



Environmental Noise Assessment

1884 Liverpool Road, Pickering

Louisville Homes Limited

86 Hillside Drive, East York, ON M4K 2M6

Prepared by:

SLR Consulting (Canada) Ltd.

100 Stone Road West, Suite 201, Guelph, ON N1G 5L3

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Revision Record

Revision	Date	Prepared By	Checked By	Authorized By
0	February 12, 2026	Sabah Ersum	Keni Mallinen	Keni Mallinen



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Acronyms and Abbreviations

AADT	Average Annual Daily Traffic
BPN-56	Building Practice Note 56
dBA	Decibels (A-weighted)
FCM	Federation of Canadian Municipalities
ISO	International Organization for Standardization
L _{eq}	Energy Equivalent Sound Level
m	Metres
MPH	Mechanical Penthouse
MECP	Ministry of Environment Conservation and Parks
NEF	Noise Exposure Forecast
NPC-216	MECP Publication NPC-216
NPC-300	MECP Publication NPC-300
OBC	Ontario Building Code
OLA	Outdoor Living Area
OPA	Official Plan Amendment
ORNAMENT	Ontario Road Noise Analysis Method for Environment and Transportation
RAC	Railway Association of Canada
SLR	SLR Consulting (Canada) Ltd.
STC	Sound Transmission Class
TMC	Turning Movement Count
ZBA	Zoning By-law Amendment



1.0 Introduction

SLR Consulting (Canada) Ltd. (SLR) was retained by Louisville Homes Limited to conduct an environmental noise assessment for the proposed residential development at 1884 Liverpool Road in Pickering, Ontario (the Project site). This report has been prepared in support of the proposed Official Plan Approval (OPA) and Zoning By-Law Amendment (ZBA) application for the proposed development.

1.1 Focus of Report

In keeping with the Ministry of Environment, Conservation and Parks (MECP), City of Pickering and the Durham Region requirements, this report examines the potential for:

- Impacts of the environment on the proposed development;
- Impacts of the proposed development on the environment; and
- Impacts of the proposed development on itself.

Mechanical systems associated with the development (e.g., cooling and ventilation equipment) have not been designed at this stage and can be assessed at a future date, if required. A general discussion has been included in this report to address the impacts of the proposed development on the environment and on itself.

1.2 Nature of the Surroundings

The Project site is surrounded by the following:

- Detached residential dwellings to the north;
- Liverpool Road (Regional Road 29) and stacked townhouses beyond to the east;
- Glenanna Road and stacked townhouses/detached residential dwellings beyond to the south; and
- Glendale Drive and detached residential dwellings beyond to the west.

A context plan is shown in Figure 1.

1.3 Description of Proposed Development

The proposed development is located at the northwest corner of the intersection of Liverpool Road and Glenanna Road. Two residential dwellings are currently located on the Project site. These will be demolished to accommodate the new development.

The proposed development contemplates two townhouse blocks separated into three blocks (Block 1, Block 2 and Block 3), each three storeys in height. A common outdoor amenity space is planned at the northwest corner of the Project site. There will be forty-eight (48) townhouse units and one level of underground parking, with access from Glenanna Road between the Block 1 and Block 2 Buildings.

Development drawings are provided for reference in Appendix A.



Part 1: Impacts of the Environment on the Development

In evaluating potential impacts of the environment on the proposed development, the focus of this report is assessment of:

- Transportation noise from surrounding roadways; and
- Stationary noise from surrounding industries/facilities on the development.

The nearest railway is located approximately 1 km south of the proposed development. Based on guidance outlined in the document entitled “Guidelines for New Development in Proximity to Railway Operations” prepared for the Railway Association of Canada and the Federation of Canadian Municipalities (RAC/FCM), the proposed development is outside of the recommended minimum noise influence area for Principal Main Lines (i.e., 300 m). Therefore, rail traffic noise has not been considered further in this assessment.

The proposed development is also located outside of the Noise Exposure Forecast (NEF) 25 contour of the closest airport. Therefore, noise from airway traffic has not been assessed in this assessment.

2.0 Transportation Noise Impacts

2.1 Transportation Noise Sources

Transportation sources with the potential to produce road traffic noise at the proposed development include:

- Liverpool Road;
- Kingston Road;
- Glenanna Road; and
- Glendale Drive.

Road traffic sound levels from these sources have been predicted, and this information has been used to identify façade, ventilation, and warning clause recommendations/requirements for the proposed development.

2.2 Surface Transportation Noise Criteria

2.2.1 Ministry of Environment Publication NPC-300

Noise-Sensitive Development

Ministry of the Environment, Conservation and Parks (MECP) Publication NPC-300 provides sound level criteria for noise-sensitive developments. The applicable portions of NPC-300 are Part C – Land Use Planning and the associated definitions outlined in Part A – Background. Table 1 to Table 4 summarize the applicable surface transportation (road and rail) criteria.

Location-Specific Criteria

Table 1 summarizes transportation noise criteria in terms of energy equivalent sound levels (L_{eq}) for specific noise-sensitive locations. Both outdoor and indoor locations are identified, with the



focus of outdoor areas being amenity spaces. Indoor criteria vary with sensitivity of the space. As a result, Sleeping Quarters have more stringent criteria than Living/Dining Room spaces.

Table 1: NPC-300 Sound Level Criteria for Road and Rail Noise

Type of Space	Time Period	Energy Equivalent Sound Level L_{eq} [5] (dBA)		Assessment Location
		Road	Rail [1]	
Outdoor Amenity Area	Daytime (0700-2300h)	55	55	Outdoors [2]
Living/Dining Room [3]	Daytime (0700-2300h)	45	40	Indoors [4]
	Nighttime (2300-0700h)	45	40	Indoors [4]
Sleeping Quarters	Daytime (0700-2300h)	45	40	Indoors [4]
	Nighttime (2300-0700h)	40	35	Indoors [4]

Notes: [1] Whistle noise is excluded for OLA noise assessments and included for Living/Dining Room and Sleeping Quarter assessments, where applicable.
 [2] Road and Rail noise impacts are to be combined for assessment of OLA impacts.
 [3] Residence area Dens, Hospitals, Nursing Homes, Schools, Daycares are also included. During the nighttime period, Schools and Daycares are excluded.
 [4] An assessment of indoor noise levels is required only if the criteria in Table 4 are exceeded.
 [5] L_{eq} – the energy equivalent sound level, integrated over the time period shown.

Outdoor Living Areas

Table 2 summarizes the transportation noise mitigation requirements for outdoor amenity areas (“Outdoor Living Areas” or “OLAs”).

For the assessment of OLA sound levels, total surface transportation noise is determined by combining road and rail traffic sound levels. Whistle noise from trains is not included in the determination of OLA sound levels.

Table 2: NPC-300 OLA Sound Level Criteria for Road and Rail Noise

Time Period	OLA Energy Equivalent Sound Level L_{eq} (dBA)	Mitigation Requirements/Warning Clause Recommendations
Daytime (0700-2300h)	≤ 55	<ul style="list-style-type: none"> None
	56 to 60 inclusive	<ul style="list-style-type: none"> Noise barrier OR Type A warning clause
	> 60	<ul style="list-style-type: none"> Noise barrier to reduce noise to 55 dBA OR Noise barrier to reduce noise to 60 dBA and Type B warning clause



Ventilation and Warning Clauses

Table 3 summarizes recommendations for ventilation where windows would potentially have to remain closed as a means of transportation noise control. Despite implementation of ventilation measures where recommended, if sound levels exceed the guideline limits in Table 1, warning clauses advising future occupants of the potential excesses are also recommended. Warning clauses also apply to OLAs.

Table 3: NPC-300 Ventilation and Warning Clause Recommendations

Assessment Location	Time Period	Energy Equivalent Sound Level – L_{eq} (dBA)		Ventilation and Warning Clause Recommendations ^[2]
		Road	Rail ^[1]	
Outdoor Living Area	Daytime (0700-2300h)	56 to 60 incl.		Type A warning clause
Plane of Window	Daytime (0700-2300h)	≤ 55		None
		56 to 65 incl.		Forced air heating with provision to add air conditioning + Type C warning clause
		> 65		Central air conditioning + Type D warning clause
	Nighttime (2300-0700h)	51 to 60 incl.		Forced air heating with provision to add air conditioning + Type C warning clause
> 60		Central air conditioning + Type D warning clause		

Notes: [1] Whistle noise is excluded from assessment.
[2] Road and Rail noise is combined for determining ventilation and warning clause requirements

Building Component Requirements

Table 4 provides sound level thresholds which, if exceeded, trigger a requirement for the building shell components (i.e., exterior walls, windows) to be designed accordingly to meet the applicable indoor sound criteria.

Table 4: NPC-300 Building Component Assessment Requirements

Assessment Location	Time Period	Energy Equivalent Sound Level – L_{eq} (dBA)		Component Requirements
		Road	Rail ^[1]	
Plane of Window	Daytime (0700-2300h)	> 65	> 60	Designed/ Selected to Meet Indoor Requirements ^[2]
	Nighttime (2300-0700h)	> 60	> 55	

Notes: [1] Whistle noise is included in assessment.
[2] Building component requirements are assessed separately for Road and Rail and then combined for a resultant sound isolation parameter.



2.2.2 Durham Region

The Durham Region Arterial Corridor Guidelines (dated February 2007) include noise attenuation strategies for arterial roads adjacent to residential areas. The Durham Region guidelines do not prescribe sound level limits; they are focused primarily on road design and attenuation strategies. Therefore, the guidelines have not been re-iterated in this report.

2.2.3 City of Pickering

The City of Pickering Official Plan outlines policies pertaining to road and railway traffic noise and vibration, and aircraft noise. The applicable portion of the Pickering Official Plan is Section 16.12:

16.12 For applications with impacts from noise, vibration, dust, light spillage or odours, or which may raise safety concerns, City Council shall require a proponent to complete an appropriate study, prepared by a qualified expert, as specified in Subsections (a), (b) and (c) below to the satisfaction of the City in consultation with relevant agencies, as follows:

(a) on lands affected by noise, for proposals for new sensitive land uses within 300 metres of a railway right-of-way or an arterial road or Provincial Highway, and for proposals for new land uses (including, but not limited to, commercial and industrial uses) that may introduce new sources of noise adjacent to sensitive land uses, City Council shall require the proponent to complete a noise study, and: (i) shall require appropriate measures to mitigate any adverse effects from the noise identified by the study; and (ii) shall only permit development if attenuation measures satisfactory to the City are undertaken to prevent or mitigate adverse impacts, which measures may include, but not limited to, berming, fencing and the imposition of building setbacks to be undertaken as a condition of approval;

As the proposed development is located within 300 m of an arterial road, this noise study has been completed to address the above-noted Official Plan requirement.

2.3 Traffic Data and Future Projections

Ultimate annual average daily traffic (AADT) volumes, the percentage of commercial vehicles and vehicle travel speeds for Liverpool Road and Kingston Road were obtained from Durham Region Planning and Economic Development Department.

Turning movement count (TMC) data from year 2025 and annual growth rates for Glenanna Road and Glendale Drive were obtained from project transportation consultant (Urbantrans Engineering Solutions Inc.). Peak-hour TMCs were used to estimate 2025 AADT volumes and commercial vehicle (truck) percentages for both roadways. The 2025 traffic volumes were projected to future year 2038 based on annual growth rate of 1.5%.

A daytime/nighttime split of 90%/10% was assumed for roadways, in accordance with the MECP ORNAMENT document.

Copies of traffic data and calculations are provided for reference in Appendix B. Table 5 summarizes the road traffic data used in the analysis.



