of Environment and Energy.

## 5.0 Results

### Surface Transportation Noise

The primary descriptors are the 16-hour daytime (7:00-23:00) and the 8-hour nighttime (23:00-7:00) equivalent sound levels,  $L_{eq(16)}$  and  $L_{eq(8)}$  for City roads.

The exterior noise levels due to roadway traffic sources were analyzed with the STAMSON version 5.04 software at all reception points. The input and output data of the STAMSON modeling can be found in Appendix 2, and the summary of the results can be found in Table 7.

<b>Table 7: Exterior Noise Levels due to Roadway Traffic Sources</b>				
<b>Reception Point</b>	<b>Height Above Grade (m)</b>	<b>Receptor Location</b>	<b>Daytime <math>L_{eq(16)}</math> (dBA)</b>	<b>Nighttime <math>L_{eq(8)}</math> (dBA)</b>
<b>Townhouses</b>				
REC 1-1	1.5	Northern Elevation, 1st Floor	62	55
REC 1-2	4.5	Northern Elevation, 2nd Floor	63	55
REC 2-1	1.5	Western Elevation, 1st Floor	59	52
REC 2-2	4.5	Western Elevation, 2nd Floor	60	52
REC 3-1	1.5	Eastern Elevation, 1st Floor	59	52
REC 3-2	4.5	Eastern Elevation, 2nd Floor	60	52
REC 4	1.5	Rear Yard - West	50	--
REC 5	1.5	Rear Yard - East	50	--
<b>Apartment Building</b>				
REC 6-1	1.5	Northern Elevation, 1st Floor	55	47
REC 6-4	11.0	Northern Elevation, 4th Floor	57	49
REC 7-1	1.5	Western Elevation, 1st Floor	48	41
REC 7-4	11.0	Western Elevation, 4th Floor	50	42
REC 8-1	1.5	Eastern Elevation, 1st Floor	49	42
REC 8-4	11.0	Eastern Elevation, 4th Floor	51	43
REC 9	14.5	Rooftop Terrace	50	--
<b>At-Grade Amenity Area</b>				
REC 10	1.5	At-Grade Amenity Area (After Townhouses Construction)	52	--

## 6.0 Discussion and Recommendations

### 6.1 Outdoor Living Areas

Outdoor living areas – rear yards at the townhouses, rooftop terrace at the apartment building, and at-grade amenity area at the middle portion of the site are anticipated at the proposed development. Two receptors (REC 4 and REC 5) were selected in the centre of rear yards of townhouses at an elevation of 1.5 m. One receptor (REC 9) was selected in the centre of rooftop terrace of apartment building at an elevation of 14.5 m. One receptor (REC 10) was selected in the centre of at-grade amenity area at an elevation of 1.5 m.

It is assumed that the rear yards will only be utilized as outdoor living areas provided that the proposed townhouses are constructed. Utilizing the exteriors of proposed townhouses as noise barriers, the proposed  $Leq(16)$  at the rear yards will be 50 dBA, which are below the 55 dBA threshold value specified by the ENCG. Therefore, no further noise attenuation measures are required.

It is assumed that the rooftop terrace will only be utilized as outdoor living area provided that the proposed apartment building is constructed. Utilizing the exteriors of proposed apartment building as noise barriers, the proposed  $Leq(16)$  at the rooftop terrace will be 50 dBA, which is below the 55 dBA threshold value specified by the ENCG. Therefore, no further noise attenuation measures are required.

It is assumed that the at-grade amenity area will only be utilized as outdoor living area provided that the proposed buildings are constructed. Utilizing the exteriors of proposed townhouses as noise barriers, the proposed  $Leq(16)$  at the at-grade amenity area will be 52 dBA, which is below the 55 dBA threshold value specified by the ENCG. Therefore, no further noise attenuation measures are required.

### 6.2 Indoor Living Areas and Ventilation

The results of the STAMSON modeling indicate that the noise levels at proposed townhouses will range between 59 dBA and 63 dBA during the daytime period (07:00-23:00) and between 52 dBA and 55 dBA during the nighttime period (23:00-07:00). The anticipated noise levels on the northern, western, and eastern elevations of townhouses will exceed the limit for the exterior of the pane of glass (55 dBA) specified by the ENCG. Therefore, all townhouse units should be designed with the provision of a central air conditioning unit, along with the warning clause Type C, as outlined in Table 3.

The results of the STAMSON modeling indicate that the noise levels at proposed apartment building will range between 48 dBA and 57 dBA during the daytime period (07:00-23:00) and between 41 dBA and 49 dBA during the nighttime period (23:00-07:00). The anticipated noise level on the northern elevation of apartment building will exceed the limit for the exterior of the pane of glass (55 dBA) specified by the ENCG. Therefore, the units on the northern elevation of apartment building should be designed with the provision of a central air conditioning unit, along with the warning clause Type C, as outlined in Table 3.

It is also noted that the results of STAMSON modeling indicate that the noise levels at the townhouses and the apartment building will be below 65 dBA, and therefore standard building materials are acceptable to provide adequate soundproofing.

## 7.0 Summary of Findings

The subject site is located at 56 Capilano Drive, in the City of Ottawa. It is understood that the proposed development will consist of two (2) storey townhouses with one level of basement at the northern part of the site, and a four (4) storey apartment building with one level of basement at the southern part of the site. The townhouses will rise 6 metres above grade and the apartment building will rise 13 metres above grade. There is one major source of surface transportation noise to the proposed development: Capilano Drive.

Outdoor living areas – rear yards at the townhouses, rooftop terrace at the apartment building, and at-grade amenity area are identified at the proposed development. Utilizing the exteriors of townhouses and apartment building as noise barriers, the results of STAMSON modeling indicate that the noise levels at the rear yards of townhouses, the rooftop terrace of apartment building, and the amenity area at the middle portion of site are expected to be below the 55 dBA threshold value specified by the ENCG. Therefore, no further noise attenuation measures are required.

Several reception points were selected for the surface transportation noise analysis, consisting of the centre of first level and top level. The results of STAMSON modeling indicate that the noise levels on the northern, western, and eastern elevations of proposed townhouses, and the northern elevation of proposed apartment building, are expected to exceed the 55 dBA threshold specified by the ENCG. Therefore, design with the provision for a central air conditioning unit, along with a warning clause Type C, will be required for all townhouse units and the units on the northern elevation of the apartment building. It is also noted that the modeling indicates that the noise levels at proposed townhouses and apartment building are below 65 dBA, and therefore standard building materials are acceptable to provide adequate soundproofing.

## 8.0 Statement of Limitations

The recommendations made in this report are in accordance with our present understanding of the project. Our recommendations should be reviewed when the project drawings and specifications are complete.

The present report applies only to the project described in this document. Use of this report for purposes other than those described herein or by person(s) other than CSV Architects or their agent(s) is not authorized without review by this firm for the applicability of our recommendations to the altered use of the report.

**Paterson Group Inc.**



Yolanda Tang, M.A.Sc



Stephanie A. Boisvenue, P.Eng.

**Report Distribution:**

- CSV Architects (email copy)
- Paterson Group (1 copy)

# **APPENDIX 1**

## **Table 8 - Summary of Reception Points and Geometry**

**Drawing PG6606-1 - Site Plan**

**Drawing PG6606-2 - Receptor Location Plan**

**Drawing PG6606-3 - Site Geometry (Townhouses)**

**Drawing PG6606-3A - Site Geometry - REC 1-1 and REC 1-2**

**Drawing PG6606-3B - Site Geometry - REC 2-1 and REC 2-2**

**Drawing PG6606-3C - Site Geometry - REC 3-1 and REC 3-2**

**Drawing PG6606-3D - Site Geometry - REC 4**

**Drawing PG6606-3E - Site Geometry - REC 5**

**Drawing PG6606-4 - Site Geometry (Apartment Building)**

**Drawing PG6606-4A - Site Geometry - REC 6-1 and REC 6-4**

**Drawing PG6606-4B - Site Geometry - REC 7-1 and REC 7-4**

**Drawing PG6606-4C - Site Geometry - REC 8-1 and REC 8-4**

**Drawing PG6606-4D - Site Geometry - REC 9**

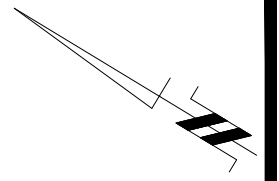
**Drawing PG6606-5 - Site Geometry (Amenity Area)**

**Drawing PG6606-5A - Site Geometry - REC 10**

**Table 8 - Summary of Reception Points and Geometry**  
56 Capilano Drive

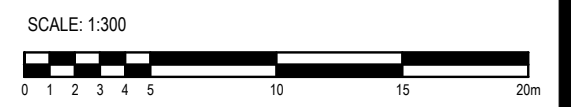
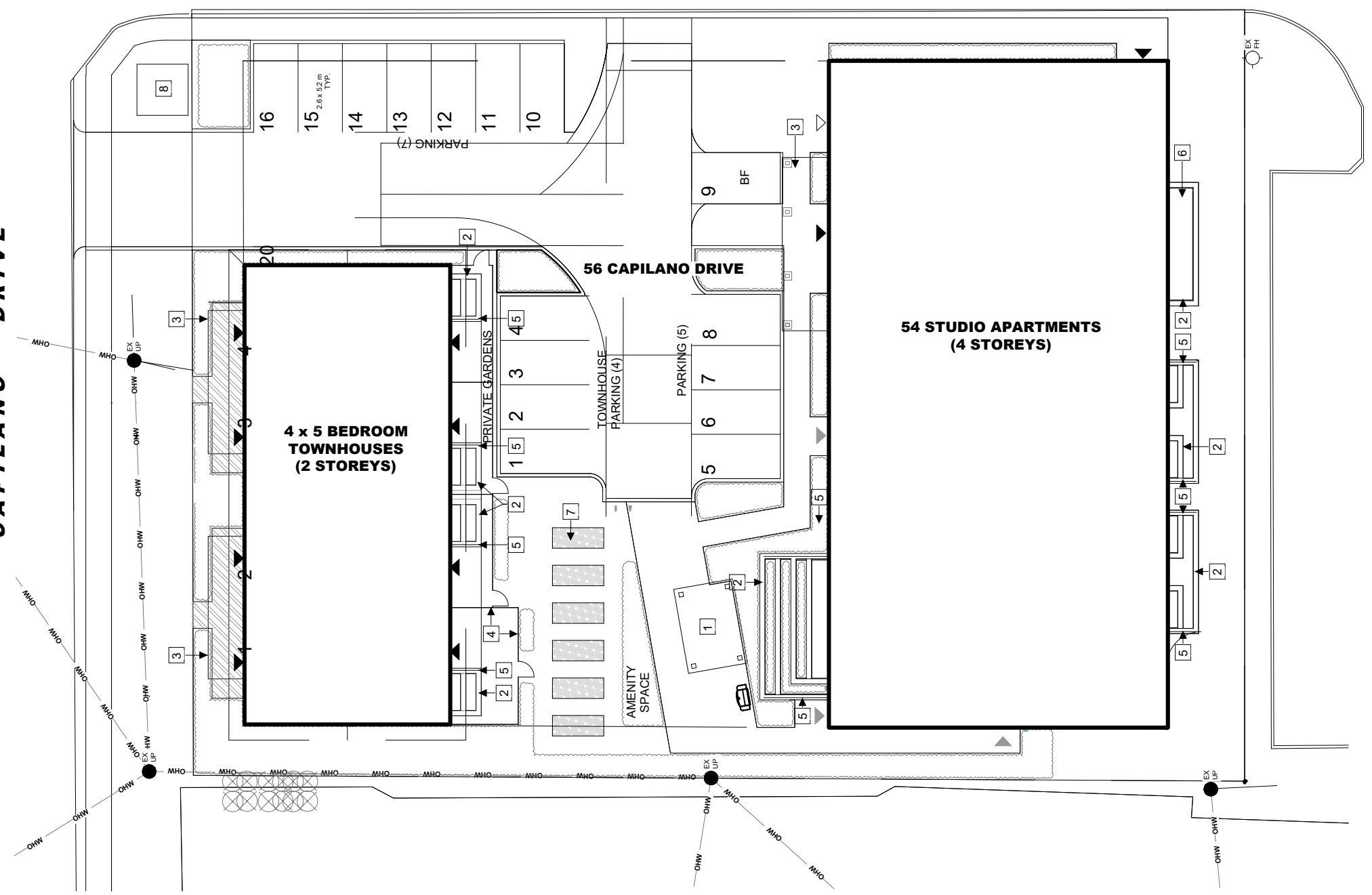
Point of Reception	Location	Leq Day (dBA)	Capilano Drive					Number of Rows of Houses	Density (%)						
			Horizontal (m)	Vertical (m)	Total (m)	Local Angle (degree)									
REC 1-1	Townhouses, Northern Elevation, 1st Floor	62	15	1.5	15.1	-90, 88	n/a	n/a							
REC 1-2	Townhouses, Northern Elevation, 2nd Floor	63	15	4.5	15.7	-90, 88	n/a	n/a							
REC 2-1	Townhouses, Western Elevation, 1st Floor	59	15	1.5	15.1	-88, 0	n/a	n/a							
REC 2-2	Townhouses, Western Elevation, 2nd Floor	60	15	4.5	15.7	-88, 0	n/a	n/a							
REC 3-1	Townhouses, Eastern Elevation, 1st Floor	59	15	1.5	15.1	0, 84	n/a	n/a							
REC 3-2	Townhouses, Eastern Elevation, 2nd Floor	60	15	4.5	15.7	0, 84	n/a	n/a							
REC 4	Townhouse (West ) - Rear Yard	50	18	1.5	18.1	-84, -63	n/a	n/a							
REC 5	Townhouse (East ) - Rear Yard	50	18	1.5	18.1	61, 79	n/a	n/a							
REC 6-1	Apartment Building, Northern Elevation, 1st Floor	55	40	1.5	40.0	-74, 70	n/a	n/a							
REC 6-4	Apartment Building, Northern Elevation, 4th Floor	57	40	11.0	41.5	-74, 70	n/a	n/a							
REC 7-1	Apartment Building, Western Elevation, 1st Floor	48	50	1.5	50.0	-66, 0	1	40							
REC 7-4	Apartment Building, Western Elevation, 4th Floor	50	50	11	51.2	-66, 0	1	40							
REC 8-1	Apartment Building, Eastern Elevation, 1st Floor	49	50	1.5	50.0	0, 61	1	20							
REC 8-4	Apartment Building, Eastern Elevation, 4th Floor	51	50	11	51.2	0, 61	1	20							
REC 9	Apartment Building - Rooftop Terrace	50	50	14.5	52.1	-70, 66	n/a	n/a							
REC 10	At-Grade Amenity Area	52	30	1.5	1.5	-80, -20	1	20							
						64, 75	n/a	n/a							





