

Environmental Noise Control Study

Proposed Residential Development

114 Richmond Road
Ottawa, Ontario

Prepared for Concorde Properties

Report PG7881-1 dated February 12, 2026

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1.0 Introduction

Paterson Group (Paterson) was commissioned by Concorde Properties to conduct an environmental noise control study for the proposed residential development to be located at 114 Richmond Road in Ottawa, Ontario.

The objectives of the current study were 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 Conservation and Parks (MOECP) and the City of Ottawa.
- ❑ Review the projected noise levels and offer recommendations regarding warning classes, construction materials or alternative sound barriers.

This 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 residential development as they are understood at the time of writing this report.

This study has been conducted according to the 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 residential development will consist of one 4-storey apartment building and six stacked townhouse blocks. Associated at-grade roadways, parking areas and an outdoor living area are also anticipated as a part of the proposed residential development.

3.0 Methodology and Noise Assessment Criteria

The City of Ottawa outlines 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

The City of Ottawa's Official Plan, in addition to the ENCG, dictate that the influence area must contain any of the 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 principal main railway line.

The NPC-300 outlines the limitations of the stationary and environmental noise levels in relation to the location of the receptors. These can be found below in the following tables:

Table 1 - Sound Level Limits for Outdoor Living Areas	
Time Period	Required $L_{eq(16)}$ (dBA)
16-hour, 7:00-23:00	55
I. Standards taken from Table 2.2a; Sound Level Limit for Outdoor Living Areas - Road and Rail	

Table 2 - Sound Level Limits for Indoor Living Area			
Type of Space	Time Period	Required L_{eq} (dBA)	
		Road	Rail
Living/Dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc	7:00-23:00	45	40
Theatres, places of worship, libraries, individual or semi-private offices, conference rooms, and reading rooms	23:00-7:00	45	40
Sleeping quarters	7:00-23:00	45	40
	23:00-7:00	40	35
I. Standards taken from Table 2.2b; Sound Level Limit for Indoor Living Areas - Road and Rail			

It is noted in ENCG that the limits outlined in Table 2 are for the sound levels on the interior of the glass pane. The ENCG further goes on to state that the limit for the exterior of the pane of glass will be 55 dBA.

If the sound level limits are exceeded at the window panes for the indoor living areas, the following Warning Clauses may be referenced:

Table 3 - Warning Clauses for Sound Level Exceedances	
Warning Clause	Description
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."
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."
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."
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."
I.	Clauses taken from section C8 Warning Clauses; Environmental Noise Guidelines - NPC-300

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 proposed residential development is not in proximity to any existing or approved stationary sources of noise. Therefore, a stationary noise analysis will not be required with respect to off-site stationary noise sources impacting the proposed development.

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 site is currently occupied with an existing multi-storey structure within the northern portion of the site, and unoccupied within the southern portion of the site. The subject site is surrounded by Richmond Road to the north, Byron Avenue to the south, and residential and commercial buildings to the east and west. Richmond Road and Byron Avenue were identified within a 100 m radius of the proposed residential development.

Based on the new City of Ottawa Official Plan, Schedule F, Richmond Road is considered a four-lane urban arterial road (4-UAU) and Byron Avenue is considered a two-lane major collector (2-UMCU). Other roads within the 100 m radius of the proposed residential development are not classified as either arterial, collector, or major collector roads and, therefore, are not included in this study.

All noise sources are presented in Drawing PG7881-1-Site Geometry, located in Appendix 1.

The City of Ottawa provides noise levels from road traffic, taking into consideration the right-of-way width and the implied roadway class. These values represent the maximum allowable capacity of the proposed roadways. The parameters to be used for sound-level predictions can be found below.

Table 4 - Traffic and Road Parameters						
Road	Implied Roadway	AADT (Veh/day)	Posted Speed (km/h)	Day/Night Split %	Medium Truck %	Heavy Truck %
Richmond Road	4-UAU	30,000	50	92/8	7	5
Byron Avenue	2-UMCU	12,000	40	92/8	7	5
Data obtained from the City of Ottawa document ENCG						

Three (3) levels of reception points were selected for this analysis. The following elevations were selected from the heights provided on the survey plan for the subject buildings.

Table 5 - Elevation of Reception Points			
Floor Number	Elevation at the Centre of Window / Ground Surface (m)	Floor Use	Daytime/Nighttime Analysis
Ground Floor	1.5	Living Area/Bedroom	Daytime/nighttime
Second Floor	4.5	Living Area/Bedroom	Daytime/nighttime
Ground Surface	1.5	Outdoor Living Area	Daytime
Fourth Floor	10.5	Living Area/Bedroom	Daytime/nighttime

For this analysis, a reception point was taken at the centre of each floor, on the ground floor and the second floor. Reception points are detailed in Drawing PG7881-2 Receptor Location Plans presented in Appendix 1.

All horizontal distances have been measured from the reception point to the edge of the right-of-way. The roadways were analyzed where they intersected the 100 m buffer zone, which is reflected in the local angles described in Paterson Group Drawings PG7881-3A to 8C-Site Geometry in Appendix 1.

Table 9 - Summary of Reception Points and Geometry, located in Appendix 1, provides a summary of the points of reception and their geometry concerning the noise sources. The analysis is completed so that no effects of sound reflection off the building facade are considered, as stipulated by the ENCG. It should be noted that one receptor is assigned to the side of the building affected by noise. There are two noise sources: Richmond Road and Byron Avenue. The anticipated noise at each receptor represents the worst-case scenario for each building.

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.

The subject site is relatively level and at-grade with the neighbouring roads within a 100 m radius.

5.0 Results

Surface Transportation

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

The proposed traffic noise levels were analyzed at all reception points. The results of the STAMSON software are located in Appendix 2, and the summary of the results are provided in Table 6 below.

Table 6 – Proposed Noise Levels – Indoor and Outdoor Living Areas			
Reception Point	Description	Daytime at Facade $L_{eq(16)}$ (dBA)	Nighttime at Facade $L_{eq(8)}$ (dBA)
REC 1-1	Eastern Elevation - Apartment Building - 1st Floor	54.24	46.64
REC 1-4	Eastern Elevation - Apartment Building - 4th Floor	56.23	48.63
REC 2-1	Northern Elevation - Apartment Building - 1st Floor	60.80	53.21
REC 2-4	Northern Elevation - Apartment Building - 4th Floor	62.44	54.84
REC 3-1	Western Elevation - Apartment Building - 1st Floor	54.31	46.71
REC 3-4	Western Elevation - Apartment Building - 4th Floor	56.30	48.71
REC 4	Outdoor Living Area - Courtyard - Apartment Building	56.13	-
REC 5-1	Eastern Elevation - Block 1 - 1st Floor	41.40	33.81
REC 5-2	Eastern Elevation - Block 1 - 2nd Floor	42.20	34.60
REC 6-1	Southern Elevation - Block 1 - 1st Floor	47.74	40.15
REC 6-2	Southern Elevation - Block 1 - 2nd Floor	48.47	40.87
REC 7-1	Western Elevation - Block 1 - 1st Floor	42.39	34.79
REC 7-2	Western Elevation - Block 1 - 2nd Floor	43.18	35.58
REC 8-1	Eastern Elevation - Block 2 - 1st Floor	50.23	42.63
REC 8-2	Eastern Elevation - Block 2 - 2nd Floor	50.83	43.23
REC 9-1	Southern Elevation - Block 2 - 1st Floor	57.78	50.18
REC 9-2	Southern Elevation - Block 2 - 2nd Floor	58.21	50.61

Table 6 continued – Proposed Noise Levels - Indoor and Outdoor Living Areas

Reception Point	Description	Daytime at Facade L_{eq(16)} (dBA)	Nighttime at Facade L_{eq(8)} (dBA)
REC 10-1	Western Elevation - Block 2 - 1st Floor	50.39	42.79
REC 10-2	Western Elevation - Block 2 - 2nd Floor	51.00	43.40
REC 11-1	Eastern Elevation - Block 4 - 1st Floor	42.94	35.34
REC 11-2	Eastern Elevation - Block 4 - 2nd Floor	43.67	36.07
REC 12-1	Southern Elevation - Block 4 - 1st Floor	48.61	41.02
REC 12-2	Southern Elevation - Block 4 - 2nd Floor	49.33	41.73
REC 13-1	Western Elevation - Block 4 - 1st Floor	44.14	36.54
REC 13-2	Western Elevation - Block 4 - 2nd Floor	44.87	37.27
REC 14-1	Eastern Elevation - Block 5 - 1st Floor	48.57	40.98
REC 14-2	Eastern Elevation - Block 5 - 2nd Floor	49.21	41.61
REC 15-1	Southern Elevation - Block 5 - 1st Floor	53.23	45.63
REC 15-2	Southern Elevation - Block 5 - 2nd Floor	53.84	46.24
REC 16-1	Western Elevation - Block 5 - 1st Floor	49.09	41.49
REC 16-2	Western Elevation - Block 5 - 2nd Floor	49.72	42.12
REC 17-1	Eastern Elevation - Block 6 - 1st Floor	53.74	46.14
REC 17-2	Eastern Elevation - Block 6 - 2nd Floor	54.19	46.59
REC 18-1	Southern Elevation - Block 6 - 1st Floor	58.99	51.39
REC 18-2	Southern Elevation - Block 6 - 2nd Floor	59.37	51.77
REC 19-1	Western Elevation - Block 6 - 1st Floor	54.24	46.64
REC 19-2	Western Elevation - Block 6 - 2nd Floor	54.69	47.09

6.0 Discussion and Recommendations

6.1 Outdoor Living Areas

One outdoor living area was analysed as part of the current study, denoted as REC4. The results of the STAMSON modelling indicate that the $L_{eq(16)}$ from all sources was 56.13 dBA. The noise level for the outdoor living area is above the 55 dBA limit that was specified in Table 1; therefore, additional noise attenuation features will be required.

Further analysis was carried out for the outdoor living areas as they exceeded the 55 dBA threshold. As per Table 7, denoted below, of the City of Ottawa Guidelines, the following recommended methods were considered to reduce the noise levels:

- It is not possible to provide additional setbacks with the current orientation and size of the proposed buildings, and it is not possible to insert noise-insensitive lands between the source and the receptor.
- The orientation of the proposed buildings was considered and is denoted on Drawing PG7881- 3D.

Primary Mitigation Measure to achieve required dBA – In order of Preference	Secondary Mitigation Measures	
	Landscape plantings and/or non-acoustic fence to obscure the noise source	Warning Clauses *
1. Distance setback with soft ground;	Recommended	
1. Insertion of noise-insensitive land uses between the source and the sensitive receptor		
2. Orientation of Buildings to provide sheltered zones in rear yards	Required	Warning Clauses are necessary and to include <ul style="list-style-type: none"> - Reference to specific noise mitigation measures in the development - Whether noise is expected to increase in the future and - That there is a need to maintain mitigation
3. Shared outdoor amenity areas		
4. Earth Berms (sound barriers)		
5. Acoustic barriers (acoustic barriers)		
* A warning clause is necessary whenever noise is expected to meet or exceed 55 dBA Leq 16 in the Outdoor Living Area or Pane of Window of any living space prior to mitigation		

With the implementation of the building orientations, the noise levels for REC4 were reduced to below 55 dBA, as with the proposed structure and existing structures it is an enclosed space and are therefore considered acceptable as per the ENCG.

6.2 Indoor Living Areas and Ventilation

The results of the STAMSON modelling indicate that the $L_{eq(16)}$ ranges between 58.57 dBA and 64.86 dBA. Some of the values calculated exceed the limit of 55 dBA as specified by the ENCG, and therefore, warning clauses will be required to be stated on any deeds of sale. The applicable warning clauses are summarized in Table 8 below.

Building	Elevation	Applicable Warning Clause	Additional Considerations
Proposed Apartment Building	Northern	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."
Proposed Apartment Building	Eastern, Western	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."
Block 2	Southern	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."
Block 6	Southern	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."

7.0 Summary of Findings

The subject site is located at 114 Richmond Road in Ottawa, Ontario. It is understood that the proposed residential development will consist of one 4-storey apartment building and six stacked townhouse blocks. The associated analysis identified two surface transportation noise sources: Richmond Road and Byron Avenue.

Several reception points were selected for the analysis, consisting of panes of glass reception points on both the first and top levels.

Various receptors for the analysis exceeded the 55 dBA and 65 dBA thresholds as specified by the ENCG. Therefore, various elevations will require Warning Clause Type C and Warning Clause Type D.

The warning clauses for the proposed apartment building will consist of Warning Clause Type D for the northern elevation and Warning Clause Type C for the eastern and western elevations.

The warning clauses for Block 2 and Block 6 of the stacked townhouse blocks will require Warning Clause Type C for the southern elevation.

All warning clauses are reiterated below and are to be included on all Offers of Purchase and Sale:

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.

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."

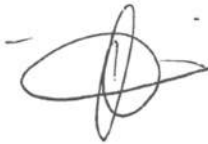
One outdoor living areas was analyzed as part of the current study. The results of the STAMSON modelling indicate that the $L_{eq(16)}$ from all sources was 56.13 dBA. Further analysis was performed as they exceeded the 55 dBA threshold. As per the recommendations provided in Table 2.3a of the ENCG, the building orientations were considered. With the implementation of the prescribed measures as per the ENCG, the sound levels for the outdoor living area were reduced to within acceptable limits. Reference should be made to Drawings for the noise-reducing measures.

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 Concorde Properties, 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.



Otilia McLaughlin, B.Eng.



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APPENDIX 1

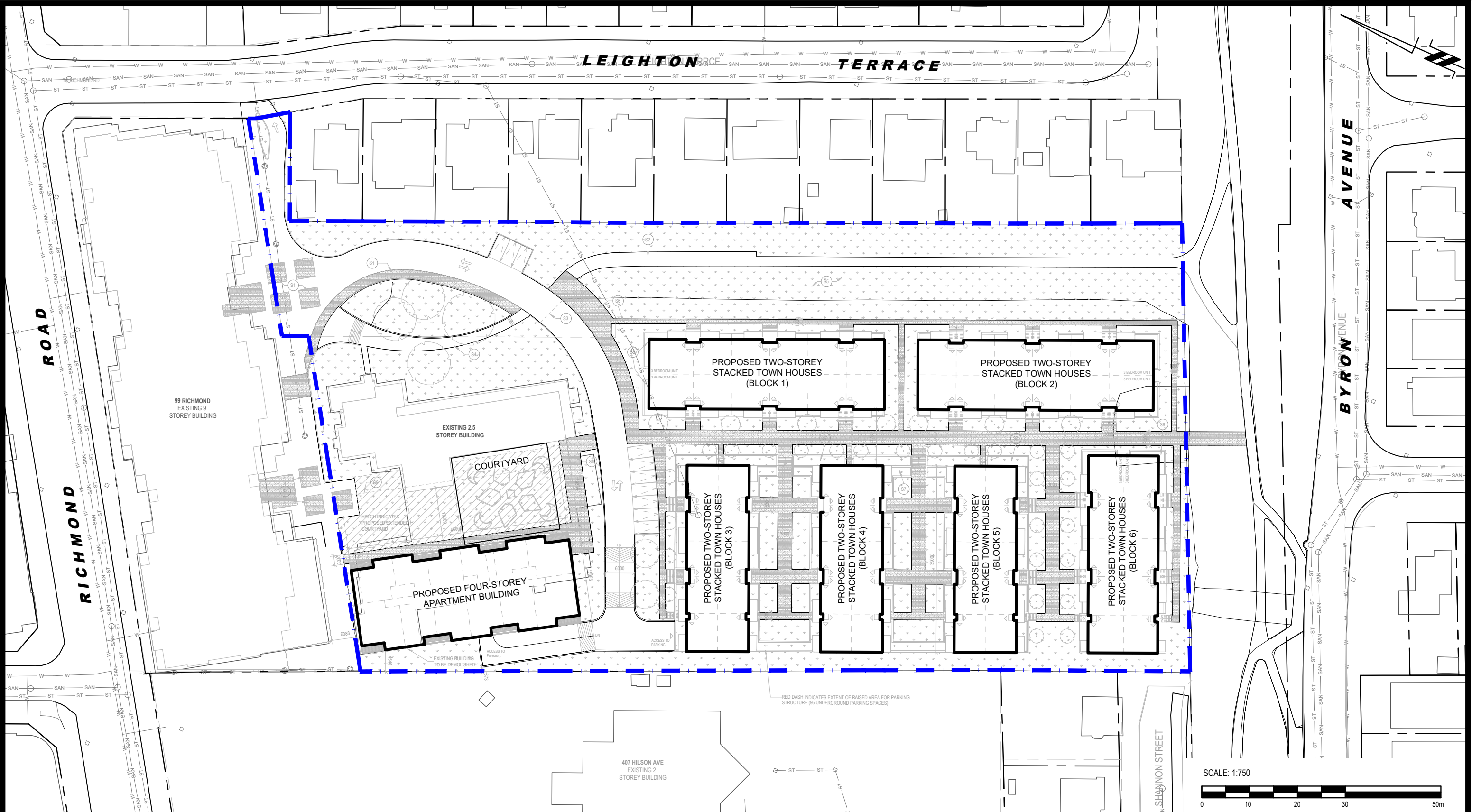
TABLE 9 – SUMMARY OF RECEPTION POINTS AND GEOMETRY
DRAWING PG7881-1-SITE PLAN
DRAWING PG7881-2-RECEPTOR LOCATION PLAN
DRAWING PG7881-3-SITE GEOMETRY
DRAWING PG7881-3A-SITE GEOMETRY (REC 1-1 AND REC 1-4)
DRAWING PG7881-3B-SITE GEOMETRY (REC 2-1 AND REC 2-4)
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DRAWING PG7881-3D-SITE GEOMETRY (REC 4)
DRAWING PG7881-3D SITE GEOMETRY (REC4 REV1)
DRAWING PG7881-4-SITE GEOMETRY
DRAWING PG7881-4A-SITE GEOMETRY (REC 5-1 AND REC 5-2)
DRAWING PG7881-4B-SITE GEOMETRY (REC 6-1 AND REC 6-2)
DRAWING PG7881-4C-SITE GEOMETRY (REC 7-1 AND REC 7-2)
DRAWING PG7881-5-SITE GEOMETRY
DRAWING PG7881-5A-SITE GEOMETRY (REC 8-1 AND REC 8-2)
DRAWING PG7881-5B SITE GEOMETRY (REC 9-1 AND REC 9-2)
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DRAWING PG7881-8-SITE GEOMETRY
DRAWING PG7881-8A-SITE GEOMETRY (REC17-1 AND REC17-2)
DRAWING PG7881-8B-SITE GEOMETRY (REC18-1 AND REC18-2)
DRAWING PG7881-8C-SITE GEOMETRY (REC19-1 AND REC19-2)

Table 9 - Summary of Reception Points and Geometry

Proposed Residential Development																			
Point of Reception	Location	Total Leq Day (dBA)	Total Leq Night (dBA)	Richmond Road								Byron Avenue							
				Horizontal	Vertical	Total	Local Angle	Number of	Density	Barrier Height	Barrier	Horizontal	Vertical	Total	Local Angle	Number of	Density	Barrier Height	Barrier
				(m)	(m)	(m)	(degree)	Rows of Houses	(%)	(m)	Distance (m)	(m)	(m)	(m)	(degree)	Rows of Houses	(%)	(m)	Distance (m)
REC 1-1	Eastern Elevation - Apartment Building - 1st Floor	54.24	46.64	72	1.5	72.02	0, 50	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 1-4	Eastern Elevation - Apartment Building - 4th Floor	56.23	48.63	72	10.5	72.76	0, 50	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 2-1	Northern Elevation - Apartment Building - 1st Floor	60.8	53.21	49	1.5	49.02	-65, 62	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 2-4	Northern Elevation - Apartment Building - 4th Floor	62.44	54.84	49	10.5	50.11	-65, 62	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 3-1	Western Elevation - Apartment Building - 1st Floor	54.31	46.71	72	1.5	72.02	-51, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 3-4	Western Elevation - Apartment Building - 4th Floor	56.30	48.71	72	10.5	72.76	-51, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 4	Outdoor Living Area - Court Yard - Apartment Building	56.13	-	83	1.5	83.01	-56, 42	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 5-1	Eastern Elevation - Block 1 - 1st Floor	41.4	33.81	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	112	1.5	112.01	-19, 0	n/a	n/a	n/a	n/a
REC 5-2	Eastern Elevation - Block 1 - 2nd Floor	42.2	34.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	112	4.5	112.09	-19, 0	n/a	n/a	n/a	n/a
REC 6-1	Southern Elevation - Block 1 - 1st Floor	47.74	40.15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	91	1.5	91.01	-27, 32	n/a	n/a	n/a	n/a
REC 6-2	Southern Elevation - Block 1 - 2nd Floor	48.47	40.87	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	91	4.5	91.11	-27, 32	n/a	n/a	n/a	n/a
REC 7-1	Western Elevation - Block 1 - 1st Floor	42.39	34.79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	112	1.5	112.01	0, 24	n/a	n/a	n/a	n/a
REC 7-2	Western Elevation - Block 1 - 2nd Floor	43.18	35.58	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	112	4.5	112.09	0, 24	n/a	n/a	n/a	n/a
REC 8-1	Eastern Elevation - Block 2 - 1st Floor	50.23	42.63	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	60	1.5	60.02	-57, 0	n/a	n/a	n/a	n/a
REC 8-2	Eastern Elevation - Block 2 - 2nd Floor	50.83	43.23	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	60	4.5	60.17	-57, 0	n/a	n/a	n/a	n/a

