Environmental Noise and Vibration Assessment

494 Darcy Drive

Southwest Investments

Prepared by:

SLR Consulting (Canada) Ltd.

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

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1.0 Introduction

SLR Consulting Ltd. (SLR) was retained by Southwest Investments to conduct an environmental noise and vibration assessment for proposed residential development to be located at 494 Darcy Drive in the Municipality of Strathroy-Caradoc, Ontario ("the Project"). This assessment has been completed in support of a development application to the Municipality of Strathroy-Caradoc.

1.1 Focus of Report

Potential environmental noise and vibration impacts from the following sources have been considered in this report:

- Industrial/commercial/retail facilities; and
- Transportation-related noise and vibration (road, rail and aircraft traffic).

In this assessment, SLR has reviewed the surrounding sources in the area with respect to the following guidelines:

- The Provincial Policy Statement;
- Ministry of Environment, Conservation and Parks (MECP) D-Series Land Use Compatibility Guidelines;
- MECP Publication NPC-300 - Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning; and
- MECP Publication NPC-207 – Impulse Vibration in Residential Buildings (draft).

This report identifies existing and potential land use compatibility issues, and evaluates options to achieve appropriate design, buffering and/or separation distances between the proposed sensitive land uses, including residential uses and nearby commercial/retail/industrial facilities. Recommended measures intended to eliminate or mitigate adverse impacts are provided.

1.2 Proposed Development

The Project is located at 494 Darcy Drive (Adelaide Con 3 Ser Pt Lot 22, RP 33R19421 Part 2), Municipality of Strathroy-Caradoc, County of Middlesex.

The site of the Project is currently vacant land zoned for Corridor Commercial (CC) land uses, according to the Township of Adelaide Metcalfe Comprehensive Zoning By-Law No. 34-2007. A context plan of the Project site and surrounding area is provided in Figure 1, and the building numbers for the townhouse units have been added by SLR for descriptive purposes. The site plan is provided for reference in Appendix A.

The Project consists of 10 three-storey townhouses with private rear yard amenity spaces. Access will be from Darcy Drive at the southeast corner of the site.

1.3 Description of Surrounding Area

The Project is bounded by the following:

- Existing corridor commercial land uses, with Second Street beyond, to the north;
- Existing low density residential developments along Darcy Drive and beyond to the east;

- Corridor commercial/retail land uses and residential development to the south; and
- Corridor commercial/retail land uses with Centre Road and agricultural land beyond to the west.

The lands immediately west and north of the Project are designed as corridor commercial (CC) zones based on the Township of Adelaide Metcalfe Comprehensive Zoning By-Law No. 34-2007. Based on zoning information, the site is not shown on the Municipality of Strathroy-Caradoc By-Law No. 43-08 maps, which show residential areas immediately east of the site. Zoning maps for the site and surrounding area for both the Township of Adelaide Metcalfe and Strathroy-Caradoc are provided for reference in Appendix B.

The topography of the Project site immediate surrounding area is considered to be relatively flat, with a minor increase in grade moving northward to Second Street.

2.0 Assessment Framework

The requirements of Ontario's planning regime are organized such that generic policy is informed by specific policy, guidance, and legislation, as follows:

- The Provincial Policy Statement ("PPS" sets out goals – making sure adjacent land uses are compatible from a health and safety perspective and are appropriately buffered; then
- The Ministry of the Environment, Conservation & Parks ("MECP") D-series of guidelines set out methods to determine if assessments are required (areas of influence, recommended separation distances, and the need for additional studies); then
- MECP and Municipal regulations, policies, standards and guidelines then set out the requirements of additional air quality, noise and vibration studies and the applicable policies, standards, guidelines and objectives to ensure that adverse effects do not occur.

These are discussed further in the following subsections.

2.1 Provincial Policy Statement

The PPS "provides policy direction on matters of provincial interest related to land use planning and development. As a key part of Ontario's policy-led planning system, the Provincial Policy Statement sets the policy foundation for regulating the development and use of land. It also supports the provincial goal to enhance the quality of life for all Ontarians."

The PPS is a generic document, providing a consolidated statement of the government's policies on land use planning and is issued under section 3 of the Planning Act. Municipalities are the primary implementers of the PPS through policies in their local official plans, zoning by-laws and other planning related decisions. The current 2024 PPS came into effect on October 20, 2024. Policy direction concerning land use compatibility is provided in Section 1.2.6 of the PPS.

From the current 2024 version:

> "3.5 Land Use Compatibility
>
> 1. Major facilities and sensitive land uses shall be planned and developed to avoid, or if avoidance is not possible, minimize and mitigate any potential adverse effects from odour, noise and other contaminants, minimize risk to public health and safety, and to ensure the long-term operational and economic viability of major facilities in accordance with provincial guidelines, standards and procedures.
>
> 2. Where avoidance is not possible in accordance with policy 3.5.1, planning authorities shall protect the long-term viability of existing or planned industrial, manufacturing or other major facilities that are vulnerable to encroachment by ensuring that the planning and development of proposed adjacent sensitive land uses is only permitted if potential adverse affects to the proposed sensitive land use are minimized and mitigated, and potential impacts to industrial, manufacturing or other major facilities are minimized and mitigated in accordance with provincial guidelines, standards and procedures."

The goals of the PPS are implemented through Municipal and Provincial policies, as discussed below. Provided the Municipal and Provincial policies, guidelines, standards and procedures are met, the requirements of the PPS will be met.

2.2 D-Series of Guidelines

The D-series of guidelines were developed by the MECP in 1995 as a means to assess recommended separation distances and other control measures for land use planning proposals in an effort to prevent or minimize 'adverse effects' from the encroachment of incompatible land uses where a facility either exists or is proposed. D-series guidelines address sources including sewage treatment (Guideline D-2), gas and oil pipelines (Guideline D3), landfills (Guideline D-4), water services (Guideline D-5) and industries (Guideline D-6).

For this project, the applicable guideline is Guideline D-6 - *Compatibility between Industrial Facilities and Sensitive Land Uses*. The guideline specifically addresses issues of air quality, odour, dust, noise and litter.

Adverse effect is a term defined in the Environmental Protection Act and "means one or more of:

- impairment of the quality of the natural environment for any use that can be made of it,
- injury or damage to property or to plant or animal life,
- harm or material discomfort to any person,
- an adverse effect on the health of any person,
- impairment of the safety of any person,
- rendering any property or plant or animal life unfit for human use,
- loss of enjoyment of normal use of property, and
- interference with the normal conduct of business".

To minimize the potential to cause an adverse effect, areas of influence and recommended minimum setback distances are included within the guidelines. The areas of influence and recommended separation distances from the guidelines are provided in Table 1.

Table 1: Guideline D-6 - Potential Influence Areas and Recommended Minimum Setback Distances for Industrial Land Uses.

Industry Classification	Area of Influence	Recommended Minimum Setback Distance
Class I – Light Industrial	70 m	20 m
Class II – Medium Industrial	300 m	70 m
Class III – Heavy Industrial	1000 m	300 m

Industrial categorization criteria are supplied in Guideline D-6-2 and are shown in Table 2. The areas of influence around the Project are illustrated in Figure 3.

2.2.1 Assessment Requirements

Guideline D-6 requires that studies be conducted to assess impacts where sensitive land uses are proposed within the potential area of influence of an industrial facility. This report is intended to fulfill this requirement.

The D-series guidelines reference previous versions of the air quality regulation (Regulation 346) and noise guidelines (Publications NPC-205 and LU-131). However, the D-Series of guidelines are still in force, represent current MECP policy, and are specifically referenced in numerous other current MECP policies. In applying the D-series guidelines, the current policies, regulations, standards and guidelines have been used (e.g., Publication NPC-300).

2.2.2 Requirements for Minimum Separation Distances

Guideline D-6 also *recommends* that no sensitive land use be placed within the Recommended Minimum Separation Distance. However, it should be noted that this is a recommendation only. Section 4.10 of the Guideline allows for development within the separation distance, in cases of redevelopment, infilling, and transitions to mixed-use, provided that the appropriate studies are conducted and that the relevant air quality and noise guidelines are met.

Table 2: Guideline D-6 - Industrial Categorization Criteria

Category	Outputs	Scale	Process	Operations / Intensity	Possible Examples
Class I Light Industry	• Noise: Sound not audible off-property • Dust: Infrequent and not intense • Odour: Infrequent and not intense • Vibration: No ground-borne vibration on plant property	• No outside storage • Small-scale plant or scale is irrelevant in relation to all other criteria for this Class	• Self-contained plant or building which produces/ stores a packaged product • Low probability of fugitive emissions	• Daytime operations only • Infrequent movement of products and/ or heavy trucks	• Electronics manufacturing and repair • Furniture repair and refinishing • Beverage bottling • Auto parts supply • Packaging and crafting services

Category	Outputs	Scale	Process	Operations / Intensity	Possible Examples
					• Distribution of dairy products • Laundry and linen supply
Class II Medium Industry	• Noise: Sound occasionally heard off-property • Dust: Frequent and occasionally intense • Odour: Frequent and occasionally intense • Vibration: Possible ground-borne vibration, but cannot be perceived off-property	• Outside storage permitted • Medium level of production allowed	• Open process • Periodic outputs of minor annoyance • Low probability of fugitive emissions	• Shift operations permitted • Frequent movements of products and/ or heavy trucks with the majority of movements during daytime hours	• Magazine printing • Paint spray booths • Metal command • Electrical production • Manufacturing of dairy products • Dry cleaning services • Feed packing plants

Category	Outputs	Scale	Process	Operations / Intensity	Possible Examples
Class III Heavy Industry	• Noise: Sound frequently audible off property • Dust: Persistent and/ or intense • Odour: Persistent and/ or intense • Vibration: Ground-borne vibration can frequently be perceived off-property	• Outside storage of raw and finished products • Large production levels	• Open process • Frequent outputs of major annoyances • High probability of fugitive emissions	• Continuous movement of products and employees • Daily shift operations permitted	• Paint and varnish manufacturing • Organic chemical manufacturing • Breweries • Solvent recovery plants • Soaps and detergent manufacturing • Metal refining and manufacturing

3.0 Description of Nearby Industries

The D-6 land use compatibility guideline setback distances for the Project are shown in Figure 3.

The lands surrounding the Project are generally commercial/retail to the south, west, and north, with some nearby industries also located to the west and north. SLR staff conducted a site visit to the Project site and these surrounding areas on January 13, 2022 to investigate potential sources of noise and vibration, with a follow up review of imagery in April 2025.

The closest commercial/retail facilities located in proximity to the Project are considered Class I Light Industries based on the D-6 guidelines. Several of these facilities are located within the 70 m area of influence and have therefore been assessed in detail for this project.

Two facilities that could be classified as Class II Medium Industries have been identified within the 300 m of area influence based on the D-6 guidelines. One of these facilities is located north of the Project, significantly closer to existing residences along Darcy Drive, and one is located west of the Project at a similar setback distance to existing residences along Charles Boulevard to the south.

No Class III industries were identified within a 1000 m setback distance from the Project without significantly closer existing noise-sensitive receptors/ residences. Therefore, no Class III industries have been considered further in this assessment.

No sources of vibration with the potential to impact the Project were identified during the site visit or imagery review.

The commercial/retail facilities and industries included in this assessment are described in further detail in the following subsections.

3.1 Dale Wurfel Chrysler Dodge Jeep Limited

Address:	28478 Centre Road, Strathroy, ON
Distance to Project:	Shared property line with Project
D-6 Classification:	Class I light industry

Dale Wurfel Chrysler Dodge Jeep Limited is a vehicle dealership with an on-site service centre. Based on previous SLR experience with similar facilities, potential noise sources of interest may include HVAC equipment and breakout noise from open bay doors due to automotive maintenance activities, such as use of impact wrenches and compressed air.

Based on the nature of its operations, it is considered a Class I light industry according to the D-6 guidelines. The Project is located within the 70 m area of influence, and therefore further analysis of the sources are warranted and discussed further in Section 4 of this report.

3.2 Moffatt & Powell RONA Strathroy

Address:	28460 Centre Road, Strathroy, ON
Distance to Project:	Shared property line with Project
D-6 Classification:	Class I light industry

Moffatt & Powell RONA Strathroy is a home goods and improvements store, with a rear outdoor storage, delivery and material pick-up area. Based on previous SLR experience with similar facilities, observations during the site visit by SLR staff on January 13, 2022 and discussions with facility staff, potential noise sources of interest may include delivery trucks, movement of forklifts in the outdoor storage area, and HVAC-related equipment.

Based on the nature of its operations, it is considered a Class I light industry according to the D-6 guidelines. The Project is located within the 70 m area of influence, and therefore further analysis of the sources are warranted and discussed further in Section 4 of this report.

3.3 Ontario Provincial Police - Middlesex

Address:	28444 Centre Road, Strathroy, ON
Distance to Project:	Shared property line with Project
D-6 Classification:	Class I light industry

The Ontario Provincial Police – Middlesex building is a police station with a small outdoor parking lot and vehicle garage. Based on previous SLR experience with similar facilities, potential sources of noise include HVAC and operation of sirens associated with emergency vehicles.

Based on the nature of its operations, it is considered a Class I light industry according to the D-6 guidelines. The Project is located within the 70 m area of influence, but the facility has no anticipated sources of noise that require assessment. Notably, operation of auditory signalling devices such as blowing horns or sirens testing are not in operation at this facility and are normally addressed in a qualitative manner in municipal by-laws. Therefore, this facility has not been considered further in the assessment.

3.4 Great Floors Strathroy and NAPA Auto Parts – Napa Strathroy

Address:	28420 Centre Road, Strathroy, ON
Distance to Project:	Shared property line with Project
D-6 Classification:	Class I light industry

Great Floors Strathroy (west) and NAPA Auto Parts – NAPA Strathroy (east) share a building on the 28420 Centre Road property. Based on previous SLR experience with similar facilities and observations obtained during the site visit on January 13, 2022, potential sources of noise include delivery trucks and HVAC-related equipment.

Based on the nature of their operations, these facilities considered a Class I light industries according to the D-6 guidelines. The Project is located within the 70 m area of influence, and therefore further analysis of the sources are warranted and discussed further in Section 4 of this report.

3.5 Warehouse and Car Detailing

Address:	28412 Centre Road, Strathroy, ON
Distance to Project:	Shared property line with Project
D-6 Classification:	Class I light industry

Two operations are started operation since the original SLR site visit on January 13, 2022. The northern building on the lot is a car detailing business and the southern building is now being used for warehouse operations. Based on previous SLR experience with similar facilities, potential sources of noise include vacuum operations and delivery trucks.

Based on the nature of their operations, these facilities considered a Class I light industries according to the D-6 guidelines. The Project is located within the 70 m area of influence, and therefore further analysis of the sources are warranted and discussed further in Section 4 of this report.

3.6 Strathroy Home Hardware Building Centre

Address:	28390 Centre Road, Strathroy, ON
Distance to Project:	Shared property line with Project
D-6 Classification:	Class I light industry

Strathroy Home Hardware Building Centre is a home goods and improvements store, with a rear outdoor storage, delivery and material pick-up area. Based on previous SLR experience with similar facilities, observations during the site visit by SLR staff on January 13, 2022 and discussions with facility staff, potential noise sources of interest may include delivery trucks, movement of forklifts in the outdoor storage area, and HVAC-related equipment.

Based on the nature of its operations, it is considered a Class I light industry according to the D-6 guidelines. The Project is located within the 70 m area of influence, and therefore further analysis of the sources are warranted and discussed further in Section 4 of this report.

3.7 Larry MacDonald Chevrolet Buick GMC Ltd.

Address:	28380 Centre Road, Strathroy, ON
Distance to Project:	Shared property line with Project
D-6 Classification:	Class I light industry

Larry MacDonald Chevrolet Buick GMC Ltd. is a vehicle dealership with an on-site service centre. Based on previous SLR experience with similar facilities, potential noise sources of interest may include HVAC equipment and breakout noise from open bay doors due to automotive maintenance activities, such as use of impact wrenches and compressed air.