**CAPILANO DRIVE**

ACCESS ROAD



**PATERSON GROUP**  
 9 AURIGA DRIVE  
 OTTAWA, ON  
 K2E 7T9  
 TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

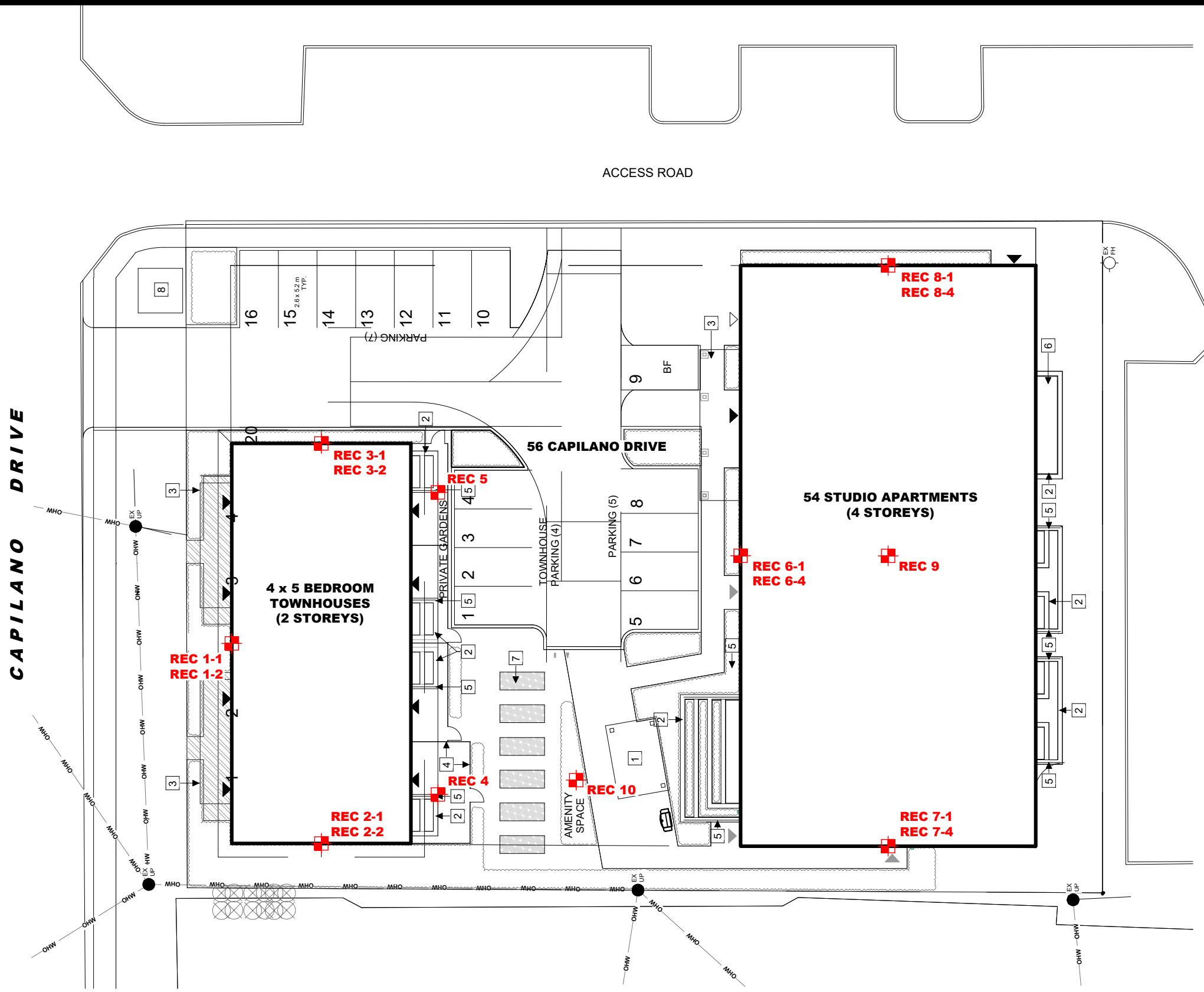
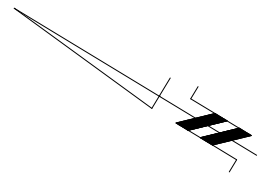
OTTAWA,  
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**CSV ARCHITECTS  
 NOISE ATTENUATION STUDY  
 PROPOSED RESIDENTIAL DEVELOPMENT  
 56 CAPILANO DRIVE**

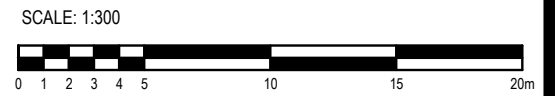
ONTARIO

**SITE PLAN**

Scale:	1:300	Date:	03/2023
Drawn by:	YA	Report No.:	PG6606-1
Checked by:	YT	Dwg. No.:	<b>PG6606-1</b>
Approved by:	SB	Revision No.:	



**LEGEND:**  
 RECEPTOR LOCATION




**PATERSON GROUP**  
 9 AURIGA DRIVE  
 OTTAWA, ON  
 K2E 7T9  
 TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

CSV ARCHITECTS  
 NOISE ATTENUATION STUDY  
 PROPOSED RESIDENTIAL DEVELOPMENT  
 56 CAPILANO DRIVE  
 OTTAWA, ONTARIO

Title: **RECEPTOR LOCATION PLAN**

Scale:	1:300	Date:	03/2023
Drawn by:	YA	Report No.:	PG6606-1
Checked by:	YT	Dwg. No.:	<b>PG6606-2</b>
Approved by:	SB	Revision No.:	



9 AURIGA DRIVE  
 OTTAWA, ON  
 K2E 7T9  
 TEL: (613) 226-7381

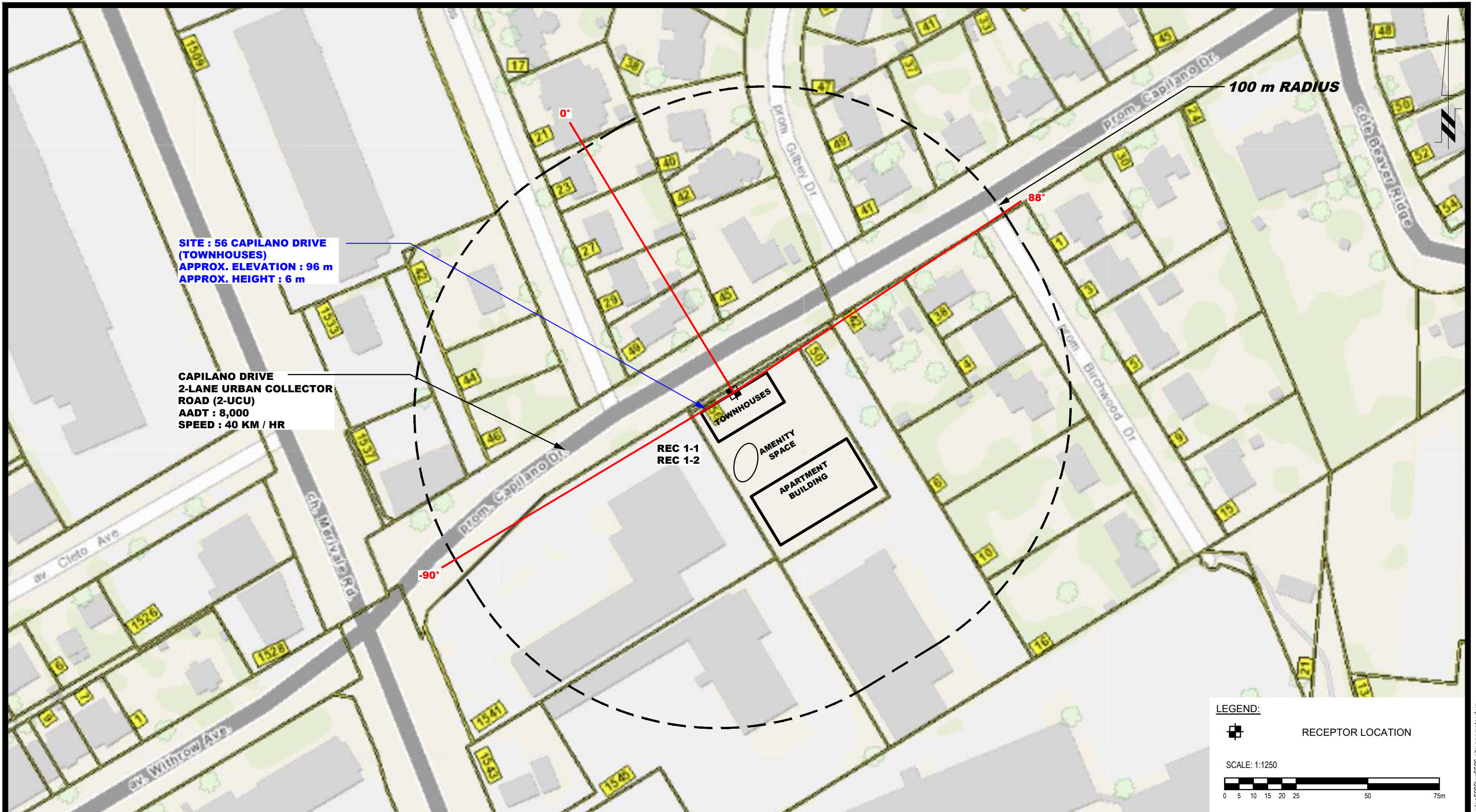
NO.	REVISIONS	DATE	INITIAL

OTTAWA, ONTARIO

Title: **SITE GEOMETRY (TOWNHOUSES)**

CSV ARCHITECTS  
 NOISE ATTENUATION STUDY  
 PROPOSED RESIDENTIAL DEVELOPMENT  
 56 CAPILANO DRIVE

Scale:	1:1250	Date:	03/2023
Drawn by:	YA	Report No.:	PG6606-1
Checked by:	YT	Dwg. No.:	<b>PG6606-3</b>
Approved by:	SB	Revision No.:	



**SITE : 56 CAPILANO DRIVE  
(TOWNHOUSES)  
APPROX. ELEVATION : 96 m  
APPROX. HEIGHT : 6 m**

**CAPILANO DRIVE  
2-LANE URBAN COLLECTOR  
ROAD (2-UCU)  
AADT : 8,000  
SPEED : 40 KM / HR**

**REC 1-1  
REC 1-2**

**AMENITY SPACE  
APARTMENT BUILDING**

**100 m RADIUS**

**LEGEND:**



**RECEPTOR LOCATION**

SCALE: 1:1250



9 AURIGA DRIVE  
OTTAWA, ON  
K2E 7T9  
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

OTTAWA,  
Title:

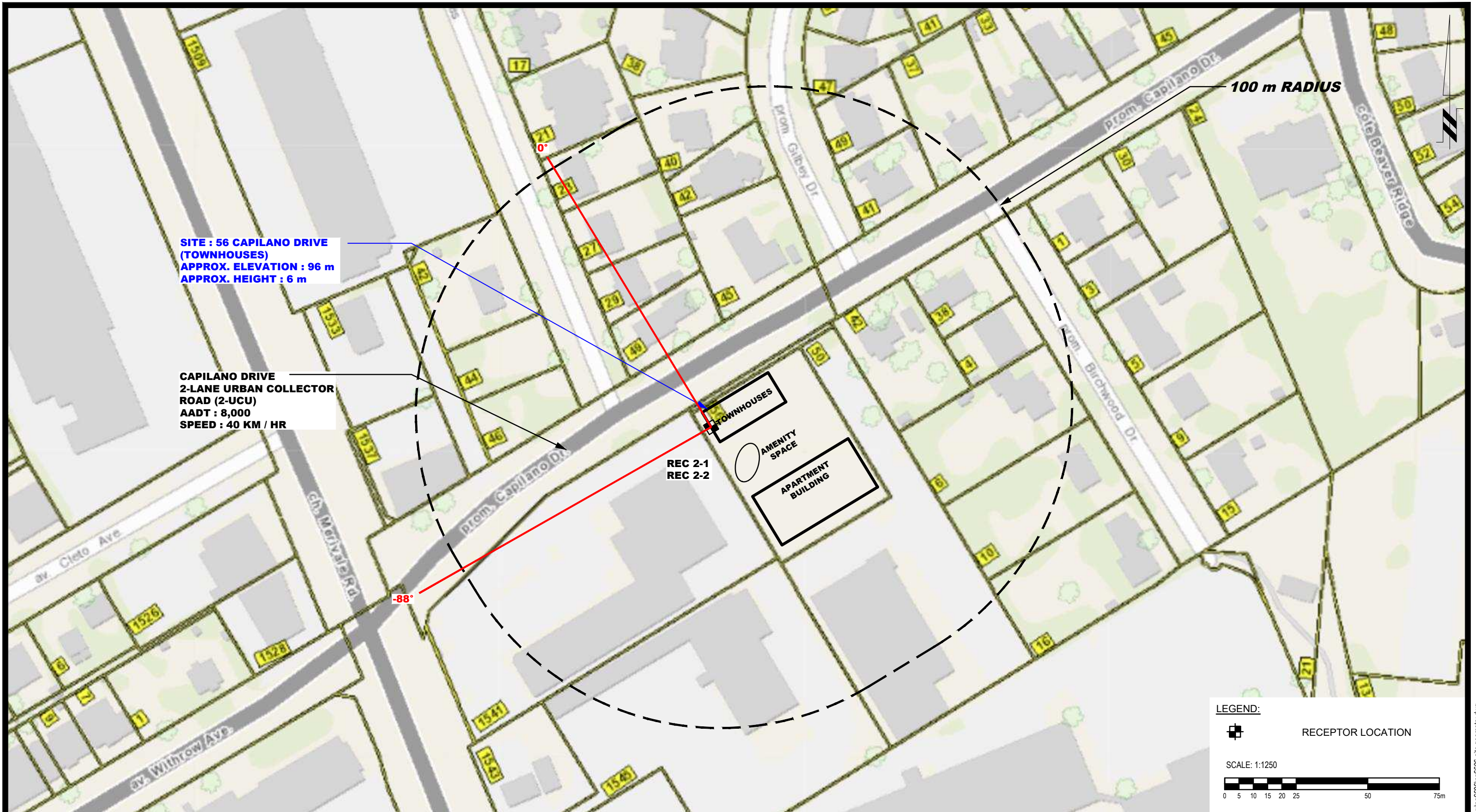
**CSV ARCHITECTS  
NOISE ATTENUATION STUDY  
PROPOSED RESIDENTIAL DEVELOPMENT  
56 CAPILANO DRIVE**

**ONTARIO**

**SITE GEOMETRY - REC 1-1 AND REC 1-2**

Scale: 1:1250  
Drawn by: YA  
Checked by: YT  
Approved by: SB

Date: 03/2023  
Report No.: PG6606-1  
Dwg. No.: **PG6606-3A**  
Revision No.:



**SITE : 56 CAPILANO DRIVE  
(TOWNHOUSES)  
APPROX. ELEVATION : 96 m  
APPROX. HEIGHT : 6 m**

**CAPILANO DRIVE  
2-LANE URBAN COLLECTOR  
ROAD (2-UCU)  
AADT : 8,000  
SPEED : 40 KM / HR**

**REC 2-1  
REC 2-2**

**TOWNHOUSES**

**AMENITY SPACE**

**APARTMENT BUILDING**

**100 m RADIUS**

**LEGEND:**



**RECEPTOR LOCATION**

SCALE: 1:1250



9 AURIGA DRIVE  
OTTAWA, ON  
K2E 7T9  
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

OTTAWA,  
Title:

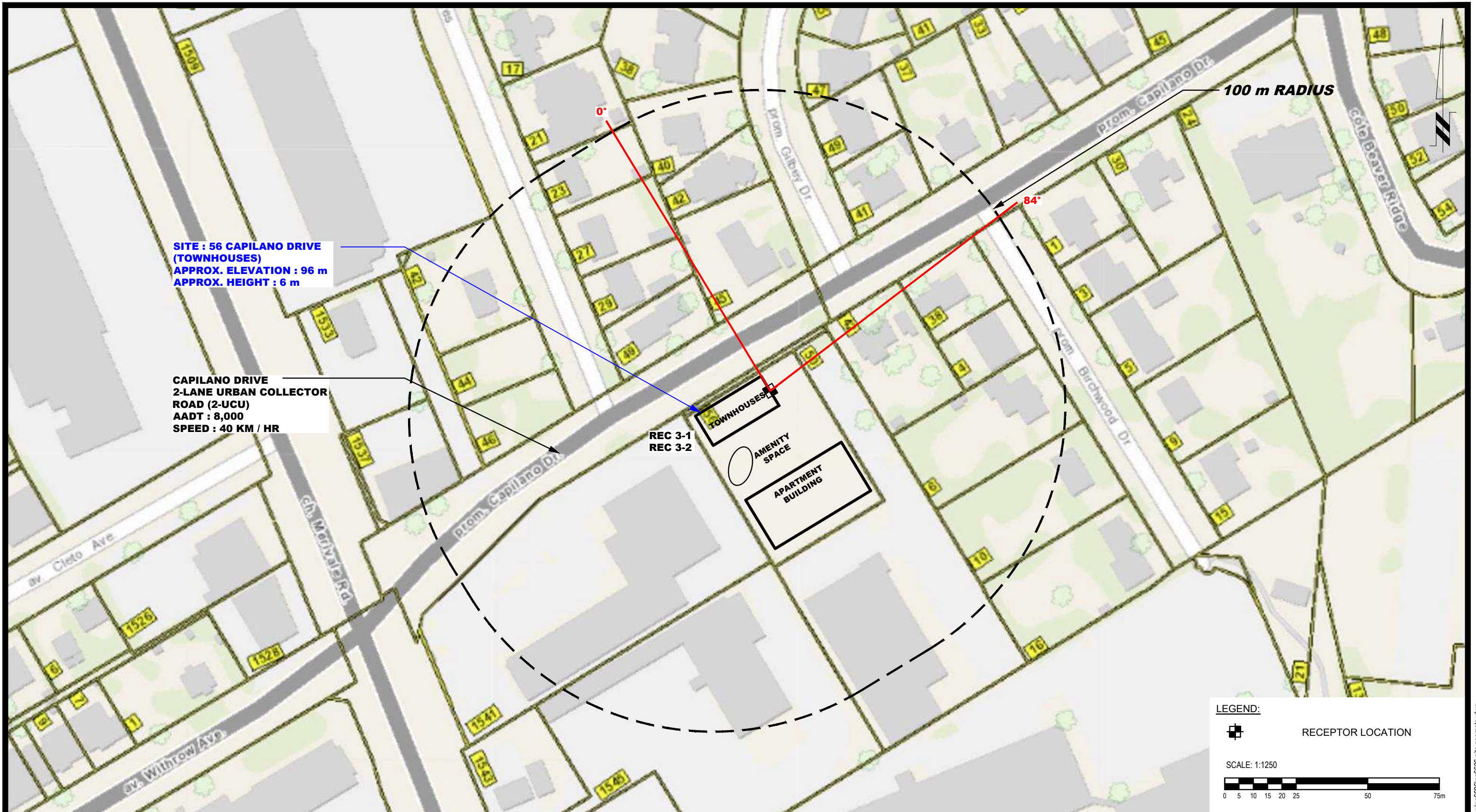
**CSV ARCHITECTS  
NOISE ATTENUATION STUDY  
PROPOSED RESIDENTIAL DEVELOPMENT  
56 CAPILANO DRIVE**

**ONTARIO**

**SITE GEOMETRY - REC 2-1 AND REC 2-2**

Scale: 1:1250  
Drawn by: YA  
Checked by: YT  
Approved by: SB

Date: 03/2023  
Report No.: PG6606-1  
Dwg. No.: **PG6606-3B**  
Revision No.:



**SITE : 56 CAPILANO DRIVE  
(TOWNHOUSES)**  
 APPROX. ELEVATION : 96 m  
 APPROX. HEIGHT : 6 m

**CAPILANO DRIVE**  
 2-LANE URBAN COLLECTOR  
 ROAD (2-UCU)  
 AADT : 8,000  
 SPEED : 40 KM / HR

**REC 3-1**  
**REC 3-2**

TOWNHOUSES

AMENITY SPACE

APARTMENT BUILDING

100 m RADIUS

**LEGEND:**

RECEPTOR LOCATION

SCALE: 1:1250

0 5 10 15 20 25 50 75m



9 AURIGA DRIVE  
 OTTAWA, ON  
 K2E 7T9  
 TEL: (613) 226-7381

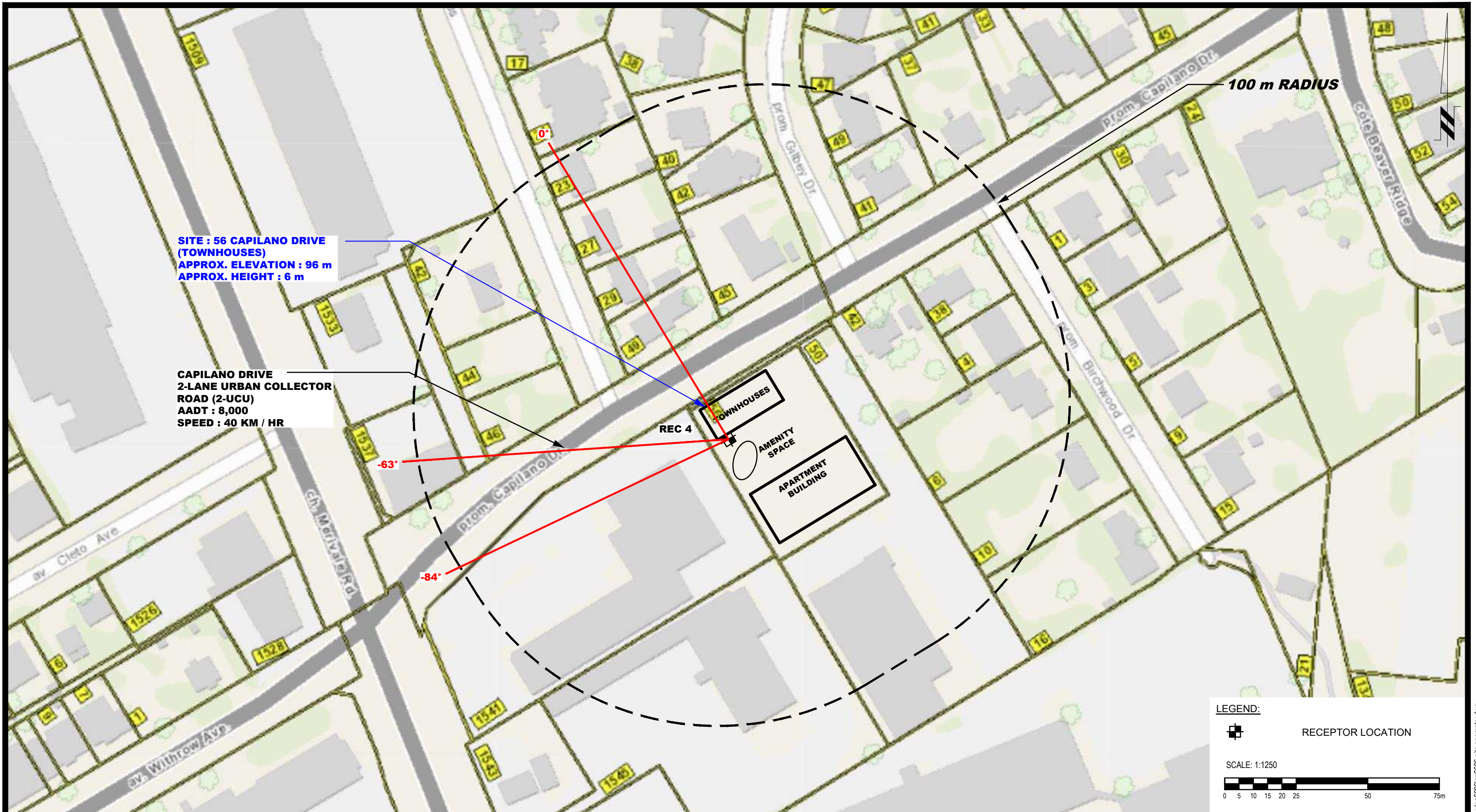
NO.	REVISIONS	DATE	INITIAL

CSV ARCHITECTS  
 NOISE ATTENUATION STUDY  
 PROPOSED RESIDENTIAL DEVELOPMENT  
 56 CAPILANO DRIVE

OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 3-1 AND REC 3-2**

Scale:	1:1250	Date:	03/2023
Drawn by:	YA	Report No.:	PG6606-1
Checked by:	YT	Dwg. No.:	<b>PG6606-3C</b>
Approved by:	SB	Revision No.:	