Table 5: Summary of Road Traffic Data Used in Transportation Analysis

Roadway	Traffic Volumes AADT	% Day/Night Volume Split		Commercial Vehicle Breakdown		Vehicle Speed (km/hr)
		Daytime	Nighttime	% Medium Trucks	% Heavy Trucks	
Liverpool Road ^[1]	20,000	90	10	4.9	2.1	50
Kingston Road ^[1]	35,000	90	10	5.6	2.4	60
Glendale Drive ^[2]	3,618	90	10	0.4	0.0	40
Glenanna Road ^[2]	7,916	90	10	3.0	0.1	50

Notes: [1] Based on ultimate AADT provided by Durham Region.
[2] Based on 2025 traffic data provided by project transportation consultant., with a 1.5% annual growth rate applied to calculate the future year 2038 AADT.

2.4 Predicted Sound Levels

Future road traffic sound levels at the proposed development were predicted using Cadna/A, a commercially available noise propagation modelling software package. Roadways were modelled as line sources of sound using ISO 9613-2(1996), with sound emission rates calculated using the ORNAMENT algorithms, the road traffic noise model of the MECP. These predictions were validated and are equivalent to those made using the MECP’s ORNAMENT or STAMSON v5.04 road traffic noise models. A STAMSON validation file and output are included for reference in Appendix C.

Sound levels were predicted along the facades of the proposed development using the “building evaluation” feature of Cadna/A. This feature allows for sound levels to be predicted across the entire façade of a structure. The at-grade OLA was assessed at a standing height of 1.5 m above grade.

Global ground absorption was conservatively considered to be reflective ($G = 0.0$), and 1 m topographic contours for the Project site and surrounding area were included in the model.

It was determined that Liverpool Road has a 2.2% change in grade between Anton Square and Kingston Road. This was considered in the road traffic analysis in accordance with guidance in the ORNAMENT document.

2.4.1 Façade Sound Levels

Predicted worst-case façade sound levels due to road traffic are presented in Table 6.

The predicted daytime and nighttime road traffic sound levels along all building facades associated with the proposed development are shown in Figure 2 (daytime) and Figure 3 (nighttime).



Table 6: Summary of Predicted Worst-Case Transportation Façade Sound Levels

Building	Building Façade ^[1]	Maximum Predicted Road Traffic Sound Levels ^[2]	
		L _{eq} Daytime (dBA)	L _{eq} Nighttime (dBA)
Block 1	North	56	49
	East	60	53
	South	62	55
	West	58	52
Block 2	North	58	51
	East	n/a ^[3]	n/a ^[3]
	South	63	57
	West	57	51
Block 3	North	62	56
	East	66	59
	South	64	57
	West	n/a ^[3]	n/a ^[3]
Notes: [1] Building façade roadway sound levels are shown in Figure 2 (daytime) and Figure 3 (nighttime). [2] Sound levels presented above are the highest for the identified building façade. [3] Façade is not exposed as Block 2 and Block 3 are connected.			

The façade roadway sound levels are predicted to exceed 65 dBA during the daytime (i.e., the thresholds described in Table 4) along one façade of Block 3, facing Liverpool Road. Therefore, an assessment of building components is required. Refer to Section 2.5.1.

2.4.2 Outdoor Living Area Sound Levels

The common amenity space (OLA) of the proposed development is located at grade, northwest of Block 1. The assessment location is shown in Figure 4.

Private balconies are all less than 4 m in depth, and a common OLA is provided for occupants of the proposed development; therefore, private balconies have not been assessed as OLAs, consistent with the definitions in MECP Publication NPC-300.

The predicted OLA sound level from the surrounding roadways is presented in Table 7 and shown in Figure 4.

Table 7: Summary of Predicted Transportation Outdoor Living Area Sound Levels

OLA Assessment Location	Assessment Location Description	Predicted Sound Level, L _{eq} Daytime (dBA)
OLA1	At-Grade Amenity (Northwest of the proposed development building)	55

As the predicted sound level at OLA1 does not exceed 55 dBA, warning clauses and/or mitigation measures are not required.



2.5 Noise Control Measures

2.5.1 Façade Assessment

2.5.1.1 Building Components

An assessment of indoor noise levels is required because façade sound levels due to road traffic exceed 65 dBA during the daytime on the east building façade of Block 3.

Indoor sound levels and required facade Sound Transmission Class (STC) ratings of exterior building components (walls/windows) were estimated using the procedures outlined in National Research Council Building Practice Note 56 (BPN-56). The preliminary façade requirements analysis is based on the following assumptions.

- Non-glazing portions of the exterior walls are assumed to have a rating of STC 37 (i.e., expected rating with an exterior wall that meets the minimum non-acoustical requirements of the Ontario Building Code (OBC));
- For living/dining rooms, 70% of the exterior facade is vision glass/patio doors and rooms have intermediate absorption; and
- For bedrooms, 50% of the exterior wall is vision glass and rooms have intermediate absorption.

Based on the predicted transportation façade sound levels and assumptions listed above, window construction meeting the minimum non-acoustical requirements of the OBC (i.e., a minimum rating of STC 29) are predicted to be sufficient to meet the indoor sound level guidelines of the MECP.

The STC requirements should be reviewed by an Acoustical Consultant if there are changes to the suite layouts or elevation drawings later in the planning process.

2.5.1.2 Ventilation and Warning Clause Recommendations

The sound level triggers for warning clauses are summarized in Table 3. Where recommended, the warning clauses should be included in agreements registered on Title for the residential units and included in all agreements of purchase and sale or lease and all rental agreements.

Based on the predicted façade sound levels, an MECP Type D warning clause and central air conditioning are recommended for all units in Block 3.

An MECP Type C warning clause and the provision for installing air conditioning at a later date are recommended for all units in Block 1 and Block 2. This typically takes the form of a forced air heating system that can be converted to air conditioning at the occupant's discretion.

Ventilation and warning clause recommendations are summarized in Appendix D.

2.5.2 OLA Assessment

The predicted OLA sound level at the at-grade amenity is 55 dBA; therefore, warning clauses and/or mitigation measures (barriers) are not required.



3.0 Stationary Source Review

A site visit to the Project site and surrounding area was completed by SLR personnel on December 2, 2024. The focus of the site visit was to identify nearby potential stationary sources of noise in proximity to the proposed development.

The Project site was found to be primarily surrounded by residential land uses. No industrial land uses identified in proximity to the proposed development. No stationary sources of noise were audible above the background/ambient acoustic environment at the Project site during the site visit, which was dominated by road traffic along Liverpool Road, Glenanna Road and Glendale Drive.

The MECP D-series Guideline D-6 minimum areas of influence for Class I and II industries are shown in Figure 5 for reference. The nearest potential sources of stationary noise are commercial/retail facilities located approximately 175 m southeast of the Project site, at Liverpool Plaza. They are considered Class I industries based on definitions in the MECP D-Series Guidelines, with an expected area of influence of 70 m. These facilities are also located closer and more exposed to existing noise-sensitive points of receptions where guideline limits are expected to be met.

There are no Class II or Class III industries located within the respective areas of influence.

Stationary source noise at the proposed development is expected meet applicable guideline limits in NPC-300; therefore, a detailed assessment was not completed.



Part 2: Impacts of the Development on Itself

4.0 Stationary Source Noise from the Development on Itself

At the time of this assessment, mechanical systems for the proposed development have not been sufficiently designed to complete a detailed assessment of stationary source noise from the development on itself.

For common mechanical systems that will be implemented as part of the proposed development (if applicable), sound levels from all noise-generating equipment should comply with the guideline limits in MECP Publication NPC-300. The potential noise from mechanical equipment in the proposed development (such as from central air conditioning units, parking garage exhaust fans, emergency generators, etc.) should be assessed as part of the final building design. The applicable criteria can be met at all on-site receptors through appropriate selection of mechanical equipment, by locating equipment with sufficient setback from noise sensitive locations, and by incorporating control measures (e.g., silencers) into the design. This can be confirmed either later in the site plan approval process, or at the building permit approval stages. If individual air conditioning systems are to be implemented for individual residential units within the proposed development, the sound levels from each unit should meet the requirements of MECP Publication NPC-216.

It is recommended that the mechanical systems be reviewed by an Acoustical Consultant prior to final equipment selection.

Part 3: Impacts of the Development on the Surrounding Area

5.0 Stationary Source Noise from the Development on the Surroundings

Traffic related to the proposed development will be small relative to the existing traffic volumes within the area and is not of concern with respect to potential transportation noise.

Other sources associated within the proposed development with the potential to generate noise are mechanical equipment (e.g., air conditioning units, parking garage exhaust fans, emergency generators). Sound levels due to operation of these sources should meet MECP Publication NPC-300 noise guidelines at all off-site noise sensitive receptors.

Off-site sound levels are not expected to be of concern are not anticipated because systems will be designed to ensure that the applicable noise guidelines are met at on-site receptors.

Regardless, off-site sound levels from mechanical equipment should be assessed as part of the final building designs. The applicable criteria can be met at all surrounding receptors though the use of routine mitigation measures, including the appropriate selection of mechanical equipment, by locating equipment with sufficient setback from noise sensitive locations, and by incorporating control measures (e.g., silencers, barriers) into the designs. If individual air conditioning systems are to be implemented for individual residential units within the proposed development, the sound levels from each unit should meet the requirements of MECP Publication NPC-216.

It is recommended that the mechanical systems be reviewed by an acoustical consultant prior to final selection of equipment.



6.0 Conclusions and Recommendations

The potential for noise impacts on and from the proposed development have been assessed. Impacts of the environment on the development, the development on itself, and the development on the surrounding area have been considered. Based on the results of this assessment, the following conclusions have been reached:

Transportation Noise

- Based on transportation façade sound levels, exterior wall and window construction meeting the minimum non-acoustical requirements of the OBC are predicted to be sufficient to meet MECP indoor noise guidelines.
- Ventilation and warning clause recommendations are outlined in Section 2.5.1.
 - Central air conditioning with an MECP Type D warning clause is recommended for all units in Block 3.
 - Forced air heating with provision to add air conditioning at a later date and an MECP Type C warning clause are recommended for all units in Block 1 and Block 2.
- The predicted road traffic sound level at the common outdoor amenity area is 55 dBA. Mitigation and/or warning clauses are not required.
- Warning clauses should be included in agreements registered on Title for the residential units and included in agreements of purchase and sale/rental agreements.
 - Warning clause recommendations are summarized in Appendix D.

Stationary Source Noise

- A review of the surrounding stationary noise sources was completed by SLR personnel during a site visit to the area and through available aerial photography. Noise from stationary sources was not audible above background sound levels at the Project site during the site visit.
- Stationary source noise is not of concern at the proposed development.

Overall Assessment

- Noise from the environment on the proposed development can be adequately controlled with the inclusion of ventilation and warning clause recommendations as detailed in Part 1 of this report.
- Noise from the proposed development on itself is not expected to be of concern and can be adequately controlled by following the design guidance outlined in Part 2 of this report.
- Noise from the proposed development on the surroundings is expected to meet the applicable guideline limits and can be adequately controlled by following the design guidance outlined in Part 3 of this report.
- As the mechanical systems for the proposed development have not been designed in detail, the mechanical design should be reviewed by an Acoustical Consultant during site plan approval process, or as part of the final building design.

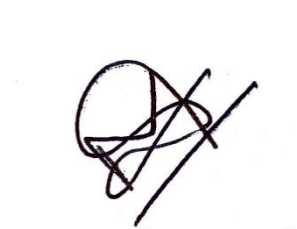


7.0 Closure

If you have any questions, please do not hesitate to contact the undersigned.

Regards,

SLR Consulting (Canada) Ltd.



Sabah Ersum, M.Eng.
Acoustics Consultant
sersum@slrconsulting.com



Keni Mallinen, M.A.Sc., P.Eng.
Senior Acoustics Engineer
kmallinen@slrconsulting.com



8.0 References

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Figures



Environmental Noise Assessment

1884 Liverpool Road, Pickering

Louisville Homes Limited

SLR Project No.: 241.031900.00001

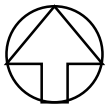
February 12, 2026

Legend	
	Proposed Development - Building
	Project Property Line (approx.)