Based on the nature of its operations, it is considered a Class I light industry according to the D-6 guidelines. The Project is located within the 70 m area of influence, and therefore further analysis of the sources are warranted and discussed further in Section 4 of this report.

3.8 Cuddy Farms

Address:	28429 Centre Road, Strathroy, ON
Distance to Project:	200 m
D-6 Classification:	Class II medium industry

Cuddy Farms is a facility that produces and delivers commercial turkey eggs and poultry products. Based on previous SLR experience with similar facilities, potential noise sources of interest may include HVAC equipment, delivery vehicle movements, operation of refrigeration units associated with delivery vehicles, and emergency generator equipment.

Based on the nature of its operations, it is considered a Class II light industry according to the D-6 guidelines. The Project is located within the 300 m area of influence. Potential noise sensitive points of reception exist at a similar setback distance to the facility sources (i.e., the residences along Charles Boulevard to the south). Nonetheless, further analysis of the sources is warranted and discussed further in Section 4 of this report.

3.9 Commander Industries

Address:	16 Second Street, Strathroy, ON
Distance to Project:	135 m
D-6 Classification:	Class II medium industry

Commander Industries custom fabricates and installs aluminum and steel truck bodies. Based on the MECP Access Environment website, the facility does not currently hold an ECA and is not registered in the EASR.

Based on previous SLR experience with similar facilities, potential noises sources of interest may include HVAC equipment, paint booth exhaust and other process exhaust stacks, delivery vehicle movements, breakout noise from open bay doors associated with indoor aluminum/steel product fabrication, and intermittent vehicle movements related to outdoor storage. During the site visit by SLR staff on January 13, 2022, the facility was not audible at the Project site.

Based on the nature of its operations, it is considered a Class II medium industry according to the D-6 guidelines. The Project is located within the 300 m area of influence, but there are existing residences along Darcy Drive to the east located significantly closer to the facility and its potential noise sources. Because the facility would be required to comply with applicable guidelines at these closer and more exposed residences, inherently there should be no concerns with compliance at the Project site. Therefore, this facility has not been considered further in this report.

4.0 Stationary Source Noise Assessment

4.1 Assessment Guidelines

4.1.1 MECP Publication NPC-300 Guidelines for Stationary Noise

The applicable MECP noise guidelines for new sensitive land uses adjacent to existing industrial and commercial uses are provided in MECP Publication NPC-300. NPC-300 revokes and replaces the previous noise assessment guideline, Publication LU-131 and Publication NPC-205, which was previously used for assessing noise impacts as part of Certificates of Approval / Environmental Compliance Approvals granted by the MECP for industries.

The NPC-300 guideline sets out noise limits for two main types of noise sources:

- Non-impulsive, “continuous” noise sources such as ventilation fans, mechanical equipment, and vehicles while moving within the property boundary of an industry. Continuous noise is measured using 1-hour average sound exposures (L_{eq} (1-hr) values), in dBA; and
- Impulsive noise, which is a “banging” type noise characterized by rapid rise time and decay. Impulsive noise is measured using a logarithmic mean (average) level (L_{LM}) of the impulses in a one-hour period, in dBAI.

Furthermore, the guideline requires an assessment at, and provides separate guideline limits for:

- Outdoor points of reception (OPOR, e.g., back yards, communal outdoor amenity areas); and
- Façade points of reception such as planes of windows on outdoor façades which connect onto noise sensitive spaces such as living rooms, dens, eat-in kitchens, dining rooms and bedrooms.

The applicable noise limits at a point of reception are the higher of:

- The existing ambient sound level due to road traffic, or
- The exclusion limits set out in the guideline.

Table 3 set out the exclusion limits from the guideline for continuous, non-impulsive sounds in a Class 2 area.

Table 3: NPC-300 Exclusion Limits for Non-Impulsive Sounds (L_{eq} (1-hr), dBA)

Time of Day	Class 2 Area	
	Plane of Window of Noise Sensitive Spaces	Outdoor Points of Reception
Daytime (7 am to 7 pm)	50	50
Evening (7 pm to 11 pm)	50	45
Night-time (11 pm to 7 am)	45	n/a

Table 4 summarizes the exclusion limits from the guideline for impulsive sounds in a Class 2 area.

Table 4: NPC-300 Exclusion Limits for Impulsive Sounds (L_{LLM}, dBAI)

Time of Day	No. of Impulses in a 1-hour Period	Class 2 Area	
		Plane of Windows of Noise Sensitive Spaces	Outdoor Points of Reception
Daytime (7 am to 11 pm)	9 or more	50	50
	7 to 8	55	55
	5 to 6	60	60
	4	65	65
	3	70	70
	2	75	75
	1	80	80
Night-time (11 pm to 7 am)	9 or more	45	n/a
	7 to 8	50	n/a
	5 to 6	55	n/a
	4	60	n/a
	3	65	n/a
	2	70	n/a
	1	75	n/a
Notes: n/a – not applicable – outdoor points of reception are not considered to be noise sensitive during the night-time			

Sound level limits for assessing noise produced by emergency equipment operating in non-emergency situations, such as during routine monthly testing or maintenance, are 5 dB greater than the limits otherwise applicable to stationary sources. Additionally, emergency equipment operating in non-emergency situations is to be assessed independently of all other stationary noise sources.

4.1.2 Application of the NPC-300 Guidelines

The stationary noise guidelines apply only to residential land uses and to noise-sensitive commercial and institutional uses, as defined in NPC-300 (e.g., schools, daycares, hotels). For the Project, the stationary noise guidelines only apply to the residential portions of the development including individual residences and private amenity spaces. As no OPORs are currently outlined in the site plans, worst-case PORs were selected within 30 m of the development façades to confirm compliance regardless of potential yard layouts. Landscaped areas at grade are not considered OPORs, and balconies are expected to be less than 4 m in depth, if present.

Based on the nature of the area, the Class 2 area minimum exclusion sound level limits apply. The area is urban in nature and dominated by man-made sounds such as road traffic noise and “urban hum” during the daytime, with a low evening and night background sound level.

4.2 Sources of Interest

The nearby Class I and II industries identified with the potential to influence the Project were previously discussed in Section 3.0 of this report. The impacts of the surrounding noise sources associated with these industries were assessed based on site visit observations, discussions with facility staff, aerial imagery, and previous SLR experience with similar facilities.

Impacts of the significant sources of noise associated with the Class I and Class II facilities adjacent to the Project were conservatively assessed together, and included the following:

Dale Wurfel Dodge Jeep Limited

- Two (2) rooftop HVAC unit; and
- Breakout noise from seven (7) service centre bay doors (due to use of tools such as impact wrenches).

Based on posted hours of operation, the facility sources associated with the service centre bay doors are operational during daytime hours only.

Moffatt & Powell RONA Strathroy

- Two (2) ground level HVAC units;
- Forklift movements in the rear yard storage area;
- Medium truck movements associated with the facility-owned delivery trucks; and
- Heavy truck movements associated with deliveries to the facility.

Based on posted hours of operation and discussion with facility staff, truck movements only occur during daytime hours when the store is open. It is understood that limited forklift movements could occur during early morning hours between approximately 6:30 am and 7:00 am, shortly before the store opens for customers, but is otherwise limited to the store operating hours.

Great Floors Strathroy and NAPA Auto Parts – NAPA Strathroy

- Two (2) rooftop HVAC units;
- Medium truck movements associated with deliveries to NAPA Auto Parts; and
- Heavy truck movements associated with deliveries to Great Floors Strathroy.

Based on posted hours of operation for both facilities, delivery truck movements associated are only considered during daytime hours.

Warehouse and Car Detailing

- One car vacuum unit; and
- Heavy truck movements associated with deliveries to the facility.

It is assumed that the car detailing operations are limited to daytime only and the warehouse can operate any time of day.

Strathroy Home Hardware Building Centre

- Five (5) rooftop HVAC units;
- Medium truck movements associated with the facility-owned delivery trucks; and
- Heavy truck movements associated with deliveries to the facility.

Based on posted hours of operation and discussion with facility staff, truck movements are only possible during daytime hours when the store is open. It is understood that limited forklift movements could occur during early morning hours between approximately 6:30 am and 7:00 am, shortly before the store opens for customers.

Larry MacDonald Chevrolet Buick GMC

- Two (2) Rooftop HVAC units; and
- Breakout noise from service centre bay doors (due to use of tools such as impact wrenches).

Based on the posted service centre hours for the facility, breakout noise from the service centre bay doors is considered during daytime and evening hours only.

Cuddy Farms

Noise impacts associated with Cuddy Farms were assessed by considering the following significant sources:

- Idling refrigeration truck;
- Delivery truck traffic;
- Ten (10) Rooftop HVAC units; and
- Emergency generator testing.

The posted facility operations are during daytime hours only, but based on previous SLR experience, it is assumed that refrigerated delivery trucks could require access to the facility daytime, evening or nighttime hours. During the site visit by SLR personnel on January 13, 2022, one refrigerated truck was observed idling at the facility delivery area, and it is expected that heavy trucks are the predictable worst-case sources.

It is expected that emergency generator testing would take place during daytime hours only as is typical for these sources. The location of potential emergency generator noise sources (i.e., combustion exhaust, air intake/exhaust) were not visible from available imagery or from the roadway where observations were made by SLR staff.

4.3 Stationary Noise Source Modelling

Noise impacts from stationary sources were modelled using Cadna/A, a software implementation of the internationally recognized ISO-9613-2 (1996) environmental noise propagation algorithms. Cadna/A / ISO-9613 is the preferred noise model of the MECP. The ISO-9613 equations account for:

- Source to receiver geometry;
- Distance attenuation;
- Atmospheric absorption;
- Reflections off of the ground and ground absorption;
- Reflections off of vertical walls; and
- Screening effects of buildings, terrain, and purpose-built noise barriers (noise walls, berms, etc.).

The following additional parameters were used in the modelling, which are consistent with providing a conservative (predictable worst-case assessment of noise levels):

- Temperature: 10°C;
- Relative Humidity: 70%;
- Ground Absorption G: G = 0 (reflective ground) as default global parameter, with localized grassy areas modelled with G = 1.0 (absorptive ground);
- Reflection: An order of reflection of 2 was used (accounts for noise reflecting from walls);
- Wall Absorption Coefficients: Set to 0.21 or 0.37 (21% or 37% of energy is absorbed, 79% or 63% reflected, respectively); and
- Terrain: Relatively flat near the Project site.

Sound level data from the SLR historical sound level database and manufacturer's data was applied in the stationary noise modelling assessment. A summary of the sound levels used in the analysis and equipment operating conditions is included in Appendix C. All stationary sources modelled are shown in Figure 4.

The assessment is considered conservative as all stationary sources have been modelled to assess cumulative noise impacts during daytime, evening and night-time hours. NPC-300 only requires each stationary source to meet the guidelines individually. By showing compliance with all sources operating simultaneously, each individual facility will inherently meet the guidelines at the Project.

A Type E warning clause is required for these residential units. The warning clause requirements are included in Appendix F.

4.4 Assessment Results

The "building evaluation" feature of the Cadna/A was used to assess noise impacts on the proposed residential dwellings. This feature allows for noise levels to be predicted across the entire façade of a structure. OPORs were also assessed.

4.4.1 Class I and II Industries

4.4.1.1 Façade Sound Levels

A summary of predicted façade noise impacts from combined Class I and II industries for select worse-case residential units and facades within the Project are shown in Table 5. Other residential units and townhouse blocks are further set back from the sources and predicted sound levels are lower than those presented in Table 5. Figures 5, 6 and 7 show the predicted façade sound levels for daytime, evening and night-time periods at all Project façade locations.

Table 5: Summary of Stationary Source Façade Sound Levels

Residential Unit [1]	Worst-Case Predicted Stationary Source Sound Levels [2]			Meets NPC-300 Class 2 Criteria?
	L_{eq} Day (dBA)	L_{eq} Evening (dBA)	L_{eq} Night (dBA)	
Building 1	47	45	42	Yes
Building 2	42	41	38	Yes
Building 3	47	44	41	Yes
Building 4	44	42	38	Yes
Building 5	47	44	41	Yes
Building 6	43	41	37	Yes
Building 7	48	45	40	Yes
Building 8	41	40	34	Yes
Building 9	47	45	38	Yes
Building 10	43	42	35	Yes

Notes:
[1] Buildings are identified in Figure 2.
[2] Sound levels shown represent the calculated worst-case impact of the identified residential unit/block.

The modeling results show that the predicted sounds levels meet the applicable Class 2 guideline limits at all noise sensitive points of reception associated with the Project during daytime, evening and nighttime hours.

4.4.1.2 Outdoor Point of Reception Sound Levels

The predicted outdoor noise impacts from the stationary sources are summarized for select worst-case OPORs locations in Table 11. Figure 8 and Figure 9 show sound level contours (assessed at an evaluation height of 1.5 m above grade) for daytime and evening periods, respectively. All OPOR sound levels are predicted to be below the applicable Class 2 criteria of 50 dBA (day) and 45 dBA (evening) for OPORs.

Table 6: Summary of Stationary Source Outdoor Sound Levels

Assessment Location [1]	Description	Worst-Case Predicted Stationary Source Sound Levels		Meets NPC-300 Class 2 Criteria?
		L_{eq} Day (dBA)	L_{eq} Evening (dBA)	
OPOR 1	Building 9 – Rear Yard	45	44	Yes
OPOR 2	Building 5/7 – Rear Yard	46	42	Yes
OPOR 3	Building 3 – Side Yard	46	44	Yes
OPOR 4	Building 1 – Side Yard	47	45	Yes
Notes: [1] OPOR locations are identified on Figure 8 and Figure 9.				

4.4.2 Emergency Equipment

A preliminary assessment was completed to evaluate compliance with potential emergency generator testing at Cuddy Farms. It was conservatively assumed that sources associated with an emergency generator (i.e., air intake, air exhaust and combustion exhaust) would be located on the east side of the facility, with a direct line of sight to the Project. It was further conservatively assumed that a generator could operate for a full hour during daytime hours, while undergoing routine monthly testing.

The maximum sound power level of an emergency generator operating under these conditions that would still result in compliance at the Project site would be approximately 110 dBA. This is considered high, and it is likely that sources associated with emergency generator testing would have a lower sound power level than 110 dBA. Furthermore, it is likely the sources would be less exposed to the Project than the conservative source locations considered in this assessment.

Therefore, adverse noise impacts due to possible emergency generator testing at Cuddy Farms are not anticipated for the Project.

4.4.3 Impulsive Sources of Sound

During the SLR site visit conducted on January 13, 2022, no observable sources of impulsive sounds were found. It is understood that some home renovation centres can potentially have sources of impulsive sound due to improper handling of products (the way they are moved or placed). Sudden “dropping” of product can cause impulsive sound levels. SLR’s did not observe these incidents occurring at either Moffatt & Powell RONA Strathroy and Strathroy Home Hardware Building Centre.

The proposed development will be closer to Moffatt & Powell RONA Strathroy than existing residences along Darcy Drive. Modelling the potential impulsive sound levels from Moffatt & Powell RONA Strathroy at the residences along Darcy drive results in approximately 55 dBA. Therefore, frequent impulsive operations at Moffatt & Powell RONA Strathroy are not anticipated to maintain compliance with the applicable limits. The maximum predicted impulsive noise level at the proposed development from the same operations is approximately 58 dBA. The maximum impulses to maintain compliance with the applicable limits is a maximum of 4 (night-time) to 6 (daytime) impulses per hours at the proposed development. This is reasonable as not every movement of the forklift to load or unload products will cause an impulse noise and it is expected that only 1 truck will arrive or depart the site within a 1-hour period.

In addition, as stated in Section 4.3, a Type E warning clause is also required. This clause will warn potential residences that surrounding facilities may cause noise that may audible at their residences at times.