9 AURIGA DRIVE  
 OTTAWA, ON  
 K2E 7T9  
 TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

OTTAWA,  
 Title:

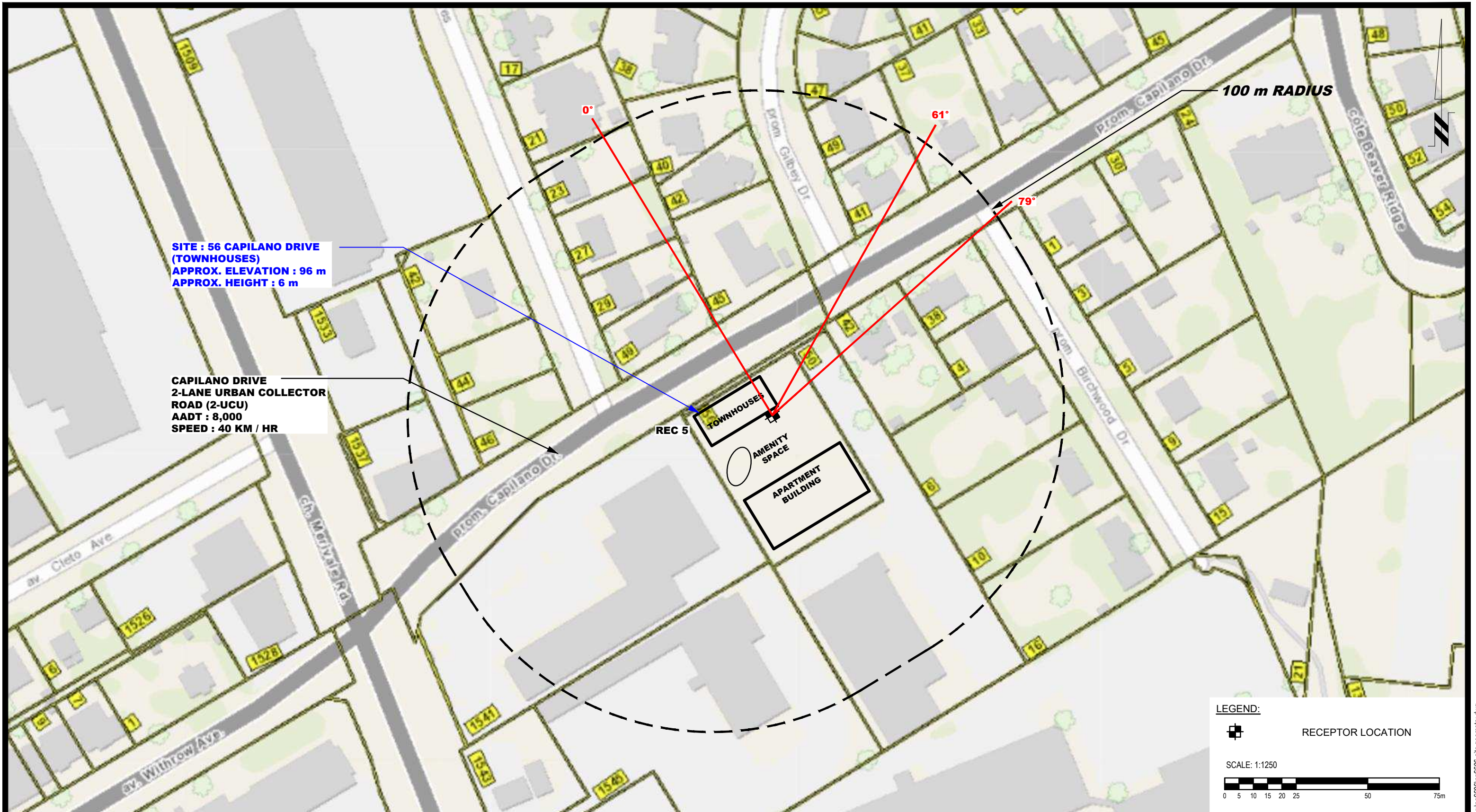
CSV ARCHITECTS  
 NOISE ATTENUATION STUDY  
 PROPOSED RESIDENTIAL DEVELOPMENT  
 56 CAPILANO DRIVE

ONTARIO

**SITE GEOMETRY - REC 4**

Scale: 1:1250  
 Drawn by: YA  
 Checked by: YT  
 Approved by: SB

Date: 03/2023  
 Report No.: PG6606-1  
 Dwg. No.: **PG6606-3D**  
 Revision No.:



9 AURIGA DRIVE  
 OTTAWA, ON  
 K2E 7T9  
 TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

OTTAWA,  
 Title:

CSV ARCHITECTS  
 NOISE ATTENUATION STUDY  
 PROPOSED RESIDENTIAL DEVELOPMENT  
 56 CAPILANO DRIVE

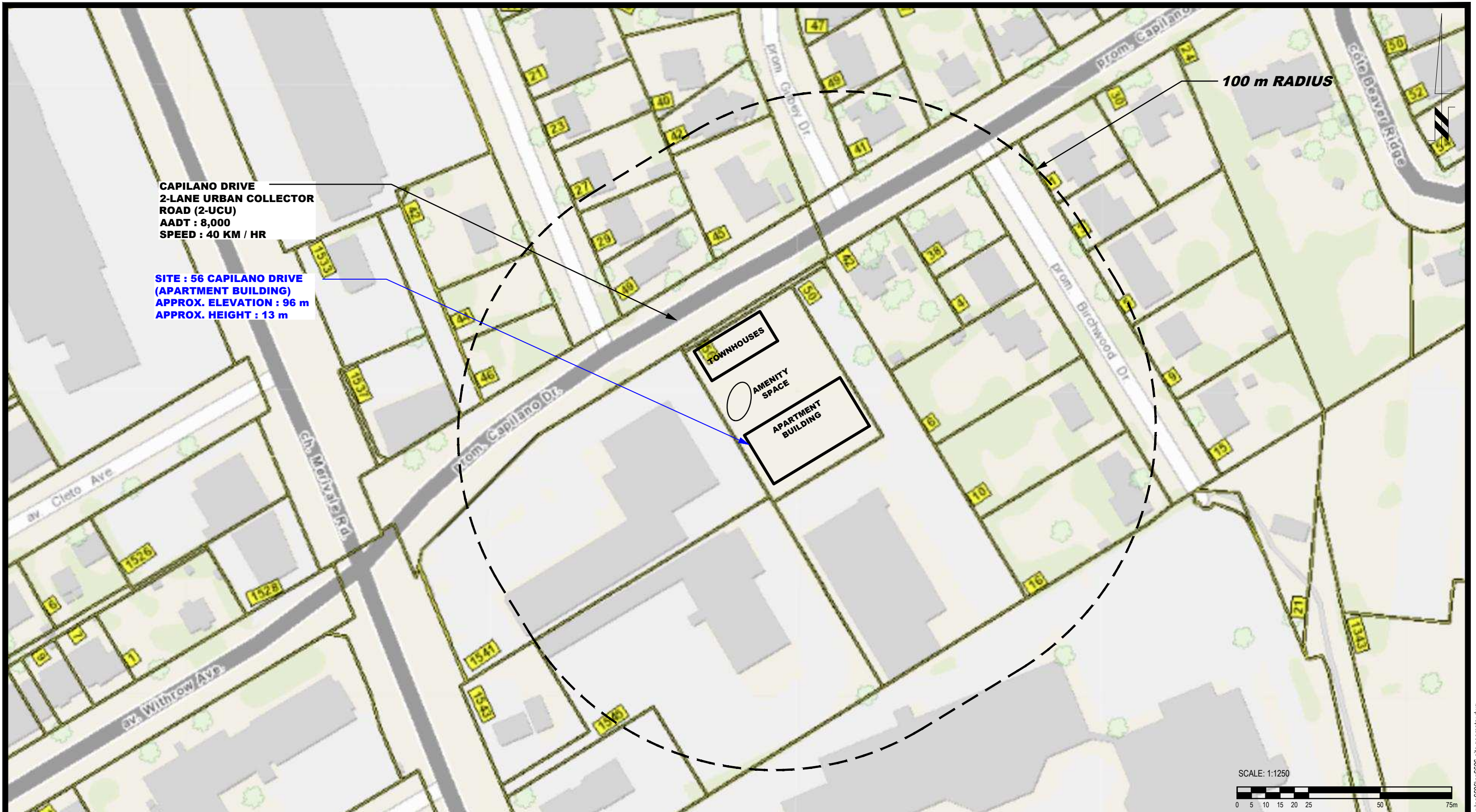
ONTARIO

**SITE GEOMETRY - REC 5**

Scale: 1:1250  
 Drawn by: YA  
 Checked by: YT  
 Approved by: SB

Date: 03/2023  
 Report No.: PG6606-1  
 Dwg. No.: **PG6606-3E**  
 Revision No.:





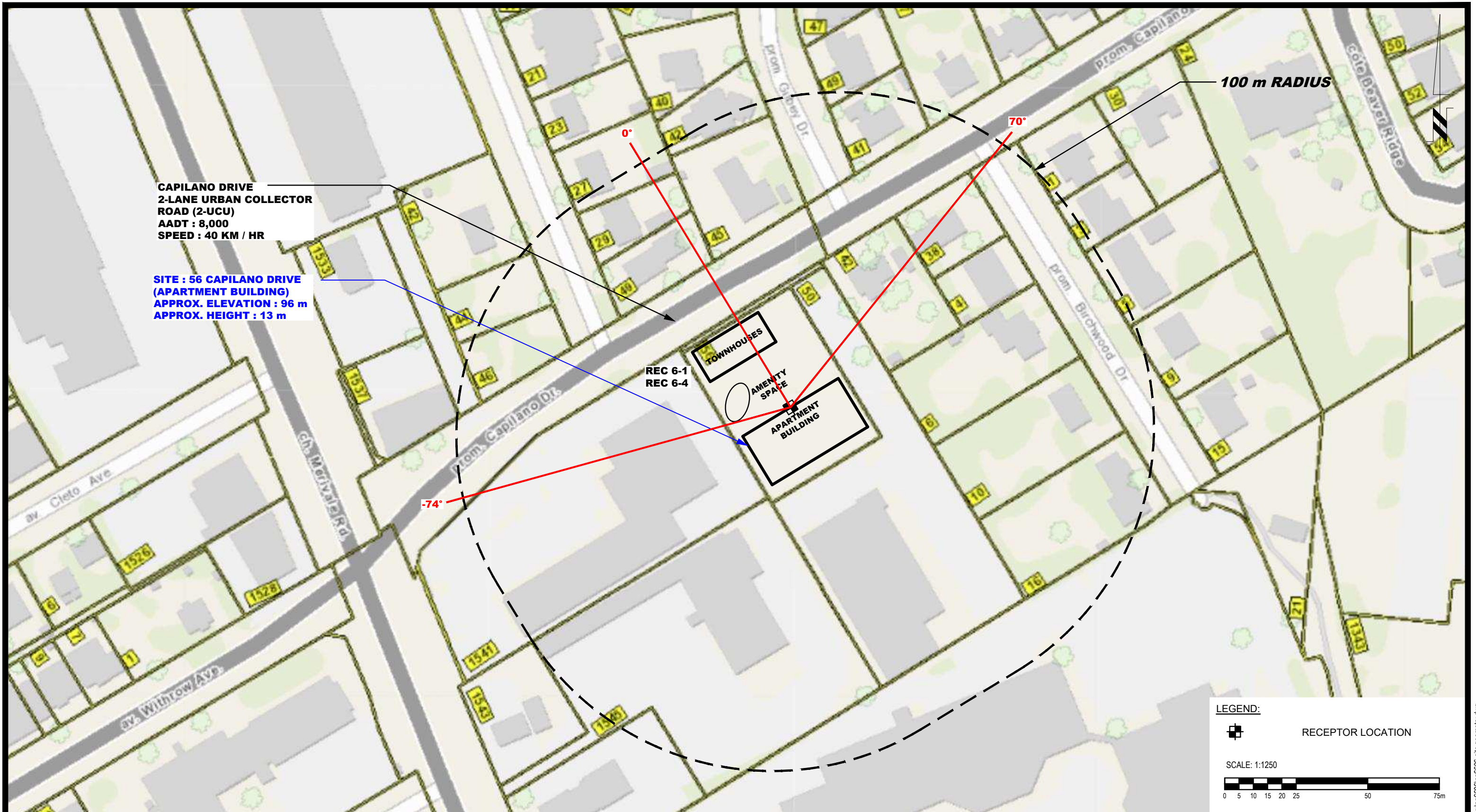
9 AURIGA DRIVE  
OTTAWA, ON  
K2E 7T9  
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