Table 9 - Summary of Reception Points and Geometry

Proposed Residential Development																			
Point of Reception	Location	Total Leq Day (dBA)	Total Leq Night (dBA)	Richmond Road								Byron Avenue							
				Horizontal	Vertical	Total	Local Angle	Number of	Density	Barrier Height	Barrier	Horizontal	Vertical	Total	Local Angle	Number of	Density	Barrier Height	Barrier
				(m)	(m)	(m)	(degree)	Rows of Houses	(%)	(m)	Distance (m)	(m)	(m)	(m)	(degree)	Rows of Houses	(%)	(m)	Distance (m)
REC 9-1	Southern Elevation - Block 2 - 1st Floor	57.78	50.18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	35	1.5	35.03	-70, 73	n/a	n/a	n/a	n/a
REC 9-2	Southern Elevation - Block 2 - 2nd Floor	58.21	50.61	n/a	n/a	n/a	n/a	n/a	n/a	1.5	16	35	4.5	35.29	-70, 73	n/a	n/a	n/a	n/a
REC 10-1	Western Elevation - Block 2 - 1st Floor	50.39	42.79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	60	1.5	60.02	0, 60	n/a	n/a	n/a	n/a
REC 10-2	Western Elevation - Block 2 - 2nd Floor	51	43.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	60	4.5	60.17	0, 60	n/a	n/a	n/a	n/a
REC 11-1	Eastern Elevation - Block 4 - 1st Floor	42.94	35.34	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	96	1.5	96.01	-21, 0	n/a	n/a	n/a	n/a
REC 11-2	Eastern Elevation - Block 4 - 2nd Floor	43.67	36.07	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	96	4.5	96.11	-21, 0	n/a	n/a	n/a	n/a
REC 12-1	Southern Elevation - Block 4 - 1st Floor	48.61	41.02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	88	1.5	88.01	-31, 38	n/a	n/a	n/a	n/a
REC 12-2	Southern Elevation - Block 4 - 2nd Floor	49.33	41.73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	88	4.5	88.11	-31, 38	n/a	n/a	n/a	n/a
REC 13-1	Western Elevation - Block 4 - 1st Floor	44.14	36.54	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	94	1.5	94.01	0, 27	n/a	n/a	n/a	n/a
REC 13-2	Western Elevation - Block 4 - 2nd Floor	44.87	37.27	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	94	4.5	94.11	0, 27	n/a	n/a	n/a	n/a
REC 14-1	Eastern Elevation - Block 5 - 1st Floor	48.57	40.98	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	68	1.5	68.02	-46, 0	n/a	n/a	n/a	n/a
REC 14-2	Eastern Elevation - Block 5 - 2nd Floor	49.21	41.61	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	68	4.5	68.15	-46, 0	n/a	n/a	n/a	n/a
REC 15-1	Southern Elevation - Block 5 - 1st Floor	53.23	45.63	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	60	1.5	60.02	-55, 59	n/a	n/a	n/a	n/a
REC 15-2	Southern Elevation - Block 5 - 2nd Floor	53.84	46.24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	60	4.5	60.17	-55, 59	n/a	n/a	n/a	n/a
REC 16-1	Western Elevation - Block 5 - 1st Floor	49.09	41.49	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	66	1.5	66.02	0, 50	n/a	n/a	n/a	n/a
REC 16-2	Western Elevation - Block 5 - 2nd Floor	49.72	42.12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	66	4.5	66.15	0, 50	n/a	n/a	n/a	n/a
REC 17-1	Eastern Elevation - Block 6 - 1st Floor	53.74	46.14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	39	1.5	39.03	-65, 0	n/a	n/a	n/a	n/a
REC 17-2	Eastern Elevation - Block 6 - 2nd Floor	54.19	46.59	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	39	4.5	39.26	-65, 0	n/a	n/a	n/a	n/a
REC 18-1	Southern Elevation - Block 6 - 1st Floor	58.99	51.39	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	30	1.5	30.04	-73, 76	n/a	n/a	n/a	n/a
REC 18-2	Southern Elevation - Block 6 - 2nd Floor	59.37	51.77	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	30	4.5	30.34	-73, 76	n/a	n/a	n/a	n/a
REC 19-1	Western Elevation - Block 6 - 1st Floor	54.24	46.64	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	37	1.5	37.03	0, 68	n/a	n/a	n/a	n/a
REC 19-2	Western Elevation - Block 6 - 2nd Floor	54.69	47.09	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	37	4.5	37.27	0, 68	n/a	n/a	n/a	n/a



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

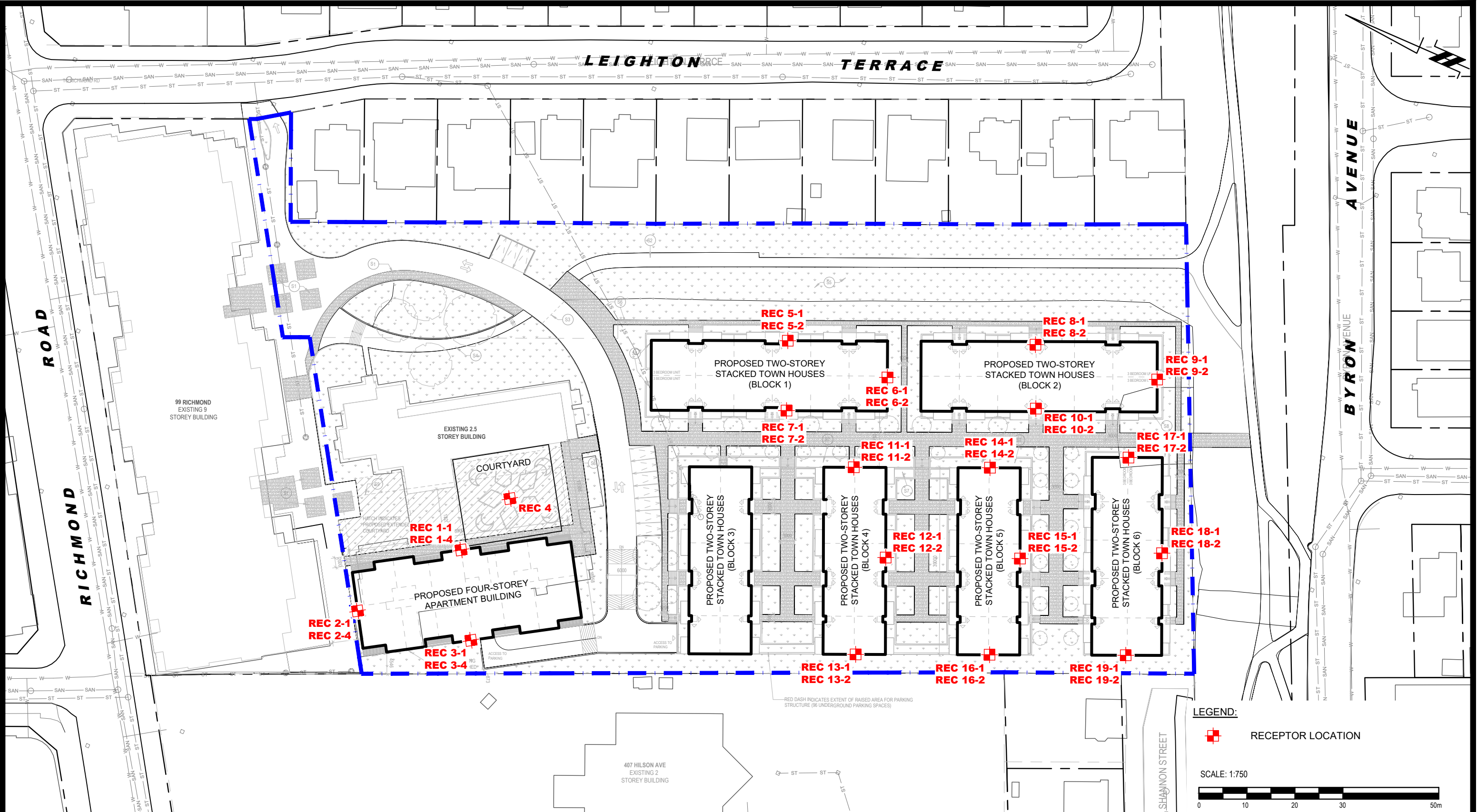
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**CONCORDE PROPERTIES
 NOISE ATTENUATION STUDY
 PROPOSED RESIDENTIAL DEVELOPMENT
 114 RICHMOND ROAD**

OTTAWA, ONTARIO

SITE PLAN

Scale:	1:750	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-1
Approved by:	SB	Revision No.:	



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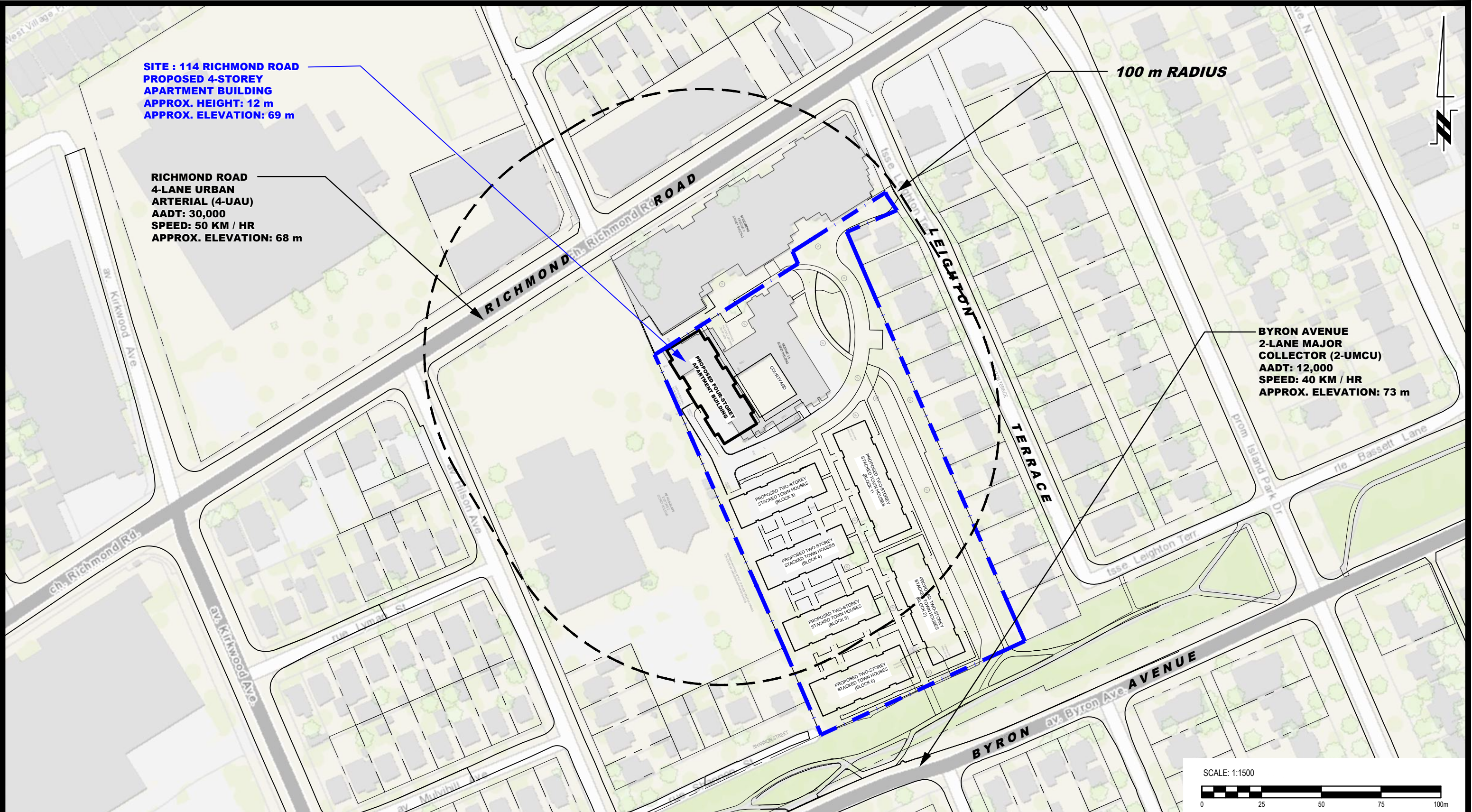
OTTAWA,
 Title:

**CONCORDE PROPERTIES
 NOISE ATTENUATION STUDY
 PROPOSED RESIDENTIAL DEVELOPMENT
 114 RICHMOND ROAD**

ONTARIO

RECEPTOR LOCATION PLAN

Scale:	1:750	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-2
Approved by:	SB	Revision No.:	



**SITE : 114 RICHMOND ROAD
 PROPOSED 4-STOUREY
 APARTMENT BUILDING
 APPROX. HEIGHT: 12 m
 APPROX. ELEVATION: 69 m**

**RICHMOND ROAD
 4-LANE URBAN
 ARTERIAL (4-UAU)
 AADT: 30,000
 SPEED: 50 KM / HR
 APPROX. ELEVATION: 68 m**

100 m RADIUS

**BYRON AVENUE
 2-LANE MAJOR
 COLLECTOR (2-UMCU)
 AADT: 12,000
 SPEED: 40 KM / HR
 APPROX. ELEVATION: 73 m**

SCALE: 1:1500



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

NO.	REVISIONS	DATE	INITIAL

OTTAWA,
 Title:

**CONCORDE PROPERTIES
 NOISE ATTENUATION STUDY
 PROPOSED RESIDENTIAL DEVELOPMENT
 114 RICHMOND ROAD
 ONTARIO**

SITE GEOMETRY - APARTMENT BUILDING

Scale: 1:1500
 Drawn by: YA
 Checked by: OM
 Approved by: SB

Date: 01/2026
 Report No.: PG7881-1
 Dwg. No.: **PG7881-3**
 Revision No.:



NOISE SOURCE:

— RICHMOND ROAD

— BYRON AVENUE

PATERSON GROUP
 9 AURIGA DRIVE
 OTTAWA, ON
 K2E 7T9
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NO.	REVISIONS	DATE	INITIAL

CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD

OTTAWA, ONTARIO

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

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-3A
Approved by:	SB	Revision No.:	



SITE : 114 RICHMOND ROAD
PROPOSED 4-STORY
APARTMENT BUILDING
APPROX. HEIGHT: 12 m
APPROX. ELEVATION: 69 m

RICHMOND ROAD
4-LANE URBAN
ARTERIAL (4-UAU)
AADT: 30,000
SPEED: 50 KM / HR
APPROX. ELEVATION: 68 m

100 m RADIUS

BYRON AVENUE
2-LANE MAJOR
COLLECTOR (2-UMCU)
AADT: 12,000
SPEED: 40 KM / HR
APPROX. ELEVATION: 73 m

REC 2-1
REC 2-4

NOISE SOURCE:
 — RICHMOND ROAD
 — BYRON AVENUE

LEGEND:
 ☒ RECEPTOR LOCATION

SCALE: 1:1500

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

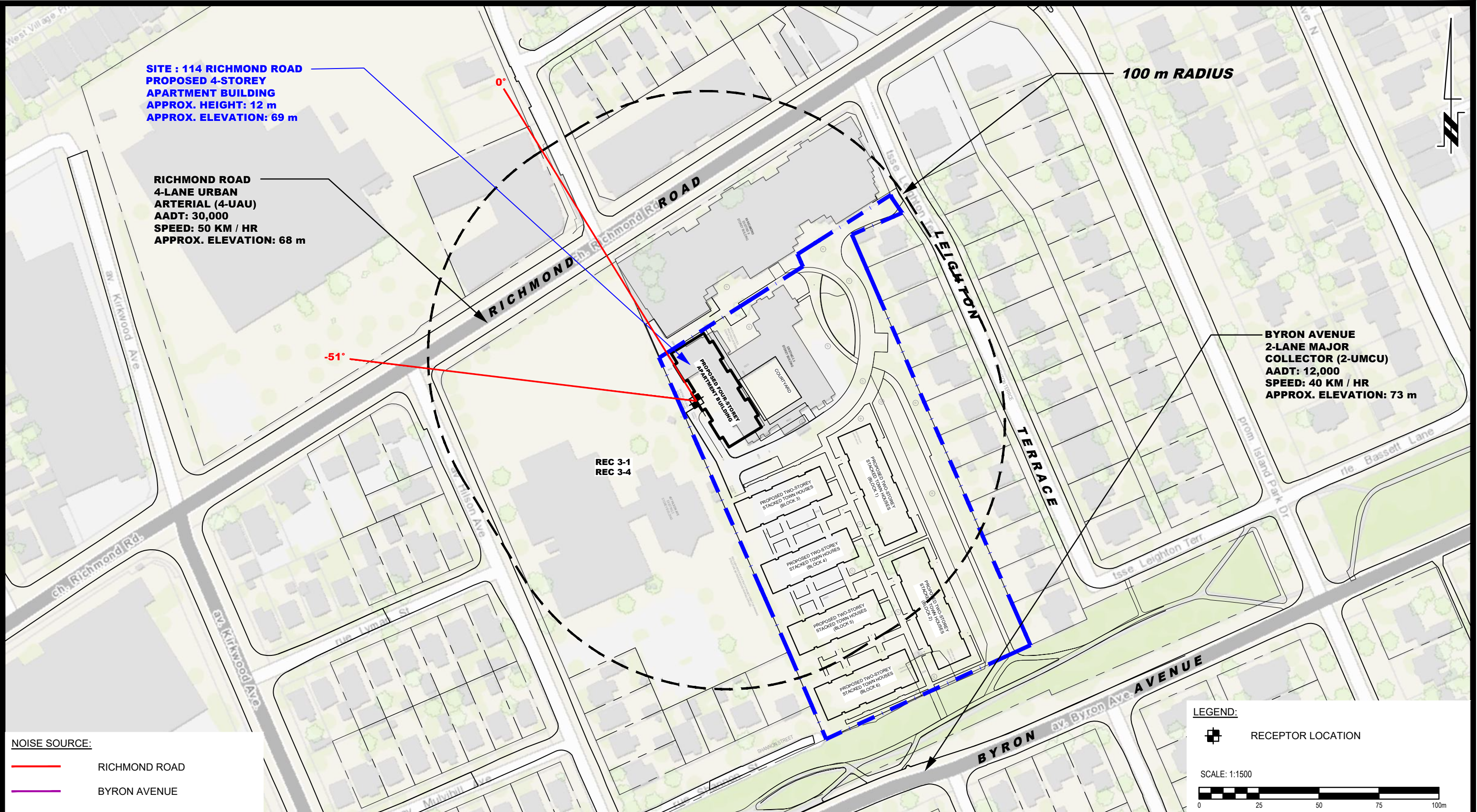
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CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD

OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 2-1 AND REC 2-4**

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-3B
Approved by:	SB	Revision No.:	



NOISE SOURCE:

— RICHMOND ROAD

— BYRON AVENUE

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

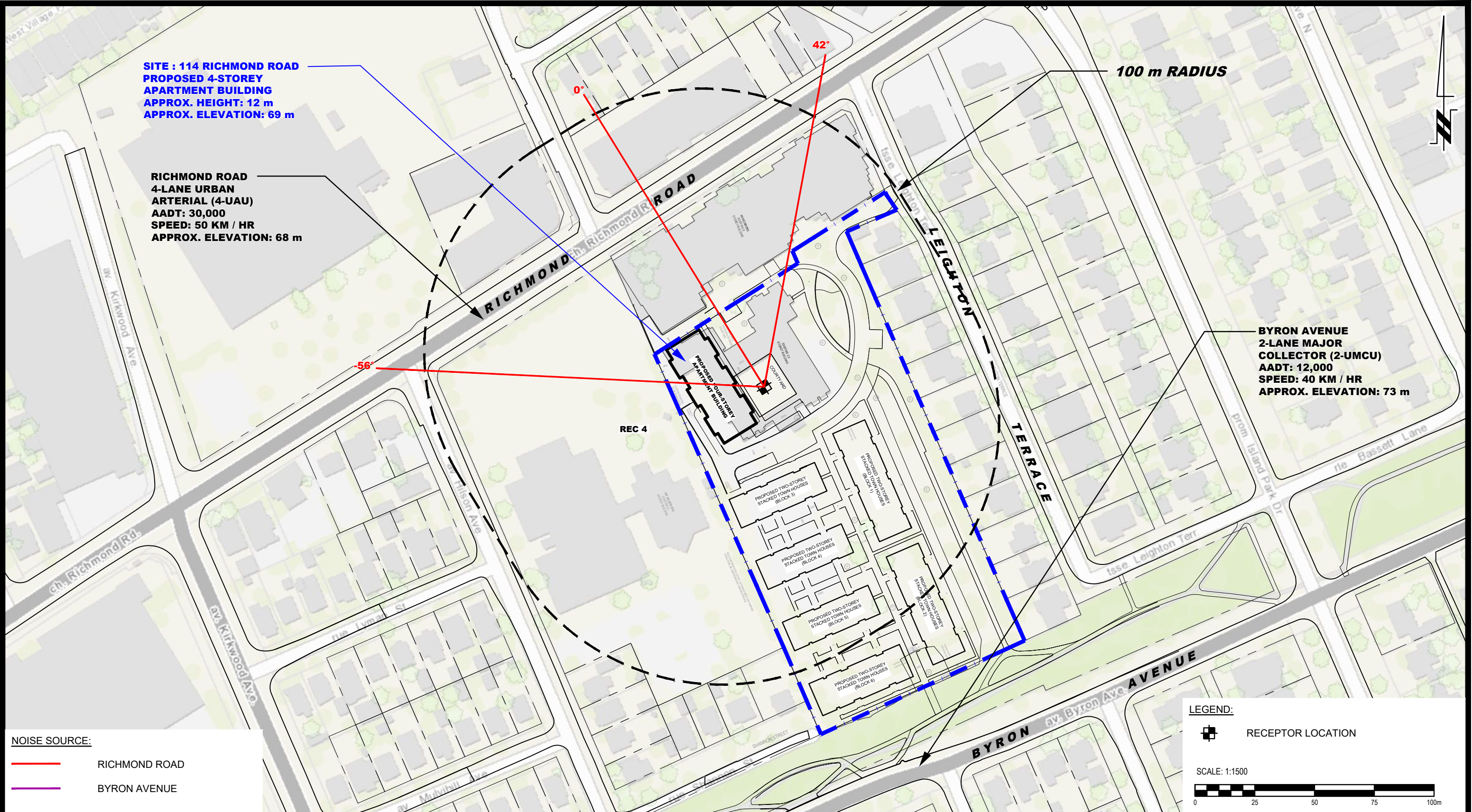
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CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD

OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 3-1 AND REC 3-4**

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-3C
Approved by:	SB	Revision No.:	



**SITE : 114 RICHMOND ROAD
 PROPOSED 4-STOREY
 APARTMENT BUILDING
 APPROX. HEIGHT: 12 m
 APPROX. ELEVATION: 69 m**

**RICHMOND ROAD
 4-LANE URBAN
 ARTERIAL (4-UAU)
 AADT: 30,000
 SPEED: 50 KM / HR
 APPROX. ELEVATION: 68 m**

100 m RADIUS

**BYRON AVENUE
 2-LANE MAJOR
 COLLECTOR (2-UMCU)
 AADT: 12,000
 SPEED: 40 KM / HR
 APPROX. ELEVATION: 73 m**

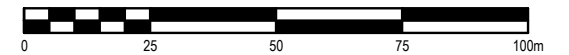
NOISE SOURCE:

- RICHMOND ROAD
- BYRON AVENUE

LEGEND:

RECEPTOR LOCATION

SCALE: 1:1500



9 AURIGA DRIVE
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 K2E 7T9
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NO.	REVISIONS	DATE	INITIAL

OTTAWA,
 Title:

**CONCORDE PROPERTIES
 NOISE ATTENUATION STUDY
 PROPOSED RESIDENTIAL DEVELOPMENT
 114 RICHMOND ROAD
 ONTARIO**

SITE GEOMETRY - REC 4 (COURTYARD)

Scale: 1:1500

Date: 01/2026

Drawn by: YA

Report No.: PG7881-1

Checked by: OM

Dwg. No.: **PG7881-3D**

Approved by: SB

Revision No.:

**SITE : 114 RICHMOND ROAD
 PROPOSED 4-STOREY
 APARTMENT BUILDING
 APPROX. HEIGHT: 12 m
 APPROX. ELEVATION: 69 m**

**RICHMOND ROAD
 4-LANE URBAN
 ARTERIAL (4-UAU)
 AADT: 30,000
 SPEED: 50 KM / HR
 APPROX. ELEVATION: 68 m**

100 m RADIUS

**BYRON AVENUE
 2-LANE MAJOR
 COLLECTOR (2-UMCU)
 AADT: 12,000
 SPEED: 40 KM / HR
 APPROX. ELEVATION: 73 m**

REC 4

NOISE SOURCE:

- RICHMOND ROAD
- BYRON AVENUE

LEGEND:

 RECEPTOR LOCATION

SCALE: 1:1500



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

NO.	REVISIONS	DATE	INITIAL

OTTAWA,
 Title:

**CONCORDE PROPERTIES
 NOISE ATTENUATION STUDY
 PROPOSED RESIDENTIAL DEVELOPMENT
 114 RICHMOND ROAD**

ONTARIO

SITE GEOMETRY - REC 4- REV.01 (COURTYARD)

Scale: 1:1500

Date: 01/2026

Drawn by: YA

Report No.: PG7881-1

Checked by: OM

Dwg. No.: **PG7881-3D**

Approved by: SB

Revision No.:

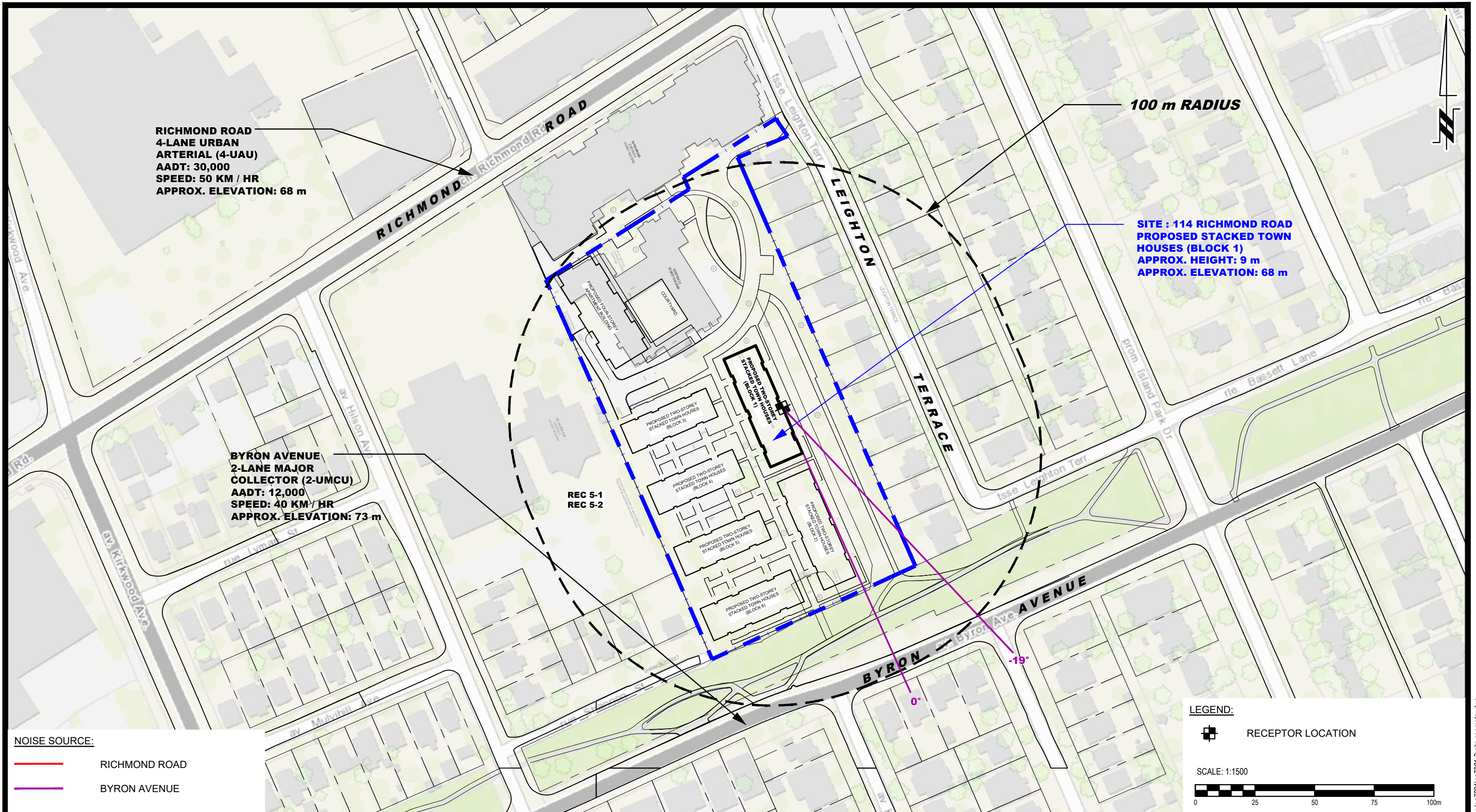


NO.	REVISIONS	DATE	INITIAL

CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD
ONTARIO

OTTAWA,
 Title: **SITE GEOMETRY - BLOCK 1**

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-4
Approved by:	SB	Revision No.:	



RICHMOND ROAD
 4-LANE URBAN
 ARTERIAL (4-UAU)
 AADT: 30,000
 SPEED: 50 KM / HR
 APPROX. ELEVATION: 68 m

100 m RADIUS

SITE : 114 RICHMOND ROAD
 PROPOSED STACKED TOWN
 HOUSES (BLOCK 1)
 APPROX. HEIGHT: 9 m
 APPROX. ELEVATION: 68 m

BYRON AVENUE
 2-LANE MAJOR
 COLLECTOR (2-UMCU)
 AADT: 12,000
 SPEED: 40 KM / HR
 APPROX. ELEVATION: 73 m

REC 5-1
REC 5-2

NOISE SOURCE:
 — RICHMOND ROAD
 — BYRON AVENUE

LEGEND:
 [Symbol] RECEPTOR LOCATION

SCALE: 1:1500
 0 25 50 75 100m

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

NO.	REVISIONS	DATE	INITIAL

CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD

OTTAWA, ONTARIO

SITE GEOMETRY - REC 5-1 AND REC 5-2

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-4A
Approved by:	SB	Revision No.:	



RICHMOND ROAD
 4-LANE URBAN
 ARTERIAL (4-UAU)
 AADT: 30,000
 SPEED: 50 KM / HR
 APPROX. ELEVATION: 68 m

100 m RADIUS

**SITE : 114 RICHMOND ROAD
 PROPOSED STACKED TOWN
 HOUSES (BLOCK 1)
 APPROX. HEIGHT: 9 m
 APPROX. ELEVATION: 68 m**

BYRON AVENUE
 2-LANE MAJOR
 COLLECTOR (2-UMCU)
 AADT: 12,000
 SPEED: 40 KM / HR
 APPROX. ELEVATION: 73 m

**REC 6-1
 REC 6-2**

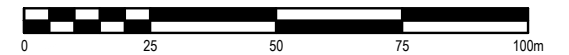
NOISE SOURCE:

- RICHMOND ROAD
- BYRON AVENUE

LEGEND:

RECEPTOR LOCATION

SCALE: 1:1500



9 AURIGA DRIVE
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 K2E 7T9
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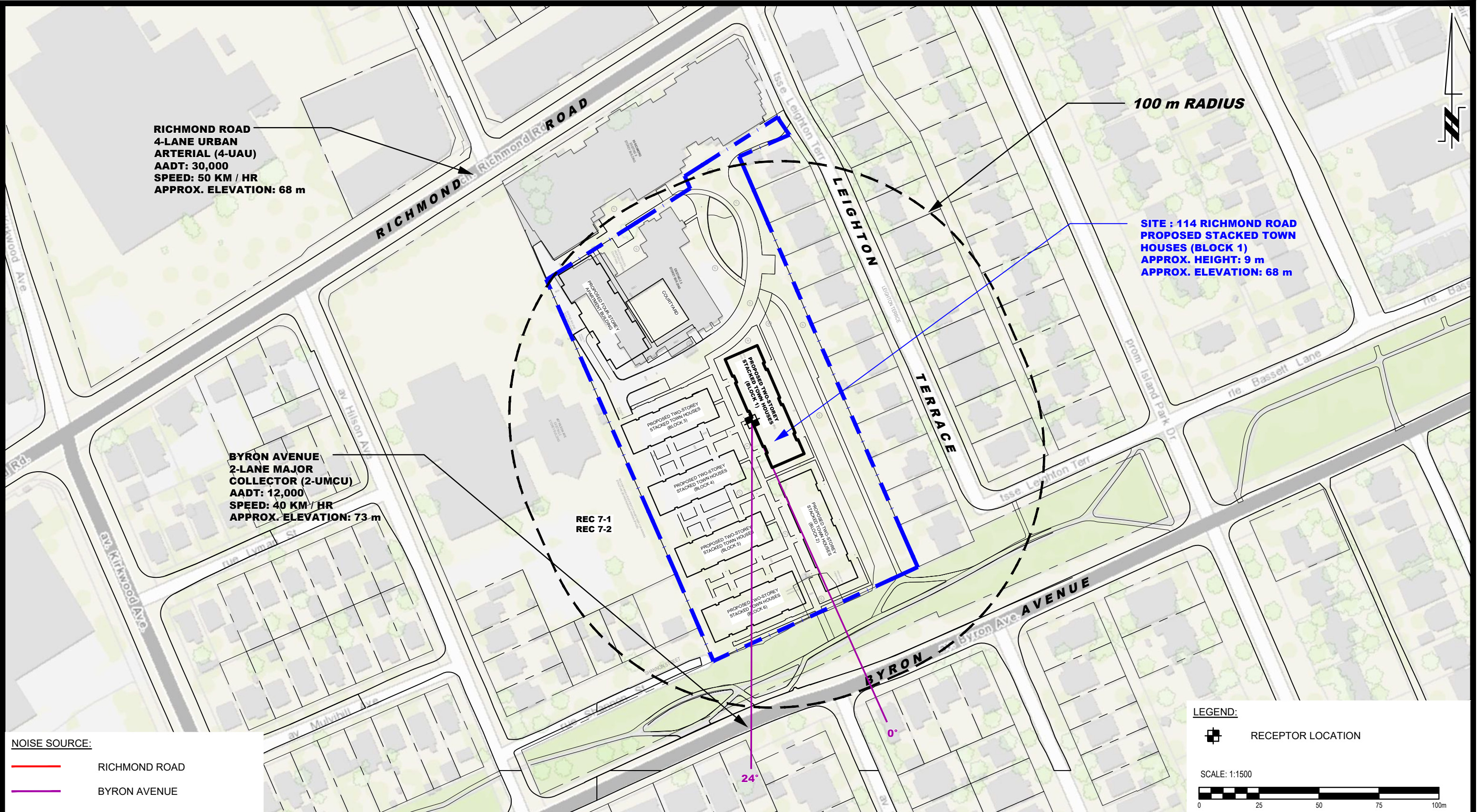
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**CONCORDE PROPERTIES
 NOISE ATTENUATION STUDY
 PROPOSED RESIDENTIAL DEVELOPMENT
 114 RICHMOND ROAD**

OTTAWA, ONTARIO

SITE GEOMETRY - REC 6-1 AND REC 6-2

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-4B
Approved by:	SB	Revision No.:	



NOISE SOURCE:

RICHMOND ROAD

BYRON AVENUE

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

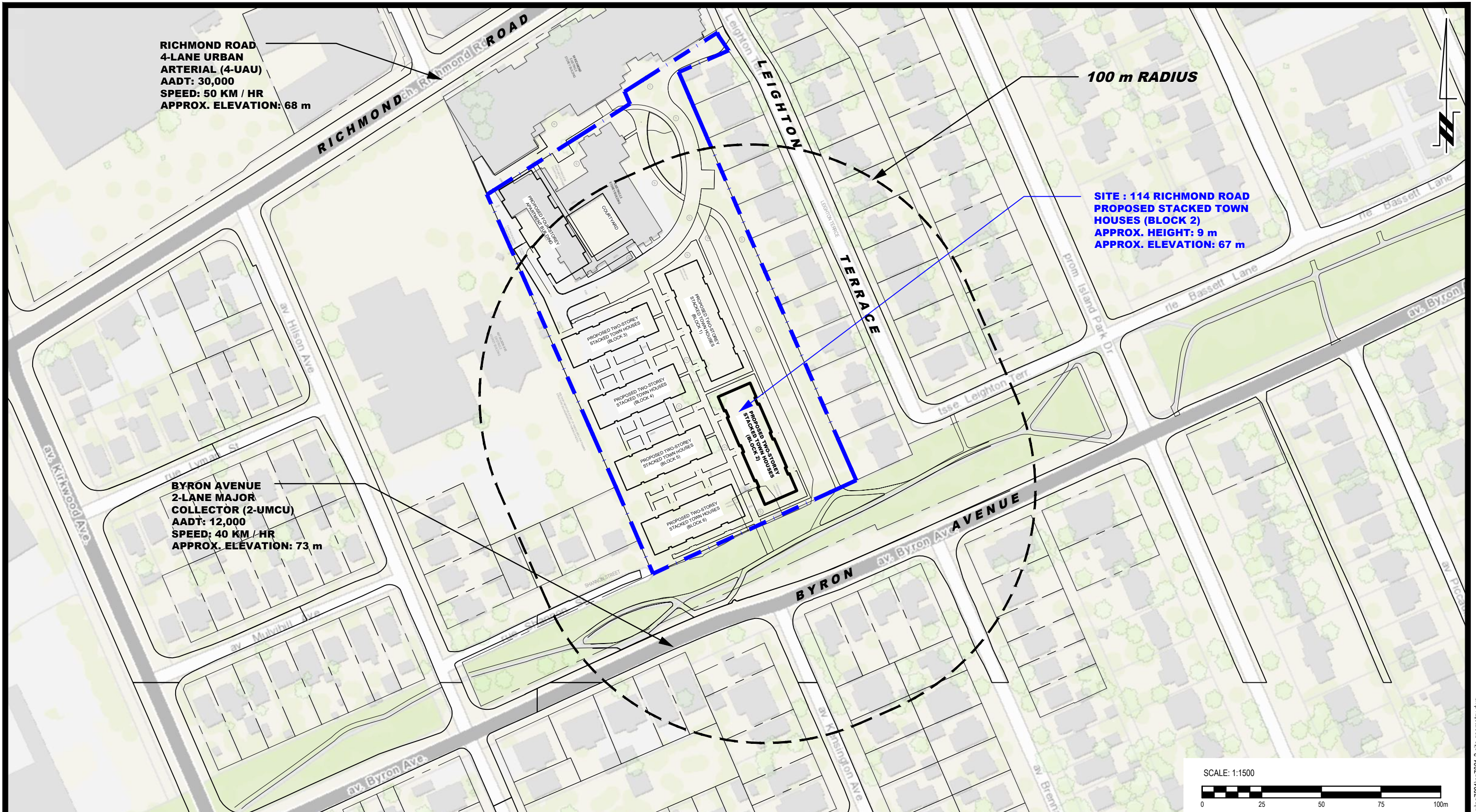
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**CONCORDE PROPERTIES
 NOISE ATTENUATION STUDY
 PROPOSED RESIDENTIAL DEVELOPMENT
 114 RICHMOND ROAD**