5.0 Transportation Noise Assessment

5.1 Assessment Guidelines

5.1.1 MECP Publication NPC-300 Guidelines for Transportation Noise

Noise Sensitive Developments

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 7 to Table 10.

Table 10 summarize the applicable surface transportation (road) criteria limits.

Location Specific Criteria

Table 7 summarizes criteria in terms of energy equivalent sound exposure (L_{eq}) levels 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 7: MECP Publication NPC-300 Sound Level Criteria for Road Traffic

Type of Space	Time Period	Equivalent Sound Exposure Level - L_{eq} (dBA)	Assessment Location
		Road	
Outdoor Living Area (OLA)	Daytime (0700-2300h)	55	Outdoors
Living/Dining Rooms	Daytime (0700-2300h)	45	Indoors [1]
	Night-time (2300-0700h)	45	Indoors [1]
Sleeping Quarters	Daytime (0700-2300h)	45	Indoors [1]
	Night-time (2300-0700h)	40	Indoors [1]
Notes: [1] An assessment of indoor noise levels is required only if the criteria in Table 10 are exceeded.			

Outdoor Amenity Areas

Table 8 summarizes the noise mitigation requirements for outdoor amenity areas ("Outdoor Living Areas" or "OLAs") with respect to road traffic noise.

Table 8: MECP Publication NPC-300 Outdoor Living Area Mitigation Requirements

Time Period	Equivalent Sound Level in Outdoor Living Area (dBA)	Mitigation Requirements
Daytime (0700-2300h)	≤ 55	None
	56 to 60 incl.	Noise barrier **OR** Warning Clause A
	> 60	Noise barrier to reduce noise to 55 dBA **OR** Noise barrier to reduce noise to 60 dBA and Warning Clause B

Ventilation and Warning Clause Requirements

Table 9 summarizes requirements for ventilation where windows would potentially have to remain closed as a means of noise control. Despite implementation of ventilation measures where required, if sound exposure levels exceed the guideline limits in Table 7, warning clauses advising future occupants of the potential excesses are required. Warning clauses also apply to OLAs.

Table 9: MECP Publication NPC-300 Ventilation & Warning Clause Requirements

Assessment Location	Time Period	Energy Equivalent Sound Exposure Level - Leq (dBA)	Ventilation and Warning Clause Requirements
		Road	
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 /provision to add air conditioning + Type C Warning Clause
		> 65	Central Air Conditioning + Type D Warning Clause
	Night-time (2300-0700h)	< 50	None
		51 to 60 incl.	Forced Air Heating/ provision to add air conditioning + Type C Warning Clause
		> 60	Central Air Conditioning + Type D Warning Clause

Building Shell Requirements

Table 10 provides sound level thresholds which if exceeded, require the building shell and components (i.e., wall, windows) to be designed and selected accordingly to ensure that the indoor sound criteria are met.

Table 10: MECP Publication NPC-300 Building Component Requirements

Assessment Location	Time Period	Energy Equivalent Sound Exposure Level - L_{eq} (dBA)	Component Requirements
		Road	
Plane of Window	Daytime (0700-2300h)	> 65	Designed/Selected to Meet Indoor Requirements
	Night-time (2300-0700h)	> 60	

5.2 Traffic Data and Future Projections

5.2.1 Roadway Traffic Data

Average traffic count data from year 2021 were obtained from Middlesex County for Centre Road between County Road #39 to the south and County Road #22 to the north. Future average annual daily traffic (AADT) volumes were obtained by projecting the average traffic count from year 2021 to year 2035 at a conservative growth rate of 3.0%. Commercial vehicle percentages of 5% medium trucks and 8% heavy trucks were assumed and based Ministry of Transportation (MTO) Environmental Guide for Noise. A typical day/night split of 90%/10% was also used as is common for well-traveled roadways.

Traffic data and related calculations are provided for reference in Appendix D. Table 11 summarizes the road traffic volumes and associated details used in the analysis.

Table 11: Summary of Road Traffic Data Used in the Transportation Analysis

Roadway Link	2035 Traffic Volumes (AADT) [1]	% Day/ Night Volume Split		Commercial Traffic Breakdown		Vehicle Speed (km/h)
		Daytime	Night-time	% Medium Trucks	% Heavy Trucks	
Centre Road [1]	15,110	90	10	5	8	60
Notes: [1] Data for Centre Road from year 2021 was projected to year 2035 at a 3.0% growth rate.						

5.3 Projected Sound levels

Future road traffic sound levels at the proposed development were predicted using Cadna/A, a commercially available noise propagation modelling software. Roadways were modelled as line sources of sound, 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 is included for reference in Appendix E.

Sound levels were predicted along the facades of the proposed development using the “building evaluation” feature of Cadna/A. This feature allows for noise levels to be predicted across the entire façade of a structure.

Note that to be conservative, the barriers considered in the stationary noise assessment were not included in the transportation noise assessment.

5.3.1 Façade Sound Levels

Predicted worst-case façade sound levels for select residential townhouse blocks most exposed to Centre Road are presented in Table 12. The transportation façade sound levels of the development, showing the ranges of predicted daytime and night-time sound levels are shown in Figure 11 and Figure 12 for daytime and night-time periods, respectively, for all residential townhouse blocks and dwellings.

Table 12: Summary of Transportation Facade Sound Levels

Façade [1]	Roadway Sound Levels [2]	
	L_{eq} Day (dBA)	L_{eq} Night (dBA)
Building 1	55	48
Building 2	52	45
Building 3	55	48
Building 4	52	46
Building 5	55	48
Building 6	52	45
Building 7	55	49
Building 8	51	44
Building 9	56	50
Building 10	53	46
Notes: [1] Façade locations are shown in Figure 11 and Figure 12.		

The highest façade roadway sound levels are predicted to be below 65 dBA and 60 dBA during the daytime and nighttime periods, respectively. Therefore, based on the guidelines in NPC-300, an assessment of building components is not required for the proposed development.

5.3.2 Outdoor Living Areas

The predicted noise impacts from the surrounding roadways onto the proposed development OLAs is shown in Figure 13 and summarized in Table 13. Four locations representing locations most exposed to Centre Road are presented in Table 13.

Table 13: Summary of Transportation Noise Impacts – OLAs

ID	Location	Transportation Impacts L_{eq} Day (dBA)
OLA 1	Block 9 – Rear Yard	56
OLA 2	Block 5/7 – Rear Yard	55
OLA 3	Block 3 – Side Yard	55
OLA 4	Block 1 – Side Yard	55

Though Table 13 above, has predicted OLA 1 to be above 55 dBA, the percentage of commercial vehicles has been estimated and is likely conservatively higher than actual. As noted in Section 4.1.2, the Project currently does not contain any identified OPORs, but rather locations were chosen for informational purposes. Therefore, sound levels are anticipated to be at or below 55 dBA at these locations, and therefore no mitigation is required.

5.4 Façade Assessment

Based on the values presented in Table 12, predicted façade sound levels are below 65 dBA during the daytime and 60 dBA during the night-time at the worst-case locations on the development. Therefore, construction meeting the minimum Ontario Building Code (OBC) is considered sufficient. Upgraded glazing is not required for the development.

5.5 Ventilation and Warning Clause Requirements

Where required, 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. Warning Clauses are summarized in Appendix F.

5.5.1 Residential Units

Based on the predicted façade noise levels, forced air heating with provisions for future installation of central air conditioning, and an MECP Type C Warning Clause, is recommended for all affected units with façade sound levels from road and rail traffic that are between 56 and 65 dBA during the daytime, or between 51 and 60 dBA during night-time hours. This affects the western façade of Block 9.

6.0 Impacts on the Development on Itself

At the time of this assessment, the mechanical systems for the development have not been selected or designed.

If common mechanical systems will be implemented as part of the proposed development, such equipment has the potential to result in noise impacts on residential spaces within the development. Noise impacts from all equipment should comply with MECP Publication NPC-300 guideline limits.

If mechanical equipment with the potential for adverse noise impacts is to be included with proposed development, those potential impacts should be assessed as part of the final building design. The criteria can be met at on-site receptors through appropriate selection of mechanical equipment, by locating equipment with sufficient setback or screening from noise sensitive locations, and by incorporating control measures (e.g., silencers/barriers) into the design if

necessary. This can be confirmed at either the site plan approval or building permit approval stages.

If individual air conditioning systems are to be implemented for each residential unit for the proposed site, the sound levels from the outdoor condenser units should meet the requirements of MECP Publication NPC-216.

7.0 Impacts of the Development on the Surrounding Area

As indicated above, at the time of this assessment, the mechanical systems for the development have not been selected or designed.

If common mechanical systems will be implemented as part of the Project, such equipment has the potential to result in off-site noise impacts onto the nearby residences along Darcy Drive or MacDonald Street. The mechanical equipment is required to meet MECP Publication NPC 300 requirements at the off-site noise sensitive points of reception, and therefore potential impacts should be assessed as part of the final building design. The criteria are expected to be met at all off-site points of reception with the appropriate selection of mechanical equipment, by locating equipment to minimize noise impacts within the development, and by incorporating control measures (e.g., silencers or barriers) into the design. If individual air conditioning systems are to be implemented for each residential unit for the proposed site, the sound levels from the outdoor condenser units should meet the requirements of MECP Publication NPC-216. There will be very little chance of off-site impacts as compliance is required to be met on-site as noted in Section 6.0.

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

The traffic related to the Project will be small relative to the existing traffic volumes within the area and is not of concern with respect to noise impacts to the surrounding environment.

8.0 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:

8.1 Stationary Source Noise

- Stationary source noise impacts onto the proposed development from the surrounding commercial facilities were assessed, as outlined in Section 4.
- Noise impacts from the surrounding stationary sources are predicted to meet applicable guideline limits at all building façades and at representative outdoor living area locations.
- Warning Clause Type E is required for residential units within the proposed development. Refer to Appendix F.

8.2 Transportation Noise

- An assessment of transportation noise impacts from surrounding roadways has been completed.

- Based on predicted transportation façade sound levels, upgraded glazing is not required for the development.
- Ventilation and Warning Clauses are outlined in Section 5.5, and summarized as follows:
  - Provision for Air Conditioning and a Type C warning clause are required for residential units of Building 9 of the proposed development.

8.3 Overall Assessment

- Impacts of the environment on the proposed development can be adequately controlled as detailed in Section 4 and 5 of this report.
- Impacts of the proposed development on itself are not anticipated and can be adequately controlled by following the design guidance outlined in Section 6 of this report.
- Impacts of the proposed development on the surroundings are expected to meet the applicable guideline limits and can be adequately controlled by following the design guidance outlined in Section 7 of this report.
- As the mechanical systems for the proposed development have not been designed at the time of this assessment, equipment selections and acoustical design should be reviewed by an accredited Acoustical Consultant as part of the final building design.

9.0 Closure

Regards,

SLR Consulting (Canada) Ltd.

Dylan Diebolt, B.Sc.
Acoustics Consultant

Aaron K. Haniff, P.Eng.
Principal, Acoustics Engineer

10.0 References

International Organization for Standardization, ISO 9613-2: *Acoustics – Attenuation of Sound During Propagation Outdoors Part 2: General Method of Calculation*, Geneva, Switzerland, 1996.

Ontario Ministry of the Environment, Conservation and Parks, 1989, Ontario Road Noise Analysis Method for Environment and Transportation (ORNAMENT).

Ontario Ministry of the Environment, Conservation and Parks, Publication NPC-300: *Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning*, 2013.

Ontario Ministry of the Environment, Conservation and Parks, 1996, STAMSON v5.04: Road, Rail and Rapid Transit Noise Prediction.