**CSV ARCHITECTS**  
**NOISE ATTENUATION STUDY**  
**PROPOSED RESIDENTIAL DEVELOPMENT**  
**56 CAPILANO DRIVE**

OTTAWA, ONTARIO  
 Title: **SITE GEOMETRY (APARTMENT BUILDING)**

Scale:	1:1250	Date:	03/2023
Drawn by:	YA	Report No.:	PG6606-1
Checked by:	YT	Dwg. No.:	<b>PG6606-4</b>
Approved by:	SB	Revision No.:	



**CAPILANO DRIVE**  
 2-LANE URBAN COLLECTOR  
 ROAD (2-UCU)  
 AADT : 8,000  
 SPEED : 40 KM / HR

**SITE : 56 CAPILANO DRIVE**  
 (APARTMENT BUILDING)  
 APPROX. ELEVATION : 96 m  
 APPROX. HEIGHT : 13 m

100 m RADIUS

REC 6-1  
 REC 6-4

TOWNHOUSES

AMENITY  
 SPACE

APARTMENT  
 BUILDING

LEGEND:



RECEPTOR LOCATION

SCALE: 1:1250



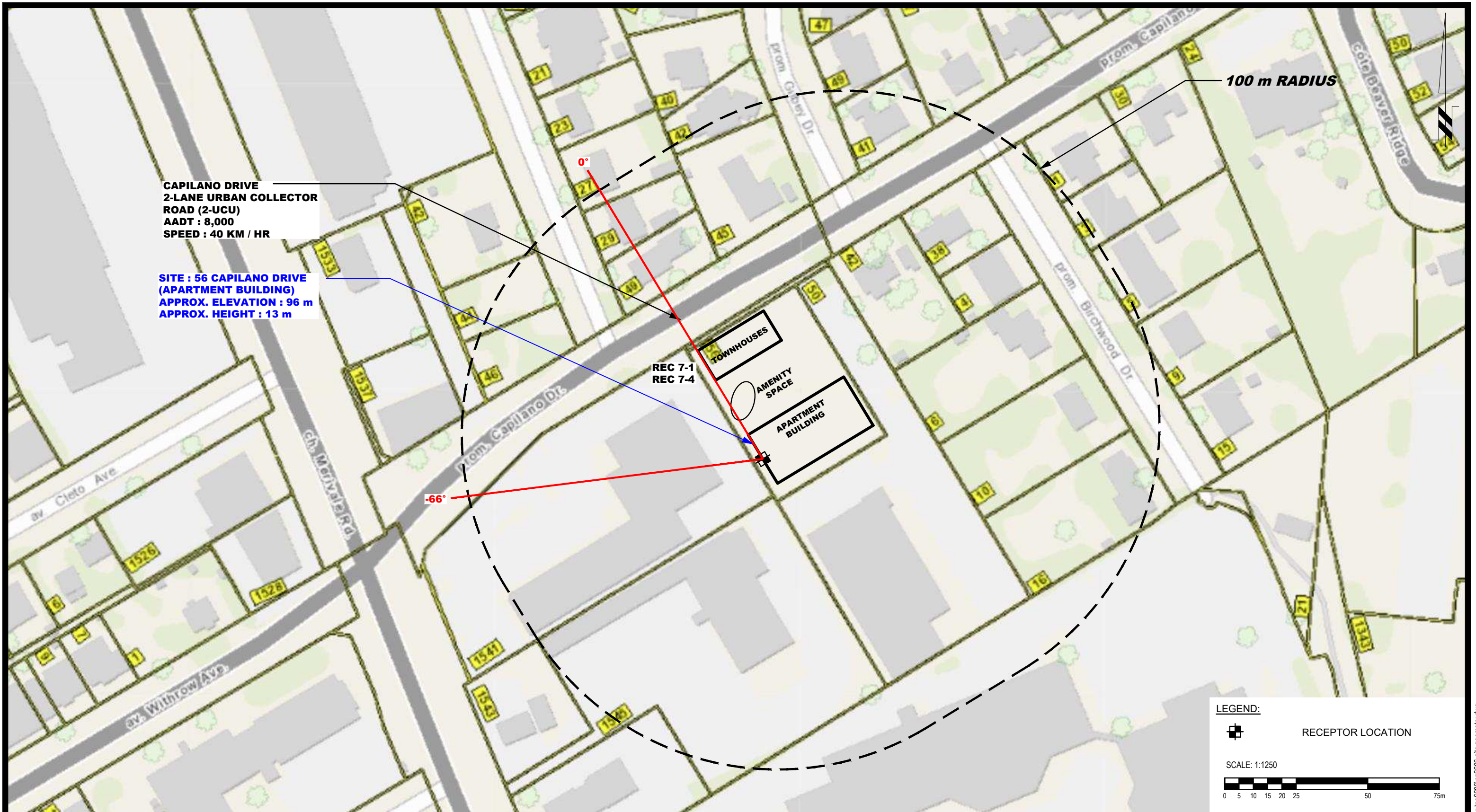
9 AURIGA DRIVE  
 OTTAWA, ON  
 K2E 7T9  
 TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

CSV ARCHITECTS  
 NOISE ATTENUATION STUDY  
 PROPOSED RESIDENTIAL DEVELOPMENT  
 56 CAPILANO DRIVE  
 OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 6-1 AND REC 6-4**

Scale:	1:1250	Date:	03/2023
Drawn by:	YA	Report No.:	PG6606-1
Checked by:	YT	Dwg. No.:	<b>PG6606-4A</b>
Approved by:	SB	Revision No.:	



9 AURIGA DRIVE  
OTTAWA, ON  
K2E 7T9  
TEL: (613) 226-7381

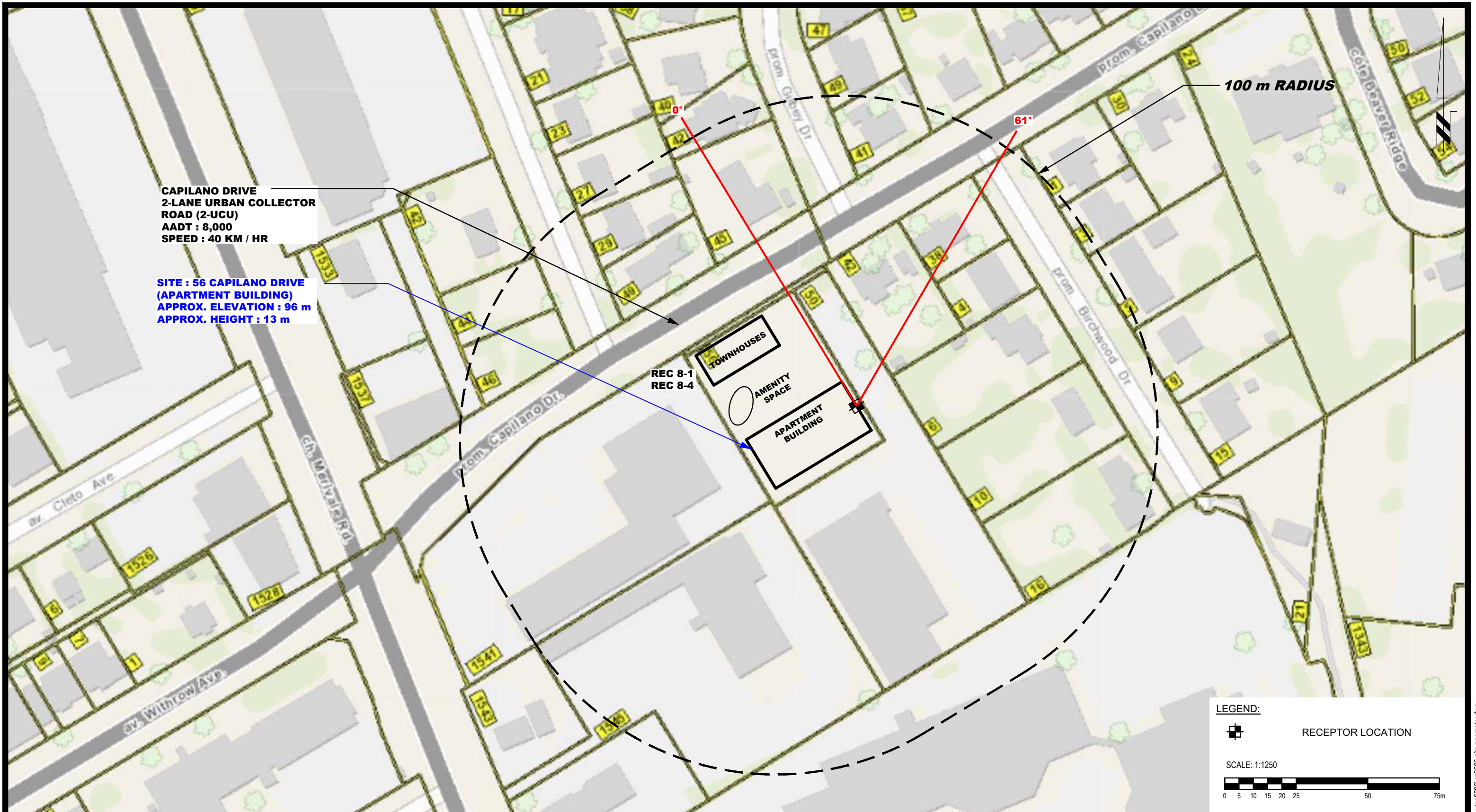
NO.	REVISIONS	DATE	INITIAL

CSV ARCHITECTS  
**NOISE ATTENUATION STUDY**  
**PROPOSED RESIDENTIAL DEVELOPMENT**  
**56 CAPILANO DRIVE**

OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 7-1 AND REC 7-4**

Scale:	1:1250	Date:	03/2023
Drawn by:	YA	Report No.:	PG6606-1
Checked by:	YT	Dwg. No.:	<b>PG6606-4B</b>
Approved by:	SB	Revision No.:	



9 AURIGA DRIVE  
OTTAWA, ON  
K2E 7T9  
TEL: (613) 226-7381

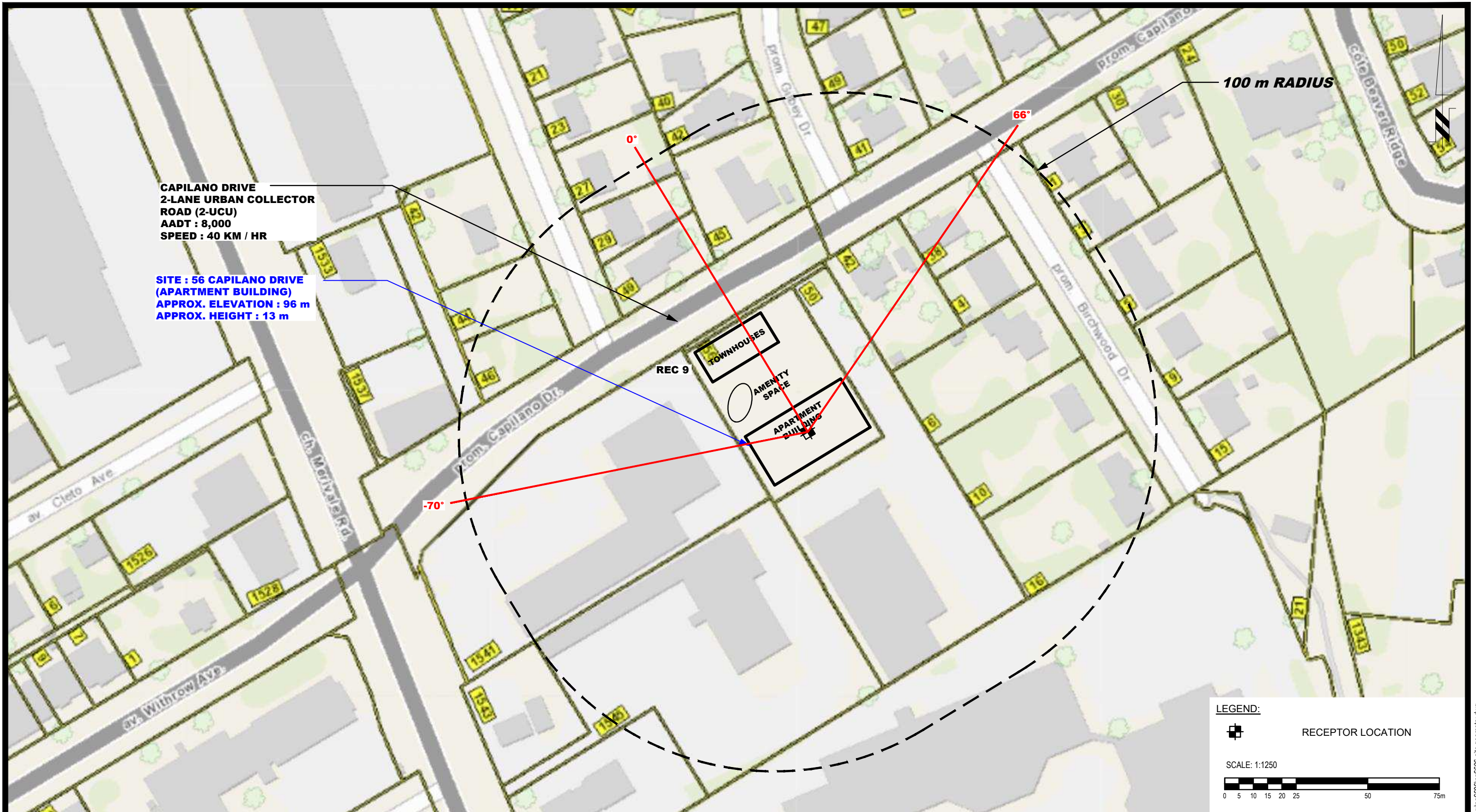
NO.	REVISIONS	DATE	INITIAL

**CSV ARCHITECTS**  
**NOISE ATTENUATION STUDY**  
**PROPOSED RESIDENTIAL DEVELOPMENT**  
**56 CAPILANO DRIVE**

OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 8-1 AND REC 8-4**

Scale:	1:1250	Date:	03/2023
Drawn by:	YA	Report No.:	PG6606-1
Checked by:	YT	Dwg. No.:	<b>PG6606-4C</b>
Approved by:	SB	Revision No.:	