OTTAWA, ONTARIO

Title: SITE GEOMETRY - REC 7-1 AND REC 7-2

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-4C
Approved by:	SB	Revision No.:	



RICHMOND ROAD
 4-LANE URBAN
 ARTERIAL (4-UAU)
 AADT: 30,000
 SPEED: 50 KM / HR
 APPROX. ELEVATION: 68 m

100 m RADIUS

SITE : 114 RICHMOND ROAD
PROPOSED STACKED TOWN
HOUSES (BLOCK 2)
 APPROX. HEIGHT: 9 m
 APPROX. ELEVATION: 67 m

BYRON AVENUE
 2-LANE MAJOR
 COLLECTOR (2-UMCU)
 AADT: 12,000
 SPEED: 40 KM / HR
 APPROX. ELEVATION: 73 m

SCALE: 1:1500



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

NO.	REVISIONS	DATE	INITIAL

OTTAWA,
 Title:

CONCORDE PROPERTIES
 NOISE ATTENUATION STUDY
 PROPOSED RESIDENTIAL DEVELOPMENT
 114 RICHMOND ROAD

ONTARIO

SITE GEOMETRY - BLOCK 2

Scale: 1:1500

Date: 01/2026

Drawn by: YA

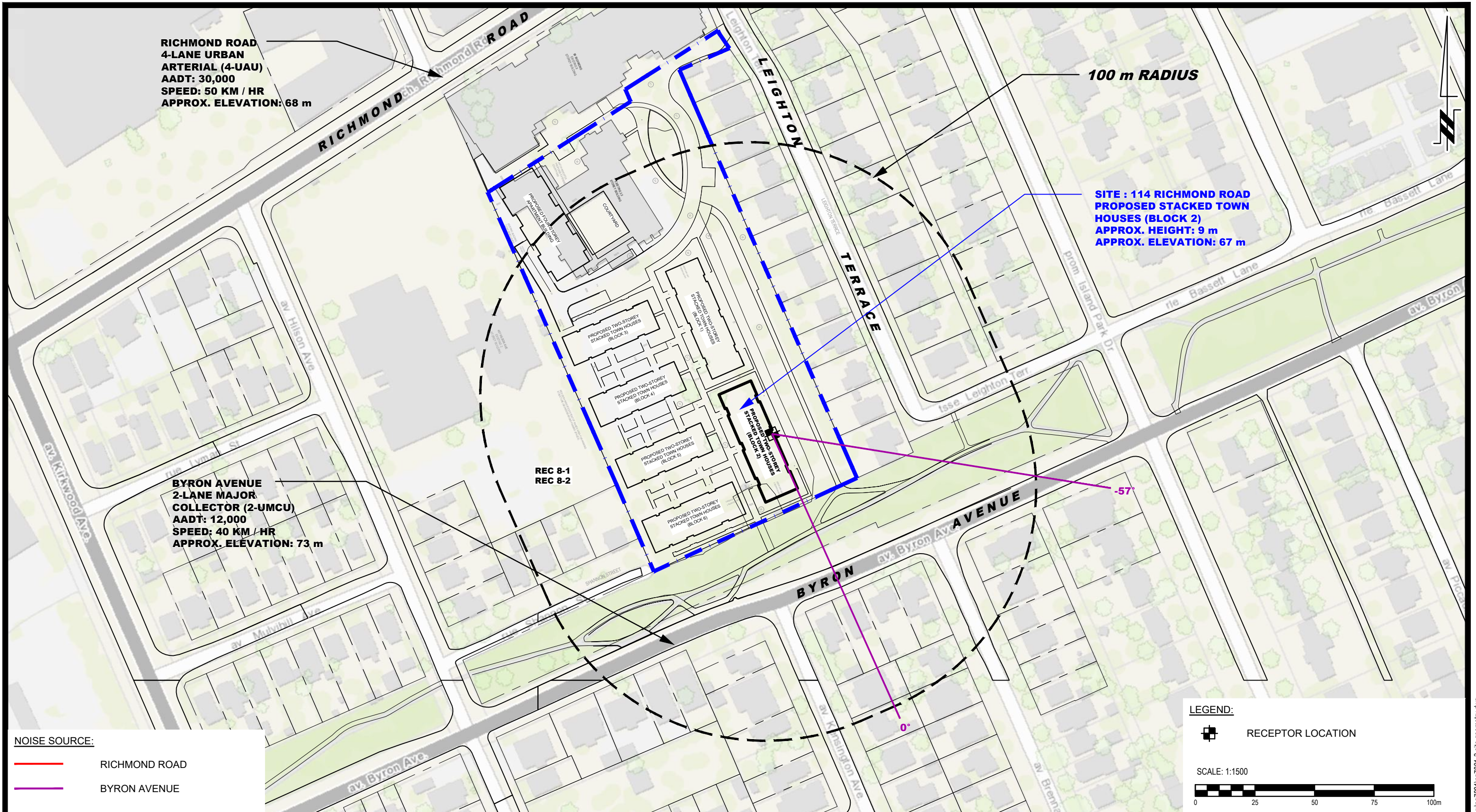
Report No.: PG7881-1

Checked by: OM

Dwg. No.: **PG7881-5**

Approved by: SB

Revision No.:



RICHMOND ROAD
 4-LANE URBAN
 ARTERIAL (4-UAU)
 AADT: 30,000
 SPEED: 50 KM / HR
 APPROX. ELEVATION: 68 m

100 m RADIUS

SITE : 114 RICHMOND ROAD
PROPOSED STACKED TOWN
HOUSES (BLOCK 2)
 APPROX. HEIGHT: 9 m
 APPROX. ELEVATION: 67 m

BYRON AVENUE
 2-LANE MAJOR
 COLLECTOR (2-UMCU)
 AADT: 12,000
 SPEED: 40 KM / HR
 APPROX. ELEVATION: 73 m

REC 8-1
REC 8-2

NOISE SOURCE:

- RICHMOND ROAD
- BYRON AVENUE

LEGEND:

RECEPTOR LOCATION

SCALE: 1:1500



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

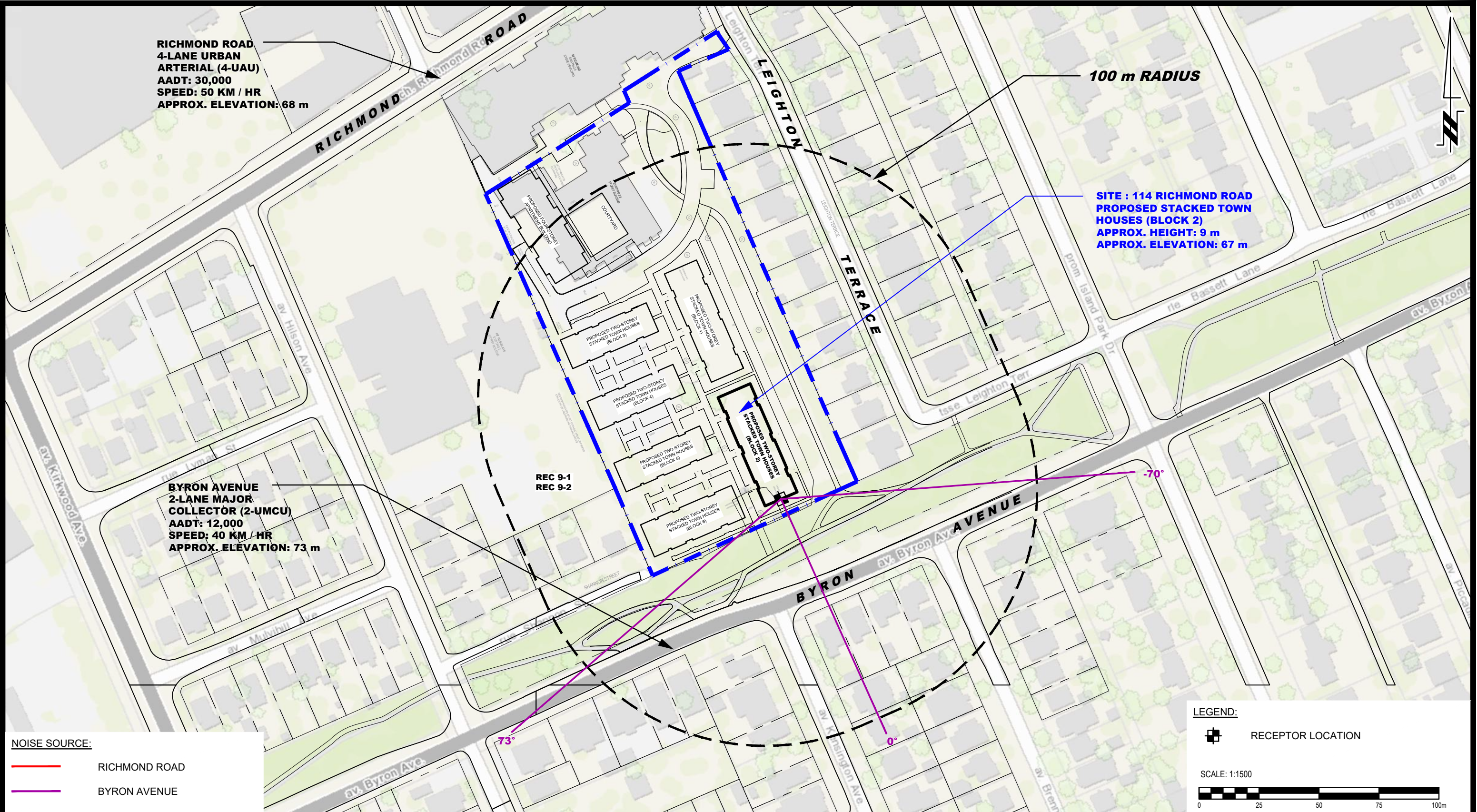
NO.	REVISIONS	DATE	INITIAL

CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD

OTTAWA, ONTARIO

SITE GEOMETRY - REC 8-1 AND REC 8-2

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-5A
Approved by:	SB	Revision No.:	



RICHMOND ROAD
 4-LANE URBAN
 ARTERIAL (4-UAU)
 AADT: 30,000
 SPEED: 50 KM / HR
 APPROX. ELEVATION: 68 m

100 m RADIUS

SITE : 114 RICHMOND ROAD
 PROPOSED STACKED TOWN
 HOUSES (BLOCK 2)
 APPROX. HEIGHT: 9 m
 APPROX. ELEVATION: 67 m

BYRON AVENUE
 2-LANE MAJOR
 COLLECTOR (2-UMCU)
 AADT: 12,000
 SPEED: 40 KM / HR
 APPROX. ELEVATION: 73 m

REC 9-1
REC 9-2

NOISE SOURCE:
 — RICHMOND ROAD
 — BYRON AVENUE

LEGEND:
 [Symbol] RECEPTOR LOCATION

SCALE: 1:1500

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

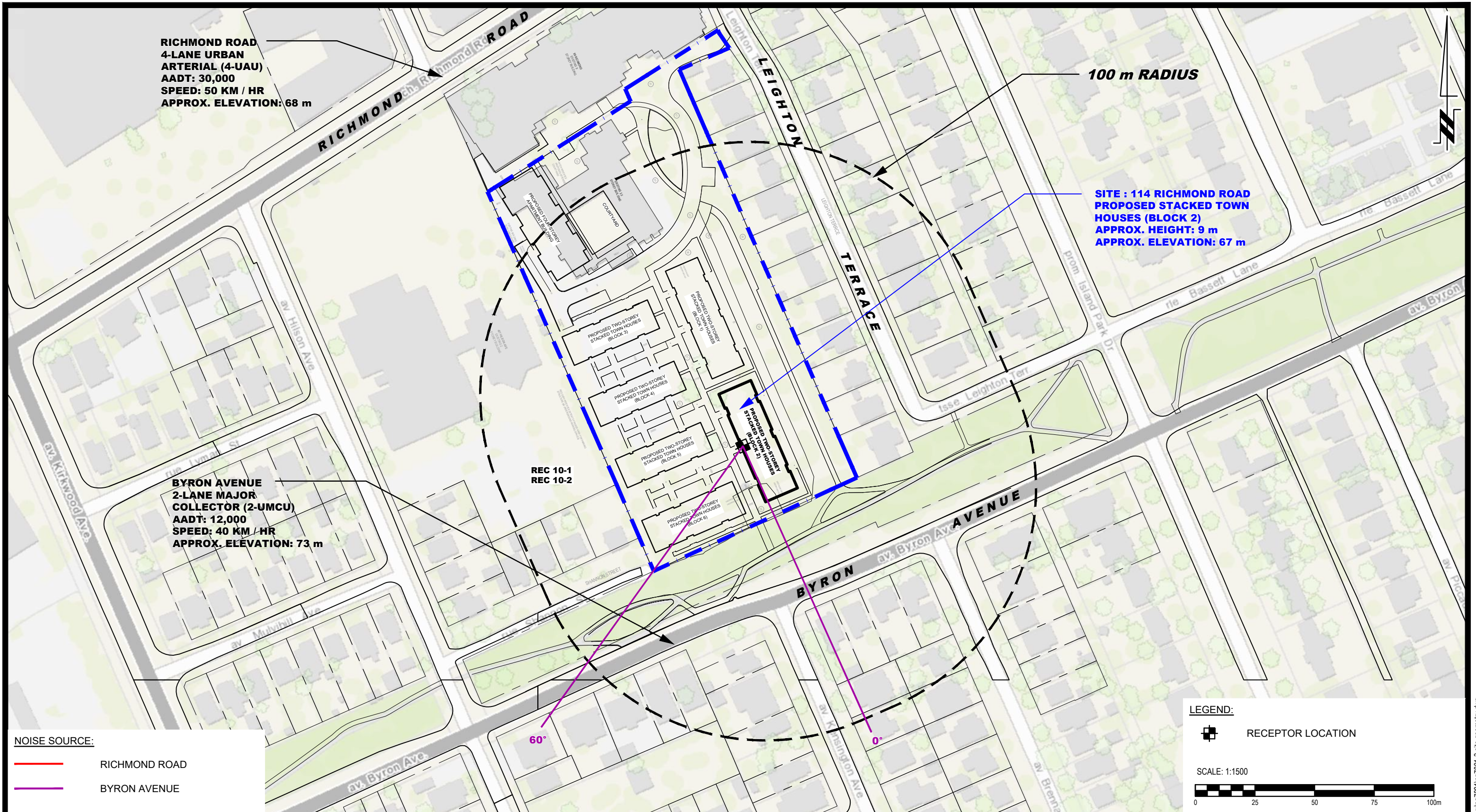
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CONCORDE PROPERTIES
 NOISE ATTENUATION STUDY
 PROPOSED RESIDENTIAL DEVELOPMENT
 114 RICHMOND ROAD

OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 9-1 AND REC 9-2**

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-5B
Approved by:	SB	Revision No.:	



NOISE SOURCE:

RICHMOND ROAD

BYRON AVENUE

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

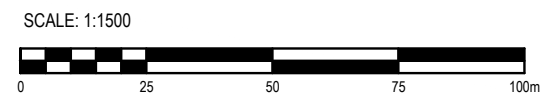
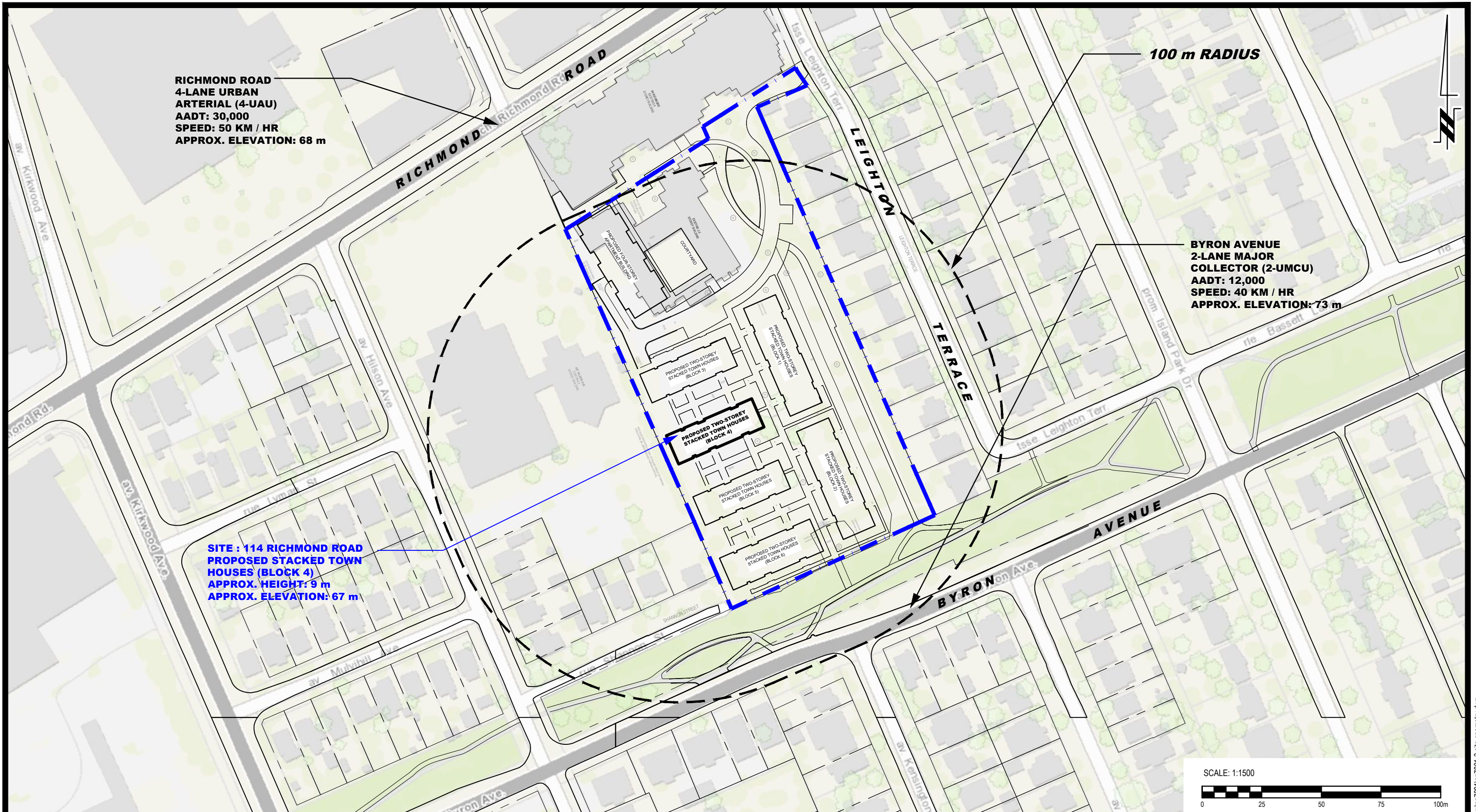
NO.	REVISIONS	DATE	INITIAL

CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD

OTTAWA, ONTARIO

SITE GEOMETRY - REC 10-1 AND REC 10-2

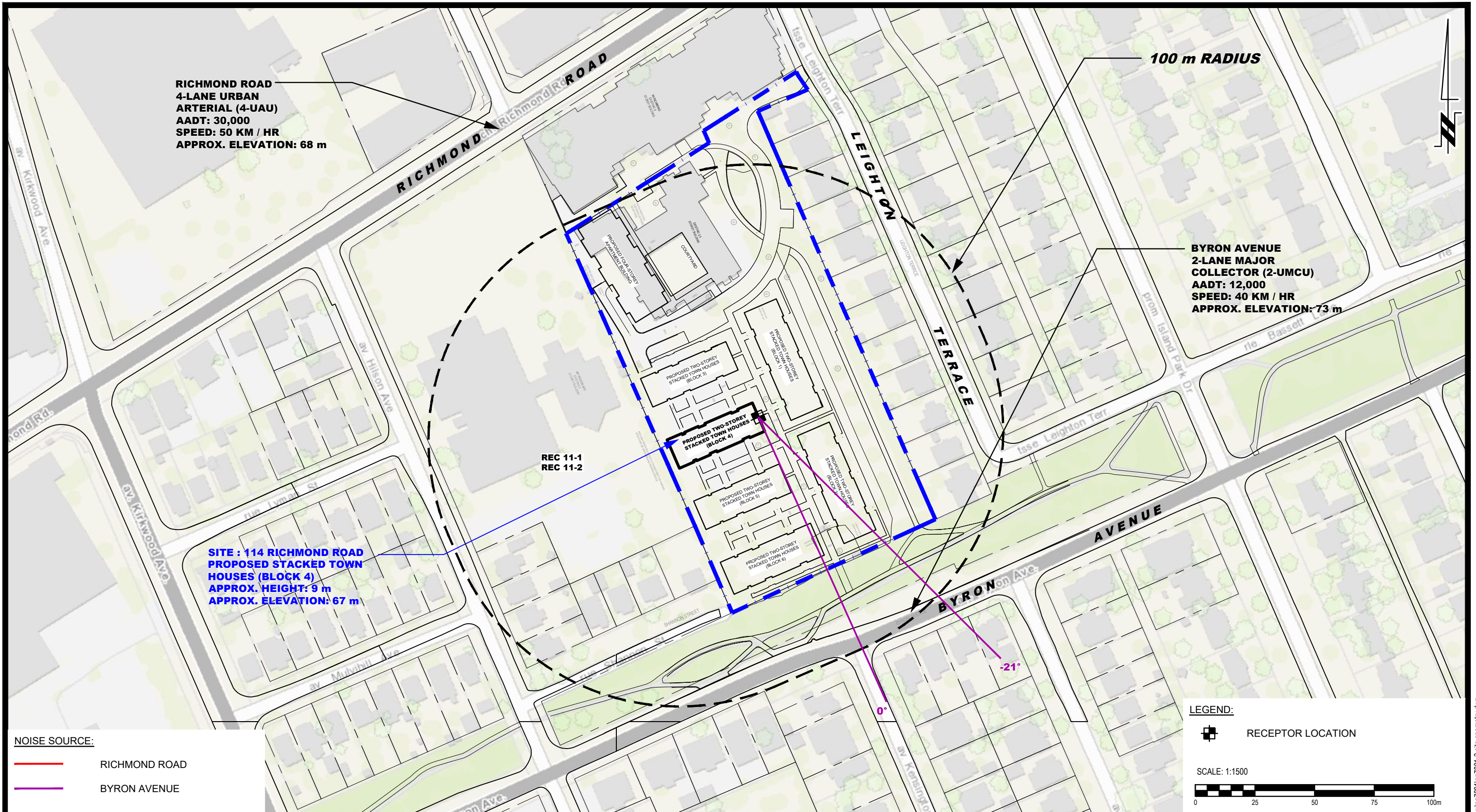
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Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-5C
Approved by:	SB	Revision No.:	



NO.	REVISIONS	DATE	INITIAL

CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD
 OTTAWA, ONTARIO
SITE GEOMETRY - BLOCK 4

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-6
Approved by:	SB	Revision No.:	





RICHMOND ROAD
4-LANE URBAN
ARTERIAL (4-UAU)
AADT: 30,000
SPEED: 50 KM / HR
APPROX. ELEVATION: 68 m


100 m RADIUS

BYRON AVENUE
2-LANE MAJOR
COLLECTOR (2-UMCU)
AADT: 12,000
SPEED: 40 KM / HR
APPROX. ELEVATION: 73 m


SITE : 114 RICHMOND ROAD
PROPOSED STACKED TOWN
HOUSES (BLOCK 4)
APPROX. HEIGHT: 9 m
APPROX. ELEVATION: 67 m

REC 11-1
REC 11-2

NOISE SOURCE:
 RICHMOND ROAD
 BYRON AVENUE

LEGEND:
 RECEPTOR LOCATION

SCALE: 1:1500




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

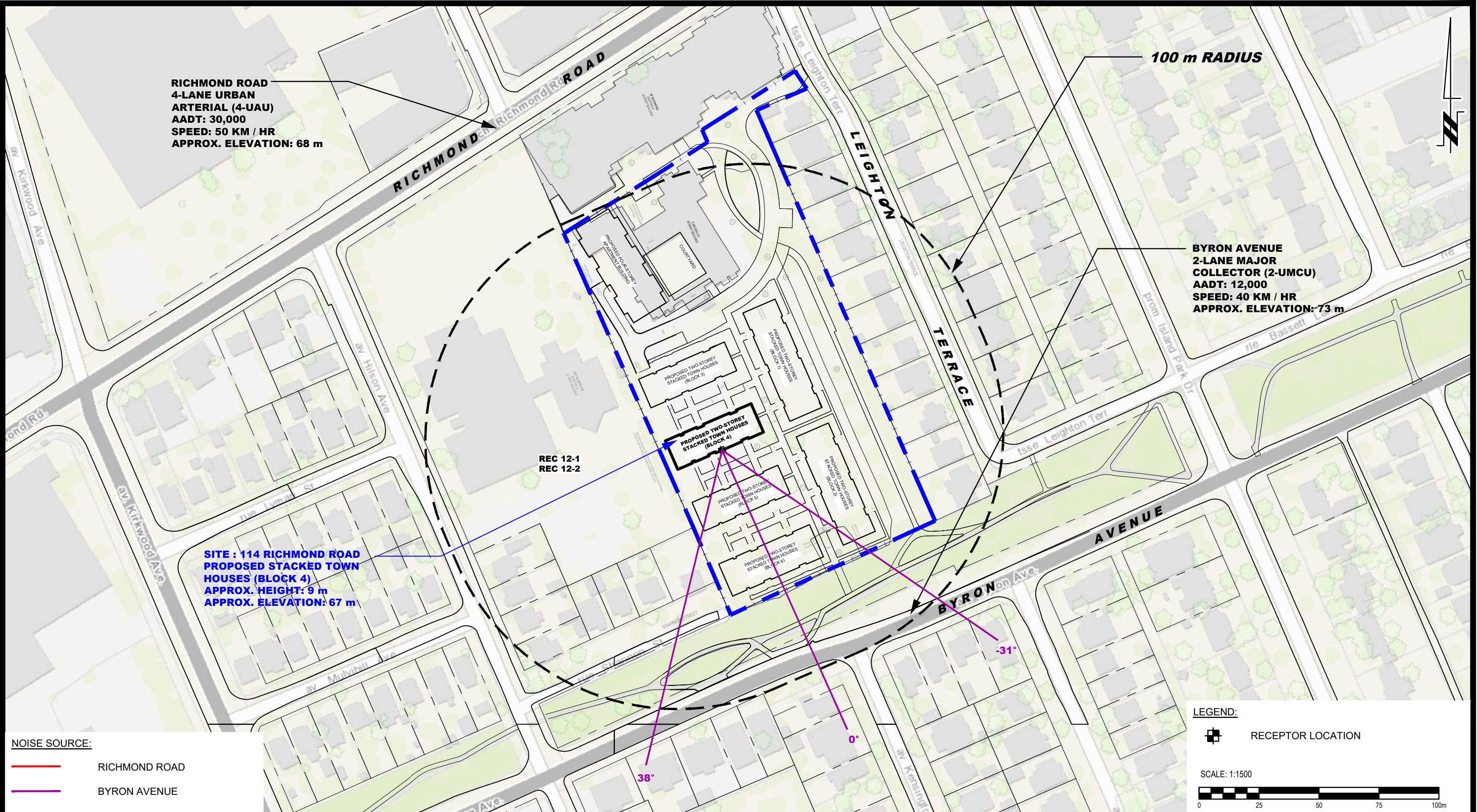
NO.	REVISIONS	DATE	INITIAL

CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD

OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 11-1 AND REC 11-2**

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-6A
Approved by:	SB	Revision No.:	



RICHMOND ROAD
4-LANE URBAN
ARTERIAL (4-UAU)
AADT: 30,000
SPEED: 50 KM / HR
APPROX. ELEVATION: 68 m

100 m RADIUS

BYRON AVENUE
2-LANE MAJOR
COLLECTOR (2-UMCU)
AADT: 12,000
SPEED: 40 KM / HR
APPROX. ELEVATION: 73 m

SITE : 114 RICHMOND ROAD
PROPOSED STACKED TOWN
HOUSES (BLOCK 4)
APPROX. HEIGHT: 9 m
APPROX. ELEVATION: 67 m

REC 12-1
REC 12-2

NOISE SOURCE:
 — RICHMOND ROAD
 — BYRON AVENUE

LEGEND:
 [Symbol] RECEPTOR LOCATION

SCALE: 1:1500

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

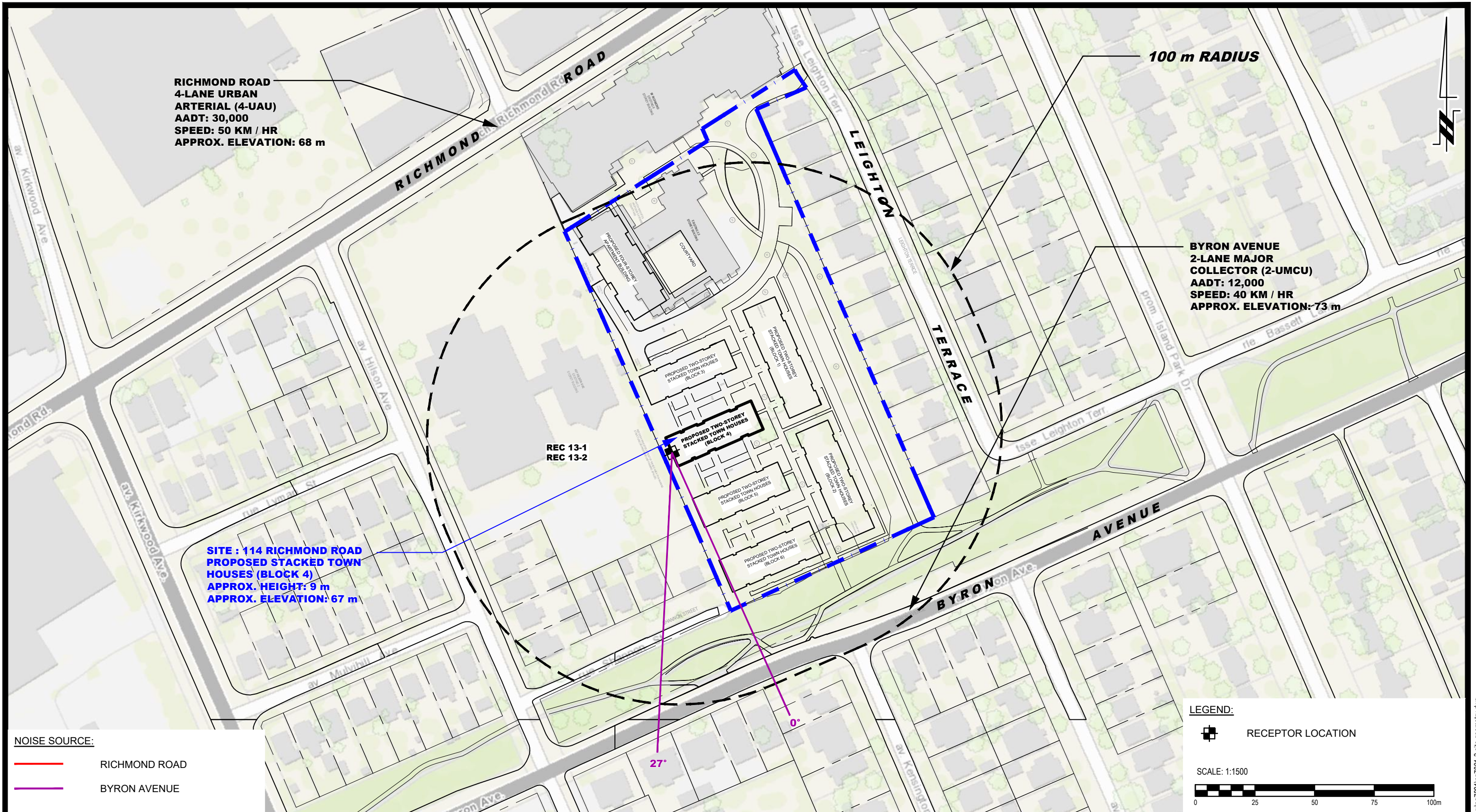
NO.	REVISIONS	DATE	INITIAL

CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD

OTTAWA, ONTARIO

SITE GEOMETRY - REC 12-1 AND REC 12-2

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-6B
Approved by:	SB	Revision No.:	



RICHMOND ROAD
 4-LANE URBAN
 ARTERIAL (4-UAU)
 AADT: 30,000
 SPEED: 50 KM / HR
 APPROX. ELEVATION: 68 m

100 m RADIUS

BYRON AVENUE
 2-LANE MAJOR
 COLLECTOR (2-UMCU)
 AADT: 12,000
 SPEED: 40 KM / HR
 APPROX. ELEVATION: 73 m

SITE : 114 RICHMOND ROAD
 PROPOSED STACKED TOWN
 HOUSES (BLOCK 4)
 APPROX. HEIGHT: 9 m
 APPROX. ELEVATION: 67 m

REC 13-1
 REC 13-2

NOISE SOURCE:
 — RICHMOND ROAD
 — BYRON AVENUE

LEGEND:
 [Symbol] RECEPTOR LOCATION

SCALE: 1:1500

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

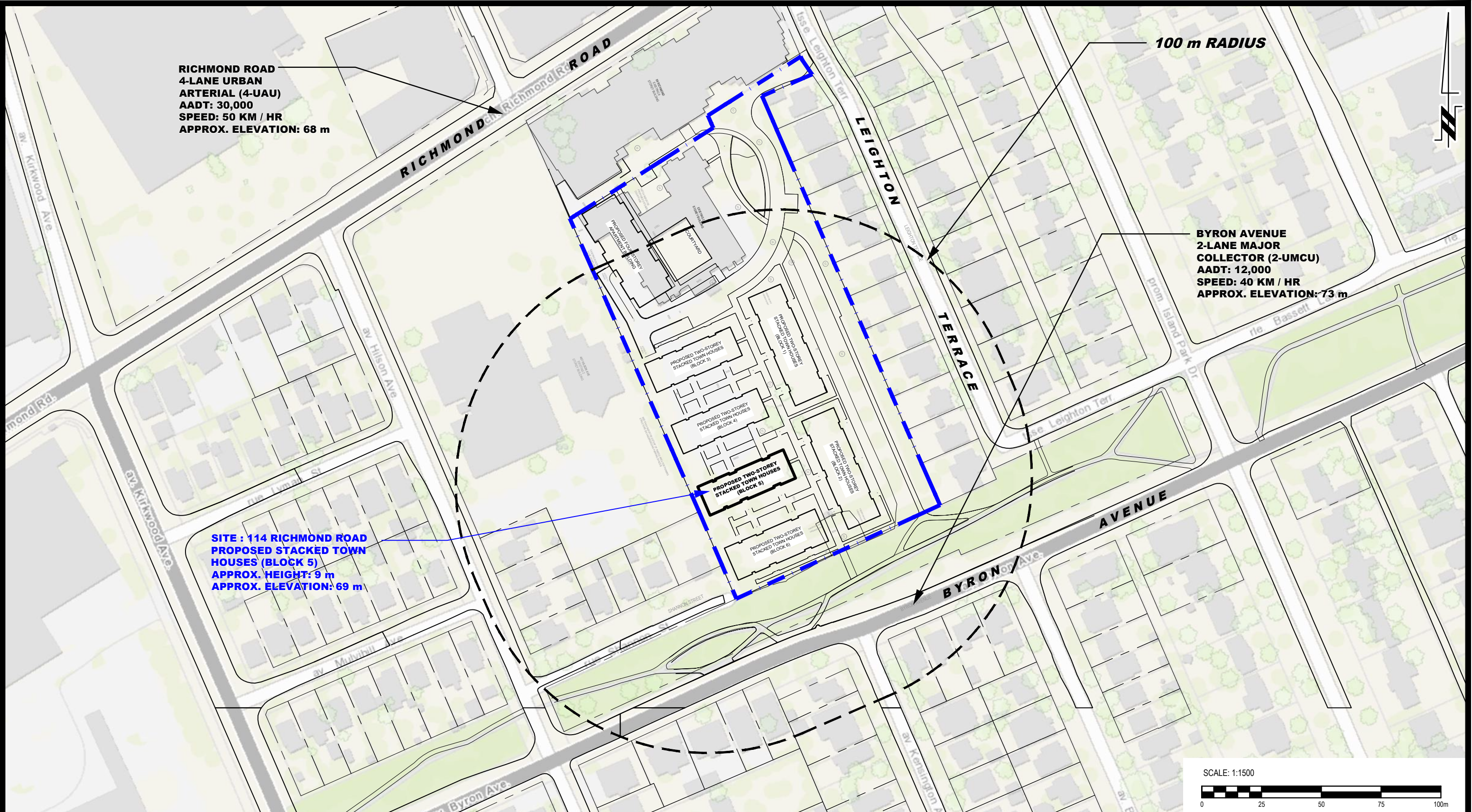
NO.	REVISIONS	DATE	INITIAL

CONCORDE PROPERTIES
 NOISE ATTENUATION STUDY
 PROPOSED RESIDENTIAL DEVELOPMENT
 114 RICHMOND ROAD

OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 13-1 AND REC 13-2**

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-6C
Approved by:	SB	Revision No.:	