Figures

Environmental Noise and Vibration Assessment

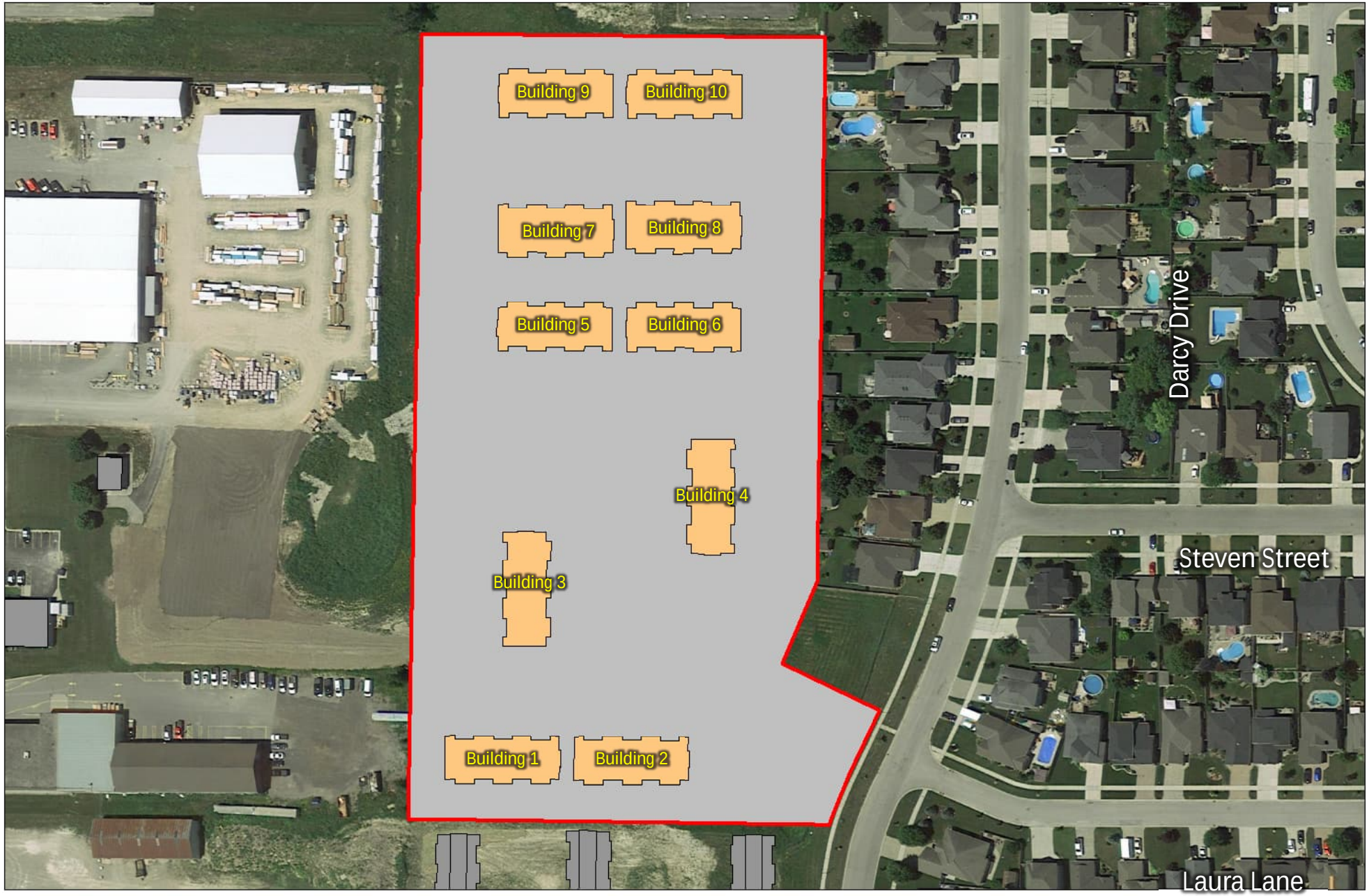
494 Darcy Drive

Southwest Investments

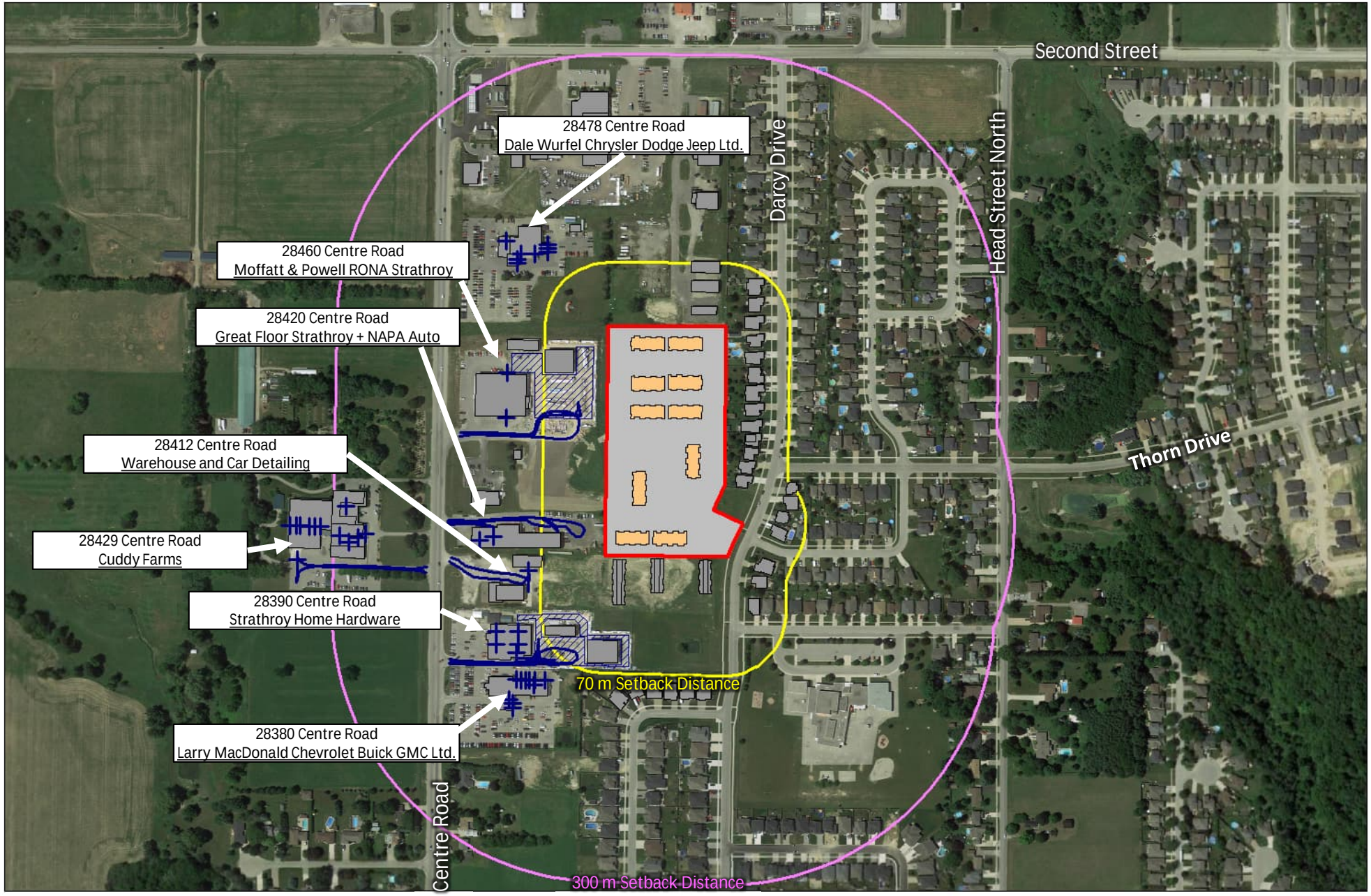
SLR Project No.: 241.30438.00000

May 8, 2025

SOUTHWEST INVESTMENTS	True North	Scale: 1:7250	METRES	SLR
494 DARCY DRIVE, STRATHROY-CARADOC		Date: May, 2025 Rev 1.0	Figure No. 1	
CONTEXT PLAN		Project No. 241.30438.00000		



SOUTHWEST INVESTMENTS	True North	Scale: 1:1500	METRES	SLR
494 DARCY DRIVE, STRATHROY-CARADOC		Date: May, 2025 Rev 1.0	Figure No. **2**	
SITE PLAN		Project No. 241.30438.00000		



SOUTHWEST INVESTMENTS

494 DARCY DRIVE, STRATHROY-CARADOC

D-6 SETBACK DISTANCES & SURROUNDING STATIONARY SOURCE LOCATIONS

True North

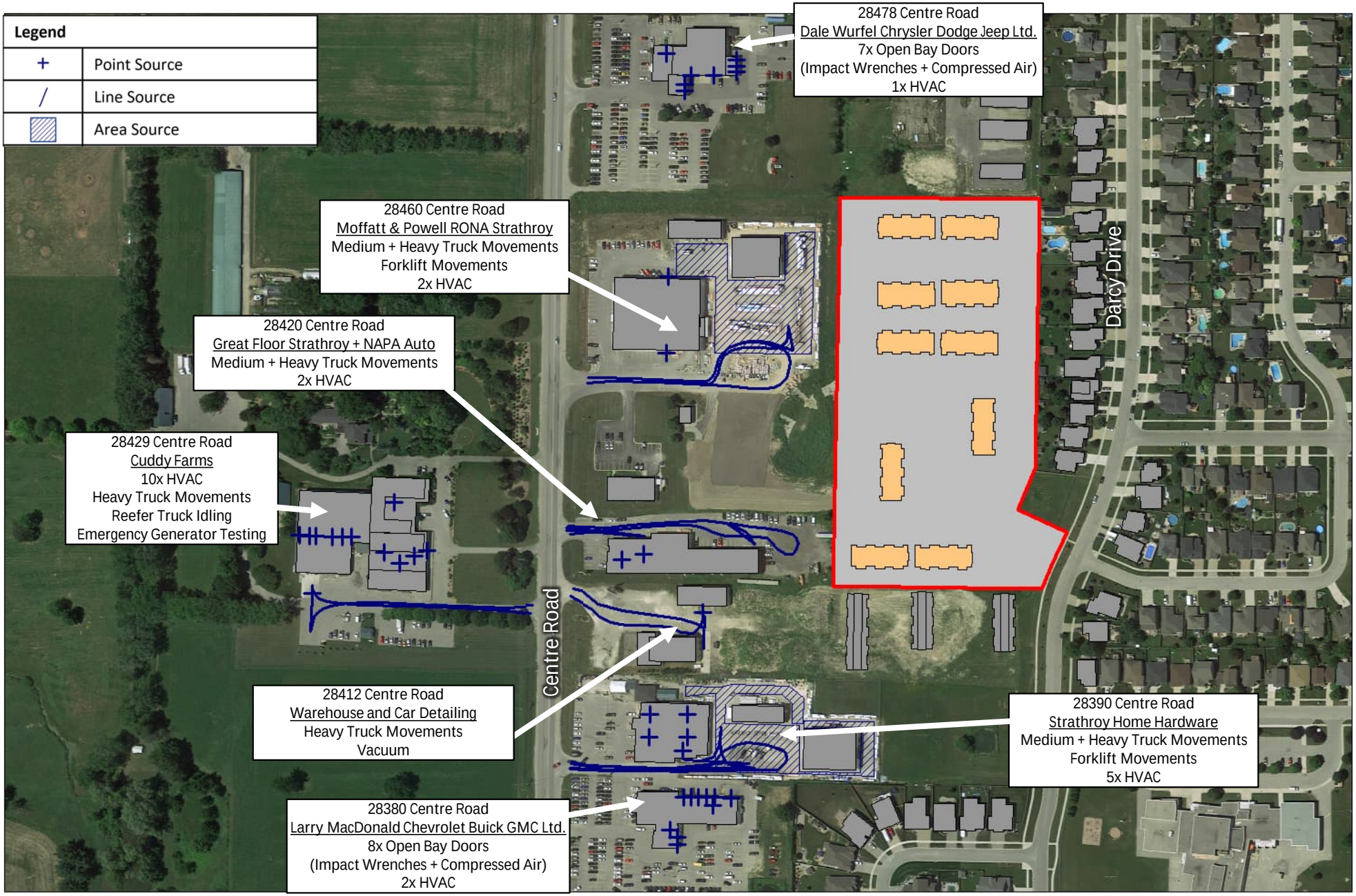
Scale: 1:6000 METRES

Date: May, 2025 Rev 1.0

Project No. 241.30438.00000

Figure No. **3**

SLR



SOUTHWEST INVESTMENTS

494 DARCY DRIVE, STRATHROY-CARADOC

MODELLED STATIONARY SOURCES

True North

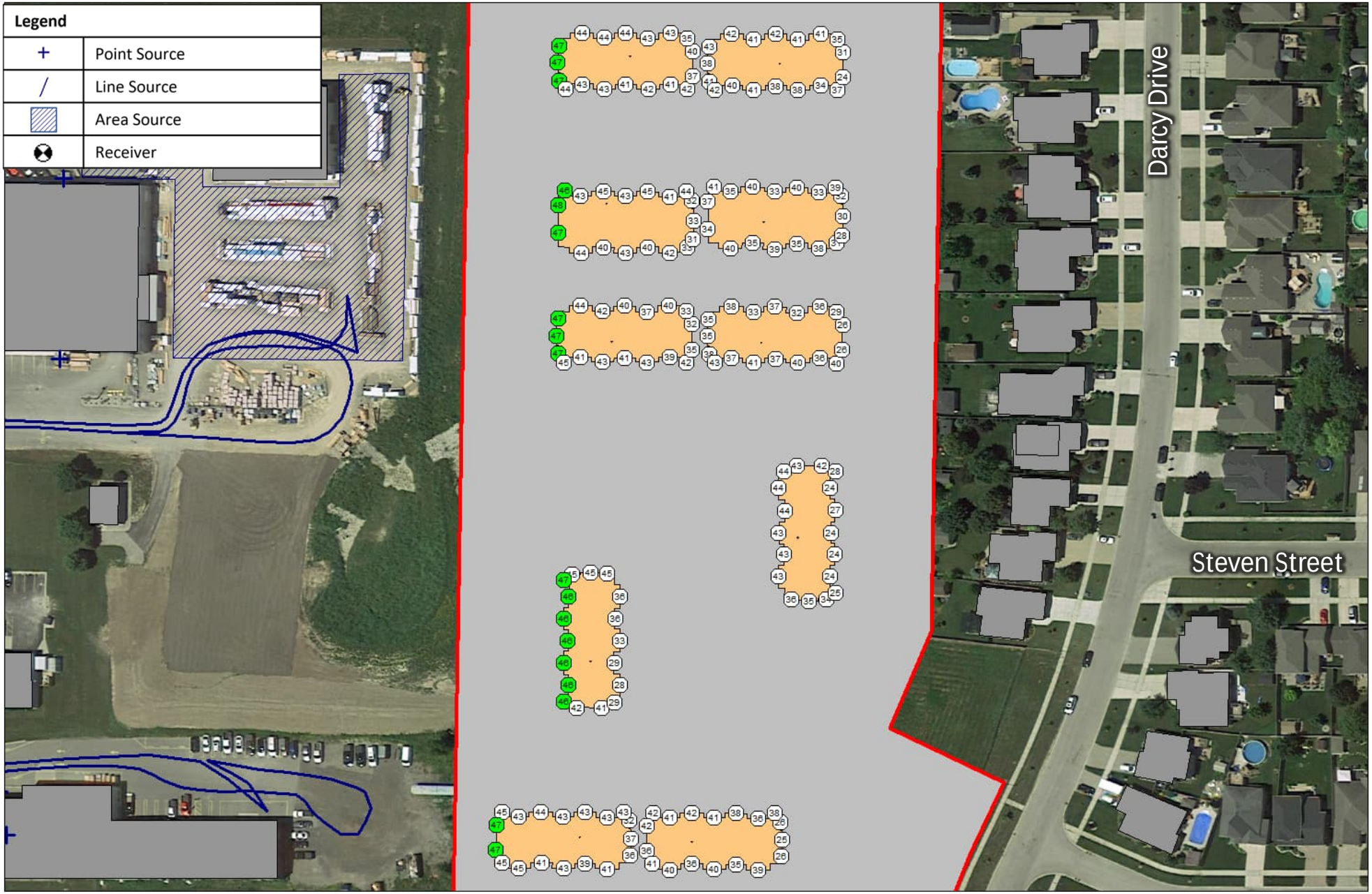
Scale: 1:3500 METRES

Date: May, 2025 Rev 1.0

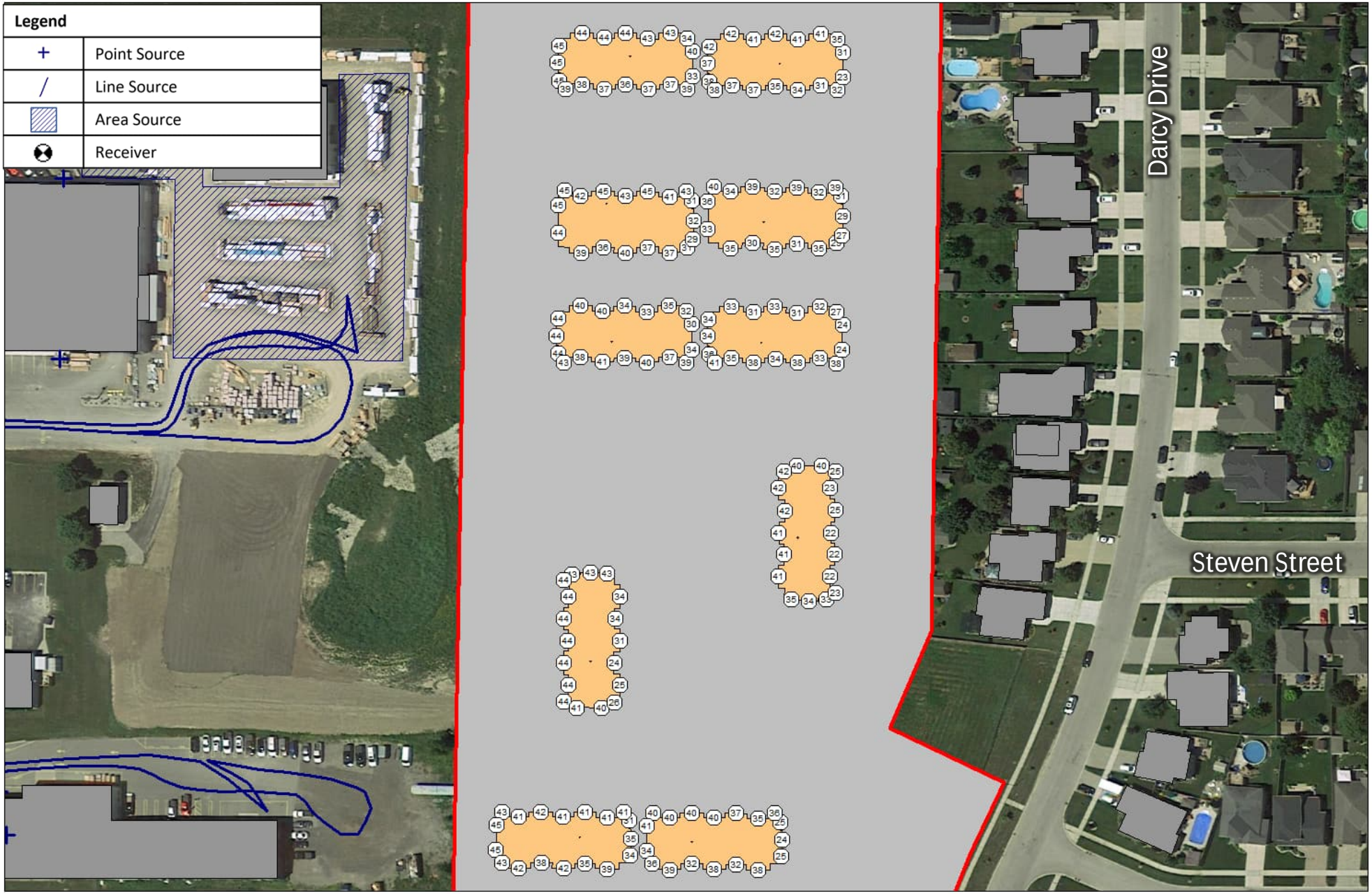
Project No. 241.30438.00000

Figure No. **4**

SLR



SOUTHWEST INVESTMENTS	True North	Scale: 1:1500	METRES	SLR
494 DARCY DRIVE, STRATHROY-CARADOC		Date: May, 2025 Rev 1.0	Figure No. **5**	
FAÇADE SOUND LEVELS – STATIONARY SOURCES – DAYTIME		Project No. 241.30438.00000		