Background Aerial Imagery from Microsoft Bing Satellite – QGIS Version 3.40

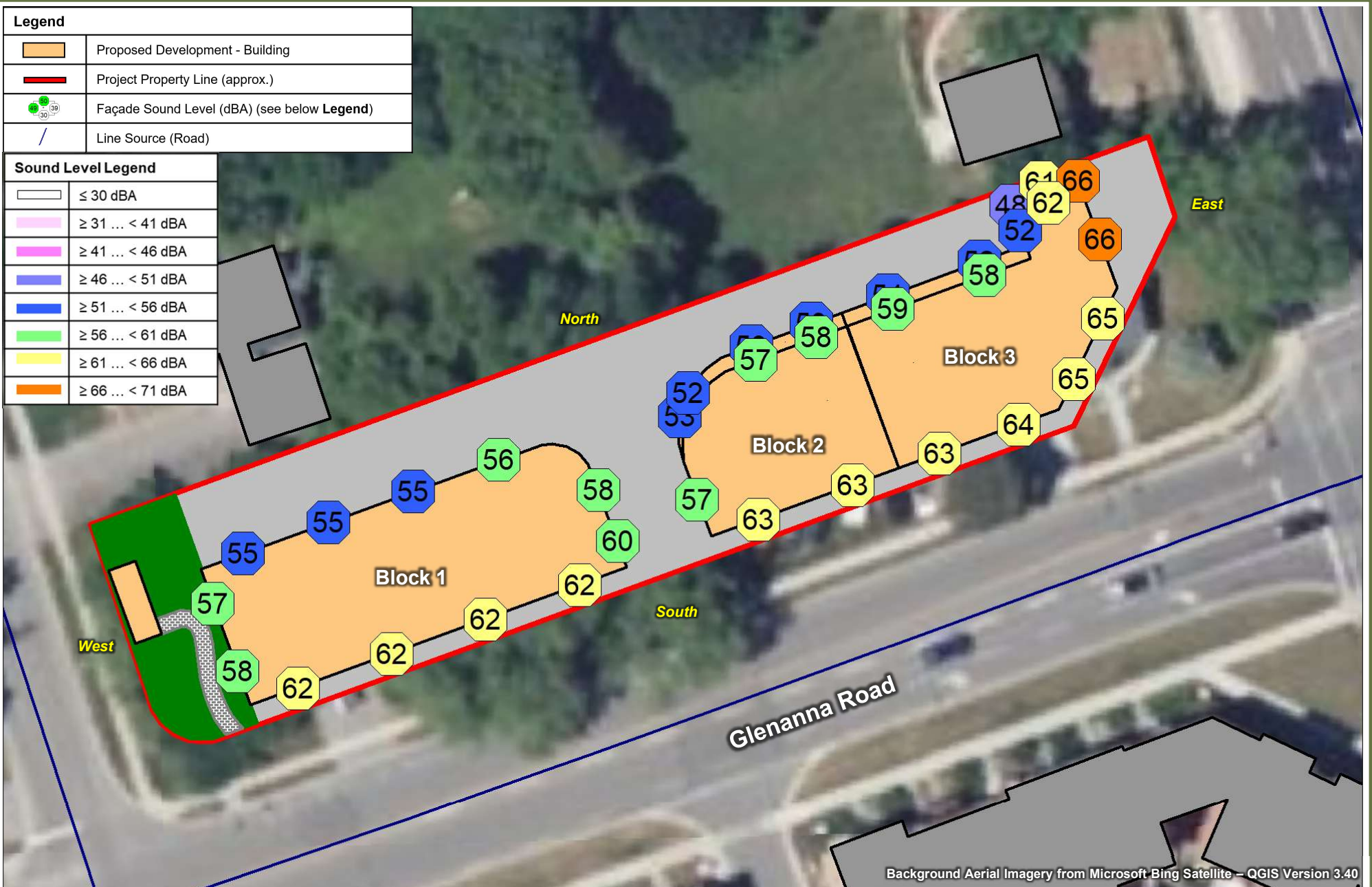
LOUISVILLE HOMES LIMITED
1884 LIVERPOOL ROAD, PICKERING
CONTEXT PLAN

True North 	Scale:	1:3,000	METRES
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	Project No. 241.031900.00001		1



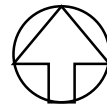
Legend	
	Proposed Development - Building
	Project Property Line (approx.)
	Façade Sound Level (dBA) (see below Legend)
	Line Source (Road)

Sound Level Legend	
	≤ 30 dBA
	≥ 31 ... < 41 dBA
	≥ 41 ... < 46 dBA
	≥ 46 ... < 51 dBA
	≥ 51 ... < 56 dBA
	≥ 56 ... < 61 dBA
	≥ 61 ... < 66 dBA
	≥ 66 ... < 71 dBA















Background Aerial Imagery from Microsoft Bing Satellite – QGIS Version 3.40

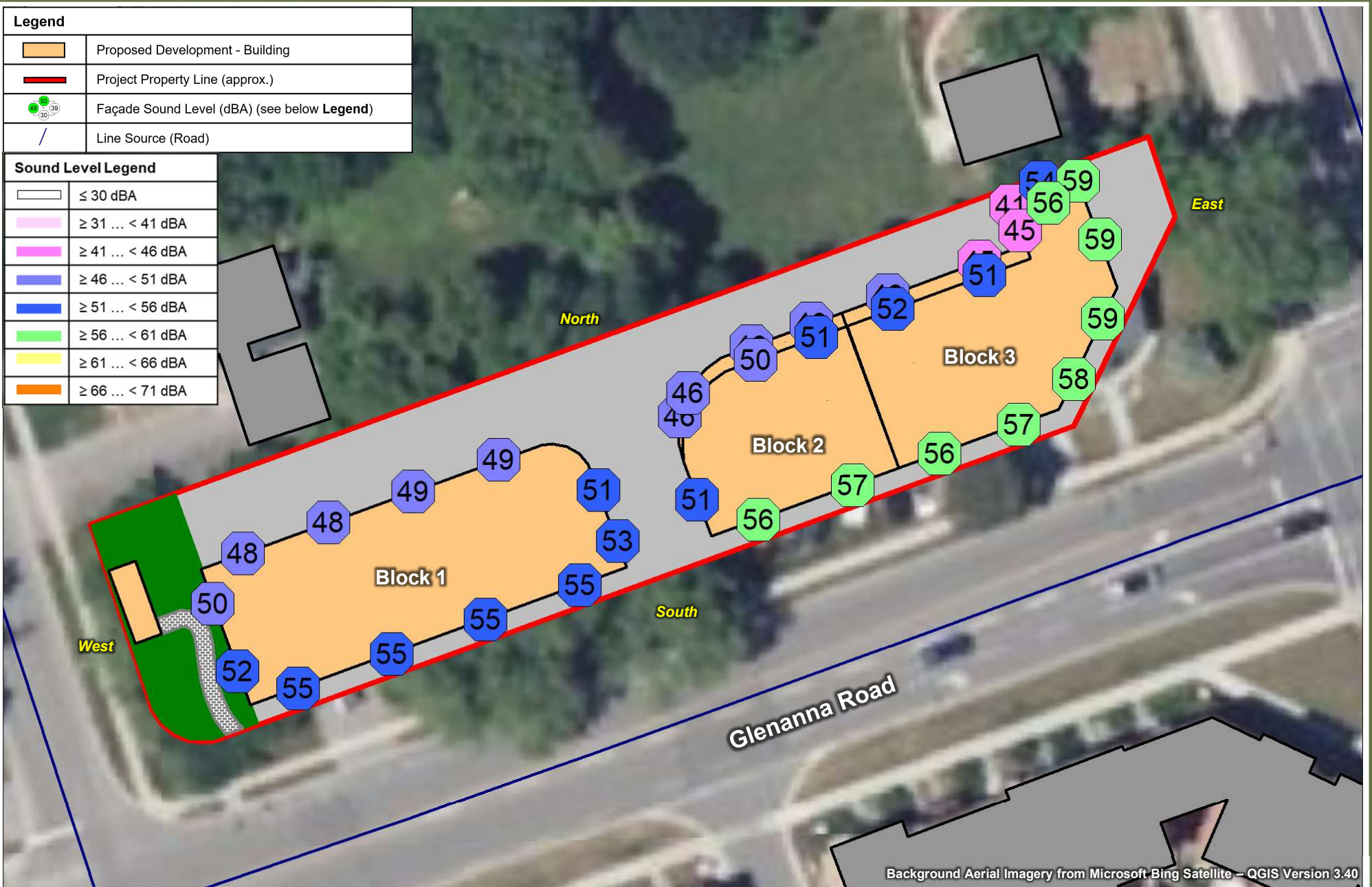
LOUISVILLE HOMES LIMITED
1884 LIVERPOOL ROAD, PICKERING
PREDICTED FAÇADE SOUND LEVELS – ROAD TRAFFIC – DAYTIME

True North 	Scale:	1:500	METRES
	Date: Feb. 12, 2026	Rev. 0	Figure No. 2
	Project No. 241.031900.00001		




Legend	
	Proposed Development - Building
	Project Property Line (approx.)
	Façade Sound Level (dBA) (see below Legend)
	Line Source (Road)

Sound Level Legend	
	≤ 30 dBA
	≥ 31 ... < 41 dBA
	≥ 41 ... < 46 dBA
	≥ 46 ... < 51 dBA
	≥ 51 ... < 56 dBA
	≥ 56 ... < 61 dBA
	≥ 61 ... < 66 dBA
	≥ 66 ... < 71 dBA







Background Aerial Imagery from Microsoft Bing Satellite – QGIS Version 3.40

LOUISVILLE HOMES LIMITED
1884 LIVERPOOL ROAD, PICKERING
PREDICTED FAÇADE SOUND LEVELS – ROAD TRAFFIC – NIGHTTIME

	Scale:	1:500	METRES
	Date: Feb. 12, 2026	Rev. 0	Figure No.
	Project No.		3
	241.031900.00001		




Legend	
	Proposed Development - Building
	Project Property Line (approx.)
	Outdoor Assessment Location
	Line Source (Road)