**CAPILANO DRIVE**  
 2-LANE URBAN COLLECTOR  
 ROAD (2-UCU)  
 AADT : 8,000  
 SPEED : 40 KM / HR

**SITE : 56 CAPILANO DRIVE**  
 (APARTMENT BUILDING)  
 APPROX. ELEVATION : 96 m  
 APPROX. HEIGHT : 13 m

100 m RADIUS

REC 9

TOWNHOUSES

AMENITY SPACE

APARTMENT BUILDING

LEGEND:



RECEPTOR LOCATION

SCALE: 1:1250



9 AURIGA DRIVE  
 OTTAWA, ON  
 K2E 7T9  
 TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

OTTAWA,  
 Title:

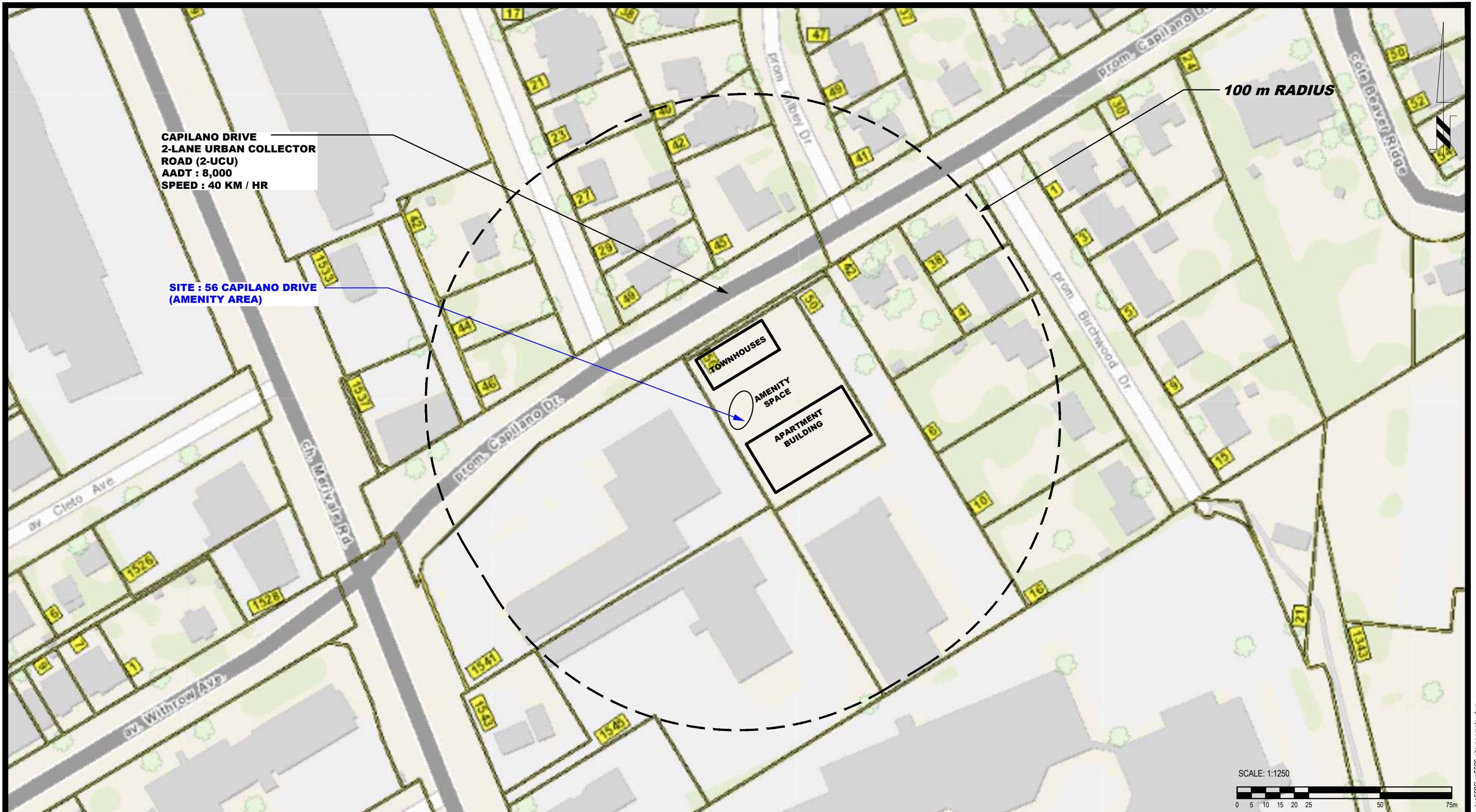
CSV ARCHITECTS  
 NOISE ATTENUATION STUDY  
 PROPOSED RESIDENTIAL DEVELOPMENT  
 56 CAPILANO DRIVE

ONTARIO

**SITE GEOMETRY - REC 9**

Scale: 1:1250  
 Drawn by: YA  
 Checked by: YT  
 Approved by: SB

Date: 03/2023  
 Report No.: PG6606-1  
 Dwg. No.: **PG6606-4D**  
 Revision No.:



9 AURIGA DRIVE  
OTTAWA, ON  
K2E 7T9  
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

OTTAWA,  
Title:

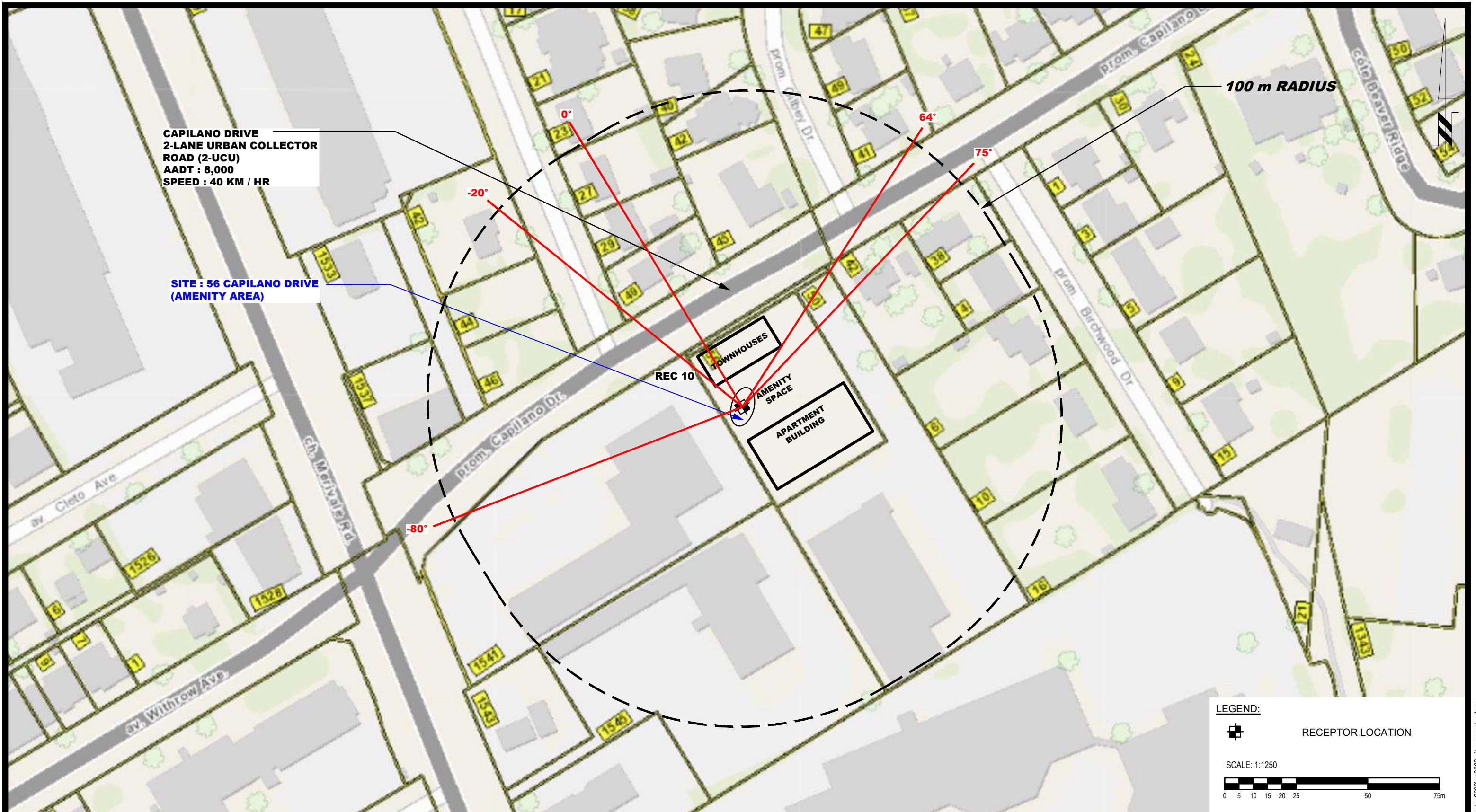
**CSV ARCHITECTS  
NOISE ATTENUATION STUDY  
PROPOSED RESIDENTIAL DEVELOPMENT  
56 CAPILANO DRIVE**

ONTARIO

**SITE GEOMETRY (AMENITY AREA)**

Scale: 1:1250  
 Drawn by: YA  
 Checked by: YT  
 Approved by: SB

Date: 03/2023  
 Report No.: PG6606-1  
 Dwg. No.: **PG6606-5**  
 Revision No.:



NO.	REVISIONS	DATE	INITIAL

Scale:	1:1250	Date:	03/2023
Drawn by:	YA	Report No.:	PG6606-1
Checked by:	YT	Dwg. No.:	<b>PG6606-5A</b>
Approved by:	SB	Revision No.:	

# **APPENDIX 2**

## **STAMSON RESULTS**



Filename: rec11.te                            Time Period: Day/Night 16/8 hours  
 Description: Receptor Point 1-1

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

-----  
 Car traffic volume : 6477/563    veh/TimePeriod    \*  
 Medium truck volume : 515/45    veh/TimePeriod    \*  
 Heavy truck volume : 368/32    veh/TimePeriod    \*  
 Posted speed limit : 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): 8000  
 Percentage of Annual Growth : 0.00  
 Number of Years of Growth : 0.00  
 Medium Truck % of Total Volume : 7.00  
 Heavy Truck % of Total Volume : 5.00  
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Capilano Dr (day/night)

-----  
 Angle1    Angle2            : -90.00 deg    88.00 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 : 1.50 / 1.50 m  
 Topography : 1            (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

↑  
 Results segment # 1: Capilano Dr (day)

-----  
 Source height = 1.50 m

ROAD (0.00 + 62.49 + 0.00) = 62.49 dBA  

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	88	0.66	63.96	0.00	0.00	-1.46	0.00	0.00	0.00	62.49

 -----

Segment Leq : 62.49 dBA

Total Leq All Segments: 62.49 dBA

↑

Results segment # 1: Capilano Dr (night)

-----

Source height = 1.50 m

ROAD (0.00 + 54.90 + 0.00) = 54.90 dBA

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

-----

-90	88	0.66	56.36	0.00	0.00	-1.46	0.00	0.00	0.00	54.90
-----	----	------	-------	------	------	-------	------	------	------	-------

-----

Segment Leq : 54.90 dBA

Total Leq All Segments: 54.90 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 62.49

(NIGHT): 54.90

↑

↑

Filename: rec12.te                            Time Period: Day/Night 16/8 hours  
 Description: Receptor Point 1-2

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

-----  
 Car traffic volume : 6477/563    veh/TimePeriod \*  
 Medium truck volume : 515/45    veh/TimePeriod \*  
 Heavy truck volume : 368/32    veh/TimePeriod \*  
 Posted speed limit : 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): 8000  
 Percentage of Annual Growth : 0.00  
 Number of Years of Growth : 0.00  
 Medium Truck % of Total Volume : 7.00  
 Heavy Truck % of Total Volume : 5.00  
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Capilano Dr (day/night)