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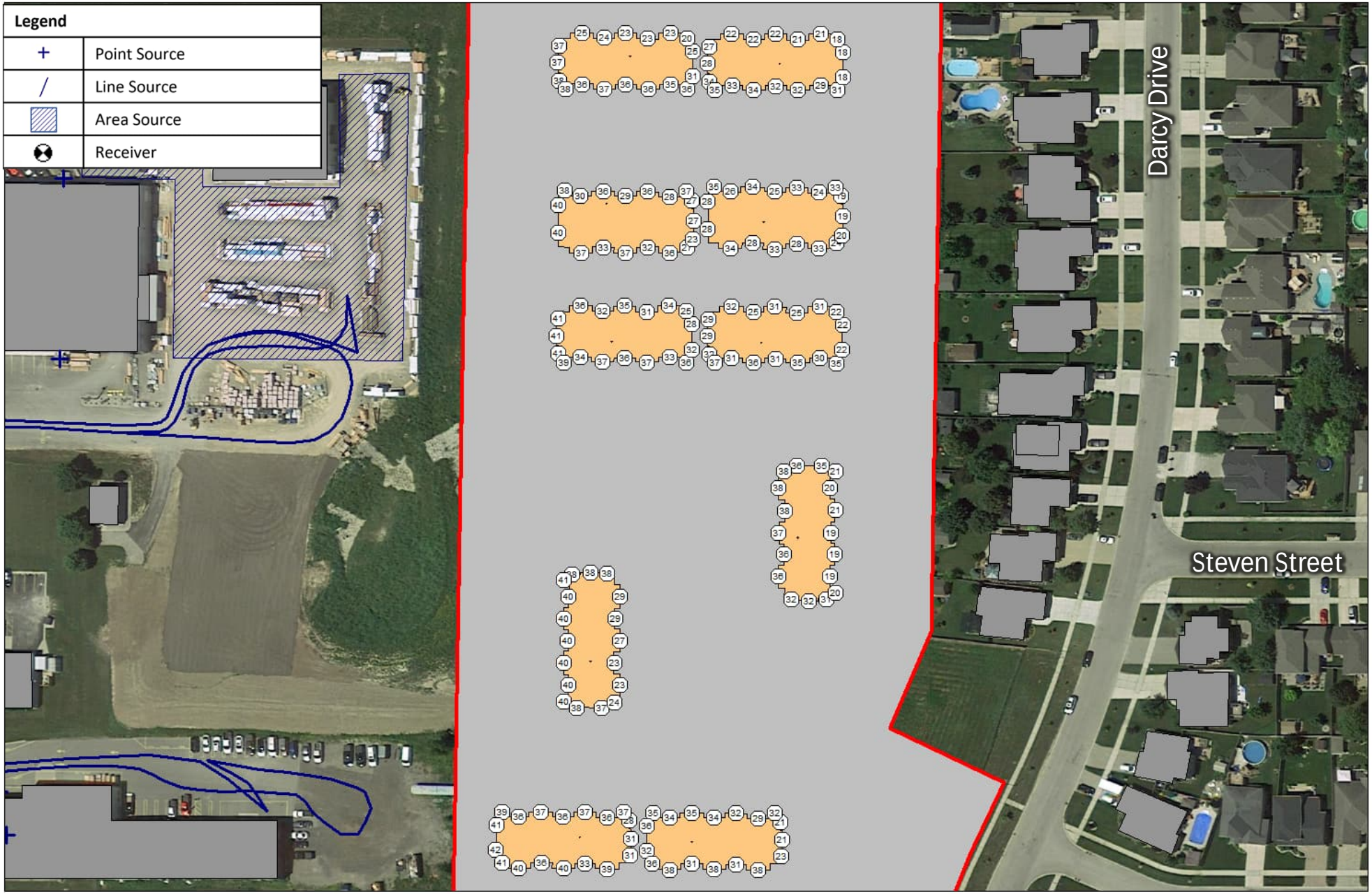
494 DARCY DRIVE, STRATHROY-CARADOC		Date: May, 2025 Rev 1.0	Figure No. 6	
FAÇADE SOUND LEVELS – STATIONARY SOURCES – EVENING		Project No. 241.30438.00000		



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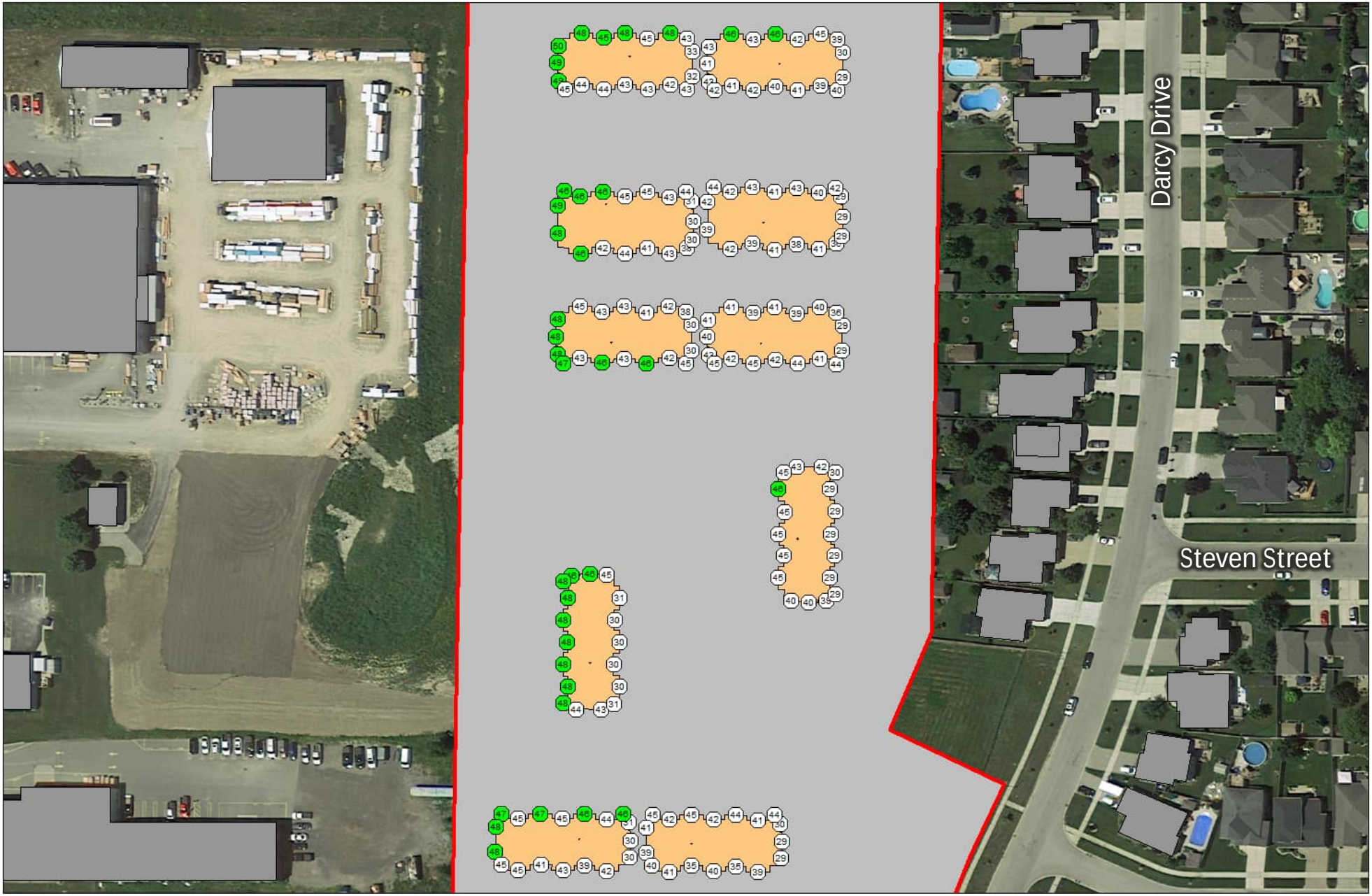
494 DARCY DRIVE, STRATHROY-CARADOC		Date: May, 2025 Rev 1.0	Figure No. 7	
FAÇADE SOUND LEVELS – STATIONARY SOURCES – NIGHT-TIME		Project No. 241.30438.00000		

SOUTHWEST INVESTMENTS	True North	Scale: 1:2000	METRES	SLR
494 DARCY DRIVE, STRATHROY-CARADOC		Date: May, 2025 Rev 1.0	Figure No. **8**	
OUTDOOR SOUND LEVELS – STATIONARY SOURCES – DAYTIME		Project No. 241.30438.00000		

SOUTHWEST INVESTMENTS	True North	Scale: 1:2000	METRES	SLR
494 DARCY DRIVE, STRATHROY-CARADOC		Date: May, 2025 Rev 1.0	Figure No. **9**	
OUTDOOR SOUND LEVELS – STATIONARY SOURCES – EVENING		Project No. 241.30438.00000		

SOUTHWEST INVESTMENTS	True North	Scale: 1:1500	METRES	SLR
494 DARCY DRIVE, STRATHROY-CARADOC		Date: May, 2025 Rev 1.0	Figure No. **10**	
FAÇADE SOUND LEVELS – ROADWAY – DAYTIME		Project No. 241.30438.00000		



SOUTHWEST INVESTMENTS	True North	Scale: 1:2000	METRES	SLR
494 DARCY DRIVE, STRATHROY-CARADOC		Date: May, 2025 Rev 1.0	Figure No. **11**	
FAÇADE SOUND LEVELS – ROADWAY – NIGHT-TIME		Project No. 241.30438.00000		

SOUTHWEST INVESTMENTS	True North	Scale: 1:2000	METRES	SLR
494 DARCY DRIVE, STRATHROY-CARADOC		Date: May, 2025 Rev 1.0	Figure No. **12**	
OUTDOOR LIVING AREA SOUND LEVELS – ROADWAY – DAYTIME		Project No. 241.30438.00000		

Appendix A Development Drawings

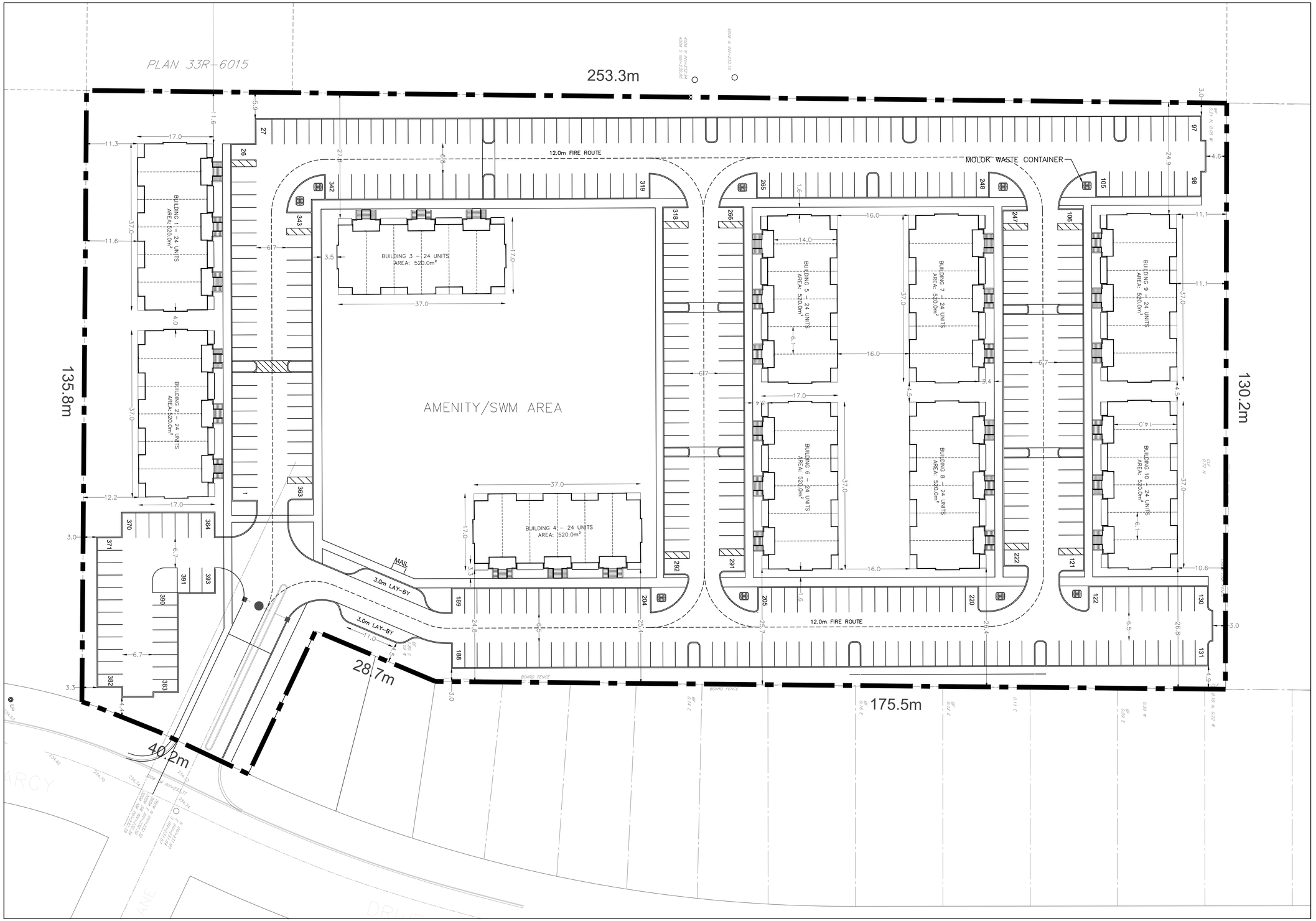
Environmental Noise and Vibration Assessment

494 Darcy Drive

Southwest Investments

SLR Project No.: 241.30438.00000

May 8, 2025



KEY PLAN

CONCEPT PLAN

ADELAIDE CON 3 SER PT LOT 22
RP 33R19421 PART 2

STRATHROY-CARADOC

EXISTING ZONE: CC
PROPOSED ZONE: R3(_)

	REQUIRED	PROPOSED
LOT AREA	210 m²	3.345 ha
LOT FRONTAGE	6.0 m	46.7 m
LOT DEPTH	N/A	135.8 m
BUILDING DEPTH(S)	N/A	17.0 m
FRONT YARD SETBACK	4.5 m	42.6 m
REAR YARD SETBACK	9.0 m	11.5 m
INT. SIDEYARD (N)	2.0 m	10.8 m
INT. SIDEYARD (S)	4.5 m	11.4 m
LANDSCAPED AREA	30%	48%
LOT COVERAGE	45%	15%
HEIGHT	3-Storeys	<10.0 m
PARKING COVERAGE (MAX)	25%	*37%
UNITS	N/A	240
DENSITY	N/A	72 UPH
AMENITY	20m²/UNIT=4,800m²	6,986.7 m²
PARKING (MIN)	TOWNHOUSES - 1.65 SPACES PER UNIT (240 X 1.65 = 396)	*393