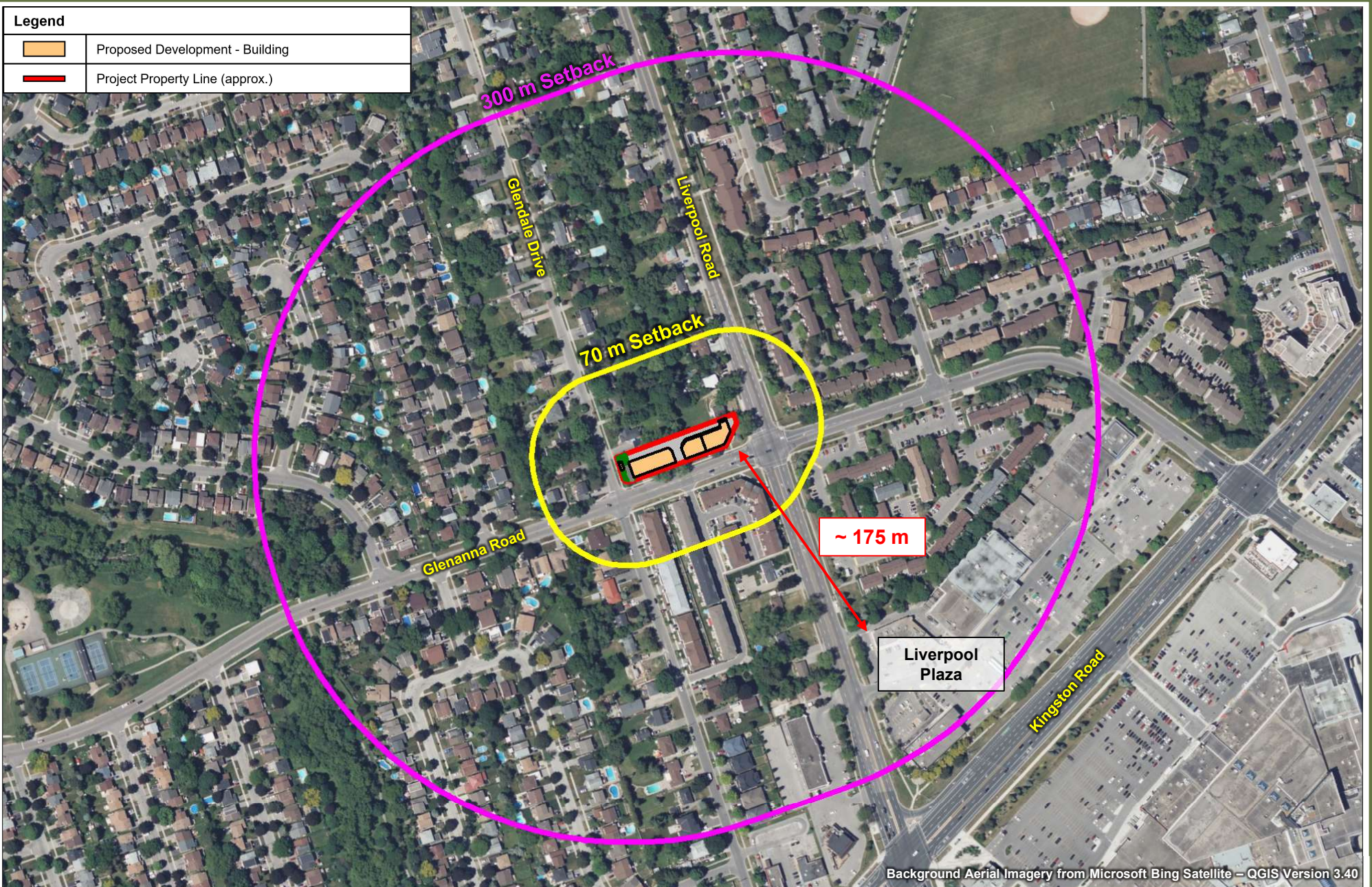
Background Aerial Imagery from Microsoft Bing Satellite – QGIS Version 3.40

LOUISVILLE HOMES LIMITED
1884 LIVERPOOL ROAD, PICKERING
PREDICTED OUTDOOR LIVING AREA SOUND LEVELS – ROAD TRAFFIC – DAYTIME

	Scale:	1:500	METRES
	Date: Feb. 12, 2026	Rev. 0	Figure No.
	Project No. 241.031900.00001		4

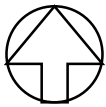


Legend	
	Proposed Development - Building
	Project Property Line (approx.)



Background Aerial Imagery from Microsoft Bing Satellite – QGIS Version 3.40

LOUISVILLE HOMES LIMITED
1884 LIVERPOOL ROAD, PICKERING
STATIONARY SOURCE REVIEW

	Scale:	1:4,500	METRES
	Date: Feb. 12, 2026	Rev. 0	Figure No.
	Project No. 241.031900.00001		5





Appendix A Development Drawings

Environmental Noise Assessment

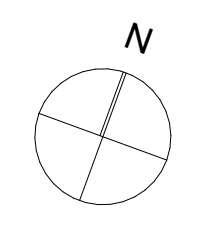
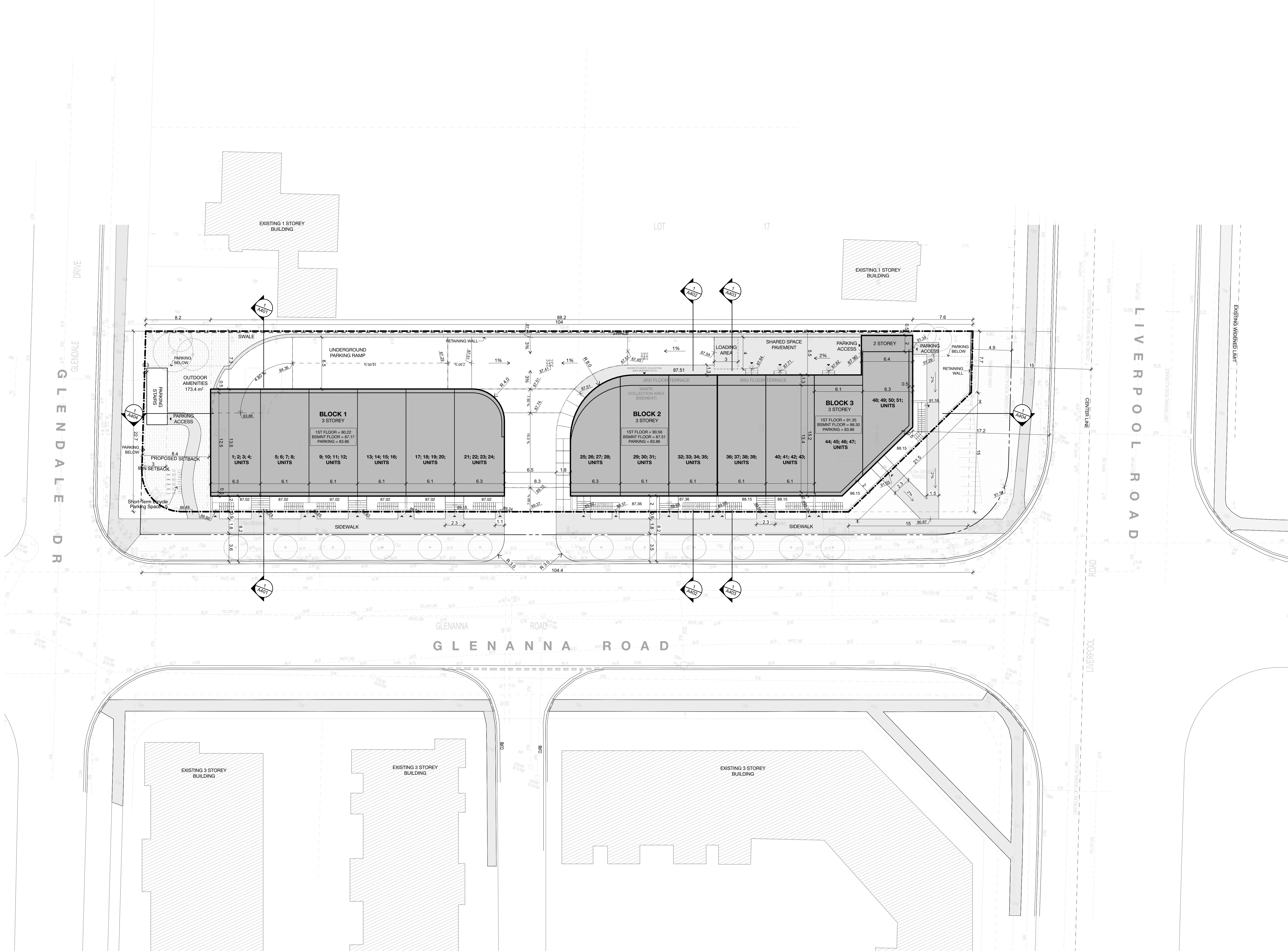
1884 Liverpool Road, Pickering

Louisville Homes Limited

SLR Project No.: 241.031900.00001

February 12, 2026

Mark	Date	Description
01	2024-04-26	Issued for Massing Study Review
02	2025-05-15	Issued for Zoning Review
03	2025-10-07	Re-Issued for Zoning Review
04	Work in Progress	Re-Issued for Zoning Review



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job title
1884 Liverpool Rd

client
withheld

sheet title
Site Plan

issue date
Friday, January 30, 2026

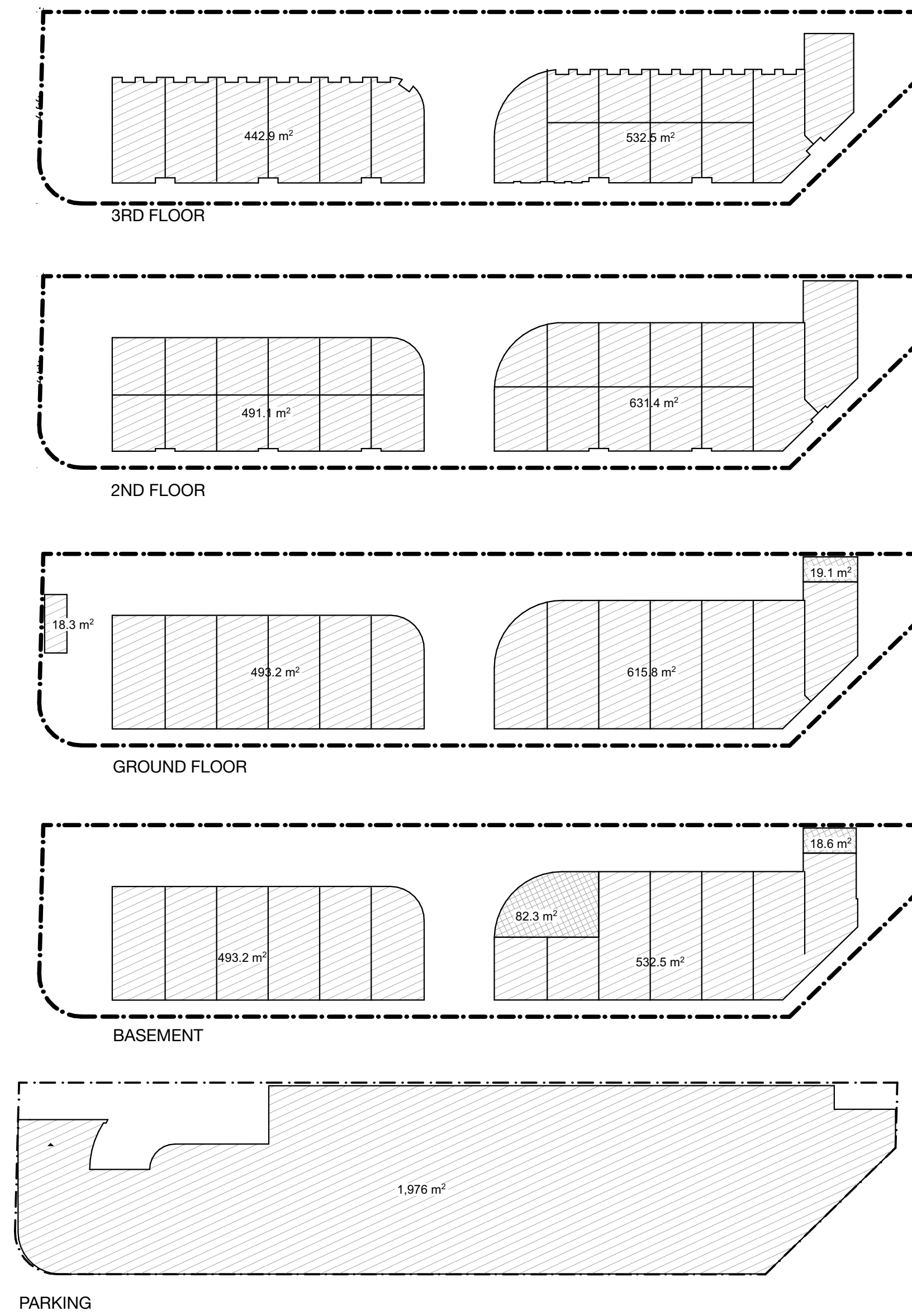
scale
1:200
 job number
2400-04

A006

Mark	Date	Description
02	2025-05-15	Issued for Zoning Review
03	2025-10-07	Re-Issued for Zoning Review
04	Work in Progress	Re-Issued for Zoning Review