RICHMOND ROAD
 4-LANE URBAN
 ARTERIAL (4-UAU)
 AADT: 30,000
 SPEED: 50 KM / HR
 APPROX. ELEVATION: 68 m

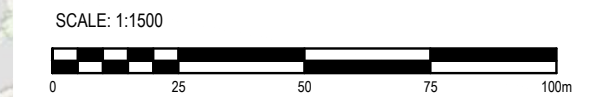
100 m RADIUS

BYRON AVENUE
 2-LANE MAJOR
 COLLECTOR (2-UMCU)
 AADT: 12,000
 SPEED: 40 KM / HR
 APPROX. ELEVATION: 73 m

SITE : 114 RICHMOND ROAD
PROPOSED STACKED TOWN
HOUSES (BLOCK 5)
 APPROX. HEIGHT: 9 m
 APPROX. ELEVATION: 69 m

CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD
ONTARIO

SITE GEOMETRY - BLOCK 5

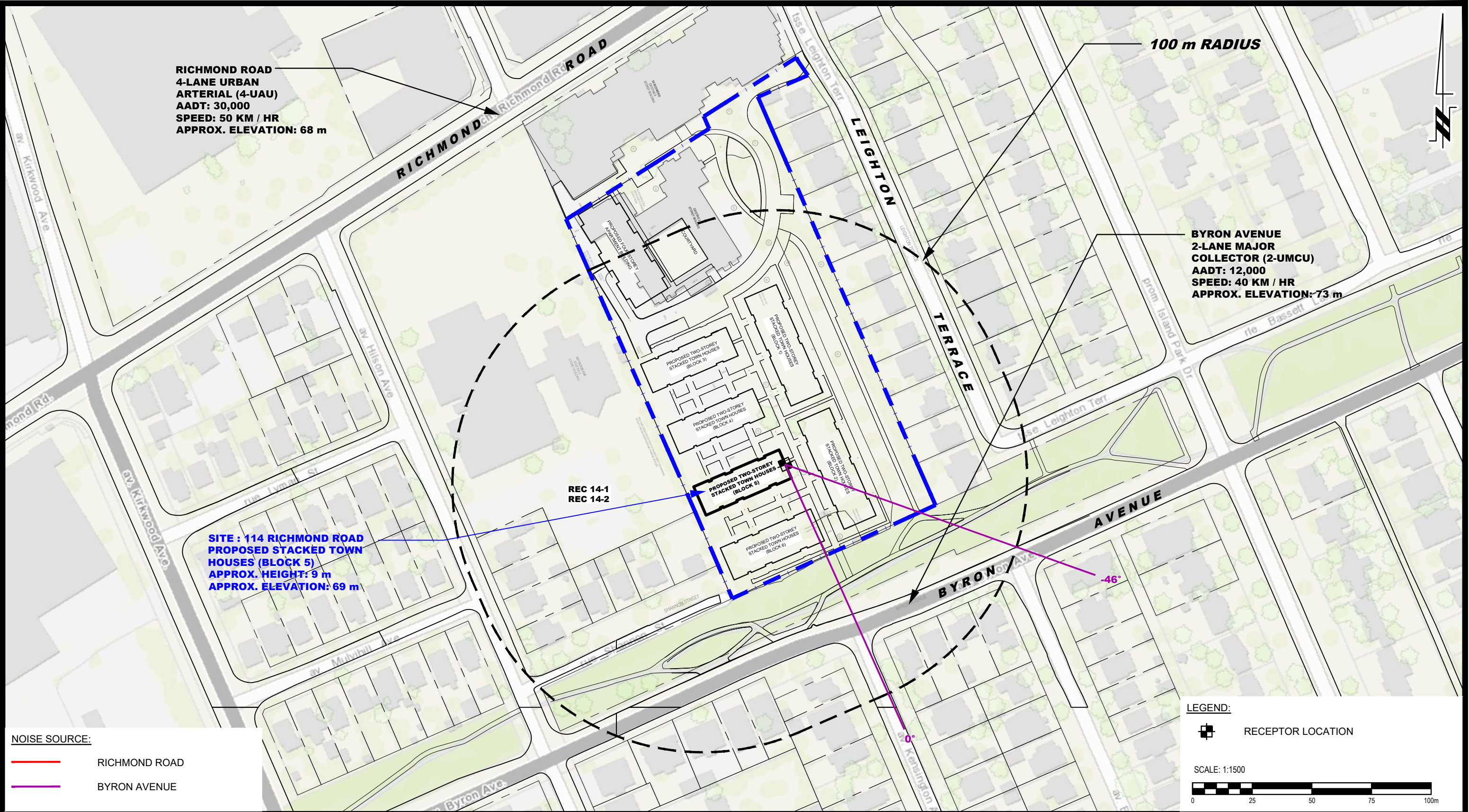


PATERSON GROUP
 9 AURIGA DRIVE
 OTTAWA, ON
 K2E 7T9
 TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

OTTAWA,
 Title:

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-7
Approved by:	SB	Revision No.:	



RICHMOND ROAD
 4-LANE URBAN
 ARTERIAL (4-UAU)
 AADT: 30,000
 SPEED: 50 KM / HR
 APPROX. ELEVATION: 68 m

100 m RADIUS

BYRON AVENUE
 2-LANE MAJOR
 COLLECTOR (2-UMCU)
 AADT: 12,000
 SPEED: 40 KM / HR
 APPROX. ELEVATION: 73 m

SITE : 114 RICHMOND ROAD
PROPOSED STACKED TOWN
HOUSES (BLOCK 5)
 APPROX. HEIGHT: 9 m
 APPROX. ELEVATION: 69 m

REC 14-1
 REC 14-2

NOISE SOURCE:
 — RICHMOND ROAD
 — BYRON AVENUE

LEGEND:
 ☒ RECEPTOR LOCATION

SCALE: 1:1500

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

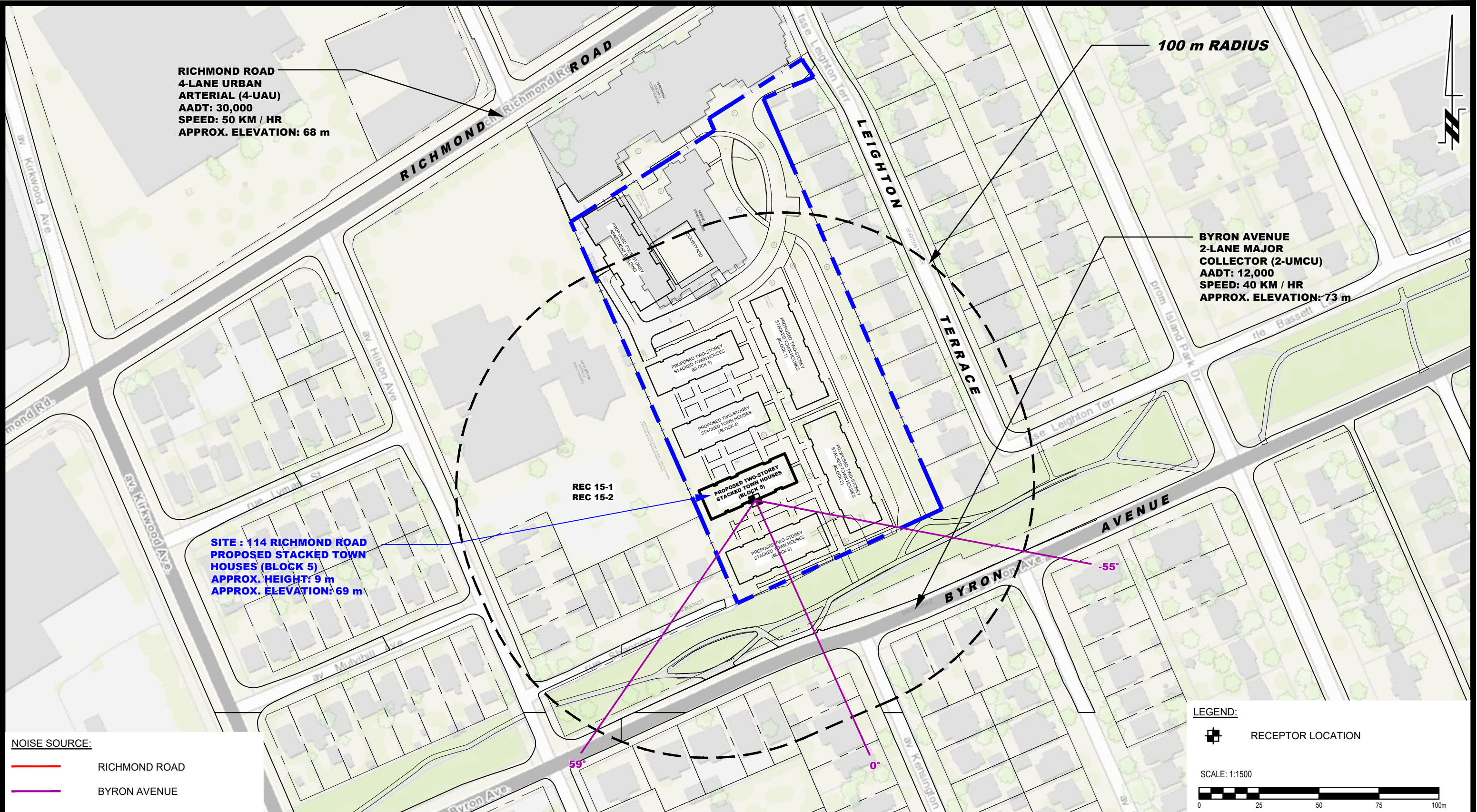
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CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD

OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 14-1 AND REC 14-2**

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-7A
Approved by:	SB	Revision No.:	



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

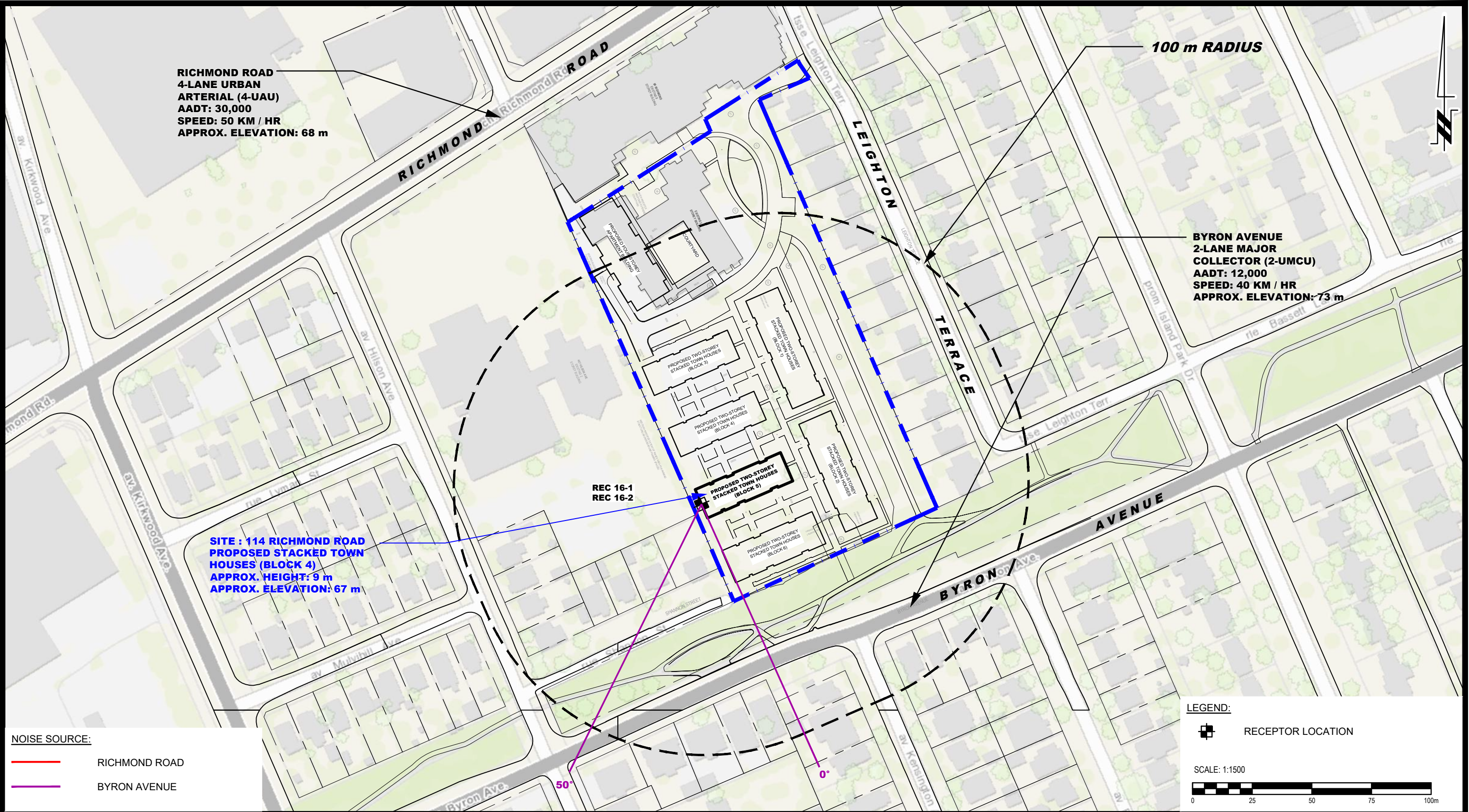
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CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD

OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 15-1 AND REC 15-2**

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-7B
Approved by:	SB	Revision No.:	



RICHMOND ROAD
 4-LANE URBAN
 ARTERIAL (4-UAU)
 AADT: 30,000
 SPEED: 50 KM / HR
 APPROX. ELEVATION: 68 m

100 m RADIUS

BYRON AVENUE
 2-LANE MAJOR
 COLLECTOR (2-UMCU)
 AADT: 12,000
 SPEED: 40 KM / HR
 APPROX. ELEVATION: 73 m

SITE : 114 RICHMOND ROAD
PROPOSED STACKED TOWN
HOUSES (BLOCK 4)
 APPROX. HEIGHT: 9 m
 APPROX. ELEVATION: 67 m

REC 16-1
REC 16-2

NOISE SOURCE:
 — RICHMOND ROAD
 — BYRON AVENUE

LEGEND:
 [Symbol] RECEPTOR LOCATION

SCALE: 1:1500

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

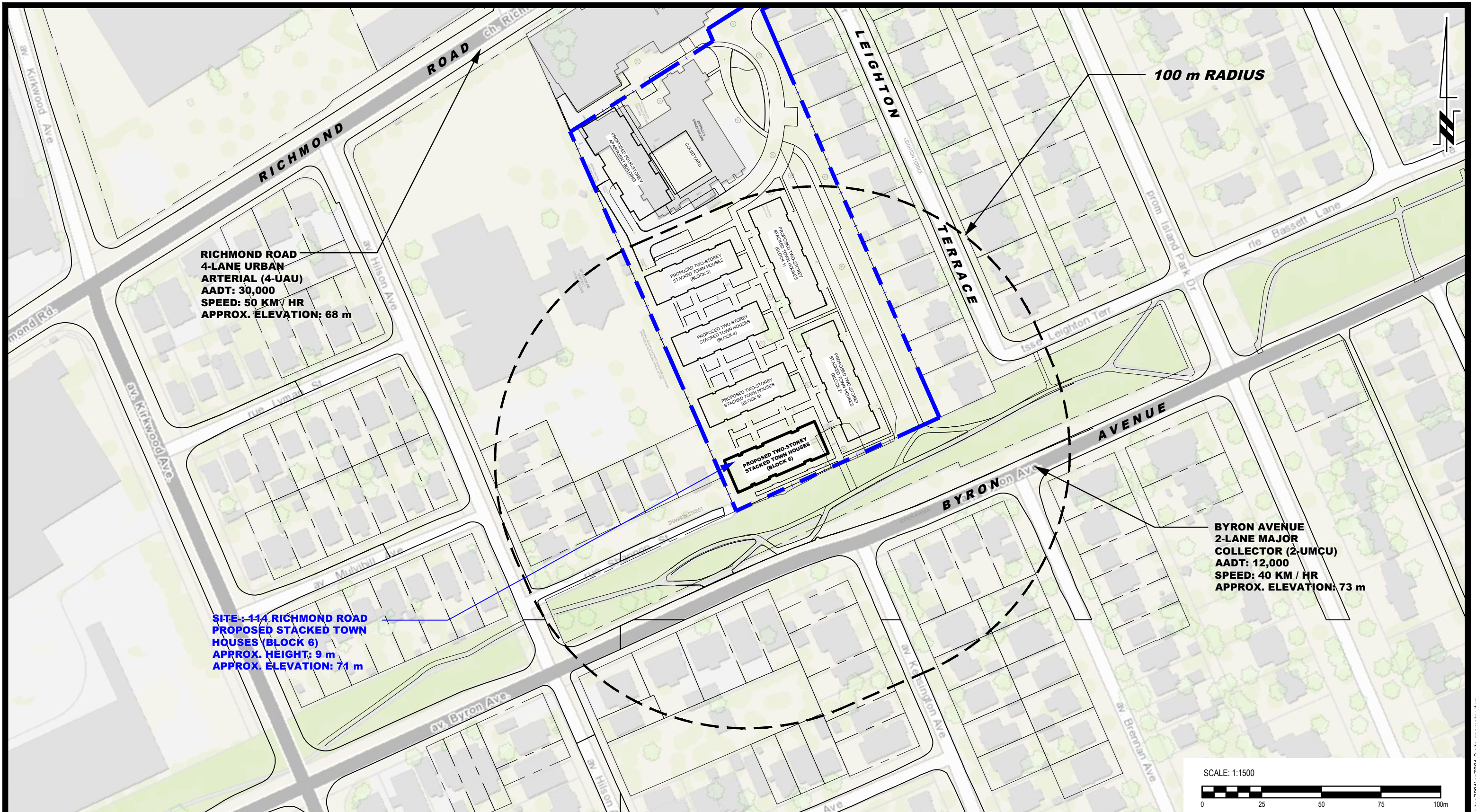
NO.	REVISIONS	DATE	INITIAL

CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD

OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 16-1 AND REC 16-2**

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-7C
Approved by:	SB	Revision No.:	



RICHMOND ROAD
4-LANE URBAN
ARTERIAL (4-UAU)
AADT: 30,000
SPEED: 50 KM / HR
APPROX. ELEVATION: 68 m

SITE - 114 RICHMOND ROAD
PROPOSED STACKED TOWN
HOUSES (BLOCK 6)
APPROX. HEIGHT: 9 m
APPROX. ELEVATION: 71 m

100 m RADIUS

BYRON AVENUE
2-LANE MAJOR
COLLECTOR (2-UMCU)
AADT: 12,000
SPEED: 40 KM / HR
APPROX. ELEVATION: 73 m

SCALE: 1:1500



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

NO.	REVISIONS	DATE	INITIAL

OTTAWA,
 Title:

CONCORDE PROPERTIES
 NOISE ATTENUATION STUDY
 PROPOSED RESIDENTIAL DEVELOPMENT
 114 RICHMOND ROAD

ONTARIO

SITE GEOMETRY - BLOCK 6

Scale: 1:1500

Date: 01/2026

Drawn by: YA

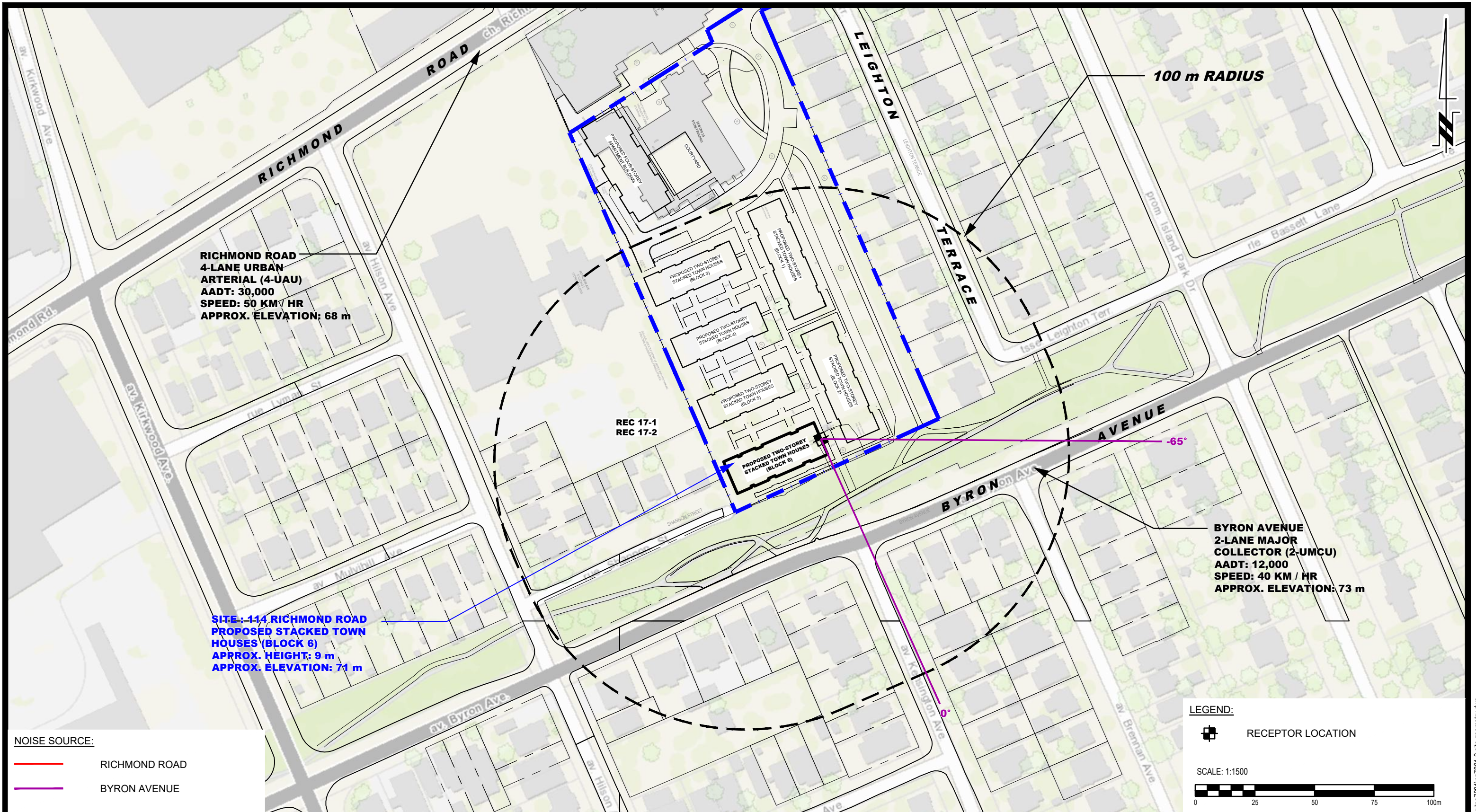
Report No.: PG7881-1

Checked by: OM

Dwg. No.: **PG7881-8**

Approved by: SB

Revision No.:





RICHMOND ROAD
4-LANE URBAN
ARTERIAL (4-UAU)
AADT: 30,000
SPEED: 50 KM / HR
APPROX. ELEVATION: 68 m


SITE: 114 RICHMOND ROAD
PROPOSED STACKED TOWN
HOUSES (BLOCK 6)
APPROX. HEIGHT: 9 m
APPROX. ELEVATION: 71 m


REC 17-1
REC 17-2

100 m RADIUS

BYRON AVENUE
2-LANE MAJOR
COLLECTOR (2-UMCU)
AADT: 12,000
SPEED: 40 KM / HR
APPROX. ELEVATION: 73 m

NOISE SOURCE:
 RICHMOND ROAD
 BYRON AVENUE

LEGEND:
 RECEPTOR LOCATION

SCALE: 1:1500




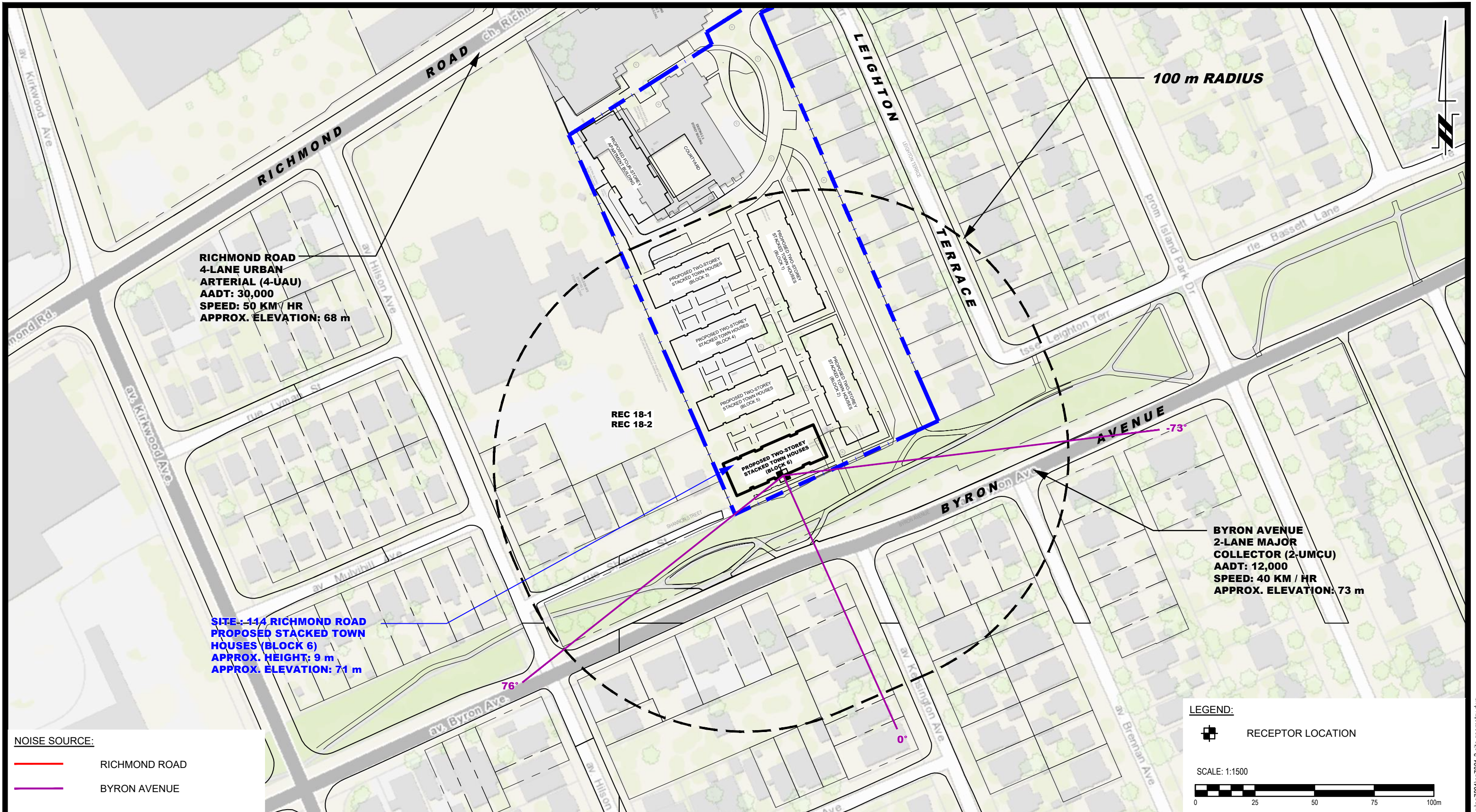
NO.	REVISIONS	DATE	INITIAL

CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD

OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 17-1 AND REC 17-2**

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-8A
Approved by:	SB	Revision No.:	



RICHMOND ROAD
 4-LANE URBAN
 ARTERIAL (4-UAU)
 AADT: 30,000
 SPEED: 50 KM / HR
 APPROX. ELEVATION: 68 m

SITE - 114 RICHMOND ROAD
 PROPOSED STACKED TOWN
 HOUSES (BLOCK 6)
 APPROX. HEIGHT: 9 m
 APPROX. ELEVATION: 71 m

BYRON AVENUE
 2-LANE MAJOR
 COLLECTOR (2-UMCU)
 AADT: 12,000
 SPEED: 40 KM / HR
 APPROX. ELEVATION: 73 m

NOISE SOURCE:
 — RICHMOND ROAD
 — BYRON AVENUE

LEGEND:
 ☒ RECEPTOR LOCATION

SCALE: 1:1500

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

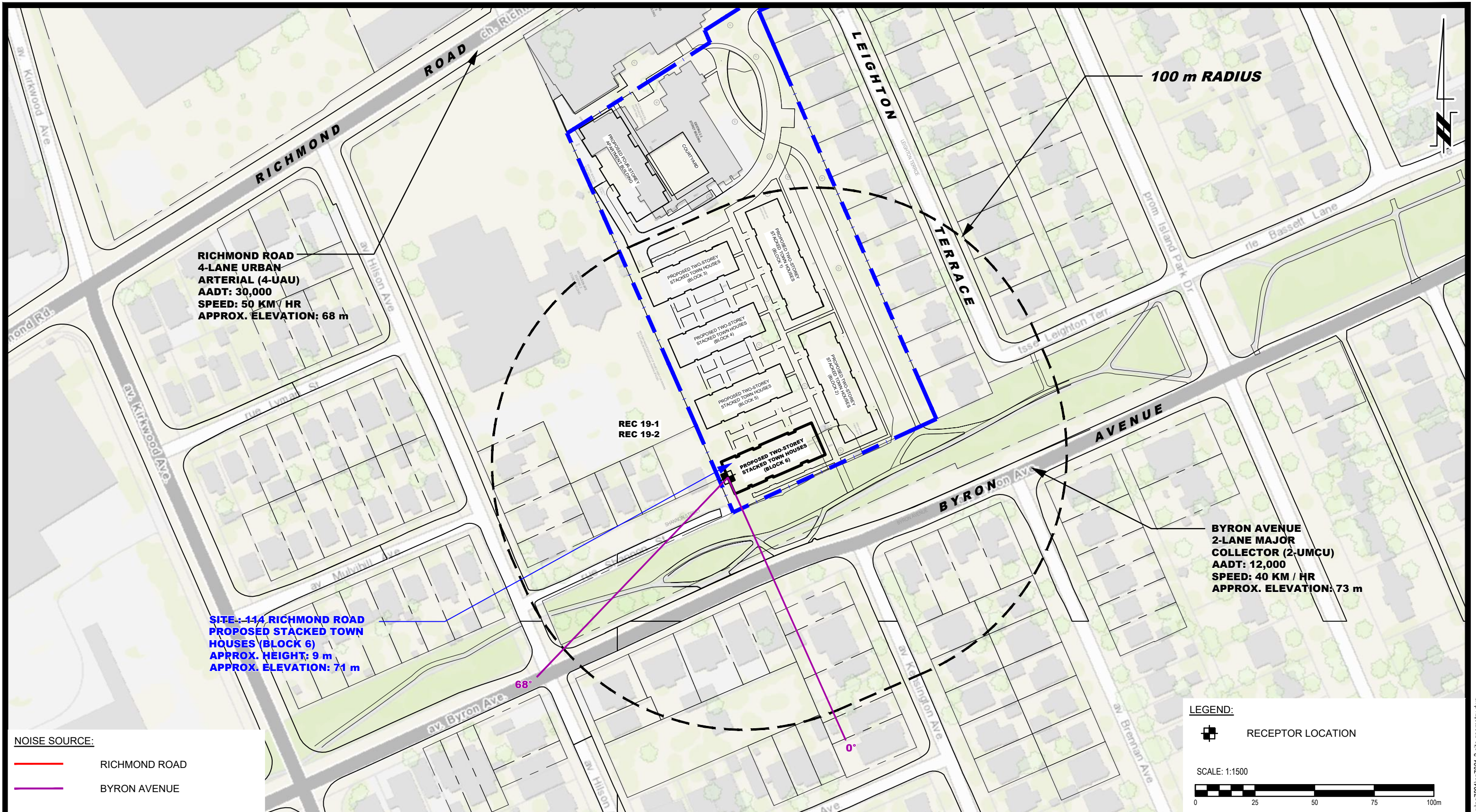
NO.	REVISIONS	DATE	INITIAL

CONCORDE PROPERTIES
 NOISE ATTENUATION STUDY
 PROPOSED RESIDENTIAL DEVELOPMENT
 114 RICHMOND ROAD

OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 18-1 AND REC 18-2**

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-8B
Approved by:	SB	Revision No.:	



NOISE SOURCE:

RICHMOND ROAD

BYRON AVENUE



NO.	REVISIONS	DATE	INITIAL

CONCORDE PROPERTIES
NOISE ATTENUATION STUDY
PROPOSED RESIDENTIAL DEVELOPMENT
114 RICHMOND ROAD

OTTAWA, ONTARIO

Title: **SITE GEOMETRY - REC 19-1 AND REC 19-2**

Scale:	1:1500	Date:	01/2026
Drawn by:	YA	Report No.:	PG7881-1
Checked by:	OM	Dwg. No.:	PG7881-8C
Approved by:	SB	Revision No.:	

APPENDIX 2

STAMSON RESULTS

Filename: REC11.te Time Period: Day/Night 16/8 hours
 Description: REC 1-1 - Proposed Apartment

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

 Car traffic volume : 24288/2112 veh/TimePeriod *
 Medium truck volume : 1932/168 veh/TimePeriod *
 Heavy truck volume : 1380/120 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): 30000
 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: Richmond Rd (day/night)

 Angle1 Angle2 : 0.00 deg 50.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 72.00 / 72.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: Richmond Rd (day)

 Source height = 1.50 m

ROAD (0.00 + 54.24 + 0.00) = 54.24 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	50	0.66	71.49	0.00	-11.31	-5.94	0.00	0.00	0.00	54.24

Segment Leq : 54.24 dBA

Total Leq All Segments: 54.24 dBA

↑

Results segment # 1: Richmond Rd (night)

Source height = 1.50 m

ROAD (0.00 + 46.64 + 0.00) = 46.64 dBA

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

0	50	0.66	63.89	0.00	-11.31	-5.94	0.00	0.00	0.00	46.64
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Segment Leq : 46.64 dBA

Total Leq All Segments: 46.64 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 54.24

(NIGHT): 46.64

↑

↑

Filename: REC12.te Time Period: Day/Night 16/8 hours
 Description: REC 1-4 - Proposed Apartment

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

 Car traffic volume : 24288/2112 veh/TimePeriod *
 Medium truck volume : 1932/168 veh/TimePeriod *
 Heavy truck volume : 1380/120 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): 30000
 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: Richmond Rd (day/night)

 Angle1 Angle2 : 0.00 deg 50.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 72.00 / 72.00 m
 Receiver height : 10.50 / 10.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: Richmond Rd (day)

 Source height = 1.50 m

ROAD (0.00 + 56.23 + 0.00) = 56.23 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	50	0.39	71.49	0.00	-9.47	-5.79	0.00	0.00	0.00	56.23

Segment Leq : 56.23 dBA

Total Leq All Segments: 56.23 dBA

↑

Results segment # 1: Richmond Rd (night)

Source height = 1.50 m

ROAD (0.00 + 48.63 + 0.00) = 48.63 dBA

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

0	50	0.39	63.89	0.00	-9.47	-5.79	0.00	0.00	0.00	48.63
---	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 48.63 dBA

Total Leq All Segments: 48.63 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 56.23

(NIGHT): 48.63

↑

↑

Filename: rec21.te Time Period: Day/Night 16/8 hours
 Description: REC 2-1 - Proposed Apartment

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

 Car traffic volume : 24288/2112 veh/TimePeriod *
 Medium truck volume : 1932/168 veh/TimePeriod *
 Heavy truck volume : 1380/120 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): 30000
 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: Richmond Rd (day/night)

 Angle1 Angle2 : -65.00 deg 62.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 49.00 / 49.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: Richmond Rd (day)

 Source height = 1.50 m

ROAD (0.00 + 60.80 + 0.00) = 60.80 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-65	62	0.66	71.49	0.00	-8.53	-2.15	0.00	0.00	0.00	60.80

Segment Leq : 60.80 dBA

Total Leq All Segments: 60.80 dBA

↑

Results segment # 1: Richmond Rd (night)

Source height = 1.50 m

ROAD (0.00 + 53.21 + 0.00) = 53.21 dBA

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

-65	62	0.66	63.89	0.00	-8.53	-2.15	0.00	0.00	0.00	53.21
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Segment Leq : 53.21 dBA

Total Leq All Segments: 53.21 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 60.80

(NIGHT): 53.21

↑

↑

Filename: rec24.te Time Period: Day/Night 16/8 hours
 Description: REC 2-4 - Proposed Apartment

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

 Car traffic volume : 24288/2112 veh/TimePeriod *
 Medium truck volume : 1932/168 veh/TimePeriod *
 Heavy truck volume : 1380/120 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): 30000
 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: Richmond Rd (day/night)

 Angle1 Angle2 : -65.00 deg 62.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 49.00 / 49.00 m
 Receiver height : 10.50 / 10.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: Richmond Rd (day)

 Source height = 1.50 m

ROAD (0.00 + 62.44 + 0.00) = 62.44 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-65	62	0.39	71.49	0.00	-7.15	-1.90	0.00	0.00	0.00	62.44

Segment Leq : 62.44 dBA

Total Leq All Segments: 62.44 dBA

↑

Results segment # 1: Richmond Rd (night)

Source height = 1.50 m

ROAD (0.00 + 54.84 + 0.00) = 54.84 dBA

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

-65	62	0.39	63.89	0.00	-7.15	-1.90	0.00	0.00	0.00	54.84
-----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 54.84 dBA

Total Leq All Segments: 54.84 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 62.44

(NIGHT): 54.84

↑

↑

Filename: rec31.te Time Period: Day/Night 16/8 hours
 Description: REC 3-1 - Proposed Apartment

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

 Car traffic volume : 24288/2112 veh/TimePeriod *
 Medium truck volume : 1932/168 veh/TimePeriod *
 Heavy truck volume : 1380/120 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): 30000
 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: Richmond Rd (day/night)

 Angle1 Angle2 : -51.00 deg 0.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 72.00 / 72.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Segment # 1: Richmond Rd (day)

 Source height = 1.50 m

ROAD (0.00 + 54.31 + 0.00) = 54.31 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-51	0	0.66	71.49	0.00	-11.31	-5.87	0.00	0.00	0.00	54.31

Segment Leq : 54.31 dBA

Total Leq All Segments: 54.31 dBA

↑

Segment # 1: Richmond Rd (night)

Source height = 1.50 m

ROAD (0.00 + 46.71 + 0.00) = 46.71 dBA

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

-51 0 0.66 63.89 0.00 -11.31 -5.87 0.00 0.00 0.00 46.71

Segment Leq : 46.71 dBA

Total Leq All Segments: 46.71 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 54.31

(NIGHT): 46.71

↑

↑

Filename: rec34.te Time Period: Day/Night 16/8 hours
 Description: REC 3-4 - Proposed Apartment

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

 Car traffic volume : 24288/2112 veh/TimePeriod *
 Medium truck volume : 1932/168 veh/TimePeriod *
 Heavy truck volume : 1380/120 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): 30000
 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: Richmond Rd (day/night)

 Angle1 Angle2 : -51.00 deg 0.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 72.00 / 72.00 m
 Receiver height : 10.50 / 10.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: Richmond Rd (day)

 Source height = 1.50 m

ROAD (0.00 + 56.30 + 0.00) = 56.30 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-51	0	0.39	71.49	0.00	-9.47	-5.72	0.00	0.00	0.00	56.30

Segment Leq : 56.30 dBA

Total Leq All Segments: 56.30 dBA

↑

Results segment # 1: Richmond Rd (night)

Source height = 1.50 m

ROAD (0.00 + 48.71 + 0.00) = 48.71 dBA

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

-51	0	0.39	63.89	0.00	-9.47	-5.72	0.00	0.00	0.00	48.71
-----	---	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 48.71 dBA

Total Leq All Segments: 48.71 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 56.30

(NIGHT): 48.71

↑

↑

Filename: rec41.te Time Period: Day/Night 16/8 hours
 Description: REC 4 - Proposed Apartment - Outdoor Living Area

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

 Car traffic volume : 24288/2112 veh/TimePeriod *
 Medium truck volume : 1932/168 veh/TimePeriod *
 Heavy truck volume : 1380/120 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): 30000
 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: Richmond Rd (day/night)

 Angle1 Angle2 : -56.00 deg 42.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 83.00 / 83.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: Richmond Rd (day)

 Source height = 1.50 m

ROAD (0.00 + 56.13 + 0.00) = 56.13 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-56	42	0.66	71.49	0.00	-12.33	-3.03	0.00	0.00	0.00	56.13

Segment Leq : 56.13 dBA

Total Leq All Segments: 56.13 dBA

↑

Results segment # 1: Richmond Rd (night)

Source height = 1.50 m

ROAD (0.00 + 48.53 + 0.00) = 48.53 dBA

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

-56	42	0.66	63.89	0.00	-12.33	-3.03	0.00	0.00	0.00	48.53
-----	----	------	-------	------	--------	-------	------	------	------	-------

Segment Leq : 48.53 dBA

Total Leq All Segments: 48.53 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 56.13

(NIGHT): 48.53

↑

↑

Filename: rec51.te Time Period: Day/Night 16/8 hours
 Description: REC 5-1 - Block 1

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume : 552/48    veh/TimePeriod *
Posted speed limit : 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): 12000
Percentage of Annual Growth      : 0.00
Number of Years of Growth        : 0.00
Medium Truck % of Total Volume   : 7.00
Heavy Truck % of Total Volume    : 5.00
Day (16 hrs) % of Total Volume   : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1  Angle2      : -19.00 deg  0.00 deg
Wood depth          : 0          (No woods.)
No of house rows   : 0 / 0
Surface            : 1          (Absorptive ground surface)
Receiver source distance : 112.00 / 112.00 m
Receiver height     : 1.50 / 1.50 m
Topography         : 1          (Flat/gentle slope; no barrier)
Reference angle    : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 41.40 ! 41.40
-----+-----+-----
Total 41.40 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	33.81	! 33.81
	Total		33.81 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 41.40
(NIGHT): 33.81

↑

↑

Filename: rec52.te Time Period: Day/Night 16/8 hours
 Description: REC 5-2 - Block 1

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume  : 552/48    veh/TimePeriod *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2       : -19.00 deg   0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 112.00 / 112.00 m
Receiver height : 4.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 42.20 ! 42.20
-----+-----+-----
Total 42.20 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	34.60	! 34.60
	Total		34.60 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 42.20
(NIGHT): 34.60