*SPECIAL REGULATION REQUIRED

NO.	REVISION	DATE	INITIAL

TAGDELL, JUSTIN

494 DARCY DRIVE

ZELINKA PRIAMO LTD
A Professional Planning Practice
318 Wellington Road, London, Ontario N6C 4P4
Tel: (519) 474-7137 Fax: (519) 474-2284 e-mail: zp@zpplan.com

DRAWN BY	PROJECT NO.
CM	TGL/STY/24-01
DATE	SCALE
FEBRUARY 2025	1:400

Appendix B Zoning Information

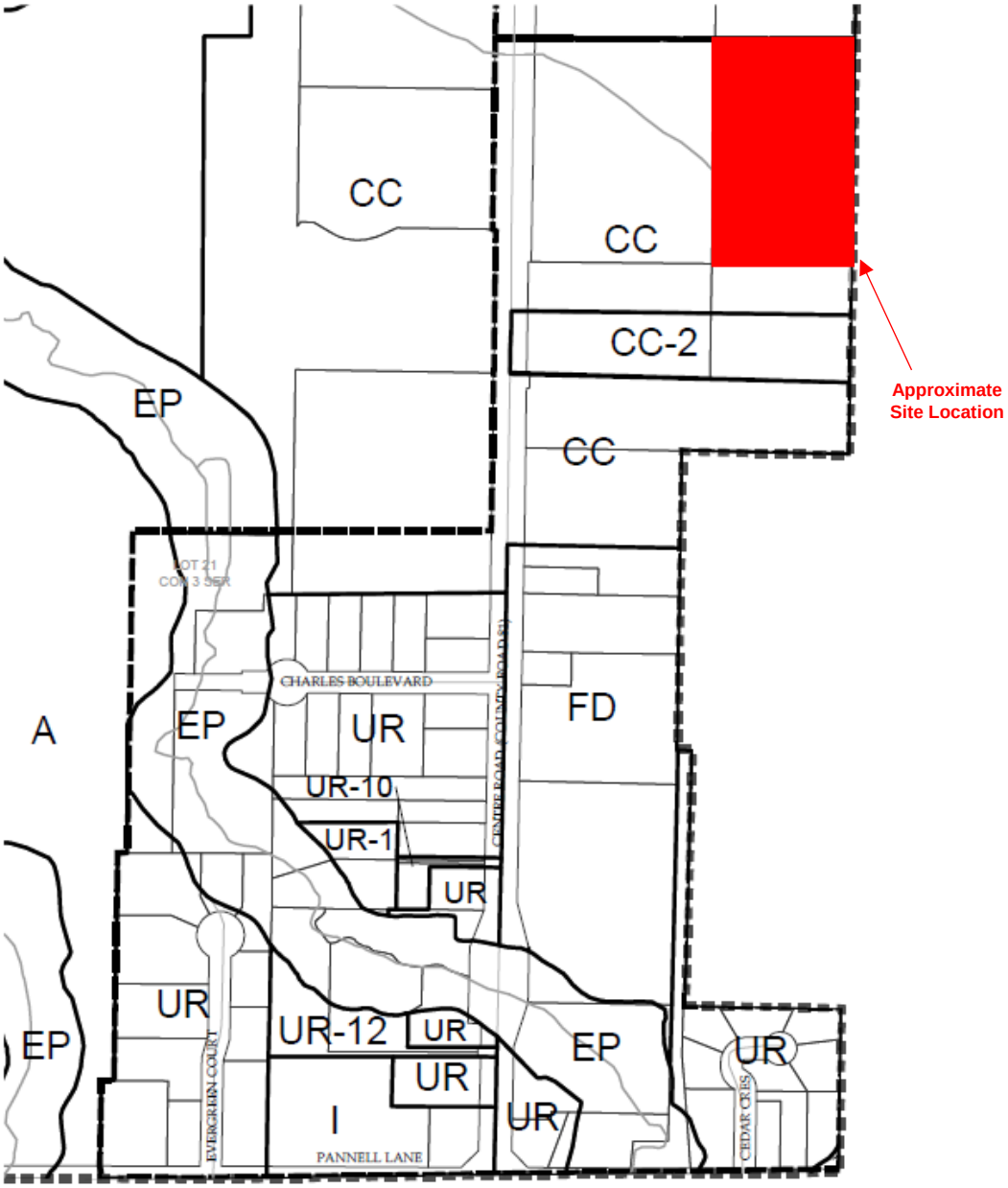
Environmental Noise and Vibration Assessment

494 Darcy Drive

Southwest Investments

SLR Project No.: 241.30438.00000

May 8, 2025



Zone Symbol	Zone
CC	Corridor Commercial
CC-#	Corridor Commercial
EP	Environmental Protection
UR	Urban Residential
UR-#	Urban Residential
I	Institutional
FD	Future Development
A	Agricultural

True North

STRIK BALDINELLI MONIZ

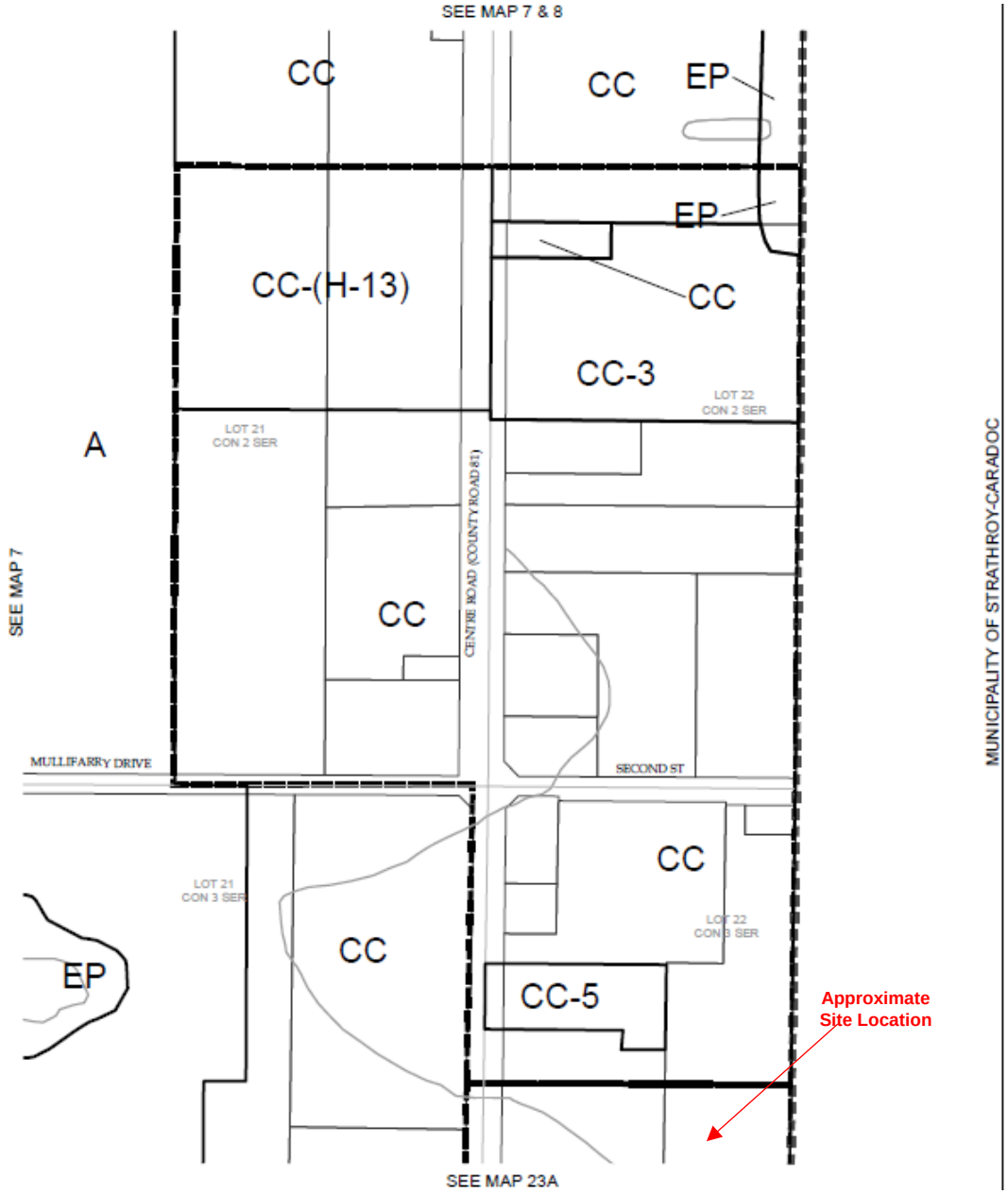
DARCY DRIVE,
STRATHROY-CARADOC, ONTARIO

ADELAIDE-METCALFE ZONING BY-LAW AREA

ZONING MAP 23A

Scale:	n/a	METRES
Date: April 2025	Rev 1.0	Figure No. **B1**
Project No. 241.20348.00000		

Source: https://adelaidemetcalfe.on.ca/sites/default/files/2021-07/AM%20Zoning%20ByLaw.pdf



Zone Symbol	Zone
CC	Corridor Commercial
CC-#	Corridor Commercial
EP	Environmental Protection
UR	Urban Residential
UR-#	Urban Residential
I	Institutional
FD	Future Development
A	Agricultural

True North

STRIK BALDINELLI MONIZ

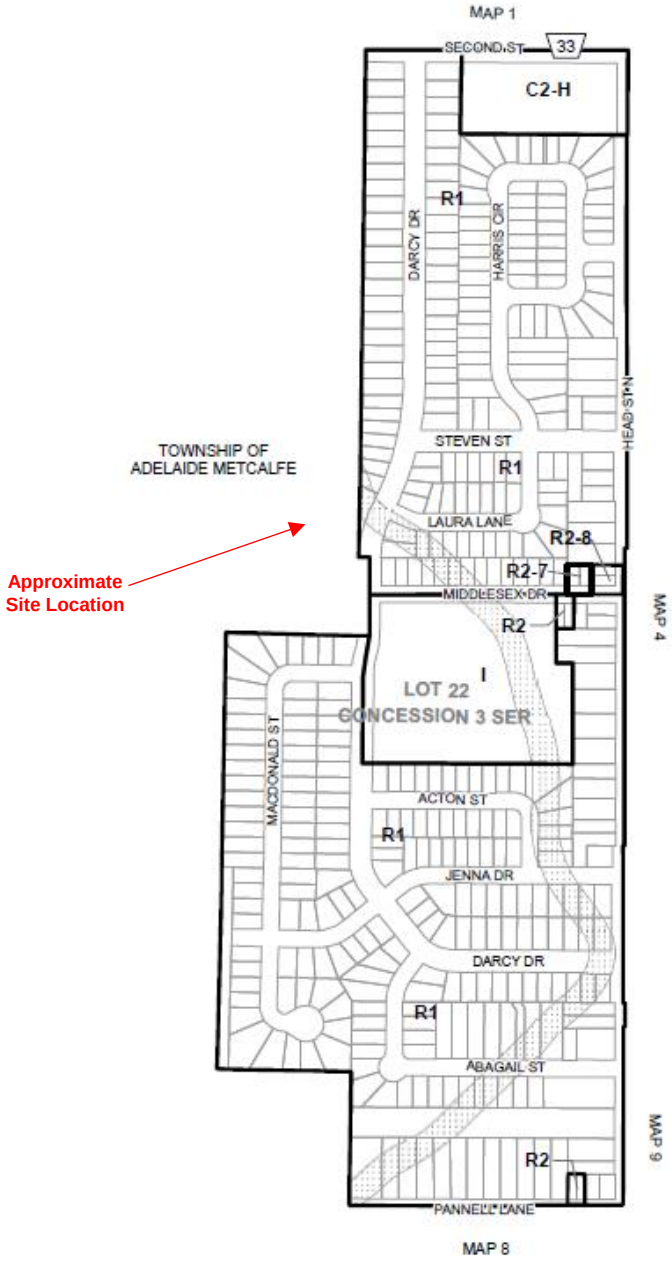
DARCY DRIVE,
STRATHROY-CARADOC, ONTARIO

ADELAIDE-METCALFE ZONING
BY-LAW AREA

ZONING MAP 23B

Scale:	n/a	METRES
Date: April 2025	Rev 1.0	Figure No. **B2**
Project No. 241.20348.00000		

Source: https://adelaidemetcalfe.on.ca/sites/default/files/2021-07/AM%20Zoning%20ByLaw.pdf



Source: https://www.strathroy-caradoc.ca/en/city-hall/resources/2021/Planning/SC-ZBL_AUG_2021.pdf

Zone Symbol	Zone
R1	Low Density Residential
R2	Medium Density Residential
R2-7	Semi-Detached Dwelling
R2-8	Semi-Detached Dwelling
C2-H	Highway Commercial (Hold)
I	Institutional

True North

STRIK BALDINELLI MONIZ

DARCY DRIVE,
STRATHROY-CARADOC, ONTARIO

STRATHROY-CARADOC ZONING
BY-LAW AREA

ZONING MAP 3

Scale:	n/a	METRES
Date: April 2025	Rev 1.0	Figure No. **B3**
Project No. 241.20348.00000		

SLR

Appendix C Stationary Source Modelling Data

Environmental Noise and Vibration Assessment

494 Darcy Drive

Southwest Investments

SLR Project No.: 241.30438.00000

May 8, 2025

Stationary Source Modelling Data

Source Description	Maximum Sound Power Level (1/1 Octave Bands) (dB)									Modelled Sound Power Level (dBA)	Source Notes
	31.5	63	125	250	500	1000	2000	4000	8000		
Dale Wurfel Chrysler Dodge Jeep - 28478 Centre Road											
Service Centre - Open Bay Door - Impact Wrench x 7	82.6	77.9	82.4	75.8	79.3	78.4	85.6	85.1	84.9	91.0	Based on historical SLR data - Operates 1 minute per hour during daytime - +10 dB penalty for quasi-steady-state impulsive sound quality
Service Centre - Open Bay Door - Compressed Air x 3	101.1	100.5	95.8	89.3	86	86.3	83.5	84.8	80.8	92.1	Based on historical SLR data - Operates 10 minute per hour during daytime - +5 dB penalty for tonal sound quality
Rooftop HVAC - 5-ton	77.0	80.0	81.0	81.0	80.0	78.0	74.0	70.0	64.0	82.5	Based on historical SLR data - Operates 60 minutes per hour during daytime/evening - Operates 15 minutes per hour during night-time (unoccupied space during night-time hours)
Moffatt & Powell RONA Strathroy - 28460 Centre Road											
Ground Level HVAC - York ZF240 x 2 units		91.0	94.0	92.0	89.0	87.0	83.0	81.0	76.0	92.1	Manufacturer's Data for York ZF240 unit - Operates 60 minutes per hour during daytime/evening - Operates 15 minutes per hour during night-time (unoccupied space during night-time hours)
Heavy Truck Movements		111.8	110.3	106.4	102.6	99.7	97.7	95.6	92.1	106.1	Based on historical SLR data - 1 heavy truck delivery per hour during a daytime hour
Medium Truck Movements		111.3	105.2	99.6	96.4	94.3	91.5	87.2	82.5	99.9	Based on historical SLR data - 2 medium truck deliveries per hour during daytime hours
Forklift Movements	90.7	98.2	93.2	90.3	90.1	85.3	83	76.7	68.5	91.4	Based on historical SLR data - 30 minutes of operation per daytime hour (area source) - 10 minutes of operation during night-time hours (early morning) (area source)
Great Floors Strathroy and NAPA Auto Parts - NAPA Strathroy - 28420 Centre Road											
Rooftop HVAC - 5-ton x 2 units	77.0	80.0	81.0	81.0	80.0	78.0	74.0	70.0	64.0	82.5	Based on historical SLR data - Operates 60 minutes per hour during daytime/evening - Operates 15 minutes per hour during night-time (unoccupied space during night-time hours)
Medium Truck Movements (NAPA Auto Parts)		111.3	105.2	99.6	96.4	94.3	91.5	87.2	82.5	99.9	Based on historical SLR data - 1 medium truck deliveru per hour during a daytime hour
Heavy Truck Movements (Great Floors Strathroy)		111.8	110.3	106.4	102.6	99.7	97.7	95.6	92.1	106.1	Based on historical SLR data - 1 heavy truck delivery per hour during a daytime hour