Zoning Statistics

	Regulations New Zoning By-law	Pre Application	Proposed
Total Site Area		2319.2 m² 0.2319 ha	2240.7 m² 0.2241 ha
Residential GFA		4,685 m² 50,429 f ²	3,207.1 m² 34,521 f ²
Footprint			1,146.3 m² 12,339 f ²
Lot Coverage			51%
Density (FSI)	—	2.02	1.43
Units per net hectar		202.7	227.6 Unit/ha
Outdoor Amenity			173.4 m ² 1,866 f ²
Landscaping			
Soft Landscaping			296.4 m ² 27%
Hardscaping			798.8 m ² 73%
Total			1,095.2 m² 100%
Units			
1 Bedroom			4
2 Bedroom			47
Total		47	51
Parking			
Residential (1.25 spaces per unit)	63		47
Visitor (0.15 spaces per unit)	8		8
Accessible	1		1
Total	72	50	56
Bicycle Parking			
Long-Term	51		51
Short-Term	5		5
Total	56		56
Setbacks			
Front	—		2m
Rear	7.5m		5.5m
West Side	3m		8.4m
East Side	3m		7.6m
Building Height			
Block 1			10.8m
Block 2	9.5m		10.4m
Block 3			10.4m



Area Calculations

Floor	GCA		Deductions		GFA	
3	975.5 m ²	10,500 f ²	0 f ²		975.5 m ²	10,500 f ²
2	1,122.7 m ²	12,085 f ²	0 f ²		1,122.7 m ²	12,085 f ²
G	1,146.3 m ²	12,339 f ²	37.4 m ²	403 f ²	1,108.9 m ²	11,936 f ²
B	1,126.5 m ²	12,126 f ²	1,126.5 m ²	12,126 f ²	0 f ²	
P	1,976 m ²	21,269 f ²	1,976 m ²	21,269 f ²	0 f ²	
Total	6,347 m²	68,319 f²	3,139.9 m²	33,798 f²	3,207.1 m²	34,521 f²

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job title
1884 Liverpool Rd

client
withheld

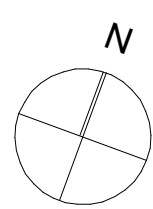
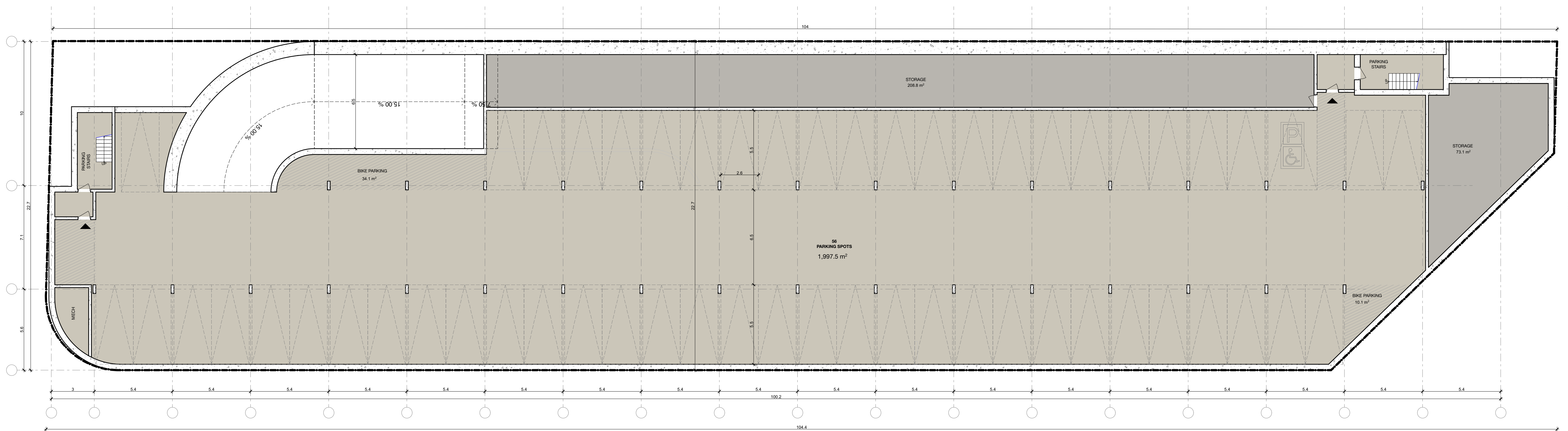
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issue date
Friday, January 30, 2026

scale
1:500, 1:0.82

job number
2400-04

Mark	Date	Description
01	2024-04-26	Issued for Massing Study Review
02	2025-05-15	Issued for Zoning Review
03	2025-10-07	Re-Issued for Zoning Review



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job title
1884 Liverpool Rd

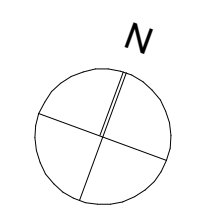
client
withheld

sheet title
Parking Plan

issue date
Tuesday, October 7, 2025

scale
1:150

job number
2400-04



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job title
1884 Liverpool Rd

client
withheld

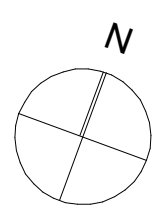
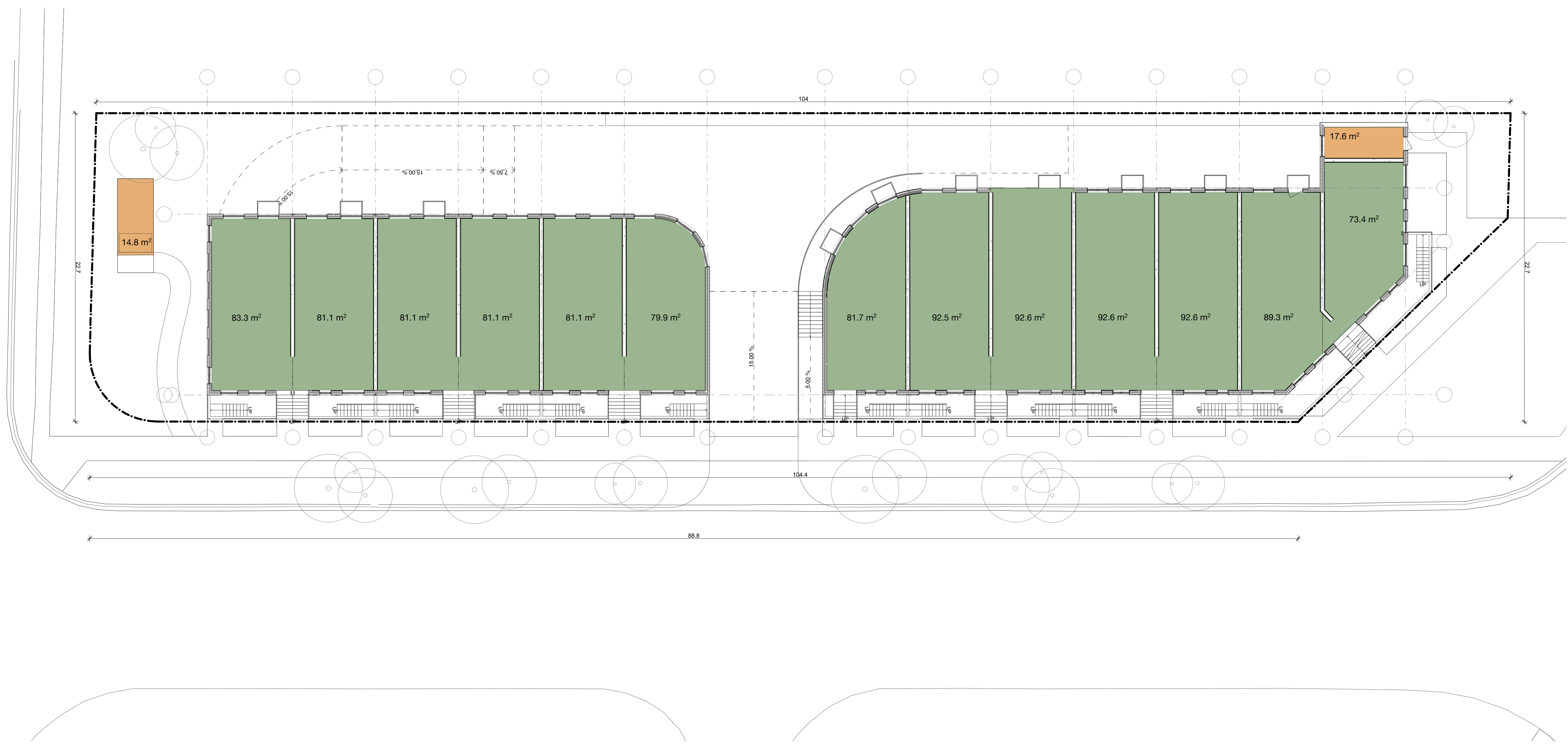
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issue date
Tuesday, October 7, 2025

scale
1:150

job number
2400-04

Mark	Date	Description
02	2025-05-15	Issued for Zoning Review
03	2025-10-07	Re-Issued for Zoning Review



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job title
1884 Liverpool Rd

client
withheld

sheet title
1st Floor Plan

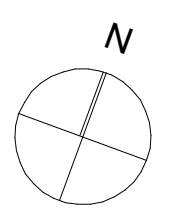
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Tuesday, October 7, 2025

scale
1:150

job number
2400-04

A103

Mark	Date	Description
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03	2025-10-07	Re-Issued for Zoning Review



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job title
1884 Liverpool Rd

client
withheld

sheet title
2nd Floor Plan

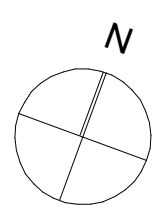
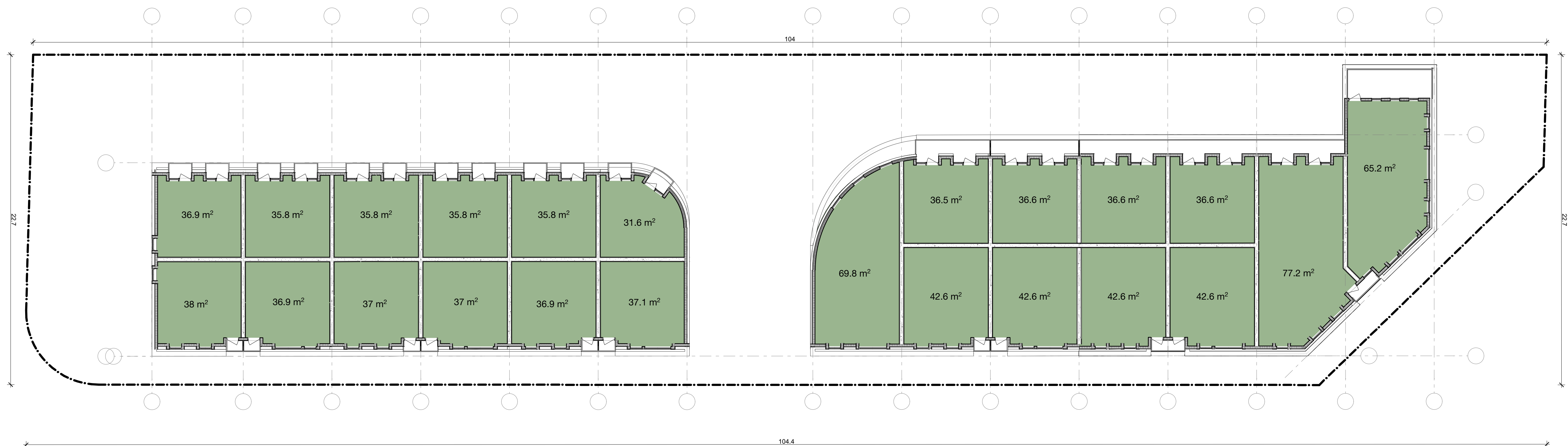
issue date
Tuesday, October 7, 2025

scale
1:150

job number
2400-04

A104

Mark	Date	Description
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03	2025-10-07	Re-Issued for Zoning Review