↑

↑

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

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume  : 552/48    veh/TimePeriod *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2       : -27.00 deg   32.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 91.00 / 91.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 47.74 ! 47.74
-----+-----+-----
Total 47.74 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	40.15	! 40.15
	Total		40.15 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 47.74
(NIGHT): 40.15

↑

↑

Filename: rec62.te Time Period: Day/Night 16/8 hours
 Description: REC 6-2 - Block 1

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume  : 552/48    veh/TimePeriod *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2       : -27.00 deg   32.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface     : 1 (Absorptive ground surface)
Receiver source distance : 91.00 / 91.00 m
Receiver height : 4.50 / 4.50 m
Topography    : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 48.47 ! 48.47
-----+-----+-----
Total 48.47 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	40.87	! 40.87
	Total		40.87 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 48.47
(NIGHT): 40.87

↑

↑

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

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod  *
Medium truck volume : 773/67    veh/TimePeriod  *
Heavy truck volume  : 552/48    veh/TimePeriod  *
Posted speed limit  : 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): 12000
Percentage of Annual Growth          : 0.00
Number of Years of Growth            : 0.00
Medium Truck % of Total Volume       : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume       : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1  Angle2      : 0.00 deg  24.00 deg
Wood depth          : 0          (No woods.)
No of house rows    : 0 / 0
Surface             : 1          (Absorptive ground surface)
Receiver source distance : 112.00 / 112.00 m
Receiver height     : 1.50 / 1.50 m
Topography          : 1          (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 42.39 ! 42.39
-----+-----+-----
Total 42.39 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	34.79	! 34.79
	Total		34.79 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 42.39
(NIGHT): 34.79

↑

↑

Filename: rec72.te Time Period: Day/Night 16/8 hours
 Description: REC 7-2 - Block 1

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume  : 552/48    veh/TimePeriod *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1  Angle2      : 0.00 deg  24.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 112.00 / 112.00 m
Receiver height : 4.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----+-----
1.Byron Ave ! 1.50 ! 43.18 ! 43.18
-----+-----+-----+-----
Total 43.18 dBA
```

↑
 Result summary (night)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
```

	! (m)	! (dBA)	! (dBA)
1. Byron Ave	1.50	35.58	35.58
Total		35.58 dBA	

↑

TOTAL Leq FROM ALL SOURCES (DAY): 43.18
(NIGHT): 35.58

↑

↑

Filename: rec81.te Time Period: Day/Night 16/8 hours
 Description: REC 8-1 - Block 2

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

 Car traffic volume : 9715/845 veh/TimePeriod *
 Medium truck volume : 773/67 veh/TimePeriod *
 Heavy truck volume : 552/48 veh/TimePeriod *
 Posted speed limit : 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): 12000
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Byron Ave (day/night)

 Angle1 Angle2 : -57.00 deg 0.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 60.00 / 60.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Result summary (day)

	! source !	Road	Total
	! height !	Leq	Leq
	! (m) !	(dBA)	(dBA)
1.Byron Ave	! 1.50 !	50.23	50.23
	Total		50.23 dBA

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	42.63	! 42.63
	Total		42.63 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 50.23
(NIGHT): 42.63

↑

↑

Filename: rec82.te Time Period: Day/Night 16/8 hours
 Description: REC 8-2 - Block 2

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume  : 552/48    veh/TimePeriod *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume     : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2       : -57.00 deg   0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface     : 1 (Absorptive ground surface)
Receiver source distance : 60.00 / 60.00 m
Receiver height : 4.50 / 4.50 m
Topography    : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 50.83 ! 50.83
-----+-----+-----
Total 50.83 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	43.23	! 43.23
	Total		43.23 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 50.83
(NIGHT): 43.23

↑

↑

Filename: rec91.te Time Period: Day/Night 16/8 hours
 Description: REC 9-1 - Block 2

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume  : 552/48    veh/TimePeriod *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2       : -70.00 deg   73.00 deg
Wood depth : 0         (No woods.)
No of house rows : 0 / 0
Surface     : 1         (Absorptive ground surface)
Receiver source distance : 35.00 / 35.00 m
Receiver height : 1.50 / 1.50 m
Topography    : 1         (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 57.78 ! 57.78
-----+-----+-----
Total 57.78 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	50.18	! 50.18
	Total		50.18 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 57.78
(NIGHT): 50.18

↑

↑

Filename: rec92.te Time Period: Day/Night 16/8 hours
 Description: REC 9-2 - Block 2

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume  : 552/48    veh/TimePeriod *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2       : -70.00 deg   73.00 deg
Wood depth : 0         (No woods.)
No of house rows : 0 / 0
Surface     : 1         (Absorptive ground surface)
Receiver source distance : 35.00 / 35.00 m
Receiver height : 4.50 / 4.50 m
Topography    : 1         (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 58.21 ! 58.21
-----+-----+-----
Total 58.21 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	50.61	! 50.61
	Total		50.61 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 58.21
(NIGHT): 50.61

↑

↑

Filename: rec101.te Time Period: Day/Night 16/8 hours
 Description: REC 10-1 - Block 2

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume  : 552/48    veh/TimePeriod *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1  Angle2      : 0.00 deg  60.00 deg
Wood depth          : 0          (No woods.)
No of house rows    : 0 / 0
Surface             : 1          (Absorptive ground surface)
Receiver source distance : 60.00 / 60.00 m
Receiver height     : 1.50 / 1.50 m
Topography          : 1          (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 50.39 ! 50.39
-----+-----+-----
Total 50.39 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	42.79	! 42.79
	Total		42.79 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 50.39
(NIGHT): 42.79

↑

↑

Filename: rec102.te Time Period: Day/Night 16/8 hours
 Description: REC 10-2 - Block 2

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

 Car traffic volume : 9715/845 veh/TimePeriod *
 Medium truck volume : 773/67 veh/TimePeriod *
 Heavy truck volume : 552/48 veh/TimePeriod *
 Posted speed limit : 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): 12000
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Byron Ave (day/night)

 Angle1 Angle2 : 0.00 deg 60.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 60.00 / 60.00 m
 Receiver height : 4.50 / 4.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Result summary (day)

	! source !	Road	Total
	! height !	Leq	Leq
	! (m) !	(dBA)	(dBA)
1.Byron Ave	! 1.50 !	51.00	51.00
	Total		51.00 dBA

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	43.40	! 43.40
	Total		43.40 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 51.00
(NIGHT): 43.40

↑

↑

Filename: rec111.te Time Period: Day/Night 16/8 hours
 Description: REC 11-1 - Block 4

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume : 552/48    veh/TimePeriod *
Posted speed limit : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2       : -21.00 deg   0.00 deg
Wood depth : 0         (No woods.)
No of house rows : 0 / 0
Surface    : 1         (Absorptive ground surface)
Receiver source distance : 96.00 / 96.00 m
Receiver height : 1.50 / 1.50 m
Topography   : 1         (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 42.94 ! 42.94
-----+-----+-----
Total 42.94 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	35.34	! 35.34
	Total		35.34 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 42.94
(NIGHT): 35.34

↑

↑

Filename: rec112.te Time Period: Day/Night 16/8 hours
 Description: REC 11-2 - Block 4

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod  *
Medium truck volume : 773/67    veh/TimePeriod  *
Heavy truck volume : 552/48    veh/TimePeriod  *
Posted speed limit : 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): 12000
Percentage of Annual Growth          : 0.00
Number of Years of Growth            : 0.00
Medium Truck % of Total Volume       : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume       : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1  Angle2      : -21.00 deg  0.00 deg
Wood depth          : 0          (No woods.)
No of house rows   : 0 / 0
Surface            : 1          (Absorptive ground surface)
Receiver source distance : 96.00 / 96.00 m
Receiver height     : 4.50 / 4.50 m
Topography         : 1          (Flat/gentle slope; no barrier)
Reference angle    : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 43.67 ! 43.67
-----+-----+-----
Total 43.67 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	36.07	! 36.07
	Total		36.07 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 43.67
 (NIGHT): 36.07

↑

↑

Filename: rec121.te Time Period: Day/Night 16/8 hours
 Description: REC 12-1 - Block 4

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume : 552/48    veh/TimePeriod *
Posted speed limit : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2       : -31.00 deg   38.00 deg
Wood depth : 0         (No woods.)
No of house rows : 0 / 0
Surface     : 1         (Absorptive ground surface)
Receiver source distance : 88.00 / 88.00 m
Receiver height : 1.50 / 1.50 m
Topography   : 1         (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 48.61 ! 48.61
-----+-----+-----
Total 48.61 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	41.02	! 41.02
	Total		41.02 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 48.61
(NIGHT): 41.02

↑

↑

Filename: rec122.te Time Period: Day/Night 16/8 hours
 Description: REC 12-2 - Block 4

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume  : 552/48    veh/TimePeriod *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2       : -31.00 deg   38.00 deg
Wood depth : 0         (No woods.)
No of house rows : 0 / 0
Surface     : 1         (Absorptive ground surface)
Receiver source distance : 88.00 / 88.00 m
Receiver height : 4.50 / 4.50 m
Topography    : 1         (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 49.33 ! 49.33
-----+-----+-----
Total 49.33 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	41.73	! 41.73
	Total		41.73 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 49.33
(NIGHT): 41.73

↑

↑

Filename: rec131.te Time Period: Day/Night 16/8 hours
 Description: REC 13-1 - Block 4

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod  *
Medium truck volume : 773/67    veh/TimePeriod  *
Heavy truck volume  : 552/48    veh/TimePeriod  *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2       : 0.00 deg   27.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface     : 1 (Absorptive ground surface)
Receiver source distance : 94.00 / 94.00 m
Receiver height : 1.50 / 1.50 m
Topography    : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 44.14 ! 44.14
-----+-----+-----
Total 44.14 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	36.54	! 36.54
	Total		36.54 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 44.14
(NIGHT): 36.54

↑

↑

Filename: rec134.te Time Period: Day/Night 16/8 hours
 Description: REC 13-2 - Block 4

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod  *
Medium truck volume : 773/67    veh/TimePeriod  *
Heavy truck volume : 552/48    veh/TimePeriod  *
Posted speed limit : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1  Angle2      : 0.00 deg  27.00 deg
Wood depth          : 0          (No woods.)
No of house rows   : 0 / 0
Surface            : 1          (Absorptive ground surface)
Receiver source distance : 94.00 / 94.00 m
Receiver height     : 4.50 / 4.50 m
Topography         : 1          (Flat/gentle slope; no barrier)
Reference angle    : 0.00
```

↑
 Result summary (day)

```
-----
```

	! source !	Road !	Total !
	! height !	Leq !	Leq !
	! (m) !	(dBA) !	(dBA) !
1.Byron Ave	! 1.50 !	44.87 !	44.87
	Total		44.87 dBA

```
-----
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	37.27	! 37.27
	Total		37.27 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 44.87
(NIGHT): 37.27

↑

↑

Filename: rec141.te Time Period: Day/Night 16/8 hours
 Description: REC 14-1 - Block 5

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume  : 552/48    veh/TimePeriod *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1  Angle2      : -46.00 deg  0.00 deg
Wood depth          : 0          (No woods.)
No of house rows   : 0 / 0
Surface            : 1          (Absorptive ground surface)
Receiver source distance : 68.00 / 68.00 m
Receiver height     : 1.50 / 1.50 m
Topography         : 1          (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

↑
 Results segment # 1: Byron Ave (day)

Source height = 1.50 m

```
ROAD (0.00 + 48.57 + 0.00) = 48.57 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-----
-46     0     0.66  65.72  0.00 -10.90 -6.25  0.00  0.00  0.00  48.57
-----
```

Segment Leq : 48.57 dBA

Total Leq All Segments: 48.57 dBA

↑

Results segment # 1: Byron Ave (night)

Source height = 1.50 m

ROAD (0.00 + 40.98 + 0.00) = 40.98 dBA

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

-46	0	0.66	58.12	0.00	-10.90	-6.25	0.00	0.00	0.00	40.98
-----	---	------	-------	------	--------	-------	------	------	------	-------

Segment Leq : 40.98 dBA

Total Leq All Segments: 40.98 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 48.57

(NIGHT): 40.98

↑

↑

Filename: rec142.te Time Period: Day/Night 16/8 hours
 Description: REC 14-2 - Block 5

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume : 552/48    veh/TimePeriod *
Posted speed limit : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2       : -46.00 deg   0.00 deg
Wood depth : 0         (No woods.)
No of house rows : 0 / 0
Surface    : 1         (Absorptive ground surface)
Receiver source distance : 68.00 / 68.00 m
Receiver height : 4.50 / 4.50 m
Topography   : 1         (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
```

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	49.21	! 49.21
	Total		49.21 dBA

```
-----
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	41.61	! 41.61
	Total		41.61 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 49.21
(NIGHT): 41.61

↑

↑

Filename: rec151.te Time Period: Day/Night 16/8 hours
 Description: REC 15-1 - Block 5

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

 Car traffic volume : 9715/845 veh/TimePeriod *
 Medium truck volume : 773/67 veh/TimePeriod *
 Heavy truck volume : 552/48 veh/TimePeriod *
 Posted speed limit : 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): 12000
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Byron Ave (day/night)

 Angle1 Angle2 : -55.00 deg 59.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 60.00 / 60.00 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Result summary (day)

	! source !	Road	Total
	! height !	Leq	Leq
	! (m) !	(dBA)	(dBA)
1.Byron Ave	! 1.50 !	53.23	53.23
	Total		53.23 dBA

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	45.63	! 45.63
	Total		45.63 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 53.23
(NIGHT): 45.63

↑

↑

Filename: rec152.te Time Period: Day/Night 16/8 hours
 Description: REC 15-2 - Block 5

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod  *
Medium truck volume : 773/67    veh/TimePeriod  *
Heavy truck volume : 552/48    veh/TimePeriod  *
Posted speed limit : 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): 12000
Percentage of Annual Growth          : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1  Angle2      : -55.00 deg   59.00 deg
Wood depth          : 0           (No woods.)
No of house rows   : 0 / 0
Surface            : 1           (Absorptive ground surface)
Receiver source distance : 60.00 / 60.00 m
Receiver height     : 4.50 / 4.50 m
Topography         : 1           (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 53.84 ! 53.84
-----+-----+-----
Total 53.84 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	46.24	! 46.24
	Total		46.24 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 53.84
(NIGHT): 46.24

↑

↑

Filename: rec161.te Time Period: Day/Night 16/8 hours
 Description: REC 16-1 - Block 5

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

 Car traffic volume : 9715/845 veh/TimePeriod *
 Medium truck volume : 773/67 veh/TimePeriod *
 Heavy truck volume : 552/48 veh/TimePeriod *
 Posted speed limit : 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): 12000
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Byron Ave (day/night)

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

↑
 Result summary (day)

	! source !	Road !	Total !
	! height !	Leq !	Leq !
	! (m) !	(dBA) !	(dBA) !
1.Byron Ave	! 1.50 !	49.09 !	49.09
	Total		49.09 dBA

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	41.49	! 41.49
	Total		41.49 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 49.09
(NIGHT): 41.49

↑

↑

Filename: rec162.te Time Period: Day/Night 16/8 hours
 Description: REC 16-2 - Block 5

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume  : 552/48    veh/TimePeriod *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2       : 0.00 deg   50.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface     : 1 (Absorptive ground surface)
Receiver source distance : 66.00 / 66.00 m
Receiver height : 4.50 / 4.50 m
Topography    : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 49.72 ! 49.72
-----+-----+-----
Total 49.72 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	42.12	! 42.12
	Total		42.12 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 49.72
(NIGHT): 42.12

↑

↑

Filename: rec171.te Time Period: Day/Night 16/8 hours
 Description: REC 17-1 - Block 6

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume  : 552/48    veh/TimePeriod *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1  Angle2      : -65.00 deg  0.00 deg
Wood depth          : 0          (No woods.)
No of house rows    : 0 / 0
Surface             : 1          (Absorptive ground surface)
Receiver source distance : 39.00 / 39.00 m
Receiver height     : 1.50 / 1.50 m
Topography          : 1          (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 53.74 ! 53.74
-----+-----+-----
Total 53.74 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	46.14	! 46.14
	Total		46.14 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 53.74
(NIGHT): 46.14

↑

↑

Filename: rec172.te Time Period: Day/Night 16/8 hours
 Description: REC 17-2 - Block 6

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume : 552/48    veh/TimePeriod *
Posted speed limit : 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): 12000
Percentage of Annual Growth          : 0.00
Number of Years of Growth            : 0.00
Medium Truck % of Total Volume       : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2           : -65.00 deg   0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface    : 1 (Absorptive ground surface)
Receiver source distance : 39.00 / 39.00 m
Receiver height : 4.50 / 4.50 m
Topography   : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 54.19 ! 54.19
-----+-----+-----
Total 54.19 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	46.59	! 46.59
	Total		46.59 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 54.19
(NIGHT): 46.59

↑

↑

Filename: rec181.te Time Period: Day/Night 16/8 hours
 Description: REC 18-1 - Block 6

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume : 552/48    veh/TimePeriod *
Posted speed limit : 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): 12000
Percentage of Annual Growth          : 0.00
Number of Years of Growth            : 0.00
Medium Truck % of Total Volume       : 7.00
Heavy Truck % of Total Volume        : 5.00
Day (16 hrs) % of Total Volume       : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2           : -73.00 deg   76.00 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
```

↑
 Result summary (day)

```
-----
! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)
-----+-----+-----
1.Byron Ave ! 1.50 ! 58.99 ! 58.99
-----+-----+-----
Total 58.99 dBA
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	51.39	! 51.39
	Total		51.39 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 58.99
(NIGHT): 51.39

↑

↑

Filename: rec182.te Time Period: Day/Night 16/8 hours
 Description: REC 18-2 - Block 6

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume  : 552/48    veh/TimePeriod *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1   Angle2       : -73.00 deg   76.00 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 : 4.50 / 4.50 m
Topography    : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00
```

↑
 Result summary (day)

```
-----
```

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	59.37	! 59.37
	Total		59.37 dBA

```
-----
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	51.77	! 51.77
	Total		51.77 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 59.37
(NIGHT): 51.77

↑

↑

Filename: rec191.te Time Period: Day/Night 16/8 hours
 Description: REC 19-1 - Block 6

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

```
-----
Car traffic volume : 9715/845   veh/TimePeriod *
Medium truck volume : 773/67    veh/TimePeriod *
Heavy truck volume  : 552/48    veh/TimePeriod *
Posted speed limit  : 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): 12000
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 0.00
Medium Truck % of Total Volume      : 7.00
Heavy Truck % of Total Volume       : 5.00
Day (16 hrs) % of Total Volume      : 92.00
```

Data for Segment # 1: Byron Ave (day/night)

```
-----
Angle1  Angle2      : 0.00 deg  68.00 deg
Wood depth          : 0          (No woods.)
No of house rows    : 0 / 0
Surface             : 1          (Absorptive ground surface)
Receiver source distance : 37.00 / 37.00 m
Receiver height     : 1.50 / 1.50 m
Topography          : 1          (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

↑
 Result summary (day)

```
-----
```

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	54.24	! 54.24
	Total		54.24 dBA

```
-----
```

↑
 Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	46.64	! 46.64
	Total		46.64 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 54.24
(NIGHT): 46.64

↑

↑

Filename: rec192.te Time Period: Day/Night 16/8 hours
 Description: REC 19-2 - Block 6

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

 Car traffic volume : 9715/845 veh/TimePeriod *
 Medium truck volume : 773/67 veh/TimePeriod *
 Heavy truck volume : 552/48 veh/TimePeriod *
 Posted speed limit : 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): 12000
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Byron Ave (day/night)

 Angle1 Angle2 : 0.00 deg 68.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 37.00 / 37.00 m
 Receiver height : 4.50 / 4.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Result summary (day)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Byron Ave	! 1.50 !	54.69	! 54.69
	Total		54.69 dBA

↑
 Result summary (night)

 ! source ! Road ! Total
 ! height ! Leq ! Leq

	! (m)	! (dBA)	! (dBA)
1.Byron Ave	1.50	47.09	47.09
Total			47.09 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 54.69
(NIGHT): 47.09

↑

↑