Stationary Source Modelling Data (continued)

Source Description	Maximum Sound Power Level (1/1 Octave Bands)									Modelled Sound Power Level (dBA)	Source Notes
	31.5	63	125	250	500	1000	2000	4000	8000		
Strathroy Home Hardware Building Centre - 28390 Centre Road											
Rooftop HVAC - 5-ton x 5 units	77.0	80.0	81.0	81.0	80.0	78.0	74.0	70.0	64.0	82.5	Based on historical SLR data - Operates 60 minutes per hour during daytime/evening - Operates 15 minutes per hour during night-time (unoccupied space during night-time hours)
Heavy Truck Movements		111.8	110.3	106.4	102.6	99.7	97.7	95.6	92.1	106.1	Based on historical SLR data - 1 heavy truck delivery per hour during a daytime hour
Medium Truck Movements		111.3	105.2	99.6	96.4	94.3	91.5	87.2	82.5	99.9	Based on historical SLR data - 2 medium truck deliveries per hour during daytime hours
Forklift Movements	90.7	98.2	93.2	90.3	90.1	85.3	83	76.7	68.5	91.4	Based on historical SLR data - 30 minutes of operation per daytime hour (area source) - 10 minutes of operation during night-time hours (early morning) (area source)
Larry MacDonald Chevrolet Buick GMC Ltd. - 28380 Centre Road											
Service Centre - Open Bay Door - Impact Wrench x 8	82.6	77.9	82.4	75.8	79.3	78.4	85.6	85.1	84.9	91.0	Based on historical SLR data - Operates 1 minute per hour during daytime - +10 dB penalty for quasi-steady-state impulsive sound quality
Service Centre - Open Bay Door - Compressed Air x 3	101.1	100.5	95.8	89.3	86	86.3	83.5	84.8	80.8	92.1	Based on historical SLR data - Operates 10 minute per hour during daytime - +5 dB penalty for tonal sound quality
Rooftop HVAC - 5-ton x 2 units	77.0	80.0	81.0	81.0	80.0	78.0	74.0	70.0	64.0	82.5	Based on historical SLR data - Operates 60 minutes per hour during daytime/evening - Operates 15 minutes per hour during night-time (unoccupied space during night-time hours)
Cuddy Farms - 28429 Centre Road											
Heavy Truck Movements		111.8	110.3	106.4	102.6	99.7	97.7	95.6	92.1	106.1	Based on historical SLR data - 1 heavy truck delivery per hour during any daytime, evening or nighttime hour
Heavy Reefer Truck Idling	97.3	112.1	101.9	103.7	99.7	94.7	93.5	89.4	80.4	101.9	Based on historical SLR data - 1 reefer truck idling for a full daytime, evening or nighttime hour
Rooftop HVAC - 5-ton	77.0	80.0	81.0	81.0	80.0	78.0	74.0	70.0	64.0	82.5	Based on historical SLR data - Operates 60 minutes per hour during daytime/evening - Operates 30 minutes per hour during night-time
Rooftop HVAC - 10-ton x 9 units	80.0	83.0	84.0	84.0	83.0	81.0	77.0	73.0	67.0	85.5	Based on historical SLR data - Operates 60 minutes per hour during daytime/evening - Operates 30 minutes per hour during night-time

STATIONARY SOURCE MODELLING DATA (continued)

Source Description	Maximum Sound Power Level (1/1 Octave Bands)									Modelled Sound Power Level (dBA)	Source Notes
	31.5	63	125	250	500	1000	2000	4000	8000		
Warehouse and Car Detailing - 28412 Centre Road											
Vacuum	77.2	76.9	78.0	73.2	89.7	82.6	86.2	89.8	87.2	94.5	Based on historical SLR data - Operates 20 minutes per hour during daytime only
Heavy Truck Movements		111.8	110.3	106.4	102.6	99.7	97.7	95.6	92.1	106.1	Based on historical SLR data - 1 heavy truck delivery per hour during any daytime, evening or nighttime hour

Appendix D Traffic Data and Calculations

Environmental Noise and Vibration Assessment

494 Darcy Drive

Southwest Investments

SLR Project No.: 241.30438.00000

May 8, 2025

TRAFFIC ON MIDDLESEX COUNTY ROADS - 2021

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
HAGERTY RD. 1	LAMBTON BOUNDARY TO NEWBURY	*1110*	3.8	1.6	3	3330
HAGERTY RD. 1	NEWBURY TO CR#14	*3236*	1.7		1.7	5501
HAGERTY RD. 1	CR#14 TO THE THAMES RIVER	*1224*	4.7		4.7	5753
DUNDAS ST. 2	LONDON TO CR#32	*16773*	2.1		2.1	35223
DUNDAS ST. 2	CR#32 TO CR#73	*12566*	4.7		4.7	59060
DUNDAS ST. 2	CR#73 TO THE OXFORD COUNT BOUNDARY	*10946*	2.9	1.4	2.2	24081
LONGWOODS RD. 2	LONDON TO HIGHWAY #402	*5709*	7.2		7.2	41105
LONGWOODS RD. 2	HIGHWAY #402 TO CR#9	*3182*	13.9		13.9	44230
LONGWOODS RD. 2	CR#9 TO CR#1	*3562*	24.9		24.9	88694
LONGWOODS RD. 2	CR#1 TO THE KENT COUNTY BOUNDARY	*2263*	8.6		8.6	19462
GIDEON DR. 3	DELAWARE TO CR#16	*3702*	3.2		3.2	11846
GIDEON DR. 3	CR#16 TO LONDON	*3576*	3.7		3.7	13231
MOUNT CARMEL DR. 5	HIGHWAY #4 TO MT. CARMEL	*1783*	12.4	12.4	6.2	11055
MOUNT CARMEL DR. 5	HURON CR#2 TO CR#81	*2432*	6.5	6.5	3.25	7904
BREENWAY DR. 5	CR#81 TO TRI-COUNTY BRIDGE	*2663*	5	5	2.5	6658
KERWOOD RD. 6	CR#10 TO CR#77	*880*	6.4		6.4	5632
KERWOOD RD. 6	CR#77 TO KERWOOD SOUTH BOUNDARY	*1382*	4.1		4.1	5666
KERWOOD RD. 6	KERWOOD SOUTH BOUNDARY TO CR#22	*1822*	6.9		6.9	12572
KERWOOD RD. 6	CR#22 TO CR#12	*1609*	6.0		6.0	9654

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
KERWOOD RD. 6	CR#12 TO CR#7	*1184*	9.4		9.4	11130
ELGINFIELD RD. 7	HIGHWAY #4 TO CR#19	*5026*	15.4		15.4	77400
ELGINFIELD RD. 7	CR#19 TO EAST JUNCTION CR#81	*2818*	12.2		12.2	34380
ELGINFIELD RD. 7	EAST JUNCTION CR#81 TO MAIN STREET PARKHILL	*4688*	2.1		2.1	9845
ELGINFIELD RD. 7	MAIN STREET PARKHILL TO LAMBTON COUNTY	*2592*	11.5		11.5	29808
THAMES RD. 8	CR#6 TO CR#10	*586*	0.9		0.9	527
THAMES RD. 8	CR#10 TO CR#2	*1155*	14.2		14.2	16401
THAMES RD. 8	CR#2 TO THE THAMES RIVER	*936*	5.7		5.7	5335
MELBOURNE RD. 9	CR#39 TO PARK STREET IN STRATHROY	*7075*	0.8		0.8	5660
MELBOURNE RD. 9	PARK STREET IN STRATHROY TO CR#77	*2655*	6.8		6.8	18054
MELBOURNE RD. 9	CR#77 TO CR#14	*2760*	10.1		10.1	27876
MELBOURNE RD. 9	CR#14 TO CR#2 MELBOURNE	*2700*	4.2		4.2	11340
MELBOURNE RD. 9	CR#2 TO THE THAMES RIVER	*3387*	9.7		9.7	32854
CALVERT DR. 10	CR#80 TO CR#8	*1185*	8.3	0.8	7.9	9362
CALVERT DR. 10	CR#8 TO CR#9 CAIRNGORM	*1614*	7.3		7.3	11782
CALVERT DR. 10	CR#9 TO CR#81 STRATHROY	*1972*	6.7		6.7	13212
CARROLL STREET 10	CR#81 STRATHROY TO CR#37 McEVOY ROAD	*3219*	3		3	9657
MUNCEY RD. 11	CR#2 TO MUNCEY	*1348*	8.1		8.1	10919
TOWNSEND LN. 12	LAMBTON COUNTY BOUNDARY TO CR #81	*2490*	10	1.6	9.2	22908
WILLIAM ST. 13	CR#20 TO LUCAN WEST LIMITS	*919*	3.2		3.2	2941
WILLIAM ST. 13	LUCAN WEST LIMITS TO CR#47	*1479*	1.1		1.1	1627

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
GLENDON DR. 14	LONDON TO CR#16	*14503*	4.3		4.3	62363
GLENDON DR. 14	CR#16 TO CR#81	*7178*	7.1		7.1	50964
GLENDON DR. 14	CR#81 TO CR#9	*3593*	10.6		10.6	38086
GLENDON DR. 14	CR#9 APPIN TO CR#8	*2619*	7.5		7.5	19643
GLENDON DR. 14	CR#8 APPIN TO CR#80	*2624*	7.3		7.3	19155
CONCESSION DR. 14	CR#80 GLENCOE TO CR#1 NEWBURY	*2803*	10.1		10.1	28310
CONCESSION DR. 14	CR#1 TO THE KENT COUNTY BOUNDARY	*1670*	9.7	4.4	7.5	12525
CARRAGE RD. 15	CR#2 TO CR#35	*2155*	8		8	17240
KOMOKA RD. 16	CR#3 TO CR #14	*4139*	1.7		1.7	7036
KOMOKA RD. 16	CR#14 TO CR#22	*1910*	9.4		9.4	17954
ILDERTON RD. 16	CR#22 TO CR#17	*2444*	5.8		5.8	14175
ILDERTON RD. 16	CR#17 TO CR#20 SOUTH	*3494*	9.5		9.5	33193
ILDERTON RD. 16	CR#20 SOUTH TO HIGHWAY #4	*4025*	5		5	20125
ILDERTON RD. 16	HIGHWAY #4 TO CR#23	*3042*	5		5	15210
PLOVER MILLS RD. 16	CR#23 TO CR#27	*1719*	7.8		7.8	13408
PLOVER MILLS RD. 16	CR#27 TO CR#31	*3389*	2.8		2.8	9489
PLOVER MILLS RD. 16	CR#31 TO THE OXFORD COUNTY BOUNDARY	*1239*	4.3		4.3	5328
GAINSBOROUGH RD. 17	LONDON TO CR#22	*5541*	6.5		6.5	36017
NAIRN RD. 17	CR#22 TO CR#16	*3358*	5.8		5.8	19476
NAIRN RD. 17	CR#16 TO CR#19	*2834*	10.3		10.3	29190
NAIRN RD. 17	CR#19 TO CR#81	*2301*	9.6		9.6	22090

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
NAIRN RD. 17	CR#81 TO CR#7	*1817*	2.7		2.7	4906
PARKHILL DR. 18	CR#81 TO THE LAMBTON COUNTY BOUNDARY	*1293*	11.4		11.4	14740
PETTY ST. 19	CR#7 TO CR#17	*3409*	5.6		5.6	19090
PETTY ST. 19	CR#17 TO CR#81	*3114*	9.3		9.3	28960
HYDE PARK RD. 20	LONDON TO CR#16	*6993(2019)*	6.4		6.4	44755
DENFIELD RD. 20	CR#16 TO CR#7	*1826*	8.4		8.4	15338
DENFIELD RD. 20	CR#7 TO HIGHWAY #4	*2463*	6.4		6.4	15763
CASSIDY RD. 21	CR#7 TO CR#24	*1088*	6.1		6.1	6637
EGREMONT DR. 22	LAMBTON COUNTY BOUNDARY TO CR#81	*1701*	13.4		13.4	22793
EGREMONT DR. 22	CR#81 TO CR#39	*2945*	6.1		6.1	17965
EGREMONT DR. 22	CR#39 TO CR#16 SOUTH	*6319*	3.8		3.8	24012
EGREMONT DR. 22	CR#16 SOUTH TO CR#17	*7618*	7.4		7.4	56373
EGREMONT DR. 22	CR#17 TO LONDON	*11432*	5.3		5.3	60590
HIGHBURY AVE. 23	HIGHWAY #7 TO CR#16 ILDERTON ROAD	*8787*	8.2		8.2	72053
HIGHBURY AVE. 23	CR#16 TO LONDON	*8814*	6.4		6.4	56410
McGILLIVRAY DR. 24	HIGHWAY #4 TO CR#21	*1465*	8.4		8.4	12306
McGILLIVRAY DR. 24	CR#21 TO CR#81	*1276*	10		10	12760
GORE RD. 25	LONDON TO CR#32	*3524*	3	0.6	2.7	9515
GORE RD. 25	CR#32 TO OXFORD COUNTY BOUNDARY	*2617*	7.5		7.5	19628
WILTON GROVE RD. 26	LONDON TO CR#74	*3310*	0.8		0.8	2648
NISSOURI RD. 27	CR#2 TO CR#28	*5665*	9.3		9.3	52685

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
NISSOURI RD. 27	CR#28 TO CR#16	*2764*	6.2		6.2	17137
WELLBURN RD. 27	CR#16 TO HIGHWAY #7	*2787*	7		7	19509
THORNDALE RD. 28	OXFORD COUNTY BOUNDARY TO CR#27	*3546*	7.1		7.1	25177
MEDWAY RD. 28	CR#27 TO CR#23	*5428*	8.4		8.4	45595
MEDWAY RD. 28	CR#23 TO HIGHWAY #4	*4554*	5		5	22770
MEDWAY RD. 28	HIGHWAY #4 TO CR#20	*4232*	5		5	21160
HAMILTON RD. 29	LONDON TO CR#74	*7494*	0.8		0.8	5995
HAMILTON RD. 29	CR#74 TO CR#32 DORCHESTER	*5817*	4.9		4.9	28503
HAMILTON RD. 29	CR#32 DORCHESTER TO CR#73	*5812*	3.4		3.4	19761
HAMILTON RD. 29	CR#73 TO OXFORD COUNTY BOUNDARY	*4726*	8		8	37808
PUTNAM RD. 30	OXFORD COUNTY BOUNDARY TO CR#29	*1597*	1.3		1.3	2076
PUTNAM RD. 30	CR#29 PUTNAM TO HIGHWAY #401	*2978*	1.7		1.7	5063
PUTNAM RD. 30	HIGHWAY #401 TO ELGIN COUNTY BOUNDARY AVON	*3599*	7.8		7.8	28072
HERITAGE RD. 31	CR#28 TO CR#16	*729*	6.2		6.2	4520
DORCHESTER RD. 32	CROMARTY DRIVE TO HIGHWAY #401	*3031*	0.7		0.7	2122
DORCHESTER RD. 32	HIGHWAY #401 TO CR#29	*4812*	4		4	19248
DORCHESTER RD. 32	CR#29 TO CR#49	*6416*	0.3		0.3	1925
SHAW RD. 32	CR#49 TO CR#2	*3787*	4.3		4.3	16284
SECOND ST. 33	CR#81 TO CR#39	*5134*	3.3		3.3	16942
MULLIFARRY DR. 33	CR#81 TO CR#45	*1840*	1.8		1.8	3312
LITTLEWOOD DR. 35	ONEIDA TO CR#15	*5188*	1.5		1.5	7782