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job title
1884 Liverpool Rd

client
withheld

sheet title
3rd Floor Plan

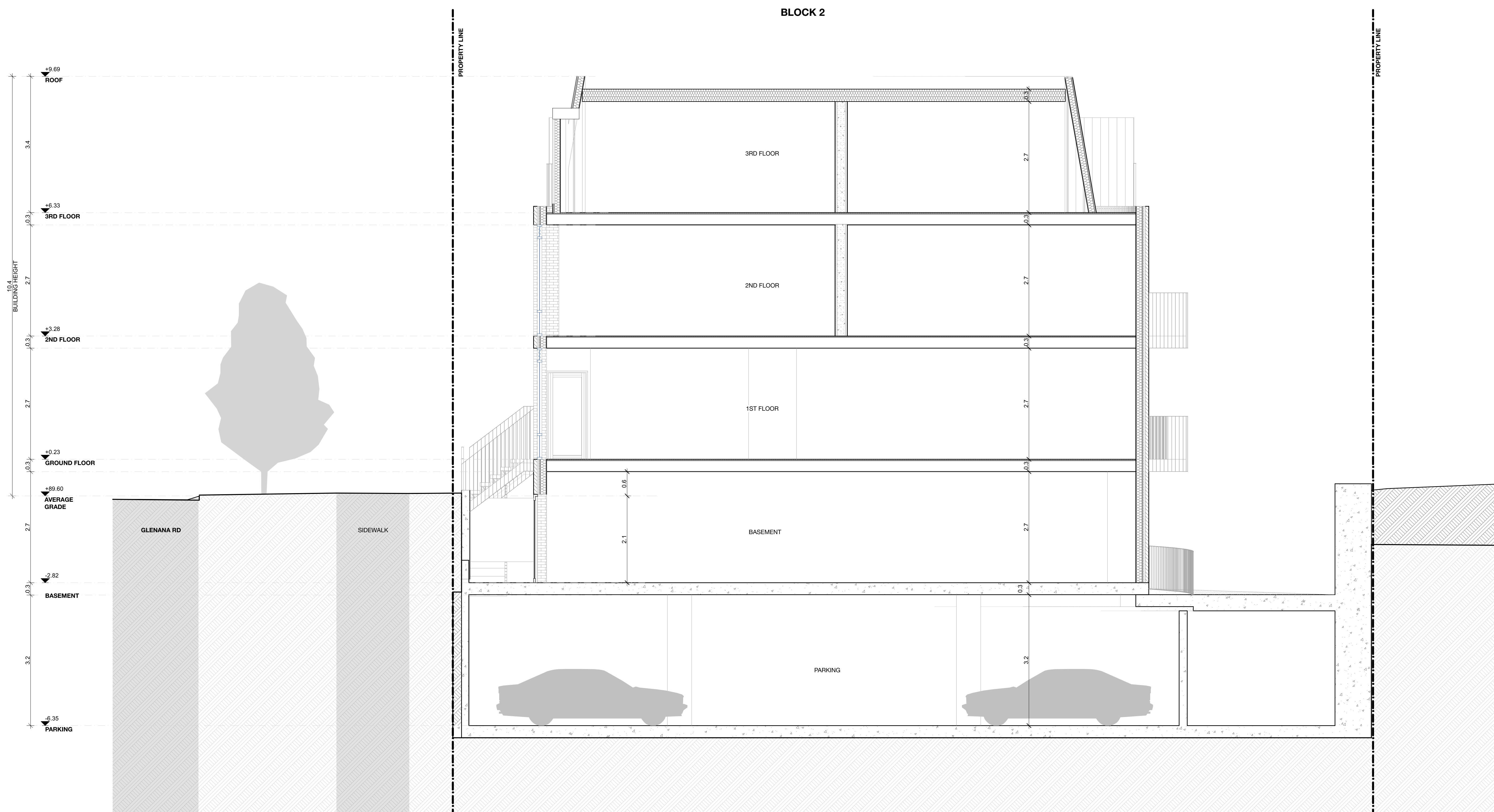
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scale
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job number
2400-04

A105

Mark	Date	Description
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03	2025-10-07	Re-Issued for Zoning Review



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job title
1884 Liverpool Rd

client
withheld

sheet title
Section Block 2

issue date
Tuesday, October 7, 2025

scale

1:50

job number
2400-04



Appendix B Traffic Data and Calculations

Environmental Noise Assessment

1884 Liverpool Road, Pickering

Louisville Homes Limited

SLR Project No.: 241.031900.00001

February 12, 2026



The Regional Municipality of Durham

Community Growth and Economic
Development Department

Community Growth Division

605 ROSSLAND RD. E.
4TH FLOOR
P.O. BOX 623
WHITBY, ON L1N 6A3
CANADA
905-668-7711
1-800-372-1102
Fax: 905-666-6208
CommunityGrowthDivision@durham.ca

www.durham.ca

Sandra Austin
Commissioner of Community Growth and
Economic Development

ROAD SEGMENT TRAFFIC FORECASTS FOR NOISE ANALYSES

This information is to be used as the basis for assessing the potential impacts of noise, generated by traffic on Provincial Highways and arterial roads, on proposed land uses that are sensitive (e.g., residential subdivisions). Arterial roads include existing and future Type A, B and C, as designated in the Durham Regional Official Plan.

Noise assessment reports recommend specific measures to be integrated into the design of sensitive developments to reduce road noise impacts to acceptable levels.

Provided For:

Name / Name of Firm: **Muhammad Sabah Ud Din Ersum, SLR Consulting**
Address: **100 Stone Rd. W., Suite 201, Guelph, ON**
Telephone: **(709) 749-5742** Fax:

Location of Proposal:

1884 Liverpool Road (west side, north of Glenanna Road)

Municipality: **Pickering** Lot(s): Concession:

Durham Region File No. (if available):

Name of Property Owner (if available):

Date Request Received: **October 10, 2025** Received By: **Chris Leitch**

Date Forecast Sent: **October 14, 2025**

Name of Road Segment	Forecasted AADT*	No. of Lanes	% of Trucks	Heavy : Medium		Speed (km/h)
				Truck	Truck Ratio	
Liverpool Road, north of Glenanna Road	20,000	4	7	30	70	50
Kingston Road, west of Liverpool Road	35,000	6	8	30	70	60
	0	0	0	0	0	0
	0	0	0	0	0	0

* Average Annual Daily Traffic. Forecast based on ultimate development according to the Durham Regional Official Plan.



Turning Movement Count (3 . GLENANNA RD & GLENDALE DR)

Start Time	N Approach GLENDALE DR						E Approach GLENANNA RD						S Approach GLENDALE DR						W Approach GLENANNA RD						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-09-25 07:00:00	1	4	1	0	0	6	2	19	6	0	0	27	8	2	3	0	0	13	9	39	2	0	0	50	96	
2025-09-25 07:15:00	0	4	1	0	1	5	0	25	8	0	1	33	10	4	8	0	1	22	7	53	2	0	0	62	122	
2025-09-25 07:30:00	1	5	2	0	0	8	1	27	7	0	0	35	14	10	6	0	0	30	15	69	5	0	0	89	162	
2025-09-25 07:45:00	0	7	1	0	0	8	2	64	13	0	1	79	20	10	5	0	0	35	12	65	2	0	0	79	201	581
2025-09-25 08:00:00	1	5	1	0	0	7	0	60	21	0	1	81	11	7	14	0	0	32	8	46	0	0	0	54	174	659
2025-09-25 08:15:00	1	6	2	0	0	9	0	41	15	0	0	56	17	5	11	0	0	33	10	69	3	0	0	82	180	717
2025-09-25 08:30:00	2	7	1	0	3	10	2	46	10	0	0	58	14	2	18	0	0	34	15	73	1	0	0	89	191	746
2025-09-25 08:45:00	3	1	5	0	2	9	1	58	11	0	1	70	15	5	9	0	1	29	22	81	3	0	0	106	214	759
2025-09-25 09:00:00	0	8	2	0	1	10	2	34	11	0	0	47	26	4	15	0	0	45	14	58	1	0	0	73	175	760
2025-09-25 09:15:00	0	4	3	0	1	7	2	48	9	1	0	60	17	5	11	0	2	33	10	48	1	0	0	59	159	739
2025-09-25 09:30:00	0	8	3	0	0	11	1	28	9	0	0	38	14	5	8	0	1	27	9	55	2	0	0	66	142	690
2025-09-25 09:45:00	1	6	1	0	0	8	1	28	6	0	0	35	16	1	6	0	0	23	5	38	0	0	0	43	109	585
BREAK																										
2025-09-25 16:00:00	1	4	2	0	1	7	1	92	2	0	0	95	13	5	4	0	2	22	3	61	4	0	0	68	192	
2025-09-25 16:15:00	0	3	0	0	2	3	2	73	4	0	1	79	29	7	5	0	0	41	5	83	1	0	0	89	212	
2025-09-25 16:30:00	1	3	1	0	0	5	1	94	3	0	0	98	12	5	5	0	2	22	1	77	0	0	0	78	203	
2025-09-25 16:45:00	3	3	3	0	2	9	1	83	6	0	0	90	15	4	8	0	1	27	6	90	1	0	0	97	223	830
2025-09-25 17:00:00	1	2	2	0	2	5	1	95	5	0	0	101	24	14	9	0	4	47	5	86	2	0	0	93	246	884
2025-09-25 17:15:00	0	1	5	0	2	6	5	87	7	0	0	99	22	9	10	0	0	41	6	70	0	0	0	76	222	894
2025-09-25 17:30:00	2	3	2	0	2	7	4	81	4	0	0	89	11	3	11	0	2	25	3	78	3	0	0	84	205	896
2025-09-25 17:45:00	1	2	1	0	5	4	3	99	8	0	0	110	20	8	3	0	2	31	8	98	1	0	0	107	252	925
2025-09-25 18:00:00	1	2	4	0	3	7	2	75	6	0	1	83	9	7	11	0	3	27	5	73	0	0	0	78	195	874
2025-09-25 18:15:00	0	1	3	0	2	4	3	82	5	0	1	90	17	8	7	0	4	32	3	53	1	0	0	57	183	835
2025-09-25 18:30:00	0	2	3	0	3	5	1	99	7	0	0	107	10	5	4	0	2	19	4	65	2	0	0	71	202	832
2025-09-25 18:45:00	1	0	3	0	7	4	2	72	6	0	0	80	12	3	8	0	1	23	7	62	2	0	1	71	178	758
Grand Total	21	91	52	0	39	164	40	1510	189	1	7	1740	376	138	199	0	28	713	192	1590	39	0	1	1821	4438	-
Approach%	12.8%	55.5%	31.7%	0%	-	-	2.3%	86.8%	10.9%	0.1%	-	-	52.7%	19.4%	27.9%	0%	-	-	10.5%	87.3%	2.1%	0%	-	-	-	
Totals %	0.5%	2.1%	1.2%	0%	3.7%	3.7%	0.9%	34%	4.3%	0%	39.2%	39.2%	8.5%	3.1%	4.5%	0%	16.1%	16.1%	4.3%	35.8%	0.9%	0%	41%	41%	-	
Heavy	0	0	2	0	-	-	1	28	0	0	-	-	6	0	2	0	-	-	2	27	0	0	-	-	-	
Heavy %	0%	0%	3.8%	0%	-	-	2.5%	1.9%	0%	0%	-	-	1.6%	0%	1%	0%	-	-	1%	1.7%	0%	0%	-	-	-	
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Peak Hour: 08:15 AM - 09:15 AM Weather: Moderate Rain (18 °C)