-----  
 Angle1    Angle2            : -90.00 deg    88.00 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 : 4.50 / 4.50 m  
 Topography : 1            (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

↑  
 Results segment # 1: Capilano Dr (day)

-----  
 Source height = 1.50 m

ROAD (0.00 + 62.65 + 0.00) = 62.65 dBA  

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	88	0.57	63.96	0.00	0.00	-1.31	0.00	0.00	0.00	62.65

 -----

Segment Leq : 62.65 dBA

Total Leq All Segments: 62.65 dBA

↑

Results segment # 1: Capilano Dr (night)

-----

Source height = 1.50 m

ROAD (0.00 + 55.05 + 0.00) = 55.05 dBA

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

-----

-90	88	0.57	56.36	0.00	0.00	-1.31	0.00	0.00	0.00	55.05
-----	----	------	-------	------	------	-------	------	------	------	-------

-----

Segment Leq : 55.05 dBA

Total Leq All Segments: 55.05 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 62.65

(NIGHT): 55.05

↑

↑

Filename: rec21.te                            Time Period: Day/Night 16/8 hours  
 Description: Receptor Point 2-1

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

-----  
 Car traffic volume : 6477/563    veh/TimePeriod    \*  
 Medium truck volume : 515/45    veh/TimePeriod    \*  
 Heavy truck volume : 368/32    veh/TimePeriod    \*  
 Posted speed limit : 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): 8000  
 Percentage of Annual Growth : 0.00  
 Number of Years of Growth : 0.00  
 Medium Truck % of Total Volume : 7.00  
 Heavy Truck % of Total Volume : 5.00  
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Capilano Dr (day/night)

-----  
 Angle1    Angle2                    : -88.00 deg    0.00 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 : 1.50 / 1.50 m  
 Topography : 1                    (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

↑  
 Results segment # 1: Capilano Dr (day)

-----  
 Source height = 1.50 m

ROAD (0.00 + 59.48 + 0.00) = 59.48 dBA  

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-88	0	0.66	63.96	0.00	0.00	-4.48	0.00	0.00	0.00	59.48

 -----

Segment Leq : 59.48 dBA

Total Leq All Segments: 59.48 dBA

↑

Results segment # 1: Capilano Dr (night)

-----

Source height = 1.50 m

ROAD (0.00 + 51.89 + 0.00) = 51.89 dBA

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

-----

-88	0	0.66	56.36	0.00	0.00	-4.48	0.00	0.00	0.00	51.89
-----	---	------	-------	------	------	-------	------	------	------	-------

-----

Segment Leq : 51.89 dBA

Total Leq All Segments: 51.89 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 59.48

(NIGHT): 51.89

↑

↑

Filename: rec22.te                            Time Period: Day/Night 16/8 hours  
 Description: Receptor Point 2-2

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

```
-----
Car traffic volume : 6477/563   veh/TimePeriod *
Medium truck volume : 515/45    veh/TimePeriod *
Heavy truck volume : 368/32     veh/TimePeriod *
Posted speed limit : 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): 8000
Percentage of Annual Growth          : 0.00
Number of Years of Growth            : 0.00
Medium Truck % of Total Volume       : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume       : 92.00
```

Data for Segment # 1: Capilano Dr (day/night)

```
-----
Angle1 Angle2      : -88.00 deg  0.00 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     : 4.50 / 4.50 m
Topography          : 1          (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

↑  
 Results segment # 1: Capilano Dr (day)

Source height = 1.50 m

```
ROAD (0.00 + 59.63 + 0.00) = 59.63 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
-----
-88      0      0.57 63.96  0.00  0.00 -4.33  0.00  0.00  0.00  59.63
-----
```

Segment Leq : 59.63 dBA

Total Leq All Segments: 59.63 dBA

↑

Results segment # 1: Capilano Dr (night)

-----

Source height = 1.50 m

ROAD (0.00 + 52.04 + 0.00) = 52.04 dBA

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

-----

-88	0	0.57	56.36	0.00	0.00	-4.33	0.00	0.00	0.00	52.04
-----	---	------	-------	------	------	-------	------	------	------	-------

-----

Segment Leq : 52.04 dBA

Total Leq All Segments: 52.04 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 59.63

(NIGHT): 52.04

↑

↑



Filename: rec31.te                            Time Period: Day/Night 16/8 hours  
 Description: Receptor Point 3-1

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

-----  
 Car traffic volume : 6477/563    veh/TimePeriod    \*  
 Medium truck volume : 515/45    veh/TimePeriod    \*  
 Heavy truck volume : 368/32    veh/TimePeriod    \*  
 Posted speed limit : 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): 8000  
 Percentage of Annual Growth : 0.00  
 Number of Years of Growth : 0.00  
 Medium Truck % of Total Volume : 7.00  
 Heavy Truck % of Total Volume : 5.00  
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Capilano Dr (day/night)

-----  
 Angle1    Angle2                    : 0.00 deg    84.00 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 : 1.50 / 1.50 m  
 Topography : 1                    (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

↑  
 Results segment # 1: Capilano Dr (day)

-----  
 Source height = 1.50 m

ROAD (0.00 + 59.43 + 0.00) = 59.43 dBA  
 Angle1 Angle2    Alpha RefLeq    P.Adj    D.Adj    F.Adj    W.Adj    H.Adj    B.Adj    SubLeq  
 -----  
           0      84    0.66   63.96    0.00    0.00    -4.52    0.00    0.00    0.00    59.43  
 -----

Segment Leq : 59.43 dBA

Total Leq All Segments: 59.43 dBA

↑

Results segment # 1: Capilano Dr (night)

-----

Source height = 1.50 m

ROAD (0.00 + 51.84 + 0.00) = 51.84 dBA

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

-----

0	84	0.66	56.36	0.00	0.00	-4.52	0.00	0.00	0.00	51.84
---	----	------	-------	------	------	-------	------	------	------	-------

-----

Segment Leq : 51.84 dBA

Total Leq All Segments: 51.84 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 59.43

(NIGHT): 51.84

↑

↑

Filename: rec32.te                            Time Period: Day/Night 16/8 hours  
 Description: Receptor Point 3-2

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

-----  
 Car traffic volume : 6477/563    veh/TimePeriod    \*  
 Medium truck volume : 515/45    veh/TimePeriod    \*  
 Heavy truck volume : 368/32    veh/TimePeriod    \*  
 Posted speed limit : 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): 8000  
 Percentage of Annual Growth : 0.00  
 Number of Years of Growth : 0.00  
 Medium Truck % of Total Volume : 7.00  
 Heavy Truck % of Total Volume : 5.00  
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Capilano Dr (day/night)

-----  
 Angle1    Angle2                    : 0.00 deg    84.00 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 : 4.50 / 4.50 m  
 Topography : 1                    (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

↑  
 Results segment # 1: Capilano Dr (day)

-----  
 Source height = 1.50 m

ROAD (0.00 + 59.57 + 0.00) = 59.57 dBA  

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	84	0.57	63.96	0.00	0.00	-4.38	0.00	0.00	0.00	59.57

 -----

Segment Leq : 59.57 dBA

Total Leq All Segments: 59.57 dBA

↑

Results segment # 1: Capilano Dr (night)

-----

Source height = 1.50 m

ROAD (0.00 + 51.98 + 0.00) = 51.98 dBA

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

-----

0	84	0.57	56.36	0.00	0.00	-4.38	0.00	0.00	0.00	51.98
---	----	------	-------	------	------	-------	------	------	------	-------

-----

Segment Leq : 51.98 dBA

Total Leq All Segments: 51.98 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 59.57

(NIGHT): 51.98

↑

↑

Filename: rec4.te                            Time Period: Day/Night 16/8 hours  
 Description: Receptor Point 4

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

```
-----
Car traffic volume : 6477/563   veh/TimePeriod *
Medium truck volume : 515/45    veh/TimePeriod *
Heavy truck volume  : 368/32    veh/TimePeriod *
Posted speed limit  : 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): 8000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Capilano Dr (day/night)

```
-----
Angle1  Angle2      : -84.00 deg  -63.00 deg
Wood depth      : 0      (No woods.)
No of house rows : 0 / 0
Surface         : 1      (Absorptive ground surface)
Receiver source distance : 18.00 / 18.00 m
Receiver height  : 1.50 / 1.50 m
Topography      : 1      (Flat/gentle slope; no barrier)
Reference angle  : 0.00
```

↑  
 Results segment # 1: Capilano Dr (day)

Source height = 1.50 m

```
ROAD (0.00 + 49.62 + 0.00) = 49.62 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
-----
-84 -63 0.66 63.96 0.00 -1.31 -13.02 0.00 0.00 0.00 49.62
-----
```

Segment Leq : 49.62 dBA

Total Leq All Segments: 49.62 dBA

↑

Results segment # 1: Capilano Dr (night)

-----

Source height = 1.50 m

ROAD (0.00 + 42.03 + 0.00) = 42.03 dBA

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

-----

-84	-63	0.66	56.36	0.00	-1.31	-13.02	0.00	0.00	0.00	42.03
-----	-----	------	-------	------	-------	--------	------	------	------	-------

-----

Segment Leq : 42.03 dBA

Total Leq All Segments: 42.03 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 49.62

(NIGHT): 42.03

↑

↑

Filename: rec5.te                            Time Period: Day/Night 16/8 hours  
 Description: Receptor Point 5

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

-----  
 Car traffic volume : 6477/563    veh/TimePeriod \*  
 Medium truck volume : 515/45    veh/TimePeriod \*  
 Heavy truck volume : 368/32    veh/TimePeriod \*  
 Posted speed limit : 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): 8000  
 Percentage of Annual Growth : 0.00  
 Number of Years of Growth : 0.00  
 Medium Truck % of Total Volume : 7.00  
 Heavy Truck % of Total Volume : 5.00  
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Capilano Dr (day/night)

-----  
 Angle1 Angle2 : 61.00 deg 79.00 deg  
 Wood depth : 0 (No woods.)  
 No of house rows : 0 / 0  
 Surface : 1 (Absorptive ground surface)  
 Receiver source distance : 18.00 / 18.00 m  
 Receiver height : 1.50 / 1.50 m  
 Topography : 1 (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

↑  
 Results segment # 1: Capilano Dr (day)

-----  
 Source height = 1.50 m

ROAD (0.00 + 49.52 + 0.00) = 49.52 dBA  

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
61	79	0.66	63.96	0.00	-1.31	-13.12	0.00	0.00	0.00	49.52

 -----

Segment Leq : 49.52 dBA

Total Leq All Segments: 49.52 dBA

↑

Results segment # 1: Capilano Dr (night)

-----

Source height = 1.50 m

ROAD (0.00 + 41.93 + 0.00) = 41.93 dBA

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

-----

61	79	0.66	56.36	0.00	-1.31	-13.12	0.00	0.00	0.00	41.93
----	----	------	-------	------	-------	--------	------	------	------	-------

-----

Segment Leq : 41.93 dBA

Total Leq All Segments: 41.93 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 49.52

(NIGHT): 41.93

↑

↑



Filename: rec61.te                            Time Period: Day/Night 16/8 hours  
 Description: Receptor Point 6-1

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

-----  
 Car traffic volume : 6477/563    veh/TimePeriod    \*  
 Medium truck volume : 515/45    veh/TimePeriod    \*  
 Heavy truck volume : 368/32    veh/TimePeriod    \*  
 Posted speed limit : 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): 8000  
 Percentage of Annual Growth : 0.00  
 Number of Years of Growth : 0.00  
 Medium Truck % of Total Volume : 7.00  
 Heavy Truck % of Total Volume : 5.00  
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Capilano Dr (day/night)

-----  
 Angle1    Angle2            : -74.00 deg    70.00 deg  
 Wood depth                : 0            (No woods.)  
 No of house rows         : 0 / 0  
 Surface                    : 1            (Absorptive ground surface)  
 Receiver source distance : 40.00 / 40.00 m  
 Receiver height          : 1.50 / 1.50 m  
 Topography                : 1            (Flat/gentle slope; no barrier)  
 Reference angle          : 0.00

↑  
 Results segment # 1: Capilano Dr (day)

-----  
 Source height = 1.50 m

ROAD (0.00 + 55.07 + 0.00) = 55.07 dBA  

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-74	70	0.66	63.96	0.00	-7.07	-1.81	0.00	0.00	0.00	55.07

 -----

Segment Leq : 55.07 dBA

Total Leq All Segments: 55.07 dBA

↑

Results segment # 1: Capilano Dr (night)

-----

Source height = 1.50 m

ROAD (0.00 + 47.48 + 0.00) = 47.48 dBA

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

-----

-74	70	0.66	56.36	0.00	-7.07	-1.81	0.00	0.00	0.00	47.48
-----	----	------	-------	------	-------	-------	------	------	------	-------

-----

Segment Leq : 47.48 dBA

Total Leq All Segments: 47.48 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 55.07

(NIGHT): 47.48

↑

↑

Filename: rec64.te                            Time Period: Day/Night 16/8 hours  
 Description: Receptor Point 6-4