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
LITTLEWOOD DR. 35	CR#15 TO LONDON	*3638*	6.8		6.8	24738
McEVOY RD. 37	CR#39 TO CR#10	*1638*	1		1	1638
VANNECK RD. 38	CR#14 TO CR#17	*5942*	3.3		3.3	19609
VANNECK RD. 38	CR#17 TO CR#22	*3908*	1.9		1.9	7425
NAPPERTON DR. 39	LAMBTON COUNTY BOUNDARY TO TO WEST LIMITS OF STRATHROY	*2010*	12		12	24120
ALBERT ST. 39	WEST LIMIT OF STRATHROY TO CR#81	*5609*	1.8		1.8	10096
METCALFE ST. E 39	CR#81 TO QUEEN STREET	*9445*	0.4		0.4	3778
HICKORY DR. 39	QUEEN STREET TO HWY#402	*8310*	4.7		4.7	39057
HICKORY DR. 39	HIGHWAY #402 TO CR#22	*6698*	2.8		2.8	18754
ADELAIDE ST. N 41	LONDON TO CR#28	*4542*	0.8		0.8	3634
ADELAIDE ST. N 41	CR#28 TO CR#16	*2833*	5.6		5.6	15865
CLARKE RD. 42	LONDON TO CR#28	*5221*	0.8		0.8	4177
VICTORIA ST. 44	CR#9 TO CR#81	*3457*	1.1		1.1	3803
PIKE RD. 45	CR #39 TO CR #33	*1467*	2.5		2.5	3668
PIKE RD. 45	CR #9 TO CR #39	*1213*	2.7		2.7	3275
SAINTSBURY LN. 47	CR #7 TO HIGHWAY #4	*2945*	3.2		3.2	9424
SAINTSBURY LN. 47	HIGHWAY #4 TO CR#47 EAST	*1855*	2		2	3710
FALLON DR. 47	CR#47 SOUTH TO HIGHWAY #23	*1081*	4.1		4.1	4432
CATHERINE ST. 49	CR#73 TO DORCHESTER ROAD	*1202*	2.5		2.5	3005
CATHERINE ST. 49	DORCHESTER ROAD TO CR#32	*3655*	2.5		2.5	9138
CATHERINE ST. 49	CR#32 TO LONDON	*3623*	3.9		3.9	14130

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
PROSPECT HILL RD. 50	HIGHWAY #7 TO PERTH COUNTY BOUNDARY	*2223*	1.4		1.4	3112
WHALEN LINE 55	CR #59 TO HIGHWAY #23	*2091*	5.2		5.2	10873
WHALEN LINE 55	HIGHWAY #23 TO HIGHWAY #4	*2360*	9.7		9.7	22892
WONDERLAND RD. N 56	LONDON TO CR#28	*6137(2019)*	0.8		0.8	4910
WONDERLAND RD. N 56	CR#28 TO CR#16	*3712(2019)*	5.6		5.6	20787
GRANTON LN. 59	PERTH COUNTY BOUNDARY TO FALLON DRIVE	*1782*	2.3		2.3	4099
GRANTON LN. 59	CR#47 FALLON DRIVE TO HIGHWAY #7	*2010*	4		4	8040
ELGIN RD. 73	ELGIN COUNTY BOUNDARY TO HIGHWAY #401	*6692*	7.8		7.8	52198
ELGIN RD. 73	HIGHWAY #401 TO CR#29	*7179*	1.6		1.6	11486
ELGIN RD. 73	CR#29 TO CR#2	*3617*	7.5		7.5	27128
WESTCHESTER BOURNE 74	BELMONT TO HIGHWAY #401	*5691*	6.5		6.5	36992
WESTCHESTER BOURNE 74	HIGHWAY #401 TO CR#29 NILESTOWN	*3877*	2.9		2.9	11243
WESTCHESTER BOURNE 74	CR#29 NILESTOWN TO CR#49	*2687*	1.4		1.4	3762
BRADLEY AV. 75	LONDON TO CR#74	*2159*	0.7		0.7	1511
PRATT SIDING RD. 76	CR#2 TO THE THAMES RIVER	*1441*	2.1		2.1	3026
MURPHY DR. 77	CR#6 TO CR#9	*588*	5.8		5.8	3410
DONNYBROOK DR. 78	CR#74 TO CR#32	*1980*	3.8		3.8	7524
DUNDONALD RD. 80	CR#2 TO CR#14 WEST	*2846*	4.1		4.1	11669
DUNDONALD RD. 80	CR#14 WEST TO THE LAMBTON COUNTY	*2032*	13.4		13.4	27229
ADELAIDE RD. 81	CR#2 TO CR#14	*4085*	6.2		6.2	25327
ADELAIDE RD. 81	CR#14 TO SOUTH LIMITS OF STRATHROY	*7842*	10.9		10.9	85478

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
CARADOC ST. 81	SOUTH LIMITS OF STRATHROY TO CR#39	*11791*	1.4		1.4	16507
CENTRE RD. 81	CR#39 TO CR#22	*9989*	5.7		5.7	56937
CENTRE RD. 81	CR#22 TO CR#12	*6365*	9.1		9.1	57922
CENTRE RD. 81	CR#12 TO CR#17	*2818*	9.4		9.4	26489
CENTRE RD. 81	CR#17 TO CR#7	*3102*	2.1		2.1	6514
GRAND BEND RD. 81	CR#7 TO CR#5	*2786*	13.1		13.1	36497
			873.0	*34.3*	*855.9*	*2996374*

Transportation Noise (Day/Night):

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)
G_avg_D	Centre_avg	Daytime Impacts	60	16	13599	87.0%	5.0%	8.0%	11831	680	1088	0	**86.1**	**1.7**
G_avg_N	Centre_avg	Nighttime Impacts	60	8	1511	87.0%	5.0%	8.0%	1315	76	121	0	**79.5**	**1.7**

Appendix E STAMSON Output File

Environmental Noise and Vibration Assessment

494 Darcy Drive

Southwest Investments

SLR Project No.: 241.30438.00000

May 8, 2025

STAMSON 5.0 NORMAL REPORT Date: 09-04-2025 15:29:54
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: DDST5VAL.te Time Period: 16 hours
Description:

Road data, segment # 1: Centre

Car traffic volume : 11831 veh/TimePeriod
Medium truck volume : 680 veh/TimePeriod
Heavy truck volume : 1088 veh/TimePeriod
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Centre

Angle1 Angle2 : -30.00 deg 45.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 216.00 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Centre

Source height = 1.68 m

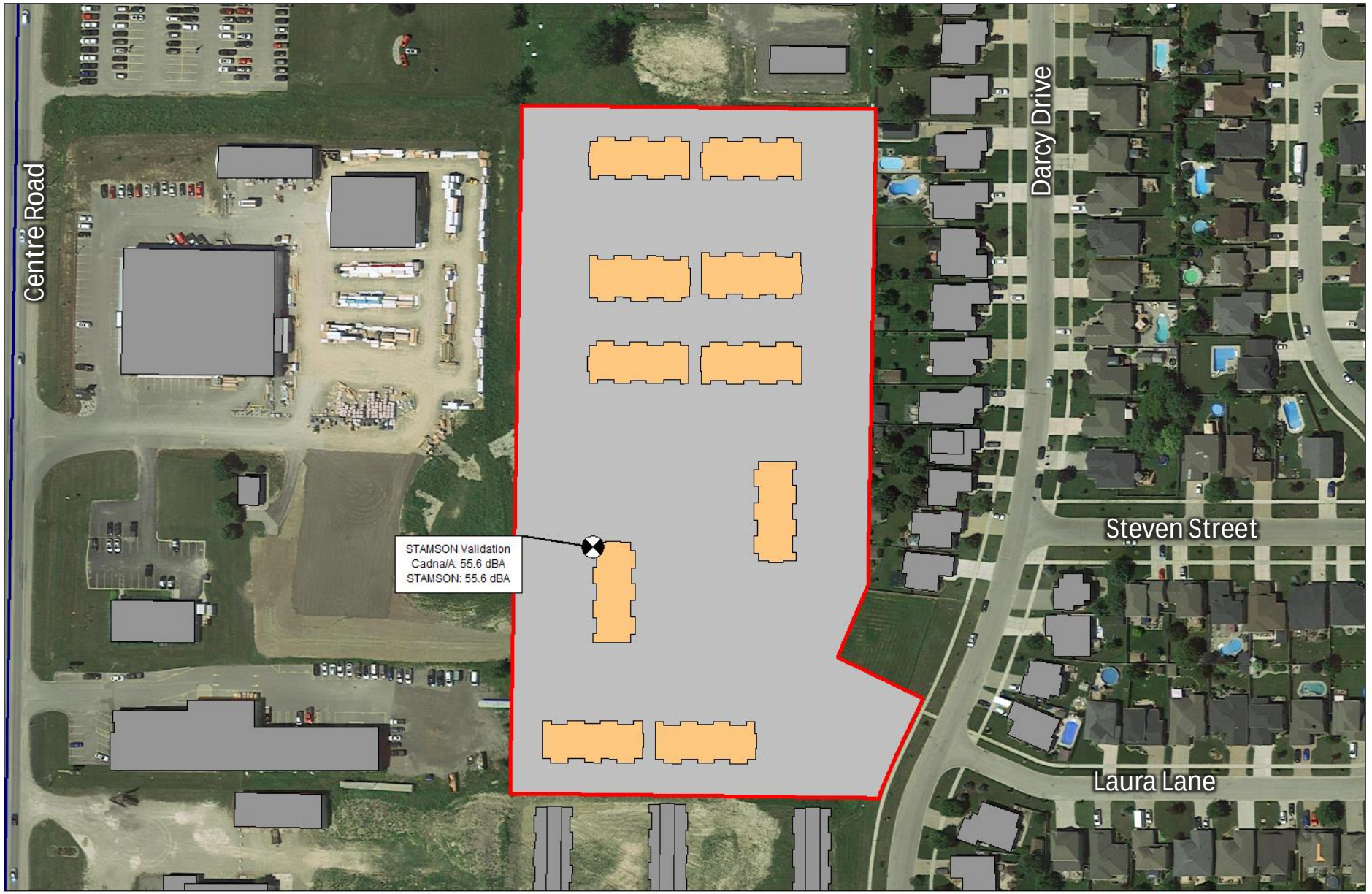
ROAD (0.00 + 55.61 + 0.00) = 55.61 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-30	45	0.00	71.00	0.00	-11.58	-3.80	0.00	0.00	0.00	55.61

Segment Leq : 55.61 dBA

Total Leq All Segments: 55.61 dBA

TOTAL Leq FROM ALL SOURCES: 55.61



STRIK BALDINELLI MONIZ	True North	Scale: 1:2000	METRES	SLR
DARCY DRIVE, STRATHROY-CARADOC		Date: April, 2025 Rev 1.0	Figure No. **E1**	
COMPARISON OF CADNA/A AND STAMSON – ROAD NOISE		Project No. 241.30438.00000		

Appendix F Ventilation, Warning Clause and Barrier Summary

Environmental Noise and Vibration Assessment

494 Darcy Drive

Southwest Investments

SLR Project No.: 241.30438.00000

May 8, 2025

Ventilation, Warning Clause and Barrier Summary

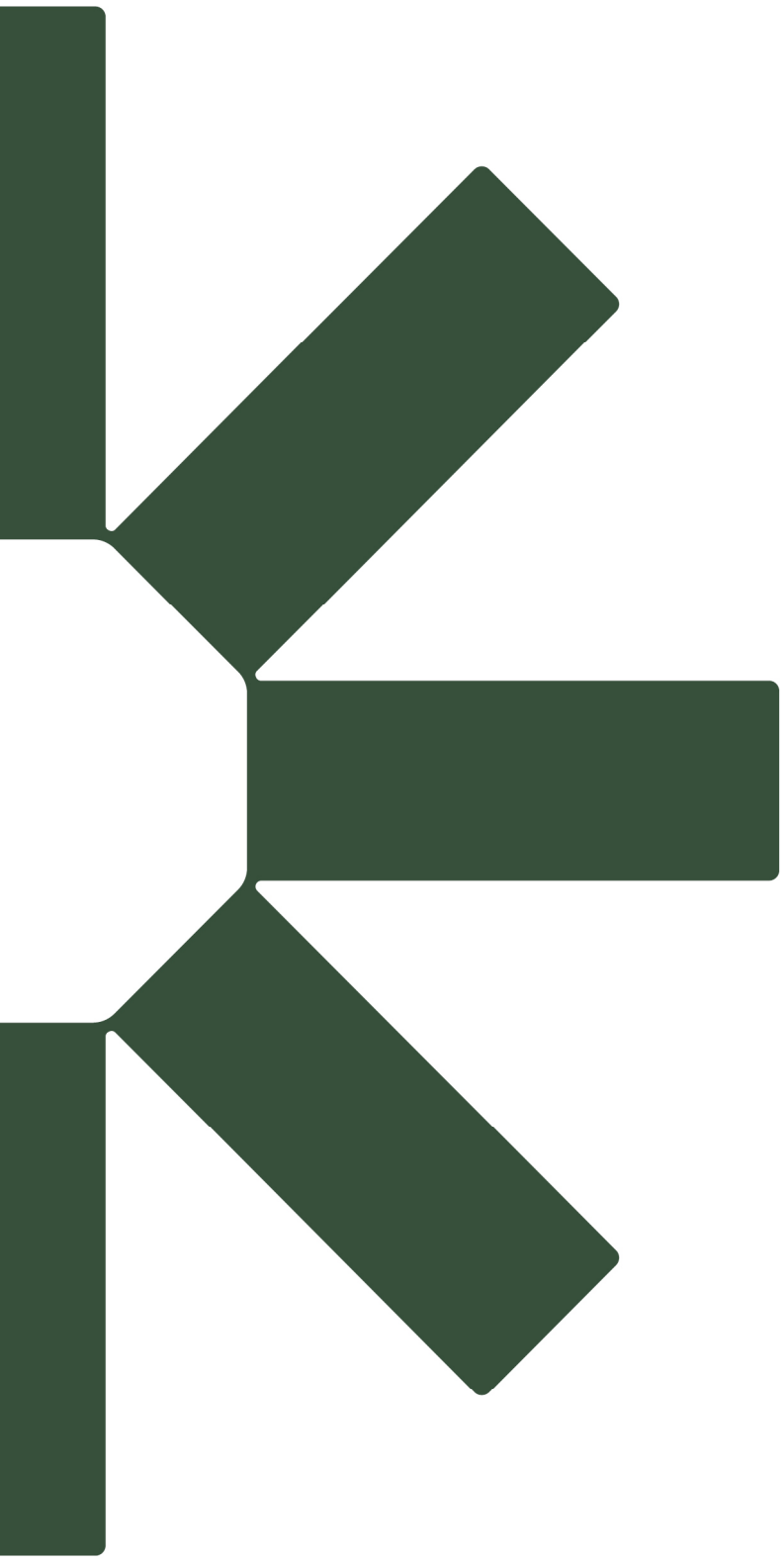
The following Warning Clauses are recommended for inclusion in agreements registered on Title for the residential units, and included in all agreements of purchase and sale or lease, and all rental agreements.

A summary of the Warning Clause and Ventilation Requirements is included in **Table F1** below.

> **MECP Type A:** "Purchasers/tenants are advised that sound levels due to increasing road 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."
>
> **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 E:** " Purchasers/tenants are advised that due to the proximity of the adjacent commercial/retail/light industrial facilities, noise from the commercial/retail/light industrial facilities may at times be audible."

Table F1: Summary of Ventilation, Warning Clause and Barrier Requirements

Residential Units	Barrier Required	Air Conditioning Requirement	Warning Clause
Building 1, 2, 4, 5, 6, 7, 8, 10	No	No	Type E
Building 9	No	No	Type C & E



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