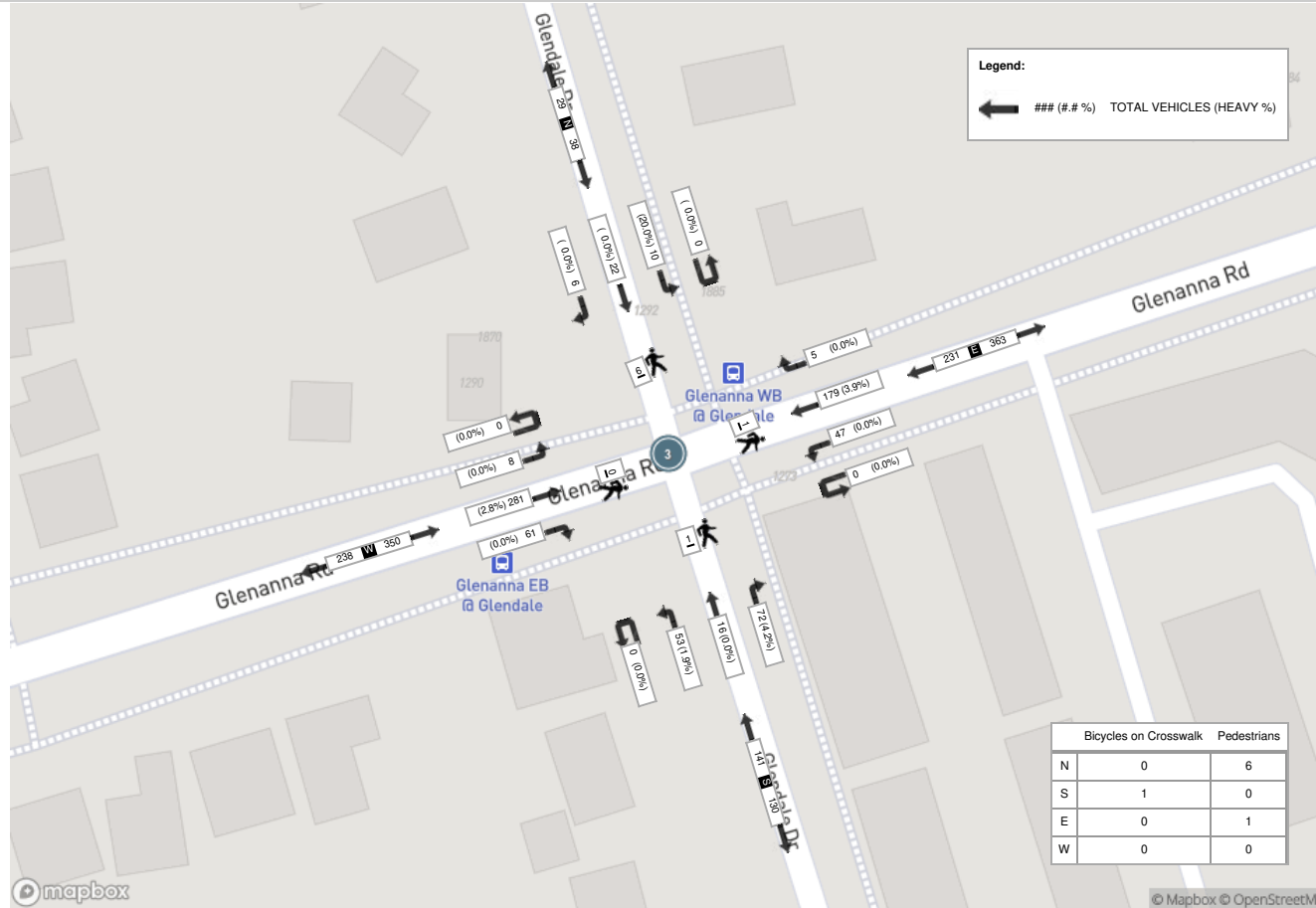
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	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-09-25 08:15:00	1	6	2	0	0	9	0	41	15	0	0	56	17	5	11	0	0	33	10	69	3	0	0	82	180
2025-09-25 08:30:00	2	7	1	0	3	10	2	46	10	0	0	58	14	2	18	0	0	34	15	73	1	0	0	89	191
2025-09-25 08:45:00	3	1	5	0	2	9	1	58	11	0	1	70	15	5	9	0	1	29	22	81	3	0	0	106	214
2025-09-25 09:00:00	0	8	2	0	1	10	2	34	11	0	0	47	26	4	15	0	0	45	14	58	1	0	0	73	175
Grand Total	6	22	10	0	6	38	5	179	47	0	1	231	72	16	53	0	1	141	61	281	8	0	0	350	760
Approach%	15.8%	57.9%	26.3%	0%	-	-	2.2%	77.5%	20.3%	0%	-	-	51.1%	11.3%	37.6%	0%	-	-	17.4%	80.3%	2.3%	0%	-	-	-
Totals %	0.8%	2.9%	1.3%	0%	5%	30.4%	0.7%	23.6%	6.2%	0%	30.4%	9.5%	2.1%	7%	0%	18.6%	8%	37%	1.1%	0%	46.1%	-			
PHF	0.5	0.69	0.5	0	0.95	0.83	0.63	0.77	0.78	0	0.83	0.69	0.8	0.74	0	0.78	0.69	0.87	0.67	0	0.83	0.89			
Heavy	0	0	2	0	2	7	0	7	0	0	7	3	0	1	0	4	0	8	0	0	8	21			
Heavy %	0%	0%	20%	0%	5.3%	3%	0%	3.9%	0%	0%	3%	4.2%	0%	1.9%	0%	2.8%	0%	2.8%	0%	0%	2.3%	2.8%			
Lights	6	22	8	0	36	172	5	172	47	0	224	69	16	52	0	137	61	272	8	0	341	738			
Lights %	100%	100%	80%	0%	94.7%	100%	100%	96.1%	100%	0%	97%	95.8%	100%	98.1%	0%	97.2%	100%	96.8%	100%	0%	97.4%	97.1%			
Single-Unit Trucks	0	0	0	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2			
Single-Unit Trucks %	0%	0%	0%	0%	0%	0.9%	0%	1.1%	0%	0%	0.9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.3%			
Buses	0	0	0	0	0	5	0	5	0	0	5	3	0	1	0	4	0	8	0	0	8	17			
Buses %	0%	0%	0%	0%	0%	2.2%	0%	2.8%	0%	0%	2.2%	4.2%	0%	1.9%	0%	2.8%	0%	2.8%	0%	0%	2.3%	2.2%			
Articulated Trucks	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
Articulated Trucks %	0%	0%	20%	0%	5.3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.3%			
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1			
Bicycles on Road %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.4%	0%	0%	0.3%	0.1%			
Pedestrians	-	-	-	-	6	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	
Pedestrians%	-	-	-	-	75%	-	-	-	-	-	12.5%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	12.5%	-	-	-	-	-	0%	-	



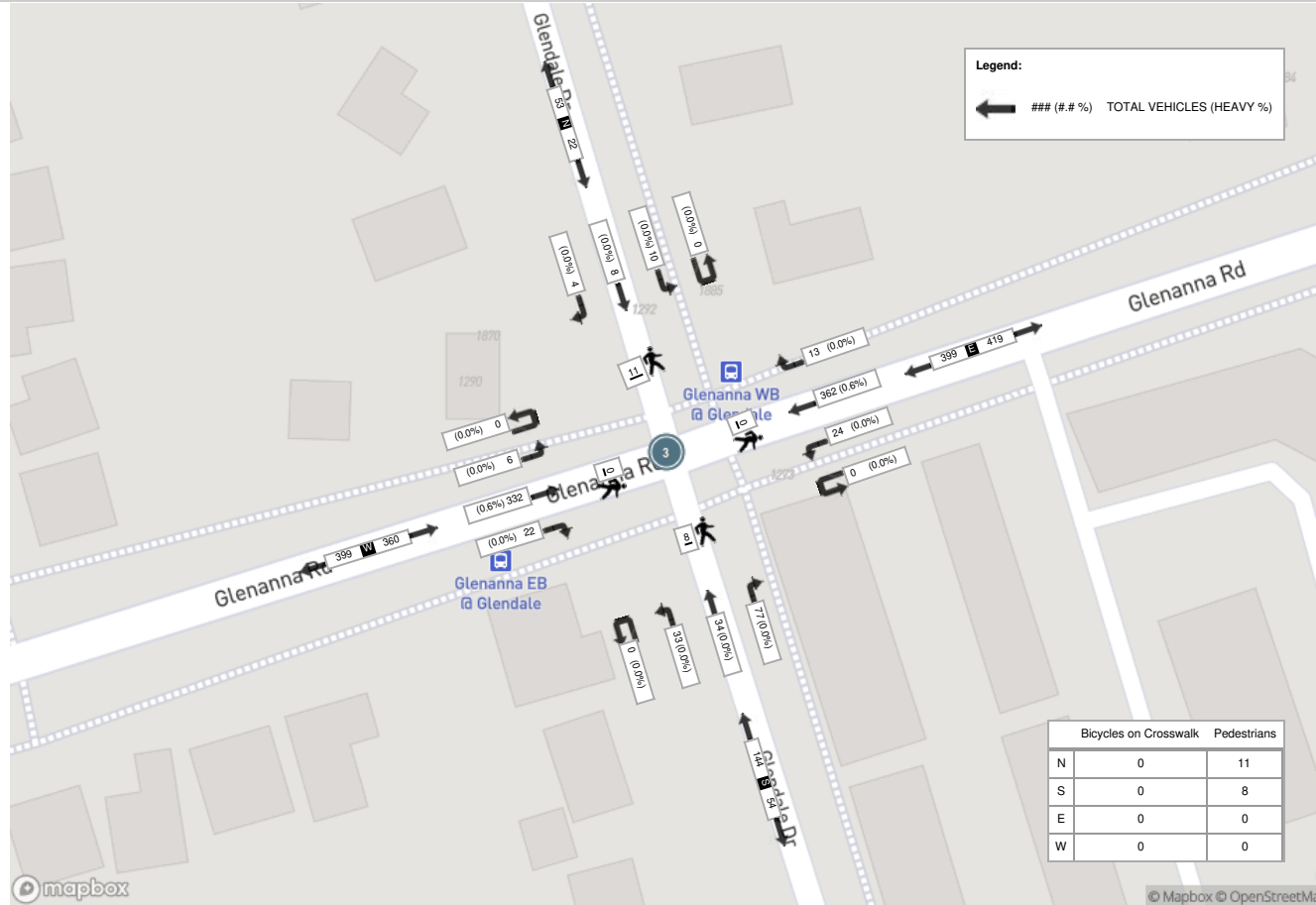
Peak Hour: 05:00 PM - 06:00 PM Weather: Mist (19 °C)