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

```
-----
Car traffic volume : 6477/563   veh/TimePeriod *
Medium truck volume : 515/45    veh/TimePeriod *
Heavy truck volume : 368/32     veh/TimePeriod *
Posted speed limit : 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): 8000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Capilano Dr (day/night)

```
-----
Angle1  Angle2      : -74.00 deg   70.00 deg
Wood depth          : 0           (No woods.)
No of house rows   : 0 / 0
Surface            : 1           (Absorptive ground surface)
Receiver source distance : 40.00 / 40.00 m
Receiver height     : 11.00 / 11.00 m
Topography         : 1           (Flat/gentle slope; no barrier)
Reference angle    : 0.00
```

↑  
 Results segment # 1: Capilano Dr (day)

Source height = 1.50 m

```
ROAD (0.00 + 56.63 + 0.00) = 56.63 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-----
-74    70     0.38  63.96  0.00  -5.86  -1.47  0.00  0.00  0.00  56.63
-----
```

Segment Leq : 56.63 dBA

Total Leq All Segments: 56.63 dBA

↑

Results segment # 1: Capilano Dr (night)

-----

Source height = 1.50 m

ROAD (0.00 + 49.03 + 0.00) = 49.03 dBA

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

-----

-74	70	0.38	56.36	0.00	-5.86	-1.47	0.00	0.00	0.00	49.03
-----	----	------	-------	------	-------	-------	------	------	------	-------

-----

Segment Leq : 49.03 dBA

Total Leq All Segments: 49.03 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 56.63

(NIGHT): 49.03

↑

↑

Filename: rec71.te                            Time Period: Day/Night 16/8 hours  
 Description: Receptor Point 7-1

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

```
-----
Car traffic volume : 6477/563   veh/TimePeriod *
Medium truck volume : 515/45    veh/TimePeriod *
Heavy truck volume  : 368/32    veh/TimePeriod *
Posted speed limit  : 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): 8000
Percentage of Annual Growth          : 0.00
Number of Years of Growth            : 0.00
Medium Truck % of Total Volume       : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume       : 92.00
```

Data for Segment # 1: Capilano Dr (day/night)

```
-----
Angle1  Angle2      : -66.00 deg  0.00 deg
Wood depth          : 0          (No woods.)
No of house rows    : 1 / 1
House density       : 40 %
Surface             : 1          (Absorptive ground surface)
Receiver source distance : 50.00 / 50.00 m
Receiver height     : 1.50 / 1.50 m
Topography          : 1          (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

↑  
 Results segment # 1: Capilano Dr (day)

Source height = 1.50 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
-66	0	0.66	63.96	0.00	-8.68	-5.05	0.00	-2.03	0.00	48.19

Segment Leq : 48.19 dBA

Total Leq All Segments: 48.19 dBA

↑

Results segment # 1: Capilano Dr (night)

-----

Source height = 1.50 m

ROAD (0.00 + 40.60 + 0.00) = 40.60 dBA

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

-----

-66 0 0.66 56.36 0.00 -8.68 -5.05 0.00 -2.03 0.00 40.60

-----

Segment Leq : 40.60 dBA

Total Leq All Segments: 40.60 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 48.19  
(NIGHT): 40.60

↑

↑

Filename: rec74.te                            Time Period: Day/Night 16/8 hours  
 Description: Receptor Point 7-4

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

```
-----
Car traffic volume : 6477/563   veh/TimePeriod *
Medium truck volume : 515/45    veh/TimePeriod *
Heavy truck volume : 368/32    veh/TimePeriod *
Posted speed limit : 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): 8000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Capilano Dr (day/night)

```
-----
Angle1  Angle2      : -66.00 deg  0.00 deg
Wood depth          : 0          (No woods.)
No of house rows   : 1 / 1
House density      : 40 %
Surface            : 1          (Absorptive ground surface)
Receiver source distance : 50.00 / 50.00 m
Receiver height    : 11.00 / 11.00 m
Topography         : 1          (Flat/gentle slope; no barrier)
Reference angle    : 0.00
```

↑  
 Results segment # 1: Capilano Dr (day)

Source height = 1.50 m

ROAD (0.00 + 49.97 + 0.00) = 49.97 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-66	0	0.38	63.96	0.00	-7.19	-4.76	0.00	-2.03	0.00	49.97

Segment Leq : 49.97 dBA

Total Leq All Segments: 49.97 dBA

↑

Results segment # 1: Capilano Dr (night)

-----

Source height = 1.50 m

ROAD (0.00 + 42.37 + 0.00) = 42.37 dBA

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

-----

-66 0 0.38 56.36 0.00 -7.19 -4.76 0.00 -2.03 0.00 42.37

-----

Segment Leq : 42.37 dBA

Total Leq All Segments: 42.37 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 49.97

(NIGHT): 42.37

↑

↑



Filename: rec81.te                            Time Period: Day/Night 16/8 hours  
 Description: Receptor Point 8-1

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

```
-----
Car traffic volume : 6477/563   veh/TimePeriod *
Medium truck volume : 515/45    veh/TimePeriod *
Heavy truck volume  : 368/32    veh/TimePeriod *
Posted speed limit  : 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): 8000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Capilano Dr (day/night)

```
-----
Angle1  Angle2      : 0.00 deg  61.00 deg
Wood depth          : 0          (No woods.)
No of house rows    : 1 / 1
House density       : 20 %
Surface             : 1          (Absorptive ground surface)
Receiver source distance : 50.00 / 50.00 m
Receiver height     : 1.50 / 1.50 m
Topography          : 1          (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

↑  
 Results segment # 1: Capilano Dr (day)

Source height = 1.50 m

ROAD (0.00 + 49.09 + 0.00) = 49.09 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	61	0.66	63.96	0.00	-8.68	-5.28	0.00	-0.90	0.00	49.09

Segment Leq : 49.09 dBA

Total Leq All Segments: 49.09 dBA

↑

Results segment # 1: Capilano Dr (night)

-----

Source height = 1.50 m

ROAD (0.00 + 41.50 + 0.00) = 41.50 dBA

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

-----

0	61	0.66	56.36	0.00	-8.68	-5.28	0.00	-0.90	0.00	41.50
---	----	------	-------	------	-------	-------	------	-------	------	-------

-----

Segment Leq : 41.50 dBA

Total Leq All Segments: 41.50 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 49.09

(NIGHT): 41.50

↑

↑

Filename: rec84.te                            Time Period: Day/Night 16/8 hours  
 Description: Receptor Point 8-4

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

```
-----
Car traffic volume : 6477/563   veh/TimePeriod *
Medium truck volume : 515/45    veh/TimePeriod *
Heavy truck volume : 368/32    veh/TimePeriod *
Posted speed limit : 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): 8000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Capilano Dr (day/night)

```
-----
Angle1  Angle2      : 0.00 deg  61.00 deg
Wood depth          : 0          (No woods.)
No of house rows   : 1 / 1
House density       : 20 %
Surface            : 1          (Absorptive ground surface)
Receiver source distance : 50.00 / 50.00 m
Receiver height     : 11.00 / 11.00 m
Topography          : 1          (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

↑  
 Results segment # 1: Capilano Dr (day)

Source height = 1.50 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
0	61	0.38	63.96	0.00	-7.19	-5.04	0.00	-0.90	0.00	50.83

Segment Leq : 50.83 dBA

Total Leq All Segments: 50.83 dBA

↑

Results segment # 1: Capilano Dr (night)

-----

Source height = 1.50 m

ROAD (0.00 + 43.23 + 0.00) = 43.23 dBA

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

-----

0	61	0.38	56.36	0.00	-7.19	-5.04	0.00	-0.90	0.00	43.23
---	----	------	-------	------	-------	-------	------	-------	------	-------

-----

Segment Leq : 43.23 dBA

Total Leq All Segments: 43.23 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 50.83

(NIGHT): 43.23

↑

↑

Filename: rec9.te                            Time Period: Day/Night 16/8 hours  
Description: Receptor Point 9

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

-----  
Car traffic volume : 6477/563    veh/TimePeriod \*  
Medium truck volume : 515/45    veh/TimePeriod \*  
Heavy truck volume : 368/32    veh/TimePeriod \*  
Posted speed limit : 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): 8000  
Percentage of Annual Growth : 0.00  
Number of Years of Growth : 0.00  
Medium Truck % of Total Volume : 7.00  
Heavy Truck % of Total Volume : 5.00  
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Capilano Dr (day/night)

-----  
Angle1    Angle2            : -70.00 deg    66.00 deg  
Wood depth                : 0            (No woods.)  
No of house rows         : 0 / 0  
Surface                    : 1            (Absorptive ground surface)  
Receiver source distance : 50.00 / 50.00 m  
Receiver height            : 14.50 / 14.50 m  
Topography                : 2            (Flat/gentle slope; with barrier)  
Barrier angle1            : -70.00 deg    Angle2 : 66.00 deg  
Barrier height             : 13.00 m  
Barrier receiver distance : 10.00 / 10.00 m  
Source elevation          : 96.00 m  
Receiver elevation        : 96.00 m  
Barrier elevation         : 96.00 m  
Reference angle            : 0.00

↑  
Results segment # 1: Capilano Dr (day)

-----  
Source height = 1.50 m

Barrier height for grazing incidence  
-----

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	14.50	11.90	107.90

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
-70	66	0.00	63.96	0.00	-5.23	-1.22	0.00	0.00	-7.32	50.19

Segment Leq : 50.19 dBA

Total Leq All Segments: 50.19 dBA

↑  
Results segment # 1: Capilano Dr (night)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	14.50	11.90	107.90

ROAD (0.00 + 42.60 + 0.00) = 42.60 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-70	66	0.00	56.36	0.00	-5.23	-1.22	0.00	0.00	-7.32	42.60

Segment Leq : 42.60 dBA

Total Leq All Segments: 42.60 dBA

↑  
TOTAL Leq FROM ALL SOURCES (DAY): 50.19  
(NIGHT): 42.60

↑  
↑

Filename: rec10.te                            Time Period: Day/Night 16/8 hours  
Description: Receptor Point 10

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

-----  
Car traffic volume : 6477/563    veh/TimePeriod    \*  
Medium truck volume : 515/45    veh/TimePeriod    \*  
Heavy truck volume : 368/32    veh/TimePeriod    \*  
Posted speed limit : 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): 8000  
Percentage of Annual Growth : 0.00  
Number of Years of Growth : 0.00  
Medium Truck % of Total Volume : 7.00  
Heavy Truck % of Total Volume : 5.00  
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: CapilanoDr A (day/night)

-----  
Angle1    Angle2            : -80.00 deg    -20.00 deg  
Wood depth : 0            (No woods.)  
No of house rows : 1 / 1  
House density : 20 %  
Surface : 1            (Absorptive ground surface)  
Receiver source distance : 30.00 / 30.00 m  
Receiver height : 1.50 / 1.50 m  
Topography : 1            (Flat/gentle slope; no barrier)  
Reference angle : 0.00

↑

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

-----  
Car traffic volume : 6477/563    veh/TimePeriod    \*  
Medium truck volume : 515/45    veh/TimePeriod    \*  
Heavy truck volume : 368/32    veh/TimePeriod    \*  
Posted speed limit : 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): 8000

Percentage of Annual Growth : 0.00  
 Number of Years of Growth : 0.00  
 Medium Truck % of Total Volume : 7.00  
 Heavy Truck % of Total Volume : 5.00  
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: CapilanoDr B (day/night)

-----  
 Angle1 Angle2 : 64.00 deg 75.00 deg  
 Wood depth : 0 (No woods.)  
 No of house rows : 0 / 0  
 Surface : 1 (Absorptive ground surface)  
 Receiver source distance : 30.00 / 30.00 m  
 Receiver height : 1.50 / 1.50 m  
 Topography : 1 (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

↑  
 Results segment # 1: CapilanoDr A (day)

Source height = 1.50 m

ROAD (0.00 + 51.81 + 0.00) = 51.81 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	-20	0.66	63.96	0.00	-5.00	-6.25	0.00	-0.90	0.00	51.81

Segment Leq : 51.81 dBA

↑  
 Results segment # 2: CapilanoDr B (day)

Source height = 1.50 m

ROAD (0.00 + 43.80 + 0.00) = 43.80 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
64	75	0.66	63.96	0.00	-5.00	-15.16	0.00	0.00	0.00	43.80

Segment Leq : 43.80 dBA

Total Leq All Segments: 52.45 dBA

↑  
 Results segment # 1: CapilanoDr A (night)



Source height = 1.50 m

ROAD (0.00 + 44.22 + 0.00) = 44.22 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-80	-20	0.66	56.36	0.00	-5.00	-6.25	0.00	-0.90	0.00	44.22

Segment Leq : 44.22 dBA

↑  
Results segment # 2: CapilanoDr B (night)

Source height = 1.50 m

ROAD (0.00 + 36.20 + 0.00) = 36.20 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
64	75	0.66	56.36	0.00	-5.00	-15.16	0.00	0.00	0.00	36.20

Segment Leq : 36.20 dBA

Total Leq All Segments: 44.86 dBA

↑  
  
TOTAL Leq FROM ALL SOURCES (DAY): 52.45  
(NIGHT): 44.86

↑  
↑