Start Time	N Approach GLENDALE DR						E Approach GLENANNA RD						S Approach GLENDALE DR						W Approach GLENANNA RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-09-25 17:00:00	1	2	2	0	2	5	1	95	5	0	0	101	24	14	9	0	4	47	5	86	2	0	0	93	246
2025-09-25 17:15:00	0	1	5	0	2	6	5	87	7	0	0	99	22	9	10	0	0	41	6	70	0	0	0	76	222
2025-09-25 17:30:00	2	3	2	0	2	7	4	81	4	0	0	89	11	3	11	0	2	25	3	78	3	0	0	84	205
2025-09-25 17:45:00	1	2	1	0	5	4	3	99	8	0	0	110	20	8	3	0	2	31	8	98	1	0	0	107	252
Grand Total	4	8	10	0	11	22	13	362	24	0	0	399	77	34	33	0	8	144	22	332	6	0	0	360	925
Approach%	18.2%	36.4%	45.5%	0%	-	-	3.3%	90.7%	6%	0%	-	-	53.5%	23.6%	22.9%	0%	-	-	6.1%	92.2%	1.7%	0%	-	-	-
Totals %	0.4%	0.9%	1.1%	0%	2.4%	2.4%	1.4%	39.1%	2.6%	0%	43.1%	43.1%	8.3%	3.7%	3.6%	0%	15.6%	15.6%	2.4%	35.9%	0.6%	0%	38.9%	38.9%	-
PHF	0.5	0.67	0.5	0	0.79	0.79	0.65	0.91	0.75	0	0.91	0.91	0.8	0.61	0.75	0	0.77	0.77	0.69	0.85	0.5	0	0.84	0.84	0.92
Heavy	0	0	0	0	0	0	0	2	0	0	2	2	0	0	0	0	0	0	0	2	0	0	2	2	4
Heavy %	0%	0%	0%	0%	0%	0%	0%	0.6%	0%	0%	0.5%	0.5%	0%	0%	0%	0%	0%	0%	0%	0.6%	0%	0%	0.6%	0.6%	0.4%
Lights	4	8	10	0	22	22	12	360	24	0	396	396	77	34	31	0	142	142	22	330	6	0	358	358	918
Lights %	100%	100%	100%	0%	100%	100%	92.3%	99.4%	100%	0%	99.2%	99.2%	100%	100%	93.9%	0%	98.6%	98.6%	100%	99.4%	100%	0%	99.4%	99.4%	99.2%
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Buses	0	0	0	0	0	0	0	2	0	0	2	2	0	0	0	0	0	0	0	2	0	0	2	2	4
Buses %	0%	0%	0%	0%	0%	0%	0%	0.6%	0%	0%	0.5%	0.5%	0%	0%	0%	0%	0%	0%	0%	0.6%	0%	0%	0.6%	0.6%	0.4%
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bicycles on Road	0	0	0	0	0	0	1	0	0	0	1	1	0	0	2	0	2	2	0	0	0	0	0	0	3
Bicycles on Road %	0%	0%	0%	0%	0%	0%	7.7%	0%	0%	0%	0.3%	0.3%	0%	0%	6.1%	0%	1.4%	1.4%	0%	0%	0%	0%	0%	0%	0.3%
Pedestrians	-	-	-	-	11	-	-	-	-	-	0	-	-	-	-	-	8	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	57.9%	-	-	-	-	-	0%	-	-	-	-	-	42.1%	-	-	-	-	-	0%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Peak Hour: 08:15 AM - 09:15 AM Weather: Moderate Rain (18 °C)



Peak Hour: 05:00 PM - 06:00 PM Weather: Mist (19 °C)



ORNAMENT - Sound Power Emissions & Source Heights

Ontario Road Noise Analysis Method for Environment and Transportation

Road Segment ID	Roadway Name	Link Description	Speed (kph)	Period (h)	Total Traffic Volumes	Auto %	Med %	Hvy %	Auto	Med	Heavy	Road Gradient (%)	PWL (dBA)	Source Height, s (m)
LiverpoolRd_avg	Liverpool Road	Daytime Impacts	50	16	18000	93.0%	4.9%	2.1%	16740	882	378	2.2	83.3	1.2
		Nighttime Impacts	50	8	2000	93.0%	4.9%	2.1%	1860	98	42	2.2	76.7	1.2
KingstonRd_avg	Kingston Road	Daytime Impacts	60	16	31500	92.0%	5.6%	2.4%	28980	1764	756	0	86.9	1.2
		Nighttime Impacts	60	8	3500	92.0%	5.6%	2.4%	3220	196	84	0	80.4	1.2
GlendaleDr_avg	Glendale Drive	Daytime Impacts	40	16	1835	99.6%	0.4%	0.0%	1828	7	0	0	65.3	0.5
		Nighttime Impacts	40	8	204	99.6%	0.4%	0.0%	203	1	0	0	58.8	0.5
GlenannaRd_avg	Glenanna Road	Daytime Impacts	50	16	8836	96.9%	3.0%	0.1%	8562	265	9	0	76.3	0.6
		Nighttime Impacts	50	8	982	96.9%	3.0%	0.1%	951	29	1	0	69.7	0.6



Appendix C STAMSON Output File

Environmental Noise Assessment

1884 Liverpool Road, Pickering

Louisville Homes Limited

SLR Project No.: 241.031900.00001

February 12, 2026

Filename: liver.te Time Period: 16 hours
Description:

Road data, segment # 1: Glenanna Rd

Car traffic volume : 8562 veh/TimePeriod
Medium truck volume : 265 veh/TimePeriod
Heavy truck volume : 9 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Glenanna Rd

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 14.60 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Liverpool Rd

Car traffic volume : 16740 veh/TimePeriod
Medium truck volume : 882 veh/TimePeriod
Heavy truck volume : 378 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Liverpool Rd

Angle1 Angle2 : 0.00 deg 19.13 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 113.97 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 3: Glandale Dr

Car traffic volume : 1828 veh/TimePeriod
Medium truck volume : 7 veh/TimePeriod
Heavy truck volume : 0 veh/TimePeriod
Posted speed limit : 40 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: Glandale Dr

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 19.06 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Glenanna Rd

Source height = 0.56 m

ROAD (0.00 + 61.32 + 0.00) = 61.32 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	61.20	0.00	0.12	0.00	0.00	0.00	0.00	61.32

Segment Leq : 61.32 dBA

Results segment # 2: Liverpool Rd

Source height = 1.20 m

ROAD (0.00 + 49.66 + 0.00) = 49.66 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	19	0.00	68.20	0.00	-8.81	-9.74	0.00	0.00	0.00	49.66

Segment Leq : 49.66 dBA

Results segment # 3: Glandale Dr

Source height = 0.50 m





ROAD (0.00 + 49.18 + 0.00) = 49.18 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	50.22	0.00	-1.04	0.00	0.00	0.00	0.00	49.18

Segment Leq : 49.18 dBA

Total Leq All Segments: 61.85 dBA


TOTAL Leq FROM ALL SOURCES: 61.85

Legend	
	Proposed Development - Building
	Project Property Line (approx.)
	Line Source (Roadway)
	Outdoor Assessment Location

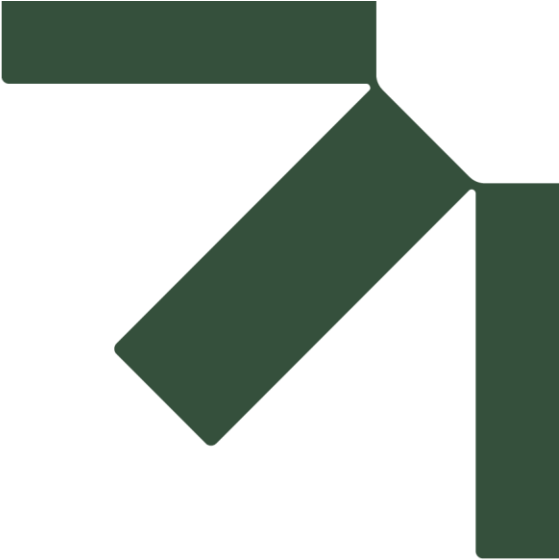


Background Aerial Imagery from Microsoft Bing Satellite – QGIS Version 3.38

LOUISVILLE HOMES LIMITED
1884 LIVERPOOL ROAD, PICKERING
STAMSON VALIDATION – COMPARISON OF CADNA/A AND STAMSON OUTPUT

True North 	Scale: 1:250	METRES
	Date: Feb. 12, 2026	Rev. 0
	Project No. 241.031900.00001	Figure No. C1





Appendix D Ventilation, Warning Clause and Mitigation Summary

Environmental Noise Assessment

1884 Liverpool Road, Pickering

Louisville Homes Limited

SLR Project No.: 241.031900.00001

February 12, 2026

Appendix D Ventilation, Warning Clause and Mitigation Summary

The following warning clauses are recommended for inclusion in agreements registered on Title for the residential units and included in all agreements of purchase and sale or lease, and all rental agreements.

A summary of the warning clause, ventilation and mitigation recommendations is included in Table D.1.

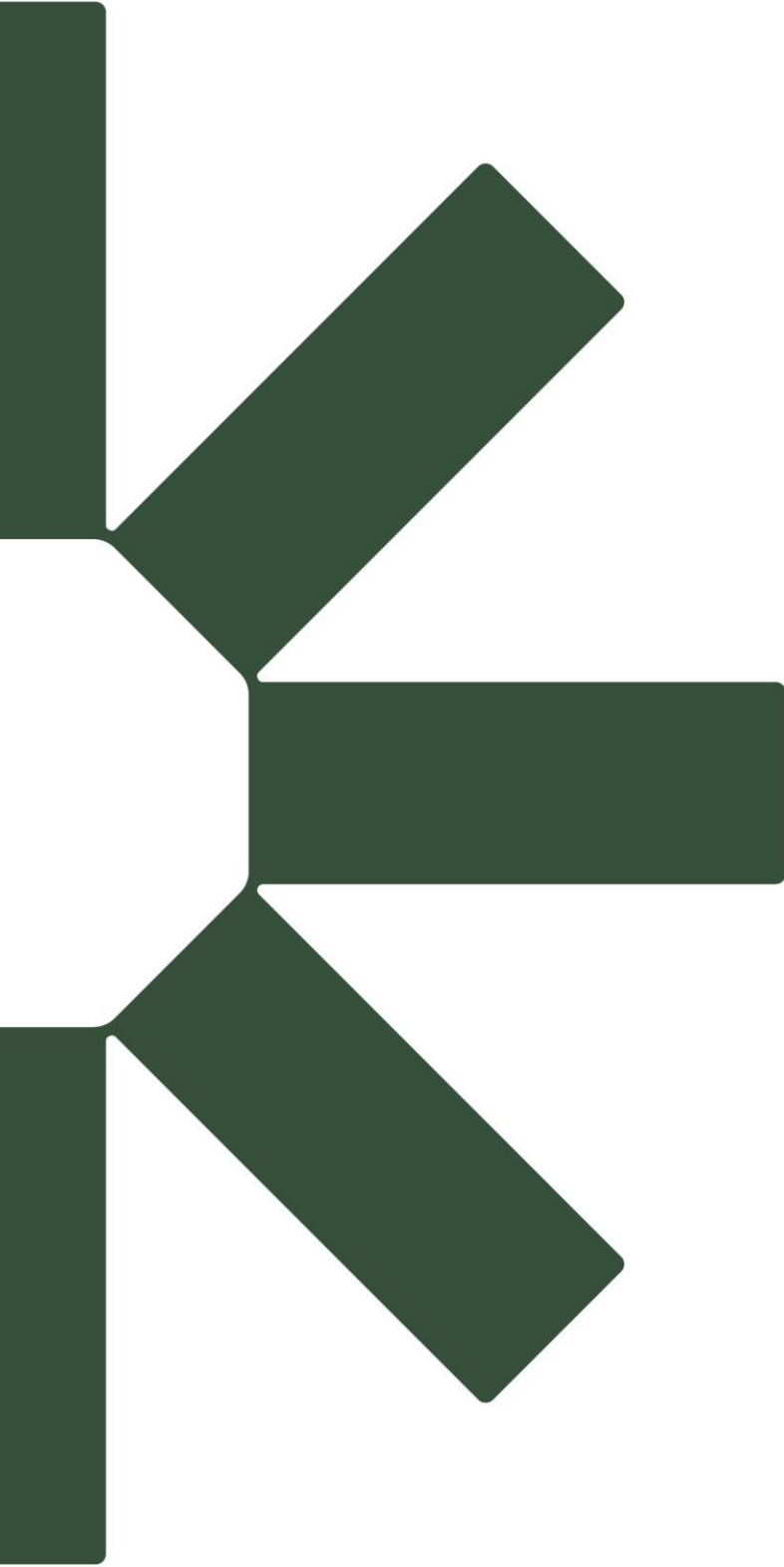
MECP Type C: “This dwelling unit has been designed with the provision for adding central air conditioning at the occupant’s discretion. Installation of central air conditioning by the occupant in low and medium density developments will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment.”

MECP 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.”

Table D.1: Summary of Ventilation, Warning Clause and Mitigation Requirements

Development Location/Building ^[1]	Barrier Requirement	Ventilation Requirement	Warning Clause Requirement
Block 1	None	Provision for Air Conditioning	Type C
Block 2	None	Provision for Air Conditioning	Type C
Block 3	None	Central Air Conditioning	Type D
Notes: [1] Block identifiers are included for reference on Figure 2, Figure 3 and Figure 4			





Making Sustainability Happen